

Committee for the Environment

Report on the Committee's Inquiry into Wind Energy Volume 1

Together with the minutes of proceedings and minutes of evidence relating to the report

Ordered by the Committee for the Environment to be printed 29 January 2015

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**REPORT EMBARGOED UNTIL
COMMENCEMENT OF THE DEBATE IN PLENARY**

Membership and Powers

The Committee for the Environment is a Statutory Departmental Committee established in accordance with paragraphs 8 and 9 of the Belfast Agreement, section 29 of the Northern Ireland Act 1998 and under Standing Order 48.

The Committee has power to:

- Consider and advise on Departmental budgets and annual plans in the context of the overall budget allocation;
- Consider relevant secondary legislation and take the Committee stage of primary legislation;
- Call for persons and papers;
- Initiate inquiries and make reports; and
- Consider and advise on any matters brought to the Committee by the Minister of the Environment

The Committee has 11 members including a Chairperson and Deputy Chairperson and a quorum of 5. The membership of the Committee since 9 May 2011 has been as follows:

Ms Anna Lo MBE (Chairperson)
 Ms Pam Cameron (Deputy Chairperson)¹
 Mr Cathal Boylan
 Mr Colum Eastwood²
 Mrs Sandra Overend^{3, 4}
 Mr Alban Maginness^{5, 6}
 Mr Ian McCrea^{7, 8, 9, 10}
 Mr Barry McElduff^{11, 12}
 Mr Ian Milne^{13, 14}
 Lord Morrow
 Mr Peter Weir

-
- 1 With effect from 10 September 2013 Ms Pam Cameron replaced Mr Simon Hamilton as Deputy Chairperson
 - 2 With effect from 18 June 2012 Mr Colum Eastwood replaced Mr John Dallat
 - 3 With effect from 23 April 2012 Mr Tom Elliott replaced Mr Danny Kinahan
 - 4 With effect from 04 July 2014 Mrs Sandra Overend replaced Mr Tom Elliott
 - 5 With effect from 23 April 2012 Mrs Dolores Kelly replaced Mr Patsy McGlone
 - 6 With effect from 07 October 2013 Mr Alban Maginness replaced Mrs Dolores Kelly
 - 7 With effect from 20 February 2012 Mr Gregory Campbell replaced Ms Paula Bradley
 - 8 With effect from 01 October 2012 Mr Alastair Ross replaced Mr Gregory Campbell
 - 9 With effect from 07 May 2013 Mr Sydney Anderson replaced Mr Alastair Ross
 - 10 With effect from 16 September 2013 Mr Ian McCrea replaced Mr Sydney Anderson
 - 11 With effect from 08 May 2012 Mr Chris Hazzard replaced Mr Willie Clarke
 - 12 With effect from 10 September 2012 Mr Barry McElduff replaced Mr Chris Hazzard
 - 13 With effect from 07 April 2013 Mr Francie Molloy resigned as a Member
 - 14 With effect from 15 April 2013 Mr Ian Milne replaced Mr Francie Molloy
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List of abbreviations

The Minister	The Minister for the Environment
The Department	Department of the Environment
AM	Amplitude Modulation
AONB	Area of Outstanding Natural Beauty
CIEH	Chartered Institute of Environmental Health
DETI	Department of Enterprise, Trade and Investment
DOE	Department of the Environment
EIA	Environmental Impact Assessment
ETSU	Energy Technology Support Unit
EU	European Union
HSENI	Health and Safety Executive Northern Ireland
MW	Megawatt
NIAPA	Northern Ireland Agricultural Producers Association
NIE	Northern Ireland Electricity
NIRIG	Northern Ireland Renewables Industry Group
NREAP	National Renewable Energy Action Plans
PAD	Pre-application Discussion
PfG	Programme for Government
PHA	Public Health Agency
PPS	Planning Policy Statement
QUB	Queen's University Belfast
RES	Renewable Energy Systems
SPPS	Single Planning Policy Statement
ToR	Terms of Reference
UFU	Ulster Farmer's Union
UU	University of Ulster

Executive Summary

1. This report sets out the key conclusions and recommendations of the Committee for the Environment on its inquiry into wind energy, and the evidence considered by the Committee which led to those conclusions.
2. The terms of reference for the inquiry were:
 - a. To assess the adequacy of PPS18 and related supplementary guidance in regulating proposals for wind turbines on a consistent and strategic basis, with due regard for emerging technologies and independent environmental impact assessment;
 - b. To compare the perceived impact of wind turbine noise and separation distances with other jurisdictions and other forms of renewable energy development; and
 - c. To review the extent of engagement by wind energy providers with local communities and to ascertain how this engagement may best be promoted.
3. The Committee is fully mindful and supportive of the requirement to promote renewable energy, and to meet the Executive's Programme for Government target for 2011- 2015 which includes a commitment to achieve 20% of electricity consumption from renewable sources by 2015. This inquiry, however, arose in response to the concerns of local residents who have questioned the way in which this target is being achieved through what they believe to be an over-reliance on wind energy.
4. The Committee put out a formal call for evidence on its agreed terms of reference and received a large volume of submissions from a wide range of stakeholders; the issues raised in submissions were followed up with oral evidence sessions on specific aspects of the inquiry. In addition, the Committee appointed a specialist acoustician to provide clarification on technical issues and carried out a fact-finding visit to a wind farm site.
5. The Committee has considered this evidence and has agreed its conclusions and recommendations which are set out in detail in the following section of this report. The Committee has made a number of recommendations to the Department of the Environment, primarily relating to the need for a more strategic approach in the Department's consideration of planning applications for wind developments, and, in particular, the development of closer liaison between planners at local council level and Strategic Planning Division.
6. The Committee also calls for the 'economic considerations' criterion for assessing applications to be clearly defined in relation to renewable energy in the Strategic Planning Policy Statement (SPPS), and for the effectiveness of PPS 18 to be reviewed by the Department to guide future policy and guidance to planners.
7. The Committee found that there were areas where planning procedures could be refined and improved, so that more detailed applications for turbines are submitted; and that planning conditions attached to successful applications should put the onus on developers to demonstrate compliance with noise limits, rather than the burden of investigation of complaints being the responsibility of local councils.
8. The Committee has concluded that the Department also needs to put procedures in place to clearly define when the concentration of wind farms sited in an area reaches saturation point, and to specify how planners should address such a situation. The Department should also review the guidelines for neighbour notification in the case of planning applications for wind turbines, with a view to extending the distance from the current 90m radius.
9. While the Committee has not made any specific recommendation for planners to take into account any potential adverse impact of wind turbines on the physical or psychological health of those living nearby, the Committee concluded that any significant evidence of such an

impact should be given serious consideration in assessing an application for the siting of a wind turbine.

10. The issue of wind turbine noise was the most contentious aspect of the inquiry. The wind industry is of the view that the current guidelines (ETSU-97) are adequate for regulating noise limits, but other stakeholders overwhelmingly cited this as their most pressing area of concern. After considering the evidence from its specialist advisor, the Committee agreed that the use of the ETSU-97 guidelines should be reviewed on an urgent basis by the Department and that more appropriate guidance should be put in place.
11. The Committee has also recommended that the Department should establish procedures for monitoring wind turbine noise on an on-going basis and should work to establish independent research evidence on the long-term impact of this noise.
12. The issue of the separation distance of wind turbines from dwellings was carefully considered by the Committee. Although it appears that this distance relates more to visual amenity than to restriction of the noise impact, the Committee has recommended that the Department should specify a minimum separation distance, rather than simply advising that 500m will generally apply, as is currently the situation.
13. During the course of its inquiry the Committee has received assurances from developers and the Department that wind turbines are generally a safe form of technology, but the recent collapse of a turbine in Tyrone has led to a recommendation that any lessons learned from the investigation which is currently on-going should be implemented as soon as possible.
14. The Committee has also made a number of very specific recommendations, which are detailed in paragraphs 37 – 39, in relation to the wind industry's need to engage with local communities. The Committee recognises that the industry has already made efforts to progress its engagement with local residents, but it has been evident to this Committee throughout the inquiry that people living near to operational or proposed wind developments do not believe that they have been adequately informed or their views heard.
15. Consequently, the Committee has made recommendations which it hopes will promote a more inclusive approach, and thereby result in a more meaningful and real form of engagement, to address the concerns of the communities whose approach to the Committee gave rise to this inquiry.

Key conclusions and recommendations

16. The Committee came to the following conclusions and recommendations after due consideration of the evidence before it.

Strategic Approach

17. The first term of reference relates primarily to the adequacy, or otherwise, of Planning Policy Statement 18 (PPS 18). The current policy is set out in PPS 18, with a slightly different approach proposed in the draft Single Strategic Planning Policy (i) to remove the significant weighting of wider environmental, economic and social benefits considerations, and (ii) to urge a cautious approach to the siting of turbines in Areas of Outstanding Natural Beauty (AONBs) or other designated landscapes.
18. The Committee considered whether a strategic approach that advocated zoning, or the identification of most appropriate locations for wind turbines, would be effective. However, it was agreed that it was now too late for introducing zoning in Northern Ireland as some areas, notably West Tyrone, had already reached saturation point in terms of the number of wind developments either operational or planned for the region.
19. **The Committee identified a clear need for closer liaison between Strategic Planning Division and local councils to ensure a joined-up approach and more cohesive planning for both wind farms and individual turbines.** This should be a natural outcome from the development over the next two years of Local Development Plans for each of the council areas; it should also involve all the relevant central government departments – DETI, DARD and DRD, as well as DOE - and should reflect the aims of the Regional Development Strategy and the Strategic Energy Framework.
20. **The Committee expressed some concern that the term ‘economic considerations’, which is used in PPS 18 and has been retained in the draft SPPS, has not been clearly defined and it would urge the Department to do so.** The Committee acknowledges that some economic impacts may be intangible, but believes that planning applications submitted by developers need to be very specific about what the measurable economic outcomes of the project will be, so that it is clear whether or not these have been delivered.
21. **The Committee also agreed that there should be an audit carried out by the Department of the effectiveness of PPS 18 in determining both the environmental and economic outputs of wind energy.** The Committee believes that this exercise would be useful not only in establishing the effectiveness of PPS 18 but also in determining future policy and practice.

Planning processes

22. The Committee found that many submissions to the inquiry focused on perceived inadequacies of current planning procedures. Members expressed concerns that there may not be adequate consideration of the cumulative impact of turbines, but they recognised that balancing individual applications against cumulative effect is a wider issue across planning. **The Committee recommends that procedures should be put in place so that a saturation point is clearly defined, rather than being a judgement call of individual planning officials.**
23. The Committee considered the present situation in Northern Ireland where local councils have to devote finite resources to the investigation of noise complaints made against wind turbines. This contrasts with other areas of the UK where the developer is required to undertake investigation of any complaints and to demonstrate compliance with noise limits. **The Committee therefore recommends that the standard conditions which were developed by the Institute of Acoustics, and which have been endorsed in Scotland, England and Wales, should be routinely attached to planning consents in Northern Ireland.**

24. The Committee has considered the desirability of a planning application for connection to the grid being assessed at the same time as the wind turbine application, instead of subsequently, as is currently the case. This would provide the Department with a more accurate record of viable applications as a significant number of single developments do not proceed when the cost and practical difficulty of connection to the grid is investigated by the applicant. **The Committee therefore recommends that planning applications for connection to the grid should be assessed at the same time as the turbine application.**
25. The information provided on generic planning application forms often lacks specific detail, so that members of the public are not clear what exactly is being proposed. **The Committee recommends that a separate application form, designed specifically for wind turbines, should be used** by planning service; since there may be evidence that older machines are noisier, **the make, model and age of the proposed turbine should also be recorded on the planning application form.**
26. Until the introduction of the Planning Act 2011, the notification of neighbours of relevant planning applications has been at the discretion of planners. The requirement to notify neighbours is now mandatory, but only applies to those who occupy buildings on neighbouring land within 90 m of the boundary of the application site. The Committee believes that this level of notification is inadequate for the latest wind turbines, which may exceed 110m in height and have a much greater impact in open countryside than in an urban environment. **The Committee recommends that the Department should review the distance for neighbour notification in the case of wind turbine planning applications with a view to extending it beyond the current 90m radius.**
27. The Committee understands that, although planning applications for wind turbines are generally accompanied by Environmental Impact Assessments, these focus mainly on the ecological features of the site, and although they should include an assessment of the impact on the population in terms of noise, public safety, employment/economic benefit, residential amenity, appropriate separation distances and shadow flicker, there is no specific reference to the physical or psychological health of those living nearby. While the Committee accepts that it would be very difficult to quantify this, any evidence indicative of serious possible detriment to either of these two aspects should be carefully considered by planners.

Wind turbine noise and separation distance

28. The second term of reference of the inquiry focuses on wind turbine noise and separation distances from dwellings. This has been the most emotive aspect of the inquiry as many submissions detail the adverse impact perceived noise from wind turbines is having on the respondents' day to day lives. From the evidence put before the Committee, it seems apparent that current guidelines in respect of permissible levels of noise are no longer adequate and that the research evidence available has increased significantly since 1997. **The Committee therefore recommends that the Department should review the use of the ETSU-97 guidelines on an urgent basis, with a view to adopting more modern and robust guidance for measurement of wind turbine noise, with particular reference to current guidelines from the World Health Organisation.**
29. The Committee was also concerned that there does not appear to be continuous long-term monitoring of noise from wind farms, either by developers or by the relevant public sector organisations. If such information were available it would introduce an objective measure of the noise output of turbines, as opposed to the projected noise impact produced by a desk-top exercise as part of the application process. This would provide both developers and planners with factual evidence and a useful assessment measure for future applications. **The Committee recommends that the Department should bear responsibility for ensuring that arrangements be put in place for on-going long-term monitoring of wind turbine noise.**
30. Following on from this, the Committee has heard evidence from local residents who are concerned about potentially harmful low-frequency noise emitting from wind turbines.

The Committee is not in a position to determine the scientific basis for such information, but members believe that it warrants further investigation. **The Committee therefore recommends that the Department, working with local universities, should commission independent research to measure and determine the impact of low-frequency noise on those residents living in close proximity to individual turbines and wind farms in Northern Ireland.**

31. The Committee is aware that PPS 18 advises that a separation (or setback) distance of 500m, or 10 times rotor diameter, will generally apply to the siting of wind developments, but there is no indication given in the policy whether this is in relation to noise or to visual amenity. The Committee's specialist advisor has indicated that, due to local topography, linear distance is less important than the robust actual measurement of noise, but it is obviously very relevant to the aspect of visual amenity. There are no generally agreed separation distances in other jurisdictions and the lack of prescription has given rise to a great deal of criticism from respondents.
32. The Committee has considered whether the current degree of flexibility should continue to be available to planners in assessing applications, but agreed instead that a minimum setback distance should now be determined by the Department. **The Committee recommends that the Department, taking into account constraints on the availability and suitability of land for the generation of wind energy, should specify a minimum separation distance between wind turbines and dwellings.**
33. The Committee has not taken evidence specifically on the development of other forms of renewable energy, but it believes that it may be beneficial in the longer term to develop a greater mix of renewables to meet carbon emission targets, rather than to place such heavy reliance solely on energy generated from wind turbines.
34. During the course of the inquiry the Committee has been assured by the wind industry that turbines are a safe form of technology, with instances of physical damage caused by turbines occurring only rarely. Committee members saw at first hand the level of computer-controlled monitoring relating to a wind farm which allows for remote monitoring of the operation of the machinery. However, a recent incident in West Tyrone when a wind turbine collapsed, scattering debris across the surrounding area, has given the Committee cause for concern. **The Committee therefore recommends that the investigation of the incident should be concluded as swiftly as possible, both by the owners of the wind development and the Health and Safety Executive for Northern Ireland, and that any lessons learned should be implemented as soon as possible.**

Community engagement

35. The final term of reference for the inquiry relates to the extent of engagement by wind energy providers with local communities and the promotion of such engagement. The Committee found that, although the wind industry is aware of the vital importance of engagement and is moving towards a more robust standardised approach (as exemplified by the recent publication of the NIRIG Community Best Practice Guidance 2014), many residents still feel marginalised in the whole process of siting wind developments near their homes.
36. The Committee believes that the views of the community must be given consideration by both planners and developers. Community concerns regarding visual amenity, noise and health, and the impact on house prices, are often not given due regard; and community groups trying to investigate or object to applications find the process resource-intensive and not transparent. This should not be seen as a mere box-ticking exercise - the views of residents need to be listened to, considered and, if possible, changes made to take account of these views. It is not just about preparing reports: there is a need to act on the findings.
37. The Committee believes that there should be timely and early engagement with communities. **It recommends that the use of a community engagement toolkit should be made**

mandatory, as a useful measure of independence, and the list of statutory consultees should be widened to reflect all users of the countryside.

38. **The Committee also recommends that, as part of the pre-application consultation process, independent community engagement reports should be prepared; and that written acknowledgement from residents that they had been adequately informed about the proposed development should be prepared and retained as a record of consultation.**
39. In order to promote dissemination of information more appropriately, **the Committee recommends that information events should be properly organised discussion sessions, not just exhibitions, with opportunities for residents to have their questions answered.** The Committee found that the role of community liaison officers who are appointed by developers could be vital in assuring this exchange of information and views.
40. The Committee also considered how the issue of financial incentives – known as community benefits – may be used to promote community engagement. There was broad support from all stakeholders for these schemes, and, while the Committee acknowledges that payments are currently made by the wind industry on a voluntary basis, **the Committee recommends that the level of community benefits payable should be set at government level and that these should be made a condition of planning permission.**
41. **The Committee also recommends that a Community Benefits register, similar to the one in Scotland, should be set up as a public record of all types of benefit arising from wind developments.** The Committee believes that this would enhance transparency and accountability, as well as providing a means of monitoring and assessing the effectiveness of the schemes.
42. The Committee found that it was reasonable and appropriate that community benefits should be allocated proportionately to those most closely impacted by the siting of wind developments, particularly where these take the form of reduced electricity tariffs for those living close by. The Committee understands that this has already been happening in some areas and calls for the standardisation of this approach on a wider basis.
43. The possible devaluation of homes, where wind developments have been sited in close proximity to existing dwellings, has been a contentious issue. While the Committee has been presented with emerging and contradictory research evidence on this, it believes that a scattered rural population – both those who have lived in the area for generations and those who have chosen to live in quiet scenic locations – has some cause for grievance. **The Committee therefore recommends that the developer gives consideration to providing compensation where there is clear and compelling evidence of a significant drop in house value directly relating to the siting of a wind development.**
44. The Committee also considered the relevance of wind farm co-operatives in promoting community engagement, particularly where such co-operatives are supported by government either in a financial or advisory role. **The Committee agreed that this may be a useful approach and recommends that it should be explored as a further means of strengthening community ownership of renewable energy.**

Introduction

Background

45. In June 2013, at an external meeting in Omagh, the Committee for the Environment had formal briefings from representatives of West Tyrone Against Windfarms, a group which opposes the siting of wind turbines in populated rural areas, and from the Strabane/Omagh Councils Working Group on Wind Energy. In September 2013 the Committee invited representatives from the Northern Ireland Renewables Industry Group (NIRIG) to respond to the issues raised on behalf of wind energy suppliers and developers. The evidence presented¹ at these two meetings led the Committee to agree to carry out a short focussed Review, to take place over four weeks in October and November 2013.

Scope and Terms of Reference

46. At its meeting on 10 October 2013 the Committee considered the terms of reference which were to be put in place for the Review. Even at this initial stage, the Committee for the Environment was very much aware that issues were emerging which were largely cross-cutting, impacting on the remit of other Executive Departments and the relevant statutory Committees within the Assembly. These were identified as follows:

Economic issues

47. The Programme for Government 2011- 2015 includes a commitment to achieve 20% of electricity consumption from renewable sources by 2015. The extent to which this commitment is being met solely by energy generated from onshore wind turbines, and the consequent subsidy from consumers through higher electricity prices, has been highlighted by opponents of wind energy.
48. Many of the areas which are most suitable for wind turbines are located in areas of great scenic beauty. It has been claimed that the visual intrusion of the turbines can adversely impact on the surrounding countryside and reduce revenues generated by tourism. Similarly, house prices of homes situated close to wind farms may be devalued as a result of the loss of visual amenity and the allegations of possible health side-effects.
49. In addition, developers specify the number of local jobs which will be created by the construction and maintenance of wind farms, and the economic benefit has been a significant factor in consideration of applications by planning authorities. However, opponents of this form of energy have disputed the number of jobs which actually resulted from wind farm developments.

Health issues

50. It has been claimed that various forms of ill-health result from the proximity of wind turbines to homes, most particularly from the incidence of low-frequency noise; and health and safety concerns, such as blade fragmentation and ice throw, have been expressed in relation to the operation of the actual turbines.
51. The Committee agreed that economic and health issues may be more properly referred to other statutory Committees, and that it should focus primarily on concerns raised in relation to environmental and planning matters which are more directly relevant to its remit.

1 All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2.

52. Accordingly, the following Terms of Reference were agreed for the Review:
- To assess the adequacy of PPS18 and related supplementary guidance in regulating proposals for wind turbines on a consistent and strategic basis, with due regard for emerging technologies and independent environmental impact assessment;
 - To compare the perceived impact of wind turbine noise and separation distances with other jurisdictions and other forms of renewable energy development; and
 - To review the extent of engagement by wind energy providers with local communities and to ascertain how this engagement may best be promoted.
53. In the course of the Review the Committee commissioned a number of research papers² from the Assembly in-house facility (RaISe) on issues which members believed required further clarification, especially in relation to separation distances of wind turbines from dwellings. On 7 November 2013 the Committee also heard formal evidence from Professor Geraint Ellis³, School of Planning, Architecture and Civil Engineering, Queen's University, Belfast, who outlined the key issues in strategic planning for renewable energy.
54. After making an initial consideration of the nature and volume of evidence before it, the Committee agreed that the original time-limited Review should be replaced by a formal Inquiry and that evidence already received in connection with the Review should be included. The Committee agreed that the existing Terms of Reference for the Review were also to be adopted for the Inquiry, but that the timescale should be extended to reflect the more in-depth consideration that the inquiry would involve.

The Committee's Approach

55. The Committee issued a formal Call for Evidence which closed on 28 February 2014. There was a substantial response and 98 submissions were received⁴. The breakdown of submissions was as follows:

Energy companies/ developers/planning consultants	21
Local councils	8
Professional representative bodies	7
Statutory agencies/ public bodies	9
Voluntary/ charitable organisation	4
Community groups	9
Individuals	40
Total	98

56. At its meeting on 6 May 2014 the Committee agreed a plan for its inquiry. The submissions indicated that it would prove useful to have detailed oral briefings from the Chartered Institute for Environmental Health, the Northern Ireland Authority for Utility Regulation, Northern Ireland Electricity and DOE Planning Division. The Committee subsequently agreed to schedule concluding evidence sessions from Windwatch NI and NIRIG in October 2014.
57. A stakeholder seminar to focus specifically on the community engagement aspect of the inquiry was arranged for 12 June 2014 at Parliament Buildings. A number of questions

2 The Committee agreed that the relevant research papers for 2013 and 2014 should be published as part of this Report at Appendix 6.

3 All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2.

4 Written submissions have been published as part of this Report at Appendix 3.

were formulated to reflect issues raised in submissions and these formed the basis for a discussion event. All of these evidence sessions, including the stakeholder seminar, were recorded by Hansard.⁵

58. In addition, the Committee agreed to carry out a fact-finding visit to two wind farms, Crighshane and Church Hill near Castlederg in West Tyrone, on 26 June 2014. Committee members also used this as an opportunity to meet with local residents both opposed to, and in favour of, wind turbine developments in the area.
59. The final element of the inquiry plan was to secure the services of a specialist acoustician to provide further information and clarification on the issue of the types and level of noise generated by wind turbines. Noise disturbance emerged as one of the key issues in the inquiry and, in particular, the relationship between turbine noise and separation distance. It is an area which has been both contentious and complex, and one where the Committee believed that appropriate specialist advice would be invaluable in informing its scrutiny. Mrs Ursula Walsh BSc (Hons) MSc, from the University of Ulster, was appointed as an advisor and duly reported to the Committee in September 2014.⁶

5 All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2.

6 Mrs Walsh's report has been reproduced in full in Appendix 7 of this Report

Consideration of the Evidence

The Adequacy of PPS18

Background

60. The existing policy underlying the development of renewable energy in Northern Ireland is set out in Planning Policy Statement 18 (PPS18).

“The aim of this Statement is to facilitate the siting of renewable energy generating facilities in appropriate locations within the built and natural environment in order to achieve Northern Ireland’s renewable energy targets and to realise the benefits of renewable energy.”

61. The objectives of the Statement are:

- to ensure that the environmental, landscape, visual and amenity impacts associated with or arising from renewable energy development are adequately addressed;
- to ensure adequate protection of the Region’s built and natural, and cultural heritage features; and
- to facilitate the integration of renewable energy technology into the design, siting and layout of new development and promote greater application of the principles of Passive Solar Design.

62. Development that generates energy from renewable resources will be permitted provided the proposal, and any associated buildings and infrastructure, will not result in an unacceptable adverse impact on:

- (a) public safety, human health, or residential amenity;
- (b) visual amenity and landscape character;
- (c) biodiversity, nature conservation or built heritage interests;
- (d) local natural resources, such as air quality or water quality; and
- (e) public access to the countryside.”

63. *“The wider environmental, economic and social benefits of all proposals for renewable energy projects are material considerations that will be given significant weight in determining whether planning permission should be granted. The publication Best Practice Guidance to Planning Policy Statement 18 ‘Renewable Energy’ will be taken into account in assessing proposals.”*

64. *“Applications for wind energy development will also be required to demonstrate all of the following:*

- (i) *that the development will not have an unacceptable impact on visual amenity or landscape character through: the number, scale, size and siting of turbines;*
- (ii) *that the development has taken into consideration the cumulative impact of existing wind turbines, those which have permissions and those that are currently the subject of valid but undetermined applications;*
- (iii) *that the development will not create a significant risk of landslide or bog burst;*
- (iv) *that no part of the development will give rise to unacceptable electromagnetic interference to communications installations; radar or air traffic control systems; emergency services communications; or other telecommunication systems;*

- (v) *that no part of the development will have an unacceptable impact on roads, rail or aviation safety;*
- (vi) *that the development will not cause significant harm to the safety or amenity of any sensitive receptors (including future occupants of committed developments) arising from noise; shadow flicker; ice throw; and reflected light; and*
- (vii) *that above-ground redundant plant (including turbines), buildings and associated infrastructure shall be removed and the site restored to an agreed standard appropriate to its location.*
65. *Any development on active peatland will not be permitted unless there are imperative reasons of overriding public interest.*
66. *For wind farm development a separation distance of 10 times rotor diameter to occupied property, with a minimum distance not less than 500m, will generally apply.*
67. *The supplementary planning guidance ‘Wind Energy Development in Northern Ireland’s Landscapes’ will be taken into account in assessing all wind turbine proposals.”⁷*
68. The Department of the Environment is currently finalising a Strategic Planning Policy Statement (SPPS). This will set out the core principles to underpin the new two-tier planning system to be delivered by councils and central government from April 2015. It aims to set a policy framework to provide greater clarity for all users of the new system and, although the draft SPPS consolidates 20 separate policy publications into one document, the Minister has stated that, “This is not simply an exercise to condense what already exists.”⁸
69. The section of the draft Strategic Planning Policy Statement relating to Renewable Energy (Paragraph 6.189 to 6.200) very much reflects the existing policy expressed in PPS18, but two significant changes have been highlighted to the Committee by the Department.
70. Firstly, the draft SPPS indicates that consideration of the balance of local and wider environmental, economic and social benefits of proposals should be included in Local Development Plans, but that these should not necessarily be given significant weighting. In contrast, PPS 18 currently predicates that the wider environmental, economic and social benefits of all proposals for renewable energy projects are material considerations *that will be given significant weight* in determining whether planning permission should be granted.
71. Secondly, the draft SPPS differs from the existing PPS18 in its approach to designated landscapes. It advocates that planners should take a cautious approach in considering the potential impact of wind farm proposals on designated landscapes such as Areas of Outstanding Natural Beauty (AONBs) or the Giant’s Causeway World Heritage Site, as it may be difficult to accommodate wind turbines without detriment to these regions. No such guidance was specified in PPS18 relation to wind developments.
72. In considering how the SPPS should be drafted to take account of local objections to the siting of wind turbines, the Department rejected calls for a moratorium on further applications, but it has undertaken to give full consideration to any recommendations put forward by this Committee as a result of the Inquiry.⁹

Departmental oral evidence: Planning Division

73. Currently individual wind turbine applications – unless they relate to unusually large or powerful machines – are dealt with by local planning offices and local councils. The Department has seen a significant increase in individual wind turbine applications since

7 Extracts from Planning Policy Statement 18, published by the Department of the Environment in August 2009

8 Ministerial Foreword to the public consultation on the Draft SPPS, February 2014.

9 Departmental briefing on 6 November 2014 on the synopsis of responses to the draft SPPS

2010: at the end of May 2014, 644 applications were being processed.¹⁰ It is unclear, however, how many of the successful applications actually resulted in the erection of turbines as it has often proved prohibitively expensive to connect rural turbines to the grid.

74. Applications for wind farms are addressed by the DOE Strategic Planning Division which has already approved applications for 74 wind farms, with a further 39 applications under consideration.¹¹ Developers have launched appeals against refusal of planning permission for a number of developments and there has also been a marked increase in applications which have been referred directly to the Planning Appeals Commission under Article 33, thereby effectively bypassing the Department.
75. Officials have confirmed that large wind farm applications require formal Environmental Impact Assessments, as well as information on noise and shadow flicker, and an assessment of the impact on dwellings, the landscape and natural heritage¹². They acknowledged that PPS18 does not currently offer additional protection to Areas of Outstanding Natural Beauty, but that a more cautious approach has been advocated under the Strategic Planning Policy statement (SPPS).
76. Departmental officials confirmed that the cumulative impact of further turbines is taken into account, but that there is no precise definition of cumulative impact: it is largely a judgement call for planners. The issue of identifying a cumulative impact is further complicated by turbines which have been granted planning permission, but which have not yet been – and may never be – constructed. Whilst officials acknowledged that some areas may have reached saturation point, there is no official recognition of this.

Oral evidence from the Chartered Institute of Environmental Health

77. Environmental Health Officers within local authorities are routinely consulted regarding planning applications relating to industrial developments, including wind farms. They review planning applications against Planning Policy Statement 18 by comparing predictions of noise impact assessments against ETSU-R-97 limits and Institute of Acoustics guidelines.
78. During their briefing session, representatives advised the Committee that, while they recognise wind energy as a very important part of the energy mix and should be supported, wind turbines need to be in the right locations. They called for the policy context to be developed and refreshed to make sure that the most appropriate locations are identified.

*'We are in a location that is exposed to a large amount of wind energy coming from Atlantic weather systems, so we are in an ideal position to capture wind energy. It is just about refining those locations to the extent that residents are adequately protected.'*¹³

79. They also indicated that existing policy and guidance does not take due cognisance of legitimate concerns in relation to the noise impact of turbines, and called for an urgent review.

*'We are not saying that a moratorium is needed here and now, but we recognise that we have a disproportionate number of turbines and a unique settlement population, and our profession is seeing noise impacts and concerns about noise that are not being reflected in the current policy and guidance. We are imploring you that this needs to be looked at again with some urgency.'*¹⁴

10 Departmental briefing 3 July 2014. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2

11 Departmental briefing 3 July 2014. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2

12 Departmental briefing 3 July 2014. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2

13 Dr Chris Jordan, Chartered Institute of Environmental Health briefing on 5 June 2014. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2

14 Mr Paul McCullough, Chartered Institute of Environmental Health briefing on 5 June 2014. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2

80. Representatives made the Committee aware that additional conditions placed on planning consent for turbines would not only provide a means of monitoring the development, but also provide reassurance to residents.

“A set of standard conditions has been produced by the Institute of Acoustics and has been endorsed fully for use in England, Scotland and Wales. However, in Northern Ireland, we have not fully endorsed those conditions, and that creates a problem for us. The specific issue is in relation to a condition that asks the developer to demonstrate that they are in compliance with the noise limits in the event that a complaint from a member of the community arises. It is an important condition because it gives that level of confidence that, as well as achieving the noise limits, there are other means of providing confidence to the community and residents in the vicinity that the developments can go ahead without causing undue problems. In the absence of a complaint requiring a developer to undertake that investigation and to demonstrate that compliance, it falls to local government and the planning authorities to do that.”

81. *“There are problems with that, and they are threefold. First, as I said, it does not show a great degree of confidence in the planning process if the developers are not able to show that. Secondly, it can lead to a problem of disproportionate costs because, as I said, a large number of those developments are going into rural dispersed areas that are higher upland areas, and those areas do not have a large industrial base or a residential population base that can bear the extraordinarily high costs of investigating compliance with noise limit conditions. Thirdly, it is not providing the best means of determining compliance with noise limits because the best way of doing it is to be in control of the operation of the turbine so that it can be turned on and turned off relative to the noise measurements that you wish to undertake. If the council is undertaking those measurements or the Planning Service is commissioning those measurements to be undertaken, they will not have control of the turbine to be able to do that in the best manner possible.”¹⁵*

The application of the Aarhus Convention

82. Stakeholders – primarily Windwatch NI and West Tyrone Against Wind Turbines - have drawn the attention of the Committee to the recent decision of the Court of Justice of the European Union (‘CJEU’) in *Commission v the United Kingdom*¹⁶ (‘*Commission v UK*’) and suggested that ‘planning applications... have been approved unlawfully’. The Committee agreed to request legal advice on this issue, and this has been summarised below.
83. The Aarhus Convention establishes a number of public rights related to environmental matters. The key rights are:
- (i) the right of everyone to receive environmental information that is held by public authorities (‘access to environmental information’);
 - (ii) the right to participate in environmental decision-making. (‘public participation in environmental decision-making’);
 - (iii) the right to review procedures to challenge public decisions that have been made without respecting the rights enumerated at (i) and (ii) or environmental law in general (‘access to justice’)

It is the third of these rights which was relevant in *Commission -v- UK*

84. The amended text of the relevant Directives required the UK to provide that, where an applicant in a case (for example a judicial review) relied on the Aarhus Convention, the costs of those proceedings should not be ‘prohibitively expensive’. The intention was to ensure that

¹⁵ Dr Chris Jordan, Chartered Institute of Environmental Health briefing on 5 June 2014. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2

¹⁶ Case C-530/11

concerned individuals and non-governmental organisations, such as charities, could challenge major development decisions without risking prohibitive costs.

85. In *Commission –v- UK*, the Commission argued that in failing to put in place legislation to ensure that court proceedings to which the Aarhus Convention applied were not prohibitively expensive, the UK had either not transposed or failed adequately to transpose the relevant provisions of the Directive. UK courts have power to make protective costs orders but this was on an ad hoc, not a legislative basis, and the Commission said this was not adequate.
86. The CJEU did not make any observation about the lawfulness of planning law in the UK generally, and the judgment did not suggest that planning applications in any part of the UK have been approved unlawfully. The judgment relates only to costs in court proceedings to which the Aarhus Convention applies.
87. On 25 March 2013, the Department of Justice made the Costs Protection (Aarhus Convention) Regulations (Northern Ireland) 2013 ('the 2013 Regulations') which came into effect on 15th April 2013. Under Regulation 3 of the 2013 regulations, in an Aarhus Convention case, the costs recoverable from an applicant are not to exceed £5,000 where the applicant is an individual and £10,000 where the applicant is a legal entity or unincorporated association; the costs recoverable from a respondent are not to exceed £35,000. This is a clear and precise statutory framework under which the state can ensure that costs in Aarhus Convention proceedings not 'prohibitively expensive': it was the absence of such a framework that was challenged in *Commission –v- UK*.
88. The absence of regulations between 2005 and 2013 did not prevent applicants seeking (and being granted) protective costs orders as in the A5 Alliance case (although under the 2013 Regulations the costs of the A5 Alliance would have been capped at £10,000 rather than £20,000).

Issues raised by submissions

89. A wide range of planning issues have been raised by stakeholder submissions¹⁷, both in relation to a strategy for the development of renewable energy and the practical implementation of PPS 18. In the main, developers have indicated that they believe PPS18 is adequate for determining applications, including the establishment of separation distances between wind turbines and houses.
90. *"In our view, PPS 18 has allowed considerable progress to be made towards the Strategic Energy Framework target, Programme for Government targets and the aims outlined in the Sustainable Development Strategy and Regional Development Strategy. We strongly believe that the language and approach of PPS 18 is appropriate to the regulation of proposals for wind farms in Northern Ireland. We believe that Northern Ireland has an appropriate planning policy framework in place for renewable energy and that the Strategic Planning Policy Statement should maintain the language and approach of PPS 18 to ensure attainment of our renewable energy targets and the siting of renewable energy generating facilities in appropriate locations within the built and natural environments."*¹⁸
91. Many other submissions, however, suggest that the presumption in favour of wind development implicit in PPS18 does not properly hold the developers to account.
92. The following points reflect stakeholder concerns:

Regional renewable energy strategy

93. Although a regional strategy for the development of renewable energy falls within the remit of the Department of Enterprise, Trade and Investment, responsibility for the relevant planning

17 All written submissions received have been published at Appendix 3 of this Report.

18 Extract from a submission from TCI Renewables, published at Appendix 3 of this Report.

- aspect lies with the Department of the Environment. DOE planners both at central and local level consider applications for the siting and location of the necessary infrastructure, including wind turbines and electricity sub-stations.
94. Professor Geraint Ellis¹⁹ outlined to the Committee how local authorities in England and Scotland have been encouraged to identify and zone sites for wind turbines, and he also referred to the more proactive step taken by Wales where eight specific zones have been identified for the siting of large-scale wind energy development.
95. A number of stakeholder submissions highlighted the need for a coherent regional strategy, so that there is an overall mechanism for monitoring and controlling the sites of wind development, and, more positively, that the most suitable, rather than the most available, sites are chosen.
96. This is clearly expressed by Craigavon Borough Council. Although the Council believes that *“the relatively high wind resource available to Northern Ireland means that both on-shore and off-shore wind has the potential to make a significant contribution to the reduction in carbon emissions and climate change effects, the security of local energy supplies and delivery of some local jobs together with improved infrastructure”*, the delivery of on-shore wind developments *“should be led by a strategic Government plan which seeks to determine how much on-shore wind energy is required and how much can be hosted by specific geographical locations without detriment to local communities, the tourist industry, habitats and the local environment in general.”*²⁰
97. The submission from Community Places sets out its views that *“the current renewable energy policy and strategic guidance provide no regional spatial guidance for wind energy proposals. The result has been the rapid proliferation and scattering of single wind turbines and wind farms region-wide in areas of the highest wind resource. This gap in policy should be addressed with a regional spatial framework that could inform local-level decision making for the large volume of existing and future renewable energy applications (686 single turbines and 54 wind farm applications currently pending in the system). It would also provide greater certainty for developers and communities. Such a document could also inform future decision making regarding infrastructure works and improvements for such as roads/grid connection to allow NI to meet its renewable energy targets.”*²¹
98. Similarly, Northern Ireland Environment Link suggests that *“an updated Landscape Character Assessment combined with landscape capacity and environmental sensitivity studies would enable the identification of spatial zones which encompass land suitable for major wind power developments. In the context of local government reform and the imminent return of planning powers to local Councils there is an urgent need to develop strategic spatial guidance to provide increased clarity for decision makers and certainty over the provision of supporting infrastructure (such as grid connections). It would also help reduce contestation and inform more consistent and strategic planning decisions across new local Council areas.”*²²
99. Juno Planning and Environmental Ltd makes the further point that *“this issue cannot be reviewed in isolation but rather should be reviewed in conjunction with PPS21- Sustainable Development in the Countryside as both policy provisions of both documents result in implications for both wind energy development and development of single houses in the countryside. This should also be highlighted in the context of the publication of the SPPS.”*²³

19 Professor Ellis' presentation is included at Appendix 7 of this Report; his oral evidence on 7 November 2013. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2

20 All written submissions received have been published at Appendix 3 of this Report.

21 All written submissions received have been published at Appendix 3 of this Report

22 All written submissions received have been published at Appendix 3 of this Report

23 All written submissions received have been published at Appendix 3 of this Report

Impact on the Natural Heritage

100. Concerns that the visual or environmental impact of wind turbines on Areas of Special Scientific Interest (ASSIs) or AONBs is not being adequately assessed or taken into account have been expressed in a number of submissions.
101. The Committee for Regional Development has highlighted its opposition to the siting of wind turbines or wind farms on land owned by the Department of Regional Development and its Arm's Length Bodies in Areas of Outstanding Natural Beauty, such as the Mournes.²⁴
102. The Irish Planning Institute has put forward its view that *“PPS18 needs to be explicit in its intent to protect, manage, and promote sensitive cultural landscapes including Areas of Outstanding Natural Beauty (AONBs), the UNESCO World Heritage Site (WHS) at the Giant's Causeway (one of only three such designated sites on the island), and Areas of Scenic Quality, the latter of which were identified in the Landscape Character Assessment (LCA) 2000. These Areas of Scenic Quality have been incorporated into Development Plans as Areas of High Scenic Value. At present PPS18 does not differentiate between sensitive landscape areas and other areas. Clarity on this would avoid any room for misinterpretation by both advocates and assessors of proposed wind energy development. This clarification may also need to apply to SACs and SPAs, which are also recognised as sensitive areas in PPS18.”*
103. A residents' group in County Antrim believes that *“PPS 18 currently appears to be much too open to interpretation with regard to issues such as visual amenity and landscape character and the appropriate siting of wind turbines. ‘Unacceptable impact’ is a term which requires much more precise clarification and prescriptive definition. The Supplementary Planning Guidance which accompanies PPS 18 does provide a fairly comprehensive assessment of the capacity of the separate Landscape Character Areas of NI to accept wind energy development, yet the SPGs are often almost completely ignored when planning approvals are granted on inappropriate sites against their advice.”*²⁵
104. The need for PPS 18 to be amended to include a specific reference to AONBs and ASSIs was also raised by submissions from residents of those areas. Many residents, as well as organisations such as Northern Ireland Environment Link and the National Trust, believe that there should be a presumption against granting planning permission for major wind farm developments, and medium or large-sized turbines, within Areas of Outstanding Natural Beauty.

The ‘Wider economic benefits’ consideration in PPS18

105. Many submissions focus on the requirement of PPS18 for planners to give significant weight to the wider environmental, economic and social benefits of all proposals for renewable energy projects in determining whether planning permission should be granted. Respondents have suggested that the perceived economic benefit should not outweigh other factors:
106. *“Several Planning Policy Statements and guidelines have been published recently that align planning policy with an overly narrow concept of conventional economic development. The definition of ‘economic benefits’ is unclear as it has not been defined and neither are its objective intentions. There must be a clear definition of what the economic and social benefits actually are. These must be real, as opposed to aspirational, since the adverse impacts are real. It is not enough to permit a certain level of noise because an applicant claims that the proposal will create 100 jobs. Such claims are often aspirational and unfulfilled. The planning system has no role in ensuring that those 100 jobs actually appear. It is solely about land management.”*²⁶

24 All written submissions received have been published at Appendix 3 of this Report

25 Braid Valley Preservation Group submission. All written submissions have been published at Appendix 3 of this Report.

26 Submission from Windwatch NI. All written submissions have been published at Appendix 3 of this Report.

Effectiveness of PPS 18

107. It has been suggested by one submission – from Windwatch NI – that there is a need for an audit of the past effectiveness of PPS 18, although this was mainly directed towards the economic outcome, rather than the contribution of renewable energy derived from wind turbines towards meeting reduced carbon emissions targets.
108. *“There is an increasing suspicion in rural communities about the veracity of the claimed benefits from a proposal for which they are being asked to sacrifice their environment, amenity and health. On the basis of job creation alone, the more than 70 wind farms already approved seem to have grossly exaggerated the numbers to be employed on a permanent basis. There is therefore an urgent need for a retrospective audit of claims about economic, environmental and social benefits of specific wind farms. This must be carried out by an independent consultant with no links either to the wind industry, the government or the various consultees whose impartiality has become so compromised. The object would be to establish if the future benefits projected by the applicant and accepted by the planners, ever materialize, and was this cost effective for the community as a whole?”²⁷*
109. Issues relating to the implementation of PPS 18 and the related planning processes were also raised in submissions.

Additional planning conditions

110. It has been suggested by stakeholders that a formal complaint investigation condition should be attached to planning permission, as is the case in the rest of Great Britain.
111. *“Complaint investigation conditions for wind farm and single wind turbine developments are routinely applied by Local Planning Authorities in England, Wales and Scotland; the Planning Inspectorate for England; the Planning Inspectorate for Wales; the Directorate for Planning and Environmental Appeals for Scotland; and the Secretary of State for Communities and Local Government. In addition, complaint investigation conditions are also recommended by the Institute of Acoustics and the Renewables UK industry body within their example conditions.”²⁸*

Planning applications for grid connection

112. A number of submissions highlighted the desirability of a planning application for connection to the grid being assessed at the same time as the wind turbine application, instead of subsequently, as is currently the case.
113. This would provide the Department with a more accurate record of viable applications as a significant number of single developments do not proceed when the cost and practical difficulty of connection to the grid is investigated by the applicant.
114. The Committee, however, is aware that this has been investigated by the Committee for Enterprise, Trade and Investment as part of its Review of Electricity Policy. That Committee found that, due to congestion on the grid, costs of grid connection in Northern Ireland are considerably higher than in Great Britain or the Republic of Ireland. In addition, the high number of applications for grid connections has also resulted in long delays for many developers.
115. This view was reflected in evidence given to the Committee for the Environment by representatives of Northern Ireland Electricity and the Northern Ireland Authority for Utility Regulation on 19 June 2014²⁹.

27 All written submissions received have been published at Appendix 3 of this Report.

28 Submission from Craigavon Borough Council. All written submissions have been published at Appendix 3 of this Report.

29 All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2

Different process for individual turbines and wind farms

116. It appears from submissions that in a number of instances single wind turbines have been erected in such close proximity so as to take on the characteristics of a wind farm. Departmental officials have advised the Committee that, although wind farm applications are referred to Strategic Planning Division to be considered centrally, each application for an individual turbine is not considered in isolation.

“As part of the consideration of each turbine, we do take in the cumulative impact of turbines in the area. That includes those that have been approved and not built, together with those that have been constructed, and any in the pipeline that have not been decided.”³⁰

117. However, some submissions have challenged the efficacy of the system:

118. *“The present planning system, which involves commercial wind farm applications being dealt with in Planning Headquarters while private turbine applications are determined at local planning level, is nonsensical. We have seen in this area that it is a case of ‘the right hand not knowing what the left is doing.’ The result of this is improperly regulated assessment of applications, causing potentially higher levels of cumulative impact. As an example, the local planning office in Ballymena seems to be at odds with Planning HQ over whether PPS 18 applies to single/low number turbine applications or not - this discrepancy emerged after permission was granted for two giant turbines at the Michelin Tyre Plant, well within PPS 18 set-back guidelines from a number of residential properties.”³¹*

119. Also, *“There are already numerous examples of single wind turbine planning applications coming in succession one at a time, or of applications for a pair of turbines being made as two separate single turbines. Legal ownership of the turbines can be diverse, for example by each individual turbine being owned by a different limited company. Whether they arise by coincidence or by design, these confluences have all the adverse characteristics of a multi-turbine wind farm, or, worse, they impact on the local community from several directions across an even larger area. The adverse impact on the local community of such single turbines and the need for protection is every bit as real as if they had been approved in combination from the outset.”³²*

Lack of detail on application forms

120. It appears that there is not a specific form of application for planning consent for wind turbines. Some submissions have indicated that this results in a lack of appropriate information being made publicly available.

121. *“The application processes, including the planning application forms, are woefully inadequate as they are aimed at somebody who is applying to build a house or extension. The planning application forms do not go into enough detail regarding the wind turbine allowing the applicant to stick to the bare minimum of information in the hope that nobody will raise an objection. The current planning application forms for the purposes of building onshore wind turbines are not fit for purpose. A completely separate application form needs to be produced that reflects the specific needs for the building of wind turbines.”³³*

30 Hansard transcript of the briefing on 3 July 2014. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2.

31 Submission from Braid Valley Preservation Group. All written submissions have been published at Appendix 3 of this Report.

32 Submission from Mr Robert Graham. All written submissions have been published at Appendix 3 of this Report

33 Submission from Mr D Boggs. All written submissions have been published at Appendix 3 of this Report

Need for confirmation of accuracy of information on application

122. Various residents' groups have indicated in their submissions that information contained in applications for wind developments had not been confirmed or verified by Planning Service, and subsequently proved inaccurate.
123. *"The mechanism whereby the requirement of an ES (Environmental Statement) gave us more cause for concern which was provided by the developers and is required by law to be impartial, with its objective "being to inform the decision-maker rather than to promote the project". Yet the ES for this project was found to be far from impartial and on some crucially important yet basic points, such as the distances between this proposed development and other wind farms, the ES was factually incorrect, a point which we raise in our 59 page report submitted to the planning department and a point that had to be acknowledged by the developer some months later. The planning service are not identifying these shortcomings or any of the others that were highlighted."*³⁴ (Orra Action Group)
124. Also, *"Due diligence should also be carried out by the planning services to ensure that the application is 100% accurate and does not mislead the public or the authorities."*³⁵

34 Submission from Orra Action Group. All written submissions have been published at Appendix 3 of this Report.

35 Submission from D Boggs. All written submissions have been published at Appendix 3 of this Report.

Wind Turbine Noise

Background

125. The second term of reference for the inquiry is to compare the perceived impact of wind turbine noise and separation distances with other jurisdictions and other forms of renewable energy development.
126. The current guidelines used in assessing wind turbine noise are those set out in the ETSU-R-97 guidance³⁶. This states, expressed in the simplest terms, that noise from a wind farm should be limited to 35 to 40 dBA during the day and 43 dBA at night. ETSU-R-97 was originally published in 1996 as a result of a working group established by the Department of Trade and Industry (DTI) to examine the difficulties experienced in applying various noise guidelines to wind farm noise assessments and it has been used extensively since then in the devolved administrations. Although its recommendations were to be reviewed 2 years after publication, no formal review took place, but it is understood that ETSU-R-97 is kept under consideration by the government.
127. In 1999 the World Health Organization (WHO) recommended noise limits for both the inside and outside of dwellings during day and night time periods. During the daytime levels these should be at, or lower than, 35 dB LAeq,16h inside dwellings, and 50 dB LAeq,16h outside. In 2009, the WHO revised the guidance for night time noise to a guideline limit for bedroom LAeq,8h with the window open of 30 dB.
128. Separation distances (sometimes referred to as setback) between turbines and residential areas vary greatly between countries in term of the distances, the reason for their establishment, and the weight that is given to them i.e. whether they are recommendations or more of a statutory requirement.
129. In Northern Ireland, there are no statutory separation distances stipulated in legislation. Recommendations, or suggestions, for separation are made through planning policy and guidance. Since these influence and inform decisions made on applications, it is good practice for a developer to adhere to these recommendations. Planning Policy Statement 18 (PPS18) indicates that a separation distance of 10 times rotor diameter to occupied property, with a minimum distance not less than 500m, will generally apply to wind turbines. PPS18 suggests that turbines are a safe technology and that even in the rare event of structural damage occurring incidents of blade throw are most unlikely.
130. Distances are calculated on the basis of noise levels so as to reduce nuisance: *The minimum desirable distance between wind turbines and occupied buildings calculated on the basis of expected noise levels and visual impact will usually be greater than that necessary to meet safety requirements. Fall over distance (i.e. the height of the turbine to the tip of the blade) plus 10% is often used as a safe separation distance.*³⁷
131. In order to clarify many technical terms, and to address the issues raised by stakeholders, in relation to wind turbine noise, the Committee commissioned a report from a specialist acoustician, Mrs Ursula Walsh from the University of Ulster. These issues are detailed below, together with the comments from Mrs Walsh.

Type of Wind Turbine Noise

132. A number of submissions highlighted the noise generated by wind turbines. As anticipated, many residents living close to turbines feel that the level and type of noise emanating from

36 The Assessment and Rating of Noise from Wind Farms, Final report from the Working Group on Noise from Wind Turbines, published September 1996.

37 Best Practice Guidance to Planning Policy Statement 18 'Renewable Energy', DOE, published 2009

turbines – particularly the newer, more powerful turbines – is having a detrimental impact on their day to day lives and their longer-term health.

133. The type of noise generated by wind turbines has been variously described in submissions as ‘*low frequency noise*’; ‘*vibrational pulsating*’ noise; ‘*amplitude modulation* (a loud beating or slapping noise)’; ‘*infrasound*’; noise ‘*of a different character*’ produced by taller and more powerful wind turbines; noise of an ‘*impulsive, intrusive and incessant*’ nature; ‘*blade swish*’; ‘*noise created and magnified by the interaction of varying air velocities*’; noise ‘*enhanced by excessive wind shear and varying upland topography*’; ‘*noise resonating within the building structure*’.
134. The Committee asked its specialist advisor to comment on the type of noise objectively recorded as being produced by wind turbines; if the type of noise varies with the size or number of turbines; and if the type of noise emitted relates to the topography.
135. The advisor explained that aerodynamic noise accounts for the majority of the noise from wind turbines. Aerodynamic noise generation is very sensitive to the speed of the blade, and to limit its generation, large modern wind turbines restrict the rotor speeds. Other means of reducing aerodynamic noise are associated with the design of the blade which has become more efficient in recent designs, causing a greater proportion of the wind energy to be converted into rotational energy and less into acoustic noise.
136. *“Many of the noise issues mentioned above are more associated with older turbines. Anecdotally, “new” wind turbines installed in Northern Ireland are in fact often reconditioned turbines. Therefore NI may not be benefiting from more modern lower noise emitting design. Furthermore the blades may have signs of wear (such as blade surface irregularities, holes or slits) also increasing noise levels beyond those expected of new turbines. The enquiry may wish to consider age and type of turbines being proposed for installation in Northern Ireland.”³⁸*
137. *“The sound level from turbine blades is often not completely steady, but is modulated (fluctuates) in a cycle of increased and then reduced level, sometimes called blade swish. It was thought that in the majority of installations the modulation depth may be up to 2-3 dBA, which was regarded as being acceptable by the ETSU-R-97 working group. In some situations, however, the modulation depth increases to the point where it can become more pronounced and potentially give rise to increased annoyance. This phenomenon is known as amplitude modulation (AM). Findings of several authors concluded that:*
- *Amplitude variations can occur downwind from single wind turbines and wind farms, and can be observed at distances up to approximately one km and perhaps more.*
 - *The low-frequency character of wind turbine sound is a possible cause of increased annoyance. Research shows significant variations in the lower frequencies of approximately 8 dB.”³⁹*
138. The issue of low frequency noise has recently been brought to the attention of the Committee by Windwatch NI.⁴⁰ Low frequency noise has been recognised by the World Health Organization as meriting special attention, requiring lower environmental limits than those of other noises, as it presents particular problems to those people who are sensitive to its effects. The effects of low frequency noise on health follow from the stress and frustration which sufferers experience in attempting to find a solution to their problem, which is often worse at night and affects sleep.

“As wind turbines get larger, the turbine noise moves down in frequency and that the low-frequency noise would cause annoyance for the neighbours. The relative amount of low-

38 Specialist Advisor’s report September 2014 has been reproduced in full in Appendix 7 of this Report.

39 Specialist Advisor’s report September 2014 has been reproduced in full in Appendix 7 of this Report

40 Windwatch oral briefing on 23 October 2014. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2.

frequency noise is larger for large turbines (2.3–3.6 MW) than for small turbines (≤ 2 MW). At long distances higher frequencies are reduced compared to low frequencies. Due to the air absorption, the low-frequency content becomes even more pronounced.”⁴¹

139. The research on the health impact of wind turbine noise has not proved conclusive, but *“annoyance is probably the most widespread adverse effect of noise. There is a wide range of how people respond to noise due to variations in individual sensitivity to noise and/or susceptibility to annoyance. These variations are not well understood in physiological or psychological terms. Adverse feelings aroused by the wind turbine noise have been found to be influenced by feelings of lacking control, being subjected to injustice, lacking influence, and not being believed. The risk of annoyance from wind turbine noise is increased in quiet areas. The general trends show that:*
- *annoyance increases with noise level,*
 - *sleep disturbance was associated with annoyance*
 - *Descriptors of the turbine noise characteristics including swishing, whistling, pulsating/throbbing and resounding were highly correlated with noise annoyance.”⁴²*

Regulation of Wind Turbine noise

140. The ETSU-97 regulations which set out acceptable levels of day- and night-time noise are deemed to be in need of revision by many of those who made submissions, including a number of local councils, so that the noise output from more modern and more powerful turbines can be appropriately regulated. The current guidelines have been deemed outdated by many stakeholders and described as ‘*vague, open to interpretation and unenforceable*’, immeasurable, and inadequate to deal with modern and emerging technology.
141. Representatives of the industry, however, believe that the existing regulations are still sufficiently robust to deal with the latest technology; the Minister has also endorsed the use of this guidance in his submission to the Committee
142. The Committee asked its specialist advisor to comment on the adequacy of ETSU-97. Specifically she was asked for her views on whether ETSU-R-97 is in need of revision; if higher noise limits for night-time can be justified; and if the acoustic impact on neighbouring properties can be adequately gauged as a desk exercise, in advance of the installation and operation of a wind turbine.
143. The specialist advisor has raised the following points in relation to ETSU-97:
- “Further consideration of some parts of ETSU-R-97 would be useful as there is some ambiguity regarding the rationale of some recommendations. The evidence base has expanded significantly since 1997 with much greater understanding of the acoustics of large wind turbines and the annoyance/health effects of wind turbine noise, AM and reaction to the low frequency content. There has also been further research on the propagation of wind turbine noise.*
144. *It is recommended that further consideration of the following content of ETSU-R-97 would be desirable:*
- *It is not necessary to use a margin above background approach in such low-noise environments*
 - *The LA90 used for both the background noise and the wind farm noise*
 - *Night time limit of 43dBA in view of the revised WHO guidelines*
 - *The statement that background noise rises with increasing wind speed*
 - *The penalties regarding the character of noise and tones.*

41 Specialist Advisor's report September 2014 has been reproduced in full in Appendix 7 of this Report

42 Specialist Advisor's report September 2014 has been reproduced in full in Appendix 7 of this Report

145. *"The WHO guidance for indoor noise levels at night was 35dB when ETSU-R-97 was published in 1997, it has now been revised to 30dB. ETSU-R-97 is influenced by BS4142. BS4142 is currently being updated to bear in mind the advances made in current knowledge of industrial noise and annoyance (although it will most likely exclude wind turbine noise and areas with very low background noise levels). The proposed revisions to BS4142 should be borne in mind when considering whether ETSU-R-97 should be updated."*⁴³
146. During his oral briefing session on 5 June 2014, Dr Chris Jordan representing the Chartered Institute of Environmental Health advised Committee members that *"ETSU-R-97 was drafted in 1996 when wind turbines were in the order of a 40-metre hub height and, typically, half a megawatt in power. The wind farm turbines that are currently coming through the planning process are, typically, in the order of 80-metres hub height and three megawatts in power, individually. Given those increases in turbine heights and power outputs, and the consequential changes in the character of the noise from those larger wind turbines, the protection to amenity originally assumed by ETSU-R-97 may no longer be valid."*
147. *"The environmental health service in Northern Ireland considers that a robust and transparent review of ETSU-R-97 is long overdue and should be prioritised with other United Kingdom Administrations. It is hoped that such a review would regain residents' confidence in the protection afforded to their amenity by planning policy and noise standards covering wind energy developments."*⁴⁴

Monitoring of Wind Turbine noise and the role of EHOs

148. Complaints regarding noise may be investigated by local Environmental Health Officers (EHOs), but such investigations place a considerable strain on existing resources – a number of local councils have highlighted this in their submissions. In addition, EHOs have no remit to investigate shadow flicker nuisance as there are currently no regulations in place to address this.
149. The practical measurement and monitoring of wind turbine noise seems problematic. The Committee sought to examine how this should be carried out and if there is a sufficient level of expertise available to local councils. It was unclear whether council environmental health officers are adequately experienced and resourced for this type of monitoring. Stakeholders had also proposed that there should be continuous and long-term monitoring of noise by developers to build up a complete record of noise levels produced by wind turbines and that this should be introduced as an enforceable condition of planning consent.
150. The view of the specialist advisor was that *'On-going, long term monitoring would enable the public, developers, planners and the Local Authority to determine the continuing noise exposure of the nearby noise sensitive receptors. In addition, this would identify where Wind Turbine noise has increased beyond the predicted and permitted levels. This would also enable action to be taken to reduce noise where it is deemed necessary.'*⁴⁵
151. Mrs Walsh also suggested that *'Local planning authorities should consider whether it is practicable to control or reduce noise levels, or to mitigate the impact of noise, through the use of conditions or planning obligations. An Example Planning Condition is provided in the Institute of Acoustics (IOA) Good Practice Guide to the application of ETSU-R-97 for the assessment and rating of wind turbine noise (2003).'*⁴⁶
152. On the role and level of expertise of Environmental Health Officers, she put forward the view that *'There is a great deal of expertise with the Local Authority employed Environmental Health*

43 Specialist Advisor's report September 2014 has been reproduced in full in Appendix 7 of this Report

44 Hansard transcript of briefing on 5 June 2014. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2.

45 Specialist Advisor's report September 2014 has been reproduced in full in Appendix 7 of this Report

46 Specialist Advisor's report September 2014 has been reproduced in full in Appendix 7 of this Report

profession in Northern Ireland with numerous having post graduate qualifications in Acoustics and Noise Control. In addition Environmental Health Officers within LA are routinely consulted regarding planning applications in relation to industrial developments including wind farms. There is a considerable burden associated with contributing to planning applications regarding wind turbines.⁴⁷

153. However, representatives of the Chartered Institute of Environmental Health highlighted the difficulties associated with the assessment of the potential noise impact of proposed wind turbines.

"It is an acute problem for the environmental health service in dealing with those applications and assessing the noise impact associated with them. Our role is very much to be independent between the developer and the local residents and to assess those impacts against the prevailing guidance."⁴⁸

Cumulative noise impact of wind farm developments

154. The Committee has heard some evidence⁴⁹ that a single turbine can produce almost as much noise as a cluster of turbines, thereby 'using up' the available noise limit. The Committee asked its specialist advisor for further information on how the cumulative noise produced by a cluster of turbines is measured, and how this differs from the noise produced by a single turbine.

155. Mrs Walsh made the following comments on the cumulative noise impact.

"Planning Policy guidelines including ETSU-R-97 are applied for both wind farms and single wind turbines. Smaller singer turbines are typically sited closer to residential dwellings than larger turbines. For example, a 250kW single wind turbine is typically sited 300m from a neighbouring dwelling. At this distance, it will effectively use up the full ETSU-R-97 limits. If at a later stage a developer wished to install a 10MW wind farm on the hill 1km from the same dwelling, it would be refused due to cumulative impacts, as the single wind turbine has used up all of the limit."

156. *"A large wind farm produces more noise than a single wind turbine, but single wind turbines under planning policy are allowed to be sited a lot closer to dwellings. It is suggested that a more strategic approach to both single and wind farm applications would be beneficial, as opposed to the ad hoc approach currently employed in Northern Ireland."*

157. Mrs Walsh has also highlighted the DEFRA guidance (2011) that, in calculating noise limits under ETSU-97, absolute noise limits and margins above background should relate to the cumulative effect of all wind turbines in the area contributing to the noise received at the properties in question. Any existing turbines should not be considered as part of the prevailing background noise.

Setback (Separation) distance

158. The measurement of appropriate set-back distances to minimise noise disturbance has given rise to a great deal of concern among stakeholders. Typical is the following comment:

159. *"The interpretation of PPS 18, where Policy RE1 on 'Renewable Energy Development' states that; 'For wind farm development a separation distance of 10 X rotor diameter to occupied property, with a minimum distance of 500m will generally apply'. It appears to me that both PPS 18 and the Best Practice Guidance use the term 'wind farm' throughout to refer to all wind*

47 Specialist Advisor's report September 2014 has been reproduced in full in Appendix 7 of this Report

48 Dr Chris Jordan, Chartered Institute of Environmental Health briefing on 5 June 2014. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2

49 Briefing from the Chartered Institute for Environment Health, 5 June 2014. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2

energy developments, with the possible exception of small single turbines (under 50Kw and under 15m in height). It can therefore safely be concluded that, irrespective of the number of turbines involved in an application, PPS 18 will apply. How did this industrial size turbine get planning approval 180m from several residential properties?"⁵⁰

160. It has been suggested that a minimum linear separation distance should be made mandatory, rather than, as currently advised by the Department, a matter of best practice for wind farm development, as a distance of 10 times rotor diameter to occupied property (with a minimum distance of not less than 500m).
161. *"It is essential to specify minimum separation distances between wind turbines and dwellings that are applied universally. This is for two reasons: i. to enable a more efficient planning process and more certainty to the public by setting a simple minimum protection that anyone can easily check and making it less likely that an application will fail on the other criteria, both objective and subjective, that are necessarily more expensive to test; and ii. to provide an essential safety net to protect health and wellbeing in a process which otherwise is necessarily subjective and/or complex and not well understood (particularly noise, amenity and health aspects) and consequently wide open to manipulation and abuse. The current process appears to tolerate insecure procedures and reports that seem prone to significant omissions and errors/misrepresentation and that can take advantage of selecting from menus of different approaches to producing results in order to achieve the 'right' result for the developer."*⁵¹
162. The specialist acoustician made the following points in her report regarding the relationship between setback distance and noise.
163. *"Sound levels reduce with increasing distance from the source. Generally, doubling the distance from a point source produces a reduction in sound level of 6dB. However atmospheric absorption, ground effect, reflections and screening also affect how sound travels. Higher frequencies are absorbed in air much more significantly than lower frequencies. At a distance of 1km there is little air absorption of low frequency sound and a substantial absorption of the high frequency components.*
164. *Meteorological (weather) conditions fluctuate and can influence sound propagation. Topography also is of importance when predicting how sound will travel over distances, convex and concave ground contours must be taken into consideration.*
165. *From a noise perspective, separation distances are irrelevant, noise levels are the relevant parameter. Whilst a set-back distance is easier to measure, it provides no substitute for a robust noise impact assessment. For example a single wind turbine 500m from a resident will produce significantly less noise than a 20 turbine wind farm scheme at a similar distance.*
166. *Local topography can provide barrier effects (e.g. turbine on one side of a hill and the resident on the other) but these are limited to only 2dB, whilst valleys can increase the noise impact (e.g. wind farm on one side of the valley and the resident on the other side). Set back distances are more appropriately applied to visual impacts than noise impact."*⁵²
167. This viewpoint has been echoed by an international wind energy developer: *"Buffer zones or separation distances are not required by statute in the UK or Ireland and we believe that an effective means of managing wind turbine noise impacts is to set noise level limits at the noise sensitive receptors likely to be significantly affected, and require these to be met by planning conditions."*⁵³

50 Submission from A White. All written submissions have been published at Appendix 3 of this Report.

51 Submission from R Graham. All written submissions have been published at Appendix 3 of this Report.

52 Specialist Advisor's report September 2014 has been reproduced in full in Appendix 7 of this Report.

53 Submission from ABO Wind NI Ltd. All written submissions have been published at Appendix 3 of this report.

168. Assembly Research and Information Service produced a paper for the Committee on Approved Wind Farm Applications and Buffer Zones⁵⁴. This paper illustrated through a series of maps the impact of increasing setback of wind farms from existing domestic properties by distances ranging from 500m to 2km. These maps showed that in the more densely populated eastern counties in Northern Ireland a significant number of wind developments were situated less than 500m from domestic housing. Although there were considerably more wind farms in the western counties, particularly in Tyrone, these mostly appear to have been constructed further than 500m from housing.
169. When the setback distance was identified at more than 500m, the areas available for wind farms decreased considerably, and virtually none of the existing wind farms were situated at a setback distance of more than 2km from housing. This is indicative of the scattered population patterns throughout Northern Ireland.
170. The Committee also asked its specialist advisor for further information on separation distances in other jurisdictions. She made the following comments:
- “There is no worldwide agreement on appropriate setback distances from homes. There was limited awareness of wind turbine setbacks in many countries, or why a particular setback distance was chosen. Frequently, separation distances were set not based on visual impacts, but on noise limits, health and shadow flicker concerns.*
171. *It is clear that the leading on-shore wind generating countries such as Denmark and Germany do not have a standardised approach to setting separation distances. In Denmark, which has the highest wind energy capacity per capita, per land area, and per GDP in the world, a new regulation related to low frequency noise recommends a measured setback of 4 times the total height of the turbine (see also Mills and Manwell, 2012). In Germany, there is no national requirement or recommendation for wind turbine setback distances from residences; although the German states and local governments are responsible for guidelines determining setbacks. Five states in Germany use 1,000m, whilst the others used between 300 and 500m. However, state policies cannot be overly restrictive and must allow 20% of areas favourable to wind energy to remain open for wind facility development. In Germany, the average lower setback distance is approximately 450m and the average upper setback distance is approximately 700 meters.”*
172. *“Only three English authorities, i.e. Cherwell and Torrridge District Councils and Milton Keynes Council, had introduced specified minimum separation distances to protect residential amenity. These minimum separation distances do not hold any formal planning status and are “encouraged rather than enforced”.⁵⁵*
173. The Scottish Planning Policy indicates that ‘A separation distance of up to 2km between areas of search and the edge of cities, towns and villages is recommended to guide developments to the most appropriate sites and to reduce visual impact, but decisions on individual developments should take into account specific local circumstances and geography. Development plans should recognise that the existence of these constraints on wind farm development does not impose a blanket restriction on development, and should be clear on the extent of constraints and the factors that should be satisfactorily addressed to enable development to take place. Planning authorities should not impose additional zones of protection around areas designated for their landscape or natural heritage value’.⁵⁶

54 Research paper dated 5 November 2013, included at Appendix 6 of this Report.

55 Specialist Advisor's report September 2014 has been reproduced in full in Appendix 7 of this Report.

56 Specialist Advisor's report September 2014 has been reproduced in full in Appendix 7 of this Report.

174. Welsh Planning Policy on separation distance is set out in Technical Advice Notice (TAN) 8: Planning for Renewable Energy. This states that:
- ‘500m is currently considered a typical separation distance between a wind turbine and residential property to avoid unacceptable noise impacts, however when applied in a rigid manner it can lead to conservative results and so some flexibility is advised.*
175. Planning guidelines in the Republic of Ireland are similar to ETSU. They consider a number of issues around the siting of wind turbines, but noise is the primary consideration. Planning Policy states that:
- ‘Good acoustical design and carefully considered siting of turbines is essential to ensure that there is no significant increase in ambient noise levels at any nearby noise sensitive locations [including dwellings]. In general, a lower fixed limit of 45 dB(A)¹⁰ or a maximum increase of 5dB(A) above background noise at nearby noise sensitive locations is considered appropriate to provide protection to wind energy development neighbours in general, noise is unlikely to be a significant problem where the distance from the nearest turbine to any noise sensitive property is more than 500 metres. Separate noise limits should apply for day-time and for night time. During the night the protection of external amenity becomes less important and the emphasis should be on preventing sleep disturbance. A fixed limit of 43dB(A) will protect sleep inside properties during the night.’*

Development of other forms of renewable energy

176. While the Committee recognises that other technologies for the generation of electricity such as hydro, anaerobic digestion and solar are gradually emerging, the comparatively lower cost of on-shore wind energy has meant that it is likely to remain the most effective source of renewable energy generation for at least the medium-term future.
177. The lack of public discussion of alternative forms of renewable energy was reflected in the submissions received in response to the Committee’s Call for Evidence, with the overwhelming majority of submissions focussing only on the advantages and difficulties associated with onshore wind energy. While many submissions opposed energy generated by wind developments, there was little consideration of how renewable energy could be provided from other sources.
178. The submission from Castlereaigh Council highlighted the difficulties faced by local government in balancing the promotion of renewable energy such as solar and biomass against the need to protect valuable agricultural land and residential amenity. The Council states that it would welcome clear guidelines on how maintaining an appropriate balance in its decision-taking on renewable energy projects.
179. The Committee did not take evidence specifically on the development of renewable energy, other than that provided by wind, but members put questions to witnesses during oral evidence sessions in relation to this issue.
180. The Chartered Institute of Environmental Health made the following responses.
181. *“We recognise wind energy as a very important part of the energy mix... We are in a location that is exposed to a large amount of wind energy coming from Atlantic weather systems, so we are in an ideal position to capture wind energy.”⁵⁷*
182. *“Wind energy is only one form of renewable energy. It seems to me, at least, that we are thus far failing to harness other technologies and other means of renewable energy here in the North, including tidal, offshore, hydro and solar. There seems to be almost an inordinate focus on wind energy... If I understand the question correctly, you are asking me whether wind energy*

57 Mr Paul McCullough, Chartered Institute of Environmental Health briefing on 5 June 2014. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2

is a better or worse alternative to our conventional energy mix. I do not think that there is any contest. I say that because the benefits from the reduction not only in reliance on a fossil fuel energy mix but in the environmental impacts of that mix show that there is no comparison...[Mr Elliott: To be clear: are you saying that the environmental benefits of wind farms and single wind turbines outweigh the environmental negatives?] In my view, yes, they do. However, neither am I saying that there are not some potential negative environmental and social impacts of wind energy that do not need to be looked at.”⁵⁸

183. In discussion during his oral evidence session, Professor Geraint Ellis gave his view on the almost exclusive dependence of Northern Ireland on on-shore wind energy.

“I think that cost of delivering renewables by other means to the level of capacity probably would not be acceptable by the public, given all the issues that we have had with electricity generation. So, it is clearly the cheapest, and it is clearly the one that Northern Ireland has the most to exploit. It does not mean that we could not do it better though.”⁵⁹

184. In reflection of the evidence presented to it, the Committee has not made any specific recommendation in relation to the development of other forms of renewable energy.

58 Mr Gary McFarlane, Chartered Institute of Environmental Health briefing on 5 June 2014. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2

59 Professor Geraint Ellis, briefing on 7 November 2013. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2.

Community Engagement

Background

185. The third term of reference for the inquiry related to the extent of engagement by wind energy providers with local communities and to ascertain how this engagement may best be promoted.
186. Submissions from a wide range of stakeholders – not just community groups and individuals – have highlighted issues around the current level of engagement between energy companies/ developers, planners and the communities impacted by turbines. It is often seen as a box-ticking exercise, rather than a meaningful attempt to address the fears and uncertainties generated by the proposed development. There is a perceived bias in favour of the developers by the planners, with the use of processes that allegedly lack transparency and very restricted advertising or neighbour notification.
187. Some opponents of wind energy feel that there is a lack of substantive medical evidence to prove the health and safety (or otherwise) of those living in close proximity to turbines and that there should be an emphasis on producing this to reassure communities. Other practical concerns include the calculation of a financial benefits package; possible compensation for the devaluation of rural properties near turbines (as in road schemes); and provision for the eventual dismantling of turbines at the end of their productive life.
188. There are also suggestions, however, from some proponents of wind energy that an antagonistic attitude and vocal protests against applications are counter-productive, and actually work against real community engagement.
189. The following extract from an oral evidence session by the Chartered Institute of Environment Health highlights the vital importance of ensuring that communities have a real and informed involvement in any wind development proposals right from the outset:
190. *“If I could say something about the community aspect. I do not know whether members are aware of this, and I can make a copy available, but we did a modest study a couple of years ago of two rural communities. This was wind farms, not single turbines. One community had lived for a number of years with a wind farm in excess of five turbines. The other community was not far away, where a wind farm of a similar size had just received planning approval. We looked at the concerns and perceptions of those two communities in different scenarios. I am slightly paraphrasing, but it reinforces what my colleagues said and one of the underpinning points that we are making: if they are properly planned and set out, there is relatively little issue.*
191. *In the first scenario, residents reported that although they had lots of concerns about the wind farm, in reality very few materialised. I am talking about noise impact and impact on visual amenity. As someone said to me, “I’m sure that when they put the electricity pylons up however many years ago, that was something new that people were concerned about, and now we don’t even notice them”. That is an interesting analogy.*
192. *The big issue for the community that had these turbines was that despite all the rhetoric of how this would benefit the community, in reality there was little community benefit other than individual landowners profiting and, obviously, the renewable energy companies. That probably needs to be looked at. There is some indication since that work — I am not saying that that work was instrumental in it, although I hope that it played a part — that energy companies are looking at that afresh.*
193. *The benefits that accrue to the community, whether direct benefits through rates rebates that come to local government going into the overall pot or whether it is more innovative and out-*

of-the-box than that in looking at how it affects their energy bills in that locality, those sort of things need to be discussed.”⁶⁰

194. The Committee has found the work carried out in this area by the Fermanagh Trust in relation to community engagement to be particularly useful. The research paper, ‘*Maximising Community Outcomes from Wind Energy Developments*’ (2012)⁶¹, and the Trust’s submission to the inquiry, point to the lack of timely and meaningful community engagement in Northern Ireland and reflects many of the views of submissions from local residents. It also identifies examples of best practice in other jurisdictions.
195. *‘Developers should engage the public and local communities as early as possible and enhance engagement throughout these stages. From our experience, often in Northern Ireland the process of informing the public with regards to wind farm developments is inadequate and not early enough. Local people are often unaware that a developer is considering submitting a planning application for a wind farm project and on many occasions local people are simply unaware that a planning application has been submitted at all. Currently as often is the case in Northern Ireland, if communities are given advance notice prior to a developer submitting a planning application for a wind energy project, this is often at very short notice for communities and public representatives to actively and appropriately comment and input into the development. In reality what is happening is developers are providing information but not actively engaging with communities.’⁶²*

Stakeholder consultation seminar

196. The Committee agreed to hold a stakeholder event to focus specifically on issues relating to community engagement, with questions based on submissions to act as a guide for the discussion. The event was attended by a range of stakeholders including representatives of energy companies, developers, planners and community groups, and was recorded by Hansard.⁶³
197. The following issues were discussed:

Strategic level considerations

198. The first group of questions related to strategic level considerations.
199. It was considered whether the identification at a strategic level by government of areas which would be the most suitable locations for wind farm development would provide a clear and useful rationale for further community consultation.
200. Some stakeholders believed that the time for development of a strategic approach has passed – as evidenced by the number of wind farms already concentrated in West Tyrone – but that central government could still play its role as an exemplar by siting turbines in suitable areas such as forests. The focus should be on the needs and amenity of the residents, rather than simply on landscapes.
201. Representatives of local councils felt that time should be taken to include an effective strategy in local development plans which would incorporate a joined-up approach between agencies, and suggested the possibility of using the life-span of existing turbines to consider future policy.

60 Mr Gary McFarlane, Chartered Institute of Environmental Health briefing on 5 June 2014. All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2.

61 Research paper included at Appendix 6 of this Report

62 Submission from Fermanagh Trust. All written submissions have been published at Appendix 3 of this Report.

63 All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2.

202. Developers and planners agreed that it would be useful to identify areas most sensitive to development, but they were not convinced that it would be of benefit to zone areas as suitable for development. Some developers believed that areas suitable for single turbines should be identified separately from wind farms as these provided different levels of cost-effectiveness.

Cross-Departmental working

203. The need for a greater level of cross-Departmental working, e.g. between DOE, DETI and DARD, to address all aspects of community engagement was agreed by all stakeholders.
204. The ‘Communities and Renewable Energy’ study commissioned by DETI, DOE and DARD as part of the work of the Sustainable Energy Inter-departmental Working Group was welcomed, but there was a consensus that this would need to be put into practice – the three Departments have not as yet accepted the recommendations of the study.

Impact of the Planning Act 2011

205. The impact of the statutory pre-application community consultation process to be introduced by the Planning Act 2011 was broadly welcomed by all stakeholders as a formalisation of existing best-practice, but residents’ representatives felt that there was a need for independent community engagement reports, not just those prepared by developers.

Wind farm co-operatives

206. There was clear disagreement in the views expressed on the benefit of government support – either financial or advisory – for wind farm co-operatives (or other forms of community ownership) in promoting community engagement.
207. Residents groups felt that such support would polarise communities even further, while other stakeholders thought that it would be useful for community buy-in and cited the example of Scottish community energy projects.

Wider range of statutory consultees

208. The potential for organisations representing the wider interests of the community, such as the National Trust, to have a role as statutory consultees for all wind developments was broadly welcomed by all stakeholders, although residents believed that all users of the countryside should be reflected in such a list.

Community Engagement Toolkit

209. The use of a mandatory ‘Community Engagement Toolkit’ was broadly welcomed by all stakeholders. Representatives of the industry pointed out that they had already published such a toolkit to ensure effective community engagement⁶⁴, but some stakeholders expressed reservations that it should not be part of a ‘one size fits all’ approach. Residents believed that it may prove a useful level of independence.

Application process

210. The second group of questions related to the application process.

Presumption in favour of wind development

211. There was discussion around the perception that, since PPS 18 permits renewable energy development unless specific adverse impacts are identified, representations from local communities are not given due regard by planners or developers.

64 Copy of the NIRIG Community Best Practice Guidance 2014 is at Appendix 7 of this Report.

212. While planners and developers both believed that a presumption in favour of the development did not preclude robust analysis of the application, they put forward the view that constructive dialogue between parties was also necessary for an effective process.
213. All other stakeholders did not believe that that community concerns in respect of visual amenity, noise or health are currently given due regard. Difficulties in accessing the resources – time or money - required for a community to make effective representations were highlighted. Residents felt that other issues such as the impact on house values should also be considered; councils felt that there should be greater focus on the cumulative impact of turbines, taking into account undeveloped applications.

Timely engagement

214. With the exception of representatives of the wind industry, stakeholders felt that proposed developments are not being advertised at a sufficiently early stage in the process to allow for timely community engagement. Residents groups also believed that this should be seen as an ongoing process of raising awareness, rather than a single piece of advertising; and councillors thought that it should take place at the beginning of the pre-proposal stage; as the current notification period is insufficient to get adequate information.
215. Developers supported the formalisation of a pre-application consultation process and the need for the industry to maintain ongoing engagement throughout a lengthy process, although some reservations were expressed as to whether this should apply to applications for single turbines.

Inadequate neighbour notification

216. There was general agreement that the current neighbour notification process is completely inadequate for wind turbine applications and is more suited to planning applications for buildings in urban areas.
217. There was also a consensus that the radius for notification should be extended from the present distance of 90m – up to 5km from the site of the development was suggested - and that this should be made mandatory. The use of mail shots and site notices were also proposed.

Evidence of notification

218. There was divided opinion on the usefulness of documentary evidence of the notification of residents or near neighbours, such as a signed acknowledgement of the receipt of information, being provided by developers to planners.
219. Planners and developers felt that this may prove impractical and possibly in contravention of data protection legislation. Councillors believed that the responsibility for ensuring dissemination of information and genuine community engagement should lie with planners rather than developers.
220. On the other hand, residents groups were very much in support of documentary evidence – it was alleged that the Advertising Standards Agency has censured developers for misrepresentation of community notification.

Anti-wind farm protests

221. It had been suggested in submissions that anti-wind turbine groups inhibited real community engagement by staging disruptive protests at information events, but this did not seem to have been experienced by those attending the event.
222. There was broad agreement that, while people are entitled to protest, such disruption would be counter-productive. The use of the term 'anti-wind' was disputed because it was felt that people may simply oppose a development on basis of location, scale or size, and

should not be categorised in this way. It was also suggested that tensions may result from misinformation, and that protests would be avoided if situation had been properly handled from the outset.

Most effective format for information events

223. Stakeholders put forward suggestions how information events should be structured so that they genuinely engage the local community and avoid the suggestion of box-ticking exercises by developers. Industry representatives indicated that they were willing to consider any proposals that would improve the engagement process.
224. Residents expressed their views that these would need to be properly organised discussion sessions, not just exhibitions of images; there should be presentations with proper information communicated and opportunities for the community to ask questions, with community liaison officers who have a vital role in allaying concerns, not just in promoting community benefits.
225. The use of an independent facilitator was also suggested, as was a formal agreed record of any discussions taking place at the engagement event which should subsequently be made available to planners. It was also emphasised by councillors that adequate notice should be given – at least two weeks was specified – of any information events scheduled.

Community benefits

Background

226. Community benefits are payments made by wind energy companies on a voluntary basis to those living in close proximity to wind developments. They may take different forms, but generally represent an amount paid per megawatt of electricity generated; this has been often been distributed as grant funding to local community groups. There may also be a local discount scheme on electricity tariffs, or infrastructure improvements delivered as part of the wind farm development.
227. Scottish Renewables, the organisation which represents the onshore wind industry, has developed a Community Benefit Protocol which outlines a consistent approach to community benefits. The protocol states that onshore wind developers in Scotland will deliver community benefit of £5,000/MW or equivalent for all new wind farms over 50kW; the protocol also agrees to record all new onshore wind projects on the Scottish Government's community benefit register and to work with the government to create good practice guidance. A similar scheme is in place in England.
228. In Northern Ireland⁶⁵ a minimum payment of £1000/MW is recommended by the industry, but it is recognised that some projects may be in a position to provide a community benefits package up to £5000/MW.

Stakeholder views

229. The role of community benefits was raised in a number of submissions to the inquiry and it formed an element of the discussion at the stakeholder seminar in June 2013⁶⁶. The outcome of this discussion has been detailed below.

Value of monetary community benefits schemes

230. There was general agreement that monetary community benefits schemes have real merit. Residents felt that this is the only way that the adverse impact on people who are already

⁶⁵ Copy of NIRIG Community Best Practice Guidance 2014 has been included at Appendix 7.

⁶⁶ All evidence sessions have been recorded by Hansard (known as Minutes of Evidence) and have been published in this report at Appendix 2.

affected – and will be impacted for the next 20-25 years – can be addressed. Although councillors believed that such schemes have the potential to enhance the infrastructure in a way that is guided by the community, they were concerned that they should not replace departmental statutory responsibilities.

231. While industry representatives agreed that monetary schemes had value, they felt that they should not be confined only to the local area and that other economic benefits of wind farm activity on local businesses also needed to be taken into account.

Negative impact of financial benefits

232. Some stakeholder submissions indicated that in some instances financial benefits were perceived as 'bribes' for communities to overlook the wider community impact. This view was shared by residents represented at the stakeholder seminar who felt that certain institutions and businesses had been targeted to get them to sign up to benefits and that, as soon as they had accepted these, any opposition had been silenced.
233. Other stakeholders believed that this is an opportunity for communities to engage at an early stage with the developers and statutory agencies as part of the community planning process to identify appropriate community benefits and see how these can be delivered.
234. Developers also highlighted that community benefits packages have no part to play in the planning process, so any decisions regarding applications are taken entirely independently.

Statutory level of benefits

235. With the exception of developers who pointed out that the wind industry is the only commercial enterprise expected to do this, there was a general agreement that the level of community benefits should be set by government, rather than energy companies.
236. It was felt that the Assembly should follow the example of the governments in England, Scotland and Wales in setting a minimum level of community benefits, with incentives to exceed this.

Community Benefits register

237. There was a consensus among stakeholders that a Community Benefits Register be established for all relevant developments in Northern Ireland, as is the case in Scotland.
238. The most important aspect of such a register would be an increased level of transparency. The format should be uniform and would help to improve accountability, as well as providing a mechanism for sharing experiences and lessons learned. Industry representatives also felt that it would be a useful tool for monitoring benefits, to assess which had been most effective.

Basis of allocation of benefits

239. There was no clear agreement that community benefits should be calculated so that those most impacted by the turbines should receive the highest level of benefit.
240. Residents representatives believed that benefits should be set at a level that will incrementally affect people who live closest to turbines, and councillors supported this concept, citing the example of Strabane and Omagh which already allocate 70% of community benefits to those within 5 miles of wind farms, and 30% allocated to those within 8 miles. It was anticipated that such an allocation could potentially be divisive, but also recognition that those living closest to wind developments are most impacted.
241. Representatives of the industry felt that it was up to the community to determine how such funding should be allocated.

Reduced electricity tariffs

242. The possibility of reduced tariffs for those living close to wind turbines may be considered more appropriate than a contribution to a community fund. This was regarded as an equitable solution and one that was already being offered by some energy suppliers, although there was some support for the idea that reduced tariffs should be offered in conjunction with other community benefits.
243. Again, wind industry representatives believed that this was a matter for the community to decide.

Impact on house values

244. There was some support among stakeholders for compensation to be offered to those whose homes have been devalued by the siting of a wind farm development, along similar lines to the Danish model. Council representatives felt that this should be mandatory but recognised that in cases where detriment to homes was likely to occur, planning permission for turbines should not be given in the first instance.
245. Representatives of the wind industry referred to a study by the Centre for Economics and Business Research, which found that the presence of wind farms had no significant effect on average local property prices within 5km of the site, and stressed the need for independent evidence on this issue.



Northern Ireland
Assembly

Appendix 1

Minutes of Proceedings

List of extract minutes

Minutes relating to the Review

Extract Minutes – 27th June 2013

Extract Minutes – 12th September 2013

Extract Minutes – 10th October 2013

Extract Minutes – 24th October 2013

Minutes relating to the Inquiry

Extract minutes – 7th November 2013

Extract minutes – 14th November 2013

Extract minutes – 5th December 2013

Extract minutes – 12th December 2013

Extract minutes – 9th January 2014

Extract minutes – 13th March 2014

Extract minutes – 20th March 2014

Extract minutes – 3rd April 2014

Extract minutes – 10th April 2014

Extract minutes – 1st May 2014

Extract minutes – 6th May 2014

Extract minutes – 12th June 2014

Extract minutes – 19th June 2014

Extract minutes – 3rd July 2014

Extract minutes – 11th September 2014

Extract minutes – 23rd October 2014

Extract minutes – 13th November 2014

Extract minutes – 15th January 2015

Extract minutes – 22nd January 2015

Extract minutes – 29th January 2015

Thursday 27 June 2013, Silverbirch Hotel, Omagh

- Present:** Ms Anna Lo MLA (Chairperson)
Mr Sydney Anderson MLA
Mr Cathal Boylan MLA
Mr Tom Elliott MLA
Mr Barry McElduff MLA
Mr Peter Weir MLA
- In Attendance:** Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Antoinette Bowen (Clerical Officer)
- Apologies:** Mr Simon Hamilton MLA (Deputy Chairperson)
Mrs Dolores Kelly MLA
Mr Ian Milne MLA
Lord Morrow MLA

11:36am The meeting began in public session.

8. West Tyrone Against Wind Farms Briefing

Dr Dan Kane, Professor Alun Evans, Mr John Peacocke and Mr Peter Sweetman briefed the Committee in relation to wind farms in the West Tyrone area and the concerns of local residents.

The main areas of discussion were the concerns regarding the number of turbines/wind farms in the area, the noise generated by turbines and the ineffectiveness of existing policy in regard to planning applications for these sites.

12. Omagh and Strabane Councils Joint Working Group briefing on Wind Energy

The Committee returned to agenda item 9.

Councillor Daniel Kelly (Strabane District Council), Councillor Kieran McGuire (Strabane District Council), Councillor Sean Clarke (Omagh District Council) and Councillor Charles Chittick (Omagh District Council) briefed the Committee on the work of their Joint Working Group.

The main areas of discussion were the lack of community consultation when installing turbines/wind farms, issues with the community benefits offered by companies and the need for a joined up approach in the Assembly for dealing with community concerns.

13:23pm Mr Elliott left the meeting.

Agreed: The Group agreed to forward information to the Committee in relation to meetings they have held with Ministers. The Group also agreed to forward information on the impact of the implementation of the Clean Neighbourhoods Bill for the Committee's information.

Agreed: The Committee was content to forward the briefing paper from the Joint Working Group to a number of relevant Departments for comment.

[EXTRACT]

Thursday 12 September 2013, Senate Chamber, Parliament Buildings

- Present:** Ms Anna Lo MLA (Chairperson)
Ms Pam Brown MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Tom Elliott MLA
Mrs Dolores Kelly MLA
Mr Barry McElduff MLA
Mr Ian Milne MLA
Lord Morrow MLA
Mr Peter Weir MLA
- In Attendance:** Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Antoinette Bowen (Clerical Officer)
- Apologies:** Mr Sydney Anderson
- Interests declared:** Ms Pam Brown, Councillor, Antrim Borough Council.
Lord Morrow, Councillor, Dungannon and South Tyrone Borough Council.
Mr Peter Weir, Councillor, North Down Borough Council.
Mrs Dolores Kelly, Member, National Health Service Superannuation Scheme.

20. **Briefing by Northern Ireland Renewables Industry Group on wind energy**

Gary Connolly (NIRIG Chairperson), Meabh Cormacain (NIRIG Policy Officer), Gail Hitchins (Principal Acoustic Consultant, SKM Enviro) and Lucy Whitford (Vice-chair, NIRIG) briefed the Committee in relation to wind energy.

11:31am Ms. Brown rejoined the meeting.

11:52am Mr. Elliott rejoined the meeting.

12:07pm Mrs. Kelly joined the meeting.

The main areas of discussion were the benefits of wind energy, the concerns over the number of turbines and planning applications specifically in the West Tyrone area and the community benefits and interaction with NIRIG.

Agreed: The Committee agreed to write to NIRIG asking for further information in relation to the impact on tourism; the contribution of wind energy to the price of electricity; details of who had rejected local government proposals to legislate for specific separation distances in relation to turbines in England; and further information on the 'Embrace the Wind' campaign.

The Committee also agreed to forward correspondence received from residents groups to NIRIG for comment.

The Committee agreed to forward a response from the Strabane/ Omagh Council Wind Energy Working Group letter to the Department for comment.

The Committee also agreed to request information from Assembly Research on the separation distances for turbines from properties in Scotland.

[EXTRACT]

Thursday, 10 October 2013

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Ms Pam Brown MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Tom Elliott MLA
Mr Alban Maginness MLA
Mr Barry McElduff MLA
Mr Ian McCrea MLA
Lord Morrow MLA
Mr Peter Weir MLA

In Attendance: Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Antoinette Bowen (Clerical Officer)

Apologies: Mr Ian Milne MLA

10. Committee Review into Wind Energy - Consideration of Terms of Reference

The Committee considered the issues and evidence already gathered on wind energy, and discussed how it should proceed with the Review which was agreed at its recent planning day.

Agreed: The Committee agreed to arrange a briefing from an independent expert on renewable energy.

Agreed: The Committee agreed to consider only environmental and planning issues in its review.

Agreed: The Committee was content to write to DETI & DHSSPS for comment on the issues relevant to their Departments and to copy the relevant Committees into the correspondence.

Agreed: The Committee agreed to the following timescale for the Review:
10 October: Consideration of Terms of Reference
17 October: Consideration of Evidence
7 November: Consideration of Evidence
14 November: Consideration of Conclusions/Recommendations
21 November: Agreement of Report

Agreed: The Committee agreed Terms of Reference for the Review.

[EXTRACT]

Thursday, 24 October 2013

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Ms Pam Brown MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Colum Eastwood MLA
Mr Ian McCrea MLA
Mr Barry McElduff MLA
Mr Ian Milne MLA
Mr Peter Weir MLA

In Attendance: Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Antoinette Bowen (Clerical Officer)
Ms Suzie Cave (Research Officer – item 10 only)

Apologies: Mr Tom Elliott MLA
Mr Alban Maginness MLA
Lord Morrow MLA

10. Committee Review into Wind Energy – Consideration of Evidence

The Committee was briefed by a representative from Assembly Research and Information Service on international guidance on separation distances between wind turbines and buildings.

Agreed: The Committee agreed to request Assembly Research to provide information on the current location of wind turbines in Northern Ireland.

Agreed: The Committee agreed to request Professor Geraint Ellis, QUB, to provide an oral briefing at its next meeting.

Agreed: The Committee agreed to issue a press release on its Review.

[EXTRACT]

Thursday, 7 November 2013

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Ms Pam Brown MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Tom Elliott MLA
Mr Alban Maginness MLA
Mr Ian McCrea MLA
Mr Barry McElduff MLA
Lord Morrow MLA
Mr Ian Milne MLA
Mr Peter Weir MLA

In Attendance: Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Antoinette Bowen (Clerical Officer)
Ms Roisin Kelly (Assembly Bill Clerk)

Apologies: No apologies received.

5. Briefing by Professor Geraint Ellis on Wind Energy

Professor Geraint Ellis, Queen's University, Belfast, briefed the Committee on Wind Energy and the relevant issues surrounding this source of renewable energy.

10:54am Mr Elliott joined the meeting.

10:58am Mr Weir left the meeting.

The main areas discussed were separation distances from turbines, community benefit and planning issues.

The Committee noted written submissions from members of the public in relation to the review.

11:23am Mr McElduff left the meeting.

11:32am Mr Eastwood left the meeting.

Agreed: The Committee agreed that it would not complete this Review but that it would instead carry out a full inquiry with the same Terms of Reference. The Committee also agreed that the closing date for submissions would be determined at its next meeting.

The Committee noted an invitation from SSE Renewables to attend the opening of Slieve Kirk Wind Park.

[EXTRACT]

Thursday, 14 November 2013

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Ms Pam Brown MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Tom Elliott MLA
Mr Alban Maginness MLA
Mr Ian McCrea MLA
Mr Barry McElduff MLA
Lord Morrow MLA
Mr Ian Milne MLA
Mr Peter Weir MLA

In Attendance: Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Antoinette Bowen (Clerical Officer)
Ms Roisin Kelly (Assembly Bill Clerk)

Apologies: No apologies received.

9. **Wind Energy Inquiry**

The Committee considered the Terms of Reference for the Review to establish if these were appropriate for the Inquiry.

11:05am Lord Morrow re-joined the meeting.

Agreed: The Committee agreed to specify Environmental Impact Assessments within the first Term of Reference. The Committee also agreed to write to the ETI Committee to ascertain if the second Term of Reference overlaps with their work area.

Agreed: The Committee agreed to write to the Department of Enterprise, Trade and Investment to request details of the percentage of renewable energy generated by wind turbines in Northern Ireland.

11:09am Mr Boylan left the meeting.

The Committee considered a draft list of stakeholders from which written submissions will be requested.

Agreed: The Committee was content with the proposed list of stakeholders and requested that Prof Geraint Ellis be added. The Committee was content with the deadline for written submissions to be set for 28 February 2014.

Agreed: the Committee was content for papers previously considered as part of the Review also be included as part of the Inquiry.

11:15am Mr Boylan re-joined the meeting.

11:15am Mr Milne re-joined the meeting.

11:24am Mr McCrea left the meeting.

[EXTRACT]

Thursday, 5 December 2013

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Ms Pam Brown MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Colum Eastwood MLA
Mr Tom Elliott MLA
Mr Ian McCrea MLA
Mr Ian Milne MLA
Lord Morrow MLA
Mr Peter Weir MLA

In Attendance: Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Antoinette Bowen (Clerical Officer)

Apologies: Mr Alban Maginness MLA
Mr Barry McElduff MLA

15. Wind Energy Inquiry

The Committee deferred consideration of information pertaining to the Wind Energy Inquiry until its next meeting scheduled for 12th December 2013

[EXTRACT]

Thursday, 12 December 2013

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mr Cathal Boylan MLA
Mr Colum Eastwood MLA
Mr Tom Elliott MLA
Mr Ian McCrea MLA
Mr Barry McElduff MLA
Mr Ian Milne MLA
Mr Peter Weir MLA

In Attendance: Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Antoinette Bowen (Clerical Officer)
Ms Roisin Kelly (Bill Clerk – item 1 only)

Apologies: Ms Pam Brown MLA (Deputy Chairperson)
Mr Alban Maginness MLA
Lord Morrow MLA

10:10am The meeting commenced in closed session.

14. Wind Energy Inquiry

The Committee considered the terms of reference for the inquiry and a draft signposting advertisement requesting written submissions.

Agreed: The Committee agreed amended Terms of Reference. The Committee also agreed that the Terms of Reference should be published on the Assembly website and in the three main newspapers in Northern Ireland.

The Committee noted a letter from SSE Airtricity to the DETI Minister announcing an increase in Community Benefits.

The Committee considered a letter from Omagh and Strabane District Councils asking for comments on its draft guidance protocol on community benefits.

Agreed: The Committee agreed to request a synopsis of the responses from the Councils.

The Committee noted a letter from Simple Power to the ETI Committee on small scale wind energy.

Agreed: The Committee also agreed to request copies of any information available on the APSE conference on Wind Farms which was held in the Strule Arts Centre, Omagh, on 12 December 2013.

[EXTRACT]

Thursday, 9 January 2014

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Tom Elliott MLA
Mr Alban Maginness MLA
Mr Ian McCrea MLA
Mr Barry McElduff MLA
Lord Morrow MLA
Mr Peter Weir MLA

In Attendance: Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Antoinette Bowen (Clerical Officer)
Ms Suzie Cave (Research Officer)

Apologies: Mr Colum Eastwood MLA

10:10am The meeting commenced in public session.

12. Wind energy inquiry

The Committee considered papers from the APSE event held in Omagh on 12 December 2013.

Agreed: The Committee noted these papers and agreed that they should be included in the final Committee report.

The Committee considered an updated list of relevant stakeholders.

Agreed: The Committee agreed to write to the stakeholders requesting a written submission to the inquiry.

10:44am Mr Elliott joined the meeting.

[EXTRACT]

Thursday, 13 March 2014

Room 21, Parliament Buildings

Present: Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Colum Eastwood MLA
Mr Tom Elliott MLA
Mr Alban Maginness MLA
Mr Barry McElduff MLA
Mr Ian Milne MLA
Lord Morrow MLA
Mr Peter Weir MLA

In Attendance: Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Antoinette Bowen (Clerical Officer)
Ms Jennifer McCullough (Clerical Officer)

Apologies: Ms Anna Lo MLA (Chairperson)
Mr Cathal Boylan MLA
Mr Ian McCrea MLA

10:12am The meeting began in public session.

8. Wind Energy Inquiry - Consideration of submissions

The Committee considered the formal submissions received to the Committee's Call for Evidence.

Agreed: The Committee agreed that the submissions should be published on the Assembly website. The Committee also agreed that it would not consider a plan for the inquiry for the next few weeks until the submissions had been analysed.

10:27am Mr Eastwood joined the meeting.

[EXTRACT]

Thursday, 20 March 2014

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Colum Eastwood MLA
Mr Alban Maginness MLA
Mr Ian McCrea MLA
Mr Barry McElduff MLA
Mr Ian Milne MLA
Lord Morrow MLA
Mr Peter Weir MLA

In Attendance: Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Jennifer McCullough (Clerical Officer)

Apologies: Mr Tom Elliott MLA

10:13am The meeting began in closed session.

1. Briefing by Assembly Legal Services on legal advice on the Committee inquiry into wind energy

The Committee received a briefing from Assembly Legal Service on advice provided in respect of the significance of a recent ruling from the European Court. The Committee also considered a response from the Department regarding similar issues raised by a member of the public.

10:28am Mr McCrea joined the meeting.

Agreed: The Committee agreed to forward the Departmental response to the original correspondent.

[EXTRACT]

Thursday, 3 April 2014

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Colum Eastwood MLA
Mr Tom Elliott MLA
Mr Alban Maginness MLA
Mr Ian McCrea MLA
Mr Barry McElduff MLA
Lord Morrow MLA
Mr Peter Weir MLA

In Attendance: Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Jennifer McCullough (Clerical Officer)

Apologies: Mr Ian Milne MLA

10:08am The meeting began in public session.

4. Matters arising

4.9 The Committee considered a Departmental reply regarding the Institute of Acoustics Good Practice Guide on Wind Turbine Noise.

Agreed: The Committee agreed to include the reply in its Inquiry report, and to forward a copy to Windwatch for information.

[EXTRACT]

Thursday, 10 April 2014

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Colum Eastwood MLA
Mr Tom Elliott MLA
Mr Alban Maginness MLA
Mr Ian McCrea MLA
Mr Ian Milne MLA
Lord Morrow MLA
Mr Peter Weir MLA

In Attendance: Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Jennifer McCullough (Clerical Officer)

Apologies: Mr Barry McElduff MLA

10:25am The meeting began in public session.

7. **Committee Inquiry into Wind Energy**

The Committee discussed how members wished to proceed with the Inquiry into Wind Energy.

10:46am Mr Eastwood joined the meeting.

10:52am Mr Boylan joined the meeting.

10:53am Mr Weir left the meeting.

10:58am Mr Maginness joined the meeting.

11:09am Mr Eastwood left the meeting.

11:17am Mr McCrea left the meeting.

Agreed: The Committee agreed which stakeholders should be requested to provide oral briefings, and that a timetable for the inquiry should be drawn up for consideration at its next meeting. The Committee also requested further information from Assembly Research.

11:24am The meeting moved back into public session.

11:25am Mr Maginness left the meeting.

[EXTRACT]

Thursday, 1 May 2014

Senate Chamber, Parliament Buildings

- Present:** Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Ian McCrea MLA
Lord Morrow MLA
- In Attendance:** Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Jennifer McCullough (Clerical Officer)
Mr Simon Kelly (Assistant Legal Advisor – item 1 only)
Ms Suzanne Cave (Research Officer – item 5 only)
- Apologies:** Mr Cathal Boylan MLA
Mr Tom Elliott MLA
Mr Alban Maginness MLA
Mr Barry McElduff MLA
Mr Peter Weir MLA

5. Assembly Research briefing on Wind Energy Inquiry

The Committee moved to agenda item 12.

The Committee received a briefing from a representative of Assembly Research and Information Service on community benefits and co-operative wind farm schemes in Scotland.

[EXTRACT]

Thursday, 6 May 2014

Room 29, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Tom Elliott MLA
Mr Ian McCrea MLA
Mr Barry McElduff MLA
Mr Ian Milne MLA
Lord Morrow MLA
Mr Peter Weir MLA

In Attendance: Mrs Sheila Mawhinney (Assembly Clerk)
Mr Sean McCann (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Jennifer McCullough (Clerical Officer)

Apologies: No apologies were received.

11. Wind energy inquiry

The Committee considered the inquiry plan and a list of stakeholders for a proposed stakeholder event.

Agreed: The Committee was content with the inquiry plan and the proposed list of stakeholders.

[EXTRACT]

Thursday, 5 June 2014

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Colum Eastwood MLA
Mr Tom Elliott MLA
Mr Ian McCrea MLA
Mr Barry McElduff MLA
Mr Alban Maginness MLA
Mr Peter Weir MLA

In Attendance: Mrs Sheila Mawhinney (Assembly Clerk)
Mr Neil Sedgewick (Assistant Assembly Clerk)
Mr George McClelland (Clerical Supervisor)
Ms Allison Ferguson (Clerical Officer)

Apologies: Mr Ian Milne MLA

10:10am The meeting began in public session.

11. Committee Inquiry into Wind Energy - Briefing by Chartered Institute of Environmental Health

Gary McFarlane, Paul McCullough and Dr Chris Jordan from the Chartered Institute of Environmental Health briefed the Committee on its Inquiry into Wind Energy.

The main areas discussed were issues around the planning process for onshore wind turbines and ETSU-R-97 noise legislation.

11:13am Mr. Weir left the meeting.

11:34am Mr. Eastwood left the meeting.

11:47am Mr. McCrea left the meeting.

Agreed: The Committee agreed that the representatives should provide them with further copies of maps identifying wind turbine sites, on adverse impacts of wind turbines and on wind turbine applications awaiting planning permission.

11:56am The meeting moved into closed session.

12. Inquiry into Wind Energy - proposed visit

The Committee discussed how members wished to proceed with a proposed visit to a wind farm site as part of its Inquiry into Wind Energy.

Agreed: The Committee agreed to visit the Crighshane and Church Hill Wind Farms in Co. Tyrone on 26th June 2014 and to meet with local residents in that area.

13. Inquiry into Wind Energy - Stakeholder Event

The Committee noted correspondence from the Northern Ireland Renewables Industry Group requesting an invitation to attend the event on 12th June 2014.

Agreed: The Committee agreed to decline NIRIG's request.

The Committee discussed the format for the event.

12:23pm Mrs. Cameron left the meeting.

12:23pm The meeting moved back into open session.

[EXTRACT]

Thursday, 12 June 2014

Long Gallery, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Colum Eastwood MLA
Mr Tom Elliott MLA
Mr Ian McCrea MLA
Mr Barry McElduff MLA
Mr Alban Maginness MLA
Mr Ian Milne MLA
Lord Morrow MLA
Mr Peter Weir MLA

In Attendance: Mrs Sheila Mawhinney (Assembly Clerk)
Ms Suzie Cave (Researcher)
Mr Neil Sedgewick (Assistant Assembly Clerk)
Mr George McClelland (Clerical Supervisor)
Ms Allison Ferguson (Clerical Officer)

Apologies: None

10:30am The meeting began in public session.

1. **Apologies**

There were no apologies.

2. **Inquiry into Wind Energy Stakeholder Event**

The Chairperson welcomed Members and attendees to the event and advised that the main focus of the event was on the third term of reference of the Committee's Inquiry into Wind Energy; namely on the extent of engagement by wind energy providers with local communities and how this engagement may best be promoted.

Evidence was taken on three separate areas of the term of reference;

- On how changes at a strategic level of government might lead to clearer, more coherent and transparent policy resulting in greater community understanding and engagement;
- On how the current the planning and application process is working and how it might be improved, and;
- On whether community benefits is a valid way of compensating those who live in close proximity to wind developments and how a different approach would possibly be more effective.

Evidence was given by attendees and was recorded by Hansard; attendees at the event are listed at the addendum.

3. **Date, time and place of next meeting**

The next meeting will be held on 19th June 2014 at 10:00 in the Senate Chamber, Parliament Buildings.

12:55pm The Chairperson adjourned the event.

Anna Lo, MLA

Chairperson, Committee for the Environment

19 June 2014

Addendum:

Stakeholders who attended the event were:

- Jonathan Bell - Northern Ireland Environment Link,
- Vicky Boden - SSE Renewables,
- Cllr Sean Clarke - Cookstown District Council,
- Aine Coyle – TCI Renewables,
- Jason Devine - Lisnahaney Area Residents' Group,
- Graeme Dunwoody - Fermanagh Trust,
- Keith Graham and Pauline Graham,
- Joy Hargie - DOE Planning Service,
- Michael Harris – DETI,
- Helen Harrison - Juno Planning,
- Lynda Hutton - Fermanagh District Council,
- Cllr Patsy Kelly - Strabane & Omagh District Council Wind Farm Working Group,
- Mervyn Keys – WindwatchNI,
- Orlaith Kirk - Juno Planning,
- Adam Larkin - Strategic Planning,
- Mary Lavery – DETI,
- David Manning - SSE Renewables,
- Ryan McBirney - Strategic Planning,
- Victoria McCabe - First Flight Wind Ltd,
- Shanti McCallister - Landscape Institute Northern Ireland,
- Lauri McCusker - Fermanagh Trust,
- Cllr Kieran McGuire - Strabane & Omagh District Council Wind Farm Working Group,
- Deirdre McSorley - DOE Planning Service,
- Pete Mullin - Landscape Institute Northern Ireland,
- Fergal O'Donnell - Rural Community Network,
- Gary Preston – TCI Renewables,
- Desmond Reid - Fermanagh District Council,
- Raymond Smith - Chief Environmental Health Officers Group NI,
- Helen Richmond - DOE Planning Service,
- Scott Symington - DOE Planning Service,
- Shauna Ward - Lisnahaney Area Residents' Group,
- Lucy Whitford – RES and
- Sacha Workman - First Flight Wind Ltd.

Thursday, 19 June 2014

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Colum Eastwood MLA
Mr Tom Elliott MLA
Mr Ian McCrea MLA
Mr Barry McElduff MLA
Mr Alban Maginness MLA
Mr Ian Milne MLA
Lord Morrow MLA
Mr Peter Weir MLA

In Attendance: Mr Paul Gill (Assembly Clerk)
Mr Neil Sedgewick (Assistant Assembly Clerk)
Mr George McClelland (Clerical Supervisor)
Ms Allison Ferguson (Clerical Officer)

Apologies: None

15. Committee Inquiry into Wind energy: Briefing from Northern Ireland Electricity and the Utility Regulator

11:56am Mr Weir rejoined the meeting.

11:58am Mr. Eastwood left the meeting.

12:07pm Mr McCrea left the meeting.

Michael Atkinson and Denis Kelly (Northern Ireland Electricity) and Tanya Hedley (Northern Ireland Authority for Utility Regulation) briefed the Committee on its Inquiry into Wind Energy.

The main areas discussed were the plans for, and challenges faced, in upgrading the electricity network to meet 2020 renewable energy targets and the role of the Regulator in achieving this.

12:41pm Mr. McElduff left the meeting.

12:47pm Mr Maginness left the meeting.

[EXTRACT]

Thursday, 3 July 2014

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Colum Eastwood MLA
Mr Barry McElduff MLA
Mr Alban Maginness MLA
Mr Ian Milne MLA
Lord Morrow MLA
Mr Peter Weir MLA

In Attendance: Ms Sheila Mawhinney (Assembly Clerk)
Mr Neil Sedgewick (Assistant Assembly Clerk)
Mr George McClelland (Clerical Supervisor)
Ms Allison Ferguson (Clerical Officer)
Ms Suzie Cave (Research Officer – item 1 only)

Apologies: Mr Ian McCrea MLA

10:10am The meeting began in closed session.

1. Committee Inquiry into Wind Energy - Selection of Specialist Acoustician

The Committee considered a draft briefing paper setting out possible issues for consideration by a specialist acoustician, together with information about candidates identified by Assembly Research and Information Service.

10:15am Ms Cameron joined the meeting.

10:20am Mr Boylan joined the meeting.

Agreed: The Committee agreed that it was content with the job specification as set out in the briefing paper. The Committee further agreed that the decision on which candidate should be appointed should be delegated initially to the Chairperson and Deputy Chairperson, and that this decision should then be circulated to the members before the appointment is confirmed.

26. Committee Inquiry into Wind energy: Briefing from DoE Planning Division

Simon Kirk, Acting Director, Deirdre McSorley, Area Manager, and Joy Hargie, Planning Policy Division, briefed the Committee on its Inquiry into Wind Energy.

The main areas discussed were the context and application process for both single turbines and wind farm developments under Policy Planning Statement 18 and also the transitional planning arrangements until 2015 when the Strategic Planning Policy Statement for Northern Ireland comes into force.

28. Committee Inquiry into Wind Energy – Community Benefits

The Committee noted a research paper from the Assembly's Research service on wind farm co-operatives; and a further paper on wind farm co-operatives and community benefits from Julianne Cox, a QUB Masters student; who spent some time assisting the Committee with its inquiry.

Agreed: The Committee agreed to include the papers in the final inquiry report.

[EXTRACT]

Thursday, 11 September 2014

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Colum Eastwood MLA
Mr Ian McCrea MLA
Mr Barry McElduff MLA
Mr Alban Maginness MLA
Mr Ian Milne MLA
Lord Morrow MLA
Mrs Sandra Overend MLA
Mr Peter Weir MLA

In Attendance: Ms Sheila Mawhinney (Assembly Clerk)
Mr Mark McQuade (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Allison Ferguson (Clerical Officer)

Apologies: None

10:06am The meeting began in public session.

22. Committee Inquiry into Wind Energy – Briefing from Specialist advisor

Ms Ursula Walsh, the Committee's specialist advisor, spoke to her report on sound generated by wind turbines and other relevant issues.

12:19pm Mr Weir left the meeting.

Agreed: the Committee agreed to write to the Department to ask about the use of reconditioned turbines in Northern Ireland.

12:38pm Mr Weir joined the meeting.

[EXTRACT]

Thursday, 23 October 2014

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Ian McCrea MLA
Mr Barry McElduff MLA
Mr Alban Maginness MLA
Lord Morrow MLA
Mrs Sandra Overend MLA
Mr Peter Weir MLA

In Attendance: Ms Sheila Mawhinney (Assembly Clerk)
Mr Mark McQuade (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Allison Ferguson (Clerical Officer)

Apologies: Mr Ian Milne MLA

10:03am The meeting began in public session.

18. Committee Inquiry into Wind Energy - Briefing by Windwatch NI.

The Committee was briefed by Professor Alun Evans, Dr Dan Kane, Mr Owen McMullan and Mr Pat Swords.

The briefing was recorded by Hansard.

22. Committee Inquiry into Wind Energy - Briefing by Northern Ireland Renewables Industry Group (NIRIG).

The Committee was briefed by Mr Patrick McClughan, Mr Michael Gordon, Ms Meabh Cormacain and Dr Matthew Cassidy.

The briefing was recorded by Hansard.

12:53pm Mr Boylan rejoined the meeting.

12:53pm Mr McCrea rejoined the meeting.

1:00pm Mr Weir rejoined the meeting.

Agreed: The Committee agreed that NIRIG should sent it further information on the calculation of carbon savings.

[EXTRACT]

Thursday, 13 November 2014

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Colum Eastwood MLA
Mr Ian McCrea MLA
Mr Alban Maginness MLA
Mr Ian Milne MLA
Lord Morrow MLA
Mrs Sandra Overend MLA
Mr Peter Weir MLA

In Attendance: Ms Sheila Mawhinney (Assembly Clerk)
Mr Mark McQuade (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Suzie Cave (Assembly Research & Information Service –
item 16 only)

Apologies: Mr Barry McElduff MLA

10:08am The meeting began in public session.

14. Committee Inquiry into Wind Energy – Consideration of main issues.

10:43am Mr Eastwood joined the meeting.

The Committee discussed the main issues arising from its Inquiry into Wind Energy. The session was recorded by Hansard.

Mr Boylan proposed that further submissions to the Committee inquiry into wind energy should be permitted.

Agreed: The Committee confirmed its previous decision, taken at its meeting on 23 October 2014, that it had concluded its evidence gathering process and that no further submissions would be accepted.

11:13am Mr Eastwood left the meeting.

Agreed: The Committee agreed to write to the Department for clarification of some aspects of the planning process.

Agreed: The Committee agreed that a draft report be prepared for consideration.

[EXTRACT]

Thursday, 15 January 2015

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Ian McCrea MLA
Mr Alban Maginness MLA
Mr Barry McElduff MLA
Lord Morrow MLA
Mr Peter Weir MLA

In Attendance: Ms Sheila Mawhinney (Assembly Clerk)
Mr Mark McQuade (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Allison Ferguson (Clerical Officer)
Ms Barbara Love (Assembly Research & Information Service - Item 6 only)

Apologies: Mr Colum Eastwood MLA
Mr Ian Milne MLA
Mrs Sandra Overend MLA

10:02am The meeting began in private session.

1. **Committee Inquiry into Wind Energy**

10:08am Mr Weir left the meeting.

10:11am Mrs Cameron joined the meeting.

The Committee noted correspondence from Mr McMullan regarding a recent wind turbine accident.

Agreed: the Committee agreed to write to the Department of Enterprise, Trade & Investment regarding the role of the Health and Safety Executive Northern Ireland (HSENI) in investigating this accident.

10:15am Mr Weir rejoined the meeting.

The Committee noted a Planning Statistics press release.

The Committee considered a draft report on the Inquiry into Wind Energy.

Agreed: The Committee agreed to consider an amended draft at its next meeting.

11:05am The meeting moved into public session.

[EXTRACT]

Thursday, 22 January 2015

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Colum Eastwood MLA
Mr Ian McCrea MLA
Mr Alban Maginness MLA
Mr Barry McElduff MLA
Lord Morrow MLA
Mrs Sandra Overend MLA
Mr Peter Weir MLA

In Attendance: Ms Sheila Mawhinney (Assembly Clerk)
Mr Mark McQuade (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Allison Ferguson (Clerical Officer)

Apologies: Mr Ian Milne MLA

10.06 am The meeting began in closed session.

1. Committee Inquiry into Wind Energy

10.08am Mr McElduff joined the meeting.

10.11am Mr Eastwood joined the meeting.

The Committee considered a draft report on the Inquiry into Wind Energy.

Agreed: The Committee agreed the draft report on its Inquiry into Wind Energy.

10.24am The meeting moved into public session.

[EXTRACT]

Thursday, 29 January 2015

Senate Chamber, Parliament Buildings

Present: Ms Anna Lo MLA (Chairperson)
Mrs Pam Cameron MLA (Deputy Chairperson)
Mr Cathal Boylan MLA
Mr Alban Maginness MLA
Lord Morrow MLA
Mrs Sandra Overend MLA
Mr Peter Weir MLA

In Attendance: Ms Sheila Mawhinney (Assembly Clerk)
Mr Mark McQuade (Assistant Assembly Clerk)
Mr Neil Sedgewick (Clerical Supervisor)
Ms Allison Ferguson (Clerical Officer)

Apologies: Mr Ian McCrea MLA
Mr Barry McElduff MLA
Mr Ian Milne MLA

5. **Committee Inquiry into Wind Energy**

The Committee considered the final report on the Committee Inquiry into Wind Energy.

The Committee considered the Executive Summary section of the report.

Agreed: The Committee was content with the Executive Summary as drafted.

The Committee considered the Key Conclusions and Recommendations section of the report.

Agreed: The Committee was content with the Key Conclusions and Recommendations as drafted.

The Committee considered the Introduction section of the report.

Agreed: The Committee was content with the Introduction as drafted.

The Committee considered the Consideration of Evidence section of the report.

Agreed: The Committee was content with the Consideration of Evidence as drafted.

The Committee considered Appendix 1 – Minutes of Proceedings.

Agreed: The Committee was content with the Appendix as drafted.

The Committee considered Appendix 2 – Minutes of Evidence.

Agreed: The Committee was content with the Appendix as drafted.

The Committee considered Appendix 3 – Written Submissions.

Agreed: The Committee was content with the Appendix as drafted.

The Committee considered Appendix 4 – Departmental papers.

Agreed: The Committee was content with the Appendix as drafted.

The Committee considered Appendix 5 – Other Departmental papers.

Agreed: The Committee was content with the Appendix as drafted

The Committee considered Appendix 6 – Research papers.

Agreed: The Committee was content with the Appendix as drafted

The Committee considered Appendix 7 – Other papers submitted to the Committee.

Agreed: The Committee was content with the Appendix as drafted.

The Committee considered Appendix 8 – List of Witnesses.

Agreed: The Committee was content with the Appendix as drafted

Agreed: The Committee agreed that it was content for an extract from the minutes of this meeting to be included in its Report unapproved.

Agreed: The Committee agreed that the report should be ordered to print.

The Committee discussed the distribution of confidential correspondence.

Agreed: The Committee agreed that the Chairperson would raise this matter with the Chairpersons Liaison Group.

10.38am Mrs Cameron joined the meeting.

[EXTRACT]



Northern Ireland
Assembly

Appendix 2

Minutes of Evidence

List of Hansard reports

Hansards relating to the Review

1. 27th June 2013 – Omagh and Strabane District Council Joint Working Group
2. 27th June 2013 – Windwatch
3. 12th September 2013 – NIRIG
4. 24th October 2013 – Assembly Research

Hansards relating to the Inquiry

5. 7th November 2013 – Prof. Geraint Ellis
6. 5th June 2014 – Chartered Institute of Environmental Health
7. 12th June 2014 – Committee stakeholder event
8. 19th June 2014 – Utility Regulator & Northern Ireland Electricity
9. 3rd July 2014 – DOE officials
10. 11th September 2014 – Ursula Walsh
11. 23rd October 2014 – NIIRIG
12. 23rd October 2014 – Windwatch
13. 13th November 2014 – Committee consideration of issues
14. 29th January 2015 – Agreement of Committee report

27 June 2013

Please note that Official Report (Hansard) staff were not present at this meeting and that this report has been retrospectively compiled without the benefit of contemporary notes and details of the sequence of speakers.

Members present for all or part of the proceedings:

Ms Anna Lo (Chairperson)
 Mr Sydney Anderson
 Mr Cathal Boylan
 Mr Tom Elliott
 Mr Barry McElduff
 Mr Peter Weir

Witnesses:

Councillor Charles Chittick	<i>Omagh District Council</i>
Councillor Sean Clarke	<i>Council</i>
Councillor Daniel Kelly	<i>Strabane District Council</i>
Councillor Kieran McGuire	<i>District Council</i>

1. **The Chairperson:** I welcome councillors from Omagh and Strabane District Council Joint Working Group on Wind Farms. They are Councillors Daniel Kelly and Kieran McGuire from Strabane District Council and Councillors Sean Clarke and Charles Chittick from Omagh District Council. I am not very good with names even though I have lived here for 30-odd years.
2. We are really pushed for time. We have received your very well documented written evidence. Can you give us a quick, five-minute summing up and then take questions from members?
3. **Councillor Sean Clarke (Omagh District Council):** Yes. Thank you, Chair. I welcome you here to Omagh. I am an Omagh councillor, as is Charlie Chittick. We set up a working group of Omagh and Strabane councillors because of the proliferation of wind farms in the west Tyrone area. I think that 48% is the figure that you have. Ironically, when you add in Fermanagh, it goes over 70%. As far as I am aware, there are 11 other constituencies with large rural areas. That raises a question.

4. I want to put on record that neither Omagh nor Strabane council is for or against wind farms per se; they judge every one on its merits. Obviously, the councils have, through environmental health, their own consultation process that they have to go through. Many people are not happy with that process. However, that is what we have at present. I realise the time, so rather than going through all of our prepared evidence, I will ask Councillor Kieran McGuire to comment on the industrialisation of west Tyrone.
5. **Councillor Kieran McGuire (Strabane District Council):** I just want to outline my disappointment that the Committee did not come to the wind farm at Killeter, where they would have seen at first hand what it is like for people who live close to it. I am also disappointed that a SDLP member did not see fit to come here when that party's Minister oversees this. It is a big problem in west Tyrone. We hear a lot from the Minister. However, his own colleagues did not come here to hear the two presentations. I am extremely disappointed about that.
6. Basically, we want west Tyrone to be seen as a special case. West Tyrone accounts for 14% of the land mass of the North of Ireland, yet it has almost 50% of its wind turbines. You will see that in the evidence that has been provided to you. You will also see that back in 2008, landscape architects commissioned a report for Planning Service. It stated that west Tyrone was nearing capacity with regard to wind turbines. That was in 2008. You can imagine the number that are there now. There is also the issue of where we are located in west Tyrone. I am talking specifically about the west of west Tyrone, the Castlederg area, where there are around 111 wind turbines and, as of last night, another five to be proposed. We also have the issue of our boundary

- with Donegal. On the other side of the border, there are 20 or 30 turbines that are just falling into one another. It will just be one plain of wind farms. One of our main issues is the closeness or separation distance of 500 metres. That has been well rehearsed, so I will not go into it. However, it is real problem.
7. A BIGGAR Economics report stated that onshore wind farms create 1,110 jobs. I have seen a wind farm develop. It was commissioned in June 2012. I have seen three full-time jobs being created locally. There were people coming in from all arts and parts. Only three local people got jobs. So, wind farms have no benefit whatsoever for the people who live close to them. That farm is now being commissioned. When it is commissioned, there will be one or two satellite jobs. That, basically, means that you could have a man sitting in an office in Dublin or Belfast controlling the turbines. So, there are no economic opportunities.
 8. The west Tyrone anti-turbine group gave a presentation just over the road in Killyclogher. Some issues came out loud and clear, and have been rehearsed today, such as the detrimental health impacts that are associated with low-frequency noise. That has not yet been proved. I would like to see, as Barry mentioned earlier, a joined-up approach with health. In response to an Assembly question from a MLA, it emerged that the Committee for Health, Social Services and Public Safety was never actually consulted on PPS 18. I would like to see something done about that.
 9. The other issues that came out of that symposium included property values and how they have deteriorated for those who live in west Tyrone; the inefficiency of wind energy — how the blades are turned when the wind does not blow or blow strongly enough, and so on; the carbon output, concrete and so on of building wind farms; and the impact on biodiversity. You will see the list there, so I will not go into it.
 10. The other issue for me, as a councillor, and the council is environmental health and the resources that we have. We have advertised to employ another person. It leaves all other applications for businesses and houses that are trying to come through the system in a backlog. Strabane District Council is 91 applications behind. Those people are trying to get a business off the ground and are waiting on planning. They are coming in, month after month, to try to get their planning through, but they cannot get it through because wind farms have taken over. That is a very sore point.
 11. ETSU-R-97 was referred to earlier. There are serious issues with it regarding noise, and so on. We would like to see it reviewed quickly because sleep deprivation and such things are unacceptable. As councillors, the complaints that we receive almost daily now — you might find that hard to believe, but they are coming in thick and fast — are about noise, shadow flicker and television reception. At the start, developers were trying to fix problems. Now, they just fob people off. They are getting away in the smoke. They blame this and that. They blame the digital switch-over. However, it is the same thing: when the wind blows strongly, television reception is gone. There is no other way round that. It is clear cut. It is black and white. The policy does not actually go far enough to ensure that it caters for people's rights. There is also a problem with flickering lights in houses.
 12. Another issue is the influence of objectors. When they try to get consultation to object to a wind farm, they find that it is top-heavy and overloaded in favour of wind-farm development. I do not know how you would ever go about objecting to a wind farm because everything is for wind farm development. Even the Minister has referred to that. Basically, there is no influence. It is top-heavy in support of development; mainly wind farm development.
 13. The other issue that you will see is the high degree of suspicion, misinformation and fear in west Tyrone about wind

- farms. They are concerned, and both councils argue that evidence-based research to address allegations that onshore wind has a detrimental impact is required, if you understand what that means. I will now hand over to Councillor Kelly.
14. **The Chairperson:** Please be very brief.
15. **Councillor Daniel Kelly (Strabane District Council):** Thank you, chair. I just want to outline the recent call for evidence by the Department of Energy and Climate Change and our own research into the community benefits here in west Tyrone.
16. You may know that Omagh and Strabane district councils submitted a response to that call for evidence in November 2012. Given the nature of our submission, it is fair to say that we were delighted with what Ed Davey published at the beginning of the month. It is important to highlight a few key points from what he published in relation to the action plan and the package of measures that he is introducing, which, I think, are specific to England. Those include compulsory pre-application consultation with local communities in planning for onshore wind; the provision of clear and reliable evidence on the impacts of onshore wind, through an evidence toolkit; the introduction of engagements guidance to include benchmarking and monitoring good ... practices; a five-fold increase in community benefit package to the value of £5,000 per megawatt per annum, minimum; a central register of community benefits; a community energy strategy to promote community ownership and buy-in; and to include the enhancement of local economic impacts by producing guidance for potential supply-chain business. As a result of that, as an action point for the Committee, both councils call on you to utilise the DECC evidence fully. We want to see the full introduction and implementation in Northern Ireland of all the same outputs that there are in England. That must be done to begin to address some of the concerns raised by the host communities here.
17. I will make a few points on community benefit and our own research. Members will be familiar with the Fermanagh Trust paper 'Maximising Community Outcomes from Wind Energy Developments', which was published in early 2012. That reports shows clear evidence that host communities here are receiving significantly less than the community benefits packages that are being offered in other parts of the United Kingdom, particularly Scotland and Wales. Examples include Bord Gais, which operates Owenreagh 1 and 2 and offers no community benefit but offers €1,000 per megawatt in the Republic and ESB, which will operate Carrickatane when it comes online this year but currently has no community benefit and Airtricity, through Scottish and Southern Electricity, offers 0.5% or 1% of revenue depending on when the wind farm was built. It is worth noting that in Scotland both companies pay and additional £2,500 per megawatt per annum into a central Scottish regional fund and that such a system does not operate here. Energia offers £1,000 per megawatt per annum for the first year of operation, but that drops to £780 per megawatt per annum thereafter for the lifetime of the wind farm. Doreen Walker (DW) Consultancy offers £2,500 per megawatt of installed capacity.
18. As an aside, since the DECC call for evidence, as part of its pre-application and ongoing consultation for a wind farm in Killeter, one company — RES — has offered £5,000 per megawatt per annum as part of a community benefits package. As far as we are aware, that is to date the highest community package offered in Tyrone and, perhaps, the whole North.
19. We are disappointed that NIRIG could not attend today. You will be aware, at the beginning of this year, the umbrella group for the industry published guidance for its members on community benefit funds. It recommends that its members pay £1,000 per megawatt per annum. Both councils argue strongly that that is not acceptable. We are still of that opinion, and, since Ed

- Davey's publication at the beginning of the month, we feel vindicated for our numbers.
20. There is a lack of transparency in what each developer is paying into a community fund. Communities are being asked to negotiate individually and they do not have the capacity to lead that kind of negotiation with multimillion-pound industries. So, as another action point, Strabane and Omagh councils argue that there needs to be a reinstatement of annex 3 of draft PPS 18, which relates to community benefits. Both councils also argue that the scope in clause 15 of the Planning Bill to amend article 40 of the Planning Act (Northern Ireland) 2011 for the payment of community benefits should be fully utilised.
21. **The Chairperson:** Thank you very much. Your paper sets out the position very well. It is neutral and evidence-based. I agree that the UK's response is very good, setting out a set of criteria and measures to recommend a regional, devolved —
22. **Mr Boylan:** Excuse me, Chair. I think that Councillor Chittick has a couple of words to say.
23. **Councillor Charles Chittick (Omagh District Council):** I will forgive the Chair. *[Laughter.]*
24. **The Chairperson:** Thank you very much.
25. **Councillor Chittick:** Madam Chair, at the outset, I welcome you and the Members of the Legislative Assembly to the Omagh District Council area and for taking the time out.
26. **The Chairperson:** Thank you for hosting the meeting here.
27. **Councillor Chittick:** Again, I am disappointed with those who could not facilitate us access to Bessy Bell. It was their choosing. I would have thought that, if there was work to be done, they would have realised that some time ago and would have chosen another site. The site was chosen by them, so to find out that remedial work was the reason
- is not acceptable and not good enough. The other wind farm representatives are very disappointed that they are not here. After all, we are elected members representing a lot of our community here, and this was the time and the place for them to put their case forward to those who are either for or against. It does not matter to us, because we have only a consultant role as a local council. Therefore, I believe that they should have been here and put their case forward to those who it most affects, the residents in our local area, particularly the area that I represent. I wanted to put that on the record.
28. I am supposed to end up with making a conclusion here. At the outset, I want to say that we are the only show in town in that we have drafted what we believe is a template that, no doubt, will be approved by both Omagh District Council and Strabane District Council. It is on the way forward towards accepting and, hopefully, providing our communities, which are affected, a kind of buy-in, instead of this long-armed approach and that we will have a closer working relationship with the wind farm group per se and to the communities that it may affect or not affect. You have the paperwork in front of you, and this draft expects a rate of £5,000 per megawatt during the installation. Indeed, that is to be index-linked so that it is, if you like, inflation proofed over the lifetime of the wind farm.
29. The other important point is that the community that surrounds the area that has been affected will have a beneficial buy-in, if you like, in their community. They will get some support back for the inconvenience and everything else that surrounds these wind farms. We also agree that central government should be involved in ensuring that benefits from the host industry are fully realised and that adverse impacts are robustly addressed. In other words, if there is anything that is outstanding, we as a grouping expect you as elected Members to ensure that our voices are heard. As I said, that is what the group is about.

30. The wind farm working urges strongly that the recent published output from DECC, as a result of its call for evidence, should be fully implemented in Northern Ireland. It recommends compulsory pre-application and consultation with local communities in the planning on onshore wind, in other words that they be consulted prior to an application.
31. **The Chairperson:** I am sorry to stop you there. Councillor Daniel Kelly has set all of that out already.
32. **Councillor Chittick:** I will not take you through it all then, for time reasons.
33. **The Chairperson:** I am just conscious that the members want to ask questions
34. **Councillor Chittick:** There are some important things, and I think that the group that you heard from earlier addressed most of them. They mentioned the issue of distance between wind farms and homes, and, in particular, the relationship between that and the size of the wind turbine. The renewal of the ETSU-R-97 regulations is important. Also, there has been the absence of an area plan for west Tyrone since 2001. We expect that it should be taken into account in any consultation on applications for or approvals of wind farms. We want a review of draft PPS 18, as has already been mentioned, in relation to the requirement to consider whether planning applications for wind farms are both “negative” and have an adverse effect, and we also want the reinstatement of annex 3 of the draft document. That is very important and I cannot emphasise it enough. We want article 40 of the Planning Act (Northern Ireland) 2011 fully utilised to ensure community benefits are an integral part of planning for wind farms.
35. I must say, at the outset, that I fully support renewable energy. Anyone who sits on the council knows my position. Obviously, we have to meet the requirements of EU legislation, but that support is not at the behest of, or undermining of, those in our community who are adversely affected or otherwise. There is a lack of consultation with our constituents, and that needs to be addressed.
36. The other thing I would add is that wind farms are one thing, but there are substations to be located, means and ways of getting electricity, new lines and whatnot to be erected. That has an adverse effect on the farming community in particular. So all of that needs to be addressed in proper fashion and above board, so that the community knows exactly what is going on.
37. **The Chairperson:** Thank you very much. Certainly, you have added weight to the earlier presentation. It is so important that communities feel that they are consulted, they have a say and, if they feel aggrieved they are listened to. They are the hosts in the area, and they may be losing something; whether it is just a view, or something else. Some people may say that they do not sleep as well. They need to be compensated and community benefit is a very important factor, if we are going to have that win-win situation, where people do not feel so totally powerless and unable to challenge the developers.
38. I think the fact that the Renewables Industry Group is unwilling to come here today is indicative that there is not cooperation or a meeting of minds. I think that they are unwilling to come because they are worried about being in conflict situation, or a confrontational situation, with local people.
39. By the way, congratulations, and I think that it is a great initiative that the two councils are working together to set up the working group. In your view, how can we bring people together? We need the industry to produce renewable energy; and we need the local community to feel satisfied that they are listened to and that their concerns have been addressed. What measures can we put in to help them to meet and discuss this, and come to some solutions?
40. **Councillor McGuire:** I think that it gives a clear indication, when the group that is paid to speak for the renewables sector, which all the wind farm developers are

bought into, will not engage. It goes to show the contempt that the developers have for the community, when they go about building wind farms and making proposals. I could give you all types of scenarios of consultation and non-consultation that have happened in my area. However, I shall not annoy you with that at this stage. There needs to be honesty, openness and transparency. There needs to be fewer deals done in farmers' kitchens, sworn to secrecy, signed documents to say that you cannot object and you cannot tell people what you are getting in this, that or the other.

41. **The Chairperson:** That splits communities, as well.
42. **Councillor McGuire:** It is not only my view; it is a fact in my community. It has divided families, church groups and football clubs. It is a train crash or train wreck through communities. It needs to stop.
43. **Councillor Kelly:** It is indicative of the power that the renewables energy group wields that it does not feel the need to engage, and that is a part of the problem. It now has the legislative framework in place which drives its planning through, without the need to consult effectively with the community, or to engage with the council or any other body. The draft legislation was amended effectively to suit the developers. Look at the clean neighbourhoods legislation. The western group of environmental health officers has advised us that it now has fewer powers of enforcement, under the Clean Neighbourhoods and Environment Act (Northern Ireland) 2011, than it did under the 1978 legislation. There have been all those subtle changes, and that is an issue that the Assembly needs to address.
44. **Mr McElduff:** I am mindful that Councillor Chittick might respond to my question, because everyone wants to say something. I commend the two councils for their presentation and written document, and thank the secretariat of the group which is located within Strabane District Council. I think that it is headed by Rachel in the council. They do a great job of providing information when you seek it. However, I must seek more information, in writing if possible, in the interests of time. I ask the secretariat, the working group, through the councillors, to provide information to the Committee about the extent of meetings with various Ministers at Stormont. You are regular visitors to Stormont, and I see you here. I am not always sure what you are at, but I wish you well. Have you met the Health Minister, the Environment Minister and the Enterprise, Trade and Investment Minister? What is the scale and purpose of the meetings that have happened in the last 12 months?
45. **The Chairperson:** I suggest that we also send your paper to DOE and ask it to respond to the points that you raise in it.
46. **Councillor Chittick:** We have met Ministers O'Neill, Attwood and Foster. We have not met the Health Minister, as far as I know. I look to Rachel, because she keeps us right on those things.
47. **Councillor Clarke:** I think it is on that document.
48. **Councillor Chittick:** I hope that that clarifies things.
49. **Councillor Clarke:** From this meeting, we expect joined-up thinking among our Departments, and a number of Departments have been mentioned. It needs to be legislated for, as part of a planning condition, that these groups will not either seek or be given approval for planning unless they have such engagement with the communities affected. I do not know whether that is possible, but that is where we are coming from.
50. **The Chairperson:** You want the current Planning Bill to do that, more or less?
51. **Councillor Clarke:** Yes. You get different views on wind farms. If you speak to someone, they might talk about the noise. People who actually live in close proximity to them say that the smaller

- turbines create a more annoying noise than some of the large ones. The perception of the public, who do not actually live beside wind farms, is that larger wind turbines create the greatest problem. I am not an expert. We have heard a number of experts speak, but there needs to be an analysis made by an independent group to pick up on the various points about noise, interference on TVs and all the rest. We should observe that independent protocol, so that people like us, who represent the public — and the public itself — will be able to say whether they believe such a document. You will always get those lobbying for and those against, but we need an independent body to sit down and analyse a lot of those issues, health issues and all the rest.
52. **The Chairperson:** A quite thorough research paper was given to us for today's meeting. It cites a number of research and survey findings. They are kind of saying that there is not proven medical evidence that the noise that you are complaining about is harmful. They also say that accidents are very rare; I cannot remember, but it is something like one in 2,500 and up to one in 30,000 or something. Research has been done on those issues.
53. **Councillor Chittick:** There is one more question, Chair. All these things have a lifespan. When they come to a stage of decommissioning, we need to know exactly who is going to pick up the tab. Is the wind farm company going to deal with that issue and restore the mountainside or whatever to its former glory? We need to be sure about what is going to happen at that stage.
54. **The Chairperson:** Thank you. Cathal, not too long.
55. **Mr Boylan:** Not too long, Chair. I was listening very carefully.
56. **The Chairperson:** There are other members behind you.
57. **Mr Boylan:** Behind every four men, there is a good council official, and it is a woman. Thanks, Rachel, for the information and the tour today.
- Unfortunately, we did not get an opportunity to see it, but we are well aware of it. We appreciate the papers that have been done by research and everything else. We have reached a crisis point where you are at the minute. There is a major issue with saturation of wind farms in this area. There is no doubt about it. I have two points. Where is the ETSU-R-97? Obviously, environmental health can assess only what regulations are there. I need information from you about that. Also, we brought forward the Clean Neighbourhoods Bill to assist council, not to put barriers in your way. Councillor Kelly alluded to it; could you write to the Committee or give us information on how that has changed? That certainly was not the intention of the Clean Neighbourhoods Bill. Thanks very much for your presentation.
58. **Mr Anderson:** Thank you for your presentation. I appreciate the difficulty that you people have as local councillors. I am a local councillor. I realise that there must be a lot of lobbying going on from various aspects.
59. **Mr Weir:** I suppose that all the wind in Craigavon is at ground level.
60. **Mr Anderson:** Yes; it is at ground level.
61. I think that councillor McGuire touched on community consultation and community benefits. You talked about people being approached by businesspeople who are looking to tell them to sign up. Can you, as local councillors, get all the communities together to say that it is a bigger issue? Do you see it as a really big problem? Are many individuals doing it? Is it a big issue?
62. **Councillor McGuire:** It is too late. They have done the deal. It goes into planning. It all came to a head about 18 months or two years ago when they started to build the first wind farm close to the road and the houses. People started to notice and realise its size and scale. When people started to ask questions, they found out that deals were done with certain farmers getting a

- road and another one getting a turbine and so on and so forth, but they had to sign an embargo, so they could not speak or tell anyone. They were not allowed to tell him down the road about this or that. That has caused great problems in the community.
63. **Mr Anderson:** So, it is a silent community deal that even you, as elected members, did not know about?
64. **Councillor McGuire:** Yes. That is still going on.
65. **Mr Anderson:** That is probably one of your bigger difficulties to try to touch base with. If you want to get the communities, you have to get all the community. If ones are being picked off, that is difficult to overcome.
66. **Councillor McGuire:** They are picked off because they are in a prime location. They are courted or whatever way you want to put it because they have a prime location. They are going up, and the deal has been done there. The man down the road is irrelevant; he may have only one strip of land that is too much hassle, so they step over him.
67. **The Chairperson:** Would that cause jealousy if someone is getting thousands?
68. **Councillor McGuire:** Yes.
69. **Mr Anderson:** I am from quite a distance away, as you know, but this has obviously caused great concern in your communities. As local councillors, when you get things like that, they are difficult to overcome. It is then getting into —
70. **The Chairperson:** Community benefits.
71. **Mr Anderson:** — what can be done for the community benefits, so that certain individuals are not getting all the benefit and [Inaudible.] benefits a few selected people [Inaudible.] .
72. **The Chairperson:** It is so that everyone gets a fair share in the locality.
73. **Mr Anderson:** I did not realise that that was going on.
74. **Councillor McGuire:** To think that one householder or farmer would agree to a turbine possibly not close to his house but maybe close to his sister's house and not even tell them and cannot tell them —
75. **Mr Anderson:** So, it is in families as well.
76. **Councillor McGuire:** And they read in the paper that there is a wind farm going up beside them, that speaks for itself.
77. **Councillor Kelly:** One other development that we have noticed in recent times is that, in the past, a lot of the companies put in planning applications under their own name, but now they are also putting in planning applications under the landowner's name so that people feel that they cannot complain or object to a planning application because they are a neighbour or friend.
78. **Mr Boylan:** That is the mechanism that they are using.
79. **Mr Anderson:** It is not official, but obviously the planning authorities know about that. It is going on. They know about it, but if there are no objections coming in, there is really nothing that they can do in the sense of objectors because of that.
80. **The Chairperson:** Now that Peter is back and we have a quorum, do members agree that we will send the council's paper to DOE and ask for its comments?
- Members indicated assent.*
81. **Mr McElduff:** In the spirit of joined-up government, could we also send them to the Agriculture Committee, the Health Committee and the Committee for Enterprise, Trade and Investment? Those Departments are being referred to as well.
82. **The Chairperson:** OK. That is joined-up thinking.
83. **Mr Boylan:** Finally, Chair, there is a wee bit of information to come back from the council in relation to the ETSU-R-97 and the Clean Neighbourhoods Bill.

84. **The Chairperson:** Yes. Once we get the responses, we will forward them to you.
85. Thank you very much. That was very informative. We need to take a balanced view of the whole situation.

27 June 2013

Please note that Official Report (Hansard) staff were not present at this meeting and that this report has been retrospectively compiled without the benefit of contemporary notes and details of the sequence of speakers. Members present for all or part of the proceedings:

Ms Anna Lo (Chairperson)
 Mr Sydney Anderson
 Mr Cathal Boylan
 Mr Tom Elliott
 Mr Barry McElduff
 Mr Peter Weir

Witnesses:

Professor Alun Evans *Wind Watch*
 Dr Dan Kane
 Mr John Peacocke
 Mr Peter Sweetman

86. **The Chairperson:** I welcome Dr Dan Kane, Professor Alun Evans, Mr John Peacocke and Mr Peter Sweetman from West Tyrone Against Wind Turbines.
87. **Dr Dan Kane (Wind Watch):** Chairperson, thank you very much for giving us the opportunity to address the Committee.
88. **The Chairperson:** You are very welcome. I am sorry that we did not bring sunshine to Omagh today.
89. **Dr Kane:** I have to tell you that I am voice-activated. If you want to make a sign to me that I am, perhaps, taking too long to speak or you are pointing at a watch or something, just rattle something at me and I will know.
90. **The Chairperson:** I am glad that you made that point because we are running behind time. Some of our members have to be back in Belfast by around 2.00 pm for a Committee this afternoon. We have already received your written submission. Perhaps, you could make a brief, 10-minute presentation, which would allow members to ask you questions afterwards. Would that be

OK? We will keep you straight to 10 minutes.

91. **Dr Kane:** OK. We are a bit unhappy about the industry not having appeared. The decisions will continue between now and September. We are unhappy that that will be the situation, and we will not have had the issued examined.
92. Perhaps, I have the advantage over Committee members in that I can remember Omagh as it was up here. What you are seeing now is the despoliation of the area. In the past five years, around 250 applications for wind farms and turbines in this area, west Tyrone, have been approved. At present, there are over 200 additional ones in the system. What you will see is a continuing bank of turbines around Omagh. That will form the backdrop to the Ulster American Folk Park. It is interesting that you were turned away from the wind farm at Bessy Bell this morning. People tell an interesting old joke, which is, "Why is the wind industry so popular? Because it brings its own fans." I think that that is very much the case. We have been told for years that wind farms would be great tourist attractions, educational facilities, and so on. If you look at the original applications, you will see that Bessy Bell and the other wind farms in the area were sold on that basis. I am sure that you were stopped there this morning by the crowds trying to get a look at the turbines. Of course, that does not happen.
93. The issues that we want to look at in particular are separation distances and noise. There are many more. We could look at jobs, electricity supply, and so on. I want to give Peter an opportunity to speak because he has come here from Dublin. Representatives of the industry could not come here from Belfast. I do not believe that they have only one speaker. The standard that is

used to decide separation distances in Northern Ireland is based on one document, which has the snappy title of 'ETSU-R-97'. We will just call it "ET" for short because it really is the type of document that an extra-terrestrial dropped on us. That document was written in 1996. It stated that the minimum separation distance of 300 metres to 400 metres would not be adequate even for small single turbines. At that time, turbines were no higher than around 32 metres. It was out of date. It was a bit like somebody walking in front of your bus this morning with a green or red flag. That is out of date. We know that it is out of date because the document itself says so. It says that it should be reviewed within two years. That has never been done. However, members of the group who wrote it, from the British wind industry and the Department of Trade and Industry, eventually, did presentations. In 2004, they decided that the distance of 300 metres to 400 metres should be doubled. So, according to Andrew Bullmore, who was one of the authors, and others, the minimum separation distance should now be 700 metres.

94. What is the situation in Northern Ireland? There is an image in the slides of a turbine beside a house. We could take you to homes around Northern Ireland where turbines have been placed as close as 100 metres to them. According to PPS 18, which is the standard that is supposed to be applied by Planning Service, the minimum separation distance is 500 metres. It is now trying to claim that it is not: it is ten times the rotor diameter. However, PPS 18 is quite explicit that it is 500 metres or 10 times the rotor diameter; whichever is the greater. It is quite simple. That is not being applied to single turbines and, in many cases, not even being applied properly to wind farms themselves.

95. There is a big issue here that is important for a number of reasons. In one way, we are glad that you did not get into Bessy Bell because, as you have, probably, never been told, the

top fell off one of those turbines and rolled down the hill. The Health and Safety Executive does not even collect information on such accidents. We know that the accident rate among wind turbines is that, on average, every single wind turbine will have an accident every 10 years. So, if there are 500 turbines, there will be 500 accidents over 10 years. That will be around 50 accidents each year. That rate is increasing, particularly as turbines get older. That is one aspect.

96. The separation distance issue is very important. It is not being dealt with properly. Other jurisdictions are moving further and further away. They are saying that the minimum separation distance should now be at least two kilometres for a wind farm. Turbines are now much bigger. They are making noise of a different character. That is another issue that we think needs to be looked at. Recently, within the past week, we have submitted two papers to the Committee for Health, Social Services and Public Safety showing the impact of low-frequency noise. That noise is the main pollution that comes from the bigger turbines. How do we know that? The chief executive of Vestas Wind Systems, the biggest turbine manufacturer in the world, has stated that clearly to the Danish environment minister. We know that the low-frequency noise is present and that it travels much greater distances than ordinary audible tones. What we are finding is that people are becoming sick through the effects of sleeplessness and other aspects of low-frequency noise. The research is now there that shows that that is happening. What are we doing? The Environment Minister hides behind the Public Health Agency. He says that it says that there is no problem. However, it has never, ever looked at it. It has never measured anything or gone out and done any testing. Basically, the view that is being taken is that, if you cannot hear it, it does not hurt you. Well, I cannot hear radiation and neither can you, but I can assure you that it hurts you. So, that argument does not stand at all.

97. With regard to the standards that are being used, it is supposed to protect amenity, among other things. PPS 18 asked for protection of amenity — residential amenity and, obviously, health and safety and all the rest of it. ETSU-R-97, or “ET” as we were calling it, which is the standard that was used, does not protect amenity. It actually states that itself.
98. **The Chairperson:** Sorry.
99. **Dr Kane:** Do you want me to stop?
100. **The Chairperson:** It is OK; I just missed that word “amenity”.
101. **Dr Kane:** So, ETSU-R-97 does not protect amenity. It states so itself. It does not protect amenity because it states that to set the noise level to one that is required to protect amenity would have too much impact on wind energy. So, there is a problem right away. With regard to the actual method that is used, ETSU-R-97 does not satisfy European requirements under the environmental assessment regulations which have to describe the impact on people who live near a wind-energy operation and what the impact on them will be of shadow flicker, noise and any other emissions. It does not satisfy that at all. It is still being used. It should have been reviewed a long time ago. As I said, ETSU-R-97 was written in 1996. It said itself that it should have been reviewed within two years. To give you an example of how out of date it is, the World Health Organization standard for night noise, which is the noise level to permit you to return to sleep if you wake at night, was originally 43 decibels. Therefore, when ET was written, it was set at 43 decibels. It is the only standard in the entire world that has a higher night-time noise than during the day, which is crazy. Not only that, but the World Health Organization has reduced the level from 43 to 38 decibels. We have not followed suit in Northern Ireland. Therefore, the whole policy is completely out of step. It does not protect the public. It does not properly describe the noise that is affecting people, particularly low-frequency noise, which it does not measure at all. It uses a particular scale, which is called the A-weighting scale, which does not measure low-frequency noise. Therefore, when the wind industry tells you that there are no noise impacts from wind turbines, it does not know that because it is not measuring it. It is not looking at that at all. The thing about low-frequency noise is that, when it reaches your home, it goes through the structure of the building. Insulation, double glazing and so on does not stop it. It actually resonates more loudly inside the home than it does outside. So, there is a big issue with low-frequency noise.
102. There are many other health impacts that we could talk about. The whole issue of 10 times the rotor diameter as a safe separation distance for noise just does not stand up. It was actually created for a totally different purpose; that of shadow flicker. It was wrong when it was created. It has no application to noise whatsoever. So, we have many concerns about the whole issue of separation distances. Why is it two kilometres in Scotland as a general rule of thumb? Many organisations, such as the French Academy of Medicine, UK Noise Association and the Society for Wind Vigilance, are saying that there should be a minimum separation distance of at least two kilometres. So, we are not going to sit here and argue about whether to have wind energy: the people in the countryside who have to live with the effects of the decisions are the ones who will suffer. They will suffer a reduction in the value of their properties and so on.
103. David Cameron has talked a great deal about giving power back to the people and the Localism Bill. However, we do not have a localism Bill here. Communities in England can stop applications for turbines and wind-farm developments. We are not being given that right here. We are not being given the right to say no. Now, attempts are being made to bribe us. People who have just lost £100,000 off the value of their home are not going to be greatly tempted by a £200 a year payment off

- their electricity bill. We need to be clear about that. Also, the benefits of that so-called energy source have to be looked at, such as employment, among others, and the actual number of jobs that are lost for every green job that is created. The big issue is health and safety. We ask the Committee to consider that issue.
104. At this point, I would like to bring in Peter Sweetman to talk about his view. He has come the whole way up from Dublin to talk about the issue.
105. **The Chairperson:** Peter, can you be very brief?
106. **Mr Peter Sweetman (Wind Watch):** I will be very brief.
107. I am a European. I am one of the few people who have taken a case the whole way to the European Court. At present, until now, I have worked only in the South. I have had a recent look at the Northern implementation of the EU environmental impact assessment directive, the habitats directive and the strategic environmental assessment directive. Northern Ireland legislation is completely out of line with the decisions of the European Court. I can give you a few figures. The first case that is relevant to the environmental impact assessment is C-50/09, which is the Commission versus Ireland. It states clearly that article 3 of the directive is that the assessment is carried out by the regulatory authority, not the developer. The decision was made in March 2011. It does not seem to have filtered through to the North because, with regard to all of those wind farms, people are saying that their environment impact statement is the assessment. According to the law, it is not.
108. We still rely on the 1999 regulations here. There was a directive in 2003 — 2003/35 — which was to implement the relevance of the Aarhus convention into European law. That has recently been tested in the European Court, to a certain extent, by an English case — the Edwards case, reference C-260/11. The actual wording of the directive is that a review shall not be prohibitively expensive. The implementation of that here is that you have now made a ruling that the maximum cost that can be awarded is £5,000 against an individual or £10,000 against a group and that the maximum costs that can be awarded to you in a High Court case are £35,000. Basically, adding all of that up, it is still prohibitively expensive. It costs, in real terms, around £100,000 to take a case to the High Court in Northern Ireland and around €200,000 in Southern Ireland. We are now allowing a cost level of £35,000. That is not in compliance. The Edwards judgement needs a little bit more interpretation. However, it does not come along with that.
109. We then move on quietly to the habitats directive. The judgement in my case, which is C-258/11, made two very important points, which I will deal with quickly. The first was that there was a mistranslation of article 6 of the habitats directive whereby we assessed the necessity for an appropriate assessment to be carried out if it were not going to have a significant effect on the habitat. It was a mistranslation. The judgement now interprets that there must be an appropriate assessment if a development could have an effect on a habitat. There is an awful lot of difference between “have a significant effect” and “could have a significant effect”. We are still going down the road here of not even having a significant effect. We are removing massive amounts of peat for wind farms and draining into protected rivers and suchlike. We are having no assessment at all. That will have to be sorted out.
110. The other point in my judgement is that when you perform an appropriate assessment on that — of the Narrow Water bridge, for example — the level is that there shall not be any lacuna. In the Narrow Water bridge situation, permission was granted despite the actual design of the bridge not being completed yet. That is a lacuna.
111. I will just make one final point on the strategic environmental impact assessment directive. What is proposed

by your policy document, which was not strategically environmentally assessed, but should be — taking it down directly to Omagh — is being interpreted so that a ring of steel is being put around Omagh with no strategic environmental assessment. Northern Ireland is way outside European law. It is time that you came into compliance like everybody else. Thank you.

112. **The Chairperson:** Thank you, Peter. Thank you very much for your presentation. Obviously, we are hearing your concerns about distance. That is the main concern. Certainly, we have two very thick research papers here saying that noise has never been proven to be detrimental. We have two very thick research papers that say that noise has never been proven as being detrimental. How close in distance are wind farms to houses in Omagh? You said that there is one about only 100 metres away. Is that the worst-case scenario? How many of them are 500 metres or more away?
113. **Dr Kane:** The policies on single turbines have been handed down to the divisional planning offices. There is no consistency. There should be a minimum of 500 metres. There are many turbines, but we do not know the exact number. Many people are coming to me saying that they have one at 90 metres, 100 metres, 200 metres and 300 metres, all of which are well within the minimum separation distance. That separation distance was set in 1996 for a turbine that was only 32 metres high. Now they are 180 metres or 210 metres high. The turbines that are used as single turbines are, in many cases, bigger than the turbines used in the wind farms. Why should there be any difference in how people living beside them are treated? There are a lot of problems. Alun, would you like to comment on the health aspects?
114. **Professor Alun Evans (Wind Watch):** Yes. A 2009 report highlighted the major growing public health problems of night-time noise. Noise is the problem. It may be noise, as Dan told you, that you cannot hear. There are considerable health concerns. My colleague Chris

Hanning and I wrote an editorial in the British Medical Journal (BMJ) last year. We have been criticised for not having a systematic review. In an editorial, you are allowed only 800 words, so it is very difficult to do a systematic review. We are well aware of the literature. There are no studies that show that wind farms are safe. That is a simple statement.

115. The problem with the noise that wind farms generate is that it is a form of noise pollution. It is particularly irritating because it is impulsive, intrusive and incessant. Noise pollution is a real problem. It may not be the noise that you hear, as Dan pointed out. The major problem with it is sleep disturbance and deprivation, which predisposes to a number of conditions. Unfortunately, old people, like me, and the very young are most affected. I would be most affected because I have lost my upper registers of hearing, and so the low registers are more prominent. Children have better hearing. Remember that sleep deprivation was used by the British Army as a form of torture in the early 1970s in this Province. It has been known that it is pretty nasty to deprive people of sleep. It leads to poor memory and possibly cognitive changes in old people and poor memory in the young. There are also disturbing associations between sleep deprivation in children and increased bodyweight. A host of diseases, some more strongly than others, are associated with sleeplessness. There is a relationship to cancer. My background is in cardiovascular epidemiology, where the term “risk factor” is originally said to have been coined. It was actually “factors of risk” that was coined; “risk factor” emanated from the aerospace industry around about 1952. The problem with risk factor — what we know from epidemiology — is that they tend to be continuously distributed. The more you have of it, the more the risk. It is artificial where you have a risk factor to have a cut-off point and say that there is no risk below that; there is a gradation of risk. That is a point to

- remember about the wind farm noise limits.
116. There is a big study and a small study this year. The big one is a Norwegian study that shows a very large association between symptoms of sleep deprivation and heart failure. We are swapping heart failure as a cause of death for myocardial infarction. This country used to lead the world in that respect. We have now, thankfully, dropped back, but we are getting more heart failure. There is a strong association with heart failure. The other thing is that a recently published study of sleep deprivation in volunteers showed surprising changes in a vast number of genes' expression: the genes are there, but it is the amount of music that they are playing. Some are increasing and others decreasing, so you explain the —
117. **The Chairperson:** That is not directly related to wind farms.
118. **Professor Evans:** I am talking about noise and sleep deprivation. This is the major thing that we have to worry about, and that is to do with the set-back distances, which are insufficient.
119. **The Chairperson:** According to our research paper, there has never been any medical evidence that wind farms cause sleep deprivation cause.
120. **Professor Evans:** We are talking about arguments of nuance, the problem being that the sorts of studies to indubitably prove associations that these things kill you have to be very large and are very slow to accrue. Therefore, we have a problem and have to take our evidence where we can find it. I conclude that there is sufficient evidence to be very worried about these things.
121. **The Chairperson:** OK. I will bring other members in.
122. **Mr Sweetman:** Sorry, may I just add one point? The report that you are relying on states that there is no evidence —
123. **The Chairperson:** It is based on a number of research studies.
124. **Mr Sweetman:** I quite agree with that, and it is not problem. The fact is that under European environmental law, the precautionary principle must hold sway. It is not up to them to say that there is no research; it is up to them to prove that there is no damage. It is not for us to prove that there is damage; it is up to the developer to prove that there is no damage. They cannot do that.
125. **Professor Evans:** That is the “primum non nocere” principle, which is enshrined in medicine, and I am surprised that our Public Health Agency does not wake up a bit.
126. **The Chairperson:** We can ask the Department what the criteria and guidance is for the set back distance and what distance it recommends between turbines and neighbours.
127. **Mr McElduff:** It is good that we are having this engagement, and we need more of it. I am struck by the fact that health-related and energy output issues are being raised. We are the Environment Committee and probably concentrate on the planning dimension, but it tells me that government needs to be joined up in how it looks at the whole are of wind energy. There may need to be some interaction between the Environment Committee, Health Committee and Enterprise, Trade and Investment Committee. I think that this is a possible area to look at having a cross-Committee inquiry. However, we are in west Tyrone, which is made up of the Omagh and Strabane districts. In answer to a recent question that I posed in the Assembly, I was told that of nearly half of the North's wind energy infrastructure — I think that it is 48% — is located in this area. That begs the question of whether we have reached or exceeded saturation level in this area. The local campaign group sent us copies of draft questions and areas for consideration.
128. I will zone in on suggested question 15, which tells us that three major planning applications for this area are in or entering the system. They are described as “Slieveard” wind farm; “Lisnaharney”,

- near Gortin glen in the Sperrins; and the Bessy Bell extension. Earlier, you asked me what type of shoes you should wear, Chair, on the site visit. Well, you did not need to change your shoes because we were denied access to the site. However, each of those sites —
129. **The Chairperson:** I brought my trainers.
130. **Mr McElduff:** — are within a five-mile radius of each other. So, will the panel perhaps make the case as to why those three planning applications should nearly be considered as one because of their cumulative effect? Will the delegation make a point that we can take to Planning Service about why they should be treated as one big application as opposed to three individual ones?
131. **Mr Sweetman:** I can answer that. It comes back to the point that there is a requirement under European law for a strategic environmental impact assessment. This is project-splitting. It is trying to minimise the overall effects by bringing three applications. What I referred to as the “ring of steel” around Omagh is technically one project and should be treated as such.
132. **Professor Evans:** From a noise aspect, the positioning of turbines on hilltops is worse because complex terrain makes the sound worse, which is bad news for people who live in the basin below.
133. **Mr Elliott:** Thanks very much for your presentation, folks. I am not exactly sure whether you are indicating that there should be no wind turbines or wind farms at all or whether you feel that they would be acceptable under the right and proper conditions.
134. **Mr Sweetman:** I feel that they have to be assessed under the right and proper law. Until such time as we have the right and proper law, we cannot answer that question.
135. **Mr Elliott:** If you were writing the law —
136. **Mr Sweetman:** The law is already written.
137. **Mr Elliott:** No, but, if you were starting with —
138. **Mr Sweetman:** It is just not being complied with.
139. **Mr Elliott:** If you were starting with a blank page and you wanted to write law that would allow wind farms, are you saying that you do not believe that you could write a law that would protect everyone from wind farms? Or, are you saying that there is a possibility that you could have enough safeguards to allow wind farms?
140. **Mr Sweetman:** It is possible.
141. **Mr Elliott:** What conditions would those be?
142. **Dr Kane:** You would need to assess the impacts accurately and honestly. That has not been done. For example, we are told in PPS 18 that a separation distance of 10 times rotor diameter would resolve the issue of shadow flicker. It would not. The original piece of research that that was based on says that it would not, so that is a misquote from the original research.
143. **Mr Elliott:** Forgive me, but, forgetting about PPS 18 and the law as it is written at the moment, what do you believe should be put in there that would protect people from wind farms or wind turbines?
144. **Dr Kane:** At this stage of our knowledge from the research that has been done, a separation distance of at least 2 kilometres is required.
145. **Professor Evans:** Some countries are going for more now. Some are going for 5 kilometres.
146. **Mr Elliott:** Do you believe that that would protect people?
147. **Dr Kane:** If we were wrong on that, you could always move the turbines closer later. You can never move them further away. That is the issue. So, that is being precautionary about it. A lot of the issues that come up in environmental impact assessments are never gone back on to be tested after the thing is up and running. In the case of wind farms that are causing noise problems, people are not reporting noise problems,

- because that affects their property value if they are trying to sell their house. Also, the Minister has told us that there is a penalty on the developer that prevents the developer from turning the turbines off so that you can assess the original background noise and so on. Therefore, they are basically saying that they cannot police the noise and cannot enforce anything against the noise. Therefore, if they do not get it right, by the time the applications have gone up, it is too bad and they are stuck with it. That is what we are being told.
148. **Mr Elliott:** So, you do believe that there could be opportunities for wind farms but only under very specific conditions, one of which is that it is at least 2 kilometres away from households.
149. **Dr Kane:** Yes, turbines are changing. There are now new types of turbines with the vortex inside them and things like this, which have a totally different principle and do not have the same impacts. We have to move on. That is old technology now, and the impact on people is more and more proven.
150. **Mr Elliott:** Finally, if there were opportunities for wind farms, do you believe that they would be better congregated in one site, with perhaps 50 turbines together, or do you believe that they would be better separated a few miles apart if that were possible?
151. **Dr Kane:** It is a pity that the slides did not work. I have a photograph of the Horns Rev wind farm. It is an offshore one. One of the things that you get with wind turbines is a vortex from the back of them, and that vortex affects the turbines in the next row and the next row and so on. So, there are major issues there about how you distribute turbines around the landscape, and it is now emerging from the research that is being done that turbines need to be scattered everywhere in groups that are quite disparate from each other, because this is how this vortex effect is reduced. In answer to your question, from the point of view of economy of landscape, you would put them all together, but that would mean that the largest proportion of the turbines would not perform properly at all.
152. **Mr Boylan:** Thanks for your presentation. To be honest, I think that the number of wind turbines and wind farms that are proposed is alarming. My colleague outlined the three planning applications.
153. I want to try to break it down into two or three issues and maybe try to get some answers. We have the new proposals; the adaptation, refurbishment or increase of existing wind farms; and I want to go into the noise and health issues. Those are the three main issues that you highlighted. When the professor was talking about "ET", I thought that that was a movie from the 1980s. That is a new meaning for us. I will come back to that point when I speak about the noise issues. Do you believe that with the new proposals in the area mean that we have reached saturation point for wind turbines?
154. **Dr Kane:** Yes.
155. **Mr Boylan:** Let us go back to the policy. If we are to look at it we need to look at the policy. Do you agree with that as far as the wind energy element of PPS 18 is concerned?
156. **Mr Sweetman:** Any strategic environmental assessment would find that we have reached saturation point in the Omagh area.
157. **Mr Boylan:** No problem. That is why we are here and that is what we want to hear. We can come here and talk about it or we can come here, take the evidence and come back and look at what we can do with the policy.
158. The policy states that the maximum size of a wind farm is 500 m for wind farms and 10 times the rotor diameter for single turbines. I am experiencing that in Armagh at the minute; that is what they are using. That is what they say. It clearly does not outline it. Somebody could put in an application for turbines with rotor diameters of 50 m, knowing rightly that they could get away with 300 m. They will then come back and say

- that they will reduce the rotor diameter to 30 m. We want to look at that. I do not know what the rotor diameter will be on the new wind farm that we did not see this morning. Will it be 30 m, 40 m or 50 m? Does anybody know what the rotor diameter will be for the proposed Bessy Bell wind farm?
159. **Mr Sweetman:** I do not know about Bessy Bell, but we have other ones that are up to 60 m.
160. **Mr Boylan:** So, that would allow for a maximum wind farm size of 600 m. Is it correct that the policy clearly states that the maximum wind farm size should be 500 m?
161. **Mr Sweetman:** There is a conflict.
162. **Mr Boylan:** That is grand. The main point that I want to make is that you have a problem with the new proposals, which there will obviously be a challenge to. Your second issue is with existing wind farms. I can only use the following example: as you know, if people put in applications for extending or refurbishing existing businesses, a principle has been established. I do not know how that works and you may have different issues —
163. **Mr Sweetman:** An application was made to extend a wind farm — I think it is called Lisnaharney — to make it bigger and have more turbines. The planning authority found that no environmental impact statement was required. It has not been built yet, but it is going to be bigger and higher, and there will be more of them —
164. **Professor Evans:** And noisier.
165. **Mr Sweetman:** Yes. And they decided that no assessment was required. That is absolutely contrary to a recent European Court judgement C-244/12 on an Austrian case. That decision was that, even on threshold, if a wind farm comes into an EIA process it must be assessed. A line from the planner that no EIA is required is not an assessment. It is a statement of non-fact.
166. **Mr Boylan:** OK. Going through all that raises a couple of simple questions. Do you believe that a threshold should be set at the number of wind turbines that are established at the minute?
167. **Mr Sweetman:** I think that we have too many.
168. **Mr Boylan:** OK. What about a challenge to the policy? There are established wind farms and proposals for new ones. What is your intention? In any debate that we have on this issue, would you like us to ask whether a threshold should be set at the level that exists now?
169. **Mr Sweetman:** My attitude is that the strategic environmental assessment directive is there and should have been used to assess this.
170. **Mr Boylan:** No. I am asking about established wind turbines. Are you saying that we have reached the threshold?
171. **Mr Sweetman:** It has reached saturation.
172. **Mr Boylan:** OK. That is your word for it. That is grand. The other issue is —
173. **The Chairperson:** Cathal, I am afraid that —
174. **Mr Boylan:** I know Chair. I only have two more questions. This is important.
175. **The Chairperson:** OK. Well —
176. **Mr Boylan:** They have come down here for this. I do not want them to have to come back to the Assembly. Let us deal with it while they are here. I have two more questions.
177. You said that the ETSU is outdated, so it is time that we looked at that again. Is that basically what you are saying about that?
178. **Mr Sweetman:** Yes. By its own admission, it is out of date.
179. **Dr Kane:** The noise levels are completely out of date.
180. **Mr Boylan:** It is obviously up to local councils to deal with environmental

- issues. What contribution has been made by councils to the assessment of wind farms, given that you are talking about the ETSU?
181. **Mr Sweetman:** The assessments that I have looked at do not comply with European law.
182. **Dr Kane:** Usually, the environmental health people are not equipped to look at this. They follow the industry's guidance. The developer tells them what they mean by what they are going to do. They do not have the equipment to measure compliance or low-frequency noise. They also not have the training to look at the landscape impacts and so on.
183. I am sure that you have been a councillor. If you had a noise issue, you would have sent your environmental health officer, who would have done an assessment in the quietest part of the night and added five decibels to that. That is what you do under what is called BS4142. ETSU does not do that. From the very start, it assumes a minimum noise level for wind turbines of 35 decibels and 43 decibels at night. That means that it cannot protect amenity and you have an increase, particularly in a quiet areas like this, of 20-plus decibels. That does not sound a lot, but it is two, three or four times the noise that is being heard in the area. Under BS4142, that would be a statutory nuisance right away. However, wind turbines get a special dispensation — by the way, no other renewable energy gets, and all the rest have to play by the rules — and are allowed to be noisier at night. If environmental health ever come out to look at the problems they come out during the day. Even if we had got on to Bessy Bell today, the time to hear Bessy Bell's real nose impact is in the middle of the night.
184. **Mr Boylan:** OK. Finally, finally, Chair, I promise, you said that there is a separation distance of 2 km for single wind turbines and wind farms. Is that for both?
185. **Dr Kane:** Originally, there was supposed to be a difference for turbines with rotor diameters of up to 15 m. That was supposed to be permitted development, but that did not happen and it was then included in PPS18.
186. You could probably make the case for single turbines that are domestic or farm-related having a closer distance, in other words, those that are in scale with the buildings around them. That is particularly and obviously the case if it owned by the landowner. However, industrial-scale turbines of 100 m-plus are being built on farms. Those are not farm-related and are being built to attract subsidies. Therefore, they should have the same separation distance as wind farms. Those turbines are wind farms of one turbine.
187. We could talk through it. If we look at the noise aspect in particular, we could come up with a set of robust rules that would deal with that issue very easily. At the moment, we have a rule that there must be a minimum of 500 m and it is being breached left, right and centre.
188. **Mr Boylan:** Thank you very much. Thank you, Chair.
189. **The Chairperson:** Peter, if possible, could you just ask one question or certainly two?
190. **Mr Weir:** I will maybe ask one question, but I want to preface it slightly. As the Environment Committee, we are looking at the planning side of this issue. There seems to be three points. First, I think that a very valid point has been made about overall cumulative applications. One of the weaknesses in the system, whether it is wind farms or other bits, is when piecemeal applications are put in in the knowledge that that will get a particular part over the line. The intention is then to put another one in etc. That also applies to other areas of planning. Secondly, there is the issue that you have raised about what you feel the panning guidance should be, particular as far as separation distances are concerned. Then there is the third issue of the current guidelines. You mentioned that a number of wind turbines are in a position in which the

- distance is a lot less than the guidance recommends. I assume that, in those cases, housing has predated the wind turbine?
191. **Dr Kane:** Yes.
192. **Mr Weir:** From the point of view of implementation or enforcement, do you feel that the reason for that is that the guidelines are not strong enough for Planning Service? Is it simply one of a number of factors to be taken into account, and then rolled into an in-the-round position? Or is it that a blind eye has been turned to the guidance and Planning Service is simply happy to drive a coach and four through it? Why do you think that the guidance requirements, even as it is at present, are not followed through? I appreciate that you consider the distance to be inadequate.
193. **Dr Kane:** You have pointed out several of them. One is that the planners seem to be too intent on chasing the targets and, therefore, they are putting through applications. A 90%-plus approval rate is not a selection system. It is not really a policing system at all. They are putting them through. The cumulative impact of that comes out very well. I can take you to a situation in Northern Ireland where there are two existing wind farms, a third developer has come along and wants to have a wind farm nearby and his application is based on the assumption that the existing two wind farms comply with the noise standard. They do not, but the planners will not measure it. They say that it is not their job to measure it and they cannot do it. Environmental health officers say that they cannot measure it.
194. **Mr Weir:** I am sorry to interrupt. I appreciate that noise is a separate issue, but I am very specifically asking about the separation distance.
195. **Dr Kane:** There seems to be a misunderstanding, in the divisional planning offices in particular, over the minimal separation distance. However, it is quite clear. I have been in correspondence over several years with them over this, but the minimum distance is 500 m. There should not be a single turbine in Northern Ireland, which you do not own, less than 500 m from your property. With the exception, possibly, of turbines under 15 m in height.
196. **Professor Evans:** Small ones.
197. **Dr Kane:** Small ones, yes.
198. **Mr Anderson:** Thank you for your presentation. Tom asked some questions and I am trying to get my head around the answers. I am not clear about the answer that you gave to Tom's question as to whether you would be happy with certain conditions, or more wind farms here. I also picked up from a reply that this area had reached saturation point, when Tom asked about the way distances and clusters were done. Would you be happy, or would you say it was OK, if those conditions were met, as regards distances and clustering? Or do you really think that we have gone beyond saturation point, in this area, in relation to the number of wind turbines?
199. **Mr Sweetman:** It is not for us to come to an opinion on that. It is for the strategic environmental assessment of the issue to be addressed. We are — certainly, I am — of the opinion that we have reached saturation point, and, under the precautionary principle which is the guiding light under European law, it is up to wind farm developers to prove that we have not reached saturation point, rather than for us to prove that we have. That is what the law says.
200. **Mr Anderson:** I am involved in a single wind turbine application at the moment. The applicant has ticked every box to date, and every time he ticks a box, it goes back to the planner's desk because something else keeps coming up. We are trying to find out whether there is a satisfactory solution to the question of whether there is a point at which there is a number of turbines, in this area or any other, that we should not exceed and which should be set in regulations as well — never mind clustering, height or whatever else goes

- with it. Is that a case that you would argue? Have we reached the point of saturation and can take no more? Are we at that point?
201. **Mr Sweetman:** We think —
202. **Mr Anderson:** You think. I am trying to tease this out. So it does not really matter now. The case is this: what should the distance be? Should it be 500 metres; 700 metres or 1,000 metres? It does not matter for an applicant or someone trying to bring an application, because you are at a point where it is no more. You say that you think, but are you sure?
203. **Mr Sweetman:** If you were to take the existing ones and draw a line at 2 kilometres from them, there is nowhere left to put one. There is saturation.
204. **Mr Anderson:** Really, what we are saying today is that it is not a case of distance any more; it is that, in your view, there are too many. Is that what you are saying?
205. **Mr Sweetman:** We are not completely looking at this area. We are talking about the general common good. Certainly, in this area, we have reached saturation. However, in any other area, we would say that the 2 kilometre distance should be not affected for public health and safety under the precautionary principle.
206. **Mr Anderson:** You are West Tyrone Against Wind Turbines.
207. **Mr Sweetman:** We are not totally Nimby. We are looking for the common good across the whole of the country — the whole of the island, actually. That is why I am here.
208. **Mr Anderson:** As far as you are concerned, it is beyond the wind turbine situation in west Tyrone.
209. **Dr Kane:** I see where you are coming from. I am not going to say that I am anti-wind or pro-wind or anything. I do not think that that is the issue here. However, I do think that we are living with the history of all the bungalows that were built during the direct rule period and so on. We have more than any other part of the UK. It is difficult. Edwin Poots told me that he could not get adequate separation distances and we would have to live with the problem. Therefore, if we cannot get adequate separation distances, do we accept that and move people away? Do we move people? There is no compensation mechanism here. People's homes are being made valueless. I could take you to a family who are living with 111 turbines proposed and in existence around them. Their house is now valueless. In that situation, if a farmer wants to put up his own turbine, the issues that I have with that are whether it will affect me if I am a neighbour and, if it does not affect me, am I going to pay for it? That is another issue that we need to look at. However, other than those things, if he wants to do that to himself, I have no real problem with that at all.
210. **Mr Anderson:** What I am trying to find out is this: within regulations, it goes beyond distance and cluster, and it also goes beyond the numbers game in a particular area? Is that what you are trying to say?
211. **Mr Sweetman:** The cumulative effect must be assessed, and the cumulative effect is not being assessed under the precautionary principle. That is what we are trying to say.
212. **Mr Anderson:** OK. Thank you, Chair.
213. **The Chairperson:** Thank you, Sidney. I think that the cumulative effect is an issue for planning, whether it is in my constituency of South Belfast or in other parts.
214. **Mr Sweetman:** The law is not being effective.
215. **Mr McElduff:** Chair, may I ask one brief question relating to Planning Service? To go back to Planning Service, it has come to my attention that individuals who wish to object to a planning application are given very restrictive, controlled and supervised access to planning application material. Is the delegation aware of the rationale for that? Somebody who has a legitimate stake in

either opposing or informing themselves about a particular application is sometimes restricted in how they can view the material and in the number of hours that they can view the material. Am I correct in my understanding of that?

216. **Dr Kane:** That is correct.
217. **Mr Sweetman:** That is contrary to the Aarhus convention. It is as simple as that. It is a breach of the convention, and we should be making a report to the compliance committee.
218. **The Chairperson:** Yes, that should not have happened.
219. **Mr Sweetman:** It should not have happened.
220. **The Chairperson:** There needs to be transparency. Thank you very much indeed.
221. **Dr Kane:** May I finalise that point, if you do not mind, because you have made a very important point? The notification distance is 90 metres. Therefore, most people are never told that a turbine is going to go up near them. That is a crucial issue.
222. **The Chairperson:** Knowledge and information are so important. Thank you very much. I am sure that we will be hearing the same argument again.

12 September 2013

Members present for all or part of the proceedings:

Ms Anna Lo (Chairperson)
 Ms Pam Brown (Deputy Chairperson)
 Mr Cathal Boylan
 Mr Tom Elliott
 Mrs Dolores Kelly
 Mr Barry McElduff
 Mr Ian Milne
 Mr Peter Weir

Witnesses:

Mr Gary Connolly	<i>Northern Ireland</i>
Ms Meabh Cormacain	<i>Renewables Industry</i>
Ms Lucy Whitford	<i>Group</i>
Ms Gail Hitchins	<i>Principal Acoustic</i>
	<i>Consultant, SKM</i>
	<i>Enviros</i>

223. **The Chairperson:** I welcome Gary Connolly, chairperson of the Northern Ireland Renewables Industry Group (NIRIG); Meabh Cormacain, NIRIG policy officer; Gail Hitchins, principal acoustic consultant at SKM Enviros; and Lucy Whitford, vice chair of NIRIG. Thank you very much for coming, and thank you for sending us a very detailed briefing paper. Can you give us a presentation of between five and 10 minutes? I am sure that members will have many questions to ask. As you are aware, we have been to Omagh to meet the west Tyrone group on a number of occasions.
224. **Mr Gary Connolly (Northern Ireland Renewables Industry Group):** Thank you very much, Chair. You have just shortened my presentation by doing the introductions, which is a good start. You mentioned that you went to Omagh, and it is appropriate that we start by apologising for not being able to attend Omagh on that day. That was for two reasons. The key reason was that Gail was not available at that time. She has travelled across from England today as an acoustic expert, and we were aware that that would probably be an area of interest. Secondly, you may be aware that the Department of Energy and Climate Change (DECC) had published guidance just prior to that meeting. We were not really in a position to comment on that guidance because of the sequencing of the event. We did not think that it would be useful for us to attend without being able to answer some of the questions that you might have asked.
225. **The Chairperson:** Gary, it would have been helpful to us and to you if you had explained that to us. Your response saying that you could not come was very brief, and there was no explanation why you could not come in June.
226. **Mr Connolly:** I can only apologise for that. Meabh will now give a brief presentation, and I will finish off at the end.
227. **Ms Meabh Cormacain (Northern Ireland Renewables Industry Group):** Thank you, Chair and Committee. I will spend a couple of minutes and start by taking a step back on why we are here as a renewables industry. Much of this you will already know. At a global level, we are aware that there is a need to tackle climate change and to reduce carbon emissions. That means that energy policy at a European and Northern Ireland level is looking at having an increasingly diversified secure and sustainable energy supply, and renewable energy is a major element of that policy. Northern Ireland is heavily reliant on imported fossil fuels for energy needs. The trend for fossil fuel prices globally and historically is upwards, and we believe that renewable, and particularly wind, is a proven, scalable, cost-competitive technology and can act as a hedge against fossil fuel volatility. Particularly on the island of Ireland, we have a single electricity market, and, when there is increased wind penetration within this, wholesale

- prices go down. That is important to be aware of.
228. Northern Ireland has some of the best renewable resources in Europe, and, in 2012, about 14% of our energy supply came from renewable energy; the vast majority of that was onshore wind. We as an industry are confident that, with the appropriate policy framework, we will be able to reach our 40% targets by 2020 and even more so beyond that. With appropriate infrastructure development and interconnection, we will be able to export more of our clean, indigenous energy resources.
229. I will touch briefly on some of the challenges that we face as an industry in developing those resources. The first is grid. There is very little value in having a wind farm if it is not connected to the electricity grid. For that, you need the appropriate network investment, and you need the appropriate policy to allow you to connect to the network.
230. In April 2012, we were expecting to see NIE's five-year fifth price control published, which would have set out the level and types of investment that would have been carried out in five years to enable the electricity grid to, first, continue to function, and, secondly, accommodate additional generation. After delays, and an eventual referral to the Competition Commission, it may be April 2014 before we see the eventual outcome. That creates a great deal of uncertainty.
231. There has been an ongoing process on connection policy, specifically, for about four years, to try to figure out the best way of connecting wind farms to clusters, which is a method of reducing the need for overhead lines. There have been four consultations. That means that, since July 2010, 14 wind farms are still waiting for revised grid connection offers. As a result, about 200 megawatts of wind energy are at risk of seeing planning permission expire, because there is a five-year planning window for most of them. Specifically, the absence of a second North/South interconnector is preventing us from fully utilising our renewable energy resources, and it is costing consumers, north and south of the border, to the tune of about €20 million a year. That is an estimate. That is one of our key challenges, and we are working on it with stakeholders.
232. There is a great deal of uncertainty in the market. Northern Ireland is in a unique nexus: we are within the all-island single electricity market, but we are within the UK jurisdiction and UK energy policy. There is ongoing change at the moment, with electricity market reform happening in the UK, which will shake up the energy sector. By 2016, the single electricity market will also have undergone a fundamental change. Such uncertainty in both markets is a challenge for investor confidence.
233. We believe that Northern Ireland has an appropriate planning policy framework and guidance in place. We believe that the strategic planning team at DOE has the expertise and the experience to deal with complex planning applications for wind farms and, as a result, has made good progress towards reaching our targets. We believe that that is the appropriate home for assessing wind farm applications in future, and they should continue to be assessed as regionally significant applications.
234. Finally, before I hand back to Gary, numerous surveys across the UK and Ireland demonstrate that most people are in favour of the increased use of renewables, including wind. However, the debate is probably being dominated by a vocal minority. At a local level, where communities have legitimate concerns, NIRIG encourages members to consult communities and to address their concerns. At an industry level, we believe that it is appropriate to have the debate based on credible evidence and factual research.
235. Again, thank you for the opportunity to have that debate today.
236. **Mr Connolly:** Thanks, Meabh. I will say a wee bit more about NIRIG and what it is about. We are a trade association; we represent the development sector

- and those associated with development. I suppose that our mission, for want of a better description, is responsible development. That is what we promote as a trade organisation.
237. With regard to the development process, the Committee will be familiar with PPS 18. I know that it came before the Committee and was reviewed quite a bit. The PPS 18 planning guidance drives what we do as individual development companies. Typically, it takes us 18 to 24 months to prepare and submit a planning application. There are significant considerations as part of that, such as landscape, ecology, hydrology, noise, shadow flicker, communication, aviation and transport, and they are addressed in some detail in the context of our planning applications.
238. As developers, we will try to maximise the potential of any site, while, at the same time, minimising the impact on the local environment, including the local community. We understand communities' concerns, and it is worth making the point that, as a development sector, we try to maximise the potential site, and often that means trying to construct turbines that are the most efficient and make the best use of the resource available.
239. We are here to answer any questions that you may have. In summary, renewables are good for Northern Ireland because they reduce our reliance on fossil fuels, they increase our security of supply and, as Meabh touched on, they give us the edge against the increase in fossil fuel prices.
240. We are committed to responsible development. Onshore wind has been proven to be the most cost-effective technology for delivering renewable electricity to any market. For that reason and for others, we believe that wind is good for Northern Ireland as a whole, and it is good for the communities that are affected by the development of wind farms. We strongly believe that wind development is safe. and we believe, as an industry, that most people support what we are doing across the UK and Ireland.
241. **The Chairperson:** Thank you for your presentation. I am sure that I speak for all members of the Committee when I say that we are supportive of renewable energy. We need to explore clean, renewable energy, and we have the potential with the abundance of wind and water around us to explore and exploit tidal power and wind turbines. However, meeting the west Tyrone group raised a big concern for me, which is that 40% of wind turbines that are in the pipeline for approval will be located in a small area of west Tyrone. That will have a cumulative impact on communities, and they talked about health problems, sleep deprivation, the sound of the flicker and also community benefit. I know that the Department has worked with you on the protocol on community benefits; it is trying to win hearts and minds. How will you go about that? You talked about needing the scientific facts and the evidence base to say whether those are real or perceived negative impacts. How do you go about it? Do you have a policy for how to win hearts and minds?
242. Another issue is whether there is a need for the Executive to have a strategic view on it so that, for instance, if there were mapping areas, they could say that a certain area is already concentrated, so they need to move away from there. There are restrictions under AONBs and ASSIs for building, but, surely, we should have a more strategic view. We have PPS 18, which does not say which area you can build on or not build on, but should we have a zoning exercise to say that certain areas should be encouraged and others discouraged, with public consultation?
243. **Mr Connolly:** One of my colleagues will speak to the points that you raised, but to deal specifically with the issue of west Tyrone and the number of projects located there, you are absolutely right: a significant number of projects have been developed in Northern Ireland in the west Tyrone region between the two council areas. Some of those who

- protest against the projects see that as a negative, but it is important that there is also a positive aspect to that. You touched on community benefits. We, as an organisation, have a protocol in place. That protocol is being reviewed in the context of the guidance that came from DECC in London. There are ongoing discussions between DECC and RenewableUK, which is one of our parent organisations. When the outcome of that is clear, we will review our protocol.
244. **The Chairperson:** I understand that the level of compensation or benefit to communities here is not as high as in the rest of the UK.
245. **Mr Connolly:** The DECC guidance proposed that it should be raised to £5,000 per megawatt. That is up for discussion between DECC and RenewableUK. When those discussions are concluded we will review our protocol in that way.
246. Aside from the community benefit, there are economic benefits to communities. I apologise for using an example from across the border, but in County Donegal, which is generally in the same part of the world, 30% of rate income from business comes from wind farms. There has been a clear recognition in that part of the world that although wind farms have an impact on the landscape and so on there is also a very positive impact.
247. There are people working in Omagh, Strabane and Derry city who are directly involved in the wind industry. We estimate that some 1,300 people across Northern Ireland are working specifically in wind. A reasonable number of them are working in the western region. That illustrates that there is a positive aspect to developing wind in regions as well as some of the perceived negatives.
248. Lucy may want to comment on some of the planning issues.
249. **Ms Lucy Whitford (Northern Ireland Renewables Industry Group):** There is special policy guidance on cumulative impacts alongside the development of PPS 18. The guidance contains a section that goes through each of the landscape character areas and gives broad strategic guidance on them and on what could be accommodated in them. That is an important tool that is being used by Planning Service and by the wind farm developers. Each of the projects submitted to Planning Service must assess cumulative impacts on all levels under environmental impact regulations. It is important to know that each wind farm is being assessed on its cumulative impact, which Planning Service will take into consideration when it makes a decision.
250. **The Chairperson:** Would basing 40% of all wind farms in one area not have a huge cumulative impact?
251. **Ms Whitford:** Each of the impact assessments has to look at that. The study areas go out to 25 kilometres and 30 kilometres in the assessments that are provided in most of the planning applications. They are studying the proposals, what is in planning and what has been given consent. It is still for Planning Service to decide what should be given consent, certainly in light of a cumulative impact assessment.
252. **Mr Connolly:** Much of the reasoning for development in west Tyrone is driven by resource, as there is a very good wind resource in that part of the world. If we broaden it out, you could ask the same question: why does such a high proportion of the wind energy delivered in GB come from Scotland? It is for exactly the same reasons. As developers, we tend to focus on the areas that give us the most efficient returns and wind farm performance.
253. **The Chairperson:** You have to think about the people whose families have lived there for generations. Suddenly, they see wind turbines all around them, and there is a mental effect on them as well. I know that there is evidence to say that outside a certain distance they will not be harmed, but people can see the wind turbines around them.

254. **Mr McElduff:** I welcome the delegation; it is a strong team. I am familiar with the story in my constituency of West Tyrone. Public representatives are prevailed on a lot by groups and individuals on this particular issue. The two councils there have done a good job. Their position might be best summed up by reflecting their duty to challenge adverse impacts robustly, but, generally, a presumption for.
255. West Tyrone Against Wind Turbines has gone beyond west Tyrone. There were a number of lobbying days here in Stormont where all the parties groups and individuals from all over the place, including Carrickfergus, Keady. It was a 40- or 50-strong group, and it raised serious issues. Therefore I am glad that the Chair posed those questions about the cumulative impact in west Tyrone, but is there scope for greater focus offshore? Is there scope for greater exploration of the offshore potential? Is it being exhausted?
256. Secondly, I do not know how you will respond to this, but West Tyrone Against Wind Turbines says that all wind farms are operating illegally and are in breach of European law. Do you understand the point that is being made there in one of these correspondences? I do not understand it, but if anybody else does, tell me what the point is behind that. It states that all wind farms operating here are doing so illegally and that they are in breach of European law. In another correspondence, a very bleak picture is painted about the loss of tourism-related jobs in areas of outstanding natural beauty, such as the Gortin glens. That is one of the bigger worries about the Lisnahrney application. Perhaps we focus on offshore potential not being realised, but the correspondence relates to the loss of tourist jobs in the Gortin glens, the Lisnahrney application, and that point about the breach of European law.
257. **Ms Cormacain:** I will kick off on the offshore point. There has been significant work done to zone Northern Ireland's tidal and offshore wind resources. In October 2012, there was a formal launch of the successful bidders for the leases, which are for two separate tidal projects off the north-east coast around Torr Head and an offshore wind project of up to 600 megawatts off the coast of County Down. Zoning was done with DETI and DOE and the Crown Estate, which manages the seabed. They zoned those areas, and 600 megawatts for an offshore wind farm is a significant contribution. That will take a long time to deliver. Lucy might correct me, but there will probably be about two or three years of studies, whether that is mammals, fish, bird life, etc, and then the planning application, construction and then grid connection. Again, Lucy can correct me, but we are probably looking at 2020 or 2021, depending on whether it is built in stages. The potential is there, and the work has been done to develop it in the appropriate areas. I will just go on to tourism.
258. **Ms Whitford:** Part of the target is 2020 for the projects awarded to be in operation.
259. **Ms Cormacain:** I have seen the concerns about tourism. All I can say is that studies have been done in Northern Ireland and surveys have been carried out in Scotland. Visit Scotland has done a couple of surveys going back to 2008 because of that concern. Broadly speaking, the outcome of those surveys has been that wind farm development should have a minimal impact on tourism. The Northern Ireland Tourist Board concluded in 2011 that, overall, people were either neutral or in favour of wind farms. In that particular report, there was a figure that said that 3% of domestic tourists, ie, from Northern Ireland, would be put off visiting an area with a wind farm, which is a very low percentage. I think it can be managed, and, on the basis of the surveys that we have seen to date, I think the fear is probably greater than the reality. I can send you links, if they would be of use or help to the people who have those concerns.
260. **Mr Connolly:** On the other side of that, regardless of whether there is an impact from a tourism point of view, it is worth looking at the positive impact

that it has had on jobs in west Tyrone. Adman Civil Projects Ltd in Carrickmore, Alexanders in Omagh, and Nordex, a turbine manufacturer, have bases in and around the Omagh area. They are employing significant numbers of people. A project built last year outside Strabane contributed locally because of the materials that were required. Over £1 million was spent on stones in the quarry sector, for example. The Committee does not need me to tell it the impact there has been on the construction sector over the past five years. Our sector, and what it is building and delivering, has been a lifeline for many small, family-run companies due to the money we are pumping in. Again, the assessment of that project indicated that somewhere between 35 and 40 local businesses in the Strabane district council area benefited directly. That is as simple as a local hotel providing accommodation for some of the technicians from the turbine company who travelled, to local hire companies, and so on and so forth. I think that there is a very real positive economic benefit from construction.

261. My last point is on the European legislation. I am at a loss, as are you. All I will say is that typical investment in a wind farm could be between £30 million and £40 million. You can imagine the due diligence involved in preparing for that. The company solicitors who review the legal agreements with landowners, the planning procedures, the grid connection, and all the rest of it, would not allow us to spend that kind of money if there was any concern that the development was illegal.
262. **Ms Whitford:** To add to that; again, I do not know the context of the question, but all of Northern Ireland's planning legislation, and a lot of the European legislation relating to habitats, comes from Europe, and we put it into policy in Northern Ireland. So, the majority of wind farm applications are under environmental impact assessment (EIA) regulations, unless they are screened by the Planning Service. We go through quite rigorous habitat assessment

regulations, all of which are driven from European legislation. Like Gary, I am not sure where that question is coming from.

263. **Mr Milne:** You talked about community benefits and outlined some of them for the construction industry and the local communities that benefit from the work. That is a passing market. The people in those areas are most concerned with what is in the ever-increasing amount of wind farms for them. If you look at the price of electricity today, with all of the wind farms we have, you will see that it is only going up and up. You talked about community benefits. In my opinion, what you have outlined is benefiting a minority in the community. It is a passing thing. Electric bills affect every household in the country. How can you say that there is community benefit to people who have to sacrifice the way of life that they have had for hundreds of years because of these monstrosities sitting at their back doors, on mountainsides, or in areas of natural beauty, if you cannot tell them that electricity bills are coming down instead of going up?
264. **Mr Connolly:** I will deal with part of that, and then Lucy will lead. First, I do not agree that they are monstrosities, but you would expect me to say that. Fuel prices are a very important point. There is a misconception that the construction of wind farms and the electricity that they produce is somehow leading to a significant increase in the electricity bill. In reality, the increase that consumers face in electricity bills is coming because of gas price increases. Over the past week or so, you may have seen that two of the main gas suppliers are talking about increasing domestic gas prices, and that change is having exactly the same impact on the electricity-generation market. So, the increase in price has been driven by gas. As an industry, we are very clear that the contribution that the 15% — 14% at the minute — is making to the electricity market is actually helping to reduce the price of electricity. People may say that they are not seeing the direct benefit of

- that, and that is a fair point. We contend that, if that contribution were not coming from wind farms today, the price would be even higher than it is. It is a very difficult point to make, but that is where we are coming from.
265. **Mr McElduff:** How great a mitigating effect is it having on the price of electricity? At an individual level, is it contributing to a reduction? Can you quantify it?
266. **Mr Connolly:** There is a cost for renewable electricity, because, as you all know, wind farms receive support payments. Against that, there is the question of what it does to the price of electricity. To quantify it, it is probably best to use figures from two studies. One is an Irish Wind Energy Association (IWEA) study, which says that if we reach our 40% generation target from 2011 to 2020 we could see a reduction in price in the region of 11%. The reason for that is that, when the wind farms are operating and the electricity has been generated, a gas-fired power station is not generating electricity. That brings down the overall wholesale price of the electricity. We are quite happy to direct you to that report if that is of any help.
267. **Ms Cormacain:** You asked about benefits to the community. It has been touched on before, but it is worth reiterating that the wind industry has been a leader in putting community benefit schemes in place. They are voluntary, as they are across the UK, and they are an acknowledgement that local communities are hosting developments that are contributing to basically regional and national energy targets.
268. I will provide a bit of background, and apologies if you are already aware of it. A number of protocols are in place around the UK and Ireland on community benefits. The first was published in England in 2011, and the second was the NIRIG protocol, which we launched in January. There was a lot of uncertainty happening, so we committed to reviewing it as soon as new evidence came out. We went ahead and published it January anyway. There is now a community protocol in Wales, which was done in conjunction with the industry and government. It does not set out community benefit levels. There is a community benefit register in Scotland, and there is now a community benefit protocol in the Republic of Ireland. So, that is the context of where we are, and, as Gary said, we will be reviewing our own protocol.
269. I disagree with the view that it is a short-term benefit. Wind farms have a predicted lifespan of 25 years. It is not insignificant, when you can give that kind of certainty in community benefits for such a period, especially for the community sector and the third sector, where you tend to work on a one-year or, if you are lucky, a three-year funding cycle. You are constantly chasing your tail to see where the next tranche of funding will come from. To have any degree of certainty over what your income levels will be for five, 10 or even 15 years or more is really welcome. An awful lot of community groups are putting in insulation in their church halls and community halls and are putting triple glazing in houses. That is a really long-term benefit, and an awful lot of communities have benefited from these schemes. So, respectfully, I do not agree on the point about short-term benefits.
270. **Mr Boylan:** Thanks very much for the presentation. I was disappointed that you could not make it down to Tyrone, because we had an opportunity there to engage properly.
271. Gary, we met at a previous Committee meeting. There was a situation in which the Department identified a number of landscape character areas; I think there were 130. I remember when we last talked that you or other members of your group identified certain areas throughout the North where it would be more efficient and effective to erect wind farms.
272. I remember Tyrone being mentioned in that discussion, but in fairness, the crux of all this is that PPS 18 is a document about all renewable energies and I want

- you to remember that. Wind energy is one element of renewable energy. After visiting west Tyrone, I genuinely think that there has been a proliferation of wind farms down there.
273. I have discussed the policy with my colleague here and we now have to ask whether a threshold should be set. I will be honest with you about that, having looked at the area and right across the policy. At the end of the day, the 2020 target is to provide 40% of electricity from renewable energy. How much of that percentage will be provided by wind turbines? I ask that because there should be a lot of other renewable energy outlets.
274. **Mr Connolly:** We are at about 14%, and over 12% of that comes from wind turbines.
275. **Mr Boylan:** OK, so it is 12% from wind turbines out of the 14%. All right.
276. I have loads of questions but I am not going to take up a lot of time by asking them all today. There have been a number of questions, and Barry touched on some of them from West Tyrone in particular. I know that there is a proposal for a wind farm with a number of units in my area, outside Keady, on the Keady to Newtownhamilton road. My constituents have come to me with grave concerns about it.
277. Having listened to all those people, and taking community benefits and everything else into consideration, I do not think that there has been proper engagement with communities on the matter in some areas. Your first port of call is to do that. Early engagement with people is very important, and it seems to me that that is not happening.
278. I will be open and honest with you, because a number of single wind turbines have been erected in the Newry and Armagh area that have been backed by businesses. I could see it happening through European funding and support from the Department of Agriculture and Rural Development (DARD) and so on, and perhaps there could be engagement with the farming community about erecting wind turbines for their benefit. However, it seems to me that the wind industry is supporting single wind turbines. That is what I am hearing from constituents. I have grave concerns about that. I would like you to respond and tell me whether that is the case.
279. **Mr Connolly:** Lucy will comment on community engagement, but when it comes to the issue of wind farms versus single wind turbines, we represent the vast majority of wind farm developers, which are members of NIRIG. A number of companies develop single wind turbines, and they are also members of NIRIG.
280. It is probably fair to say that the majority of single wind turbine applications are from private individuals. They tend to be from farmers, supported by local architects and so on. Therefore, it is difficult for us to speak for them, in the context of what the member companies of NIRIG do with regard to single wind turbines. They have a more systematic approach because they repeat what they are doing over and over again, whereas an individual farmer tends to apply for one or maybe two single turbines, which is a slightly different process.
281. I take your point about proper community engagement and I agree with you. However, I would not necessarily agree that it does not happen. From our membership's point of view, when we propose to develop a new project, we do engage fully. I will give you an example of a project that will go to the Planning Service before the end of the year. There were 140 households visited to make them aware of the proposed planning application, and a community information event was held on the back of those visits in order to inform people about the possible planning application. I was surprised that quite a number of the people who turned up at the event thought that the planning application had already been made, whereas it was very much a pre-planning information and consultation exercise.
282. **Ms Whitford:** From an NIRIG perspective, we have been supportive of

- pre-application community consultations that have come through the local government reform Bill and the Planning Bill. We are also involved with the Planning Service in how we go about pre-application discussions. The Planning Service is trying to develop that policy.
283. A large majority of wind-farm developers are engaging with us as early as they can. Sometimes it is a difficult process. You need to have the information to be able to go and tell people about a project, especially if you have bird surveys to do for a couple of years and look at the landscape and visual impact of the assessment. You want to be able to talk clearly about the project and answer concerns. There are door-to-door visits around the locality, exhibitions and follow-up information, trying to answer questions as local communities have them.
284. **Mr Boylan:** I take your point. We are raising this issue only because this is what we are hearing on the ground. We are in the middle. The project has started, you have engaged, but some members of the public are coming back and saying, “We only saw this in the paper.” Obviously, it is down to planning and we discussed with the Planning Service how that early engagement and pre-applications should take place.
285. It is a pity that you were not down in Tyrone, I have to reiterate that, but more and more opposition is growing against wind turbines. I understand the targets and what the industry is trying to do. We are supportive of that. It is Government policy and has been agreed, and that is grand. We will forward some questions, Chair, that were sent here specifically. There are a number of them and I will not get into them.
286. You talk about community benefit. Somebody could argue the point that there are subsidies for wind farms in the first place. There are charges and somewhere embedded in all that could be the element that goes back to the community anyway. That is an interpretation that some people have. People are already being charged for their electricity. There are European subsidies, so when you say that there may be a monetary community benefit, I do not know what you are talking about. So, people could have that perception. If there is proper engagement with communities, that is the sort of thing that should be teased out.
287. Meabh mentioned the North/South interconnector, which affects my area. When there are 6,500 objections, it is very difficult. People have the right to object and the point is that, initially, there was not proper engagement with the community. You are then left with people who have a very strong lobby in relation to it. In terms of connection to the grid, I do not know whether that is happening or not.
288. **Ms Cormacain:** It is one project and a major one. I would not want to comment any more on the application. It is an NIE application, obviously, but as an industry we think that we really need it.
289. **Mr Connolly:** It is also important to say that it is not a wind project. It is not being built to facilitate wind farms.
290. **Mr Boylan:** No, 100%, but it would be remiss of me not to mention my constituency.
291. **Mr Connolly:** Absolutely.
292. **The Chairperson:** With Gail here, I want to make use of her expertise. Will the mechanism, ETSU-R-97, be reviewed? There are arguments that wind speed at night is so different from during the day and that mechanism may be a bit outdated.
293. **Ms Gail Hitchins (Principal Acoustic Consultant, SKM Enviros):** Is the Committee aware of the recent publication undertaken by the Institute of Acoustics called ‘A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise’? What it has done is address some of the common criticisms of the ETSU methodology. An independent noise working group was formed by members of the Institute of Acoustics. Yes, there was an instruction

- from DECC, which was to look at various applications of the ETSU methodology and how it could be consistently applied in applications to the planning system. There are recommendations in the guide that address measurements of wind speed and how it should be measured at the same time as the background-noise monitoring is addressed. That is the consensus of my professional body of our industry on good practice. So, I refer you to the good practice guide, which is freely available on the Institute of Acoustics' website.
294. **The Chairperson:** People who talk to us, such as the west Tyrone group, say that, at night, when the wind speed is a lot stronger, it causes them sleeplessness, and that the measurement is not quite correct.
295. **Ms Hitchins:** I am not sure exactly what technical point there is there. You mentioned —
296. **The Chairperson:** You said that the distance is big enough for people not to hear the noise. They say that you should come at night. During the day, it is a different matter. At night-time, because of stronger wind, the noise causes sleep deprivation.
297. **Ms Hitchins:** Obviously, during the day, background noise levels tend to be higher. We are all out driving our cars. There are all sorts of other active anthropogenic noise sources. So, at night, the background noise levels drop. So, there is the ability, perhaps, to perceive turbine noise. However, that change in background noise levels is taken into account by the ETSU guidance. So, essentially, the ETSU guidelines allow for a set decibel level above background noise levels. Those background noise levels will be either day or night levels. So, separate noise limits are set for day and night. I ask you to remember that the ETSU noise limits during the day are set to protect people's amenity of their gardens, so that, on a Sunday afternoon, after a good lunch, you can have that snooze in your garden or on your patio. However, at night, the guidelines assume that
- you will be indoors asleep — with an open window. So, that is all taken into account in the guidelines.
298. **The Chairperson:** OK. Is that meant to be reviewed soon?
299. **Ms Hitchins:** No. As I said, the application of those guidelines — specifically, ETSU — does not contain any guidance on how turbine noise levels should be predicted. It does not tell you which calculation methodology should be incorporated. Likewise, there is an acknowledged area of weakness, perhaps, to do with the measurements of wind speeds and how they correlate with noise levels. Those points have already been addressed by that good practice guide, which the Institute of Acoustics published in May this year.
300. **The Chairperson:** Fair enough. I will just ask another question quickly. The allegation from the west Tyrone group is that the blades of the industrial wind turbines will warp if they do not keep turning, so they actually require the use of electricity, which is unmetered and is charged to the public in hidden charges on their electricity bills, to keep the blades turning. What is your response to that?
301. **Mr Connolly:** There is a technical issue. In the unlikely event that there is a prolonged period of no wind, you are absolutely right that, with regard to the power —
302. **The Chairperson:** This is not from me: it is from the west Tyrone group. [Laughter.]
303. **Mr Connolly:** Some power needs to go to the turbines. It is primarily to keep the electronics in the turbine control systems operational. If it is switched off and is allowed to become damp, etc, that causes problems. The blades do not turn in the sense that we stand back from a house and watch them. They are not powered to rotate; they are powered to twist, in exactly the same way that, in a serious storm condition, the turbine stops turning and stops generating power for safety reasons. So, yes, an element of power is required to

- go back to the turbine. As for how that is metered —
304. **The Chairperson:** It says it is unmetered.
305. **Mr Connolly:** At the end of the day, all our sites are net metered, if you like. We are paid only for the difference between the power that we draw and the power that is sent out.
306. **The Chairperson:** So it is untrue to say that that is charged to the public.
307. **Mr Connolly:** I am not clear about where that allegation comes from.
308. **The Chairperson:** We can certainly send letters and get calculations, including the mechanism for measuring noise.
309. **Mr Elliott:** Apologies for missing part of your presentation. If this point has been addressed, that is fine. One of the issues that came up consistently at the Omagh meeting was the distance from which wind turbines can be built from a dwelling. People referred continually to the Scottish policy and guidance. I cannot remember; was it 3 kilometres or something like that? It was quite a long distance anyway. I am sure that you are very much aware of that policy and guidance. How do you react to the suggestion that Northern Ireland should move to a policy similar to Scotland's?
310. **Ms Whitford:** I think that that is under consultation at the moment. I will have to triple-check with my colleagues in Scotland, but, as far as I am aware, it is a consultation and it relates to villages. My understanding is that it is not individual properties; it relates to villages. It is an ongoing consultation. As far as I know, there is not a set policy anywhere for a separation distance, apart from what is detailed in PPS 18 and policy RE 1 for residential amenity, which is 10 rotor diameters, and a minimum of 500 metres.
311. **Ms Hitchins:** I am aware of local authorities in England that have tried, in the context of their local plans and development frameworks, to introduce stand-off distances of varying amounts, but those have been rejected when the policies have gone for examination. They have been found not to be appropriate.
312. **Mr Elliott:** By whom? Was it the courts?
313. **Ms Hitchins:** I will have to check. Milton Keynes is the example that I am thinking of. We can certainly get back to you on who exactly rejected it.
314. **Ms Cormacain:** Guidance from the Department for Communities and Local Government stated that separation distances or buffer zones were inappropriate and should not be used. There are no statutory limits. It is all dependent on topography, landscape, the size of the turbine and other factors, but, in Wales, it was 500 metres or 10 rotor diameters, as it is here.
315. **Mr Elliott:** Chair, it might be useful if we could get the Scottish issue checked out, and what the actual position is. It was referred to a number of times by the group in Omagh. I met the group privately, and it was also referred to then.
316. **The Chairperson:** Yes, we can do that. At the moment, in Northern Ireland, it is 500 metres. Is that right? People sometimes seem to think that sometimes it is less.
317. **Ms Whitford:** PPS 18 sets out a minimum of 500 metres or 10 rotor diameters. If a project goes forward for approval, it has to put its case for anything that is going to be under that, and then it is for the Planning Service to look at. That is certainly the policy context of PPS 18.
318. **Mr Milne:** We hear a lot about objectors in communities to, for example, a specific wind farm. What support, apart from the owner of the land where you are building a wind farm, do you get from the community? Do you get letters of support from the community?
319. **Mr Connolly:** That goes back to something that you are all probably familiar with: the silent majority. In the context of the example that I gave earlier, my colleagues visited 140

- residences and gave the occupants a brochure and an invitation letter to an event. Of those 140 residences, 30 people came to the event. That did not include the wider advertisements in the local papers. We tend to hear from the people who have a real concern, and that is understandable. Other people are quite content. Meabh mentioned some of the numbers from the broader surveys. Those people do not tend to jump up and down saying, "We really support it". It might be worth mentioning the Embrace Wind campaign that RenewableUK has been promoting.
320. **Ms Cormacain:** That campaign was started a couple of years ago to provide a voice to the silent majority, to use Gary's phrase. It was prompted in part by the increasing number of objection letters that were being received for specific projects, largely in England at the time. The sense was that more people were in support of wind energy than were not, but that those views were not being heard. Therefore, a campaign was started by Action for Renewables that aimed to give people the chance to provide letters of support. That was quite successful. I do not have any figures to hand. I could find out a bit more about it, but, when people realised that there was an issue and that support letters were not being received as often as objection letters, the number of support letters began to rise. I do not have the specific information on that to hand, but I will see whether I can find out more.
321. **Mr Milne:** That is fair enough, but —
322. **Mr McElduff:** Is that an independent group?
323. **Ms Cormacain:** It was funded by industry, initially.
324. **Mr McElduff:** That is my point. I wanted to know whether it was funded by industry.
325. **Ms Cormacain:** It is funded by a number of organisations and chaired by a member of Greenpeace, Phil Jupiter — I think that is the right name. It has a board that comprises a lot of environmental NGOs as well, but I do not know the exact composition of the board. I am happy to send on the information that I have.
326. **Mr Milne:** When do you see an end to wind farms? Surely there has to be a limit on the number of wind farms that will be put in place in the North.
327. **Mr Connolly:** That question is almost one for yourselves. From a governmental or Executive perspective, what level of renewable energy do you want in Northern Ireland? As an industry, we are happy to develop projects that are profitable, and if the policy states that we do not need any more, that could bring it to a conclusion. However, that is certainly not what the policy is at the moment. I go back to my earlier comments about the significant knock-on impact of primarily using gas-fired generation and being reliant on that to produce our electricity. There is an element of "out of sight, out of mind" about how we generate our electricity, but, as you are all very well aware, our gas supplies come from fairly unstable regions and if we get to a point when gas supply becomes very expensive and uncertain, we will perhaps be back at the Committee in 10 years and you will be asking us why we are not building more.
328. **The Chairperson:** Security of supply is very important.
329. **Mr McElduff:** Could Gail point us in the direction of conclusive reports that say that there are no negative health impacts from low-frequency noise?
330. **Ms Hitchins:** Yes. Numerous reports reach those conclusions. I refer you to probably the most cited of those, which is the 2006 report that was issued on behalf of the then Department of Trade and Industry and carried out by the Hayes McKenzie Partnership. It concluded that, yes, low-frequency noise can be measured indoors at properties in the vicinity of wind turbines, but that it is well below the guidelines that are permitted by the Department for Environment, Food and Rural Affairs

- (DEFRA). Wind turbines are not the only source of low-frequency noise. There are guidelines that aim to control it from a variety of sources. Wind turbines are not unusual in that regard, and, as I said, the levels measured were well below the DEFRA guidelines.
331. **Mr McElduff:** I have a question about people who are objecting to applications. I am thinking of a particular family from the Aghyaran community on the Tyrone/Donegal border. They are absolutely surrounded by dozens and dozens of wind turbines. They tried to read all the material relevant to the application, but the Planning Service gives only restricted access to those documents. Reading is supervised and allowed for only a limited number of hours. Is that right? Are you aware of that?
332. **Mr Connolly:** All the applications for wind farms are handled at planning headquarters at Millennium House. There is a facility for anyone to request to see a file and read through it. There is a booking system and time limit for that. We suffer exactly the same issue when trying to see those files. That problem has been pretty much alleviated by the fact that the vast majority of information, and certainly the information that we provide as developers, is now available online on the Planning Service website. That takes away a lot of the pressure of trying to review it in an office in Belfast while someone is looking over your shoulder. It is now much more straightforward. We all use that now to access the information ourselves. It is a much better system.
333. **Ms Whitford:** It covers not only the environmental statement information that is submitted but the P1 planning application form, all the consultation responses and any other correspondence in relation to a wind farm that comes in, whether it is a letter from a supporter or an objector, and how that is dealt with.
334. **The Chairperson:** There are no more questions from members. The session was belated but very welcome and very useful. Thank you very much indeed for coming.
335. **Ms Cormacain:** Lucy has just reminded me of something. We are happy to facilitate a Committee visit to a wind farm at any point, if you wish. The Clerk has my contact details so please feel free to get in touch if that is of interest.
336. **The Chairperson:** OK. Thank you very much.

24 October 2013

Members present for all or part of the proceedings:

Ms Anna Lo (Chairperson)
 Ms Pam Brown (Deputy Chairperson)
 Mr Cathal Boylan
 Mr Ian McCrea
 Mr Barry McElduff
 Mr Ian Milne
 Mr Peter Weir

Witnesses:

Ms Suzie Cave *RaISe*

337. **The Chairperson:** I now invite Suzie Cave, our researcher, to go over her research paper. I apologise to Suzie for keeping her back the last time and postponing it to this week. You are very welcome again.
338. **Ms Suzie Cave (RaISe):** Thank you very much. I will try to keep this brief. It might not be just as quick as last week, but I will try.
339. I refer to the terms of reference that members were shown at the meeting on 10 October. This paper mainly relates to the first of the three that were identified, and that is to assess the adequacy of planning policy statement (PPS) 18 and related supplementary guidance in regulating proposals for wind turbines, in particular, with regard to issues of noise and separation distances. The paper also looks at arrangements across the UK and the Republic of Ireland, and considers areas worldwide where more stringent requirements have been set.
340. The first few pages of the paper mainly give an account of the process for making a planning application for wind farms and turbines, including the information that must be provided and how decisions are made. However, it focuses specifically on looking at separation distances from residential areas or “setback” as it is sometimes referred to. Those seem to vary greatly between countries in distances, the reason for their establishment and the weight that is given to them; that is, whether they are just recommendations or more of a statutory requirement.
341. In Northern Ireland, there does not appear to be any statutory separation distances stipulated in legislation. Recommendations or suggestions for separation are made through planning policy and guidance. Although these influence and inform decisions that are made on applications, it is good practice for a developer to adhere to the recommendations made; however, they are not obligated to do so.
342. Planning policy statement 18 suggests that turbines are a safe technology and that, even in the rare event of structural damage occurring, incidents of blade throw are most unlikely. Therefore, distances are calculated on the basis of keeping noise levels to a minimum, and those details are on pages 341 and 342. The Department of the Environment’s best practice guidance on PPS 18 goes on to state:
343. “As a matter of best practice for wind farm development, the Department will generally apply a separation distance of 10 times rotor diameter to occupied property (with a minimum distance of not less than 500m).”
344. When we look to the rest of the UK, it is apparent that no separation requirements are written in legislation. Similar to Northern Ireland, distances are suggested in policy and accompanying guidance, which are detailed on pages 342 to 343. In England, planning policy statement 22 suggests the same general requirements as PPS 18. However, the companion guide to PPS 22 suggests a separation distance of 350 metres. Scottish planning policy suggests a distance of up to 2 kilometres between areas of search and edge of settlements to guide developments to the most

- appropriate sites. A Welsh technical advice note on planning for renewable energy states that 500 metres is considered a typical distance. In the Republic of Ireland's guidelines for wind farm development, 500 metres is also the distance that is suggested between any turbine and noise sensitive property.
345. That having been said, and although unsuccessful to date, attempts have been made in the UK and Republic of Ireland to introduce separation distances through legislation. There have been three attempts in England to introduce a private Member's Bill that state statutory distances. However, none of those Bills progressed beyond Second Stage, the main reason being the possible impacts on the wind energy industry. That was illustrated in the Republic of Ireland, where, in November 2012, Deputy Willie Penrose introduced the Environment and Public Health (Wind Turbines) Bill 2012, which proposed separation distances of between 500 metres and up to 2 kilometres, depending on the size of the turbine. The Bill was not passed because it was felt that it could hinder the South's ability to meet EU renewable energy and climate change commitments.
346. That statement was made on the back of research carried out by the All-Island Research Observatory at the National University of Ireland, Maynooth, where the practical consequences of setting each of the separation distances between turbines and residential areas were mapped. The maps in appendix 3, beginning at page 355, illustrate the extent of the land area that would remain following the introduction of these exclusion buffers. In the case of the 500-metre setback, just under a quarter — 23.75% — of the total land area of the country would remain available for new wind farm development. However, that drops to 9.4% for the 1,000-metre setback, to 5.2% for the 1,500-metre setback and to 3% for 2,000-metre setback.
347. Since last week, I have been able to produce similar maps for Northern Ireland, copies of which have been passed round. Ring buffers were created round every domestic property in Northern Ireland using a geographical information system called ArcGIS. The maps show in green the remaining area of land that is not covered by a buffer. The property data was extracted from Northern Ireland's address database called Pointer, which is maintained by Land and Property Services with input from local district councils and Royal Mail. The data is current, as of 17 October. Only properties that were approved, built and domestic were used to create buffer zones. It is important to highlight that those scenarios do not take into consideration other constraints, such as availability of wind resource, buffers for watercourses, roads, communications, protected sites etc. Therefore, the total land area remaining available could in fact be smaller than the scenarios suggest.
348. In the UK, a number of local authorities are developing their own minimum distances between turbines and housing. Although those policies may have limited status, they demonstrate that separation distances are considered to be an issue across many areas of England. There are different examples of practice and approaches undertaken. The table in appendix 2 provides a range of examples to illustrate the range of distances selected and the status of the approach.
349. On 6 June 2012, Lincolnshire County Council issued a press release calling for a halt to the unrestrained invasion of wind turbines across Lincolnshire, stating that a minimum of 2 km and 10 times the diameter of the blade would be applied between turbines and residential property for noise and flicker reasons. In Milton Keynes, the council, in its supplementary planning document, tried to adopt a sliding scale of distance requirements according to turbine height. However, the policy was quashed in a High Court case, when the judge concluded that national guidance:
350. "plainly indicates that local authorities should not have a policy that planning permission for a wind turbine should

- be refused if a minimum separation distance is not met.”
351. There are a number of cases worldwide where distances have been set on a more statutory basis than just recommendations or guidelines. Pages 348 to 349 give an overview of some of those. Examples range from Hamburg in Germany to Ontario in Canada. Although Germany, Denmark and Canada do not have any national level requirements for setback distances, local authorities set their own requirements. Hamburg published a document on exclusion zones for wind turbines, which outlines the setback distances required from residential areas, nearest roads, railways, forests and protected areas.
352. In Denmark, municipalities are in charge of the planning for wind turbines up to 150 metres tall. They produce requirements for setback distances that fall within Danish law parameters. That includes setback from residential and coastal areas. In general, municipalities are considered to prefer flatland over hill land and grouping of turbines to reduce visual impact. People living within six times the total height of any wind turbine may have their property valued to assess any decrease. If the property is determined to have decreased in value by a minimum of 1%, they might be reimbursed by the wind facility developer.
353. In Canada, setback requirements are decided at the provincial level. Ontario has well-developed setback regulations, including distances from residential areas, public roads and railways, workplaces and recreation areas. Other areas that have policies include Brunswick and Prince Edward Island. Details of those are provided on page 350.
354. In conclusion, the main questions surrounding the use of statutory setback distances can be summarised as the following: would tightening requirements restrict wind development, and, if so, would that impact on Northern Ireland’s ability to reach the 2020 target of 40% renewable energy, when, in 2012, Northern Ireland reached 12%?; and what are the other renewable energy options available regarding their appropriateness for the Northern Ireland landscape, set-up costs and time, and their ability to generate energy in time to make the 2020 targets?
355. I know that the paper focused on a specific area, but if there are any other areas that members would like to consider, I am happy to discuss them. Thank you.
356. **The Chairperson:** Thank you very much indeed. It seems that very few places have a set distance on the statute book.
357. **Ms Cave:** Yes. It is normally just guidance, and recommendations are then made.
358. **The Chairperson:** Residents have told us that it is sometimes less than 500 metres here in Northern Ireland. Maybe our planners are following PPS 18 guidelines.
359. **Ms Cave:** The guidance states that each application is judged independently and that other considerations are taken into account as well. So, it allows for that degree of flexibility.
360. **The Chairperson:** The issue is not the danger of it falling down or blades flying off; it is the noise.
361. **Ms Cave:** It is the noise and, in some areas, the flicker.
362. **The Chairperson:** It even affects the television picture.
363. **Ms Brown:** Thank you for your paper, Suzie; it is interesting reading. I was trying to find the terms of reference, because I am not sure what we are basing this on. I just want to throw out a few questions. I was just wondering how efficient wind turbines are, given that they use wind to generate electricity but the wind does not always blow. So, how efficient are they on land?
364. There is no mention of costs in your paper. I know that wind turbines are heavily subsidised, but, when you look at how much energy they produce compared with how much we as

- consumers pay for that, how cost-efficient are they?
365. Separation distances obviously have a significant impact; that is, the bigger the separation distance, the fewer we will see. Although I am not opposed to wind turbines as such, I do not like the sight of them on the landscape. If they were dotted all over the place, I would be a bit concerned about the impact on what is a very beautiful landscape in Northern Ireland.
366. I know that there is not a lot of evidence to say that wind turbines have an adverse impact on people's health, but I question whether the noise levels could cause sleep deprivation, thereby impacting on the health of residents who live very close to them. Sleep deprivation obviously has a huge impact on your health. So, if sleep is disturbed, what is the outworking of that? There are lots of questions, I feel, coming out of this.
367. **The Chairperson:** The likes of the Northern Ireland Renewables Industry Group (NIRIG) said that there is no medical evidence to say that the noise level is above what you would hear on a windy day and that the negative effect is only in the minds of the people concerned. That is the problem.
368. **Ms Brown:** I have heard people on radio programmes saying that they do hear them. Maybe it depends on which way the wind is blowing or different weather circumstances, but they do hear them, and it disturbs them. So, I think that there are more questions.
369. **The Chairperson:** Pam makes a good point. Maybe we should look into how efficient they are and what value for money they provide, given that we all contribute to them through grants.
370. **Ms Cave:** A good starting point would be the Department of Enterprise, Trade and Investment's (DETI) draft action plan on onshore renewable energy for 2011 to 2020. On the question of efficiency, I mentioned that we reached 12% in 2012, and the draft plan basically states that onshore wind made the biggest contribution to that. It also lists eight other forms of technology that it feels would, when combined, reach 90% of the target for 2020. It is about this idea of reaching shorter-term targets and longer-term targets, and about what is the most viable technology to reach those shorter-term targets and what would be best in the longer term.
371. **The Chairperson:** Should we invest more in looking at other forms of renewable energy, such as geothermal? Apparently, that could be the most efficient. That involves pumping underground.
372. **Mr Weir:** It is fracking.
373. **The Chairperson:** No it is not. Geothermal is kind of underground —
374. **Mr Weir:** So is fracking.
375. **The Chairperson:** It involves getting the air from there or whatever.
376. **Ms Cave:** The technologies that the DETI draft action plan lists include offshore energy, marine energy, biomass electricity, biomass heat, ground-source and air-source heat pumps, and renewable transport. Those are the top seven that they recommend in that action plan.
377. **The Chairperson:** Members, we contacted Professor Geraint Ellis, a semi-independent academic at Queen's, to come to talk to us. We heard the pros and cons and both sides of the argument from the industry through NIRIG and from residents in the west Tyrone group. I felt that perhaps we needed an independent academic to talk to us. If members are agreeable to that, he can be available for our next meeting, which is on 7 November. If we have him talk to us, that will more or less conclude our inquiry. It will be only a short inquiry.
378. **Mr McElduff:** Will the academic from Queen's address the issue of sleep deprivation? Will that be one of the issues?
379. **The Chairperson:** No. He is from planning, essentially. We are looking at only two aspects, which are planning

- and distance rather than the health side.
380. **Mr McElduff:** Yes, OK. I understand.
381. **Mr Boylan:** Suzie, thanks very much for the paper. We waited for two weeks to receive the presentation.
382. **The Chairperson:** Have you read it?
383. **Mr Boylan:** Yes, Chair.
384. **Mr McElduff:** He absorbed and digested it.
385. **Mr Boylan:** Barry touched on a good point. We decided to do a small inquiry and focused on the planning side, but there are other issues. I am concerned because we keep going back to the 40% target for renewables, which Suzie mentioned in her report. The wind energy element has played a big part in the renewable energy targets. We have no figures for the other renewable energy sources, and they have not gone anywhere, be it tidal or whatever the other sources are within the renewable —
386. **The Chairperson:** Biomass is another area that we could explore.
387. **Mr Boylan:** Exactly. That is in PPS 18. Unfortunately, the wind energy is only one element, which raises questions for us.
388. In other areas, it seems that it is 500 metres for wind farms. Planning Service uses 10 times the rotor diameter of the wind turbine. Did you find that it was just a copy-and-paste job from other areas? Are those the general distances that we are looking at?
389. **Ms Cave:** In England, the relevant one is planning policy statement 22. That is very similar regarding the distance from the rotor blade. Whenever you take it down, though, to the supplementary guidance, it is 350 metres; whereas here, we are setting a minimum of 500 metres. As you know, with it being supplementary guidance, there is still a degree of flexibility and it is left to the discretion of planners at the time and individual applications.
390. **Mr Boylan:** Did your research find that Planning Service is considering the targets or it is just going on planning laws? I can imagine Planning Service sitting there and somebody arguing the point that the Programme for Government has set a certain target for renewable energies. Does any research suggest that that is playing a part in the decision-making process?
391. **Ms Cave:** It sounds logical to have a look into that. I am not sure whether there is anything available from the Department that states that Planning Service takes those targets into consideration. The main documents that it seems to make its material decisions on are listed. The issue is whether targets, which are obviously monitored more by DETI, are taken into consideration. However, there is no mention of that.
392. **Mr Boylan:** I do not know whether there are any figures for, or monitoring of, the effects. People mentioned sleep deprivation and noise pollution, but I do not know whether there has been a body of work done anywhere in the world that suggests that that has been monitored, over time, to see whether any damage is being done. I do not know whether there has been any research on that. We are focusing on planning, but the health issues — the noise pollution and everything that goes along with it — have been the main cry from the groups that have come to us. Is there any research that we could look at? Once we formulate our response at the end of this short inquiry, maybe that is something we could touch on.
393. **The Chairperson:** We decided that we are going to look only at the two main aspects, but, as you said, we need to mention that those were the issues brought up by people. I do not think that we can delve into that very much.
394. **Mr McElduff:** We could raise those issues and write to the relevant Committees suggesting that they may wish to examine those areas.

395. **The Chairperson:** That is a good idea, Barry.
396. Suzie, you have produced this map, which is great. Is it very difficult for you to map out for us the existing farms that we have in Northern Ireland in a similar map so that we can see where the concentrations are? Is it easy enough for you to do that?
397. **Ms Cave:** I can have a go.
398. **The Chairperson:** Then we can see and compare. I suggest that it would be very similar.
399. **Ms Cave:** The maps were produced in conjunction with one of my colleagues who works in geographic information systems, so I will speak to her to see what we can do.
400. **The Chairperson:** That way, we will know the concentration.
401. Thank you very much indeed, Suzie.

7 November 2013

Members present for all or part of the proceedings:

Ms Anna Lo (Chairperson)
 Ms Pam Brown (Deputy Chairperson)
 Mr Cathal Boylan
 Mr Colum Eastwood
 Mr Tom Elliott
 Mr Alban Maginness
 Mr Ian McCrea
 Mr Barry McElduff
 Mr Ian Milne
 Lord Morrow

Witnesses:

Professor Geraint Ellis *Queen's University
 Belfast*

402. **The Chairperson:** I welcome Professor Ellis. You are no stranger to the Committee. You have been very vocal about planning issues for some time. If you could give us a five- or 10-minute briefing on the paper that you sent us, which members have already, you can then take questions from members.
403. **Professor Geraint Ellis (Queen's University Belfast):** I put together something that is fairly brief and that, in some ways, raises more questions than answers yours, but I am happy to respond. I have not followed your inquiry closely so I am not entirely sure whether there are some issues that you feel that you have resolved or whether some are still outstanding.
404. The paper covers three key issues, one of which questions the policy and policy objectives for renewable energy here. In support of that, there are a few diagrams at the end, which have not been reproduced in great quality but which show the capacity in Northern Ireland up to 2011 and how that compares to other regions. It is a good way to start to try to understand whether the policy is having some success and on what terms you want to judge PPS 18 and the renewable targets.
405. I raise issues on how effective planning and energy policy have interacted and whether any more questions can be asked to make sure that their objectives fit a bit more closely together. I saw that there were questions over other types of renewables. I do not have a great deal to say on that, but I have highlighted the outstanding issues on the large scale, which are on anaerobic digesters or solar farms. As far as I am aware, there is not really a clear policy context for those at the minute, although there are likely to be quite a few applications for them.
406. I draw some questions from a recent study that I have completed with colleagues throughout the UK looking at how each of the devolved regions has considered renewables. You can see some of the graphs that have been taken from that study. We looked at the planning policies that differ across the UK on how the regions are seeking to plan and zone for renewables, particularly wind energy. There is a very different set of objectives, and I think that Northern Ireland stands out as being fairly different to the others.
407. In brief, Scotland and, latterly, England are encouraging local authorities to identify and zone sites for wind energy. In Wales, and I have attached figures at the back of my paper, they have taken the most different and potentially innovative approach. They have identified eight strategic zones in which they are encouraging large-scale developments of wind energy, and that has some pros and cons that we might want to discuss. Comparing the evaluation of planning policy here with other jurisdictions is a quite a useful thing to do in order to draw out some principles. That is all that I wanted to say briefly on planning.
408. Clearly, there are a lot of concerns about the local impacts, particularly

- of wind energy. I know that you have been looking at set-back distances, and I have said a few things on that point that draw attention to the implications of extending those. My biggest issue here is to ask the question: what is the purpose of a set-back distance? It is never quite clear what that is supposed to deliver. If it is to do with noise, then there may be other aspects such as shadow flicker and so on. Having a clear idea about what the set-back distance is supposed to achieve is the biggest issue, I think. If it is to do with noise, then there are probably other ways that you can do that.
409. I very quickly talk about land values and try to encapsulate some of the research on that. There is no evidence to suggest that wind farms have a major impact on land values in the research so far. There are some aspects on visual intrusion, which comes back to the zoning issue, and I talk about noise issues as well. There have been a lot of studies on noise and I know that local residents complain about that. It is a difficult issue for which there do not appear to be a lot of successful solutions. I suppose that the key point there is on a very interesting initiative in Denmark, which has huge amounts of wind and a lot of wind turbine manufacturers as well. They are trying to lower the threshold for noise in an attempt to get the manufacturers to improve. I am not entirely sure whether Northern Ireland has enough leverage in using planning policy to put pressure on wind turbine manufacturers.
410. Finally, I go on to say a few things about community engagement and participation aspects. There is some interesting work being done on the role of intermediaries working between communities, agencies and local authorities. That might be something you could consider in the context of planning powers being devolved further to local authorities. There may be a bigger role for that. I talk a little bit about community benefit schemes, which I am sure have occupied some of your discussion.
411. One thing I very much urge you to think about, as a way of leveraging greater levels of community acceptance, is a much bigger role for community-owned schemes or co-ownership. In a very different cultural context, and which has been very successful in Denmark, is a law passed in 2008, requiring every major wind farm to offer 20% ownership of the wind farm to local communities. That is taken up a lot there, and it seems to be very successful in engaging communities and spreading the benefits of the development.
412. Finally, I tie up some of those key things in a number of set questions at the end, which is just a summary of what I have just said.
413. **The Chairperson:** Thank you very much, Professor Ellis. You have given us a lot of food for thought.
414. You mentioned zoning. Some planners have talked about the fact that we do not have a zoning policy, but wind energy developers would say that we have plenty of areas of outstanding natural beauty (AONBs) that they are not allowed to go into. What will be the effect of having a zoning policy? You said that there may be drawbacks from it. What are they?
415. **Professor Ellis:** One important issue is whether it is too late for that because there has been so much development. Some of the benefits would have been in the protection of some areas for habitats and other things. We have maybe gone past that stage. That maybe one of the drawbacks.
416. It looks as though Wales will eventually lever in much bigger schemes into its zoned areas than elsewhere. Compared to England, just over the border, Wales is probably competing better when it comes to attracting major wind energy schemes. The benefits of attracting very large schemes is that usually there is much more leverage to get much better community benefit schemes. That is one key issue.
417. The other key issue to think about is the area per megawatt of visual intrusion. If

- you can concentrate turbines and have them closer together, the overall area taken up by them will be smaller. The Northern Ireland aspect, particularly with the financial regulations for single turbines, is that it will come to the point where there might not be anywhere from which you cannot see a wind turbine. That might be fine, depending on your viewpoint.
418. On the one hand, you can concentrate turbines; on the other, you can get them everywhere. Developers prefer non-zoning: they made that quite clear when PPS 18 was put into practice. The downside, coming from Wales particularly, is that zoning is much stricter and less flexible, so it might come to the point where you are limiting the overall renewable capacity in the country. It becomes a very big issue if you want to open up other areas. The downside is the inflexibility and uncertainty involved. There would be far more protection for non-zoned areas, which would become prohibited from that type of development. Maybe, we want more flexibility.
419. It is a very difficult call, and only time will tell in the UK about the experiment in Wales. In Scotland, zoning has been pushed down to local authorities, which might be a little bit better because communities then have a little bit more control over it. Maybe, in the single strategic policy for here, asking local authorities to zone areas may be the potential midway for doing it. There is quite a bit of research to be carried out on the Northern Ireland context and what could be done here.
420. **Lord Morrow:** You say that there is no evidence that land values have been affected. What about the value of other properties, such as homes? When you say “land”, are you talking about houses also?
421. **Professor Ellis:** The research done has been on house values. There have been quite a few studies, and they are very dependent on local house markets. As far as I know, there has been no research done on Northern Ireland.
- There was a little bit of work done quite a long time ago on Cornwall, but most of the research tends to have been done in the US. There was a major study issued in August this year that looked at 50,000 home sales in the US ranging from one mile to 10 miles away from wind farms. They did some very sophisticated modelling and could not see any effect on house values from that. In some ways, it seems as though there would be, but, actually, the evidence from the research does not seem to support that. I think a lot of people who are concerned about this aspect are concerned about that, but there does not seem to be rigorous evidence to support it.
422. The other point I will make is that lots of different land uses affect land values and home values as well. I know that wind energy has been the focus, but, if you are to consider an approach, it is a bit odd to just look at wind energy and not waste tips, schools or anything else. There have to be very good grounds —
423. **The Chairperson:** A school would add value.
424. **Professor Ellis:** Of course, some land uses increase value, like new public parks, schools or swimming pools. Clearly, it is not the intention, and never has been, to retract the positive value that people get from development either.
425. **Lord Morrow:** Schools are not something new. They have been around for a long time. This contraption is somewhat new. Therefore, people might be apprehensive. Maybe it is due to lack of knowledge and the fear factor of what will happen. I see that in your report you state that the most commonly quoted noise standard is ETSU-R-97, which is specified as 5 Db above background noise, an absolute maximum of 35 to 40 Db for daytime and 43 Db for night-time.
426. To be truthful, I do not think I would buy a home where there was a wind farm sitting a short distance from me. Whether it would make a noise or not, I would always be fearful that it might. We

- have listened to different delegations coming in here. They are very apprehensive and have cited incidents. We went to visit a wind farm and were locked out of it on one occasion. Whatever was going on, they did not want us to see it, or they did not want us there. Maybe we were trespassing and we should not have been there in the first place. There is genuine community apprehension about that aspect of it, which I think needs more reporting on. I am concerned about land values too, but you are telling me that this has not affected them, and I will accept that. I am not questioning what you are saying.
427. **Professor Ellis:** That is in what evidence there is. There have not been any studies done on Northern Ireland, so I would certainly not want to say that in this context it does not.
428. **Lord Morrow:** Any agent selling property would have a statutory obligation to state in the brochure that such a thing exists so many metres or yards away. That declaration alone —
429. **The Chairperson:** Do they have to put that in?
430. **Lord Morrow:** Yes, of course, they have to put in anything that could impact on the property. For instance, a large quarry sitting some distance from the property should be included in the brochure to notify the would-be buyer that it exists. Schools have been mentioned. When you lift a brochure for a new home, if there is a school nearby, it will tell you that the school is within five minutes' walking distance. Let us see if they are going to say, "And five minutes the other way, by the way, you have this wonderful, beautiful wind farm". It is something that must go into the brochure, as you would understand.
431. **Professor Ellis:** There are two things that I want to offer on that. One is that, when we understand reactions to wind farms, we often think of one thing, which is opposition; we never think of the nature of the dispute between supporters, which is far more complex and dynamic. We always tend to get obsessed with the opposition.
432. Also, we tend to look at it in a static way. The research tends to suggest that opposition to or dislike of wind farms generally — and again, this is a generalisation — takes a V shape. People tend to be relatively supportive of wind energy before there is any announced proposal near them. When one is announced, support drops because of the fear factor, as people become apprehensive of what might happen. Research shows that, over time, support tends to recover, not to the former limit, but there is a sense of getting to live with it. I do not claim that that happens to everyone. It depends on the siting and everything. However, research suggests that it follows that pattern. Support does not end up as high as it was before.
433. Some research has shown that any impact on home values tends to follow the above trend. In the example you gave, if a wind farm were announced, it would put people off buying. However, once established, people would see the effects for themselves and take the decision on whether to buy. That is an important aspect: the dynamic of opposition.
434. The other thing you said was that, from your own personal experience, you would not buy a house in that situation. This is a vital issue.
435. **Lord Morrow:** I would certainly look twice at it.
436. **Professor Ellis:** I think that there is a real problem with policy, because I have been looking for evidence and there is none. However, you know that people feel that way. It is the same with noise. The noise standard suggests that there is not a problem, but you know that some people really suffer from noise. I think that, to have a smarter policy, we must take into account how people feel about this because, in the long run, that is the best thing for the wind energy industry.

437. If people feel that they are being dealt with in an unjust way, or whatever, there is going to be more and more opposition. So, in the long run, instead of discounting people's feelings just because they cannot be proven, we have to be very sensitive and somehow have a policy that is a bit more reactive to that. If people keep feeling that they are being hard done by, by wind energy or other things, there will be a much greater and increasing level of opposition and it will be much more difficult, in the long term, to provide renewable energy facilities and so on. Just because there is no evidence, we should not deny the fact that people feel very affected by these aspects. There are some very difficult subjective and objective issues here.
438. **Lord Morrow:** Community benefit schemes are perceived as being a selling point or making a wind farm more friendly. When they come in with us, they are perceived to be intruding in a very quiet rural community that has never witnessed this before. You state in your report that wind energy developers offer benefits to those living in proximity to the proposed wind farm. What sort of benefits are on offer?
439. **Professor Ellis:** There is a huge variety of schemes. The most common is the tendency to pay, per megawatt, into a community fund. It can be offered for environmental schemes, educational trusts and so on. The level varies. At the minute, it cannot be enforced in planning because it is not a planning issue and cannot be taken into account. The protocol of the Northern Ireland Renewables Industry Group, issued during the year, suggests that it should be £1,000 per megawatt. In Scotland it is £5,000. It varies. Some companies, and there is such a company now in Northern Ireland, offer discounted electricity to local places.
440. A huge number of issues arise from community benefits. In the UK, there tends to be an onus on the developer to offer them in a voluntary way. In other countries, they do not see a need for that. For example, Denmark has co-ownership, so why offer other benefits if a person can buy into it? A lot of other countries recoup local taxes through wind farms, so the money circulates. We do not have that model in the UK, because the local tax base is centralised and, as far as I understand, there is no link between local authority funding and wind farms or any other commercial development.
441. **The other question that I would ask is this:** what is the purpose of the community benefit scheme? You could think of four reasons why it might be in place. As far as the developer is concerned, it might be just to try to sweeten the local population in order to get planning permission. The developer increases the social acceptance of the development by being seen to be doing something.
442. **The Chairperson:** Some might call it bribery.
443. **Professor Ellis:** You could do that, but I do not think that the evidence that that works is strong. Some developers see it, maybe genuinely, as part of their corporate social responsibility to give something back to the host community. A lot of the wind energy companies have come out of social responsibility companies, so that might be an issue. Some might see it as an issue of compensation for some of the effects that you have talked about, but that is not really enshrined in any law or policy because if companies admit that, you start to try and put a quantified limit on what level of compensation you should have. I will come back to that, because there is an interesting Danish example of that.
444. The other aspect is that the communities have to put up with this, so they should share in the benefits in some way. Whether the benefits amount to any of those reasons, I do not know, but we do not really have a clear idea of what these benefits should be delivering. If we had a clear idea of that, we could design them to have a sharper focus to deliver those various aspects.

445. **Lord Morrow:** You have come quite close to it. What is the difference between a benefit and a bribe? Sometimes, the two can be misunderstood. I am thinking of some of the big power companies and the profits that they have been generating, which has caused considerable debate out there. Do you see the day coming when everyone who lives within an x mile radius of these will get their electricity free? That would be a wonderful experience, would it not?
446. **Professor Ellis:** It is an onus on the companies, I suppose. If you think of a continuum of the very largest schemes owned by multinationals with shareholders throughout the world, people tend to object more to them, and then there might be a nationally owned co-operative where you can buy shares in UK companies down to local co-operatives, local landowners. It tends to be the scale and more local ownership that there is less objection to. So, the other, bigger companies maybe need to invest more in thinking of social acceptance issues.
447. I mentioned compensation. There has been a scheme in Denmark since 2008, in which they offered that if you could prove that your house value had decreased by more than 1%, it would be recompensated. I was discussing that with some Danish colleagues last week, and it looks like an interesting initiative, but it seems that it has not worked. Administratively, it is very difficult, and it seems to be that there are people taking advantage of it. So, while it is an interesting initiative, a full evaluation is under way, but I do not think that the compensation issue is going to run.
448. **Mr Boylan:** Thank you very much, Professor, for your presentation. Following on from some of the comments, the Chair raised a relevant point about zoning. I agree with you. I think that we have gone too far. In some cases, there is no doubt that there is saturation there. If we go back to the original thing and bring the whole planning issue into it, there are 132 landscape areas right across the North, and I remember talking a number of years ago about identifying certain areas where it would be most viable for these things. I think if we had used that map properly, whether you were agreed with them or were for or against — your views on whether we have used that map for it. I also think that we have gone past the point of community benefit, because more and more now, there are a lot of people are reacting. There are applicants who are proactive in what they are doing about policy, but, on the other side of that, there are people who are reacting to the policy and trying to challenge it. That is the concern, and that is where we sit at the minute. I have two or three specific points that I want you to comment on, but I would like you to comment on that, just in relation to the planning issue.
449. **Professor Ellis:** I am probably not the best person to talk about how the landscape areas are used on a day-to-day basis, but, anecdotally, I think that whole exercise is not used a great deal. When it comes down to policy, it is largely criteria-based policy, as in PPS 18. As far as I know — maybe the DOE will be able to confirm the position — those 132 landscape areas are not used a great deal to inform policy, as far as I understand.
450. **Mr Boylan:** If they had used them, we might be in a better position.
451. **Professor Ellis:** There is another aspect to that, because zoning is not necessarily just about protecting landscapes; it is about protecting wind resource as well. You could take advantage of that. You could actually say: “We are not going to allow any houses in this area, because it is zoned for wind.” It has a number of dimensions to it that are not just about landscape.
452. **Mr Boylan:** It was a good starting point; that is all I am saying.
453. **Professor Ellis:** Yes. I think that that was the intention but, as far as I understand it, the industry thought it too restrictive to take that.
454. **Mr Boylan:** Just let us go back to some of the key points. I know that you are

- talking about policy, and I want to specifically concentrate on that. We agreed this 40% target by 2020, but we are sitting here with a policy, and I want to know your views as to whether it is now fit for purpose. The policy is actually about renewables, and it seems to me that the industry is taking us down the avenue of achieving the target for electricity provision through wind. However, there are a number of other renewables. I want your view on that. Do you believe that that is it? Is it now possibly time to look at the policy in the light of the wind energy element of it?
455. **Professor Ellis:** Again, my expertise is in planning more than in the economics of energy. Clearly, onshore wind is the cheapest renewable resource, and we have buckets of it here. That is probably the simple reason for it. We are now coming online to start taking advantage of the marine resource that we have, and that could make a huge contribution.
456. **The Chairperson:** There is always offshore wind.
457. **Professor Ellis:** Yes, there is also offshore wind — and tidal, of course. Clearly, other parts of the UK have been leading globally on offshore wind and, particularly in Scotland, on tidal and marine power.
458. **Mr Boylan:** I agree with you, professor. However, let us look at planning specifically, because it is the policy we are looking at here, and it reads that way. What I as saying is, it is not adhered to, and there does not seem to be any impetus to look seriously at other renewable technologies. Let us be honest about that. That is where we are caught, and that is what the objections are about. My fear is that, as we look at wind farms per se, there is a saturation of them. There are that many complaints that they cannot go further than that. However, now we are making it up in terms of single wind turbines, which are even more damaging in their impact. That is my concern.
459. **Professor Ellis:** In the second bullet point in my paper, I raise the point that the 40% target was set clearly for energy policy reasons. I am unclear as to whether that was ever translated into a specific spatial output. Similarly, when the financial mechanisms were changed for single turbines, I do not know whether that was thought of, at the time, as a spatial policy. It is encouraging for individual landowners, but whether it is the best way to deliver the target is questionable. Take the example of Wales. Concentrating on very large schemes might be the best way to get the percentage of capacity. Single turbines have advantages because they are spreading the benefits amongst the rural population much more widely. There might be greater landscape impacts, but the economic impact is spread much more evenly. We are not talking about single multinationals holding the revenue from that, but individual farmers or communities.
460. **Mr Boylan:** Well, there is a perception that they are driving in terms of single wind turbines, to be honest with you. The perception out there is that the industry is driving the single turbine industry now.
461. I will try to tidy up these last three points very quickly, Chair. How will this policy, PPS 18, impact in a single policy statement? How do you think it will read in the future? I forgot the other point that I was going to make; I will have to go with that. How do you feel about that?
462. **Professor Ellis:** If you look at an equivalent, the English national planning policy framework, there are two paragraphs on wind which, on their own, do not really add up to effective regulation. However, what that does is pass it on to the local authorities to develop robust development plans. That could work in the context here, if we can be sure that local authorities have complete plan coverage. We know that, at the minute, our local development plan system is not quite up to that process. Therefore, I am a bit concerned that we might deliver a single planning

- policy statement, but take our eye off the ball of developing or enhancing capacity at the local plan level. Clearly, given all the local concerns then, strategic targets might be compromised if it is going to be locally driven. So it is a very difficult thing to achieve. You want to have some strategic guidance from the DOE but give communities some ownership in the context of having to deliver renewable energy targets and so on. One idea is to not just give local authorities planning powers to control and protect the landscape and so on, but give them responsibilities to deliver a certain percentage of renewable energy, so that the two things are being made by the same body. They are not trying to deliver targets for central government on the one hand and trying to respond to the needs of local communities on the other.
463. **Mr Boylan:** I have forgotten the other point, but it may come back to me.
464. **The Chairperson:** If I may just jump in, are you saying that we should review PPS 18?
465. **Professor Ellis:** My view is that it seems to be very successful in delivering renewable capacity. If that is the basis that you and the Government want to base it on, that is fine, but already this morning we have heard a lot of other concerns that may not be adequately reflected in the policy. It is to try to get that balance that we need a review. I would have thought that the wind industry would be relatively happy, because it has delivered a lot of capacity very quickly. My concern in the long term is with safeguarding our renewable resource and allowing social buy-in. It is on those two grounds that I think the review will be most useful. Is it the most effective policy you have got to deliver those two long-term goals?
466. **The Chairperson:** You do have to question the fact that in west Tyrone, as the local group told us, 40% of wind turbines are based in that area. What does it say about PPS 18 when it allows that cumulative effect in one area?
467. **Professor Ellis:** If you have a criteria-based policy, clearly, any areas that fit the criteria are going to be attractive. Clearly, where there is a high wind resource, they are going to be even more attractive, so in some ways you could have foreseen that that was going to happen. It is not unusual. I do not know whether that clustering impact was considered, but it is certainly a natural outcome of the policy. Again, what we are doing here is allowing the private sector to see where the greatest opportunity is and to exploit that for our renewable energy purposes. Whether the community sees it like that — clearly it does not, so the policy may be lacking in trying to encourage the community to come with it and having some opportunity to buy into it. I know that there are some concerns about how much say the community has had, but I think it is a natural outcome of the policy.
468. **The Chairperson:** I thought what you said about the Danish model of community co-ownership was very interesting. I think that is something that we really should look into.
469. **Mr McElduff:** Thank you, professor, for your presentation. I will refer to set-back distances. Will you elaborate a wee bit more on the Australian experience of stringent set-back distances and how they have got on there? Secondly, you said that the previous policy on one-off housing in the countryside would present particular problems for set-back distances here. Those two points, please.
470. **Professor Ellis:** In Australia, in the state of Victoria — they have policies at state level, not national policy — a new Government came in that were not very sympathetic to wind, so they said that no wind farm was allowed within 2 km of a habitable house unless the people living in that house gave it consent. Australia as a nation is really not very densely populated, but the wind coincides, on the coast, with where the population is, so actually it is quite dense in that particular location. As far as I have seen in reports, which

- are largely newspaper-based, that has more or less meant that there are no more wind developments in that area. It is very difficult to find sites that are 2 km away, and then there might be several houses, and all it needs is for one person not to give consent. So, effectively, it cuts off the wind industry. That might have been the intent of doing it; I do not know.
471. **The Chairperson:** Barry, Suzie has done some mapping to show us the distances of 500 metres. Two kilometres is massive.
472. **Mr McElduff:** Thank you.
473. **Professor Ellis:** There have been Private Member's Bills in England and down South that have proposed similar things, and their intent was largely to cut off the wind resource. The relationship to the one-off housing is that we have a very scattered population now, and actually finding wilderness sites on which you can develop large wind with very large set-back distances is inevitably going to compromise how you exploit the wind resource. We are always trying to balance those issues, but it is a consequence of the type of settlement pattern that we have. If we zone areas for wind, do we stop houses being built there? That flows into all sorts of issues. I am sure that that is going to be a big issue if or when fracking is introduced. The distributed housing distribution is going to be a big issue with that, as well, which is another type of energy exploitation.
474. **The Chairperson:** We are now talking about solar farms, and people are objecting to green areas being —
475. **Professor Ellis:** Very little is known about how people will take to that. Clearly, there is no noise, but there could be all sorts of other issues — run-off, house values. Who knows what will happen with that? As far as I know, DOE does not have a strong policy on large-scale solar, but that could have been anticipated as well, really.
476. **The Chairperson:** I got a letter through my letter box about solar panels for my roof. I need to look into that as well; do my bit for the environment. We will see.
477. **Lord Morrow:** I am not sure that that is what they had in mind when they put the leaflet through your door.
478. **The Chairperson:** No. That is right.
479. **Mr A Maginness:** Thank you very much, professor. I am new to this, but it is very interesting. What you are really saying is that PPS 18 has been highly permissive — I think that that is the term that you used — and that it has been successful in assisting the rapid development of wind energy here in Northern Ireland. That must be a good thing, if it is part of a public policy objective. However, in your critique, you seem to focus on single turbines as being problematic. Is it fair to say that single turbines, as opposed to wind farms, seem to pose a specific challenge?
480. **Professor Ellis:** In terms of whether the public policies deliver against the targets, I think that having lots of small ones is not as effective as having clusters of big schemes — which might have problems, but you can focus, have action, community support — all sorts of things with the big ones. Single turbines generally do not bring community benefits or anything like that. I would not like to be definitive about anything, but if the policies are about delivering large amounts of renewables, the larger schemes deliver that. However, with the larger schemes, you substantially magnify the social acceptance problems.
481. **Mr A Maginness:** I know the problem of visual amenity and the negative or adverse impact that these could have. Is it purely the turbines themselves, or is it the attendant linkage to the grid, that is part of the problem?
482. **Professor Ellis:** By “problem”, do you mean why people object?
483. **Mr A Maginness:** Yes.
484. **Professor Ellis:** That has been pored over by a lot of researchers. The main issue seems to be visual intrusion.

- However, it is complex because what sensitizes people to object might be who owns the wind farm. There have been examples where people think that community-owned wind farms are better than externally owned ones. People might react badly to the process of decision-making, so although they might like the scheme, they have a feeling that it is being imposed on them, and therefore object. There also might be issues of noise. Some people are very concerned about bird strikes and other things. So, there is a whole bundle of drivers for opposition or support.
485. **Mr A Maginness:** So what you are saying is that central to all this is getting significant community buy-in to any scheme that is being developed.
486. **Professor Ellis:** I think that that will increasingly be an issue, to the point where it might ultimately limit the amount of wind that we can exploit in Northern Ireland, or Ireland as a whole. We often think of the amount of wind or the infrastructure as being the limiting factors, but I foresee a time when actually social acceptance will be a limiting factor. We are starting to see those schemes. I would like the industry and government to have a sharper focus on that, seeing it as almost an economic limit on what we can do, being driven by social issues. I do not think that that has been explored fully yet. If we are going to secure renewable resources, we have to focus on the social impacts and be very sensitive to those. It is in the interest of the industry, DETI and whoever.
487. **The Chairperson:** We are saying that we are taking people's feelings into account. However, unfortunately, when you have a PPS and a Programme for Government, people's feelings are not seen as material aspects for determining planning applications. That is why people feel so powerless.
488. **Professor Ellis:** I am doing work at the minute where we are trying to develop future scenarios of energy based on differing limits of social buy-in. One of the scenarios, which may be unlikely but is possible, is that a wind project goes so badly that all wind applications, even small ones, become toxic. There are murmurings of that happening in the Republic of Ireland at the moment. Very big schemes are seemingly being handled very badly and turning people off to wind schemes hundreds of miles away. There is a duty on the industry not just to secure planning permission but to have a long-term view of the industry.
489. **Mr A Maginness:** May I ask you about the various diagrams that you have described? Figure 5 shows that Northern Ireland is doing extremely well in comparison to England, Wales and the Republic and is second only to Scotland, which seems to be miles ahead of everybody else. Is that the pertinent diagram that shows our growth and success?
490. **Professor Ellis:** It is. To take away from Scotland, a lot of its renewable capacity is hydro that has been established for 50 years or so. Take that out — I did not do it for the purposes of this. The Northern Ireland's one is almost entirely onshore wind, while a large proportion of Scotland's is hydro; I cannot remember exactly. If you were to look at renewable capacity of onshore wind per kilometre squared, I am fairly sure that Northern Ireland would come out the highest. Given that, largely, that is the only resource that we have exploited so far, that both underlines the success of the policy and shows that we are now occupying more per kilometre squared. I would not like to claim that absolutely without looking at the statistics, but that is certainly the suggestion.
491. **Mr Eastwood:** Thanks for your presentation, Professor. May I ask you about the 20% law in Denmark? How has that been working? How do they define the community in terms of the 20%?
492. **Professor Ellis:** I think it gives a distance away from the actual wind turbine — I cannot remember, but it is a number of kilometres. They have to offer 20% there. There is another law that

- they should voluntarily offer it to a wider population as well.
493. Denmark has a tradition of the wind industry being cooperatively driven. That is why I would be a little bit sceptical about saying that you can immediately take that policy and drop it into Northern Ireland. Denmark has a very strong tradition of agricultural cooperatives, and particularly wind. It has had wind cooperatives since the 1980s; that has delivered huge amounts of wind for a long time. The landscape there is largely saturated, but it is saturated by cooperatively developed wind farms.
494. Social acceptance was not an issue until they put in a major national test centre, which was handled very badly. It was one of the projects that started to turn public opinion against wind. There is now a much bigger reliance on large multinationals to develop the thing. That is why Denmark has introduced a law to try to push a cooperative aspect in these very large schemes. Of course, in Denmark they even benefit economically, because most of our turbines, traditionally, have been built in Denmark. Their locally manufactured goods are going up, so the economic multipliers are much higher there.
495. **Mr Eastwood:** Does the money go into a community fund?
496. **Professor Ellis:** No, it is individual ownership now. It is limited only to people who can take advantage of it if they have the spare capital to put into it. There are distribution benefits that come from that.
497. **Mr Elliott:** I apologise for missing the start of your presentation. I have just one question. There are indications that there are significant environmental benefits to having renewable energies, but significant environmental disadvantages to having wind farms and wind turbines. Which do you believe holds the greater weight?
498. **Professor Ellis:** I think, on the latter part, there are local environmental disbenefits. Some of those are subjective, so some would not see any disbenefits at all. Some would see bird strikes and noise, but, in some cases, those things can be fairly minimal, so I would not want to portray every wind farm causing major local environmental disbenefits. Personally, I think that, with the challenges of climate change and energy security, it is absolutely essential that we develop more renewable energy. That is my own feeling; it far outweighs any local disbenefits.
499. **Mr Elliott:** Professor, you would make a good politician because you have not really answered the question. [Laughter.] I am trying to establish which, in your opinion, holds the greatest weight in this instance? Is it the weight of the environmental benefits of wind turbines or the environmental disbenefits of having them?
500. **Professor Ellis:** I am sure that no one would vote for me, unfortunately. When you say “the weight”, is that in relation to public interest?
501. **Mr Elliott:** I am talking about the environmental impact. Do the environmental positives of renewable energy outweigh the environmental negatives of the community impact and the overall environmental negatives?
502. **Professor Ellis:** In my direct view, they do. The environmental and economic benefits of renewable energy outweigh the local environmental disbenefits, but we must be aware that those local environmental benefits could hamper opportunities to exploit the environmental goods in the long run if we are not very sensitive to how we do those.
503. **Mr Elliott:** That is useful. Thank you.
504. **Ms Brown:** Thank you for your presentation. It was very interesting. On the back of Tom’s question, you said that you see the environmental advantages as being greater. Is that in the context of renewable energy as a whole, as opposed to what appears to be happening here in Northern Ireland, where we are chucking up wind turbines left, right and centre? Would your view change if we change the question and

- specifically said “wind turbines and wind farms” as opposed to renewable energy as a whole?
505. **Professor Ellis:** I think that it is renewables in general, but it probably would still apply because the cost of delivering renewables by other means to the level of capacity probably would not be acceptable by the public, given all the issues that we have had with electricity generation. So, it is clearly the cheapest, and it is clearly the one that Northern Ireland has the most to exploit. It does not mean that we could not do it better though. The key question for me is this: how can we improve policy and ensure that we are in a very good position to exploit all sorts of renewables in the long term by encouraging the community to come with us? That is very difficult, and I suspect that questions have not been fully grasped and grappled with. Putting those two things together and capturing the renewable resource but with public buy-in tends not to be the way that we have thought about policy here, up until now anyway.
506. **Ms Brown:** Finally, on the back of what the Chair asked about zoning, you talked about drawbacks. Is it too late for zoning? Is the process happening too quickly now?
507. **Professor Ellis:** It is, because we have areas zoned out, which are areas of outstanding natural beauty, and we should try and keep —
508. **The Chairperson:** The communities said that there are some examples where wind turbines have been bordering on, or are very close to, areas of outstanding natural beauty (ANOBs).
509. **Professor Ellis:** One aim of the zoning in Wales is to protect some of the areas for wilderness, or to give that sense of wilderness, and national parks and other things that are important for tourism and other aspects. Those aspects are rapidly declining here, because there are lots of places with turbines now. You would have to do a proper spatial analysis, so that we are not basing this solely on my impressions. Zoning may be useful in giving local authorities the opportunity to think of where they would want to encourage development. We might have lost the opportunity to think rationally about how we can concentrate turbines and turbine sites in Northern Ireland. That is probably lost, because we have them over the place. However, I think that zoning might still be important with regard to the local development plan issue, because it will give ownership and some direction to the local authority. I think that that will be very important.
510. **The Chairperson:** Are you saying that that could be included in the PPS?
511. **Professor Ellis:** Yes, I think that it should be. It is included in the national planning policy framework in England, encouraging local authorities to zone. Maybe we should go further than that and say that it is a requirement.
512. **The Chairperson:** You made the point that wind energy is cheap and that we get plenty of it. However, do you accept the criticism that wind energy is not particularly efficient?
513. **Professor Ellis:** Again, I am not an energy economist, but it depends on the terms of the comparison. Yes, we know that it is intermittent, but if you have effective —
514. **The Chairperson:** And there is no storage of energy.
515. **Professor Ellis:** No.
516. **The Chairperson:** So, you lose a lot of energy if the wind is blowing and there is no demand for that energy.
517. **Professor Ellis:** That is why, if we are going to fully exploit the wind resource here, more north, south, east and west interconnection would start to overcome those issues, as would the electrification of transport, for example, where you can store energy. I think there are potentially a lot of innovative ways to tackle that problem.
518. **The Chairperson:** OK. There are no more questions.

519. **Lord Morrow:** Chair, I would like to ask a question.
520. **The Chairperson:** Sorry, let Cathal come in. He has been wanting to come in.
521. **Mr Boylan:** I signalled about half an hour ago, but I will bow to your good judgement on this.
522. **Mr A Maginness:** You always bow to a lord. [Laughter.]
523. **Lord Morrow:** You always bow to the Lord. [Laughter.] Professor, you courageously nailed your colours to the mast when you said that the advantages outweigh the disadvantages, in relation to the environment. I know that I am digressing slightly, but I will bounce this off you to hear what you say. Those who are emphatically in favour of fracking tell us that the advantages of fracking far outweigh the disadvantages. In some instances, however, they are not winning that argument. Are we being told today, and these are my words, that it is because we do not understand it? I think that that is what the frackers are saying. They are saying, “It is because you do not understand it that you are opposed to it or have reservations about it”. Many people and many active groups are passionate about this issue. When they come to talk to us, privately or at our offices, they tell us of the disadvantages. For every report of an advantage, you are going to get another scientist saying, “Hold on a moment, this is the real story”. At the end of the day, it is but one man’s view. Are we going to have to suck it and see before we realise where we are in the whole idea?
524. **Professor Ellis:** On fracking?
525. **Lord Morrow:** No, on what we are discussing here today.
526. **Professor Ellis:** In some ways we have had that experience. Perhaps, we should be drawing some conclusions to that now, some way into the experiment. When you say that I have nailed my colours to the mast, I would like to think that I have done so on the basis of hard evidence. Most in my mind are the very persuasive — clearly, not everybody accepts this, unbelievably, but, within the academy, everybody accepts it — huge risks of climate change. I know that that is not accepted by everybody.
527. **Lord Morrow:** Some scientists do not accept that.
528. **Professor Ellis:** I think that that is very, very rare. The academy accepts it, and it accepts that the impacts will be very, very profound. I think that it is on that basis that renewable energy should be a huge priority for us.
529. **The Chairperson:** We also need to look at the fact that oil and gas are going to run out within 50 or 60 years.
530. **Professor Ellis:** Absolutely. Energy security is important. Also, there is a cost issue. If fossil fuel reserves are running down and the price fluctuates, having indigenously generated electricity can have a positive economic impact. As far as I am aware, I think that there is very hard rational evidence to suggest that an expansion of the renewable capacity is a very good thing for Northern Ireland, the UK and the island of Ireland.
531. **Lord Morrow:** Did you want to comment on fracking? [Laughter.]
532. **Professor Ellis:** Is it helpful to your inquiry? [Laughter.]
533. **The Chairperson:** That is another topic, Lord Morrow.
534. **Professor Ellis:** I would have a precautionary principle in that I do not think that we know enough yet, and I certainly would not want to nail my colours to the mast one way or the other. However, applying a precautionary principle, there are many things that we need to clarify before we let it go ahead.
535. **Mr Elliott:** You would definitely make a good politician. [Laughter.]
536. **The Chairperson:** Are you going to join the Ulster Unionist Party? [Laughter.]
537. **Mr Boylan:** I love the terminology “precautionary principle”, because I

- have adopted that when it has come to the North/South interconnector. It is a great line.
538. Coming back to planning policy, and that is the key element, I have an issue over distances. The policy at the minute states that wind farms must have a separation distance of 50 metres from occupied property, with a minimum distance of 10 times the rotary diameter for single wind turbines. It seems to me that we have reached a point of wind energy exhaustion here in the North. The numbers of those for and those against have plateaued, and we need to look seriously at that.
539. One element that you mentioned in your presentation was social acceptability. I will be honest, in a lot of cases, I do not think that it is socially acceptable that wind farms and turbines should go up in most areas. That begs the question of the need to look at a strategy and a policy if we intend to go forward with this target and with wind energy. How do we bring that forward in a single policy statement and avoid all the legal challenges that will come with it? That will be the problem here. We are going to set a policy that will say, "This is what we need to do and this is what we want to achieve, but, by the way, there is still that legal argument". No matter what way we go, it is all about terminology. No matter how we go forward with this, through the report that we are considering, we want to bring forward a policy that will get that balance right. What are your views on that?
540. **Professor Ellis:** I do not think that there is an objective sense of saturation because saturation is subjective. Some people would be more than happy to have their entire house surrounded, while some people would want not one turbine as a speck on the landscape. We must understand that that issue is variable. Everybody will have a different sense of saturation. Having said that, I think that one very important piece of work to do would be through a geographic information systems (GIS) model to see on what proportion of Northern Ireland landscapes wind turbines are visible. Again, there has been some excellent work done in Denmark on that, so you can model using GIS to see whether there are any places in Northern Ireland where you cannot see them. That would be a very good way to inform the development of policy. I do not think that we should necessarily set the policy on that basis, but I think that it might be difficult to go forward without that sort of analysis.
541. The other thing is something that I mentioned earlier. You said that we are now hitting saturation point, but I think that now is a good time to consider the future of what we call re-powering. The early wind farms are now 10, 15 or 20 years old, and there will come a point where they come to the end of their economic life. The question then is what we do with those sites. Usually, they were much smaller, noisier, less efficient turbines, and I think that to have a policy on re-powering, now that those sites have accepted wind turbines, we should question whether we focus all new developments on those sites but with larger turbines. Should we increase capacity through redevelopment or should we increase capacity through new development? That is an issue. There is going to be a timescale to that because a lot of the wind developments are fairly recent, so they might not come up for redevelopment for the next 10 or 15 years. It might be a long-term issue, but that is another way of thinking about how we increase capacity in the future. Or do we actually think that those communities have hosted these for 10 years and they have had enough; let us move on to somewhere else?
542. **Mr Boylan:** I have a final point, Chair, because the word being used all the time is Nimbyism. People have the right to object and air their views. Obviously, we need to solve that issue. From your experience, how can we deal with that and include those people in a proper process?
543. **Professor Ellis:** I and others in the academy feel strongly that Nimbyism is a myth, and it is a very unhelpful thing that we should almost abolish from the

policy process for a number of reasons. First, by calling people Nimbys, you are particularly saying that their views do not count because they are irrational or deviant in some ways, and that is not helpful. That will increase opposition and not decrease it. If you ask people about why they object, they usually have some very good reasons. It is not just to protect selfishly. They might think that it is their duty to protect the local landscape, because their ancestors have lived there and so on. Therefore, that aspect is something that we should completely eradicate, and we should think that those people are obviously objecting because they have good reason to and look at how we can tackle those reasons rather than dismissing them completely.

544. **The Chairperson:** Thank you very much. As you can see, there is a lot of interest from Committee members. Thank you for your input. Your paper will be included in our report.

5 June 2014

Members present for all or part of the proceedings:

Ms Anna Lo (Chairperson)
 Mrs Pam Cameron (Deputy Chairperson)
 Mr Cathal Boylan
 Mr Colum Eastwood
 Mr Tom Elliott
 Mr Alban Maginness
 Mr Ian McCrea
 Mr Barry McElduff
 Mr Peter Weir

Witnesses:

Dr Chris Jordan	<i>Chartered Institute</i>
Mr Paul McCullough	<i>of Environmental</i>
Mr Gary McFarlane	<i>Health</i>

545. **The Chairperson:** I welcome Gary McFarlane, who is the director. Is that right?
546. **Mr Gary McFarlane (Chartered Institute of Environmental Health):** That is right, Madam Chair.
547. **The Chairperson:** I know Gary in a different guise. Gary is also very much involved with ramblers. I also welcome Paul McCullough, who is the group principal environmental health officer; and Chris Jordan, who is the principal environmental health officer in environmental protection with Northern Group Systems Environmental Health. You are all very welcome this morning.
548. We are very interested in this issue. As you know, we are carrying out an inquiry, and we have received some 97 submissions. Certainly, people have been very enthusiastic in responding to our inquiry. The noise and the impact on health have been mentioned often in the submissions. We are delighted that you are here. I have read through your submission. Will you give us a briefing for five or 10 minutes and then take questions from members?
549. **Mr McFarlane:** Thank you, Chairman, and thank you for giving us the opportunity to come and talk to you today. I am not going to say anything about the chartered institute other than to reiterate the point that, as you know, we are here today ostensibly as an independent professional body. As you have outlined, my colleagues on either side of me — Dr Chris Jordan and Paul McCullough — are working in the environmental health service. However, I invited them here in their professional capacity —
550. **The Chairperson:** Sorry, I should have said that this session is being recorded by Hansard. So, please speak clearly and nice and loud.
551. **Mr McFarlane:** OK. Paul and Chris, although they may not care to admit it, are widely regarded, regionally in Northern Ireland and nationally, as experts in this area. As they will no doubt outline, there are reasons for that. I want to share with the Committee a couple of documents, which are really diagrams. I think that they will help with the discussion this morning.
552. Professionally, the chartered institute supports renewable energy. Our view is that it is the only logical and long-term sustainable way forward for these islands. I make that point in the context of anything that we may say around some of the current issues with regard to wind energy and onshore wind, in particular.
553. I will create the context and then pass over to Paul and Chris to deal with the two substantive issues. We believe that a lack of confidence within the community around the actual process for the approval and siting of onshore wind in Northern Ireland is underpinning the issue at the minute. There are two substantive issues under that banner that we would like to discuss with you this morning. First, there is the ETSU guidance, which Chris will deal with more specifically. We believe that it is

- somewhat obsolete and out of date and needs to be reviewed on a UK-wide basis. The Department responsible for it is the Department of Energy and Climate Change (DECC). The second point relates to the current planning process in Northern Ireland, particularly the planning process for single medium-scale turbines. We believe that that also needs to be reviewed.
554. I invite Chris to address that first point. Following that, we will take questions. Then, we will pass on to Paul to address the second point on planning, and then, of course, we will take any other questions or issues that the Committee would like to ask us about.
555. **Dr Chris Jordan (Chartered Institute of Environmental Health):** Good morning, everyone. Planning policy statement 18, like its equivalents in the other UK jurisdictions, recommends that wind farm developments are assessed against a particular standard. That standard is the assessment and rating of noise from wind farms, which is often referred to as ETSU-R-97. That standard is used to assess single wind turbines and wind farms. The noise impact that comes from a single wind turbine in close proximity to a residential dwelling can be the same, from a noise-level perspective, as the noise coming from a wind farm on top of a hill and, maybe, slightly further away.
556. I will give a brief overview of what ETSU states. Noise from wind farms should not exceed five decibels above the prevailing background noise level at any residential dwelling. However, ETSU-R-97 recognises that achieving five decibels over the background in very quiet rural locations would prevent achievement of renewable energy targets and hence provides a more permissive fixed limit, which is not set relative to the background noise level. Uniquely, ETSU-R-97 also allows more noise at night than during the day.
557. ETSU-R-97 was drafted in 1996 when wind turbines were in the order of a 40-metre hub height and, typically, half a megawatt in power. The wind farm turbines that are currently coming through the planning process are, typically, in the order of 80-metres hub height and three megawatts in power, individually. Given those increases in turbine heights and power outputs, and the consequential changes in the character of the noise from those larger wind turbines, the protection to amenity originally assumed by ETSU-R-97 may no longer be valid.
558. ETSU-R-97 recommends that it should have been reviewed within two years of publication. However, some 18 years since its original publication, ETSU-R-97 has yet to be reviewed. Whilst recent guidance has been produced by the Institute of Acoustics in the form of the good practice guide, which has assisted greatly in improving the quality and robustness of the submitted noise impact assessments, the terms of reference provided to the Institute of Acoustics specifically excluded that group from reviewing the noise limits as set within ETSU-R-97. As a consequence of the UK Department of Energy and Climate Change repeatedly refusing to review ETSU-R-97, residents have lost confidence in the assessment of wind farm noise. The environmental health service in Northern Ireland considers that a robust and transparent review of ETSU-R-97 is long overdue and should be prioritised with other United Kingdom Administrations. It is hoped that such a review would regain residents' confidence in the protection afforded to their amenity by planning policy and noise standards covering wind energy developments.
559. **Mr McFarlane:** Chair and members of the Committee, would you prefer Paul to make some comments on the planning issues and then take questions in general? They are intertwined.
560. **The Chairperson:** OK.
561. **Mr Paul McCullough (Chartered Institute of Environmental Health):** Chair and members, thank you for the opportunity to speak. I want to follow on from Chris's points about the noise limits. The planning process relies upon

the environmental health service, which is based in local government, to assess the noise impacts of applications. By way of context, one of the charts that have been handed round is entitled 'Planning Applications for Single Wind Turbines' and that goes up to the end of April 2014. You can see from that that we are talking about a large number of applications throughout the area. The second chart that we have provided is an extract from the UK Renewable Energy Association's website, and we wanted to illustrate that we have a disproportionately high number of turbine applications in this area. It is an acute problem for the environmental health service in dealing with those applications and assessing the noise impact associated with them. Our role is very much to be independent between the developer and the local residents and to assess those impacts against the prevailing guidance. As Chris said, it is our belief that that guidance certainly needs to be refreshed, given the time that has passed.

562. In relation to our interaction with our colleagues in planning, it is true that this area has a dispersed population with a large number of houses in rural areas, and it tends to be rural upland areas that are most suitable for wind energy developments in an attempt to capture the most energy from the wind. So, when dealing with predictions of noise impact — it is important to point out that, at a planning application stage, they are very much predictions — we have questions about the methodology of how those predictions are being done and the limits that are applied.
563. The point that I want to get to is about the conditions that are attached to planning permissions to allow the adequate control of the noise from the developments in future. A set of standard conditions has been produced by the Institute of Acoustics and has been endorsed fully for use in England, Scotland and Wales. However, in Northern Ireland, we have not fully endorsed those conditions, and that creates a problem for us. The specific
- issue is in relation to a condition that asks the developer to demonstrate that they are in compliance with the noise limits in the event that a complaint from a member of the community arises. It is an important condition because it gives that level of confidence that, as well as achieving the noise limits, there are other means of providing confidence to the community and residents in the vicinity that the developments can go ahead without causing undue problems. In the absence of a complaint requiring a developer to undertake that investigation and to demonstrate that compliance, it falls to local government and the planning authorities to do that.
564. There are problems with that, and they are threefold. First, as I said, it does not show a great degree of confidence in the planning process if the developers are not able to show that. Secondly, it can lead to a problem of disproportionate costs because, as I said, a large number of those developments are going into rural dispersed areas that are higher upland areas, and those areas do not have a large industrial base or a residential population base that can bear the extraordinarily high costs of investigating compliance with noise limit conditions. Thirdly, it is not providing the best means of determining compliance with noise limits because the best way of doing it is to be in control of the operation of the turbine so that it can be turned on and turned off relative to the noise measurements that you wish to undertake. If the council is undertaking those measurements or the Planning Service is commissioning those measurements to be undertaken, they will not have control of the turbine to be able to do that in the best manner possible.
565. My point is that we have a disproportionately large number of single wind turbine applications in this area. We have a unique settlement population that exacerbates the problem, yet we have a planning process that does not provide the adequate level of robustness that is being provided in the other regions. Our request is that

- the Committee uses its influence to investigate that to see that we can bring about better public confidence in the development of wind energy.
566. **The Chairperson:** Thank you. Those are two very valid points. We will definitely explore that and put it into our report. I will talk to Chris first. A lot of the people we talked to when we went to Tyrone talked about noise levels and how they had disturbed sleep. Lots of people are saying that, yes, ETSU-R-97 is out of date. Why has it taken so long? Why is there such a resistance to reviewing that? It is 18 years.
567. **Dr Jordan:** That is an excellent question and, unfortunately, I do not know the answer. Publicly, we have been calling for it to be reviewed as well over a number of years, and why the Department of Energy and Climate Change has resisted doing so is for it to answer. I suspect that it is a fear that it may have an impact on the ability of wind energy to be developed. In effect, if the noise limits go down, it is harder to achieve and, as a consequence, you will have less wind energy.
568. **The Chairperson:** So, it is really a bias in favour of renewable energy.
569. **Dr Jordan:** Yes.
570. **The Chairperson:** Paul, there is an anomaly, in a way, with our Planning Service and the complaint investigation condition.
571. **Mr McCullough:** Yes, we believe that it sits as an anomaly and is compounded by the fact that we appear to have a unique development situation as well.
572. **The Chairperson:** It is essentially PPS 18 that we need to be looking at, is it not?
573. **Mr McCullough:** Yes.
574. **The Chairperson:** The diagrams are indicative of the difference between us and the rest of the UK. The black and white diagram does not show the existing turbines. It shows applications have been refused and ones where the decisions are pending, but still that is quite a large number of dots. Can you send us the colour diagram?
575. **Mr McFarlane:** Yes, we will send you the colour one. I have a colour version; I will pass it round. Without getting into a detailed analysis, there are a lot fewer red dots than any other colour.
576. **Mr I McCrea:** There seems to be a lot more dots round west Tyrone. I am not sure that it is related to Barry or anything.
577. **Mr McElduff:** West Tyrone has the measles.
578. **The Chairperson:** That is where the mountains and wind are.
579. **Dr Jordan:** It is worth highlighting the fact that the diagram of Northern Ireland shows only the single wind turbines; it does not include the wind farm applications, which are separate.
580. **The Chairperson:** How much cognisance do our planners take of objections from neighbours? If a neighbour said that they could see the wind turbine from their back window, would that be seen as a material consideration?
581. **Mr McCullough:** It is probably best for the planners to answer that question. However, it is a material consideration, and it is taken into regard. Obviously, our planning colleagues operate within the policy context that they are given. The point that Chris, Gary and I have been making is that the policy context needs to be looked at to see whether it is fit for purpose for the future.
582. **Mr Eastwood:** Thank you very much for your presentation. The diagrams make fairly interesting reading, although I am not quite sure of the scale, because there seems to be a couple over my house, and I know that there are not.
583. A fair bit of Scotland is not on this map, and some parts of Scotland do seem fairly dense in terms of the number of wind farms. Is there any relationship between the two? Is there any reason why the other part of Scotland is not on the map?

584. **Mr McCullough:** No. It was purely for illustrative purposes. Maybe I should explain the background of the charts that we have provided for you. The planning applications chart is publicly available on the DOE planning website and is updated monthly. We have printed out the most recent one for illustrative purposes. The second chart comes from the renewable energy industry's own database, and I extracted a section of that. However, you can log on and it will show the entire area. What we are trying to demonstrate is the concentration in this particular local area and it illustrates that. We are not hiding a large number of them that are in the Highlands. That is not the case, as those areas are reasonably well protected by planning.
585. **Mr Eastwood:** It paints a bit of a picture, and that is probably why we see so many constituents and hear so many complaints from people coming to us on this issue. It has a significant impact in one way or another for people across the North. The difficulty, of course, is the balancing act between meeting the targets that we all know we need to meet — or most of us know we need to meet — and ensuring that residents and locals are not adversely impacted. You talked about the fact that, at the minute, you are allowed to be noisier at night than during the day, which, I think, is fairly bizarre. In your view, if we got to the stage where those regulations were all changed to a more sensible situation, how would that impact on the targets that we need to meet?
586. **Mr McFarlane:** I take it that you are referring to the energy mix targets.
587. **Mr Eastwood:** Targets on climate change and that, yes.
588. **Mr McCullough:** I will come in on that point. Yes, it is all about balance; you are 100% correct, and that is what we attempt to do. As Gary rightly pointed out, we recognise wind energy as a very important part of the energy mix. The line that we take is that that is to be supported, but they have to be in the right locations, and it is that policy context that needs to be developed and refreshed to make sure that we place them in the right locations. We are in a location that is exposed to a large amount of wind energy coming from Atlantic weather systems, so we are in an ideal position to capture wind energy. It is just about refining those locations to the extent that residents are adequately protected.
589. **Mr Eastwood:** Is the logical extension of that the fact that there would be less of a spread but more of a concentration in particular areas? Therefore, the people we have to speak to most around the work that we are doing now will still be subjected to wind farms and maybe more wind farms.
590. **Dr Jordan:** To clarify, the noise limits as currently set are cumulative. The wind farms do not get 40 decibels each; all of them combined have to achieve, as an example, 40 decibels. Therefore once an area becomes saturated by applications or built turbines, you will hit the buffer of the noise limit. Consequently, if the limit were to be amended and reduced, you would hit it more quickly.
591. **Mr McFarlane:** I will just add to that in terms of the point you were making about the wider achievement of targets. I presume that you are primarily talking about greenhouse gas reduction targets. Wind energy is only one form of renewable energy. It seems to me, at least, that we are thus far failing to harness other technologies and other means of renewable energy here in the North, including tidal, offshore, hydro and solar. There seems to be almost an inordinate focus on wind energy.
592. **The Chairperson:** Because it is cheap, I suppose, Gary. It is cheap and easy to do.
593. **Mr Eastwood:** You are absolutely right that people have seen it as an easier option. Perhaps the logical outworking of what you are saying, if we look at more sensible regulations, is that we might end up with people focusing on some of those other potentials and opportunities around renewable energy. That might be a good thing. Thanks very much.

594. **Mr Boylan:** Thank you very much for your presentation. I think that ETSU-R-97 resonates with all of us after the many presentations that we have had. The guidelines and regulations were set a long time ago; technology has moved on and we will compensate in some ways for it, but not in all. I have some sympathy for environmental health. It is betwixt and between, because it is under pressure from councillors, especially on single wind turbines.
595. I want to bring up the planning issue. A bugbear of mine is the issue of renewable energy targets. They are saying 40% by 2020, but the bigger percentage in the last number of years has been wind power. You can say it is cheaper and maybe we have not invested enough or looked at other technology. Do you not agree that the problem is that we are betwixt and between? It has nearly come to a point where they are not given permission or there is so much dispute over permission. Some wind farms are starting to make the targets, but they need to increase that to become economically viable. That is not happening, and that is where we are stuck.
596. Do you also agree that the ETSU-R-97 needs to be looked at? There is no doubt about it. As for PPS 18 itself, we have asked through the Committee to review it, especially the wind energy side of it. Because we have not established that much in relation to the other technologies or other forms of renewable energy targets, there is a way to go on that. Will you respond to those points?
597. **Mr McCullough:** I will come back to the planning context side of it. That resonates with our own experience, acting for the planners to provide expert opinion on noise, the evidence that has been provided by the developer, yet dealing with the questions raised by the public and those concerned about such developments. That is true, and it has certainly had a dramatic impact in local government over the past five years. On the policy, again, I go back to the point that we are very supportive of wind energy as part of the mix. How the economics of that work out is for another body. We are firmly of the belief that the planning policy and its outworkings with noise and ETSU-R-97 need to be looked again to bring the public along. Councils are receiving a vast correspondence on concerns. You have only to look at the planning database to see dozens and, on certain occasions, hundreds of single wind turbine applications. The community does not want them in their areas, and that is not a good way to go forward with renewable energy development. We need to bring communities along with us, and that is why we are of the belief that this really does need to be looked at again.
598. **Mr McFarlane:** To add to what Paul said, as I said in my opening remarks, these two issues are underpinned by what we believe is a fundamental lack of confidence in the community in the controls and the checks and balances in the system. Notwithstanding the points that we were discussing a moment or so ago with regard to the mix and the broader picture on renewable energy in its totality, it seems to me that what is happening at the moment is almost a little like, if I may say so, what happened with residential development in Northern Ireland in the 1970s and 1980s, where a house appeared almost everywhere you turned. Paul has brought along diagrams to illustrate that.
599. Essentially, we are saying that this is an important part of a renewable energy solution but that it needs to be more strategically thought out rather than just individual applications being made. I will share with you a personal anecdotal example. I live in a rural location, and there are four farmers around me each putting up a single turbine in disparate locations rather than a coordinated approach to putting them somewhere more appropriately sited together. Why is that happening? It is because of the process around this at the moment. What my colleagues are saying is that, if these things are sited properly and the appropriate controls are put in place

- and the emphasis is in the right place with those controls, which means that the developer sorts out any problems, that is a more appropriate way of going about it.
600. The point about local government is that, in essence, what is happening with the control mechanism is that, particularly on single applications, to use layperson's language — my colleagues are the technical experts — the same controls are not being put in place for single-use turbines as for wind farms. They can produce the same effects, and, in essence, they are ending up much closer to people's properties and are much more likely to get problems. The control mechanism is to make a complaint. I am sure that my colleagues can share with you examples of the resource and expertise required to look into these as individual cases, since if this continues as at present it will put a considerable resource burden on local government and the new councils.
601. **Mr Boylan:** Local government will now take more responsibility, and there will be expectations from the public about the planning element. I think that we have gone far too far. Do you agree? I have no issue with single wind turbines; however, we have gone down the wrong route on the matter of engaging with the public on it. We might have gone a step too far. My fear with single wind turbines is that we will get into a situation, and I believe that this is the situation. It used to be the case that people would buy ground and sell off sites. I am concerned that some of the bigger companies are sponsoring wind turbines. I do not want you to comment on that. I am only gauging that from what people are saying.
602. The issue for the Committee is support for renewable energies and the targets. If it is another issue, we will look at the targets again. Let's be realistic. The issue for me is how we get around working with communities and turning that around because we are getting near saturation point. I do not need the colour diagram to see that because we
- are very close to saturation point across the board.
603. **Mr McFarlane:** If I could say something about the community aspect. I do not know whether members are aware of this, and I can make a copy available, but we did a modest study a couple of years ago of two rural communities. This was wind farms, not single turbines. One community had lived for a number of years with a wind farm in excess of five turbines. The other community was not far away, where a wind farm of a similar size had just received planning approval.
604. We looked at the concerns and perceptions of those two communities in different scenarios. I am slightly paraphrasing, but it reinforces what my colleagues said and one of the underpinning points that we are making: if they are properly planned and set out, there is relatively little issue.
605. In the first scenario, residents reported that although they had lots of concerns about the wind farm, in reality very few materialised. I am talking about noise impact and impact on visual amenity. As someone said to me, "I'm sure that when they put the electricity pylons up however many years ago, that was something new that people were concerned about, and now we don't even notice them". That is an interesting analogy.
606. The big issue for the community that had these turbines was that despite all the rhetoric of how this would benefit the community, in reality there was little community benefit other than individual landowners profiting and, obviously, the renewable energy companies. That probably needs to be looked at.
607. There is some indication since that work — I am not saying that that work was instrumental in it, although I hope that it played a part — that energy companies are looking at that afresh. The benefits that accrue to the community, whether direct benefits through rates rebates that come to local government going into the overall pot or whether it is more innovative and out-of-the-box than that

- in looking at how it affects their energy bills in that locality, those sort of things need to be discussed.
608. **Mr Boylan:** I agree. The energy companies have to look at that element and get a strategy for working with communities. They are trying to do that now.
609. **Dr Jordan:** I would like to add to Mr Boylan's previous comments about achieving energy targets. The noise limits are cumulative. A single turbine close to a residence may use up all the limit and, as a consequence, could block the wind farm going on the hill. That could have a significant damaging effect on achieving energy targets. There does not appear to be a strategic approach to how these are assessed.
610. **The Chairperson:** Chris, that proves the need for strategic planning or zoning rather than just letting people put up single turbines wherever they want.
611. **Mr McFarlane:** Absolutely.
612. **The Chairperson:** I read the survey that you mentioned. It is very interesting. Part of it could be because people have got used to it after they have lived there for a while, while others who have seen what people have gone through, object to it. You can look at it that way. People are seeing new planning applications coming in.
613. **Mr McFarlane:** That is undoubtedly part of it, Chair. That is what struck me. The pylon analogy reflects that. There is an element of getting used to it.
614. **The Chairperson:** Human beings are very adaptive.
615. **Mr McFarlane:** It is a broader point, but my view is that, as a collective society in Northern Ireland, we have to recognise that nothing in this life does not have cause and effect. To go back to what I think Mr Eastwood was getting at in his point, we need to secure a sustainable energy future for this country, and we have to make choices. It is about the best choices and making sure that we do it in the best way. Some of the proposals on our future energy mix —
- that is another discussion, and I am not referring to renewable energy — are very unsustainable.
616. **The Chairperson:** Yes. There is huge potential for that energy mix of different types, not just for wind turbines. Look at what SeaGen has done: it supplies about 1,000 homes with electricity. We have plenty of locations. We could have SeaGen 2, SeaGen 3, and so on.
617. **Mr McFarlane:** In the renewable energy discussion and debate, in its totality, Northern Ireland has the potential to be a world leader. As a result, many environmental, social and economic benefits could accrue. I am talking about jobs, exporting talent and innovation. However, we seem to be disparately considering these as single issues rather than as a collective whole.
618. **The Chairperson:** A WWF report from two years ago said that we have more than enough energy potential on the island of Ireland, North and South, to be not only self-sufficient but to export to Europe, by 2030 or 2050, if we put our minds to it.
619. **Mr McFarlane:** Absolutely. That is a valid point. That wider strategic view of energy for Northern Ireland should be looked at on an all-island basis.
620. **Mr McElduff:** Is there any body of research or evidence relating to the impact of wind turbines and wind farms on the overall physical and mental health of people? Are you involved in that work?
621. **Dr Jordan:** No, I am not. There are numerous papers in the public realm on research undertaken on the impact of wind turbines on health. Many say that there is no impact; equally, many say that there are terrible impacts. In undertaking a review of the ETSU-R-97 standard and setting noise limits, those noise limits should be set relative to health impacts. Ensuring that ETSU-R-97 is reviewed will ensure that the health impacts from noise are incorporated into the new standard.

622. **Mr McElduff:** Do you have a specific proposal as to how to offer greater protection to residents who are opposed to a wind turbine or wind farm in close proximity to them? Do you have any way of offering them greater protection in such a review?
623. **Dr Jordan:** It depends on what the review comes up with. It may reinstate the existing noise limits, in which case residents will be no better off than at present. As the review has not even commenced, it is hard to say.
624. **Mr McCullough:** It is certainly known that elements of wind turbine noise have not been fully encompassed in the ETSU document. You may be familiar with the term “amplitude modulation”, which is receiving quite a bit of scrutiny at the minute. That is all new to ETSU-R-97; it does not encompass the modern thinking on that. So although we cannot say what a new standard should be, we can say that we think that the current standard is outdated and does not encompass the new stuff. That is our take on it. Rather than giving you definite proposals, we think that it needs looked to be at.
625. **Mr McFarlane:** What my colleagues are saying is that a comprehensive objective review and the incorporation of the latest evidence into that review in the guidelines that are set is the best way to offer residents much greater reassurance that any impacts, particularly in relation to noise, are dealt with as effectively as possible.
626. **The Chairperson:** Are we saying that the decibel level, whatever you call it, is too low?
627. **Dr Jordan:** It may be the opposite, Chair; it may be too high. It is about how you undertake the measurement. Without getting into too much detail because it is quite technical, amplitude is another name for volume and modulation is change. So, it is, in effect, the volume of the wind farm going up and down very quickly, and that is typically heard as a thumping noise by the local residents, and that thumping noise can be disturbing, especially in the middle of the night. If you were to take a measurement of that using the measurement parameters as stated in the guidelines, ETSU-R-97 would not recognise that thumping noise at all. So, at a wind farm that does thump and a wind farm that does not, the levels will be the same. It does not recognise the thumping noise. We need a total review of the assessment procedure, not just the limit.
628. **The Chairperson:** With new types of wind turbines, new problems are coming on board.
629. **Dr Jordan:** Yes. When ETSU-R-97 was drafted, the term “amplitude modulation” did not exist. Only as the technology has improved and grown in scale has the phenomenon of amplitude modulation become apparent.
630. **The Chairperson:** Because they are taller, bigger and more powerful now.
631. **Mr Elliott:** Thanks very much for your presentation. It is very interesting, as are the research documents. In the report, I notice that the largest proportion of people living close to the two sites are satisfied and seem reasonably content. That point was raised earlier, but it is interesting compared to what we hear generally. My question is about the environmental benefits of wind farms or wind turbines against the negative environmental aspects, because there is always the argument that there are two environmental aspects to wind farms and wind turbines, namely the positive environmental aspect of greener energy and the negative environmental aspects, particularly around the landscape and what it does to habitats. In your opinion, which outweighs which?
632. **Mr McFarlane:** I will answer that first and then allow my colleagues to come in. It may sound rather trite but, as they say in popular speak, I think that is really a no-brainer.
633. **The Chairperson:** I am sorry — what was that?

634. **Mr Boylan:** It is a no-brainer.
635. **Mr McFarlane:** You are asking me a very clear question, and, as I said, there is no option that does not have pros and cons. There are positive and negative aspects to any form of energy generation.
636. **Mr Elliott:** Which argument holds the greater weight?
637. **Mr McFarlane:** If I understand the question correctly, you are asking me whether wind energy is a better or worse alternative to our conventional energy mix. I do not think that there is any contest. I say that because the benefits from the reduction not only in reliance on a fossil fuel energy mix but in the environmental impacts of that mix show that there is no comparison.
638. **Mr Elliott:** To be clear: are you saying that the environmental benefits of wind farms and single wind turbines outweigh the environmental negatives?
639. **Mr McFarlane:** In my view, yes, they do. However, neither am I saying that there are not some potential negative environmental and social impacts of wind energy that do not need to be looked at. We have covered that. The issue for Northern Ireland seems to be that there is no strategic approach as to how best we site, position and harness onshore wind energy in this jurisdiction.
640. **Mr McCullough:** I would like to come in on that point. We are saying that we should capture those environmental benefits but that there is a better method of reducing the adverse effects. We are not saying that we should not put these up; we are saying that we should look at the guidelines and the planning controls and make sure that they are put up in the right locations. You can still capture all those benefits, but, by working in a better way, you can reduce the adverse impacts. The balance remains and is, in fact, better.
641. **Mr Elliott:** I appreciate that, but you are trying to get out of the question a wee bit, Paul, by talking about where they are located. Are you still saying that the benefits outweigh the negatives but that the map of Northern Ireland showing the huge number of planning applications for single wind turbines is not appropriate?
642. **Mr McCullough:** No, far from it. I will go back to my earlier point. We are in an ideal situation in the north-west corner of Europe, exposed as we are to the Atlantic systems. As Gary said, we can be a world leader. I will put it into the simplest terms, and, again, I am using hypothetical figures. We are suggesting that, instead of putting a turbine 300 metres from somebody's house, we should put it 500 metres away. It requires a little more investment, a little more cabling and x, y and z, but you can still put the turbine up.
643. **Mr Elliott:** I will stop you there. In fairness, the reality is that it would be impossible to get all those wind turbines 500 metres away from individual houses in Northern Ireland. I am not arguing for or against; I am interested to hear your opinion, because it is a huge issue. I take each wind turbine and wind farm on an individual basis, whether I support it or not, given the context around it. You cannot implement some of those ideas because they are impractical. There are three wind farms in the vicinity of my home, but I do not know whether any of them are 500 metres away. I can guarantee that they are not 500 metres away from every house. In fact, they are probably not more than 100 metres away from any dwelling at all. In that context, there would be none at all in my vicinity because it would be impossible.
644. **Mr McCullough:** I will respond to that. We are advocating a strategic approach. I will use Chris's earlier point for illustration. If the noise budget is going to be used up, it would be better used up by a wind farm capturing a lot of energy than a single wind turbine capturing a very small amount of energy. All we are advocating is a strategic approach. You say that it is difficult to find the land. It may well be, but let us at least have that strategic approach to explore those issues and see where they can go for the best use of energy with the least environmental impact.

645. **Mr McFarlane:** Tom, I will add to that. Perhaps I misunderstood your question. If you were asking me whether I think that the benefits of the proposals represented on the map for that number of turbines positioned where they are outweigh the negative aspects, that is not what I meant. I meant that, in a hypothetical sense —
646. **Mr Elliott:** I did not take it as such, Gary.
647. **Mr McFarlane:** You make a valid point in the sense that Northern Ireland is a small place, and we have what we have with our residential development. I mentioned failings in the past, and we cannot change that now. However, it brings me back to the point that, in my view, we will not find all the mix of renewable energy from onshore wind. At the minute, the focus seems to be on tidal, offshore, solar and anaerobic digestion. I am not quite clear why that is the case; perhaps it is an economic issue.
648. **The Chairperson:** From what you are saying, from looking at the map and given what Tom said, should we be calling for a stop to the further development of wind turbines in Northern Ireland?
649. **Mr McElduff:** Is that what you are saying?
650. **The Chairperson:** Should we be bold and put a moratorium on it?
651. **Mr McCullough:** No. We are not saying that a moratorium is needed here and now, but we recognise that we have a disproportionate number of turbines and a unique settlement population, and our profession is seeing noise impacts and concerns about noise that are not being reflected in the current policy and guidance. We are imploring you that this needs to be looked at again with some urgency.
652. **Mr A Maginness:** How many single turbines are in use in Northern Ireland?
653. **Dr Jordan:** I think that it is around 200 but with 1,000 permitted.
654. **Mr A Maginness:** So about 200 are in use and operational. Is that over the past five years or more?
655. **Dr Jordan:** Yes.
656. **Mr A Maginness:** Is there any evidence to suggest that they have had an adverse impact on either the environment or on individuals' health?
657. **Dr Jordan:** We have received a number of noise complaints across the Province.
658. **Mr A Maginness:** Yes, but I am asking about a cumulative effect on people in Northern Ireland. Is there any evidence to suggest that we have got it so wrong that people are suffering?
659. **Dr Jordan:** At the minute, the turbines that are constructed are usually fairly far away from one another. The other permitted turbines have yet to be built in between. Therefore, from a cumulative impact point of view, we are not there yet, but it may be coming.
660. **Mr A Maginness:** You are giving a health warning.
661. **Dr Jordan:** Yes.
662. **The Chairperson:** We have a number of research papers that show that there is no evidence of detriment to the health of those nearest to a turbine from the sound. It is very difficult to pin it down.
663. **Dr Jordan:** I will go back to my original point. To try to re-engage those communities and bring them along, we need to review the guidelines in a robust and transparent fashion.
664. **Mr A Maginness:** Could I stop you there? Is there any evidence to suggest that the situation has got so bad that that has to be done? Is there some major problem out there? I do not sense it, but you may have evidence to the contrary.
665. **Mr McFarlane:** Before colleagues make any further comments, from the discussions that I have had with them — obviously they are, as it were, at the sharp end — it seems to me that some cases require extensive investigation.

- Indeed, some are not even concluded yet, which is part of the problem. I made the point that we could be storing up problems for the future with the burden on local authorities. Perhaps colleagues could give you anecdotal examples that would illustrate that, and I know that Paul can mention one case that we have spoken about. It is a very good question, and we could come back to you with more robust information through liaising with colleagues in the other two subregional areas who are not here today. I am not dodging the question but trying to answer it more accurately.
666. **Mr A Maginness:** I understand that. We are all grappling with this relatively new situation, so we have to learn from one another.
667. Scotland is producing a lot of alternative energy and is really a leader. Is the emphasis in Scotland on wind farms or single turbines?
668. **Dr Jordan:** Wind farms.
669. **Mr A Maginness:** Does Scotland zone wind farms or single turbines?
670. **Dr Jordan:** Scotland's guidance on wind farms is a two-kilometre separation distance from towns and villages. I do not believe that any separation distance from individual dwellings is set in its guidance.
671. **Mr A Maginness:** Does Scotland use the same noise limits?
672. **Dr Jordan:** It does. The difference between Northern Ireland and Scotland is that we have a dispersed rural population, which is not evident in Scotland. Therefore, it has a larger land bank to allow it to place its wind farms further away from residences, and we do not have that luxury.
673. **Mr A Maginness:** Is that because the redcoats cleared them out?
674. **Mr Boylan:** Luxury is a new word for it.
675. **Mr A Maginness:** What you say is very interesting. I take your point about being more strategic and about greater emphasis on wind farms as opposed to single turbines. Given that there are 200 turbines at the moment, it does not strike me as a huge number operationally across Northern Ireland.
676. **Dr Jordan:** We are not anti-single turbines.
677. **Mr A Maginness:** No, but you want them to be developed on a more selective basis, and it should not be a laissez-faire approach.
678. **Dr Jordan:** That applies to wind farms and single turbines. Currently, there is no strategic approach to the wind energy mix, so it is a laissez-faire approach. At present, everyone builds where they like, albeit with permission. Consequently, as I said, single turbines have potentially blocked a larger wind farm on the hill behind.
679. **Mr A Maginness:** That, obviously, is very unhelpful.
680. **Dr Jordan:** Yes.
681. **The Chairperson:** It is simply a waste of resources. You are saying that 200 are in operation at the moment —
682. **Dr Jordan:** Approximately 200.
683. **The Chairperson:** — but 1,000 are in the pipeline, waiting for approval.
684. **Dr Jordan:** We could get the exact figure from the Planning Service.
685. **Mr McFarlane:** Would you like us to give you those exact figures?
686. **The Chairperson:** Yes, I think that it would be very useful.
687. **Mrs Cameron:** Thank you for a very interesting presentation, although I cannot help but feel that we are left with many more questions on the subject. It is very concerning that the guidance that is being used is 18 years old. I do not mind wind turbines so much, although I would not want to live beside one. I cannot get my head around the idea that there are no health implications. If the noise is such that it disturbs sleep, in my simple mind that means that there are health implications for certain

- people, for children with particular conditions or for whomever.
688. **The Chairperson:** You do not have a simple mind.
689. **Mrs Cameron:** Thank you, Chairperson. I wonder about the rate that we are going at. There are 200 turbines in operation and 1,000 in the pipeline. When will new guidance be available? I assume that it is not being reviewed and that there is no plan to review it. If there were a decision to review it tomorrow, how long would that take?
690. **Dr Jordan:** I suspect that there would be a significant amount of objection, not over the review but over the content and agreement on the content. A good example would be the Institute of Acoustics good practice guide. It took two years to develop, and it is a far simpler topic than noise limits.
691. **The Chairperson:** The Department is reviewing different planning policy statements PPSs all the time, so it is not difficult for them to start a process.
692. **Mrs Cameron:** I worry that we are not even talking about a review. Even if we did, how long would that take and how many more single turbines would we have?
693. **Mr McCullough:** It very much relates to a desire and to the importance we place on this industry. These issues are always complicated, and there are many opinions on them, but a good comprehensive review can take place if the appropriate resources are there to make it happen. I appreciate your point about what has gone before, but we are where we are. Our point is that, to bring communities along, we need to provide the robustness of a comprehensive review of the guidelines that they are operating under.
694. **Mrs Cameron:** Whose overall responsibility is it to review the guidelines?
695. **Mr McFarlane:** It is the responsibility of the Department of Energy and Climate Change.
696. **The Chairperson:** I am conscious of the time. I will allow one quick question.
697. **Mr Boylan:** This has been one of our better presentations, and it has offered more questions than answers. I want to go over some of the points that have been made. Anything that we do should not be to the detriment of communities. Unfortunately, we have seen that in some instances. I am surprised that there are only 200 turbines, but we will get the figures on that. I know that in my area, I have been lobbied very strongly on this matter.
698. We have identified 132 landscape areas. There are definitions of how the North is broken up. A number of years ago, we talked about a strategic approach for wind turbines, but that has not happened. I want to put this question to you, and maybe it is a consideration. Although we have set a 40% renewables target by 2020, whether it is a European target or whatever the case may be, I do not think that we have done an in-depth investigation into how we will achieve that, but we are where we are. I want to ask you this question because you keep talking about the Atlantic coast. Is it not the case that in Europe, under INTERREG IVa, there is an opportunity for member states to work together to bring a programme forward? Is there not a good opportunity at this point to look at offshore energy? There is an opportunity because Scotland is doing something at the moment. Is there an opportunity to involve some of that and work to meet the targets? I thought of that when you spoke about a strategic approach.
699. When you talk about development, Gary, I read between the lines that you are saying that perhaps there has been too much single-house development in the countryside.
700. **Mr McFarlane:** Yes. Historically, that happened, and that is what I was getting at. However, we cannot do anything about it.
701. **Mr Boylan:** We cannot, but we are trying to look at PPS 21 because there are issues for communities. I take it that

that was the point you were trying to make.

702. **Mr McFarlane:** Yes, it was.
703. **The Chairperson:** We also need to sort out the interconnector.
704. **Mr Boylan:** Yes, but it is not coming down our way, Chair.
705. **The Chairperson:** We all have to bear in mind that your submission states that fossil fuel production of energy causes health problems and has negative environmental impacts because of emissions and so on, which is bad for everyone's health. We need to be clear about that.
706. As you can see, members found the session very interesting. Thank you very much for coming and making your presentation.
707. **Mr McFarlane:** Thank you for the opportunity. We will come back to you on some of your questions and to give you further information. As I said, although there are bigger issues, we believe that the Committee could add to this by at least trying to ensure that a review of the ETSU guidance gets under way and that we look at the planning framework as it exists.
708. **The Chairperson:** Thank you.

12 June 2014

Members present for all or part of the proceedings:

Ms Anna Lo (Chairperson)
 Mrs Pam Cameron (Deputy Chairperson)
 Mr Cathal Boylan
 Mr Colum Eastwood
 Mr Tom Elliott
 Mr Alban Maginness
 Mr Ian McCrea
 Mr Barry McElduff
 Mr Ian Milne
 Lord Morrow
 Mr Peter Weir

Witnesses:

Mr Raymond Smith	Chief Environmental Health Officers Group NI
Mr Sean Clarke	Cookstown District Council
Mr Michael Harris Ms Mary Lavery	Department of Enterprise, Trade and Investment
Ms Lynda Hutton Mr Desmond Reid	Fermanagh District Council
Mr Graeme Dunwoody Mr Lauri McCusker	Fermanagh Trust
Ms Victoria McCabe Ms Sacha Workman	First Flight Wind Ltd
Ms Helen Harrison Ms Orlaith Kirk	Juno Planning
Ms Shanti McCallister Mr Pete Mullin	Landscape Institute Northern Ireland
Mr Jason Devine Ms Shauna Ward	Lisnahaney Area Residents Group
Mr Jonathan Bell	Northern Ireland Environment Link
Ms Joy Hargie Ms Deirdre McSorley Mr Scott Symington	Planning Service, Department of the Environment
Ms Lucy Whitford	RES
Mr Fergal O'Donnell	Rural Community Network

Ms Vicky Boden Mr David Manning	SSE Renewables Ireland
Mr Patsy Kelly Ms Ann McAleer	Strabane and Omagh District Council Wind Farm Working Group
Mr Adam Larkin Mr Ryan McBirney	Strategic Planning
Ms Aine Coyle Mr Peter Craig Mr Gary Preston	TCI Renewables
Mr Mervyn Keys	WindWatch
Mr Keith Graham Ms Pauline Graham	

709. **The Chairperson:** Good morning, everyone, and thank you very much for coming here today to Parliament Buildings to participate in this evidence event. We are trying to condense as much evidence as we can into the time available. We have now received 98 written submissions from a range of individuals and organisations keen to make us aware of their thoughts on the subject. I want to take the opportunity to thank you for your written submissions and your attendance today.

710. Before I outline the format for today, I want to quickly outline some housekeeping arrangements. Please switch off your mobile phone totally; please do not just leave it in silent mode. If you do not, they will interfere with our recording. Please switch your tablets to mute mode. Toilets can be found if you go out any of the doors and turn left along the corridor, and they are on the right-hand side. If the fire alarm rings, please leave the building immediately. Do not use the lifts, and follow instructions from the doorkeepers and Committee staff. If anyone feels unwell or needs assistance, please let a member of the Committee staff know immediately.

711. I will now outline the format for the evidence session. Today, we focus on three areas that have been consistently raised in relation to community benefit and community engagement. The first consideration is the strategy underlying the siting and location of wind development and how this impacts on the surrounding area and its residents. The Committee would like your views on how changes at a strategic level of government may lead to clearer, more coherent and transparent policy. Would such changes promote community understanding and engagement?
712. The second area relates to the planning and application process. Many of the submissions to the inquiry illustrate that people do not feel that their voice is being heard in the planning process and that their concerns are not being recognised. Their submissions tell us of a lack of awareness of applications for large wind developments that change the character of a location. A sense of not being involved has resulted in communities feeling marginalised and disengaged. The Committee would like to hear how you believe the current process is working and how it might be improved.
713. The third and final area of focus is on the role of community benefit. The Committee would like to know whether this is a valid way of compensating those who live in close proximity to wind development or whether a very different approach would be more effective. What part should financial incentives play in this situation?
714. All the stakeholders attending today's session have been grouped into tables to reflect fairly similar areas of interest. I ask each table to nominate a spokesperson to feed back the views of that table during each plenary session. Committee members will circulate throughout the room and will remain at a table for the duration of one discussion session before moving on. We have put together a list of questions to guide today's discussion, and you will find these on your table. We will allow approximately 20 minutes for

each table to discuss the questions in each session. A member of staff will be present at each table to assist by taking notes for the group.

715. At the end of each discussion session, we will have a short plenary to allow a spokesperson to present each table's responses. I request that the spokesperson for each table clearly identifies himself or herself by stating their name and the organisation that they represent. Hansard will record these contributions, and they will be included in the Committee's final report. After each plenary session, we will move on to the next group of questions. Time permitting, there may be an opportunity for a short discussion at the conclusion of the session, but we will have to keep fairly strictly to the indicative timings on your agenda to ensure that we finish on time. If you have any queries on the running of the event, please speak to a member of the Committee staff. We will start now with the first discussion session. Enjoy the session, and we will talk to you in about 20 minutes.

On resuming —

716. **The Chairperson:** From hearing the noise in the room, I am sure that you have all had a very useful and productive engagement. I invite the spokespersons to come forward. I invite table 5 to make comments on the first session of questions. Can you please give your name, the organisation that you come from and which table you are from?
717. **Mr David Manning (SSE Renewables Ireland):** I am speaking on behalf of the developer table today. We had a very interesting discussion from the beginning. We did not make it far beyond question 1, I am afraid, which is quite interesting. The question that was posed to us was about individual one-off wind turbines and large developments of wind farms. Three or four points came out of that, and I will try to touch on them.
718. The first point is that we have seen a large proliferation of single one-off turbines, with around 2,000 of them flowing into Planning Service. That

- places a burden on Planning Service. They are real people too, and they have to work through that process and those applications. We need to make sure that there is a robust assessment process no matter what the nature of the application might be. Whether it is a one-off turbine or a large wind farm, the robustness of how it is assessed is important, and everybody must be measured by the same yardstick. We think that, in the provisions of the legislation and in planning law, there is a solid framework for assessing all applications no matter what their scale.
719. The second point is on community engagement. I personally represent a large wind farm developer, as we all do around the table. Our focus is very much on community engagement, and we pour a lot of time and resource into that because we feel that it is the right thing to do. You must engage with communities and be willing to hear what they have to say, and, as a developer, you also get a lot of benefit from that feedback because you can get local intelligence on the area that you are developing in as well and can meet the community's need and your own need. We have a concern about the smaller-scale one-off developments of single turbines. Does the same community engagement take place? If I am a single landowner and I want to put up a 250 KW unit, am I investing a reasonable amount of time in engaging with my neighbours and my local community to make them aware that I am doing that?
720. The third point is about those single one-off turbines. If it is the intent of that one turbine to export power to the grid, grid reinforcement works are likely to be needed. That is costly and, ultimately, all that cost adds up, and it falls on the consumer to pay for that cost. We need to be cautious and sensible that we develop in an economically rational way.
721. I will skip forward to question 5, which relates to statutory consultees. We are looking forward to the introduction of the full provisions of the Planning Act in the first quarter of next year. It will introduce statutory timelines that will be very important for seeing the planning process move along in a timely way. That is very welcome and cannot come quickly enough.
722. The final point is on question 6, which is about a community engagement toolkit. We refer the Committee to wind industry best practice guidance that has been prepared. I think that we have left copies at the table at the top. If anyone cares to peruse it, we would welcome any feedback on it at any point from anybody. It feeds into one of the earlier points, which is that, as a large developer, it is our desire, our interest and our want to engage with communities.
723. **The Chairperson:** Thank you. Table 4, please. About three to four minutes, please.
724. **Mr Sean Clarke (Cookstown District Council):** Please excuse me if I cannot read this that well; it is not the fault of the person who made the notes.
725. On question 1, different points were made. Local development plans need to consider the local community and give it a say in the process from the beginning. With the new councils and community planning and developing of new area plans, there should not be a rush to make strategic decisions that will affect local areas. There was mention of whether there should be a moratorium. Should areas be strategically identified? Environment puts emphasis on particular areas for development plans. Given their new roles, new councils with power should have the decision, not central government. Councils have more of a local view and knowledge and should make the decisions. Designations strategically and identifying most viable areas; those points were brought up. Currently, the landscape character areas identified most viable areas, and the problems are when decisions are overruled by this, particularly by the Planning Appeals Commission (PAC). The lack of grid connection was also mentioned as a factor in determining locations. The super-councils will make the decision,

- and — this was mentioned again — they should not be rushed into doing so. A piecemeal approach was mentioned.
726. It was mentioned that single turbines use up the noise limit for wind farms, which leads to less generation capacity. The lifespan of a wind farm is 20 to 25 years, and there was a suggestion that, after that, the area should maybe be given a break. It was also mentioned that there needs to be a joined-up approach.
727. DOE's position is that it is aware of the best locations, but councils need to work collectively to develop a strategy with central government. It was suggested that, as with the situation in Scotland, forestry lands could be used for turbines.
728. On question 2, we agreed with the need for greater cross-departmental working, but we need clarification on the level of cooperation from all involved. There is no evidence on the ground that cross-departmental work is happening.
729. On question 3, developers undertake this voluntarily, but people developing single turbines do not do so. It was felt that it would be a tick-box exercise and a long process. In the past, it has been inaccurate and inappropriate, so the new pre-application process should provide the community with more confidence, but we need more detail and clarity on the statutory duty. I will have to pass on the next point, as I cannot read it.
730. On question 4, this would add weight to and encourage community buy-in. The support should be based on what the community wants, and there should be consultation and negotiation with the community about what it needs. Identifying the areas that would benefit would be a problem.
731. There was no comment on question 5.
732. On question 6, a toolkit would be useful, but a one-size-fits-all approach should not be taken to establish the baseline.
733. **The Chairperson:** Thank you. Can we have table 3, please?
734. **Ms Helen Harrison (Juno Planning):** We are planning and environmental consultants who work on wind farm projects.
735. We had a very interesting discussion on question 1 that looked at the needs of developers and wind energy versus the need to protect the landscape. On the one hand, we thought that it would be useful to identify viable areas where wind energy was most suitable and the areas that are most sensitive to development. Throughout the discussion, we agreed that areas for special protection should be identified, but we were not convinced, one way or the other, whether or not zones should be identified as being suitable for development. I should mention that there was reference to the Welsh and Scottish models and to the approach that they took in identifying areas of special potential and undertaking landscape capacity studies.
736. On the second question, there was agreement that there should be a greater cross-departmental working. It was recognised that a report entitled 'Communities and Renewable Energy: a Study' was recently undertaken by DETI and DARD, but we did not talk about that in detail.
737. We recognise that, for example, DETI's renewable obligation certificates (ROCs) targets have a direct impact on DOE's work in dealing with submitted applications. They also have a direct impact on the nature of the renewable energy industry in how that is being progressed and developed. We agreed that there needs to be a balanced approach that considers the impact on the community and the environment, while understanding the economic benefit that comes from ROCs and renewable energy targets.
738. On question 3, we noted that a consultation document is out at the moment on the requirement to undertake community consultation on major, regionally significant applications, which was welcomed. I think that it has been said previously that, in line with

- best practice, many parties already undertake or plan to undertake that, but it is good to formalise the process. We discussed — interestingly, table 1 did the same — the concerns regarding the approach taken to single wind turbines and the fact that, at the minute, they maybe fall beyond some of the regulations on community consultation and the environmental impact regulations.
739. We did not have a lot of time to discuss question 4. In summary, we thought that there was potential for this to be considered further.
740. We ran out of time, so we have no comment on question 5.
741. On question 6, the answer is yes. We refer to our answer to question 3.
742. **The Chairperson:** Thank you. Table 2, please.
743. **Mr Lauri McCusker (Fermanagh Trust):** Good morning. This is the rural table.
744. On question 1, we felt that there was a question mark over the adoption of suitable locations for wind farm development. Is it too late for that? Some communities may feel that it is too late in places where clustering has taken place, such as west Tyrone. So, there is a question mark over that.
745. We raised the issue of the relationship between clustering and how it applies in the case of single turbine developments vis-à-vis major or significant wind farm developments and how government might consider where single turbine developments are likely to be placed and how that would work. We felt that the Government could play a role in providing good practice on planning wind farm developments on public sector land in forestry, which DARD's Forest Service is leading on. Government can be an exemplar of how the public sector does community consultation. The Scottish Government have shown how that can be an effective mechanism and an exemplar that the private sector can then taken on.
746. Question 2 was on whether there should be greater cross-departmental working. Yes, there should. There is the sustainable energy interdepartmental working group, but it can do more and do it more quickly.
747. Question 3 was about the Planning Act. The statutory pre-application community consultation process is about preparing a report that will go into the planning system. We felt that the important thing there was that the report needed to show how the concerns raised by people during the community consultation had been acted upon. We can all produce reports — paper does not refuse ink — but what are people doing about the messages and what they are hearing? It can make a difference if implemented effectively.
748. Question 4 was about whether government support would be positive in promoting community engagement. Again, we said yes. We felt that there is real potential for embedding community energy in policy. Again, we looked to Scotland, where there are 300 community energy projects that have been partly facilitated by government policy and backed up by initiatives providing financial support, such as the Big Lottery etc.
749. Most recently, the Department of Energy and Climate Change (DECC) in London released its community energy strategy, which says that, by 2015, it should be the norm for communities to be offered some level of ownership of wind farm developments. That is a very important document that the Committee should look at. DECC has also implemented the shared ownership task force and a community right to buy.
750. On question 5, we said yes. On question 6, we said also yes. We encourage the examination of best practice, namely the Scottish Government's good practice principles on community benefits.
751. **The Chairperson:** Thank you. Table 1, please.

752. **Mr Jason Devine (Lisnaharney Area Residents Group):** I represent the residents here today.
753. On question 1, a lot of the talk has been about protecting the landscape, but what about protecting the residents in that landscape? We asked how many areas are being identified at the minute and how protection will be provided for specific classified areas, such as areas of outstanding natural beauty (AONBs). At the minute, it seems that no value is being placed on our landscape. It seems to be a free-for-all. Also, a lot of the areas that have been identified seem to be doing their bit already. They seem to be saturated with wind farm development already, so what is the point of adding more in those areas? If they have already been saturated, will development just keep moving back from there? There is also the need for site-specific analysis, not just depending on, I suppose, a UK-based analysis.
754. It is interesting to hear the issues of single wind farms being brought up. We are wondering whether that was possibly due to the number of applications and the Department actually having to handle them, rather than having to deal with the larger applications.
755. Like everyone else, we spend more time talking about the first few points. I will try to be quick. On question 2, yes, it goes without saying. It was asked how Departments are presently engaged in that and how independent such guidelines for that should be.
756. On question 3, yes, local government should have stronger emphasis on community consultation going forward. We had also asked about independent community engagement reports. In our application in our area, the developer did the community engagement report. When we saw it, we were absolutely shocked because it did not reflect the community I represent. So, we did our own community engagement report. If a community engagement report is put in as part of an application, how independent is it? It needs to be totally independent. It does not need to be from the developer or the bodies that the developer would actually use.
757. On question 4, a few of us here thought that it would actually polarise opinion more. People who were for it would definitely think that it was a fantastic idea. However, people who were against it thought that it was just another bribe — that is the word that was used.
758. On question 5, yes, but, again, it would depend on the bodies that were asked. Why have the likes of Outdoor Recreation NI, sports bodies in Ireland and Sport NI — people who represent those who are actively involved in using the outdoors and, particularly, the rural areas where the wind farms are going — not been involved in this? Why are they not statutory consultees?
759. On question 6, the toolkit could be useful. However, again, it goes back to there being an independent body. In the right hands, it is possible.
760. **The Chairperson:** Thank you very much. Those comments are all very useful. I am sorry that we do not have time. We have to move on to discussion 2. You need to report back in 20 minutes. Thank you.
- On resuming —*
761. **The Chairperson:** OK, everyone. We need to report back on discussion 2. I invite table 3 to do so first. We have until around noon to do the reporting back.
762. **Ms Harrison:** I am sorry, but we did not quite get through all the questions. We spent a long time talking about question 7 on the perception that Planning Policy Statement (PPS 18) permits renewable energy development unless adverse impacts are identified. The Department's perspective was that all views are taken into account by it and the statutory agencies. As applicants, we felt the same. We recognised that the policy at the minute under PPS 18 provides a presumption in favour of development. It is that which perhaps results in the perception of the weight being towards approving the development, rather than

- undertaking the robust analysis that may, in fact, result in it being refused.
763. We thought it possible that perceptions may be developed through people's lack of knowledge or understanding of issues and that that could be improved through the sharing of information through community engagement, pre-application discussions and reporting back on community issues and how they have been addressed — if indeed they can be addressed — where possible. However, we also recognised that there will be many instances in which the parties will not be able to agree. We have to take responsibility for that and understand that, when promoting wind energy development in Northern Ireland, that is part and parcel of what will happen. How do we promote constructive dialogue between parties in that situation?
764. We felt strongly that not only should the Department undertake extensive and diligent assessment with the statutory agencies but, from the developer's point of view, there should be checks and balances that are designed to protect the interests of the public and the community. Particular reference was made to the environmental impact assessment (EIA) regulations.
765. Question 8 asked whether developments are being advertised at a sufficiently early stage. We felt that that would be improved significantly through the pre-application discussion process and particularly through community engagement. However, again, we recognised the question mark over the requirement for single turbines to go through that process.
766. On question 9 on neighbour notification, I think that everyone felt strongly that, at the minute, the system is weak, in that there are many interests that fall within areas that may be affected but that are beyond 90 metres of the site. We thought that it could be useful to consider the 10-times-rotor-diameter area as that within which neighbours should always be notified at the very least. Around the table, we felt strongly that site notices would be a really useful tool, whereby communities that have not been notified, people who fall outside the zone or those who have not read the local newspaper can see the site notice if they are in the local area and check it.
767. That also forms of our answer to question 10. The site notices would be an extremely useful tool. At the table, I have to say, we were split on who should take responsibility for neighbour notification. We probably recognise that to expect developers to give a signed acknowledgement would be extremely difficult in practice because there may be parties who are either unavailable or simply do not want to provide a signed acknowledgement. What impact will that have on the scheme going forward and being determined?
768. On question 11, although none of us had direct experience of that, we felt that, yes, it could be disruptive.
769. I am sorry that we did not have time to answer question 12.
770. **The Chairperson:** OK. Thank you. I invite table 2 to report back.
771. **Mr McCusker:** On question 7, we agreed. We touched on the draft PPS 18 document. It had an annex on community benefits that was dropped when the draft became a final document. That reflects the feeling that the policy has been weighted towards renewables.
772. Another very important point here is that communities do not have the resources of space and time that are often needed to make representations to counterbalance the position and documents that developers are able to put together.
773. The simple answer to question 8 is no. We think that it needs to be reflected on in future planning.
774. Question 9 links into the previous question. We asked whether those notifications are adequate, because we feel that they are not robust enough. We feel that there needs to be genuine engagement and that there may be

- a significant opportunity for some independence. It was interesting to hear from table 3, whose representative said that they had not had experience of those tensions at public exhibitions. If the planners are not aware of tensions between developers and local communities or individuals in those communities and have not experienced them in some of the public exhibitions, maybe there is an information gap.
775. Question 10 asks whether it would be useful for developers to provide planners with documentary evidence. Yes.
776. Question 11 uses the phrase “anti-wind turbine groups”. I think that we need to be very careful with the terminology that is used. Some people may oppose a development but not be anti-wind. They may oppose a development on the basis of location, scale or size, but to put everybody into a category that they are anti-wind is unfair and incorrect. I think that we all need to be very careful in our use of language. Many people are opposed to something for particular reasons, but that does not mean that they are opposed to everything.
777. We felt that there is an issue with community engagement and disruptive protests, which we feel are wrong. Arguments need to be presented with courtesy, dignity and respect, and everyone needs to be given space. Adopting disruptive protests and antagonistic approaches does nobody any favours, and we should all be opposed to them.
778. On question 12, there needs to be more than four-hour exhibitions six weeks before planning in the local post office or community hall. We also felt that discussions and points that are raised in those forums, or so-called engagements, need to be recorded. Two peoples can have a conversation, and we can go away with a different understanding of what we have just said to each another. One could then report back to the planning authorities about what that conversation meant or what was said. Exhibitions need to be recorded, and we felt that there needs to be independence to oversee the process. We suggest the appointment of an independent facilitator. I again refer to the Scottish Government’s good practice principles, which may be a useful tool.
779. **Ms Shauna Ward (Lisnahaney Area Residents Group):** I represent the residents groups at table 1.
780. Question 7 asks whether local communities are given enough due regard by planners and developers. We obviously think that they are not. When making a decision to approve a wind farm, a number of factors are considered. One of those is the visual impact, and we expect the planners to do their job independently, and we trust them to do that.
781. However, there are other points that residents raise that are not enough regard is given to. We feel that we are let down by the noise legislation and noise guidelines. Those need to be looked at, as many residents raise concerns about noise. We also raise concerns about health, including the sleep disturbance that is caused by the low-frequency noise that seems to come from wind farms. Those concerns always seem to be ignored, and we feel that we are not given enough support by planners when it comes to looking into that.
782. We are also concerned about our house prices and the residential amenity for the area. That seems to be overlooked, as we are meant to be looking at the greater good and the greater socio-economic benefits for the area. We feel that our individual houses and residential properties are affected by wind farms. We also think that wind farms impact on local businesses. I come from an area that is trying to develop tourism, and we feel that the wind farm will have a detrimental effect on local businesses and providers. Those kinds of people are not given enough support by the planners either. I know that developers talk about all the wonderful jobs that wind farms create

- and the business that they give to local quarries, and so on, but we usually find that that does not normally happen. The residents are then used to sucking it up for the greater good.
783. Questions 8 asks whether the proposed developments are being advertised sufficiently. We talked about that and how it related to question 9 about notification. We feel that a one-off hit in a local newspaper perhaps beside a notice about an extension to someone's house or a new bungalow is inadequate. Some around the table said that they had been notified of a wind farm in their area via Facebook and had picked it up and learned about it from there. We talked about residents in the local area being notified and written to as individuals. For example, if my neighbour were building an extension on their house, I would hear about it from the planners, yet there is wind farm going up in our area, and I was not written to by them. We had some discussion about the distances, and some felt that the mailshot should be done for properties up to 3 kilometres away from the wind farm, while others felt that it should be 5 kilometres. That is done for electioneering purposes, so we feel that it is quite feasible. It could be done. We also feel that there should be repeated ads, not just one-off ads in newspapers to try to get the communication out.
784. At the end of the day, these wind farms are big developments, and they are getting bigger and bigger. The turbines are 125 metres tall in our area — some of them are even going to be taller than that — and they will be there for 25 years and more. The residents would like proper notification so that they can respond, and respond properly.
785. We then talked about documentary evidence and the notification of residents. We are very much for that. If the developers have gone around the doors, we would like to see a written report of all the residents whom they visited, and residents should sign to say that they have received the information. In our area, the developer said that they had consulted derelict houses, and I think that, if we went to local graveyard, we might find in there some of the people whom they said they consulted. They were not living in those houses. Those are the kinds of things that get residents' backs up and get them annoyed. Proper information should be given out, and people should sign on receipt of that information. The information should also be proper and factual. We have evidence in our group of some of the groups taking developers to the Advertising Standards Authority (ASA), which upheld their objections. Some developers oversell and are not descriptive enough about the information that they give. So, the information should be factual and be signed for by the residents.
786. Question 11 refers to community engagement and destructive protests. We say that we live in a democracy and that people have a right to protest. We also discussed how we can prevent protests and why they happen in the first place. They happen in the first place because developers do not do their community engagement correctly, and there is a lot of misinformation out there. By the time that they come to have their meetings in a local hall or wherever, there is a lot of mistrust and misinformation in the area. We feel that that could be properly handled to avoid the protests happening in the first place.
787. We also feel that meetings should be properly organised. In our area, for example, there were montages up around a room like this — perhaps not as grand as this — and it was like going into an art gallery. You looked and walked back out again, as no proper information was given. We feel that the developers should have a top table at which they do a presentation and take questions and answers from the group. Residents may not feel comfortable or qualified enough to ask questions, but somebody in the audience might ask a question that I want the answer to. There should be proper dialogue and proper question-and-answer sessions to give the community proper information. If there were, we could avoid protests

- and that build-up of frustration in the area.
788. How should information be structured? I have just covered that.
789. Our group made a point about community liaison officers. Most developers have a community liaison officer, but their only function is to try to sell or promote community benefits. I feel that the community liaison officer should be on the ground from day one knocking doors and going around residents trying to allay their concerns, rather than promoting community benefits. It also gets residents' backs up when you find out that a cycling group six miles away has accepted a community benefit from a developer. Because it has accepted a benefit, it seems to be associated automatically with supporting the wind farm, and those who live close to the wind farm then feel pressurised by the fact that other groups have received a community benefit. That is not what a community engagement is about or what the community liaison officer should be about.
790. **The Chairperson:** Can you sum up quickly?
791. **Ms Ward:** That is it.
792. **The Chairperson:** Table 4, please.
793. **Mr S Clarke:** I will just make the points again. On question 7, there is a problem with the process. We need more focus on the cumulative impacts. The true impacts are not apparent until the turbines are built.
794. It was also mentioned that undeveloped individual applications stop new developments. When there are turbines with a scattered distribution, a lot of people are involved. The question was asked whether policy should dictate the treatment of individual turbines. Moreover, the point was made that there are a lot of individual turbines that are not built, and that is probably because NIE does not have the grid to take them. Whatever is erected or approved has an impact on future development in the general locality for everything. It has a big impact on that. Furthermore, why not let the Government develop wind energy on their own land — for example, forestry — and decapitalise the energy industry?
795. We took questions 8 and 9 together. It was felt that the community engagement should take place at the beginning of the pre-proposal stage, to give plenty of time for discussion and before vast amounts of money are spent on the development. The notification time is insufficient to get adequate information. The notification area should be widened, and the process should be mandatory. The planners should be more responsible for notifying people. In the cases of Omagh and Strabane, it was indicated that everyone inside a one mile radius should be notified. DETI does not get all the applications. It probably gets applications for wind farms but not for all individual turbines. It may receive some applications for individual turbines but not all.
796. Environmental health offices have an awful lot of work to do, and that includes noise monitoring. It was felt that that should be handed to the developer, because environmental health officers should be assessing the reports, rather than doing the research themselves.
797. There is no complaint investigation condition here. It is hard for councils to gather information to investigate breaches of, for example, noise restrictions. Shadow flicker was discussed. It was also noted that the size of and technology used in new turbines is completely different, and we do not know what the noise and health implications are.
798. On question 10, it was felt that there is not enough impartiality. It was felt that planners rather than developers should be responsible for providing that information and that there should be genuine community engagement as part of the process.
799. On question 11, it was felt that people should have the right to protest but not

- to disrupt. Opinion should be taken into consideration from the beginning the process, which brings us back to points made earlier.
800. On question 12, it was felt that at least two weeks' notice should be given before an event, and access to the appropriate information should be available.
801. **The Chairperson:** Thank you. Table 5, please.
802. **Mr Manning:** Thank you. I tried to rotate the chairmanship of this table, but, unfortunately, it did not work.
803. Table 1 made a number of comments, and, on dialogue, we could not agree more. It is absolutely fundamental and critical, because that is how understanding arises. On question 7, we hold the view that PPS 18 is robust. The planning adjudication process means that all correspondence is considered equally, and I think that that is the point in question 7.
804. On question 8, I referred earlier to the Northern Ireland Renewables Industry Group best practice guidance, of which there are copies here today. That sets out a view on best practice on consultation. However, we fully support the formalisation of a pre-application process. We think that that is a very important thing. It comes back to the point about dialogue and communication. Perhaps some of the issue that arises is that planning does take a while. I apologise if I am offending anybody in the room by saying that. It takes a while to get from the point at which you enter into the process to the point at which you get an answer out the back end. In that very long process, there is drift, and, if there is a sense that developers are not talking to communities, or vice versa, that might be a function of time. So, the lesson for the industry is the importance of ongoing engagement, and I think that we are comfortably committed to that.
805. Question 9 is a matter for Planning Service. One of the things that we noted there is that, as planning is devolved to new, larger local authorities, that will become a function for them.
806. Question 10 is on a signed acknowledgment of the receipt of information. In practice, that will be a little bit difficult, and that is because individuals are not generally minded to sign their name on forms, which is understandable. However, we all spoke of the fact that, when we run our community events, we have an open book in which people can sign their name and acknowledge that they were there. We also make comment boxes available so that, if they are not comfortable with making the comment out loud, people can write it down and submit the comment in that way. There might also be a data protection issue around the particular proposal, and that probably warrants a little bit of further investigation.
807. Question 11 is on disruptive protests. Look, we live in a democracy. People are entitled to have their voices heard, but, for both sides of the conversation, disruptive protests do not help engagement. We are always willing to engage with all members of the community and with interested groups. That is our concluding point on that.
808. On structured engagement with local communities, there is an open willingness from this table — perhaps the most relevant table is table 1 — on any suggestion that can help to improve the engagement process. We are always willing to listen to anything that we can both agree together as a realistic proposition to improve community engagement, and we are willing to act on it.
809. **The Chairperson:** Thank you very much to all the tables for their contributions. We now move on to the third and final discussion, which is on community benefit. We have 20 minutes for that.
- On resuming —*
810. **The Chairperson:** I hope that you are all ready to report back. We call upon table 1. Can you please state which organisation you are representing?

811. **Mr Keith Graham:** Good afternoon, ladies and gentlemen. I do not represent any organisation, but I do have the privilege of living beside an installation, Slieve Kirk, which is owned by the organisation represented by one of my colleagues at table 5.
812. The questions should be approached from the point of view of those who are affected already and those who are potentially affected. I suggest that, for community benefits and for people like me who are already affected in a fairly extensive way, it is really the only game in town. There is no way that the installations are going to be removed. They have longevity of 20 years, possibly 25; therefore, the adverse effect, which is a broad spectrum, has to be addressed. I suggest that the current arrangements are not democratic in any way. The companies that are developing are setting out their stall by acquiring the land asset. To do that, they have to deal with individual landowners whose interests are not the interests of the population as a general whole. So, in order to counteract that, we need a fundamental change in the governance of how benefits are issued. We have to move away from what is commonly known as the 30 pieces of silver to get somebody to agree to something, with other people just having to suffer the consequences.
813. There must be uniformity of the financial structures, and the only way to address that is through government. People at this table and other representatives from other organisations who are affected by these issues would highly question the methodology that is being used for the distribution of funds. To make it uniform and transparent, and to have it set at a level that will incrementally affect people who live closest to the installations, it needs to be government-based. The way in which you would address that would have to be along the lines of the cost of people's housing. We must remember that, in this present environment where economic austerity is very much the name of the game, for a lot of people in various communities, their house is their pension. I will not go into the details of my personal case, but, suffice to say, that pension is grossly diminished as a result of those installations.
814. In terms of the energy provision that is produced by the companies, their profit margins and share prices certainly do not reflect the amount of money that is issued into the community in any way. Therefore, you are into the realms of electricity charges as well. I find myself in the perverse situation where I am contributing to the electricity renewable tariff while I am living beside an installation that is not compensating me in any way, and I am effectively paying for my own torture. These are serious issues. It may be easy for companies to take the view that there is a wider picture and that we should, for want of a better phrase, suck it up for the benefit of other people. However, we live in a democracy, and there has to be a degree of sharing out the difficulties that people are encountering on a level of how they are affected. At the present time, that is not the case.
815. In terms of the way in which development money is passed out at the minute, certain institutions and businesses are targeted to try to get them to sign up to take benefits. Once they sign up, effectively, they enter a gagging clause, whereby they are then prevented from showing any opposition to the development that is there. If it is the view of all the people that a development is beneficial, that is then negated by the fact that they are completely gagged and cannot contribute any further on it.
816. To sum up, I would say that governance of this development is our prime concern. Even the sharing out of profits would need to be controlled by government. That is the only way that it can be trusted; we see no other way.
817. **The Chairperson:** Thank you. We move to table 2.
818. **Mr McCusker:** Our first question was about whether monetary community

- benefits schemes have real merit. The important word there is “monetary”, because there are a number of types of community benefit schemes, including community ownership. Yes, they can be used to benefit communities. There are examples of where communities have used such schemes to help tackle issues such as fuel poverty etc. However, it is very important that, if there are to be benefits, they last as long as the operation of any development and are sustainable. We touched on the fact that Omagh, Strabane and Fermanagh district councils have put in place community benefit protocols, which are of interest in terms of the new local government structures.
819. Our next question was about whether these things could be perceived as bribes. Yes, obviously some people perceive them to be bribes. We feel that, as with earlier points, engagement is the key, and early engagement is critical.
820. The next one was about whether the level of community benefits should be set by government. In England and Wales, the Department of Energy and Climate Change (DECC) stated that the expectation is £5,000 per megawatt, and that is clearly stated in DECC’s community energy strategy and in ‘Onshore Wind Call for Evidence: Government Response’. Scottish Government policy is similar. So, government can set the benchmark and play a lead role. The Scottish Government and Welsh Government have done that through the release of public sector land for wind farm developments. We hope that the Assembly follows suit with the current plans.
821. The next question was about whether a community benefits register should be established. Yes, as it would help to improve accountability.
822. We took questions 17 and 18 together. Question 17 was about whether community benefits should be calculated in terms of those impacted the most. We felt that a local electricity discount scheme is attractive. There is one such scheme currently in place here. The people closest must benefit. That particular model offers an example of how people can benefit.
823. The final point is about whether those who live close to wind turbines and whose homes have been impacted on regarding value be compensated? Absolutely. Again, we refer the Committee to the Danish model of good practice, where those householders who have been directly impacted upon need to be compensated. It is not rocket science. There are examples of where that has been done.
824. Just to conclude, DECC and the Scottish Government have done a lot of work in those areas. Some papers have been prepared on good practice. The Danish model is interesting in terms of how the impact on householders can be partially overcome. We recommend that those models of good practice are examined and adopted by the various Departments.
825. **The Chairperson:** Thank you. Table 3 is next. Please state which organisation you are representing.
826. **Ms Harrison:** I am representing Juno Planning.
827. Question 13 was about whether monetary benefits schemes have real merit. We discussed some existing schemes that appear to have community merit, but then we considered the definition of “community benefit”. How do you define the community and those who need to benefit? We discussed whether that benefit process, if you like, should be outside the statutory planning process and different from, for example, an article 40 agreement requiring a developer to contribute to a road or a school that is directly related to the development itself. We felt that there is general support amongst developers to provide community benefit, but there is no direction in terms of the form that that benefit should take. The benefit should be to the local community and also, to an extent, to the wider

- community. It should not be just to local residents but potentially beyond that.
828. We referred to the community renewable energy study and the best practice studies that are included in it.
829. We noted that there also need to be measures for single turbines.
830. In relation to question 14, we thought that a good way of approaching this would be through the community planning process, which is one of the powers being devolved to councils. The community planning process may provide an opportunity for the communities within those areas — either currently affected or targeted as areas of potential for wind energy — to engage with the developers and statutory agencies to enable them to understand what community benefits are needed and how they may be delivered.
831. With respect to question 15, we felt that it would be important to have community ownership and that community benefits should be set by the Government and that that should be done at Executive level, but it should be undertaken in consultation with energy companies and also with the communities to understand what those benefits might be and what mechanism might be used for delivering them. It is also important that they are related to the scale of the development and, as has been mentioned, there are best practice examples out there that we can use as points of reference.
832. An important point to note, which has been raised, is what happens about existing wind farms. I can see that residents of communities affected by wind farms would feel that it is unfair for them, as one of the earlier speakers said, to have that development imposed on them and for them to see no benefits. So, we need to think carefully about existing wind farms and the communities that are affected by them.
833. In terms of the community benefits register, we said yes and recognised that that is a useful tool for monitoring benefits and it is also a record of the tangible benefits. The register could be a check to see which benefits are working and which are most popular and effective in communities. It also promotes transparency.
834. In terms of how community benefits should be calculated so that those most impacted should receive the highest level of benefit, we thought that, in simple terms, this has the potential to fracture the community and be quite a divisive tool. However, we recognise that there are parties closer to the turbines and closer to the development who may feel more impacted by it. We thought that a better approach might be to refer to government policy and opportunities through the community plan process looking at benefits.
835. We recognised, and this relates to question 18, that there are opportunities for energy companies to look at reduced tariffs and that those people who are benefiting from reduced tariffs should clearly be those closest to the turbines. Tariffs are seen as an equitable benefit for individuals and one that people can understand. We also noted that some companies are already offering that.
836. In relation to the question about compensation, we noted that it was interesting that the word used was “revalued” rather than “devalued”. I am not sure about the wording of that question. Compensation for roads is not a useful comparison in this case, because roads compensation is implemented where land is taken from residents and acquired through compulsory purchase. So, I think that it is not a helpful comparison in this case.
837. **The Chairperson:** Table 4 is next.
838. **Mr Patsy Kelly (Strabane and Omagh District Council Wind Farm Working Group):** I am a new councillor on the Derry and Strabane super-council.
839. Question 13 is about whether monetary community benefits schemes have real merit. Yes, they have the potential to enhance communities and community infrastructure in such a way that the investment is guided by how the community itself feels that it would

- benefit the area. However, community benefits should not be used as a mechanism to carry out projects that are the statutory responsibility of Departments.
840. Question 14 is about whether such schemes could be perceived as bribes for communities to overlook the wider community impact. Members have no experience of communities being willing to overlook the wider community impact of a wind farm in order to gain assistance from a community benefits scheme. Community benefits are not written into legislation and, therefore, are not automatically put in place when the community becomes a host community for a wind farm.
841. Question 15 is about whether the level of community benefits should be set by government rather than energy companies. Yes, energy companies should be given a minimum standard by government, starting at £5,000 per megawatt per annum — £10,000 pro rata Cookstown DC — throughout the lifetime of the project, and they should be encouraged to view it as a minimum and therefore be encouraged to exceed the minimum standard. Given that the level of community benefits currently provided in Northern Ireland are much lower than in the rest of the UK, government standardisation of acceptable levels of community benefits should be welcomed.
842. Question 16 is about whether a community benefits register should be established for all relevant developments in Northern Ireland, as is the case in Scotland. Members are in favour of a community benefits register similar to the Scottish model. They agree that the information provided to populate the register should be given on a voluntary basis. It should provide details of the funding spend, as well as providing ideas and advice for communities, to ensure that funds are spent appropriately and in the way that would benefit communities where the highest level of need has been identified. The register would also provide a mechanism for communities and possible developers to share their experiences and lessons learned. That information would then act as a useful way for communities to ensure that they are on an equal footing in terms of the levels of community benefits that they are receiving and are able to find out the outcomes of projects delivered in the past.
843. Question 17 is about whether community benefits should be calculated so that those most impacted by the turbines receive the highest level of benefit. The guidance protocol developed and adapted by Strabane and Omagh district councils sets out that a community benefits scheme will receive support to the minimum value of £5,000 per megawatt — £10,000 pro rata Cookstown DC — of installed capacity per annum, and that they will be linked to the retail price index for the lifetime of the project. The monetary value of any benefits in kind shall not be considered as part of the £5,000 — £10,000 pro rata Cookstown DC — per megawatt support. Seventy per cent of the community benefit fund should be allocated to the community living within five miles of the outer boundary of the wind farm. The remaining 30% should be allocated to the community living within eight miles of the outer boundary of the site.
844. Question 18 is about whether reduced tariffs for those living close to wind turbines would be more appropriate than a contribution to a community fund. Reduced tariffs may be appropriate where they are offered in conjunction with community benefits. Also, from the point of view of transparency, it would be useful if the Utility Regulator made it a requirement for energy companies to state on bills how much of the bill is going towards funding renewable energy projects.
845. Finally, question 19 is about whether it would be appropriate to compensate those whose homes have been revalued by the siting of a wind farm development in the same way as other infrastructure such as major roads. Yes, this should be mandatory. Also, homes that suffer from issues such as noise pollution, shadow

- flicker and interruption of TV signals should also be assessed for financial reimbursement. However, members are of the opinion that, overall, if a home is adversely affected, planning permission should not be granted and, in some cases, there may be cause for the turbine to be removed. Ideally, turbines should be granted planning permission only where providing compensation would not be an issue and, therefore, would not be required.
846. **The Chairperson:** Table 5 is next.
847. **Mr Manning:** The question was about whether monetary community benefits schemes have real merit. Yes, but a lot of the conversation that we had was specific to the nature of community funds, which is a little bit narrow in focus, because the actual local economic value associated with wind farm development is far broader than that. It includes, most importantly, local authority rates payments, civil upgrades in local areas that are undertaken by the developers to the benefit of all in the community, landowner rental payments and, generally, through the economic activity surrounding the operation and ongoing maintenance of wind farms. There is always general activity where people are involved in maintaining those wind farms, so there is always a consistent economic benefit to the local community.
848. As to the perception of bribes, I do not use the word "perception" in error. Community funding has no part to play in the planning process, and the decision on planning operates completely independently of any form of community fund, and rightly so. Therefore, it cannot be perceived to be part of a bribing methodology.
849. You would expect any business established in a local area to have some sort of economic benefit for or contribution to make to the local area. As I stated for question 13, community benefit is just one element of that contribution.
850. The next question was about whether the level of community benefit should be set by government. We are the only industry that does it. So, the energy industry — wind farms — is the only one that works with local communities and has a community benefit protocol. If we are going to make this mandatory and the Government is to take responsibility for it, in the interest of equity and fairness, can we then assume that all commercial enterprises will have a responsibility to contribute to a community fund in that area? I will just leave that question out there for consideration.
851. Question 16 is about whether a community benefits register should be established. Absolutely. Certainly.
852. The next one was about whether community benefits should be calculated based on those most impacted? It is a community fund. It is for the community.
853. The next one was about whether reduced tariffs for those living close to wind would be more appropriate. There are many different mechanisms by which community funds operate. Some communities have stated a preference with regard to that type of a programme; other communities have selected other options. All developers work with communities in that regard.
854. Finally, on the question about the revaluation of homes, I will just refer the Committee to a piece of work published earlier this year by the Centre for Economics and Business Research. Rather than me elaborating on it and have you say, "Well, you would say that anyway, wouldn't you?", I will say that the really important part of this is to ensure that there is independent, peer-reviewed evidence in everything that we have spoken about here today, and that is just one example of that independent, peer-reviewed evidence on that particular issue.
855. **The Chairperson:** Thank you very much. I thank all those who spoke for their contributions. They have been very

valuable, and thank you for keeping to time so well. In closing, I thank you all, once again, for coming here today and for sharing your time and expertise and knowledge with the Committee. I am sure that I speak for all my Committee colleagues here in saying that it has been a most productive event. A transcript of this event will be circulated to all participants in the next few days for comments. The finalised transcript will be available on the Committee's website and will form part of our report to the Assembly.

856. This inquiry has a number of complex strands, and this event has addressed just one element. The Committee will continue to gather evidence so that it can draw up well-balanced conclusions and recommendations for the attention of the Assembly.
857. Finally, I extend a quick "Thank you" to the Assembly official reporters for transcribing the event, and to the catering and support staff for their help today. Again, thank you very much for coming, and I hope that you have a safe journey home.

19 June 2014

Members present for all or part of the proceedings:

Ms Anna Lo (Chairperson)
 Mrs Pam Cameron (Deputy Chairperson)
 Mr Cathal Boylan
 Mr Colum Eastwood
 Mr Tom Elliott
 Mr Alban Maginness
 Mr Ian McCrea
 Mr Barry McElduff
 Mr Ian Milne
 Lord Morrow
 Mr Peter Weir

Witnesses:

Ms Tanya Hedley	Northern Ireland Authority for Utility Regulation
Mr Michael Atkinson	Northern Ireland
Mr Denis Kelly	Electricity

858. **The Chairperson:** I welcome Michael Atkinson, the head of generation connections in NIE; Mr Denis Kelly, who is the network development manager in NIE; and Ms Tanya Hedley, director of electricity from the Northern Ireland Authority for Utility Regulation. I remind everyone that this session will be recorded by Hansard and included in our published report. We are a bit short of time. You can go ahead, Michael, and give us a brief presentation. Members have your papers.
859. **Mr Michael Atkinson (Northern Ireland Electricity):** Chairman, is it acceptable to circulate some images?
860. **The Chairperson:** Yes, of course.
861. **Mr Atkinson:** They are complete sets.
862. **The Chairperson:** For future reference, it would be useful to pass papers on to the secretariat team in advance of the meeting so that we can sort them out quickly.
863. **Mr Atkinson:** A follow-up query came back from yourselves, which was essentially to provide a bit more information to the Committee on the role of NIE in delivering infrastructure to support turbines; the processes involved in the planning applications; and, finally, plans or progress to support the renewable generation that was outlined in the submission paper. So, essentially, I plan to speak initially, just for a few minutes, against those headings, if that is agreeable, and then we can take questions.
864. **The Chairperson:** OK.
865. **Mr Atkinson:** In summary, NIE's role is essentially to work along with a number of other stakeholders, including the Utility Regulator, DETI and industry participants, towards delivering the 2020 targets, particularly that of the 40% consumption from renewables. We arrived at a point at the end of 2013 where we were at around 16% in respect of that 40% target, and, over recent months, we have probably been climbing to around 18%.
866. We feel that it is important to outline, for better understanding, that the NIE infrastructure essentially comprises two main components: the transmission layer and the distribution infrastructure. The infrastructure was designed essentially to transport energy from the central large power stations from high voltage of 275,000 volts to industrial customers who use maybe 11,000 volts and down to domestic customers, and you will be more familiar with the voltage at your premises of 240 volts.
867. In order to connect renewables, NIE is effectively reverse-engineering the network to bring flow in the opposite direction for which it was designed, and the predominant flow of energy now is from the west to the east because the main sources of wind energy are coming from the western side. The transmission and distribution infrastructures are significantly stronger in the east of

- the Province, which is where the main sources of energy originally were and where the bulk of the population density is. However, the bulk of wind energy is located more to the west; that is where the better prevailing wind conditions are. So, we initially have to deal with an imbalance. There is around 45,000 km of transmission and distribution infrastructure, and around just 2,000 km of that is the transmission infrastructure.
868. We basically deal with two major categories of generation connection in respect of wind. The first is the larger-scale renewables that will typically be a group of wind turbines together at somewhere between about 10 MW and 40 MW, and the second major category that we deal with is what we refer to as smaller-scale renewables, which tend to be single wind turbines and are more akin to individual developers and farmers putting their own individual turbines up. Those are typically in the order of about 0.25 MW each.
869. I have outlined to you that there are essentially two major layers of the network, namely the transmission layer, which is the high-level backbone of the system, and the distribution system, which is much more voluminous in terms of kilometres but operates at a lower voltage. Basically, with the transmission development to support larger-scale generation connections, there is a very organised plan in place at the minute, and that is generally what we refer to as the medium-term plan. Much of the work associated with the medium-term plan is due to implement by around 2016-17. Beyond that, work is under way, including with the Systems Operator for Northern Ireland (SONI), which is the transmission operator, to determine what we refer to as a longer-term plan of investment, which would take us to 2020 and the achievement of the 2020 targets.
870. It is important to note that the medium-term investment is in the order of about £60 million. That investment, in the main, has been agreed with the Utility Regulator. That work essentially involves reinforcing our 110,000 volt network along corridors that you will perhaps recognise — Kells, Coleraine, Tamnamore and Omagh. When we get that work completed, which will be around the end of 2016, that will enable about 27% to be achieved versus the 40% target, and I suggest that, in that territory, the plans are reasonably well understood and under way to deliver against those targets.
871. Beyond that, for what we refer to as the longer-term plan, more substantial investment is required to take us to the next level and get up towards the 40% target. That may be in the order of about £420 million, we believe, with £100 million of that being in relation to the North/South interconnector, which is an important component of that delivery. At this point, whilst we have the initial plans and plenty of work has been undertaken to determine what that further investment will look like, it has not yet been finally agreed, and that, to me, from an NIE viewpoint, represents part of the challenge that we need to address in the more immediate term as to how we get to the final part of the 2020 target.
872. A vital part of NIE's strategy in delivering against those investments has been the development of what we call the cluster method. We have 31 large wind farms installed already and another 30 or so on the way. We wanted to avoid having a plethora of lines criss-crossing the Province, and, instead, in conjunction with the regulator, we developed a proposal whereby we essentially extend the transmission out to appropriate points and connect the wind turbines back to what we call cluster substations. It means that there is a more efficient construct to the network. You can get a sense of what we refer to as clusters on the slide that is entitled "Large Scale Generation Cluster Connections". That gives a flavour of it. For example, you can see where we have circled in the areas of Magherakeel, Drumquin, Tremoge, Gort and mid-Antrim. Those are what we call cluster locations, where we have brought the network out to the centre of those circles so that

- we can connect the wind farms more locally rather than having very long lines developing across the countryside. That dramatically reduces the kilometre length of individual electricity lines required for giving volume on wind farms, and it also aligns with NIE's obligation to develop the network efficiently.
873. Importantly, although an organised plan is in place for developing the transmission network to accommodate the larger-scale wind generators that will deliver the vast majority of the targets, it is not the case with the distribution system, which is what the smaller-scale generators, such as the individual wind turbines, connect to. In that territory, we have run into difficulties as more and more small wind turbines have sought connection. We are seeing very high levels of application, particularly in the west of the Province. Essentially, the distribution network has run out of room. The last slide that I circulated is an indication of what we call our heat map. That is really just to show that there are a lot of red areas in the distribution system.
874. **The Chairperson:** Which map are you talking about?
875. **Mr Atkinson:** That is the one I am referring to. I was explaining that we almost need to consider the problem in two parts. That map gives an indication of the difficulties we are experiencing with what we call the distribution network, or the lower voltage levels of the network. It has become very congested as a result of the small turbines. It is less economically efficient to develop that network further because of not just the costs involved but the logistics of the further development of very vast kilometres of line to allow more small generators to connect. You will hear various reports of considerable frustration from a number of directions. One of the areas of frustration will be from parties trying to connect smaller single turbines to the distribution network and are struggling to get connected.
876. The transmission level is well under way. It is not without challenges. We have had some delays in getting the cluster method approved, which has led to frustration with a number of developers. However, in the main, plans are reasonably well understood and under way to deliver at that level. A problem exists at distribution level with the connection of small individual turbines. Those parties are not likely to contribute a significant proportion to the 40% target, but they have responded to incentives available to them. That has created a difficult situation for those parties.
877. That is a flavour of how we feel we are getting on. We will now refer to some of the processes involved in the planning applications. I was going to ask Denis to talk about that briefly.
878. **Mr Denis Kelly (Northern Ireland Electricity):** Hello, everyone. One of the frustrations in the planning process is that Northern Ireland has a very high percentage of planning permission grants to wind farm developers, but, for the reasons Michael stated, we cannot get those connected. We are very proactive in the planning process. There are two elements to it. Obviously, the person installing the wind turbine or any renewable applies for planning permission. We are advised through the DOE electronic planning information for citizens (ePIC) system as consultees, and we respond primarily in terms of safety. We want to know whether a wind turbine is going to potentially cause an issue on the infrastructure nearby or whether vehicular access to that site is going to be a safety issue. That is one aspect that we would comment on in terms of the applicant's planning site and development site directly.
879. As far as the connection is concerned, we then organise the way leaves, consents, easements and routes, and we do the design and development. We are proactively involved with the developers. We go out at an early stage to talk to landowners and the interested parties. It is important to note that we will not provide quotations or do any

- development on our side until such times as planning permission by the authorities is granted.
880. Whenever the planning involves a cluster development, we have to tie up with the regulator at various stages to ensure that the capital investment plan is understood. We then introduce additional timeline factors that we need to take into consideration. That is a high-level overview.
881. **Mr Atkinson:** Chairman, I will finish off our summary introduction. We have referred in our submission to the medium-term plan. We have alluded, I think, to the roll-out of this cluster methodology, which is very important to us. We have to acknowledge that getting those things up and running has caused some frustration. I think that it is worth noting that considerable progress has been made here. We need to meet the 40% targets and to have installed an order of what we refer to as 1,600 MW. We currently have around 600 MW installed. We have another 320 or more in the delivery pipe that is about to be connected over the next two to three years. As well as another 100 MW or so of live offers that we need to process, another 600 MW of large-scale wind farms is in the planning process at the minute, and we expect that to come through.
882. We can see a horizon where the target can be met, but it requires a lot of the infrastructure development to move forward in parallel to allow that to happen. From an NIE point of view, we do work hard to link up with the various stakeholders that are involved. There are various approvals and interfaces that need to play out. We have a close working relationship with the regulatory side now as we move forward to get the clusters approved and agreed, but it does require quite a joined-up approach. We feel that we certainly cannot afford to operate in isolation from each other. We need to work in a very joined-up way, and NIE certainly tries to explain the same things as it attends various forums with DARD and local councils. We have attended most of the local councils in the west of the Province to try to outline the situation. Admittedly, we do meet with considerable frustration out there that progress has not been as good in some areas, but that is part of the journey that we are on at the minute.
883. **The Chairperson:** Thank you very much indeed. Tanya, do you want to say something?
884. **Ms Tanya Hedley (Northern Ireland Authority for Utility Regulation):** I have a few slides to show you to clarify. Thank you very much for this opportunity to give evidence. I thought that there would be value if I were to clarify the Utility Regulator's role in relation to this issue. The Utility Regulator puts in place price controls for monopolies in gas, electricity and water, and, in this case, we are concerned about the electricity network. So, we are basically approving the investment that NIE is using to develop the network. What we are doing there is allowing NIE to charge all consumers in Northern Ireland who use electricity for the extra network that it is building. So, we are effectively signing the cheque for consumers, and you then pay the costs of that investment in your electricity bills.
885. It is also worth noting that we are a complaints body and a dispute body. If someone were to raise a dispute because they were unhappy with their connection or the process of their offer, we would go into a semi-legal role where we would determine the dispute and could make a direction that is binding on NIE at the end of that.
886. We also approve the charges that NIE puts in place for the methodologies that it applies, for example clustering, and what it charges in a connection offer to anyone who seeks to connect. We monitor the company to make sure that it is compliant with its licence. Within NIE's licence, there are different pieces that relate to legislation. If government puts in place legislation that is appropriate for NIE, we will reflect that in a licence so that we can monitor its compliance with that. That is very important in the policy context in

- relation to developments that are taking place at a European level as well as locally.
887. I think that it is worth mentioning the renewables journey that Northern Ireland has been on. In 2007, only 18 wind farms were connected, with a total of 227 MW. You can see that we have come quite far on that journey when you compare that with the figure of 18% of our energy that is now being used in Northern Ireland and the capacity that we now have of over 600 MW. It is also worth noting our ability to continue on that journey, and, in relation to that, I want to emphasise the need for the North/South interconnector. It was originally envisioned that that would be in place for 2012. It is still uncertain when it will happen, and that impacts not only on our ability to meet the renewable targets but on security of supply, which, I am sure, many of you have heard of before.
888. Finally, I was asked to mention the renewables grid liaison group, which was set up by the Utility Regulator to allow open and transparent interaction between all the various renewable-interested stakeholders, NIE and SONI. Rather than having individual companies or individual areas of development coming to us, the idea was to set up something open and transparent and to get everyone together to discuss the issues and to provide evidence and information in order to allow the policy to be implemented effectively.
889. We publish the minutes of that group. We have representation from all the different renewable stakeholder groups — small-scale, large-scale, onshore and offshore. The group was started in 2012. The terms of reference, the minutes and all the presentations are on the website for anybody who wishes to look at that. The group does not resolve the matters relating to specific individual connections, but it does talk about the general areas that impact everybody who is looking to develop in this area.
890. I have already mentioned that NIE is part of the group. SONI, which is the transmission system operator, attends. The Northern Ireland Renewables Industry Group (NIRIG), which represents many connections groups, is there. There are also individual representations from different sectors, including the Ulster Farmers' Union, which has many members who are interested in this area. DETI attends as an observer, so it is aware of how its policy is being implemented in this area.
891. I have provided some links in the few slides that I sent you, if anybody wants further information on that.
892. **The Chairperson:** OK. Thank you, Tanya. Michael and Denis, what you said in many ways confirms what we heard from stakeholders at last week's stakeholder event and in their submissions. There needs to be a strategic overview of the coordination of wind turbine development and the issue of capacity. As you said, that needs to run parallel with the infrastructure. There is the issue of the massive number of wind turbines being erected. There is also the issue of balance: is it better not to permit so many single turbines but to allow bigger-capacity wind farms to produce energy more efficiently? There needs to be coordination between planning and people being able to connect to the network. There is no point in getting planning permission if you cannot connect to the network or if it is too expensive to do so. It would be very useful for us to think about that if we are going to head for 40% by 2020. We are only sitting at 18%, you said.
893. **Mr Atkinson:** Yes, 18% is the most recent figure. The plans in place for infrastructure development, which have already been agreed, will allow us to get to around 27%. That will be at a cost of about £60 million to the Northern Ireland customer base. Part of the big decision then is that getting from 27% up to 40% will require another quantum.
894. **The Chairperson:** Of £420 million.
895. **Mr Atkinson:** Albeit that includes £100 million for the North/South interconnector. The balance of £320

- million is for strengthening the transmission system at the very high-voltage level, so that we can get that final push on. It has to be said that it is expensive. It is a big step change in the amount per megawatt to connect.
896. **The Chairperson:** The question is whether we have the money to invest in it.
897. Many members have put their names forward for a question. I will start with Alban.
898. **Mr A Maginness:** Thank you very much for the documentation. It is very useful, and the illustrations are very helpful.
899. You are talking about an investment of roughly half a billion pounds. There was disagreement between you and the Utility Regulator on pricing and so forth. I think that that went to the former Competition Commission in London and there was then a determination. Did that determination give you the amount of money necessary to make that half-a-billion-pound investment between now and, I presume, 2020?
900. **Mr Atkinson:** I will begin answering that, and others may want to chip in. Broadly speaking, those investments to support renewables have almost been dealt with outside of that formal price control, and the debates, disputes and whatever we have had with the regulator have been more about the day-to-day further development of the network. All the investments that we have talked about so far, such as the medium-term plan — the £60 million — have almost been developed outside the formal price control on a case-by-case basis of investment, and have been agreed on that basis. Certainly, our expectation and understanding from the outcome of the Competition Commission is that it should not affect us in seeking further investment. The renewables work is essentially being dealt with outside the formal price control.
901. **Mr A Maginness:** That is extremely helpful. Does that include the interconnector as well?
902. **Mr Atkinson:** Yes, that is right.
903. **Mr A Maginness:** I suppose that, decoding what you said about the increase in capacity, there is a weakness in the way that capacity is being developed. That relates to single turbine development, which is the less productive and effective way of increasing capacity. Is that a fair comment?
904. **Mr Atkinson:** Yes. If you considered the situation in terms of what is the best strategic and most practical logistical method of getting the 2020 targets, you would definitely concentrate on the large wind farm size. The development of the transmission system, whilst relatively expensive, is of much less physical length and easier to work with and develop than if you try to meet the targets by connecting a high volume of smaller machines through the distribution network. The distribution network is pretty much at maximum capacity at the minute, and the logistics— not just the money — associated with developing the distribution system to help you to make significant inroads towards the target are such that it does not make a lot of sense.
905. We have to recognise that, in parallel, incentives have been introduced that are making small single turbines attractive to investors. Unfortunately, it is the case that some of the individuals will have made significant investments and got to the final stages of getting their applications into NIE for grid connection and found out that it is going to be quite expensive or maybe not viable. That is very problematic territory. However, at a strategic level, it makes sense to concentrate more on transmission and connection of large wind farms.
906. **Mr A Maginness:** When smaller investors with single turbines come to you and tell you that they have got or are confident of getting planning permission and all the other work has been done and completed and asks you for the price of a connection, what is your response? Obviously, there is a response in the form of figures, but are you saying to them, “Look, the price is

- quite high here, and the reason for that is the difficulty in getting connections because of the work that has to be carried out, etc"? Is that really what you are saying to small investors?
907. **Mr Atkinson:** Consider the small investor going through the decision-making process: he will look at a site and decide whether he wants to try to get planning permission agreed for a turbine. If he can, he would like to know at an early stage how much it will cost. By systematically going to local events, local councils and the DARD events that a lot of the agricultural attendees come to, we have been trying to alert the various stakeholders — the Ulster Farmers' Union is one — that it is going to be potentially problematic and costly to connect.
908. When a developer actually decides that he is going to go ahead and get planning permission for his turbine and is going to come to NIE, he would normally pay us an application fee of £6,000. As the problems become more acute, we have agreed that, as we go through that application process and if he has paid the £6,000, he will get a pretty good idea at an early stage whether his connection is likely to be prohibitively expensive. If so, we contact him at an early stage, give him an indication that it might be £300,000 or something very high, and offer to rebate them back down to just the cost of what we call a feasibility study if he is unable to afford it —
909. **Mr A Maginness:** Yes, I am opting out.
910. **Mr Atkinson:** In that way, we try to reduce the cost impact that they suffer in going through an application with us. Whilst that maybe alleviates the problem a bit, it is not an entirely satisfactory situation. I suppose that, by issuing a heat map and working to bring that to another level of granularity, we are going to encourage people to do almost a form of self-assessment at an early stage. We give them better information, for example on the website, that could give them an indication of whether they are in a zone or territory where it could be quite problematic. If they want to come to us and get a feasibility study done before they go through the whole process of planning, they can do that.
911. It is a wee bit of a catch-22 because, literally, with each week that goes by the situation can change. If somebody decides to maybe spend a bit of time getting a feasibility study done with NIE, by the time we have given them the study and they have gone to get planning permission for their turbine and got back to us with a formal application, the situation could have changed or worsened dramatically. So, what appeared to be viable in April or May may not be as attractive by the time they get to us with a formal application in June or July.
912. It is not a pretty picture out there. I think that the best that we can do at the minute is to try to forewarn as best we can through the website information and the communications that we have generally with stakeholders. In essence, the room is running out very rapidly on that work to connect.
913. **Mr A Maginness:** Can I ask one further question?
914. **The Chairperson:** Yes.
915. **Mr A Maginness:** A quarter of a megawatt is the sort of capacity that you might get from a single wind turbine. What contribution does that make to the overall system capacity?
916. **Mr Atkinson:** In the region of the targets? I said to you earlier that we have a total of around 600 MW installed to date — it is just over 600 MW; about 620 MW — in the context of the overall 1,600 MW target we are working to. Of that 620 MW, around 70 MW or so comes from small-scale generation. It tends to —
917. **The Chairperson:** Sorry, did you say 17 MW?
918. **Mr Atkinson:** No, 70 MW. It tends to represent, and we would see it continuing to represent, a proportion of maybe about 10% of the total. So, 10% small-scale and 90% large-scale wind.

919. **Mr A Maginness:** So it is not very significant really.
920. **Mr Atkinson:** In general terms, no. We are not saying that to be demeaning to the people who are trying to connect small turbines, but, at a strategic level, it is not going to contribute a major proportion.
921. **The Chairperson:** That is what we have heard as well.
922. I want to take up what you said about people coming to you for a feasibility study. You said that, down the line when they get planning permission, things may have changed. What may have changed within months?
923. **Mr Atkinson:** To try to explain it, we get around 600 applications —
924. **The Chairperson:** It just makes sense for people to have an understanding of how much it will cost, the route for connection and all that before they go ahead with a planning application.
925. **Mr Atkinson:** If I could maybe just explain the point? It is only at the point when you get your planning approval and get your application into NIE that you can effectively book your place in the queue. Until you get your formal application in with us and book your place in the queue, other people can come in ahead of you. There may be 3 MW or 4 MW of remaining capacity on a line when you have the initial discussion with us, but by the time you have said, “I’m interested now; I’ll get my turbine and my planning permission, and I’ll get an application in”, and you go through that process, that 2 MW or 3 MW may no longer be there. That is the circle we get ourselves into.
926. **The Chairperson:** Right, I understand.
927. **Mr Denis Kelly:** It is probably important to note, as well, that customer loads and demands change as well. Energy flowing in one direction can have an impact on planning as well. It is a whole dynamic model that is continually changing.
928. **The Chairperson:** Can you put on your website what capacity is currently available in a certain area for further development?
929. **Mr Atkinson:** It pretty much changes on a day-to-day basis, so we have tended to use the heat map. That will be taken to another level of detail, but maybe not quite the level of detail you would like to see in saying, “There’s 3 MW here at the minute”, or, “There’s 2 MW here”. Probably the most practical way to provide the information is to colour-code it; red indicating that we have pretty much run out of capacity at a certain point, amber maybe indicating that there are a few megawatts left, and white indicating that there could be 8 MW or 10 MW of capacity remaining. To be honest, it is a quickly changing situation. It would be unwise, and probably not entirely accurate, to try to put very specific numbers down. It has to be done in terms of broad guidance. We try to update that broad guidance as frequently as we can.
930. **Mr Elliott:** Thanks very much for the presentation. I could go on for quite a long time on this one, but you will probably restrain me, Chair. Quite a lot of renewable energy resources have gone into the electricity grid over the last number of years, but electricity prices have risen enormously over that same period. Why is that? Are the renewables not efficient?
931. **Mr Denis Kelly:** It is primarily to do with the wholesale energy cost. Renewable energy still bids into the wholesale market at system marginal price, so the prices are set by the market. There is a misconception that, just because it is from a renewable source, it is a lot cheaper, but it bids into the market as a commodity.
932. **Mr Elliott:** So, it is not cheaper.
933. **Mr Denis Kelly:** It is not necessarily cheaper; it depends on the time of day, merit orders and dispatch instructions from the central system operators. The renewable bit does not necessarily pull the wholesale cost down.

934. **Mr Elliott:** Is it actually increasing the price?
935. **Mr Denis Kelly:** You could debate the structure of the market and the way pricing works in the market.
936. **Ms Hedley:** I probably have a little bit more knowledge of the wholesale market. Most renewable energy on the island of Ireland is a price-taker. It does not bid in; it goes in at zero price. The price is set by the last generator that is brought on. By having the renewables there, you reduce the need to get the more expensive gas or oil plant up and going. Therefore, the price is reduced from that point of view. However, like all these things in electricity, there are a lot of complications. You have issues with security of supply and other services that are also needed. Sometimes, renewable energy can increase those costs. The wind energy group has done a lot of analysis to show how the wholesale price is brought down.
937. **Mr Elliott:** Are you telling me that renewables actually help to increase or decrease the price of electricity?
938. **Ms Hedley:** Overall, renewables have brought the wholesale price down, but the actual wholesale price normally reflects —
939. **Mr Elliott:** So who is ripping the consumer off? *[Laughter.]*
940. **Ms Hedley:** Electricity is regulated, and we hope that consumers are not being ripped off. The main —
941. **Mr Elliott:** That is not the feedback that I get as a representative. I am sure that others are the same. Electricity prices are very significant to the consumer at the moment. People are finding it hugely difficult to pay, especially older people. Electricity prices have risen hugely, and you cannot tell me why that is.
942. **Ms Hedley:** The Utility Regulator has done a piece of work to compare domestic and commercial electricity prices in Northern Ireland. We are now looking further and in more detail and will publish further information on how those costs break down, why there are variations between Northern Ireland and other European countries, and where those variations occur. You can see that our costs for domestic consumers compare quite favourably, but issues have been raised about some of our more commercial costs compared to other places in Europe, and that investigation is under way. The price comparison has been published, and further work will be published. It is one of our flagship projects, and we think that it is very important that people understand and that there is transparency on both how your costs are made up and why they are what they are.
943. **Mr Elliott:** I will leave this point only to say that renewables are heavily subsidised. We are paying for them through our government subsidies, and the consumer is also paying additional.
944. I have a couple of other points on renewables, and wind energy in particular. This map is quite worrying, especially for someone who represents people in Fermanagh and South Tyrone. Does that mean that people who have renewable sources like wind turbines cannot access the grid at the moment?
945. **Mr Atkinson:** There are significant areas in those red zones where, at the minute, we have to issue what we call offers. On one side, they are quite expensive to get connection, but they are also conditional on further work being done on what we call the 33,000 volt network to allow those generators to get on and connect. So, at the minute, it is a very gloomy picture in those areas for single turbines trying to connect to the distribution system. There is no doubt that, to make some of the investments that will potentially enable more generators to connect in those areas, some lower-order investments will potentially help. In some cases, the investments required on the 33,000 volt network are quite sizeable, and there is a question to be answered as to whether it is fair to levy those additional costs on the Northern Ireland consumer, because they certainly

- would not be affordable to the individual generators.
946. The only positive thing that I can say to that is that, at the minute, we are looking at alternative methods by which generators may consider connecting. For example, at some point in the not too distant future, we may offer them a method to connect whereby they simply connect without further sizeable investment but have to take a chance that there may be some level of curtailment or reduction on their machine at such times as the network is becoming overloaded. It may provide a method that is of some help. We are trying to look at that in some detail, but there is no easy quick fix with all the answers at the minute. Basically, the network was not designed to take all this generation, and it is very heavily congested now.
947. **Mr Elliott:** Is it right that some people cannot get connected at all, irrespective of the price that you may charge them? I am told that people who have made applications to NIE have been told that they just cannot get connected. It does not matter what the cost might be.
948. **Mr Atkinson:** That is correct. In some cases, unless investment of several million pounds is made to allow those parties to connect, they will not be able to connect and export their energy on the network. We are in fairly intense discussions with the Utility Regulator on that subject but, unfortunately, at the moment, in some cases, we cannot connect and allow parties to export their energy on to the network.
949. **Ms Hedley:** It is maybe worth mentioning that there is a legal duty on NIE to develop its network economically, efficiently and in a coordinated way. It submits proposals to us for approval for investment that it deems to meet that legal requirement, and then there is a duty on us to only approve money that is economically viable. We have approved all the money that NIE has requested for investment to date because we have assessed it as being economically viable. If you were talking about millions of pounds for one connection of a substantially reduced size, it would be difficult to see how that would pass that test. If that sort of investment was required, the legislation would, because of NIE's legal duties and the Utility Regulator's legal duties, need to be changed.
950. **Mr Elliott:** I assume from the map that the areas marked red cannot take much more power. Does that mean that the red areas want to get more power than the other areas, or is it that there is a lower grade of system in those areas?
951. **Mr Atkinson:** The answer is both. Historically, because of the population density, the network in the west of the Province was built to a lighter construction. That means that, in many cases, when customers in the west want to connect, significant reinforcement is needed, which adds quite a lot to the cost of reconnection. However, it is equally the case that, in the east of the Province, because the case for wind is not as strong, there has not been as much interest. Certainly, at the minute, there are areas in the east of the Province where, if wind developers came to us looking for a connection, they would be able to get one at a relatively low cost. The wind strength has tended not to be as good in the east as in the west.
952. **Mr Elliott:** Does the Utility Regulator consider that it has any responsibility to bring the grid in the west up to the same level as in the east to give equality to the people in the west? Obviously, if they have a lower grade or lower transmissions system, they are being disadvantaged.
953. **Ms Hedley:** I do not accept that they are being disadvantaged. The network was built to meet the need that was there, and it was deemed economic at the time. If there was a need to build more network, it would have to be economic, and NIE and the Utility Regulator would, as part of their legal duty, have to be assured of that. We are looking at the connection policy. The Utility Regulator has committed to review that. However,

- it goes back to your point about electricity prices. Somebody has to pay for this. So, if the person who wants to connect does not pay, bills go up.
954. **Mr Elliott:** Yes, but those in the west pay the same for electricity as those in the east.
955. **Ms Hedley:** You pay for the electricity that you use —
956. **Mr Elliott:** Yet the system in the west is not the same.
957. **Ms Hedley:** You pay for the electricity that you use. Basically, you pay for the use of the network that you have, and that is the same throughout Northern Ireland.
958. **Mr Elliott:** Finally, and then I will leave it, £420 million is a huge figure. You said that the Utility Regulator, to use your term, “writes the cheque” on behalf of the consumer, who then has to pay it back. So the upgrade, which includes the North/South interconnector, could cost the consumer, as Mr Maginness said, almost half a billion pounds. Is that how it works?
959. **Mr Elliott:** If NIE were to submit investment of that level to us, which it has not done, we would assess it and decide whether there was economic value from that investment for the people paying their bill. For the North/South interconnector, which Michael said would be about £100 million, we know that there are costs to the consumer, because it has not been built. They are clearly and easily identified, and there is a clear need. As for the remaining investment, we have not assessed it. There has not been the detail for us to carry out any assessment at this stage.
960. **Mr Elliott:** Can you give us a hint or a ballpark figure? If the cost was £420 million, by what percentage would that increase consumer electricity prices?
961. **Ms Hedley:** I do not have the figures with me, but we have the analysis, which we did as part of NIE’s price control. I should also flag that technology moves on. As Michael said, there is value, perhaps, for people connecting and not having a 100% guarantee of being able to access the network, 24 hours a day, seven days a week. If people use more electricity, we can, of course, get away with connecting more generation. However, we also have the energy efficiency directive, which is pushing us to use less electricity, so competing areas have to be balanced as we go forward.
962. **Mr Elliott:** I will leave it at that, Chair. Thank you.
963. **The Chairperson:** That is a good point.
964. **Mr McElduff:** My interests were well served by Tom, given the way in which he put forward his case. Some of the questions that I planned to ask have been covered in his contribution.
965. Michael said that it was quite expensive, and maybe not viable, for an individual farmer to have a single turbine, for example, connected to the grid. Will you give us some examples of the prices being quoted? I am aware of some of the prices in the Omagh district and in rural parts of mid-Tyrone, but I would like to hear from Michael what the typical prices being quoted to farmers are.
966. **Mr Atkinson:** The popular size is a quarter of a megawatt — a 250 kilowatt machine — because that maximises the renewable obligation certificates (ROCs). They get four ROCs for every megawatt hour. About 18 or 24 months ago, a typical connection cost was £50,000, £60,000 or £70,000. Essentially, that was for a wind turbine being connected to the closest bit of electrical line. Since then, as more and more wind turbines have connected on to the feeders coming out of our primary substations, as we describe them, the backbone feeders have started to get overloaded, resulting in more investment being required further away from where the generator sits. Those costs, which are chargeable to the developer, have increased maybe twofold or threefold. In the west, for example, instead of the average bill being £60,000 or £70,000, it could be £180,000 or £200,000. In

- some cases, the cost is £300,000 or £400,000, which clearly will not work for developers. We are not happy about that, but those are the sorts of numbers that are starting to come out.
967. **Mr McElduff:** Is it common for the price quoted to be in the region of £750,000?
968. **Mr Atkinson:** There have been a few such examples, but by no means all come out at that level. I have seen a lot at £200,000 or £300,000, which is still very high for individual developers. I have seen individual cases for which the cost was £700,000 or £800,000.
969. **Mr McElduff:** What is the ceiling figure? What is the highest figure that you have seen to date? I am aware of a figure of £750,000.
970. **Mr Atkinson:** For that kind of money, it would not work anyway, but, in theory, if the lines were getting so congested locally that the only way for a turbine to get connected was to build an entirely new line back to the primary substation, the bill could be £800,000 or £1 million. I am not suggesting for a minute that that sounds good to anybody.
971. **Mr McElduff:** I seek an assurance from all sides at the table that the Agricultural Producers' Association (NIAPA) will be consulted on these matters in addition to the Ulster Farmers' Union. The Ulster Farmers' Union represents a significant number of farmers — of course it does — but NIAPA is another union representing the interests of farmers. So I seek an assurance that NIAPA will be included in any consultation processes and discussions.
972. **Mr Atkinson:** That is a fair point.
973. **Ms Hedley:** The Utility Regulator's consultations are open to everybody; they are not restricted to any individual. We will engage with anybody who wants to speak to us.
974. **Mr McElduff:** Tanya, you mentioned a round-table format, which is systematised, and to which UFU has input but NIAPA has not.
975. **Ms Hedley:** UFU approached us and asked to join. NIAPA is also welcome to do so.
976. **Mr Boylan:** Thank you very much for your presentation. I just wonder how much of the £100 million would be invested in the underground cable for the North/South interconnector. I am not being flippant, but I have to be realistic. As you know, it is a major issue in my area. It had gone off the radar, but I take it that it is back on. I am glad that you brought it up in your presentation because you will not be able to do anything to move forward without that being achieved.
977. **Mr Atkinson:** Technically, it is a very important part of the jigsaw. I am not the best person to answer the question about the interconnector. There is still a lot of debate to be flushed out on the Republic of Ireland side about the method of connection and all the undergrounding issues that you raise. We have said in other forums, such as the ETI Committee, that, technically, we do not think that undergrounding is a workable solution. Various opinions have been exchanged on that. Whilst more detailed information was submitted to NIE as part of the planning process during the latter part of last year, we are still waiting for some issues in the South to be resolved before re-engaging in the public inquiry process that is expected to reconvene shortly.
978. **Ms Hedley:** None of that cost relates to undergrounding. That is a figurehead solution.
979. **Mr Boylan:** I know. To be honest, that is why I made the point.
980. I want to try to thrash, or tease, this out with you: is the 40% target realistic and achievable?
981. **Mr Atkinson:** At this time, we are of the view that it remains achievable. To achieve it from the amount currently installed and commissioned represents a very sizeable challenge. It requires us to progress all the approvals that Tanya mentioned and to get all the various parties joined up and working together on it. So, yes, it remains achievable,

- but, as time goes on and we still have difficulties with the interconnector, it becomes more challenging every day.
982. **Mr Boylan:** I have two other points to make, Chair. Tanya, I know that electricity is a product and that the consumer always pays for it, but I take it that a consumer's ability to pay is not an element in all of this. Clearly, the market dictates the price for the product, and that is it. Is that a fair assumption?
983. **Ms Hedley:** The costs for electricity have to be recovered, and they have to be recovered from consumers. We have a duty to be mindful of vulnerable customers, and we always look to that duty. However, in Northern Ireland, there is no cross-subsidy between people who have issues with paying and people who do not. For us to do that would probably require a policy direction.
984. **Mr Boylan:** That is grand. The reason I asked was that Tom mentioned subsidising renewables. No matter whether the interconnector goes overhead or underground, and no matter how long the life cycle — people have put forward different arguments on that — the customer will pay for it. That is the point that I am getting at.
985. I have one final point, and I would like you to look at it. It seems strange to me that people are allowed to apply to the Planning Service for planning permission before going through the process of trying to connect to the grid. We need to tie that up. You may be doing that, and I get the feeling that you are doing so for wind farms. I am dealing with a case in which someone got planning permission but cannot get connected to the grid. The lack of connection is not the only issue, there are other concerns, too. This happens with single dwellings in the countryside as well. Somebody, somewhere needs to be part of the process. It does not make any sense whatsoever.
986. **Mr Denis Kelly:** The expectation of someone who gets planning permission is that they will be able to connect, but that is not always the case.
987. **Mr Boylan:** I would like you to tie that up if you can. We are transferring planning powers to local government, so somebody needs to tie the two together.
988. **The Chairperson:** There needs to be better communication so that people think about that before —
989. **Mr Boylan:** Chair, I can apply for planning permission, build a house and then find that it will cost me £25,000 to connect to the grid or even to a renewable energy source. All that I am saying is that there needs to be better communication, or maybe we need to look at a policy or a legislative process to tie people into all of that. I do not know, but it seems incredible that the process has not been —
990. **Mr A Maginness:** On Mr Boylan's point about the North/South interconnector, is there an additional cost to cable it underground? I presume that there is. Is there any estimate of how much it might cost?
991. **Mr Atkinson:** We need to be a wee bit careful about answering that question, but it tends to be multiples; it is not a small —
992. **Mr Denis Kelly:** It is hundreds of times as much. We are not cable experts, but it is normally *[Inaudible.]*
993. **The Chairperson:** Sorry, will you speak up a bit, Denis?
994. **Mr Denis Kelly:** Sorry. The cost of going underground is usually hundreds of times the cost of going overhead. We are not cable experts.
995. **The Chairperson:** I have heard that.
996. **Mr A Maginness:** I have one further question about the North/South interconnector. At the moment, the consumer bears the cost of the lack of connection. Can anybody estimate that cost?
997. **Mr Atkinson:** I think that we have previously indicated figures of an annual inefficiency of £25 million or £30 million by not having the interconnector in place.

998. **Ms Hedley:** That will increase as more renewables enter the market in Southern Ireland and Northern Ireland.
999. **Mr Boylan:** On that point, that is why I come back to the case of the 40% target being reasonable and achievable. We have set the target, and then we say that we need to hit it. We should be saying, "Hold on a minute. What can we achieve? What is reasonable?". That is another part of the argument.
1000. **Ms Hedley:** Yes, but we are aware that DETI is reviewing that.
1001. **The Chairperson:** We have the capacity; we just do not have the infrastructure to develop it. Not only could all of Ireland — North and South together — be totally self-reliant on renewable energy but there could be enough to export to Europe. That is my reading of a recent report.
1002. We have been told repeatedly in submissions, and by stakeholders at our last event, that, because of the lack of storage facility for wind turbine energy, it is only about 30% efficient. Is that correct?
1003. **Mr Atkinson:** The larger wind farms — the 10 MW to 40 MW ones — are typically in the order of 30%. The typical efficiency for single turbines, which tend to be smaller, lower and do not catch the same wind distribution, is about 18% to 20%.
1004. **The Chairperson:** What is the efficiency of conventional fossil fuel, such as gas or coal?
1005. **Mr Atkinson:** The gas turbine efficiencies probably range from about 55% up to 70%, depending on the nature of the gas turbines. The percentages are much higher.
1006. **The Chairperson:** Thank you very much. That was really interesting, and it will certainly form part of the consideration for our final report.

3 July 2014

Members present for all or part of the proceedings:

Ms Anna Lo (Chairperson)
 Mrs Pam Cameron (Deputy Chairperson)
 Mr Cathal Boylan
 Mr Barry McElduff
 Mr Ian Milne
 Mr Peter Weir

Witnesses:

Ms Joy Hargie *Department of the*
 Mr Simon Kirk *Environment*
 Ms Deirdre McSorley

1007. **The Chairperson:** We welcome Simon Kirk, the acting director, and Deirdre McSorley and Joy Hargie from planning policy. Deirdre is the area manager. As you know, we are now deep into the inquiry, so your input will be very useful. Thank you for your paper. Please make your initial presentation to us, and I am sure that members will have questions to ask you afterwards.
1008. **Mr Simon Kirk (Department of the Environment):** I will run through the main points of the information that we have sent to you.
1009. Obviously, the Department recognises the contribution that the renewable energy sector makes to the Northern Ireland economy and to the reduction of carbon emissions, but it also acknowledges the importance of processing applications in a consistent and timely manner, having regard to the published policy. Since 2010, there has been a very significant increase in the number of applications for renewable proposals, particularly for individual wind turbines. At the end of May this year, the Department had 770 renewable applications, with 644 of those relating to individual turbines. Approval rates for renewable applications remain high, with 89% of renewable applications approved in 2013-14.
1010. Applications for wind farms and turbines continue to generate a high level of objection, with landscape and visual impact, noise and residential amenity being the main reasons. Currently, wind farms are dealt with by strategic planning division, which is a small team in Belfast that has been in operation since 2003. To date, we have approved 74 wind farm applications, with the potential to provide just over 1,000 MW of power. We have a further 39 applications that are being processed, which equates to 279 turbines and just over 700 MW of power, if approved. At the moment, we are dealing with a number of planning appeals against refusal of permission for wind farms, and there appears to be a greater use of non-determination appeals under article 33. We have had four of these recently. It seems to be a route that some of the wind farm developers will follow.
1011. **The Chairperson:** I am just trying to look through the notes. What is a non-determination appeal?
1012. **Mr Kirk:** If the Department does not make a decision within two months of an application, you have the right to go to the Planning Appeals Commission and to be heard. The jurisdiction for the decision then transfers from the Department to the Planning Appeals Commission. It is like an ordinary appeal. We will be sending reasons for refusal against those four. It takes the final decision away from the Department, and this is a new feature really. We have not had any.
1013. **The Chairperson:** Thank you for your presentation. I certainly read through your paper. As you said, we have certainly been hearing a lot of opposition, although last week, when we were out in Omagh, we met a group of people last week who were quite positive about the community benefits. The environmental people who came to

us have concerns that there are far too many single turbines and that they have proven to maybe not be as effective in generating energy. Maybe it is better to have more concentrated areas with larger wind farms being able to be connected to the grid, whereas, for a lot of the single turbines, they may go and apply for planning, and they get it, but then they find that it is too expensive to connect to the grid. There is also the issue of our grid capacity, the connector and all that. What is the most efficient way of doing it? Should we not have, say, zoning, and say that we really want to encourage more large wind farms than single turbines here, there and everywhere, which take up planners' time as well?

1014. **Mr Kirk:** Well, I suppose that the Department has to react to the applications that are presented to us. There has been a marked increase in single wind turbines. There may well have been financial incentives to erect them. I agree with you, Chair, that there have been cases where people have found that it is simply too expensive for them to connect to the grid. At the moment, the policy allows for both wind farms and single wind turbines. It may be that we have had a peak. It may fall off in future years. I know that Northern Ireland Electricity (NIE) is looking at clusters because they make grid connection more efficient. I suppose that there is an argument that you could have more wind farms.
1015. You raised the point of zoning. I take it you mean that there would be areas which would be seen as acceptable and areas that you would maybe constrain? It would be a matter for the development plan process to identify areas of constraint. For many years, we have had areas in plans that were subject to constraint on minerals development. There would be no reason not to do that in a development plan, as long as you took account of the strategic planning policy statement and did not attempt to say that there would be no wind farm development.

1016. **The Chairperson:** You mention the draft strategic planning policy statement (SPPS) a lot in your paper. I believe that PPS 18 on wind energy is currently supplemented by a best-practice guidance note. However, it is not mentioned in the draft SPPS. When you have the final document, will that best-practice guidance note be included?
1017. **Ms Joy Hargie (Department of the Environment):** A section in the draft SPPS talks about transitional arrangements. Although the proposed transitional arrangements were that the SPPS would sit alongside, it would take precedence where there were any areas of conflict. Planning policy statements and any associated supplementary planning guidance, such as what you are referring to, would still be a material consideration until councils adopt both of their plans — the plan policy and local development plans; the two stages. We have received over 700 responses to the public consultation on the SPPS document. We actually hope to get a paper to the Environment Committee on the key emerging findings from the SPPS consultation. We hope to get that paper to you by tomorrow. That will give members a flavour of the issues that are coming through.
1018. There has been a mixed reaction to the transitional arrangements. Some people believe that the SPPS should be more strategic in its thinking and not include so much detailed operational policy, and that it should itself sit at that level. Other people want the planning policy statements to remain as we have suggested until the plans are adopted by the councils. There is a different level of thought. We need to work through the comments received in relation to the transitional arrangements, and that will provide for whether the guidance, etc, will still be a material consideration.
1019. **The Chairperson:** The SPPS was supposed to incorporate all of the individual PPSs. You are saying that some people want another layer; they want the SPPS at the top and then the individual PPSs.

1020. **Ms Hargie:** The SPPS is trying to set out the new two-tier planning system. You will have your strategic planning policy, which will be set out in the SPPS, and councils will be able to bring forward their detailed operational policies, specific to their local areas, through their local development plans. It is just for the transitional period, because, obviously, councils cannot start actively preparing their development plans until they get the powers next April. Some people believe that, when the SPPS is adopted, there will be a period in which there will not be enough detailed operational policies, so the existing planning policy statements could have stayed, along with the guidance, to give guidance on specific areas to decision-makers and those out there. That will be the detailed information that will go into the local development plans, once councils prepare those. We had suggested that they would drop away at that stage. I hope that that is clear.
1021. **Mr McElduff:** I welcome the delegation from the Planning Service. I thank the Planning Service for its willingness to engage in pre-application discussions, sometimes, with residents' groups as well as with developers, where appropriate. I have had that experience a couple of times, and I thought that it was very useful. I suppose that one obvious question, speaking as a west Tyrone MLA, is this: is there ever such a thing as reaching saturation point in an individual area or community? Does the Planning Service view the world in that way? Is there ever going to be an end to it? Is there an endgame? Is west Tyrone at saturation level?
1022. I am very interested in what Simon was saying in relation to article 33 non-determinations going to appeal. As well as giving that information, do you have any comment to make? Is it ethical? Is it appropriate? Is that type of practice a tactic or a ruse, or is it entirely OK?
1023. **Ms Deirdre McSorley (Department of the Environment):** I will deal with the single turbines. I am area manager for the west Tyrone area. We obviously have the lion's share of the single turbine applications. As part of the consideration of each turbine, we do take in the cumulative impact of turbines in the area. That includes those that have been approved and not built, together with those that have been constructed, and any in the pipeline that have not been decided. So we do look at the cumulative impact, and there will be areas where they have reached saturation point, in that the environment cannot take any more without them having an adverse impact. There is also an issue with connection to the grid, and there will be a saturation point at some stage in terms of the ability to connect to the grid or the grid being able to take any additional turbines. So, yes, there are issues over the cumulative effect and the saturation point.
1024. As for appeals and article 33, the legislation allows for it. I am not sure whether it is an advantage or a disadvantage. Certainly, when processing single turbines, we find that a lot of information is required on noise reports and, sometimes, on shadow flicker. There is all the consideration of any objections or representations that we receive. I think that it is fair in some cases. The article 33 appeals — all of that information may not be available, and in some cases the commission has to seek that information. I am not sure if there are any advantages, other than time, in going down that route.
1025. **Mr Kirk:** Part of the reason is that an application for a large wind farm is incredibly complex to deal with and very time-consuming in the amount of analysis that you have to do on its impact on dwellings, the landscape and natural heritage. They take a long time to get through the system, and in the recent cases that we have had, I think that article 33 appeals have been submitted to maybe move the applications forward more quickly, but it may or may not do so, because as Deirdre said, a quantity of information is required.
1026. Wind farm applications trigger environmental impact assessment regulations and require a formal EIA,

- and neither the Department nor the Planning Appeals Commission can grant permission without taking account of the required environmental information. In the EIA regs, you are precluded from doing that. So it may just be something that is recent and may not continue, but as Deirdre said, legally, there is a mechanism.
1027. **Ms McSorley:** They are not as common for single turbines as they are for wind farms. Most applicants will allow the turbine application to be determined by the Department and then appeal it if necessary, so article 33 appeals are not as common.
1028. **Mr Kirk:** It has not been common historically, but it has happened recently. We got four all in one.
1029. **Mr McElduff:** In the correspondence before us from a family in the Castlederg/ Killeter/Aghyaran area — always say Aghyaran up here; it is important — there is a general statement, which has been made to us previously, that some of these wind farms are illegal under EU law. Do you understand the point that is being made? For example, there is a reference here to Crighshane:
- “The wind farm you visited is contrary to EU law operating without full consent, as developers made significant changes during construction. Under case law, this should now be subject to a full EIA.”*
1030. People who are opposed very often say that type of thing to us as a Committee. They say, “This is all illegal under European law”. What do you say in answer to that?
1031. **Mr Kirk:** First, I am not aware that it is illegal under any European law. I am not quite sure which European law they are talking about. With any planning permission, you are granted permission to carry out the development that you have applied for, based on the approved details and drawings. In the construction industry generally and in the wind farm industry, things change. You can make minor amendments to planning applications without recourse to a new application, but we quite often get applications to amend.
1032. **Mr McElduff:** Sometimes minor amendments are a contested area, because what is described as a minor amendment may not be minor at all.
1033. **Mr Kirk:** We have had that debate about a number of development types. It is a matter of planning judgement. Moving a turbine from its approved position to another position is not a minor amendment. That would require an amended application, which you can do retrospectively, but we have found that applicants generally do not do that. They instead seek an amendment prior to starting the work. So I do not believe that any approved wind farms are unlawful under Northern Ireland domestic law.
1034. **Mr McElduff:** Can I ask one final question? Again, it is typically areas like Gortin Glen and Bruach Dearg — Broughderg — areas of outstanding natural beauty where there seem to be applications for large wind farms in the pipeline. What additional protection is given to those communities and areas of outstanding natural beauty against the impact, adverse or otherwise, of these wind farms?
1035. **Mr Kirk:** The current policy in PPS 18 applies across Northern Ireland generally. It does not distinguish between areas of outstanding natural beauty and other areas of open countryside. Joy, that issue may have been raised in the —
1036. **Ms Hargie:** In the key emerging themes paper, one strong theme is that areas of outstanding natural beauty should be offered more protection than other areas. We have picked that up through the consultation responses on the SPPS, and we will consider it further.
1037. **The Chairperson:** You showed us maps with the locations of wind farms in Northern Ireland. Compared with the rest of the UK, we seem to have a larger concentration, with more wind farms approved or in the pipeline. Will there come a point when you say that enough

- is enough and that we need to look at other energy sources to meet our targets for renewable energy?
1038. **Mr Kirk:** As a general principle, the more wind farms that come into the system, the fewer that will get approval, because issues of cumulative impact will come into play. Certainly, planning policy does not want wind farms everywhere. Our paper states that about 97% of renewable energy to the grid is from wind.
1039. **The Chairperson:** That is right.
1040. **Mr Kirk:** Perhaps we should look to other technologies, but energy companies should bring those forward. A number of proposals are coming into the system.
1041. **The Chairperson:** As a Department, is there a point at which you say that there are too many wind farms, and we should stop?
1042. **Mr Kirk:** That might now be an issue for the councils when they bring forward their development plans. As Mr McElduff said about parts of west Tyrone, councils might say that an area has reached saturation point so they will constrain development. I think that that will be acceptable as long as there is clear justification. In other areas, wind farm development might not need to be constrained. I see that as the main mechanism rather than a policy that says, “No more”.
1043. **Ms McSorley:** In areas such as west Tyrone in particular, where there are single turbines, the difficulty is that, although we know that quite a large number are approved in that area —
1044. **The Chairperson:** The approval rate is 92%.
1045. **Ms McSorley:** — we do not know how many will be constructed. A lot of those may not be constructed for other reasons, such as the cost of connection to the grid or whatever reason. It is sometimes difficult to make a judgement about saturation point if a large proportion of those will not be constructed.
1046. **The Chairperson:** Should it be communicated to applicants for single wind turbines that, at the end of the planning application process, they may not get connected to the grid?
1047. **Ms McSorley:** Most applicants are aware of that because NIE will not entertain an application for a connection until permission has been granted for a turbine. A lot of people in the industry know that they have to get permission for a turbine before they can get the connection sorted out.
1048. **The Chairperson:** Is that not a waste of time and manpower? People apply for planning permission, and, at the end of it, they may not get connected. A large number of applications are now clogging up the system.
1049. **Ms McSorley:** It is an issue.
1050. **The Chairperson:** Given that we know that it is an issue, is there a way to address it?
1051. **Mr Kirk:** We react to applications that are submitted to us, and, if people consider that they want to do this, they will continue to make applications. We cannot prevent that. As Deirdre said, connection is a big issue. As with any permission that is granted — for a single wind turbine, a house or a factory — the implementation of the permission is a matter for the applicant. As long as applicants comply with conditions of consent, the Department has no further role.
1052. **Mr Boylan:** I am trying to think of another question, Chair, because nearly all the questions have been asked.
1053. We have to look at the issue going forward. Over the last 12 months, I have had a lot of complaints not only about wind turbines but about single houses and the lengths that people have to go to to connect to the grid because of complaints, the use of other people’s land and all that. We need to give serious consideration to that. As you said, Simon, I know that it may be outside the remit, but we need to look collectively at how we deal with that.

1054. I will go back to some of the main points. A couple of years ago, all the planning policy statements were combined in this major strategic planning policy statement. It is not going to be that way. My problem with the SPPS is that, while I recognise that a wee bit of work has already been done on the area plans, we are looking at, in some cases, 2020 as the timeline for the introduction of those area plans in some councils. Is that a fair assessment?
1055. **Ms Hargie:** The SPPS suggests that it could take up to 40 months to get the two plans in place — that is, the strategic policy plan and the local policy plans.
1056. **Mr Boylan:** I say that to you because the target of 40% renewables by 2020 will be operating on those planning policy statements. I am talking about single wind turbines at the minute. Councils will have great difficulties in making decisions on this issue. We need to look at something that will give them an opportunity to make fair and informed decisions. We started this inquiry into PPS18, but, to be honest with you, the real inquiry is into the wind energy element. New technologies are coming forward, and we are trying our best to support them. Whilst there is a general view to support renewable energy, there is certainly a problem with wind energy. I agree with my colleague, and, to be fair to my colleague in west Tyrone, it is there and is staying there. That is why we started the inquiry in the first place. I am concerned that, between the strategic planning policy statement, the existing planning policy statements and the introduction of the new development plan, there will be a gap in making decisions, and we will get caught up in this back and forth. How will we try to address that?
1057. **Ms Hargie:** As you know, at the start, the key purpose of the SPPS was to consolidate all existing planning policy statements. Our Minister then said that, in certain key areas, he would look at what came through the consultations to see whether anything needs to be addressed. Obviously, renewable energy falls into one of those categories. If strong opinions come through on certain areas, and it is considered that something needs to change in the policy rather than it just reflecting the existing policy, we will consider that through the policy. Additional information may be included in the SPPS to give more detail in some areas to make sure that there are not the gaps that you refer to. The transitional arrangements are not decided as they are proposals to continue with the PPSs until the plans are adopted. That has been queried. So, that decision has still to be taken. However, the SPPS will take precedence if the PPSs remain. If more information is considered to be required about particular aspects of renewable energy policy, that will be considered as part of the overall process.
1058. **Mr Boylan:** I have a straightforward question. Is it a fair point that, under your development plan, you can outline a target number of wind turbines or wind farms in an area? Can you look at that and say that they will not exceed a certain number?
1059. **Ms Hargie:** There will be the regional development strategy and the SPPS. Obviously, the Programme for Government targets will have to be provided for. So, I am not sure that you can say that a blanket ban —
1060. **Mr Boylan:** No, I understand that, Joy. That is where the problem will lie, because it will be a big issue once councillors get into the development of area plans. It is down to the numbers. That is the reality of what will happen. I understand that process because we looked at the regional development strategy, the SPPS and the area plans. This is the problem, and we will need to take it forward. I welcome your coming to the Committee today. These are the issues that we are faced with.
1061. I want to go on to another point. While it is part of the process, non-determinations will be a difficult issue. All the information may or may not be there on how it goes to appeal. For

- wind farm applications, information is gathered, and there are environmental impact assessments and all that. However, there is always a question mark over how that proper process can be assessed under an appeal mechanism.
1062. **Ms McSorley:** I assume that the Planning Appeals Commission will not make a decision unless it has all the facts. So, if information is lacking, maybe on noise reports or other issues, the PAC will adjourn the appeal until the information is available or make a determination to refuse the appeal on the basis that the information is not there to demonstrate —
1063. **Mr Boylan:** That is why it is unusual, but my view is that you should wait until the whole process is finished. I do not see why it should go to a non-determination without all the information, because, within the time frame, it does not —
1064. **Mr Kirk:** If the information is not there, it does not speed up the process.
1065. **Mr Boylan:** No, 100%. I have a load of questions, but I will leave it at that.
1066. **Mr Milne:** Thank you all for coming along today. When you consider that, in the Castlederg area, there will reportedly be over 100 single turbines within a five-mile radius, how do you define “cumulative impact”?
1067. **Ms McSorley:** We do not have a precise definition of cumulative impact. For individual turbines, we have to make a judgement when we assess an application and look at all approvals for existing turbines as to how that impacts on the environment, and whether the impact is so negative that we refuse the application. The cumulative impact of noise can be assessed through the noise assessment, which will also include looking at all approvals for existing turbines.
1068. **Mr Kirk:** The same principle applies for wind farms: you have to look at what has been approved and consented to, and what is proposed. If a proposal would tip the balance unacceptably, cumulative impact comes into play. As Deirdre said, it is a matter of judgement as to when there is just too much. We have had cases of consent being given to two wind farms, and then somebody wanted to put another wind farm between them, but we believed that was an unacceptable cumulative impact because there would have been a massive visual impact. However, that is a planning judgement.
1069. **Mr Milne:** However, people will make different judgements about anything.
1070. **Mr Kirk:** That is true.
1071. **Mr Milne:** After visiting the Castlederg area last week or the week before, I am concerned that the people who live in that basin — I am not too familiar with the area — will be completely surrounded by wind turbines. To be honest, it does not sound good to me if you are saying that, somewhere along the line, you will start to refuse permission to build any more in a particular area because NIE cannot take the power into the grid. If NIE says that it cannot cope with any more, does planning take that into consideration at that stage? It should be taking it into consideration now. It should not be based on how NIE or anybody else can accommodate that.
1072. **Mr Kirk:** As I said, the grid connection is part of the implementation of the permission, and it rests largely with an applicant. If NIE cannot make the connection, and if that becomes an issue and it says so up front, I would be surprised if anybody went through with the cost of an application. They require a full EIA, and applications are costly because of the planning fee and the amount of work that consultants have to do to prepare the information necessary for an application.
1073. **Mr Milne:** That is fine. I am very concerned about where all this caps out. If we just carry on approving applications, every field in the country could be covered with wind turbines. Do you agree that a plan has to be put in place?

1074. **Mr Kirk:** Yes. The Minister has listened to a lot of people who are concerned that the policy might allow wind farms to such an extent that we have approved an awful lot of them. He said that he will look at the issue when he considers the responses to the SPPS. As Joy said, there is the potential to amend the policy if there is broad agreement to do so.
1075. **The Chairperson:** It is the cumulative effect that upsets people. The young couple whom we met said that the first wind farm started across the way from them; it was quite far away, but they could see it. That wind farm now has permission for an extension so, within a 45-mile radius, they are going to be absolutely surrounded; they are at the epicentre.
1076. **Mr Boylan:** It will be 900 metres from the house.
1077. **The Chairperson:** You can understand why people get so upset about it.
1078. **Mr Kirk:** I fully understand the opposition to wind turbines, and people are quite entitled to hold those views. At the moment, we are faced with having to determine planning applications in the context of PPS 18 and other relevant material considerations, but we take cumulative impact into account. As Mr Milne said, it is a matter of planning judgement, which can lead to markedly different opinions in many areas, not just on wind turbines.
1079. **The Chairperson:** From your record of approval, you seem to approve nearly everything coming your way. It is 92.6% for this year.
1080. **Mr Kirk:** We currently have seven appeals. There are three refusals and four non-determinations that we do not believe are acceptable, and we will present reasons for refusal. We are starting to refuse applications. A number of wind farm applications have been presented to councils recently with an opinion to refuse, so that figure of seven may increase.
1081. **The Chairperson:** What is the reason for those refusals? Was it the cumulative effect?
1082. **Mr Kirk:** I cannot honestly remember the exact reasons, but they include the visual impact on the landscape, which is probably the most widely used reason for refusal.
1083. **The Chairperson:** Thank you very much for coming.

11 September 2014

Members present for all or part of the proceedings:

Ms Anna Lo (Chairperson)
 Mrs Pam Cameron (Deputy Chairperson)
 Mr Cathal Boylan
 Mr Colum Eastwood
 Mr Alban Maginness
 Mr Ian McCrea
 Mr Barry McElduff
 Mr Ian Milne
 Lord Morrow
 Mrs Sandra Overend
 Mr Peter Weir

Witnesses:

Mrs Ursula Walsh *University of Ulster*

1084. **The Chairperson:** I welcome Mrs Ursula Walsh from the University of Ulster, who has been appointed as our special adviser on acoustics, and invite her to make a five- or 10-minute presentation to the Committee, after which members will have an opportunity to ask questions. Thank you very much for your hard work; you have done a very big piece of work.
1085. **Mrs Ursula Walsh (University of Ulster):** Good afternoon. I want to give you a brief overview of my paper and, perhaps, explain a couple of terms, after which we can have a discussion.
1086. Noise is quite complex. Sound becomes noise when it becomes unwanted. People's perceptions of noise are related not just to the volume of the noise but to its pitch or frequency and character. Two noises might be at the same volume, but one might be much more annoying than the other because of its character and fluctuations, which I will talk about. It also depends on the time of day. Obviously, if people's sleep is disturbed, it is much more annoying than it perhaps would be during the day.
1087. There is a human reaction to the annoyance caused by wind turbine noise. Sometimes, people are more annoyed because they feel a lack of control or they have feelings of injustice that they are not being heard or believed. Therefore, there is a subjective element to it. However, some people's being more sensitive to noise than others has not been found so much with wind turbine noise.
1088. Some of the general terms that you come across in all the noise guidance are not everyday terms, so the inquiry asked me to explain some of them. Leq is, more or less, the average sound. If you get all the sounds together, it is an average. L90, which is referred to extensively in the wind turbine guidance ETSU, is more or less the background noise remaining when you remove the noisiest elements. It would not be your average noise; it would be the remaining noise. It would be low-level noise, about two decibels lower than Leq.
1089. When you see those terms and there is a small subscript "A", as in LAeq, that "A" means that it has been adjusted, weighted. The "A" gives more weighting to high-frequency noise and removes decibels in low-frequency noise. In other words, it will give you a reading that makes higher-frequency noise more important. It diminishes low-frequency noise. That "A" weighting means that some pitches are enhanced and lower ones are diminished, if that is clear.
1090. Noise comprises pressure waves and they spread out in the environment. They are affected by weather, so on still nights noise will travel better than on windy days. It also depends on the landscape. With distance, high frequencies and high pitches are absorbed in the atmosphere much more than low frequencies and low pitches.
1091. If an airplane is going past you, for example, you will hear the low-frequency element; you will hear the drone. You will hear not high-pitched noises but

- low-pitches noises even though the noise, if you were beside the airplane, would have high and low frequencies. At a distance, you tend to hear the lower frequencies.
1092. Wind turbine noise is mainly dominated by aerodynamic noise — the swish of the blades going round in the air — and most of the noise from wind turbines is that swishing. To some extent, it is unavoidable. It is the nature of the machine. You can get mechanical noise if there are faults, but we are mainly talking about aerodynamic noise, the swish. The recent designs of turbines have a better blade angle going into the air. It is like any newer, more modern machine; it would tend to be quieter than older machines. They have a better design. However, larger turbines are louder and have more low-frequency noise. So, the more modern ones are quieter, but the larger ones, of course, are going to be louder.
1093. It is not a steady noise, like your fridge at home, and you may not notice it until it suddenly kicks off. A fridge makes is a steady noise and is not that noticeable. Wind turbine noise has a fluctuation. It goes up and down a little bit. The ETSU guidance, published in 1997, acknowledged there was some fluctuation, but bigger wind turbines have been found to have more fluctuations and more in the lower-frequency range.
1094. The ETSU guidance relies very much on the British Standards Institution's BS 4142, which says that more emphasis should be put on the fluctuations. If a noise is not steady, you have to account for that. It is likely to be more annoying if it fluctuates. I am talking about amplitude modulation, which is up and down — non-steady because it is not steady. The standard says to take account of that and add in another five decibels for the annoyance as it is not a steady noise. When the ETSU guidance was published in 1997, it did not recognise the degree of fluctuations that we now know the larger machines are capable of. ETSU is the assessment and rating of noise from wind turbines.
- Our planning and policy statement refers to ETSU.
1095. The evidence base has expanded a lot since the ETSU guidelines were published in 1997. A lot more is known about wind turbine noise and annoyance. Also since 1997, the World Health Organization has reduced its recommended indoor night-time noise from 35 decibels to 30 decibels. They reckon that for people not to have their sleep disturbed, it should be 30 decibels.
1096. The ETSU guidance talks a lot about the L90 measure. As I mentioned, that is not the average sound level, it is the lower sound level. ETSU uses L90, the lower level, for both turbine noise and background noise. That is very unusual. All the other guidance that I have read and all the other standards use LAeq. They all use the average; so this is quite unusual for ETSU. When the ETSU guidance was written, it was recommended that it should be reviewed within two years; however, it has not been reviewed. Some of the people who actually wrote the ETSU guidance have subsequently published a paper saying that it might underestimate the noise. So, the people who wrote the ETSU guidance have reservations and reckon that it needs to be updated in the light of current knowledge.
1097. Basically, the reason I think that the ETSU guidance should be revised — apart from the fact that its authors think so — is that the quieter the environment, the more disturbing the noise is. So, it is not necessarily about the actual noise level; it is about the difference between the background noise — what you are used to — and the source noise. It is the difference between the background noise level and the source, not necessarily the absolute, noise level. So, something in the centre of Belfast may not be very annoying, but if it were in the countryside the exact same noise would be annoying. That is what the British standard says as well: it is the difference between the background noise and the source noise. ETSU refers to that; however, it

- then says that in low-noise environments you may not use that approach. So, I think that ETSU needs to be clarified: why it is usually the difference between the background noise and the actual wind noise, and why sometimes the background noise is not considered. That needs further explanation. ETSU needs to be updated with regard to the World Health Organization's changes, and more consideration needs to be given to those fluctuations.
1098. Let me turn to some particular issues which you asked me about. Anecdotally, I have heard from several sources, although I do not have evidence, that Northern Ireland is in receipt of older wind turbines, refurbished from other countries. Three academic and professional sources have told me that Northern Ireland is getting refurbished wind turbines. Obviously, those turbines do not benefit from the more recent designs and they may show signs of wear and tear. For example, the blade may have indentations, holes or wear which make it noisier. Apparently, some websites that market reconditioned turbines highlight Northern Ireland as a potential market. I query why such turbines, which are perhaps no longer acceptable in other countries, are acceptable here. Other industries have to show use of best available technology with regard to noise. With refurbished turbines in use, I would query whether we are getting the best technology as defined in the report. Also, with regard to noise, it is a defence to prove use of best practicable means. Again, I think it would be worth looking into the refurbished, reconditioned turbines.
1099. You were asking me in my brief whether the developer should carry out ongoing noise monitoring. My report states that that would identify any increases in noise and any increases beyond what was anticipated. Such noise could be identified and remedied, so I recommend ongoing monitoring by the developer.
1100. You also ask me about setting planning conditions. It is very common for environmental health to advise the Planning Service on planning conditions with regard to noise. There are model planning conditions for noise in guidance provided by the Institute of Acoustics. Use of that would be common.
1101. You also asked me about the environmental health profession's knowledge of acoustics and noise. My report says that there is a great deal of expertise in acoustics in Northern Ireland's environmental health profession. Many of them have the postgraduate diploma in acoustics, are members of the Institute of Acoustics and sit on the institute's advisory committees. However, even though there will be fewer and larger councils shortly in Northern Ireland, there is a considerable and time-consuming administrative and human resources burden due to commenting on planning applications on wind turbines. So, there is a burden on councils.
1102. My report suggests that there should be a more strategic approach to wind turbine planning permission, rather than planning permission being granted on an ad hoc, case-by-case basis. There should be an overview and strategic approach to where we want turbines to be rather than those that pop up intermittently.
1103. I think that we should refer to the Danish policy. In Denmark, there is the subsidy scheme for replacement of wind turbines as they become less efficient and, as I mentioned, noisier. Newer ones are less noisy. They replace wind turbines and have a replacement scheme. They are really going towards offshore, rather than onshore, wind turbines. They do acknowledge that there have been complaints in Denmark. Maybe we might not think that other countries complain about noise. They have a loss-of-value scheme for dwellings, so that, if your dwelling is badly affected by wind-turbine noise, there is a compensation scheme. There is an option to purchase at least 20%. So, if a wind turbine is being erected near your house, you have the option to purchase a portion of that turbine

- so that you will then have an economic interest in it. One of the reasons why people feel particularly aggrieved is when they feel that they have no control and that there is an injustice. We might benefit from the experiences of the Danish.
1104. I was also asked to compare wind turbine noise to road traffic noise and other industrial noise. Wind turbine noise has been found to be more annoying than industrial and road traffic noise. At significant roads and industrial areas, the noise has to be mapped and action plans put in place. With road traffic noise, if a road is being significantly upgraded and your house is nearby, you can get money towards insulation and there is a compensation scheme in place. However, I would say that comparing wind turbine noise with industrial or road traffic noise is like apples and oranges because they are different characters. Road traffic noise tends to go down at night. Roads would not be as noisy at night. So, it is different.
1105. In summary, the ETSU guidance actually permits louder noise at night than it does during the day. Again, anecdotally, I have been told that some operators actually increase their production of electricity at night when they are allowed to emit louder noise levels than during the day. That seems like another reason why the guidance could do with being reviewed and revised.
1106. **The Chairperson:** Thank you, Ursula. There is certainly a lot of food for thought. That was very informative. You mentioned issues like ETSU-R-97's being quite out of date, needing to be reviewed and all of that, but this is the first time that I have heard about us using reconditioned turbines. Maybe that is something that we need to write to the Department about. What you are saying is anecdotal. To what extent do we know that we buy reconditioned turbines from others?
1107. **Mrs Walsh:** I do not know.
1108. **The Chairperson:** So, when developers make planning applications, do they have to tell the planners that they are for reconditioned turbines?
1109. **Mrs Walsh:** As far as I know, they identify the make and model of the turbines.
1110. **The Chairperson:** OK. So, the Department should know and be able to tell us how many what you would call "new turbines" are being installed here that are actually old turbines?
1111. **Mrs Walsh:** Yes.
1112. **The Chairperson:** That is something quite significant.
1113. **Mr Milne:** You mentioned Denmark. Is it possible for us to get a more detailed report on how Denmark operates the system of renewable energies through wind?
1114. **Mrs Walsh:** How Denmark operates what?
1115. **Mr Milne:** You said that Denmark has moved away from turbines and more to offshore. Can we get a more detailed report on what you said regarding Denmark?
1116. **Mrs Walsh:** I have a document here about wind turbines in Denmark. It is produced by the Danish Government and is on my references list. That document is available. It is quite a straightforward document. It is quite easy reading. It does not give the minute detail about how, for example, compensation schemes operate in practice. It does not go into great detail about Denmark's move towards offshore. I was in Denmark in the summer, and several people told me, "We're going offshore". However, when I looked it up, it did not exactly say that they were definitely and conclusively going offshore, but they were saying that this committee is committed more to a policy of offshore turbines.
1117. **Mr Milne:** Here, we talk about community benefits, and I like the idea you mentioned that, in Denmark, if a wind turbine is put up beside you, you

- get maybe up to 20% of buy-in to that building. Here, communities are given a few pounds or pennies to buy them off. That is why I would like to see a more detailed document on what is happening in Denmark.
1118. **Mrs Walsh:** As I said, there is that document. It is called 'Wind Turbines in Denmark', and it gives the main information about that but does not give the detail on exactly how those schemes work.
1119. **The Chairperson:** We can ask Suzie in research to look into it. Suzie has produced a couple of research papers for us.
1120. **Mr Boylan:** Ursula, thank you for your presentation. I was only signalling that I wanted to ask a question. Sorry about that.
1121. **The Chairperson:** It was my fault. Ian puts his hand up higher.
1122. **Mr Boylan:** There is a main point here that you have exposed. You brought up some good points on open space and how sound travels. Clearly, most of these are in the open countryside. Your main point is about the ETSU-R-97, which sounds like something out of a sci-fi movie. The point is that, when people have been making presentations to this Committee, they have been saying to us that there have been issues. Clearly, you have exposed those people who have been through that process and said that there are problems with it. That leads me on to say that I know that we have good acoustic professionals here, but, if they are judging all of this, or refusing that, on that policy, which, clearly, does not seem to be fit for purpose, there is a challenge for us to ask more questions. Is it your view now that most of the information is leading us to be judging something on a policy or recommendations that are not fit for purpose and that Planning Service and whoever else is using ETSU-R-97 to gauge all of these decisions?
1123. **Mrs Walsh:** I think ETSU needs to be reviewed and revised in view of the fact that the knowledge has changed a lot. There has been a lot more knowledge on wind turbine noise since then, and the World Health Organization has asked for particular consideration to be given to low-frequency noise. I think that there is more low-frequency noise in the larger turbines than in 1997, when turbines were not generally as large as they are now. They are getting bigger. I think that the guidance needs to be revised. As I said, ETSU refers to the British Standards Institution's BS4142, and it is being revised currently. Currently, it is being said that maybe more weight needs to be given to these fluctuations and tones, so ETSU would benefit from the upcoming revision of the British Standard.
1124. **Mr Boylan:** Where is that element of it — the review? Is it soon? The reason I ask you that is because there are going to be a number of decisions over the next twelve months or the next two approvals. There could be a retrospective challenge to whatever system people want to use. I would safely say now that, at this moment in time, given the evidence that you have brought to us in relation to ETSU-R-97, there could be challenges to those approvals that have already taken place because the guidance was not actually fit for purpose. Is that a fair assumption? Where are we in terms of the new review? There are going to be new decisions made or new approvals given over the next 12 months, or maybe more than that, before the new figures are actually in place.
1125. **Mrs Walsh:** It does not give enough weighting to the fluctuations and the amplitude modulation. It does not give enough significance to the annoyance level of that.
1126. **Mr Boylan:** So, basically, we as a Committee need to ask questions about approvals. It is not really fit for purpose, given what we have heard today.
1127. **The Chairperson:** Do you know why? As you said, it was meant to be reviewed after two years. Why is it still not being

reviewed 17 years on? What is the reason for not reviewing it?

1128. **Mrs Walsh:** I do not know. The Institute of Acoustics did bring out a guide to ETSU but it was outside the remit of the institute to look at noise levels and noise limits. Further guidance on it has been produced, but certain core issues were not addressed because it was outside the remit of the review committee.

1129. **The Chairperson:** Thank you very much. That was a lot of information. Your issue about taking a strategic approach has been given to us over and over by planning personnel. There are just too many ad hoc applications, with single turbines everywhere. Thank you very much indeed.

23 October 2014

Members present for all or part of the proceedings:

Ms Anna Lo (Chairperson)
 Mrs Pam Cameron (Deputy Chairperson)
 Mr Cathal Boylan
 Mr Alban Maginness
 Mr Ian McCrea
 Mr Barry McElduff
 Lord Morrow
 Mrs Sandra Overend
 Mr Peter Weir

Witnesses:

Professor Alun Evans *Windwatch NI*
 Dr Dan Kane
 Mr Owen McMullan
 Mr Pat Swords

1130. **The Chairperson (Ms Lo):** You are all very welcome: Professor Alun Evans, Dr Dan Kane, Mr Owen McMullan and Mr Pat Swords. I remind everyone that the session is being recorded by Hansard and will go into our report. I am pleased to meet you all again. This is really the final stage of our inquiry. We are meeting you, and then we will meet the Northern Ireland Renewables Industry Group. After that, we will consider writing up and making conclusions and recommendations of our reports.
1131. You are very welcome. If you can give us a briefing of five to 10 minutes, I am sure members will have questions to ask you.
1132. **Dr Dan Kane (Windwatch NI):** Thank you, Madam Chairman. It is good to be back to meet you. Bearing in mind the time issue, we want to concentrate on areas that, perhaps, would be of particular help to the Committee. As we see it, there is the large problem, and then there are the symptoms of the problem, which are the issues of noise, shadow flicker and how PPS 18 is applied. Therefore, we want to commence with Mr Pat Swords, who will talk about the legal framework of the whole issue. We feel that it is crucial that we get across why we feel there is an illegality here and how it will impact on the whole situation.
1133. **Mr Pat Swords (Windwatch NI):** I prepared eight or nine slides in advance. I think you have them. I am a fellow of the Institution of Chemical Engineers and a chartered environmentalist. I have worked in industry, both in Ireland and abroad, for 25 years. From about 1999, I spent a considerable time, and am still doing it —
1134. **The Chairperson (Ms Lo):** Members, the slides start on page 309.
1135. **Mr Swords:** I spent a considerable period of time — probably 25% of it — in eastern Europe. I helped to bring in the EU's environmental legislation, particularly on pollution control and major accident hazards, training the administration, industry, NGOs and groups on their rights. I come from a unique background.
1136. The second slide is basically the 20% renewable target that the European Union has through the 2009 directive. What was to be built, where it was to be built, the impacts and the mitigation measures were never worked out. You can read and recycle the introduction to the directive. It tells you how they got the 20% target. They shared it out amongst the member states, based on the existing levels of renewables and a fudge factor based on gross domestic product. Ireland got 16%. We do not have a lot of hydro. The UK got 15%, and Austria, which has a load of hydro, got 34%. That is where it came from. Normally, a directive takes two or three years. In this case, it was rushed in within a year. It had to rush in the national renewable energy action plans (NREAPs), which had to be adopted by June 2010. At that stage, all the legally binding environmental assessments and public participation were bypassed.

1137. We are a democracy, so citizens have to be given rights. The environment does not belong to the state; it belongs to the citizens, and they have to be given robust procedural rights. That was recognised in the United Nations Rio declaration of 1992. Environmental issues are best handled with participation of all concerned citizens at the relevant level. At national level, each individual should have appropriate access to information concerning the environment that is held by public authorities, and the opportunity to participate in decision-making processes. Finally, you have to have effective access to judicial and administrative proceedings, including redress and remedy. That was the goal.
1138. In the European Union, the greater area, which is the United Nations economic commission for Europe, stretches out into central Asia and non-EU member states. We have a thing called the Aarhus convention, which has been part of European law since 2005. Basically what happened was that all of the Rio declaration was codified into a legal act and adopted. It is based on access to information, public participation in decision-making and access to justice in environmental matters. Some of the European Union legislation was changed, but it does not matter — the core principles that are not specifically written in are still binding.
1139. I saw what I can only describe as a completely dysfunctional programme to plaster the Republic of Ireland with 3,000 turbines and 6,000 kilometres of high voltage lines. It had never been through any assessment. I was not in a position to challenge in the courts in Ireland because of the cost, and Ireland would not ratify the convention. Ireland was the only member state that did not have it. However, it was part of European law, and as I had documented all of the issues, the United Nations took a case in my name in which it investigated the European Commission. On 16 August 2012, the compliance committee to the legal tribunal in Geneva ruled that the EU did not comply with the provisions of the convention in connection with its 20% renewable energy by 2020 programme and its implementation throughout the 27 member states through the national renewable energy action plans. It had never put the necessary structures in place to carry out the assessments, engage with the public and provide the information to the public.
1140. I was also involved, as the next slide relates, in a Scottish communication back in Geneva. I helped present it, with the community council up in Scotland. We took in the European Union and the United Kingdom again. The ruling came out, again, that the United Kingdom's national renewable action plan did not comply with the public participation requirements of article 7 of the convention. Article 7 of the convention is the assessment to the planner programme. The necessary information was not provided to the public, and the public was provided with no opportunity to engage in public participation with this plan or programme before it was adopted by the United Kingdom. So there were two rulings. Those are from the compliance committee.
1141. I move now to the compliance mechanisms. There is a meeting of the parties, which is when all 47 countries that have ratified the convention come in. It occurred in July 2014 in Maastricht. Once the findings and recommendations of the compliance committee are endorsed by the meeting of the parties, they are a binding part of international law which, de facto, is community law and national law. As I said in relation to the first case against the European Union, it expressed its concern on whether a proper regulatory framework and/or clear instructions for implementing article 7 of the convention with respect to the adoption of the national renewable energy action plans were carried out. It remained unclear how the party concerned will adapt the manner in which it evaluates the national renewable energy action plans in accordance with the recommendations of the committee.

- Since 2012, the European Union has done nothing to comply and bring itself into compliance. It now has to report in this December, and every 10 months, on what it is doing. That will be brought back into the legal process at the next meeting of the parties. If the European Union keeps on refusing to comply, it will be thrown out of the convention. Quite rightly so.
1142. I move now to the Aarhus convention and European Union law. It is an integral part of community law. Under community law, an international agreement is binding on the community institution and the member states and takes precedence over legal acts adopted by the community. Currently a legal case is going on in my name over the national renewable energy action plan in the Irish High Court. Seven other judicial reviews are going on in the High Court in relation to planning decisions and renewables in Ireland, and a judicial review is forthcoming in Scotland.
1143. We have to ask ourselves these questions: is the Irish renewable energy programme proportionate? Is it reasonable? What are we trying to do, because we never assessed it? The only reasons why we have got so far with it is that buzzwords have sufficed and legal assessments have been bypassed. The public authorities do not have the information they are required to possess by law. Once assessed, it is nothing but completely disproportionate and dysfunctional. Sorry, I do not agree that a percentage of the electrons in my house being renewables actually amounts to anything. As we pointed out in the compliance committee, under cross-examination with the Scottish communication, what are we trying to achieve? What is the environmental protection? What does a ton of carbon dioxide actually do and save? How many proper tons of carbon dioxide are we saving — not wild, spurious claims that do not take account of the inefficiencies? All that Jean-François Brakeland, head of legal enforcement at DG Environment of the EU Commission, can come up with is:
- “If we were to take instead of a 110 m high wind turbine a 110 m high metal statue of Mickey Mouse, you would not be expected to do a detailed carbon assessment on that, so why do you expect a detailed carbon assessment for the wind turbine?”*
1144. I was not in the least surprised, because the European Union does not have any data. Nobody does. We do not know what a ton of carbon dioxide is doing in pounds, shillings and pence.
1145. I turn now to the Planning Appeals Commission and the Drumadarragh wind farm in Northern Ireland. The legal requirement of the convention is that public participation takes place when all options are open. So does the European Union’s environmental impact assessment directive. It states it: “when all options are open”. Then you see the Planning Appeals Commission saying:
- “Performance of Wind Turbines: General criticisms of wind power in general were raised by objectors. However, such criticisms are inappropriate for consideration in the context of this individual appeal. For example, the question of whether wind turbines are more or less efficient or cost effective relative to other power sources is a matter of national and regional policy review. General concerns about wind farms; ‘green credentials’ and carbon release impacts are similarly beyond the scope of this appeal.”*
1146. Sorry, it is the law. When all options are open, the citizen is entitled to raise those issues. If they have not been addressed at the prior level or tier, the citizen is entitled to raise them at that point. That is the law. Your Planning Appeals Commission does not know the law and does not care.
1147. Secondly, it is the obligation of the Planning Appeals Commission, as a decision-maker, to have those assessments prepared, by itself, of what exactly this wind turbine is doing. That is the commissioners’ obligation: to assess it. Not the developer’s statement, but its obligation, under law, to assess it and make that available. That is a clear breach of law. If the lawyers came in and started tearing you apart, you would be in severe problems.

1148. Finally, even if we look at the European Union's own documentation, we find that it now recognises that those targets will not be met. The EU has had to scrap the 10% renewable fuels target because it was causing too much loss, food prices soaring and damaged environments. So we now have something like half the member states already recognising that we will not even approach those targets by 2020. As the EU's report says:

"For the UK it is not expected that its 2020 ... target can be achieved under baseline conditions"

1149. as we are proceeding at the moment. It predicts a renewable energy share of 7·8% versus a target of 15% set in the EU directive. So we are not going to make it. And what has been achieved so far? Nothing. There has been no increase in temperatures in 18 years and, even if the whole of the European Union's plan worked, and it has not, in terms of reducing carbon emissions, we would only be looking at a 1% reduction.

1150. That is my contribution.

1151. **Dr Kane:** The point that we are trying to make, Madam Chairman, is that, if the whole situation is illegal from the start, then everything that flows from it — PPS 18, the assessment methodology and all that — is also faulty. We know that there is an issue of transposition of European law into Northern Ireland regulation; that has not been done properly. The Planning (Environmental Assessment Impact) Regulations (Northern Ireland) 2012 are not compliant with the European law. We also know that, at the level below the law, PPS 18 is not being properly carried out by the planners. They are not even following the faulty policy that is in place. That is not acceptable anyway. And they are using faulty policies below that, such as ETSU-R-97. They are not using it properly. They are not applying even the PPS 18 separation distances adequately. Therefore, for example, no minimum separation distance is being applied in the case of single turbines. If we had the time, I could prove to you, from the original documentation for the

draft of PPS 18, that it was applied to single turbines as well as to wind farms. Yet, in some cases, we have turbines which are 100 metres from people's front doors. You are being told by the industry — I have seen some of the material provided to you by officials — that there are no health impacts. There is no evidence that there are no health impacts — none whatsoever. The evidence shows that there are different types of health impact and, if we have time, perhaps Professor Evans would like to comment on that.

1152. **Professor Alun Evans (Windwatch NI):**

Thank you for that invitation. I have read the submissions made to this Committee previously, in the shape of the chief environmental health officer, who suggested that ETSU-R-97 was out of date and needed to be reviewed, and also the evidence presented excellently by your wisely chosen acoustics expert, who said more or less the same thing, but added that she considered that there were also health problems. I consider that there are health problems associated with wind turbines. They are noisy; they are being put too close to human habitations; and the big thing that they are doing is keeping people awake. We can argue about the particular frequency of the sound being produced. They are noisy enough in the audible range. In the infrasound range which, classically, is inaudible, there is increasing evidence that the human brain is capable of perceiving it, not as sound but as a sensation, which is disturbing.

1153. Even the report commissioned by Alex Salmond from the quartet of acousticians in Salford admitted that sleep disturbance, and possibly sleep deprivation, was a problem. There were no other health problems, but once you are into sleep deprivation and disturbance, you are into a very serious range of health problems. With children, you are into impaired memory and a tendency to produce obesity which tracks on into later life, predisposing particularly to cardiovascular problems. In adults, there are problems with

memory and defects in cognition but, most importantly, there is cardiovascular disease. The weight of the evidence for a relationship between sleep deprivation and cardiovascular disease — stroke, heart attacks and heart failure — is large. I am very worried about that. The assurances being given are not good enough. Yes, we need studies or understanding mechanisms. As I say, I have had a long history, particularly in cardiovascular epidemiology. I worked for WHO for at least 25 to 30 years. I have an interest in cardiovascular disease, and I have great concerns about what is going on.

1154. Thank you.

1155. **Mr Owen McMullan (Windwatch NI):**

I would just like to say that Mrs Ursula Walsh, the acoustics expert from the University of Ulster, confirmed that the ETSU guidelines are not fit for purpose. That was also highlighted by the environmental health officer, Chris Jordan, in a presentation to you. The ETSU guidelines do not cover wind shear, which creates the occurrence of amplitude modulation, infrasound, ice throw, reflected light, or shadow flicker, nor do they consider residential amenity. The current setback distances of ten times the rotor diameter, or 500 metres from a wind turbine to a dwelling, are not based on any scientific proof or medical evidence to suggest that it is a safe practice. At a DARD presentation on wind energy, I asked the representative for the scientific proof or medical evidence to prove that 10 times the rotor diameter or a 500 metre setback distance from the wind turbine to a dwelling was safe, his reply was that it was based on a rule of thumb.

1156. In her presentation, Mrs Walsh also referred to the fact that Northern Ireland has become a dumping ground for second-hand wind turbines which are, perhaps, no longer acceptable in other countries but seem to be OK to be sold here. They have been refurbished, and they are being littered all round our countryside. Obviously, those wind turbines have had wear and tear. They have indentations and holes in the

rotors which make them noisier. Mrs Walsh also confirmed that noise from wind turbines is much worse than industrial noise pollution and road traffic noise.

1157. Earlier this year, we saw a BBC report that over £135 million has been paid out in compensation and legal fees to over 8,000 members of the PSNI who suffered hearing loss in the line of duty. Another 2,000 cases are still to be heard. That precedent has now been well and truly established, and there are now people living around the countryside in Northern Ireland who are going to be susceptible to hearing loss because current guidelines do not protect them from the infrasound and the noise emitted from wind turbines. There will be litigation further down the line.

1158. We urge the Environment Committee to impose an immediate embargo on the processing of all planning applications for wind farms and proposals for single wind turbines, and cessation of those in the process of construction, until proper updated guidelines have been drafted, consulted upon with all the relevant stakeholders and introduced by the Assembly. A policy of strict adherence to all EC regulations and legislation must be introduced with immediate effect.

1159. I would like to refer to the presentation by the DOE. I want to make a couple of comments on it. Mrs Deirdre McSorley was asked whether there was ever such a thing as saturation point and cumulative impact. She said that:

“we do take in the cumulative impact of turbines in the area ... there will be areas where they have reached saturation point”.

1160. When asked a question by an MLA on the regulations of European legislation, her DOE colleague, Mr Kirk, said:

“I am not aware that it is illegal under any European law. I am not quite sure which European law they are talking about.”

1161. The presentation that was made by the Chartered Institute of Environmental Health also confirms that the ETSU guidelines are not fit for purpose. They

also said that strategic planning has really not been adequate to protect the amenity of the countryside and the citizens who enjoy rural life. Dr Chris Jordan, when he was asked how many wind turbines were in use in Northern Ireland, said that he thought that there were around 200, with 1,000 also being permitted. To confirm on that point: as of 31 August, 3,530 applications for single wind turbines had been made, of which 2,413 had been decided. Of those, 2,125 single wind turbines had been approved, with a further 631 pending. In addition to that, there have been 175 wind farm applications, of which 111 have been decided, with 96 approved and a further 54 pending. Mr Jordan was asked about the health impacts. Mr Maginness asked whether he was giving a health warning. Mr Jordan's reply was yes.

1162. This is a map of Northern Ireland. You may or may not be familiar with it. It was printed as of the end of August. If that is not cumulative impact, I do not know what is.
1163. **Mr Weir:** Would it be possible to pass that map around?
1164. **Mr Owen McMullan:** Certainly. By all means, yes. In addition to that, I have the locations of wind farms. They cannot be transposed on the same map. SONI has plans to transfer the power from wind turbines onto the grid. We have a map of Northern Ireland which shows the corridor of pylons with overhead cables and additional substations. This has been done without any proper community engagement or public consultation. People who live in properties along that route and quite close to wind turbines that have been forced upon them against their will are now seeing the value of their properties decrease and, sometimes, their properties actually being deemed to be unsaleable.
1165. I have here a copy of a statement from an estate agent in Ballymena relating to the sale of a property in Broughshane, County Antrim. The said property was put on the market in January 2014.

Sale was agreed on 12 March 2014, whereupon solicitors were instructed. The purchasers discovered that planning approval for Elginny Hill wind farm had been sought. When that was brought to their attention, and after some discussion and negotiations with them, they eventually decided not to proceed with the purchase of the house. They felt that it would not be in their best interests to purchase a property with close proximity to such a development. So here we have evidence in black and white that, in cases of homes that are located in close proximity to wind turbines, not only have properties been devalued, but, in some cases, they have been deemed unsaleable. The property that I referred to was put on the market on 20 May 2014. To date, we have received no offers on the same.

1166. With regard to the guidelines that I have just referred to as being not fit for purpose, serious questions must now be asked of the Environment Minister, the Enterprise Minister and the Health Minister and their respective Departments for rolling out a Government policy that fails to protect the basic human rights of rural communities throughout Northern Ireland. Who will pick up the tab for the inevitable consequential compensation claims that will follow?
1167. I also note from the Hansard reports that Mrs Walsh from the University of Ulster was asked about ongoing noise monitoring to be conducted by wind energy developers. This would be completely unacceptable. That would be like asking the fox to guard the hen house. This should be conducted by a firm of appropriately qualified independent consultants.
1168. **The Chairperson (Ms Lo):** Sorry, I missed that bit. Can you repeat that?
1169. **Mr Owen McMullan:** Yes. When Mrs Walsh gave her briefing, she was asked whether developers should carry out ongoing noise monitoring. To suggest that the wind energy developers be responsible for ongoing noise monitoring is completely unacceptable. That would

be like getting the fox to guard the hen house. This should be conducted by a firm of appropriately qualified independent consultants.

1170. **Dr Kane:** This is a crucial point, Madam Chairman and members. There has never been any compliance testing of any wind farm in Northern Ireland since the first turbines went up — no proper compliance testing at all. Do they do what it says on the tin? We do not know, because nobody goes back to see whether they created the number of jobs that were claimed. Did they reduce CO₂? Is CO₂ even being measured? Did they produce the amount of electricity that was claimed for them? Are there complaints of noise around them? Are there health effects? We notice that members have asked other people who have come to speak to you questions on health and whether there are any records of people's health being affected. Nobody has been tasked with gathering that information. Who do you go to? You do not go to environmental health. It is not responsible for health. The Public Health Agency believes that it simply translates what is happening in England. There is an issue there right away.
1171. **Mr Swords:** The strategic environmental assessment legislation in the European Union, which has been in member state law since 2004, requires for such a programme on energy that not only should it have been assessed with public participation before it was adopted, but it should have been subject to monitoring for unforeseen adverse environmental effects. That is the precise wording that is used in the legislation. The fact that your authorities here have not a scrap of evidence that they have ever done that, with the thousands of wind turbines that have been built on this island, is just an incredible legal breach, particularly as we are seeing that there are problems coming forward.
1172. **The Chairperson (Ms Lo):** OK. Thank you very much for your presentation. I think that you have to accept that we are too dependent on fossil fuels such as gas and oil, which are going to end in 50 or 60 years' time. We have a Programme for Government target for 2020 of 35%. It is set in the Programme for Government that we all have to strive for that. There is that requirement.
1173. **Mr Owen McMullan:** Just on that point, the wind industry claims that all of these wind farms and turbines that are littered around our countryside will decrease our dependency on fossil fuels and our electricity bills. There is no evidence to suggest that, when our dependency on fossil fuels has actually increased. For example, during the summertime and even in September, 100% of our Northern Ireland fuel mix was actually being generated by fossil fuels. Wind was not contributing anything at all to the NI fuel mix.
1174. **The Chairperson (Ms Lo):** I have not got all of the figures here, but I think that there is evidence that we are now using a lot of renewable energy — more than before — on generating electricity. I think that that is a fact.
1175. **Mr Swords:** OK. I can explain this. First of all, none of you has an entitlement to engage in a plan or programme of this nature without going through the necessary assessments and the cost/benefit consideration of alternatives. Opinions are irrelevant. It has to be done within the legal bounds of a transparent and fair process. That did not happen. Every step of the way, the procedures were bypassed. I do not need to have a lecture on how to design energy infrastructure; I know how to do it. I am professionally qualified in it. What we want to see is something that is done according to the law in a professional manner, which can be scrutinised by the public and agreed on. That gives you the transparency and buy-in of the public.
1176. As regards claims about the percentage of renewable energy, because of the intermittent nature of renewable energy — I mean, my mother can figure it out. She is in her 80s and has no college education, but, as she says, "How do you expect me to cook a

turkey for Christmas when I am waiting around for the wind to blow, and there is electricity in the oven?”. There are massive instabilities on the grid. Just because you have 20% renewables does not mean that you are getting 20% fuel savings or 20% carbon dioxide savings. You are actually getting less than half of that, and, as you put more of them on, you will get even less. We, as engineers, know that, and senior engineers in the engineering institution — the Irish Academy of Engineering — are telling you all over the place to go and assess this and get it right. It is not just that you have to go and do it; you have a legal obligation to provide the information so that we do not end up with a European Union official, under cross-examination in Geneva, starting to talk about Mickey Mouse and carbon analysis of the statue.

1177. **Mr Boylan:** Thank you very much for the presentation. It was very in-depth. To be fair, I have a couple of questions. To be honest with you, the target issue *[Inaudible.]* if you are going to set a target, no matter what it is, it has to be achievable.

1178. **Mr Swords:** Exactly.

1179. **Mr Boylan:** That is where the question marks are first. I want to go down this route because I want to tease this out with you. You are talking about law and what is legal. What law are we looking at here? I will explain myself here. It is not that I have an issue with European law; I think that we should follow certain practices and best standards, and if it is set in Europe, that is grand. We also have to recognise that, as a member state or an authority of whatever devolved government it is, they have certain policies. If you look at it in the round, in this case — we will use this as an example — whether you believe that PPS 18 is good, bad or indifferent, it is there at the minute. We have heard all the arguments about it. You are saying that it is a legal matter, and we have policy here. Are you saying that policy is illegal according to European law? Can you expand a bit on that? Then I will get on to ETSU and all the other issues,

because it is important to go down this line.

1180. **Mr Swords:** Any type of structure will evolve, and people react to the situation. Basically, in the 70s and 80s, it was recognised worldwide that developments were being rushed in projects — maybe a bridge here, a power station and oil refinery there — and we came up with the principle of environmental impact assessment, not only in Europe but in the United States. It was to assess the project and to inform the decision-making and the methodology and the tools that we use for that.

1181. The next stage of that was that it then became obvious that this was deficient, in the sense that if the bridge was part of a big motorway network or the power station was part of a massive roll-out of energy infrastructure, you had to assess the next level up, which was the plan. So we started bringing in legislation to do a strategic environmental assessment at the plan or programme level in a more holistic viewpoint. Instead of having a motorway network, would you increase some of the rail network modalities of transport? That is a simple one.

1182. That has been applied worldwide, and it is part of European legislation and has also been adopted at member state level. The first one has been at the project level since 1985, and the other one has been implemented at programme level since 2004. But because of the fall-out of eastern Europe and the legacy of Ceausescu and all of this and unsuitable development, there was a strong desire that this would not happen again. They took the Rio declaration at the UN and brought it into the Aarhus convention, which is overriding and extends way beyond the European Union area. It states that the public should be given rights; that any development should be part of a transparent and fair process; and it should be proceduralised. It does not say that nuclear power is bad or good; it does not say that wind power is good or bad. It says that, if you develop a project, you should do so in a structured manner. You should provide the

- information and have public participation in the planning of the project, at the top level and the programme level. Then, you should provide public access to recourse to justice, which is to challenge issues. That has to mean that the public can bring the factual basis into the courts and challenge it in a manner that is not prohibitively expensive. The UK has not complied with that and, at the minute, is subject to compliance hearings in the European Court and at Geneva. So, the approach is that you have to give the public rights. When a populist wave disappears, or when, after 20 years, there is a change of Government, it is the public who are left with this in the landscape around them: the derelict plants. We have to protect the public and give them rights. Democracy is about bringing out people's talents. The authorities in the Planning Appeals Commission are not the only ones with knowledge. Plenty of others, particularly in the local area, may be even more expert in planning than the planners.
1183. **Mr Boylan:** We could talk and argue all day about this. If we were going by some principles, we would never get into a car and drive down the road.
1184. **Mr Swords:** Yes.
1185. **Mr Boylan:** There are loads of arguments. What you said is interesting, and that is why I asked you about the legal side of it.
1186. I thank my colleague who brought the issue of the ETSU-R-97 to the Committee in the first place. It seems to be a major issue for us, judging by a previous presentation. One argument was that it was not fit for purpose, and, from what I hear from different people, including experts, it certainly has not been. It has been part of the assessment process in allowing wind farms, and that will be reflected in the report. There is no doubt about it.
1187. The other issue is the setback distances and whether you feel that PPS 18 has been adhered to. The setback distance for wind farms is 500 metres, and there is a nominal distance of 10 times the rotor diameter. I do not know where exactly that comes from.
1188. **Dr Kane:** I can tell you exactly where that came from. It was the civil servants' approach to trying to combine a proposal for shadow flicker — 10 times the rotor diameter — and the 500-metre minimum separation distance. The whole story is in our 'Devastation and Delusion' document. Remember, the wind industry asked for PPS 18 to be written and, indeed, wrote it. Stephen Hamilton admitted that here, and that is in the Hansard report.
1189. When they came to look at the separation distance, they had a stakeholders' group, but they left environmental health out of that group. As environmental health was not involved, there was nobody to give any noise expertise except the wind industry. Strangely enough, we ended up with ETSU-R-97. The Chief Environmental Health Officers Group (CEHOG) was extremely annoyed about that. It wrote in and said, "There's an issue here of the minimum separation distance". Page 46 of ETSU gives a works example on which the proposed separation distance is based. We have copies here, if you want to look at them. It shows that I am not making it up. They used a single turbine, not a wind farm, as an illustration. They said that the equivalent of a 101-decibel single turbine would not reach the noise standard of 35 decibels at 437 metres; at that distance, it would still be 38 decibels. As you know, for a single turbine, the simple method of assessing noise is simply to ask this question: will it meet the 35-decibel standard? ETSU, in 1996, states that the noise at 437 metres would not get down to the low level needed. So the Chief Environmental Health Officers Group came back and said that the minimum distance should, therefore, be 500 metres. CEHOG said that in 2008, but, in 2004, the people who wrote ETSU had already decided that the distance should be 700 metres. However, the Chief Environmental Health Officers Group did not seem to know that.

1190. So the 500 metres was based on the example of a single turbine. That was confirmed to me by the people who scribed PPS 18. The public consultation was on the website — there were 90-odd responses — and they clearly state that the 500-metre minimum separation distance applied to wind energy installations, not wind farms. If you go one step further, you say that planners in all the groups are using the 500 metres only for wind farms. However, if you take the view that it applies only to wind farms, because that is the term used, you cannot use ETSU for single turbines, because it is the assessment and rating of noise from wind farms. So, if you say that a farm means “not for single turbines”, the assessment and rating of noise for wind farms does not apply to single turbines.
1191. You have asked a very perceptive question. Here is the rub: rural communities — in fact, the whole of Northern Ireland — had a very robust noise standard called BS4142. All environmental health agencies, right across the UK and the Republic, used this because it worked. It was a method of assessing the likelihood of annoyance being caused to the neighbours of any industrial noise source. It is still in use, but wind farm noise is different; it was given a special dispensation. So, irrespective of any other factor, rural communities across Ireland, England, Scotland and Wales already suffer a penalty because BS4142 is not allowed to be used for wind farms. If you ran the two in parallel, you would find that ETSU allows a far greater level of noise, for neighbours of wind farms and wind turbines, than the original standard, BS 4142.
1192. The 500 metres was definitely based on a single turbine. We are told by the planners that it does not apply, and yet they still apply the measure of 10 times the rotor diameter, which is also supposed to be only for wind farms and is, as I said, based on shadow flicker. The research that it was based on was a paper by A D Clarke for the Open University in 1991. The details are in the paper ‘Devastation and Delusion’, which you have. The quote in PPS 18 is wrong. The authors have misinterpreted the research: it does not say that 10 times the rotor diameter will solve the problem of shadow flicker; it says that, if you live to the east/south-east, west/south-west and so on, it definitely will not solve that problem and that much greater separation distances are needed.
1193. We gave some video evidence to the Committee — I believe that it did not work, so we will replace it — that clearly shows serious shadow flicker indoors and out at 30-plus times the rotor diameter. There were assessments of wind farms in various places. The assessment of Wolf Bog, for example, in County Antrim showed that the worst-affected house was at 15 times the rotor diameter but that houses at 22 times the rotor diameter were also badly affected, as, indeed, were dwellings at 33 times the rotor diameter.
1194. So, none of the factors being used are correct, and the method of dealing with separation distances is, frankly, wrong. That is why, to try to clarify that, we called for a minimum separation distance of two kilometres. Then we can take the safe position that, if a developer can prove to us and to you that there is no impact by moving closer, because topography and so on would intervene, a lesser distance may be considered. However, with the present method of dealing with separation distances, people are being exposed to torture. We all know about the UN Torture Convention, and, if you remember back to the 1970s and 1980s, when young people used to gather around shopping centres, a little device mounted on a wall emitted low-frequency noise. That is what comes from wind turbines that are close to homes.
1195. You have a video clip showing a snowstorm. The industry attended the Committee on 12 September and said that there was no problem with low-frequency noise. Not only is there a problem with it, the chief executive of

- Vestas has admitted it. That video clip clearly shows the low-frequency noise. You can see the spirals of noise as the blade passes the tower. So there is a major issue of people being exposed to what is, basically, torture. If the issue is not resolved, we will be forced to explore that further.
1196. **Mr Boylan:** I am nearly afraid to ask another question, Chair, but just allow me one more wee one. Owen, you referred to health issues. What about the practice elsewhere? There are wind turbines all over the world. Are you saying that there is evidence on those?
1197. **Mr Owen McMullan:** Peer-reviewed studies have been carried out around the globe. We are not making up this stuff. I have witnessed people suffering in their own home because of the impact of wind turbines being too close.
1198. **Mr Boylan:** Dan, you mentioned compliance. For the approval of any application, conditions must be met. Are we going to be reactionary by asking for compliance, checks and everything else? Where do you see that process going?
1199. **Dr Kane:** Some of the compliance is very easy. Software developed in New Zealand allows the calculation of the exact noise being produced by a wind turbine or a wind farm. Among other things, we think that it would be a very worthwhile experiment to try the different types of assessment methodology, side by side, at the same site and then compare the results. So, we could compare ETSU, BS 4142 and the Institute of Acoustics good practice guide, which has a lot of the same faults as ETSU. There has never been a proper assessment.
1200. Consider the economic benefits. I do not want to bother you with too much paper today, but I have a report here for a 54 MW wind farm in County Fermanagh, which clearly shows that it has no employees. It produces 54 MW and there is an income from that electricity, but it has no employees. So where are the 30 jobs that were claimed for that wind farm? Where have they gone? Incidentally, the report also says that the turbines are expected to last for only 15 years, not 25. So there are a lot of issues there. Who measures the Co2? I wrote to DETI and asked who assesses the claims made by developers about the Co2 savings from their wind farms. Nobody does. These are not proper claims; they are never checked out. As in the case of shadow flicker and so on, nobody in planning has the competence to do these things, and they are not being passed on to other government organisations that can. So there is a major compliance issue to test.
1201. We must look also at the health issues. I have with me a little device called a Zeo, which, if you do not mind, I will pass on to you. It was used recently to prove the problems with sleep that wind turbines cause. You wear it on a headband at night. Alun could tell you how it works by measuring brainwave patterns. It showed that, when a person stayed near a wind farm, they had a certain quality of sleep; when they stayed away from the wind farm, their quality of sleep improved very significantly. The Zeo turns brainwave patterns into a score. It is scientifically applicable and can demonstrate that, even though you are not necessarily being woken up, the value of your sleep is being destroyed by the low frequencies and amplitude modulation — all that comes from a turbine but is not measured by ETSU. As you know, ETSU uses only the A-rated scale. It does not, therefore, look at low frequencies and takes no account of the amplitude modulation, and those are two of the major issues with wind turbines.
1202. **Professor Evans:** There is no provision to measure at night or inside the subject's or sufferer's house. The sound may be worse inside than outside.
1203. **The Chairperson (Ms Lo):** OK. We must be aware of the time. Barry, do you have a quick question?
1204. **Mr McElduff:** Thank you, Chair. Did I pick up correctly Dan's suggestion that a

minimum separation distance between a wind turbine and a dwelling should be 2 kilometres? I note that you provided us with a video clip of shadow flicker. What is the main point that you are making on the shadow flicker issue?

1205. **Dr Kane:** The original separation distance of 10 times the rotor diameter was set on the basis of that research on shadow flicker, but that research was incorrect. I will give you an illustration of 10 times the rotor diameter: if the rotor diameter of the turbine is, say, 20 metres, what height is a tower with a 20-metre blade? You can have towers of different heights with the same blades. Therefore, the turbine is getting higher and higher, the sun is being cast further and further towards your home, but the blades are identical, so the separation distance, according to PPS 18, remains the same. That is an obvious fault in the original research, which contains a whole series of problems, but that is where 10 times the rotor diameter came from. We are saying that it is clear that it was wrong when it was written, it was wrongly transposed into PPS 18 — it was misquoted actually — and the evidence is that shadow flicker can be cast for great distances.
1206. Indeed, work by people looking at epilepsy research— Professor Harding and his team at Aston University — has shown that the intensity of the light from shadow flicker reduces only when you get, believe it or not, 100 times the hub height away from the turbine, so you are talking about kilometres. There is an issue there right away.
1207. The other issue is noise itself. There is no measurement. What we have here is theorising. You will find that, generally, neither the applicant for a wind farm or wind turbine nor environmental health will measure the noise. They will only estimate it. Nobody ever goes back afterwards to see whether the estimate was an accurate representation. Pat mentioned the Drumadarragh application. Complaints about noise were made in 2007 and have still not even been investigated properly. Environmental health is not equipped

to deal with it. What do you do in that situation? You give yourself a safety zone. The safety zone of 2 kilometres has been recommended by noise experts all over the world and is the rule of thumb that is in use in Scotland. I am sure that you are aware that Scotland is consulting on moving it out to 2.5 kilometres. So there is an issue of wind farms having an adequate separation distance that will provide a safety margin until some sensible resolution of compliance testing has taken place.

1208. **The Chairperson (Ms Lo):** Thank you very much, gentlemen. There is certainly a lot of information for us to take away. I think that we need to talk to the Department and the Executive about the legality side.
1209. **Lord Morrow:** May I ask Dr Kane one question? He challenged a number of points in PPS 18. I was interested in the separation distance, which another member raised. Was it 2 kilometres?
1210. **Dr Kane:** Up to 2 kilometres.
1211. **Lord Morrow:** If PPS 18 is inaccurate, what are we doing to address that? I think that you said that some of the statements in PPS 18 are just wrong. Is that right?
1212. **Dr Kane:** Yes.
1213. **Mr Swords:** Remember that when the citizen brings an analysis to the planning department, all options are open for effective public participation. For planning then to trivialise it and say, “Get lost — we have our plan.” is a breach of law.
1214. **Lord Morrow:** Yes.
1215. **Mr Swords:** It is breach of decency, too.
1216. **Lord Morrow:** Yes. That is really my question. Surely, in the future, we will not be subjected to working from a PPS 18 that is patently inaccurate?
1217. **Mr Owen McMullan:** That is already happening.
1218. **Dr Kane:** Let me give you one example of a particular inaccuracy. It was lifted

directly from the British Wind Energy Association's website, I believe, and put into PPS 18 that:

"no member of the public has ever been injured by the proper operation of a wind farm."

1219. That was a false statement when it was made and is even more false now. At the time that it was made, there had already been 44 known deaths. Maybe death does not count as injury, I do not know. At the last count, on 30 June 2014, there had been 151 deaths. I think that 90 were wind farm industry workers, but the rest were members of the public, people just passing by in one form or another, or single turbine operators. So, there is a patent untruth. Most accidents that occur around wind farms — there have been over 1,500 in the UK in a five-year period — are caused by the thing that you are told cannot happen: the breaking of the blades, blades being flung off, collapse of the tower, fire, and so on and so forth. These incidents happen in significant numbers.
1220. Research by the University of Edinburgh, just this year, shows that you would expect at least 117 turbines to burn down each year across the world. We are not saying that, generally, a member of the public can expect to get a lump of wind-turbine blade on the head. We are saying that when you are looking at separation distances, this has to be an issue. The Government's health and safety laboratory did tests on pieces of blade being thrown off. They worked out that pieces had been thrown to distances of nearly 1,500 metres. These are the distances that you have to take into account, and that is why we are talking about 2 kilometres.
1221. Everything, as you know, is subordinated to the 40% target. Interestingly, the industry will tell you that, if you require a distance of 2 kilometres, we will not have any turbines. Under ETSU, we have a very high night-time standard of 43 decibels, which is totally against the World Health Organization's guidance. In Germany, the night-time standard is 35 decibels. They have a standard of 35 decibels at night and up to 40 during the day. We, too, can have up to 40 during the day. Germany has twice the population density of Northern Ireland, yet does not seem to have any problem at all with wind turbines. That is not an issue, although wind energy is not working there. Germany can give that comfort zone and still, despite its higher population density, deal with wind turbines.
1222. That is not being done here. The public are being put last in this procedure. We think that the public, particularly the rural public, should be put first. It does not just affect the rural public; urban constituents are suffering because electricity prices have doubled in the past 10 years. You are being told that this doubling is because of gas prices. Yes, because gas is having to be used to support wind energy. If you did not have wind energy as, basically, a second grid, you would not have to use as much gas, and you would not have to use it in the inefficient way in which it is being used now. There is a cost for all of us.
1223. One of the reasons that we react so strongly to community benefits is because they are a way of avoiding the point that we were all promised lower electricity prices from wind energy, and we are not getting them. They are also a way of avoiding compensating those most badly affected. Those who live closest to the turbines are obviously the ones who must be compensated. That is common law, but that is not happening either.
1224. **The Chairperson (Ms Lo):** OK. Thank you very much indeed. We shall produce a draft report, probably towards the end of the year, and you will have a chance to look at it. Thank you very much, gentlemen, for your ongoing support and contributions.

23 October 2014

Members present for all or part of the proceedings:

Ms Anna Lo (Chairperson)
 Mrs Pam Cameron (Deputy Chairperson)
 Mr Cathal Boylan
 Mr Alban Maginness
 Mr Ian McCrea
 Mr Barry McElduff
 Lord Morrow
 Mr Peter Weir

Witnesses:

Dr Matthew Cassidy	<i>Northern Ireland</i>
Ms Meabh Cormacain	<i>Renewables</i>
Mr Michael Gordon	<i>Industry Group</i>
Mr Patrick McClughan	

1225. **The Chairperson (Ms Lo):** I welcome Mr Patrick McClughan, Mr Michael Gordon and Ms Meabh Cormacain. We have one more person.
1226. **Mr Patrick McClughan (Northern Ireland Renewables Industry Group):** I will introduce as I go round, Chair.
1227. **The Chairperson (Ms Lo):** OK. That is fine. We are very tight for time. Can you give us just five minutes, rather than going through a long presentation? We have probably all read your paper, and there will probably be a lot of questions to ask you.
1228. **Mr McClughan:** OK. Chair and members, thank you for offering us the opportunity to brief the Committee again. The Northern Ireland Renewables Industry Group (NIRIG) is the voice of the Irish Wind Energy Association and Renewable UK in Northern Ireland. We certainly appreciate your interest in the renewable technology that delivers such a high proportion of our clean electricity in Northern Ireland. I would like to introduce myself as chair of NIRIG; Meabh Cormacain, policy and communications coordinator; Dr Michael Gordon, vice chair; and Dr Matthew Cassidy, member and noise specialist. We intend to make a short presentation today, and we are happy to take questions afterwards.
1229. We strongly believe that we have the opportunity to develop a clean, low-carbon future for Northern Ireland. This Committee has a crucial role to play in committing to the vision and strategies that will deliver a more sustainable energy future, now and in the coming 12 months. It is widely accepted that our members' projects leave a legacy of benefit, and we look forward to continuing to develop and deliver benefits locally.
1230. I will hand over to Meabh for the presentation.
1231. **Ms Meabh Cormacain (Northern Ireland Renewables Industry Group):** Thank you, again, Chair and Committee. I will briefly discuss a few issues. I am aware that they are not, perhaps, within the remit of the inquiry, but they are of crucial importance to the sector at this time. We are really looking forward to 2015, which is an extremely important year for a number of reasons, amongst which is the fact that we will have a new single planning policy statement (SPPS). We have seen a few areas of concern within the draft SPPS. The SPPS in its draft form — and, I assume, in its final form — emphasises sustainable development. That is a golden thread which we believe is of fundamental importance. We believe that it is, therefore, vital that renewable energy is a particularly core element of our sustainable future, and there should continue to be a presumption in favour of renewable energy in the final version of the SPPS.
1232. There is one particular notable absence in the SPPS which we would like to bring to the attention of the Committee. The local councils will be developing their own development plans going forward. There is no reference to the strategic energy framework anywhere in the draft SPPS. We see that as a major gap. Our understanding, therefore, is that councils could potentially draft development plans that do not take into account our Executive-agreed strategic energy framework. We think that that is a fundamental problem that should be addressed.

1233. The renewable sector, particularly the wind industry, is highlighted in the draft SPPS in terms of community benefit and engagement. We think that the industry is a leader in both those regards. We have an objection to being singled out, given that we are a leader and we have produced protocols and the best practice guidance for the industry.
1234. My colleague Michael will raise a couple of other issues.
1235. **Mr Michael Gordon (Northern Ireland Renewables Industry Group):** In the five months — 20-odd weeks — to local government reform, we are keen to focus on transitional arrangements. We believe that it is important that planning applications that are currently in the system with the strategic projects team stay there, get closed out and stay with DOE.
1236. **The Chairperson (Ms Lo):** Are they article 31s?
1237. **Mr Gordon:** Some of them are article 31s, and others are strategic but not article 31. In relation to new applications in the system after 1 April next year, the threshold for wind projects should be 5 MW. Projects above that threshold should stay with the DOE and not sit with local government. Appropriate call-in measures and facilities also need to be available to allow the Department to call in wind projects where their determination is important for Executive priorities and the strategic energy framework (SEF).
1238. **Ms Cormacain:** There is one other issues, just before I hand over to Patrick to conclude. We mentioned it in our briefing paper that we submitted last week. To give the Committee an update, we had raised concerns about resourcing, particularly in the NIEA, and the time lines for the turnaround of projects. Subsequently, we had a productive meeting with the Environment Agency, and we received a letter from it stating that we would seek solutions together. Our issue in our paper was major delays in applications, plus compliance. We are hoping that they can be resolved. That updates the Committee on what was in our papers.
1239. **Mr McClughan:** As the Committee will be aware, other significant policies are being developed or amended for the renewable energy sector in 2014-17. They include two fundamental changes in our energy markets by 2017. That means a sustained effort on the part of the developers to make sure that projects are operational by this date. The urgency of an efficient planning system is, therefore, compounded.
1240. In conclusion, the renewables industry has delivered lower-carbon electricity, hundreds of jobs and millions of pounds of local investment in Northern Ireland. That is a direct success of a clear government vision, strategy and political will. Targets work, but they need full political commitment. We ask the Committee to take an active interest in the strategic energy framework review, the single planning policy statement and all other renewables-related policies to ensure that the long-term future of our environment remains a government priority. We urge that all such policy is based on robust, credible, consistent and peer-reviewed evidence.
1241. **The Chairperson (Ms Lo):** OK. Thank you very much. I think you were here when the previous group, Windwatch, talked to us.
1242. **Ms Cormacain:** We were outside.
1243. **The Chairperson (Ms Lo):** OK. Were you able to listen to some of their comments?
1244. **Ms Cormacain:** The last couple of minutes.
1245. **The Chairperson (Ms Lo):** They mentioned a lot of issues about legality and whether the EU directive or the UK renewable energy action plan are valid, so maybe we should talk to the Department. They mention a lot about noise level, distance and whether the ETSU guidelines are up to date. They are talking about whether 2 kilometres set-back distance should be the right distance. There are a lot of issues,

- mostly about noise, flicker distance, shadow flicker, low-frequency noise, not complying with methods, and whether people's claims of carbon reductions and community benefits are being tested. Can you respond to those questions? I am just going to ask one large lot of questions, and then you can answer.
1246. **Mr McClughan:** There are no statutory limits in relation to separation distance, but I will let Dr Cassidy fill you in on the 2 kilometre Scottish indicator that you illustrated. He will give some information around the three different levels.
1247. **Dr Matthew Cassidy (Northern Ireland Renewables Industry Group):** In relation to separation distance, noise is a separate issue because it is not really relevant. Noise itself is based on nuisance. You are talking about 500 metres in PPS 18 and 2 kilometres in the Scotland guidance. The 2 kilometres in the Scotland guidance comes about with spatial awareness. In that framework, it categorises three different categories. There are places where you cannot build wind farms, and also places where you can build wind farms. The 2 kilometres issue comes in where there are areas of significant interest, and you cannot build wind farms within 2 kilometres of villages and towns and things like that. That is not in relation to noise; that is in relation to landscape and visual purposes. In relation to noise, it is really about the level of noise that is permitted to not cause disturbance. That is where limits come in.
1248. **The Chairperson (Ms Lo):** That guideline seemed to be out of date. Do you agree that that needs to be reviewed?
1249. **Dr Cassidy:** The fundamental principles of the ETSU-R-97 guidelines that you referred to are still as valid today as they have always been, because they are based on a set of limits. The issues with ETSU that have been identified over the years have been addressed in the good practice guide, which I am sure you have heard about previously. The good practice guide defines a methodology to predict the level of noise, which was not in ETSU itself, but the principles of ETSU in respect of actual levels and limits that are permissible — there has to be a reasonable balance between protecting residential amenity and not unreasonably restricting development. So those two documents go hand in hand at providing a robust assessment and protecting residential amenity.
1250. **Ms Cormacain:** I am assuming that it was based on actual carbon emission reductions. We included a figure in our briefing notes, which was 628,000 tons of CO₂ savings in Northern Ireland in 2013-14. The calculation behind that includes the number of megawatts of renewable energy installed, multiplied by the average capacity factor. It includes the average savings of CO₂ per megawatt, which is based on a Department of Energy and Climate Change (DECC) figure. I can send through the exact calculation afterwards. I may not have included it, but I can send that through.
1251. **The Chairperson (Ms Lo):** That would be useful.
1252. **Ms Cormacain:** It is a standard figure that is used throughout the UK, and it is based on calculations that we have taken primarily from DECC as well as installed capacity.
1253. **The Chairperson (Ms Lo):** You also said that almost one fifth of Northern Ireland's electricity from April 2013 to March 2014 came from renewable sources.
1254. **Ms Cormacain:** It did. You will be very aware that the targets contained in the Programme for Government are 20% of our electricity consumed from renewable resources by 2015, which is next year. We have hit 19.5%, which we think is a great success. Of that, almost 94% came from onshore wind. We obviously have our 2020 targets, which we recommend that we do not lose sight of at this point, particular given that —
1255. **The Chairperson (Ms Lo):** It is 35%. Is that right?

1256. **Ms Cormacain:** It is 35% reduction in greenhouse gases, but there is a 40% renewables target. A cost/benefit analysis is being carried out at the minute by DETI in preparation for a mid-term review of the SEF next year. We really encourage the Committee to take an active interest in the strategic energy framework review, because we believe that the 40% targets are absolutely achievable by 2020 with the right commitment in place. Any watering down of those targets would be a really bad signal for investment and for Northern Ireland generally. That is a bit of a plea on our side in terms of the Committee and the strategic energy framework.
1257. Before I left the office today, I did a quick check, and 29% of our electricity is coming from wind today. It was 32% yesterday, and the day before, all-island — because we are in an all-island system — it was 44%. You may have seen something in the UK press on Tuesday. They were very pleased with themselves that 24% of their electricity was coming from renewables. We are regularly hitting 30% and 40% in Northern Ireland. So it is working, and it is a substantial part of our electricity mix at the moment.
1258. **The Chairperson (Ms Lo):** What about the accusation that we are all subsidising wind energy? As they said, we have not seen a decrease in electricity prices in the last 10 years?
1259. **Ms Cormacain:** There is a support system in place to encourage low-carbon generation. That is effectively to try to get generation into place before it becomes too late. The support system up until now has been called the renewables obligation. It is changing throughout the UK, and Northern Ireland will see that change to a different support system in 2017.
1260. **The Chairperson (Ms Lo):** Is it the ROCs?
1261. **Ms Cormacain:** The ROCs will change to a contract for difference, which we are calling a CFD. There are costs, but to give some alternative figures, in 2011 and 2012, Ofgem estimated that the cost of low carbon per household was 3·2p per day, which works out at about £12 a year. Those are figures from a few years ago. We have done our own research that says that there will be a cost of about £7 per year per consumer bill to reach Northern Ireland's 2020 targets. We would also like to point out that between 2004 and 2011 — this is a DECC figure — average household energy bills doubled. Some 85% of that was the rise in the cost of gas. So there is a cost, but it is a very minimal cost based on the benefits.
1262. You also mentioned the legality. I was assuming that was the Aarhus convention. There were two cases. There was an Irish case and then a UK ruling which upheld, more or less, the Irish judgement. They both more or less say the same thing, which is, effectively, that the future national renewable energy action plans (NREAP) should be consulted on in such a way to comply with the convention. It did not affect the current one. The ruling also specifically noted that the NREAP is not a planning document, and the committee rejected a number of challenges made against relevant UK and Scottish Government policy documents. It also rejected a specific claim on a wind farm application. So all the relevant material, policies and processes were shown to be compliant with the directive, and the recommendations that came out would affect future rulings. Again, I am not a legal expert, but if you want more information on that, I will be happy to send some more through.
1263. **The Chairperson (Ms Lo):** That would be useful. We took legal advice on that. Mr McMullan raised that issue with us. What was the legal advice? That the UK Government have not breached anything?
1264. **The Committee Clerk:** Yes.
1265. **Mr McElduff:** I draw your attention to guidance protocols developed by local government authorities in my part of the world. Omagh, Strabane and Fermanagh councils have developed guidance

proposals on community benefits from wind energy for host communities. Does NIRIG have a clear understanding of what those guidance protocols and suggestions are? Might NIRIG review its policy on community benefits to reflect the protocol proposals coming from Omagh, Strabane and Fermanagh councils?

1266. **Ms Cormacain:** I was aware that there had been draft protocols from two council areas. The Committee will know that, last January, we published a community commitment protocol. It was based on the situation at the time. We reviewed that this year, and produced best practice guidance. We did not want to focus specifically and solely on community benefits, because there is a lot more to communities than a community benefit scheme. There is an awful lot that needs to be done in respect of engagement, talking, early consultation and all of those other issues. So the good practice guidance covered a range of issues and included recommendations on early engagement and how to engage.
1267. As I said before, I think the wind industry leads by good example, particularly when it comes to engagement. Our recommendations on community benefit reiterated our previous recommendation, which is that there should be a minimum threshold. We then went further and recommended higher levels of community benefits, where possible. It is something that we have always said, and will continue to say: no two projects are the same and no two communities are the same. So we did not feel it was appropriate to have a flat rate for every project. Also, there are very significant rates increases coming down the line. At the minute, the rateable level for wind farms is £4,000 a megawatt, but we are expecting that to increase by up to 800% on 1 April next year. So there is going to be a significant financial difference in the local authority income from wind farms and individual wind turbines as of April.
1268. **Mr McClughan:** That June guidance document that Meabh is referring to
- also recommends that our member developers provide the opportunity for interested communities to discuss with said developers the joint ownership, or potential for joint ownership, of wind farm schemes. My day job is at Gaelectric, in the member's area. We have two wind farms that are currently under construction, and we are rolling out two very good community benefit funds in the area. So you can see it on the ground, and it is fantastic to watch communities benefit from something that is spinning away in the background, generating electricity and providing that much-needed support to local communities, especially in these austere times.
1269. **The Chairperson (Ms Lo):** We had lunch with members of that group. We heard about the community benefit and the community centre. They certainly get benefit out of it.
1270. **Mr McElduff:** I am interested in the figures. We have this figure of £1,000 a megawatt, but it has been suggested to me some companies offer £5,000 a megawatt. I do not know whether this is right, Patrick, but it says that over the 25-year lifespan of the Dunbeg project, you are really just talking about £567 a megawatt, which is below the NIRIG best practice guidelines.
1271. **Mr McClughan:** It is maybe not up to date. The Dunbeg project is about to be commissioned. It is a 42 MW scheme, and it is a fantastic opportunity for us as a company. It will offer over £1 million a year; it is at £1,000 a megawatt.
1272. **Mr Boylan:** Thank you very much for your presentation. You are welcome back, Meabh. I have a few questions about Tullyneill wind farm. Can anybody answer questions on that, please? Obviously, it is down my way, and I am liaising with the community. I am interested in this because I have heard a few wee things on the grapevine, and I seek clarity. It is in relation to the community benefit issue. Obviously, in the process, you will comply with the 500-metre limit in terms of the SPPS by-law. NIE takes out a way leave on ground. Can you talk me

- through your process? Have you talked to any landowners yet or offered any contracts or agreements? You do not have to give me the details, but tell me whether any contracts have been signed with people in that area inside the 500 metre distance?
1273. **Mr McClughan:** With respect to the Tullyneill application, there are landowners who own land within the 500 metres, and perhaps own land even 1 metre from the turbine, because, obviously, a turbine will be located on their land, so that is a fact.
1274. **Mr Boylan:** Have they signed contracts with you already?
1275. **Mr McClughan:** Yes. They are in a financial agreement with us.
1276. **Mr Boylan:** An advance agreement through —
1277. **Mr McClughan:** Even before we submit a planning application, we have all those financial agreements in place.
1278. **Mr Boylan:** Obviously, that is confidential.
1279. **Mr McClughan:** Yes.
1280. **Mr Boylan:** I ask that because the people are happy enough, but it does fly in the face of the policy. Do you know what I mean? It is within 500 metres of a wind farm. Is that correct?
1281. **Mr McClughan:** There is no set separation distance.
1282. **Mr Boylan:** That is the whole point. Chair, we are at this now long enough. There is no point in having the PPS 18 policy if companies are going to do that. We will be looking at that for the report. I am trying to tease it out.
1283. I have read your marketing strategy, and I have heard genuine concerns from people there about deflation of house prices and so on. Your marketing strategy states that falling house prices is not an issue. Have you the specific —
1284. **Mr McClughan:** We have been asked that a number of times by the same individual at Tullyneill. All the academic research published, even abroad, states that there is no conclusive evidence to suggest that wind farms have a devaluing effect on house prices.
1285. **Mr Boylan:** Let me follow that up, Patrick. It is a serious issue, and it is a local issue for me; I have been asked these questions. I do not imagine that people would buy a house if they knew that six wind turbines would be built nearby. Is that the right number of turbines?
1286. **Mr McClughan:** Yes, hopefully.
1287. **Mr Boylan:** Your brochure states that all the research shows that it will not impact house prices. However, no one would go to an estate agent and buy a house near a wind turbine unless they were offered a house for £1,000. I am trying to tease it out.
1288. **Mr McClughan:** Tullyneill, in particular, is a great example. The literature that we circulated on the first day that we went to the community to seek its opinion — at the community consultation event — was reviewed by the Advertising Standards Authority (ASA), and it gave our publication a clean bill of health. Last year, a claim was made by an anti-wind farm group that there was a direct impact on the price of houses in proximity to wind farms, and that proximity caused prices to fall. However, the ASA ruled that that was misleading and could not be substantiated.
1289. **The Chairperson (Ms Lo):** I recall reading something about house prices dropping and that some country has a policy of asking developers to compensate for that drop in prices. Do you know anything about that?
1290. **Mr McClughan:** I am a chartered surveyor, and you have to take so much into context: the housing market, the condition of the house, its desirability, proximity to schools and education and all that. A myriad of issues has to be considered.
1291. **Mr Boylan:** You outlined some general points. I want to tease this out with you.

- In my experience, 99% of the population would not buy a house near a wind farm.
1292. **Ms Cormacain:** Fair enough. However, a study was carried out earlier this year in the States, and it is the most recent research that I have access to. I know that you are talking about what you think 99% of your constituents would do. However, 51,000 houses and households were surveyed in America in this study, and they were closer to wind turbines than in any previous study. I will quote directly:
- “Regardless of model specification, we find no statistical evidence that home values near turbines were affected in the post-construction or post-announcement/pre-construction periods.”*
1293. I can send the link to that report to you. It is important to base it on the statistical research that has been done and that is out there.
1294. **Mr Boylan:** Meabh, I could argue the point that America is not here — let us be honest — but I will not get into that.
1295. **Ms Cormacain:** There have also been UK studies.
1296. **Mr Boylan:** I could argue that some parts of the UK are not here either. Patrick, you outlined some of your terms of reference, but, realistically, I do not know anyone who would buy a house between 1 metre and 10 metres away from a wind farm. I would like some other member to argue this point with me.
1297. **Mr McClughan:** I will give you some context. Our Carn Hill wind farm, which has six wind turbines, is on the outskirts of Belfast and is very visible to people who are flying in and out etc. About two months after it was commissioned, a house at the very bottom of the lane on the site, which has full sight of at least four of the turbines, sold for a higher price than it was being marketed at. That is my direct experience. I have no more to give you, unfortunately.
1298. **Mr Boylan:** That is grand, but it certainly does not instil confidence in the communities. Let us be realistic. It is up to the company — you have signed contracts already — but the guidelines under PPS 18 that houses cannot be any less than 500 metres from a wind farm are not worth the paper that they are written on.
1299. **Ms Cormacain:** Cathal, we want to make sure that the policies are based on robust, credible, peer-reviewed evidence. All we can do is provide you with the evidence that we find.
1300. **Mr Boylan:** I am not arguing —
1301. **Ms Cormacain:** We are keen to have policies that are based on those.
1302. **Mr Boylan:** I am mindful of your opening comment about the SPPS, Meabh. You are looking at the policy and feel that, because of local area plans, there may not be room, strategically, for that kind of development. I am also mindful of the fact that we are using PPS 18, but nobody is adhering to it. That is underlined by the fact that contracts have been signed.
1303. You have answered one of my questions. I have another question for Patrick. You are familiar with Gaelectric. Are you aware of any families that have left any of the sites that you are working on anywhere on the island?
1304. **Mr McClughan:** Yes. Mr and Mrs Keane decided to leave their property close to our Skrine wind farm, which is a two-turbine site in County Roscommon. That was played out to the extreme in the Southern media. Our offer to Mr and Mrs Keane still stands, but, unfortunately, they have decided not to take us up on that and to move out of their property, which, incidentally, is more than 700 metres from the nearest turbine.
1305. **Mr Boylan:** I am asking those questions because we will publish a report. We have heard from both sides, and I am caught in the middle. Sinn Féin supports renewable energy — we stick by that — but there are concerns about whether the 40% target is realistic and achievable.
1306. **Ms Cormacain:** Absolutely.

1307. **Mr Boylan:** I have a final question about the ETSU-R-97. We took evidence from an acoustics expert on that. I am sorry, but I did not pick up what you said about that. Did you say that it is being reviewed or that it needs to be reviewed?
1308. **Dr Cassidy:** During previous Committee evidence sessions, representatives from environmental health said that it should be reviewed, and I think that your acoustics expert also said that it should be reviewed.
1309. The basic principles of ETSU-R-97 are a set of limits, which are still applicable and are based on legislation and guidance. ETSU-R-97 has been endorsed by all the regions of the UK, as has the good practice guide. From our perspective, it does not need to be reviewed.
1310. Wind farms go to appeal and public inquiries, and ETSU-R-97 is reviewed at those all the time and is open to question. That is why we have the good practice guide to help with that. As I said, issues have been identified about how you predict noise from wind farms and deal with other characteristics of noise. That is why things such as the good practice guide have come about.
1311. **The Chairperson (Ms Lo):** They argued that the level that has been set is far too low. Do you agree with that?
1312. **Dr Cassidy:** As regards the actual noise levels, that is the opinion of environmental health and others. From our perspective, the actual levels are designed for disturbance, nuisance and sleep deprivation. The figures have come about based on that. Another way to look at this is to do with reasonableness and restricting development. It is designed for the general population, but some people are more sensitive to noise than others. There has to be a balance in that context.
1313. **Mr A Maginness:** I will be very brief. I have a couple of questions, one of which relates to the 178 MW per annum or thereabouts between 2015 and 2020. Do you think that that is achievable?
1314. **Ms Cormacain:** I think that it is definitely sustainable because the alternative is not to build them and to continue to be more and more reliant on fossil fuels. That is the calculation that we need to get us to 2020. The system operator has said that the range of factors, including what demand will look like in 2020, will affect the 40%. It will be between 1,350 MW and 1,650 MW of installed capacity of renewable energy. So, the figure of 178 MW is taking the time that is left and the distance that we have to go.
1315. **Mr A Maginness:** Is it right that, this year, you have installed over 200 MW?
1316. **Ms Cormacain:** No. I think that I included that —
1317. **Mr A Maginness:** Your paper states that 172 MW of large-scale renewable energy is expected to connect during 2014 and that 41 MW of large-scale renewable energy generation has been connected to date.
1318. **Ms Cormacain:** Yes. We included that figure as an illustration of some of the other challenges that are beyond the remit of the Committee and the inquiry. There is a major problem with connecting large and small renewable developments to the grid. That applies to wind, solar and others.
1319. **Mr A Maginness:** So, that explains —
1320. **Ms Cormacain:** The discrepancy.
1321. **Mr A Maginness:** — the apparent shortfall.
1322. **Ms Cormacain:** Yes. As we said, 2017 is a very important year for market changes. There is a real push to get connected before 2017. The grid is one of our challenges.
1323. **Mr A Maginness:** I have one final point that relates to local government reform, which has been central to the Committee's work. You said that you believe that any live wind farm applications at the time of transition

- should be concluded by the strategic projects team at DOE headquarters. In other words, applications that are in the system should be completed by the strategic team. What about later applications that are outside that time? Are you saying that they should remain?
1324. **Mr Gordon:** Ideally, yes. After 1 April, everything above the 5 megawatt threshold would be —
1325. **Mr A Maginness:** Let me paraphrase what you are saying. “This is very important, and we have to get it right. The strategic team has the expertise etc. It would not be efficient to go to local councils because they have to relearn everything. It is better to keep these applications with the strategic team at headquarters”. Is that right?
1326. **Mr Gordon:** That is correct.
1327. **Mr McClughan:** That will be the thrust of our consultation response on the draft SPPS.
1328. **Lord Morrow:** Thank you for your presentation. I will be very brief because some of the issues have already been touched on. We have been shown maps today that show the density of saturation right around Northern Ireland. I see that you have 19 applications, and you are still waiting for a decision on 17 of them. What way have they been dispersed?
1329. **Ms Cormacain:** I assume that you have seen the small-scale wind turbine map and the large wind farm development map. I am happy for colleagues to jump in to answer. DETI has implemented a good support programme for single turbines. It is generous and based on diversifying rural incomes. There has been a real upswing in the number of single turbine applications. I do not think that any of my colleagues who work in that area would question me when I say that I do not think that they will all be built out. Grid connection costs for single turbines have increased rapidly. That is one of the big challenges. So, I would not assume that all or even a major part of those single turbines will be built. As for large-scale developments generally, there is a whole range of —
1330. **Lord Morrow:** The 19 applications — the wind farms —
1331. **Ms Cormacain:** They are large-scale wind farms.
1332. **Lord Morrow:** Will you comment on that?
1333. **Ms Cormacain:** A whole series of constraints affect where a wind farm can be built. There are a huge number of factors, ranging from the obvious wind speed to whether a location is in an area of special scientific interest (ASSI) or within a certain distance of an overhead line. The list of factors goes on and on. The policy states that those constraints will be taken into account.
1334. The wind farm applications have been made for sites in areas where the policy states that it is possible to build them. The figures of 17 and 19 are a reference to the fact that an awful lot of the applications that have been submitted in the last 18 months have not been turned around within the six-month target that we understand is in the Programme for Government. I am not sure whether any of my colleagues want to come in on that point.
1335. **Mr Gordon:** With the dispersal of the 17 wind farms, there are some new sites, but it is fair to say that some are applications for extensions to existing sites. You mentioned saturation, and I think that you are probably referring to the landscape and visual impact in particular.
1336. **Lord Morrow:** I am thinking about County Tyrone and places like that?
1337. **Mr Gordon:** Challenging planning judgements need to be made there. There are two sides to the argument: that there has been saturation; and that it is about consolidation. They are two sides of the same coin.
1338. **Lord Morrow:** It is a glass half-empty or half-full situation.
1339. **Mr Gordon:** Yes. Meabh mentioned the obvious point that applications

- are submitted for locations where the wind speed is highest, and there is an obvious coincidence between the highest wind speeds and the highest landscapes. We work within constraints, but planning judgements need to be made.
1340. It is worth recording that there is no free-for-all in planning. It is not easy to get planning permission for a wind farm. It is quite challenging, which is why it takes quite a long time. I am sure that, in your discussions with the Department, that has also been the feedback. The policy is operated in such a way that judgements are made. Applications that should not be approved are not approved, and there are examples of refusals and of applications being withdrawn when it has looked as if they would be refused. It is not a free-for-all, and not every submitted application is approved.
1341. **Lord Morrow:** Would you like to comment on the economics of the issue? It has all been sold on the premise that we will have cheaper energy costs, but households have not seen that coming through.
1342. **Ms Cormacain:** I do not know that it is really fair to say that the population has been sold it on the basis of cheaper energy. The argument for sustainable energy goes way beyond prices. It is about a sustainable future.
1343. I mentioned that there are costs to developing a new energy system. Fundamentally, we are in the middle of a major shift in and restructuring of our entire energy system. That happened when we electrified 100-odd years ago, and it is happening again. We are facing challenges as the grid suddenly has to cope with different demands being made of it. People are also now seeing their sources of energy whereas before, if they did not live near Ballylumford or Kilroot, they did not see where their energy came from, and they switched on the light and that was that. We are in a period of major flux, and there are challenges. We are also unavoidably facing higher fossil fuel prices.
1344. The trend is up, and it has been upwards for a very long time. A study was carried out a few years ago that stated that, if we hit our 2020 targets, the wholesale cost of electricity in the all-island market will fall by 11.5% as a result of renewable energy. In the long term, I do not think that we can afford not to develop these sources of energy, because we will be reliant on fossil fuels that do increase in price.
1345. **Lord Morrow:** You talk about fossil fuels. Your paper states that you had €1 billion of savings in the past five years.
1346. **Ms Cormacain:** Yes. That is as a result of renewables. I pulled that figure from the Sustainable Energy Authority of Ireland report, so I do not have equivalent figures for Northern Ireland alone. I am afraid that they are Ireland figures. They are just an example.
1347. **The Chairperson (Ms Lo):** We have also heard from Mrs Walsh, our special adviser for the report, that some people may use second-hand reconditioned turbines. Would the industry do that?
1348. **Mr McClughan:** Generally, on large-scale wind farm sites, there are brand new machines that are specifically designed and constructed for that site. The usage of second-hand reconditioned technology and assets is on small- to medium-scale single turbine sites. They are reconditioned to a very high standard. If they were not, they would not be allowed to connect to the grid, for example. They should be scrutinised from a warranty perspective as any asset would be with regard to technology warranty and availability. So, they should be of good condition generally.
1349. **The Chairperson (Ms Lo):** Would they have the benefit of newer technology to reduce noise?
1350. **Ms Cormacain:** It would depend. A reconditioned turbine does not necessarily mean that it is any better or any worse than a new turbine. If it is properly fitted, it should not be any

noisier. If it is noisy, that implies that it has not been fitted properly and is not particularly efficient. There is no real benefit to having a noisy reconditioned turbine. I do not know how many are being used. They are cheaper. I suspect that a number of individuals are probably interested in putting up a turbine on their land and are looking at them as cheaper options.

1351. **Mr McClughan:** All developments that receive planning permission are subject to post-construction noise monitoring surveys. We all have to undertake noise surveys after a wind farm has been constructed. Generally, the experience is that it is better than what was proposed. Do you want to fill in on that, Michael?
1352. **Mr Gordon:** From my experience of the noise issue, lots of assumptions are made in the prediction of noise. Often, when the post-commissioning noise surveys are undertaken, it is found that the predictions were overstated. The actual noise is less than what was predicted through the noise impact assessment.
1353. **The Chairperson (Ms Lo):** Are you saying that, in 2017, you will see a drop in renewable energy applications because of the change in policies?
1354. **Ms Cormacain:** Given that it takes so long to get from thinking about a wind farm to having it in the ground — five, seven or 10 years — at this time, there is a lot of uncertainty as to what 2017 looks like. There are wind farms that have planning permission, which investors want to ensure are connected before 2017 so that they know exactly what their returns will be. There are projects that are still in planning that we would like to get through planning and connected to the grid. Obviously, that is dependent on regulatory and NIE work before 2017. By the time that 2017 comes round, we will know — fingers crossed — what the support system and market will look like. Hopefully, by 2017, we will have a very good idea what our 2030 targets need to be. At that point, we will be looking beyond 2020 and into 2030. At this time, there is a lot

of uncertainty as to what the level of applications may be. By 2017, we will know something different about the number of applications.

1355. **Mr McClughan:** Uncertainty is key from an investor's perspective, in the sense that investors want to see what the future looks like and what revenue streams will appear to them to be. They can lend on that basis and price that debt accordingly. When there is uncertainty, a little bit of turbulence or greyness around what may be coming down the line, investors take a step back across all industries. They say, "We will just watch what is happening here". It is up to us as an industry association to get involved and be proactive to get as much information for our members as possible. We are confident that there will be a market for us post 2017. We may not know what that looks like just yet, but we hope to know by early next year. That certainty that, up to 2017, gives us and our investors the confidence that is needed to keep investing.
1356. **The Chairperson (Ms Lo):** I presume that you have responded to the consultation on the draft SPPS to raise your points. Thank you very much indeed. It is very nice to meet you all again.

13 November 2014

Members present for all or part of the proceedings:

Ms Anna Lo (Chairperson)
 Mrs Pam Cameron (Deputy Chairperson)
 Mr Cathal Boylan
 Mr Colum Eastwood
 Mr Alban Maginness
 Mr Ian McCrea
 Mr Ian Milne
 Lord Morrow
 Mr Peter Weir

1357. **The Chairperson (Ms Lo):** The next item on the agenda is a look at details of our inquiry into wind energy. The Clerk has written a very good summary paper of the evidence, which is in your meeting pack. We have agreed to conclude our evidence gathering after we have all the information. So, we need to start looking at drafting the main issues and making recommendations. A short paper from the Clerk on the main issues has been tabled, and also tabled is a very good research paper from the Fermanagh Trust. It is not really that long. Members, do you need a couple of minutes go over the Clerk's paper on the main issues? There is one more tabled item, which a list of questions from Cathal on the inquiry.
1358. **Mr Boylan:** Last week we had a number of questions that were sent to us to ask the officials, and I did not want to prolong the meeting by asking them. I asked the officials whether, if I had the questions sent in writing, they would send responses back. There are about 10 questions. They are really about the wind farms and setback distances. The officials agreed to send responses back in writing.
1359. There is one other issue. I have been dealing with a group that is looking at a proposal for six wind turbines in an area outside my town on top of what is known as Keady mountain. A community group out there has got involved in opposition, and it has put a file together and wants to send it through today as part of the final process. It is basically on some of the same issues about setback distances. I would appreciate it if you would consider that. If they can, they will email it to you today, Chair, as part of the process. They had asked to meet the Committee, but we did not want to get into meeting with groups, so I just told them to make whatever points they wanted to. It is like this: they will be living with it. There is a proposal for six wind turbines over the next couple of months, and they have some concerns about it. If they write or email, I would appreciate it if we could take some of their remarks on this into consideration.
1360. **The Committee Clerk:** Have they sent us a submission, Cathal?
1361. **Mr Boylan:** They have sent some things.
1362. **The Committee Clerk:** I think that there is a formal submission from them in our —
1363. **Mr Boylan:** Most of the people have been following this inquiry, and some things were said in a presentation a couple of weeks ago.
1364. **The Chairperson (Ms Lo):** Cathal, we have looked at separation distance in detail already.
1365. **Mr Boylan:** I am not asking that. I am saying that, as part of this whole process, we have invited people in here. There are loads of people who we could have asked to give presentations, and we have kept them out of it. They got together as a group. There were some responses from Gaelectric and others last week, and all I am saying is that those people were listening to those responses and are challenging them. They have asked to write in about some of their issues and that those be taken into consideration. All they will do is email some of those concerns in response. They have every right to

- respond to it because they did not get a chance to present to the Committee. They will email some comments on what they feel about what NIRIG and Gaelectric said.
1366. **The Chairperson (Ms Lo):** We have to be fair to others. Some people passed the submission deadline, and we refused the inclusion of their submission in our report. I think that we have to be fair to the other people who have said that they wanted —
1367. **Mr Boylan:** To be fair, I do not know whether there were any deadlines, because this has been a live inquiry going on for a long period. If that were the case, we extended our inquiry and gave other people an opportunity to come here. I do not see a big issue in allowing another two or three pages of responses in an email to the live issues that were brought up a fortnight ago. It may be nothing different to what is there already, but I will be arguing for it, because at the end of the day, we will do our report, but those people may have to live with the turbines for the rest of their days. I am only putting that to the Committee. It is only an email with a few pointers in response to what members brought up in presentations. If the Committee feels that it is content that the inquiry is finished, so be it.
1368. **The Chairperson (Ms Lo):** The inquiry has been extended and extended, and I think that we need to draw a line somewhere and say, "Right. That it is all the information that we have received so far".
1369. **Mr Boylan:** Yes, Chair, but we are live in drafting our final report.
1370. **The Chairperson (Ms Lo):** It is up to members. What do you think?
1371. **Mr Weir:** What has been the practice up until now? I have some sympathy for people putting in whatever they want, but, whatever it is, we have to be consistent with what we have done in the past with our treatment of evidence. Is it a question of recording it but it essentially gets recorded in a separate category as late evidence or evidence that arrived after the deadline? Is it excluded or included? What is the situation?
1372. **The Chairperson (Ms Lo):** The majority of people met our deadline calling for evidence and submitted their written paper. There was only one —
1373. **The Committee Clerk:** Nobody has been refused except for one person, and they sent the submission after the Committee had agreed at the last meeting that it would not take any further evidence. The refusal was on that basis. One gentleman said that he was not making a submission as such but comments, which reiterated evidence that we already had from other people. So, on that basis, do you want to reopen it? The Committee agreed that that was the end of the evidence gathering. We have not been particularly firm; we have accepted late submissions. The deadline for giving formal submissions to the Committee was February 2014, and we have accepted a considerable number of submissions since then. There was only one person who came after we had decided a couple of weeks ago that that was the end of the evidence gathering. That is the only person who has been refused.
1374. **The Chairperson (Ms Lo):** Yes, someone emailed us with comments, and we wrote back and said, "No, we are not taking it".
1375. **Mr Boylan:** That is the point about the inquiry. If we go back to it, we cannot accept anything after February. So, we then extended it.
1376. **The Chairperson (Ms Lo):** We decided after the last briefing that we would not take any more.
1377. **Mr Boylan:** Peter is asking about the procedure. If we want to go back to the procedure, we can say that it ended in February. All I am saying is that there was a presentation here a fortnight ago. The second presentation was given by a certain group. It does not matter which group I am talking about, but nobody had a chance to respond to what was

- said. Those people heard things at the presentation and did not get a chance to challenge it. We opened up the inquiry for everybody to get a chance.
1378. **Mr Eastwood:** Is there likely to be a flood of people submitting if we open it up again? Probably not. So, we should maybe accept the submission and any others that were refused in the last couple of weeks. I do not think that there is much harm in it, but we will need to draw a line at some point.
1379. **The Chairperson (Ms Lo):** One person wrote to us after that submission, and we said that we were not accepting any more —
1380. **Mr Eastwood:** If we opened it up, we would have to allow that person to submit as well.
1381. **The Chairperson (Ms Lo):** Yes. If we are going to accept that submission, we will have to go back to the other person and say, “We’ll take your comments”.
1382. Cathal, to be honest, we have flogged the separation distance almost to death.
1383. **Mr Boylan:** Chair, but —
1384. **The Chairperson (Ms Lo):** Look into —
1385. **Mr Boylan:** To be fair —
1386. **The Chairperson (Ms Lo):** If you look at the Clerk’s paper, you will see that we have compared with other jurisdictions, we have looked at —
1387. **Mr Boylan:** Chair, to be fair, I do not know what is coming in the email. I am using that as only one example; there could be three or four other points. I do not know exactly what is in the email. The person asked whether they could give evidence in response to what was said. We could get into a debate about setback distances all day. If the Committee wishes not to accept any more, that is grand; that is the majority of the Committee, so it is fine. I will live with it.
1388. **The Committee Clerk:** I think that that group — *[Interruption.]*
1389. **The Chairperson (Ms Lo):** Can you listen to the Clerk, please?
1390. **The Committee Clerk:** I think that that group gave us a submission. It then wanted to change its submission and said that it wanted to give us an amended submission. That was quite a while ago; I think that it was in June or during the summertime. To date, however, we have not received it. Is the information actually available now?
1391. **Mr Boylan:** The information is available. That is why I am bringing it up today. I got an email last night that asked whether I would accept information on the last presentation.
1392. **Mr Weir:** The issue is whether it is the same.
1393. **Mr Boylan:** It is different.
1394. **Mr Weir:** Is it information that relates to what was said —
1395. **Mr Boylan:** It is information in the light of the last presentation by Gaelectric, which was a fortnight ago.
1396. **Mr Weir:** With the best will in the world, that is where that might be a bit of a problem. I am sure that all the stuff is very genuine. Does that mean that, when the group submits, that will be part of the evidence? Presumably, Gaelectric might dispute elements of that. Does it then have a right to come back on the submission? That is where I see a problem.
1397. **The Chairperson (Ms Lo):** It just goes on and on.
1398. **Mr Boylan:** To be fair, Peter, it does not, because it had the opportunity to present to the Committee.
1399. **Mr Weir:** But, with respect, if any group says, “We actually heard the evidence of so-and-so, who has produced this. We actually dispute that, and we believe that A, B and C are actually correct”, A, B and C having been asserted by another group may not have even been put to the group that presented to us. Does it then get a right —

1400. **The Chairperson (Ms Lo):** Of response to it.
1401. **Mr Boylan:** It is not a case of that.
1402. **Mr Weir:** It could be accommodated on one level, but I do not know whether you can have a situation where you keep on doing that, unless there is some sort of general line in the report that said, "Some groups submitted additional evidence after the deadline" or there was some acknowledgement of what happened without actually noting the evidence.
1403. **The Chairperson (Ms Lo):** I think that we have to draw a line somewhere. If not, we are just going to delay this. It will go on and on.
1404. **Mr Boylan:** Chair, as long as you read out a letter of apology.
1405. **Lord Morrow:** It will be recorded that you fought the battle.
1406. **Mr Weir:** Despite the best protestations of Cathal Boylan.
1407. **Mr Eastwood:** Tell them that I fought the battle, too, will you?
1408. **The Chairperson (Ms Lo):** I will thank them for their interest, but I will say that we have now concluded all our evidence and want to start writing our report. They are very welcome to look at the report.
1409. **Mr Boylan:** I record my disappointment.
1410. **The Chairperson (Ms Lo):** Members, do you have time to have a quick read of the Clerk's short tabled paper? I will start going through it, because we have to give the Clerk some direction on what we want in the report. Do you have time to have a look at it? I will give you a couple of minutes to read it.
1411. **The Chairperson (Ms Lo):** OK, members. We will go straight to paragraph 3 and look at the questions that the Committee Clerk has put to us.
1412. This is on Planning Policy Statement 18 (PPS 18). We talked about a strategic approach and all the other planning issues. The Committee Clerk wants us to decide whether a strategic approach that advocates zoning, or the identification of the most appropriate locations for wind turbines, would be effective. The various responses state that it is a bit too late now to do zoning. Perhaps the councils can take into account their local development plan, the regional development strategy, the strategic planning policy statement (SPPS) and the renewable energy framework, and then decide for their own area. What do you think, members?
1413. **Mrs Cameron:** To my mind, zoning would have been very good, but it may be no good at this stage. I do not know whether that means that it should still be done or whether it is simply too late.
1414. **The Chairperson (Ms Lo):** I got those feelings from the planners and the institute.
1415. **Mr Weir:** My point marries that point a little bit. Perhaps the development of actions through the local councils through area development is the next best thing to zoning. On a broader level — this may have been useful at the start — we should not at this stage try to do something that is very top-down without having a good deal of local knowledge. However, with local development plans, the council has a role in — as I said, this is not exactly zoning — establishing what should be in certain areas, using its local knowledge. That might be a slightly better route to take.
1416. **Mr Eastwood:** I take the points, but the question is whether we should have a strategic approach, and I still think that we should. Whatever body decides what that strategic approach should be, whether it is at a very local level or a more central level, it would have been far better if we had done it at the beginning, but we did not. I still do not think that that should mean that we just let things go the way in which they are going. There should be some level of strategic approach, however we decide that. I am not being prescriptive on it, but it would be ridiculous for us to say, "Let's not be strategic", even though we have not been until now.

1417. **The Chairperson (Ms Lo):** I agree with you, but what I mean is that, even with the development of the local development plan, councils need to take other strategies into account, such as the regional development strategy, the renewable energy framework and the SPPS, at that strategic level.
1418. **Mr Boylan:** I agree with a strategic approach. There is no doubt about it. I do not think that it is too late in some of the areas. Although we agree with renewable energy and all of that, the first question that should have been asked concerned need, to be honest. We have set a target, and we may not be able to meet it where there is a need. I am happy enough with what the departmental official said last week about local area plans, because those will have a big say, but I do not think that it is too late. I think that some of the areas have been saturated with this, to be honest with you, particularly Tyrone.
1419. **The Chairperson (Ms Lo):** On zoning, I think that they are saying —
1420. **Mr Boylan:** Yes, areas need to be zoned, but people need to reflect on the fact that, way back at the start of the process, areas were identified. There is one question that I want to ask —
1421. **The Chairperson (Ms Lo):** Sorry, I have just received a note. Members, can you move your tablets away from the microphones? Some members' microphones are being blocked.
1422. **Mr Weir:** Somebody's words of wisdom could have been lost to posterity.
1423. **Mr Boylan:** Chair, you mentioned the regional development strategy, which is the overarching strategy for all of this. Did we look at what was in it on renewables? I remember that, as part of the process of looking at 132 landscape areas, officials identified areas that they thought would be more appropriate and more viable for wind farms. Colum mentioned it and you mentioned it, Chair, and it is correct. The regional development strategy should outline major strategic infrastructural development. I agree with a strategic approach, and I certainly think that in the future local authorities will have a big part to play in zoning.
1424. **The Chairperson (Ms Lo):** OK. Are members in agreement? Perhaps not on zoning, but on the need to take a strategic approach, and that the best way in which to deal with it would be through local authorities when they are developing their local area plan.
1425. **Mr Eastwood:** In conjunction with the relevant Departments as well.
1426. **Mr Boylan:** And with the regional development strategy.
1427. **The Chairperson (Ms Lo):** Yes. OK.
1428. **Lord Morrow:** I have a comment to make about a strategic approach. I think that that is fine, but advocating zoning takes you in a different direction. That is basically where the problem is now arising, because it leads to saturation, as we know — in west Tyrone, for instance. I think that we need to be careful.
1429. **The Chairperson (Ms Lo):** No, we are not saying that we advocate zoning. We are just going to leave it for local —
1430. **Lord Morrow:** You are putting a full stop after "strategic approach".
1431. **The Chairperson (Ms Lo):** We are not going to write it like this.
1432. **Lord Morrow:** No, I understand that.
1433. **Mr Weir:** You are putting a metaphorical full stop.
1434. **The Chairperson (Ms Lo):** We will say that we do not think that zoning will be effective.
1435. **Lord Morrow:** So we do not think that zoning is the way forward.
1436. **The Chairperson (Ms Lo):** It is not the way forward, yes. I think the planners are going to say to us that it is too late now, and we should have done it a long time ago. OK. Fair enough?

Members indicated assent.

1437. **The Chairperson (Ms Lo):** The next question is:
- “Would this result in the saturation of some areas?”*
1438. We have already answered that.
1439. **The next is:**
- “Should there be different processes for individual turbines and wind farms to promote more cohesive planning?”*
1440. Again, I think we should say that the councils and the strategic planning team, the one in the Department, should work in close liaison. Councils are going to deal with individual turbines; then, within the Department, there is the strategic planning team, which is looking separately at wind farms. So maybe there needs to be more coordination between the two.
1441. **The Committee Clerk:** I think that I worded that rather badly. What I was actually getting at is that some of the submissions kind of alleged that the right hand did not know what the left was doing; councils do not know what was happening in strategic planning; and there was not that level of cohesion.
1442. **Mr Boylan:** I understand where you are coming from. They should be different processes.
1443. **The Chairperson (Ms Lo):** Particularly now that councils, from next year, will be solely responsible for planning in their own areas, there needs to be more talking with each other.
1444. **Lord Morrow:** It is called joined-up thinking.
1445. **The Chairperson (Ms Lo):** More joined-up thinking, quite right. Right face.
[Laughter.]
- Members indicated assent.*
1446. **The Chairperson (Ms Lo):** OK. Next, then, members:
- “Should there be closer definition of what constitutes economic considerations, as stipulated in both PPS18 and the draft SPPS?”*
1447. Maybe not a “closer”, but “clearer definition”?
1448. **The Committee Clerk:** That is right; that is what it should be. I was a wee bit tired by then.
1449. **Mr Boylan:** I would make it stronger, in terms of economic considerations. Does that follow on from contribution to communities? Are we talking about the benefits of wind turbines in general or the whole community aspect?
1450. **The Chairperson (Ms Lo):** No. In their planning statements, developers often say that they will create, say, 100 jobs, but, from the responses that we received, people are saying that there is no way that planners would go back in a year’s time to see how many jobs the developer has created and how many have been sustained. Developers claim to benefit communities by this amount of money or that. We might suggest a more definite requirement for developers to be less vague and more specific about the economic benefits and contributions to communities.
1451. **Lord Morrow:** That takes you into different territory. If a developer claims to be able to create a mythical 100 jobs, and you ask: “Over what period of time?”, he may answer that that will be done over the next 25 years. Who will be there, who started over 20 years ago, still standing and able to say: “No, 100 jobs were not created, so we should close down this whole thing”?
1452. **The Chairperson (Ms Lo):** However, we could ask developers to be more specific and more detailed and to say, for example, that at construction, they will create jobs for a project manager or whatever, construction workers; and then, once it is up and running, they will require this many staff to do that. We can ask them to give more specific details.
1453. **Mr Boylan:** I have a slight problem with that. It does not really fit into planning per se, because it is a material consideration. So developers will put in their business case as a part of their application. I do not know how we would

define that, to be honest with you, in most planning applications. Economic weighting is either given or not, and it is a material consideration in any planning application. So I am just wondering how you would clearly define that, in the planning application process itself, which might be slightly difficult. That is why I asked you whether it is community or economic. Clearly, this is the jobs and the economic element. Economic weighting counts in any planning application.

1454. **The Chairperson (Ms Lo):** It does. The responses from the community groups say that job creation and economic benefits are a big material consideration in planning. What they are saying is that there is no means whereby planners, afterwards, can verify that the developer came up with the economic benefits that he claimed for the project.

1455. **Mr Weir:** The only thing is that economic benefits can be intangible. If you take the view that, for instance, given the opportunity, more electricity will be generated and that could in theory lead to cheaper electricity if there was a surplus of it. That would have wider economic benefits for the community as a whole, for example.

1456. **The Chairperson (Ms Lo):** Exactly. That should be included in the statement: that the price will drop by whatever.

1457. **Mr Weir:** I think the problem, to some extent, is that it is very difficult to tie down the specifics and the implications. Cathal is right in that regard, but it is true of a lot of applications. I think that, realistically, if you get a situation where wind turbines are put up on the basis of a promise — that that series of turbines will create 100 jobs, but it creates only 40 — realistically, if you are judging it a year down the line, are you then going to demolish the wind turbines that have been put up? It is a difficult question. There may be a more general point that information on economic considerations should be made clearer and more specific, if possible; but I am not sure that there is a great deal further that you can go in that.

1458. **The Chairperson (Ms Lo):** That is what we will recommend: developers to be more specific on the economic aspects. Economic benefits are given such a high weighting in the decision-making process. People can just claim that their project will have such and such a big benefit, and yet they may not come up with it. Are we agreed on that then, members? Clearer definition?

Members indicated assent.

1459. **The Chairperson (Ms Lo):** The next one is:

“Should there be an audit of the effectiveness of PPS18 to determine the economic outputs of wind turbines?”

1460. **Lord Morrow:** That is a simple one. Yes.

1461. **Mr Boylan:** Yes.

Members indicated assent.

1462. **The Chairperson (Ms Lo):** Good. It is up to the Department to find a way of doing it, but, yes, we advocate that.

1463. **Lord Morrow:** I fully trust them.

1464. **The Chairperson (Ms Lo):** Next is planning processes and the inadequacies of current planning procedures. We want to see:

“if there is adequate consideration of the cumulative impact of turbines, given that planning officials have confirmed that they use their professional judgement to decide when saturation point has been reached”.

1465. The cumulative effect is a big issue in the community responses. We would support that and call for that.

1466. **Mr Boylan:** I would support that. That needs to be clearly defined.

1467. **Mr Weir:** I think that, even leaving aside wind turbines, it can be a wider issue in planning. There is always this balance between what the saturation effect is, and treating an individual application on its merits. I think that, at times, it veers a little bit more towards the individual application than looking at the cumulative effect. It is a wider issue than purely the wind turbines.

1468. **The Chairperson (Ms Lo):** Yes. We will put that in, then?

Members indicated assent.

1469. **The Chairperson (Ms Lo):** The next one is:

"Should conditions relating to noise complaint investigation be routinely attached to planning consents?"

1470. I think so; that is the case in the rest of the UK.

Members indicated assent.

1471. **The Chairperson (Ms Lo):** The next one is:

"Should planning applications for connection to the grid be assessed at the same time as the turbine application?"

1472. Logically, you would say yes; but the explanation from NIE is that a scheme has to have planning permission before it can consider whether it can connect that scheme to the grid —

1473. **Mr Boylan:** It is not our job to defend NIE. We are making this recommendation; I believe it is a good one. Whether NIE adheres to it is another thing.

1474. **The Committee Clerk:** Apparently, it is routinely done in England and Wales.

1475. **Mr Boylan:** I think that, as part of our report, I would recommend it.

1476. **The Chairperson (Ms Lo):** OK. It is up to members.

1477. **The Committee Clerk:** If you were making a planning application for a wind turbine, you would have to have some idea about connection to the grid, the feasibility and the cost of it at the time.

1478. **Mrs Cameron:** That is a commonsense approach

1479. **The Chairperson (Ms Lo):** What NIE has said to us, as far as I recall, is that it has — or we suggested that it should have — information on its website so that people can know in what areas you can connect to the grid easily and in what areas it is more difficult.

1480. **Mr Weir:** I appreciate what you are saying in terms of the constraint at one level, Chair. However, should we go a little bit further and say that the system should change to try to tie in the planning permission with the issue of connection, whatever way round it is, rather than simply get the planning permission and hope that you get that. With the best will in the world, if you are left effectively with a potential eyesore that is not serving a useful purpose and is unable to be connected to the grid, it makes —

1481. **The Chairperson (Ms Lo):** The issue is usually cost; not that it is an eyesore. When people get their planning permission, they may not realise that connecting to the grid will cost them something like £50,000 or £500,000, and they realise that there is no point in being connected to the grid.

1482. **Mr Boylan:** To be fair, we need to come away from that. I think that NIE cannot stand in isolation. If we are talking about Departments and everybody else working together, there is no way that a person is going to get planning permission and then find out that it takes a quarter of a million pounds to connect to the grid. There should be statutory body created as a part of the planning process. That is what I think should come out of this approach.

1483. **The Committee Clerk:** It was causing problems for planning officers because they were granting planning applications, but they had no idea how many of them were actually going to be built, so it made it difficult for them to assess cumulative impacts or anything else when they did not know how many were in the pipeline.

1484. **Lord Morrow:** Any would-be developer is going to have a clear indication. You are not talking about small amounts of money but about hundreds of thousands of pounds. So, from the day that they sign their name and put in the application, they know what this is all about. So I do not accept that. I take the argument up to a certain point, that NIE should be a bit more up-front,

but I also say this: the applicant needs to fully understand it, and I think they do. We are talking about a quarter of a million pounds, give or take £50,000 or £60,000 either side of it. That is the sort of stuff that they are getting into here.

1485. **The Chairperson (Ms Lo):** I think that wind farm developers usually have done their research, but people who install a single turbine may not. They may just think that they are going to get a grant, apply for planning permission and then, when they go to NIE and NIE says that the substation is miles away and it will cost you £500,000 to connect to the grid, they will just say “Oh, right.” Then you will have so many planning applications submitted to the office that will be just a waste of time.
1486. Sheila, are you saying that the rest of the UK does it at the same time?
1487. **The Committee Clerk:** Apparently, the ETI Committee is doing a similar inquiry into renewable energy and connection to the grid, and that is what I was told had come out of it. Because there is a monopoly of infrastructure provision by NIE in Northern Ireland, that is how it is done here; but, in other jurisdictions, there is not the same monopoly of connection provision to grid infrastructure and other companies provide these cost estimates at the time of the planning applications.
1488. **The Chairperson (Ms Lo):** I suppose that it is only fair to the applicants, who are spending all that time and money, that they should know the likelihood of all the costs involved. I am happy to say yes to that, members. What do you think? To assess the cost of connection at the same time as the turbine application?
1489. **Mr Boylan:** Yes I would be happy enough with that.

Members indicated assent.

1490. **The Chairperson (Ms Lo):** The next one is:

“Is there adequate information provided on generic planning application forms, or should there be a separate application specifically for wind turbines?”

1491. I would support that. Obviously, a generic application form is very simple, say, if you are building an extension to a kitchen. However, they use the same form for a wind turbine.
1492. **The Committee Clerk:** That is what we have been told by submissions, anyhow.
1493. **The Chairperson (Ms Lo):** I mean, they use the same form for an extension to a kitchen as they do for an application for 20 wind turbines on a 20-acre site.
1494. **Mr Boylan:** It is still an application.
1495. **The Chairperson (Ms Lo):** I think that there is a big difference.
1496. **Mrs Cameron:** That is a good point, Chair, but I wonder what difference it would make.
1497. **The Chairperson (Ms Lo):** It would be a separate form. There would be a general, household application form and then a more detailed one.
1498. **The Committee Clerk:** Apparently, you cannot give very much detail on the application form, so that any neighbours or anybody looking at the application form does not have very much detail on what is actually being proposed.
1499. **Mrs Cameron:** Does it state that it is a wind turbine?
1500. **The Committee Clerk:** I am not sure what it states. It may not state the height or the exact location of it.
1501. **Lord Morrow:** We are not saying that it is a major development either, are we? If it does not say “wind turbine” on it, I think that there should be a category for it. It does not have to be a complicated one — though it may end up so, I do not know — but I think that there has to be a separate category for this type of development. If it is being treated the same as an extension to your kitchen or something of a minor nature, that is wrong. It needs to be different.

1502. **The Chairperson (Ms Lo):** Yes. It would really alert people to that information. We should put it in.
1503. **Mr Boylan:** I do not know. It could be a series of red boxes that you just have to tick.
1504. **The Committee Clerk:** I hope that that is accurate.
1505. **The Chairperson (Ms Lo):** Yes, I do not know whether we are correct to say that it is the same form, but, from the submissions that were given to us, it seems that people are saying that the same form is used for a domestic application, such as a kitchen extension, as for a wind farm. That does not make sense to me.

Members indicated assent.

1506. **The Chairperson (Ms Lo):** The next one is:
"Is there adequate neighbour notification, or should this be made mandatory within a much greater radius than the current 90m?"
1507. I think it makes sense to ask for a greater radius to be used, particularly in rural areas. In urban areas, it is very different but in rural areas, if it is still 90 metres, you could only cover maybe one or two houses.
1508. **Lord Morrow:** If we agree that if it should be a different type of application form with a different process, I think that it has to be different here too.
1509. **The Chairperson (Ms Lo):** Yes.
1510. **Mr Boylan:** I know that neighbour notification is going to be in statute as part of the new Planning Act . I do not know when it is starting. Have you any suggestions in terms of the —
1511. **The Chairperson (Ms Lo):** Will the radius be bigger than 90 metres? The current radius is 90 metres.
1512. **Mr Boylan:** Yes, but we need to change that distance, obviously.
1513. **The Chairperson (Ms Lo):** We will just ask them to review it, rather for us to set it.

1514. **Mr Boylan:** At the minute, they are saying that, with single wind turbines, the distance should be 10 times the rotor diameter; so that could be 300 metres.
1515. **The Chairperson (Ms Lo):** No. That is for setting up, but this is for notification: informing people that there is a planning application made.
1516. **Mr Boylan:** Sorry, yes, you are right. That is sound, but there are two separate things here. Neighbour notification will be in statute under the new planning laws and the new regulations that are coming in. That is one thing that is coming in. The other thing is that in terms of —
1517. **The Chairperson (Ms Lo):** Neighbour notification has always been on the statute book.
1518. **Mr Boylan:** No. It has not been in statute; it has been discretionary.
1519. **The Chairperson (Ms Lo):** Oh. Right. OK.
1520. **Mr Boylan:** So we are just asking for review of the 90-metre distance, yes?
1521. **The Chairperson (Ms Lo):** Sorry, you are right. It says:
"mandatory within a much greater radius than the current 90m".
1522. **The Committee Clerk:** Some of the community groups have been asking for a radius of five kilometres and that some type of mailshot or something be sent out.
1523. **Mr Boylan:** Well, I think —
1524. **The Committee Clerk:** I am only passing on what they ask for.
1525. **Mr I McCrea:** I thought that they were talking about distances for the wind turbine; 500 metres or whatever. It would not do any harm to have 500 metres.
1526. **Mr Weir:** I think the format we should use is, "Neighbour notification may be inadequate and it needs to be reviewed." I would be a little bit cautious

about drafting something particular for them.

1527. **The Chairperson (Ms Lo):** We should call for it to be reviewed, rather than for us to set it because we do not know.
1528. **Mr Boylan:** Yes. I was only asking the question.
1529. **The Chairperson (Ms Lo):** We will ask them to review the distance and say that it needs to be mandatory.

Members indicated assent.

1530. **The Chairperson (Ms Lo):** The next one is:

“Should the focus of environmental impact assessments include the psychological and physical health of residents who may be impacted?”

1531. **Lord Morrow:** What are we saying here? What sort of a report would that be? Is it likely to come from psychologists, consultants and everybody lining up to give their report? Is it a wee bit OTT there?
1532. **A Member:** You get what you pay for.
1533. **The Chairperson (Ms Lo):** Are they required to make a health impact assessment?
1534. **The Committee Clerk:** Some of the residents’ groups say that there is evidence that people who live nearby are affected, for instance, by low-frequency sound and that that should be included in an environmental impact assessment.
1535. **Mrs Cameron:** It would not do any harm, would it?
1536. **The Chairperson (Ms Lo):** Again, should we ask them to review whether they extend the environmental impact assessment to include the health and well-being of residents?
1537. **The Committee Clerk:** I am trying to echo as far as I can the main areas of concern that came up in the submissions.
1538. **Mr Boylan:** The only way you could do any of that is by outlining certain things under the impact assessment, like the low frequency. That is part of the process anyway. Are we saying that we should stipulate certain things under the EIA? You can only test noise pollution and how that impacts on people’s health. I do not know how you would —
1539. **The Chairperson (Ms Lo):** It is going to be very difficult. At the moment, how do they judge the distance and impact of the noise level and how that may impact on people’s health? It is very difficult to measure the individual application’s impact on the health of local residents, taking into account that people have different health issues.
1540. **Mr Milne:** What are some of the reports saying about how this affects people’s health? Can you give us some examples?
1541. **The Chairperson (Ms Lo):** People have mentioned sleep disturbance.
1542. **The Committee Clerk:** It is the impact of noise of all descriptions — either low-frequency noise or noise that they can actually hear — disturbing their sleep. There is some evidence, I think. There are two points of view: that there is no evidence and that there is some evidence that low-frequency noise can impact on people’s health by causing, maybe, brain tumours and other fairly serious impacts. However, I am not sure that that —
1543. **The Chairperson (Ms Lo):** We could have a research paper to say that there is no medical evidence that a wind turbine would cause health problems.
1544. **Mr Boylan:** I suggest that we look at it through the EIA and expand that out. Obviously noise is one issue. I know that we are going to look at the ETSU-R-97 guidelines later. However, if noise is most of it, that is something that the EIA process should look at in more depth.
1545. **The Committee Clerk:** People have cited the impact on their psychological health. They may have retired to the countryside to have a beautiful view in a quiet area and, now, get up every morning and see 25 wind turbines in front of them. That

- could have an adverse psychological effect. They thought that they were buying into something else when they went to live there. Can you do that?
1546. **The Chairperson (Ms Lo):** It has been mentioned that, because of the lack of communication with local residents, people feel a loss of power and control in the planning process. That can also cause frustration and health problems. However, those are just too difficult to assess. I feel that, if we stick with noise level, maybe that is more tangible than to say that people need to take account of psychological and physical health impacts. There is not much impact on physical health.
1547. **Mrs Cameron:** That could be disputed.
1548. **The Committee Clerk:** Sleep disturbance has an impact on physical health.
1549. **The Chairperson (Ms Lo):** OK.
1550. **Mr Boylan:** Saying that supports the focus I suggested for the EIA. However, we also have to reflect in the final report what has been said about sleep deprivation.
1551. **The Chairperson (Ms Lo):** Perhaps we stick to the level of noise — it is mostly the noise that affects people's psychological and physical health — rather than specify that the impact assessment must include psychological and physical health assessment, because, practically, that may be difficult for planners to do.
1552. **Mrs Cameron:** In my view, it is just as difficult to demonstrate the impact on physical health as it is on psychological health.
1553. **The Chairperson (Ms Lo):** Psychological impact is difficult too. People could have an existing condition.
1554. **Mrs Cameron:** I do not think that we can ignore it because we cannot prove or disprove the psychological or physical effects that it may or may not have. A balance needs to be struck.
1555. **Lord Morrow:** If we follow through with the strategic approach and if an audit of the effectiveness of PPS18 is carried out, which we have said yes to, that should have a result at the end. Whilst I still think that we have to include it, I hope that it would not be too cumbersome and bureaucratic. We need an environmental impact assessment to include the potential psychological and physical health of residents. I hope that if this is carried through in the way that we have tried to outline it here, it should minimise it to a great extent. However, it will not eradicate it, because nothing ever does.
1556. **The Chairperson (Ms Lo):** I just worry about what that would mean in practice.
1557. **Lord Morrow:** I agree.
1558. **The Chairperson (Ms Lo):** How can developers make the assessment?
1559. **Mr Boylan:** That is fair, Chair. I think you reflected that. The only way we can realistically do it is through an environmental impact assessment. As part of that, most of what people said was on the noise pollution issue. On the next page, we are looking at ETSU-R-97 and then the setback distance. Collectively, there may be enough in the report to address it.
1560. **The Chairperson (Ms Lo):** I agree. That is my point. Are members content for us not to include the physical and psychological effects? Yes, we agree that they exist, but it would be very hard to do.
1561. **Mr Boylan:** As long as it is reflected in the report.
- Members indicated assent.*
1562. **The Chairperson (Ms Lo):** The second term of reference focuses on noise and separation distances from dwellings, which has been the most emotive aspect of the inquiry.
1563. **Mr Boylan:** We can agree the first one.
1564. **The Chairperson (Ms Lo):** The majority of responses from residents and local community groups are about noise and

distance. Do members want to see the ETSU-97 guidelines reviewed on an urgent basis?

Members indicated assent.

1565. **The Chairperson (Ms Lo):** There is no argument on that.
1566. **Mr Boylan:** I think that we can agree all these en bloc.
1567. **The Chairperson (Ms Lo):** Should arrangements be put in place for ongoing long-term monitoring of wind turbine noise?

Members indicated assent.

1568. **The Chairperson (Ms Lo):** Should research be instigated to determine the impact of low-frequency noise on residents who live in close proximity to individual turbines?

Members indicated assent.

1569. **The Chairperson (Ms Lo):** But, who is going to do it?
1570. **Some Members:** That is not our problem.
1571. **The Chairperson (Ms Lo):** Fair enough. Put it in.
1572. Should the make, model and age of the proposed turbine be recorded on the planning application? We have been told that reconditioned turbines are being used.

Members indicated assent.

1573. **The Chairperson (Ms Lo):** We move on to setback distance, which, again, is a big issue in Northern Ireland. Do we want to look at the minimum separation distance or whether current flexibility should still be available to planners?
1574. **Lord Morrow:** I cannot recall who said it in Committee, but somebody said that we have flogged this one to death.
1575. **Mr Boylan:** I wonder who said that.
1576. **The Chairperson (Ms Lo):** I said that.
1577. **Mrs Cameron:** I think that there should be a minimum.

1578. **Mr Boylan:** I agree; a starting point of 750 metres.

1579. **The Chairperson (Ms Lo):** In the rest of the UK, there is no mandatory setback distance, nor is there in the Republic of Ireland. It is judged more on the noise —

1580. **Mr Boylan:** Chair, I think we have flogged that one to death.

1581. **The Chairperson (Ms Lo):** It is more on noise level.

1582. **The Committee Clerk:** You have to take into account the fact that if you specify a minimum separation distance, it will apply to individual turbines, and farmers may not want that to happen.

1583. **Lord Morrow:** We are going to have joined-up thinking on all of this, so that should deal with that.

1584. **The Chairperson (Ms Lo):** Mrs Walsh, our adviser, said that noise level had nothing to do with separation distances, because you can have someone on each side of a valley and the noise level would be a lot higher if you measured it on the linear distance — 500 metres —

1585. **Mr Weir:** There is clearly no correlation. By definition, if you have something that is noisy, and you are closer to it, it will be noisier the closer you get to it. However, there are also other factors.

1586. **The Chairperson (Ms Lo):** It is geographical.

1587. **Mr Boylan:** The point, Chair, is that there will be joined up thinking, and we agree on a minimum.

1588. **The Chairperson (Ms Lo):** Our adviser says that it is not logical to have setback distances, because it depends on the area and on —

1589. **Mrs Cameron:** She is specifically addressing noise, not the whole issue.

1590. **The Chairperson (Ms Lo):** She is just looking at noise. However, she looked at setback distances in relation to noise. She is rigidly saying that there needs to be a separation distance, which would

make it very difficult. It would not be helpful to residents.

1591. **The Committee Clerk:** She said that there needs to be a robust measurement of noise. That was the main criteria. As Anna said, you could have a situation where there could be a wind turbine at the top of one hill and somebody living at the top of another one. If you go right down into the valley, it may be more than 500 metres, but that person will suffer a greater noise impact.
1592. **Mr Boylan:** I agree with the issue of a minimum separation distance. If that is the recommendation that is put forward, I am happy to agree with it. I think that there should be a minimum.
1593. **Mr I McCrea:** I do not disagree at all. The reality is that the Committee is making recommendations. We are not deciding what the changes, if any, will be. This whole report could be ignored by the Department; most of it likely will be. I do not think that we should get caught up on or worried about what we include in it. Certainly, there is an argument for this within the local community. I do not see why we should not include it, and it is then up to the Department whether to accept it. It is just a recommendation.
1594. **The Chairperson (Ms Lo):** In general, they do take our recommendations seriously. We can always go back to them and ask them to follow it up. If that is what members want, we will put it in. Are members content that they should set a minimum separation distance?
- Members indicated assent.*
1595. **The Chairperson (Ms Lo):** At the moment, they do have something like 500 metres anyway, so they will probably say that they are doing it anyway.
1596. The next recommendation is that, if a separation distance is to be specified, how that should be determined, taking into account constraint on the availability of land. I think that we should

just leave it for the Department to set the minimum separation distance.

1597. **Mr Boylan:** Yes, Chair.
1598. **The Chairperson (Ms Lo):** Are members content?
- Members indicated assent.*
1599. **The Chairperson (Ms Lo):** The next one relates to other forms of renewable energy. Do members wish to consider whether we agree with the view that we are taking different evidence on other forms of renewable energy and agree to mix? You cannot argue with that.
- Members indicated assent.*
1600. **The Chairperson (Ms Lo):** The third term of reference relates to community engagement. We are looking at whether there should be a pre-application consultation process. Absolutely.
- Members indicated assent.*
1601. **The Chairperson (Ms Lo):** The next one is wind farm cooperatives. I think that that is something that government should encourage and support. There is the tabled report from the Fermanagh Trust advocating cooperatives and citing examples in England where buy-in from local communities is encouraged, and where there is less delay, protests and opposition to it, and it benefits communities and gives people a say. I think we should include that.
- Members indicated assent.*
1602. **The Chairperson (Ms Lo):** The next one relates to statutory consultees. The list of consultees should be widened to reflect all users of the countryside. Are members agreed?
- Members indicated assent.*
1603. **The Chairperson (Ms Lo):** The next one relates to a mandatory community engagement toolkit. Are members agreed?
- Members indicated assent.*
1604. **The Chairperson (Ms Lo):** The next one is consideration of community views

- by planners and developers, and it is not just consideration; it is meaningful engagement.
1605. **The Committee Clerk:** Some of these are mutually exclusive. Those are different points of view.
1606. **The Chairperson (Ms Lo):** Sorry, those are community views by planners and developers. We are saying that there needs to be consideration of community views by planners and developers.
1607. **The Committee Clerk:** The planners are saying that they get due consideration; the residents are saying that they do not, and, furthermore, they have difficulty in resourcing any objections they bring to the planners. That was not clearly agreed. These are based on a lot of the things that were discussed at the stakeholder events, but some points were not agreed by stakeholders, and this was one of them.
1608. **The Chairperson (Ms Lo):** What we are saying is that planners and, particularly, developers need to listen more and engage more with communities and take into account their views and make changes in relation to the views of residents and have meaningful engagement with them. A lot of the respondents say that they just send circulars, knock on doors and put up an exhibition for four hours in an evening in the local town hall.
1609. **Mr Boylan:** What are we trying to say? The way I read it at the minute is that the community feels that it is a tick-box exercise, but the other side is that planners and developers are saying that they are robustly going through the process.
1610. **Lord Morrow:** Just on that point; it is not the lack of robustness or otherwise of the public consultation that I have an issue with. What I have an issue with is that it does not seem to have any impact. We have a consultation, and I agree with the process and that it should be happening, but what I find very hard to live with is that, after the consultation is over and they do not get the answer that they were looking for—
- and I am not specifically talking about this — they just go on anyway. Take, for instance, the closure of a hospital, where you have 15,000 or 20,000 people standing and protesting in a market square somewhere about the closure of their hospital, and everybody invariably says, “I do not want it to close” —
1611. **The Chairperson (Ms Lo):** The trust says, “We are going ahead.”
1612. **Lord Morrow:** It says, “Thank you very much. We have heard what you have said, but we are going ahead anyway.” What is the business of this [*Inaudible.*]
1613. **The Chairperson (Ms Lo):** Exactly. I think that that is the point being made by residents.
1614. **Lord Morrow:** Those who say that it is a box-ticking exercise have got it dead right.
1615. **The Chairperson (Ms Lo):** Yes. That is the main gist of respondents. They are being invited to an exhibition, with pictures and drawings, and what they say in opposition to some issues is never taken into account and no changes are made to the plans. What we are saying is that residents’ views need to be considered and incorporated if it is sensible and practicable to make changes and that people listen to respondents and residents. Is that OK?
- Members indicated assent.*
1616. **The Chairperson (Ms Lo):** Do members agree on timely and early engagement?
- Members indicated assent.*
1617. **The Chairperson (Ms Lo):** Neighbourhood notification? Do we want to follow the suggestion of 5 kilometres from the site? We will maybe just say that it needs to be extended.
1618. **The Committee Clerk:** I think that we left it that it should be reviewed.
1619. **The Chairperson (Ms Lo):** It should be reviewed. OK.

1620. **Mr Boylan:** It should be extended and reviewed. We will do the review first, with the intention of extending it.
1621. **The Chairperson (Ms Lo):** OK. On documentary evidence that residents have been informed, we are saying that that would be impractical and possibly against data protection law. That is the view of developers. However, you do not need to give out details; you just need to say how many residents were contacted and what the views are rather than —
1622. **Lord Morrow:** Yes, and state what means of media were used to publish it and make it known. In the past, when it was pushed and someone asked where the National Trust advertised for comments, I think that it was in the 'Belfast Gazette' or something like that. How many people around this table, for instance, read the 'Belfast Gazette'? It is published in London, which makes it very useful and transparent. That is an absolute mockery.
1623. **The Chairperson (Ms Lo):** I do not think that it was the National Trust; it was NIEA on the built environment.
1624. **Lord Morrow:** Perhaps it was.
1625. **The Chairperson (Ms Lo):** It was listed buildings or something. Anyway, I agree. We do not accept this. It is impractical. It is about how they approach it. You do not need to include details of people's names and addresses. It is very useful as a record of consultation.
1626. Information events should be properly organised. They should not be just four-hour exhibitions on a cold evening. We support the monitoring of community benefit schemes. The level of community benefits are to be set at government level. That is the case in England, and I think we support that. In Northern Ireland, we are much lower with respect to community benefits being given out by developers compared to the rest of the UK. Are members agreed?
1627. **Mr Boylan:** In relation to community benefits, are we saying that that should be part of the condition of approval on a planning application?
1628. **The Chairperson (Ms Lo):** I think so. Do you mean whether it is compulsory?
1629. **Mr Boylan:** Yes, should it be part of the conditions? If it is a condition in the planning application, then they have to adhere to it. I am only throwing this idea out here. If approval is given, then part of the condition of the planning application should be that the community benefit is highlighted, whatever that community benefit is. It could be monetary, or whatever the case may be.
1630. **The Chairperson (Ms Lo):** I do not think that we can do that. I do not know whether there is a piece of law —
1631. **Mr Boylan:** I think that Planning Service can do it as a condition.
1632. **The Chairperson (Ms Lo):** I do not know whether you need a piece of law to say that. They could legally challenge that.
1633. **Mr Boylan:** I am making the suggestion that Planning Service puts it as a condition as part of the application. The form of words is up to them.
1634. **The Committee Clerk:** I think that, if it is doing applications for shopping centres and so on, there is very often the stipulation that they have to put in a road or —
1635. **Mr Boylan:** Yes, it is a condition in the planning application.
1636. **The Chairperson (Ms Lo):** But that is very different. It terms of access —
1637. **Mr I McCrea:** Agreed.
1638. **The Chairperson (Ms Lo):** In terms of transport —
1639. **Mr Boylan:** Agreed; as part of the condition of the application.
1640. **The Chairperson (Ms Lo):** I do not think that we can do that. Can we check whether we have any legal grounds to say that they must —

Members indicated assent.

1641. **Mrs Cameron:** It is only a recommendation, Chair.
1642. **Mr Boylan:** It is nothing to do with —
1643. **The Chairperson (Ms Lo):** We cannot recommend something that is illegal.
1644. **Mr Weir:** We can; it just cannot be enacted.
1645. **Lord Morrow:** The Department will come back and tell us that.
1646. **The Chairperson (Ms Lo):** OK. We are a very liberal group.
1647. **Mr Weir:** Under your inspired leadership, we are moving in liberal directions. *[Laughter.]*
1648. **The Chairperson (Ms Lo):** OK. We move on to the community benefits register. I think that we should support that. The Fermanagh Trust highly recommended that. Are members agreed?
- Members indicated assent.*
1649. **The Chairperson (Ms Lo):** Community benefits to be located proportionately? I think so, too. Do members agree?
- Members indicated assent.*
1650. **The Chairperson (Ms Lo):** A reduced tariff for those living nearest? I think that that is a sensible idea.
- Members indicated assent.*
1651. **The Chairperson (Ms Lo):** Compensation for homes? Is everyone agreed?
- Members indicated assent.*
1652. **The Chairperson (Ms Lo):** OK, members. Thank you very much that is very productive. Sheila should be pleased.
1653. **Mr Boylan:** Thank you; and thanks to the staff.
1654. **The Chairperson (Ms Lo):** Is there anything that we might have missed out?
1655. **Mr Boylan:** Somebody contacted me about bringing forward information earlier on, because — *[Laughter.]*
1656. **The Chairperson (Ms Lo):** You can tell them that we have gone a long way and accepted a lot of the recommendations from residents and community groups.
1657. OK, members, a draft report will be prepared within the next few weeks. Happy Christmas. *[Laughter.]*
1658. **The Committee Clerk:** I think that you will hear from us before Christmas.
1659. **Mrs Cameron:** I would just like to say a big thanks to Sheila and the rest of the staff for the work that has been done on this. It started off as a mini-inquiry, but it turned into a —
1660. **The Chairperson (Ms Lo):** — a full-blown inquiry.
1661. **Mr Boylan:** Oh dear. A full-blown inquiry? A maxi-inquiry.
1662. **The Chairperson (Ms Lo):** We all say “Hear, hear” in support of the Deputy Chair’s comment. We endorse it. Sheila had to go through thousands of pages. She spent a whole week going through all the responses, so very well done Sheila.

29 January 2015

Members present for all or part of the proceedings:

Ms Anna Lo (Chairperson)
 Mrs Pam Cameron (Deputy Chairperson)
 Mr Cathal Boylan
 Mr Alban Maginness
 Lord Morrow
 Mrs Sandra Overend
 Mr Peter Weir

1663. **The Chairperson (Ms Lo):** Are members content with the report? Are you all ready to agree the report? OK? Are you content with the executive summary? Agreed?

Members indicated assent.

1664. **The Chairperson (Ms Lo):** Are you content with the key conclusions and recommendations?

Members indicated assent.

1665. **The Chairperson (Ms Lo):** Are you content with the introduction — paragraphs 45 to 56? Why is the introduction at the end, Sheila? That is not the introduction; it must be the conclusion.

1666. **The Committee Clerk:** No, no. It is the introduction.

1667. **The Chairperson (Ms Lo):** Why is the introduction at the end?

1668. **The Committee Clerk:** It is just the name of that part of the report. It introduces why are carrying it out and so forth and the background to it, before the actual evidence comes in.

1669. **The Chairperson (Ms Lo):** OK. Are members happy with that?

Members indicated assent.

1670. **The Chairperson (Ms Lo):** Are members content with the consideration of the evidence? That is paragraphs 60 to 245.

Members indicated assent.

1671. **The Chairperson (Ms Lo):** Are members content with the contents of appendix 1, the minutes of proceedings?

Members indicated assent.

1672. **The Chairperson (Ms Lo):** Are members content with the contents of appendix 2, the minutes of evidence?

Members indicated assent.

1673. **The Chairperson (Ms Lo):** Content with appendix 3, written submissions?

Members indicated assent.

1674. **The Chairperson (Ms Lo):** Content with appendix 4?

Members indicated assent.

1675. **The Chairperson (Ms Lo):** Content with appendix 5, the departmental papers?

Members indicated assent.

1676. **The Chairperson (Ms Lo):** Content with appendix 6, the research papers?

Members indicated assent.

1677. **The Chairperson (Ms Lo):** Appendix 7, other papers submitted to the Committee? Content?

Members indicated assent.

1678. **The Chairperson (Ms Lo):** Appendix 8 is the list of witnesses. Are members content?

Members indicated assent.

1679. **The Chairperson (Ms Lo):** Members, are you content for the report to contain the relevant extract from the minutes of today's meeting? Members will be agreeing to their inclusion in the report without prior sight of the documents.

Members indicated assent.

1680. **The Chairperson (Ms Lo):** OK. The report will now be ordered to be printed and submitted to the Business Office as

- the Committee's report on this inquiry into wind energy. The report will be embargoed until the commencement of the debate. How many copies are we printing?
1681. **The Committee Clerk:** Initially we are just printing two. We have to lay two in the Business Office within 24 hours, so any Member who wishes can go in and read it in the Business Office. The formal copies that are printed out by the PPO within the Assembly are usually the executive summary and the sort of main body of the report, and all the appendices are on a CD at the back. That would not normally be printed out. I think you can request a full copy, but I am not sure how many pages it is — about 3,000, I think.
1682. **The Chairperson (Ms Lo):** OK. At the last meeting of the Chairpersons' Liaison Group, we looked at thousands of pounds on printing. It is such a waste. Do we send the whole report to the stakeholders?
1683. **The Committee Clerk:** No, normally what we do is write a letter to anyone who has given us a submission or given evidence, and we just give them a link to the Assembly website, so then they can pick it up there.
1684. **The Chairperson (Ms Lo):** That is the best.
1685. **The Committee Clerk:** Rather than giving them a hard copy or anything else, I think that is just convenient.
1686. **Mr Boylan:** For clarification, when are we saying it is embargoed to? Have you any date?
1687. **The Committee Clerk:** The commencement of the debate in plenary.
1688. **Mr Boylan:** So what are we looking at? A couple of weeks?
1689. **The Committee Clerk:** Probably a couple of weeks, yes. I have to put it to the Business Committee and see when it is convenient to schedule it.
1690. **The Chairperson (Ms Lo):** Are members content with that?
- Members indicated assent.*
1691. **The Chairperson (Ms Lo):** And then we will do a press statement. Are members content with that?
1692. **The Committee Clerk:** There is a motion as well.
1693. **Mr Boylan:** Chair, I just thank the staff for the work they have done. I think we have done a good body of work in relation to it. We have stuck to our own remit as best we can. Obviously there were other factors outside of that, but we could not deal with them. I think it has been a pretty good exercise, and I think we gave everybody a fair hearing. I just want to put on record my thanks to the staff for all the work they have done in bringing this report forward for us.
1694. **The Chairperson (Ms Lo):** Absolutely.
1695. **Mr A Maginness:** I concur.
1696. **The Chairperson (Ms Lo):** A very balanced report, I thought. Well done to all, and well done to members, too. You all worked very hard on that as well.
1697. Members, there is a draft motion for a plenary debate on the inquiry at page 26. It is pretty straightforward. Are members content to proceed to lay the motion for a plenary debate on the inquiry, possibly in about two weeks' time?
- Members indicated assent.*



Published by Authority of the Northern Ireland Assembly,
Belfast: The Stationery Office

and available from:

Online

www.tsoshop.co.uk

Mail, Telephone, Fax & E-mail

TSO

PO Box 29, Norwich, NR3 1GN

Telephone orders/General enquiries: 0870 600 5522

Fax orders: 0870 600 5533

E-mail: customer.services@tso.co.uk

Textphone 0870 240 3701

TSO@Blackwell and other Accredited Agents

£21.00

Printed in Northern Ireland by The Stationery Office Limited
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ISBN 978-0-339-60553-4

