REPORT

ENERGY STRATEGY BUSINESS AND CONSUMER VIRTUAL INSIGHT AND AWARENESS CONSULTATION

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EXECUTIVE SUMMARY

This report presents the findings from research with Northern Ireland consumers and businesses to help support the development of a new Energy Strategy for Northern Ireland. The research was commissioned by the Department for the Economy and The Consumer Council and involved focus groups with 64 consumers and a survey of 157 businesses from across Northern Ireland. The research was conducted independently by Social Market Research (SMR) during August and September 2021.

Focus Group Findings

The following are the key points emerging from the 64 participants across the eight focus groups. The focus groups were conducted by ZOOM between 18th and 31st of August 2021.

- There is a high level of awareness of climate change and the need for the world to reduce carbon emissions generally. This awareness has been heightened by TV programmes such as Blue Planet and Planet Earth and by recent world weather events.

- Climate change and news of extreme weather have alarmed people, but they haven't driven those in our focus groups to action. They are looking for leadership and practical things like financial help and information to help them make choices. These seem to be the levers to effect behavioural change rather than information on climate disaster.

- There is a disconnect between awareness of climate change and personal behaviours. People see climate change and energy transition as if they were a drama unfolding on the big stage, but they mostly see themselves in the audience rather than as active participants.

- Whilst there is an acceptance that everyone must play a part, there is a general lack of urgency with many saying that they know they will have to make changes, but not until they are pressurised into it.

- This inertia is sometimes expressed as a need for leadership. People will want to play a part, but are looking for leadership, information, direction, and financial help to make changes.

- Legislation is seen as a key enabler "just tell us what we have to do". School children are seen as being key influencers and some point to children's influence on parents in successfully changing recycling behaviours.

- Health, education, and economic recovery from the pandemic are at the forefront of people's minds. Carbon neutrality comes further down the list of priorities. This points to a necessity to focus on messaging around importance of carbon neutrality and its relationship to the wellbeing of the economy and society.

- Cost or affordability is high on people's worry list and there is a concern that people who are better off will find it easier to change and that financial help should be tailored to income or outgoings.

- Smaller and more affordable changes are currently more palatable to people, for example, being as energy efficient as possible or getting better insulation installed. For bigger changes, there is a financial barrier where a capital outlay is required, say to change a boiler, or buy a more energy efficient appliance.

- There are differing opinions on how financial help should be delivered, but there is a high degree of consensus around the following model:

    1. A fixed level of universal grant set at x% amount of the initial capital cost and available to all;

    2. The remainder of the financial support to be means tested and made up of one (or combinations of) the following:

        - further grant up to 100%
        - low-cost loan
        - personal contribution.

- Most people are not actively seeking information on how to live lower carbon lives, most are passive, wating for "the government" to bring information to their attention. The preference is for information leaflets or a hybrid approach with TV and digital platforms giving simple factual information and advice.

- An appliance's end of serviceable life is a more important trigger for people to change to lower carbon solutions than environmental considerations.

- Many people have a small motoring budget and buy their cars second or third hand. For these people, owning an EV or a hybrid is something in the far future.

- The few who see themselves becoming active consumers are not ready to take the plunge into micro-generation until they know more about the upfront costs and how long it might take to break even on the investment.

The Energy Strategy consultation report has identified four different consumer populations one of which is vulnerable people; those who are chronically ill or disabled; on low income; or of pensionable age.

There were no discernible differences between the views expressed by people with disabilities or long-term illness and the rest of the focus group participants. The consumer focus groups did not produce qualitatively different views between vulnerable people and other consumers except for some general trends:

- People in fuel poverty already make all the savings that they can, often by turning their thermostat down low and, on occasion, going without heat altogether. For these consumers, heating is already an unaffordable utility.

- People on low incomes tend to buy their cars second or third hand and are unlikely to be in the market for an EV in the foreseeable future. They are likely to have concerns about the reliability and service life of a used EV.

- People on low incomes were more likely to say that financial help should be in the form on non-repayable grant and were more likely to express a fear of debt. People on higher incomes were more accepting of taking out repayable loans.

- Older people may need extra help to understand the complexity of change. It should be noted, however, that this view was more often expressed by younger people than by older people themselves.

Business Survey Findings

The following are the key points emerging from online interviews with 157 Northern Ireland businesses representing different business sizes and sectors conducted between 31 August and 7 September 2021.

- Approximately eight out of ten (81%) businesses surveyed said that taking actions to help limit the effects of harmful carbon emissions is a priority.

- Seven out of ten (70%) businesses said they have considered the challenges of ensuring they have the in-house skills and personnel to take actions to help limit the effects of harmful carbon emissions.

- A majority (70%) of businesses reported having taken some action to help reduce carbon emissions.

- Businesses who said they have taken action to help reduce carbon emissions most commonly said they had introduced electric or hybrid vehicles (17%), installed solar panels (14%), or recycled (12%).

- Just under half (47%) anticipate changes in the next 5 to 10 years to the way their business is powered, with relatively fewer businesses anticipating changes to how their business is heated (36%) and how their business can become more actively involved in helping to reduce carbon emissions (40%).

- More than eight out of ten (85%) businesses said they see opportunities or benefits to help reduce the effects of climate change. Businesses were more likely to see opportunities or benefits for their business in relation to the transport of goods or business travel (48%), and energy efficiency (41%).

- Businesses were asked to say how likely it is that their business would introduce a range of specific changes to help tackle the effects of climate change. The most common changes included using greener energy suppliers (75%) and purchasing electric vehicles (68%).

- The most important things that would encourage or motivate their business to become more active in reducing carbon emissions and helping to reduce the effects of climate change are government grants (24%) and cost savings (17%).

- The biggest barrier to business becoming more active in reducing carbon emissions and helping to reduce the effects of climate change is cost, cited by just over half (51%) of respondents.

- Almost one in five (19%) businesses said that in the next 12 months they expect that they will have to make changes to the way they operate to help support Northern Ireland's effort to meet its climate targets, most commonly a change to renewable energy sources.

- More than nine out of ten (95%) businesses said that the availability of financial incentives is important to encouraging their business to make changes to help limit the effects of climate change.

- Business grants (64%), and tax incentives (59%), were the most common factors that would encourage businesses to become more active in reducing carbon emissions.

- Most (69%) businesses said they would accept paying a little more for cleaner energy rather than allowing the burden of payment to fall heavily on future generations.

- More than six out of ten (63%) respondents rated the energy use within their business as either excellent or good.

- Forty percent of businesses believe that business costs will increase as we make progress in tackling climate change over the next 5-10 years.

- Most businesses (59%) said they would be willing to pay more towards reducing the effects of carbon emissions on climate change.

- Just over half (52%) of businesses said they had either an excellent or good awareness of the upfront costs of introducing new technologies to their business to help reduce the effects of carbon emissions on climate change

- Almost half (48%) of businesses said they have concerns about introducing new technologies with the aim of supporting climate change, with 46% saying they are waiting for new technologies before they adopt them.

- Approximately three out of four (76%) respondents said they feel that their business will need to be supported to make changes to help support efforts to reduce the effects of carbon emissions on climate change.

- **T**ax incentives (23%) and grants (37%) were the most commonly suggested ways of supporting businesses to make changes to help reduce carbon emissions.

- Overall, businesses reported an average pay back period of 9 years as acceptable to recoup investment costs to support reducing carbon emissions.

- Approximately two out of three (67%) businesses said that if they did invest in new technologies, to combat the effect of carbon emissions on climate change, they would expect lower running costs generally.

- Businesses suggested a number of indicators which could be used to measure business performance in making a positive contribution to climate change with the most common being reduced costs (18%), reduced

energy consumption (8%); smart metering / monitoring (6%); and carbon audits / energy efficiency audits (6%).

- Around half of businesses say that they have enough information to introduce change to reduce carbon emissions.
- Financial help from government, and government sticking to their commitments, were the most common ways that businesses said they need protections when making changes to help reduce carbon emissions.

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1. Background

1.1 Context and Key Drivers

Department for Economy

Energy is a devolved matter in Northern Ireland and falls under the responsibility of the Department for the Economy (DfE). The Strategic Energy Framework 2010-2020 sets out Northern Ireland energy policy until the end of 2020. DfE published on 17 December 2019 a 'Call for Evidence' to inform the development of a new Energy Strategy for Northern Ireland post 2020. The new strategy will set out policies and targets that help deliver the "net zero" emissions targets included in the UK Government's Road to Zero Strategy.

The Consumer Council's Responsibility

The Consumer Council was established through the General Consumer Council (Northern Ireland) Order 1984. Its principal statutory duty is to promote and safeguard the interests of consumers in Northern Ireland with specific statutory duties in relation to energy, postal services, transport, and water and sewerage. These include carrying out research and educating and informing consumers.

The Need for Research

Energy transition presents considerable challenges for Northern Ireland businesses and consumers. Therefore, it is important that DfE and the Consumer Council have robust evidence to inform the development of policy.

1.2 Research Aims and objectives

The research aims are to:

- build a robust evidence base that identifies the opportunities / challenges / motivators for consumers to embrace the behavioural and attitudinal changes to how they live, travel and work, required to address climate change through the new Energy Strategy.

The research objectives are:

- to provide representative consumers input on the following three themes:
  - Heating and energy efficiency for your home / business
  - Powering your home / business
  - How your family / business travels

- to consider consumer input with regard to:
  - expectation of what energy transition will mean to consumers
  - affordability
  - simplicity
  - protection
  - inclusiveness
  - reliability; and
  - empowerment
  - individual responsibility.

2. Methodology

2.1 Overview

Eight focus groups were conducted across Northern Ireland. The focus groups were conducted by ZOOM during which the PowerPoint was screen shared with participants. The groups were conducted in August 2021.

The survey is based on online interviews with 157 Northern Ireland businesses representing different business sizes and sectors. The survey was completed by businesses operating in all 11 local government districts across Northern Ireland, with survey fieldwork conducted between 31 August and 7 September 2021

Focus groups with the general public

SMR engaged with 64 members of the public in 8 focus groups. Seven of the focus groups covered specific geographical areas. The 8th group was comprised of people with disabilities from across Northern Ireland:

- Antrim and Newtownabbey Borough Council / Ards and North Down
- Causeway Coast and Glens / Armagh City, Banbridge and Craigavon
- Belfast
- Belfast
- Derry and Strabane / Fermanagh and Omagh
- Lisburn and Castlereagh / Newry, Mourne and Down
- Mid and East Antrim / Mid Ulster
- All areas disability

Achieved sample profile for focus groups

Table 1 below presents the achieved sample of 64 consumers.

Table 1 Socio-Demographic Characteristics of the Population in Target Local Councils [n=64]

		%	n=64
Sex	Male	50	32
	Female	50	32
Age	16-34	31	20
	35-59	42	27
	60+	27	17
Social Class	ABC1	47	30
	C2DE	53	34
Local Authority Area	Antrim and Newtownabbey Borough Council	6.25	4
	Ards and North Down	6.25	4
	Armagh City, Banbridge and Craigavon	6.25	4
	Belfast	25.0	16
	Causeway Coast and Glens	6.25	4
	Derry and Strabane	6.25	4
	Fermanagh and Omagh	6.25	4
	Lisburn and Castlereagh	6.25	4
	Mid and East Antrim	6.25	4
	Mid Ulster	6.25	4
	Newry, Mourne and Down	6.25	4
Disability group		5.0	8
Total		100	64

Achieved sample profile for online survey

Table 2, below, presents an overview of the achieved sample of 157 businesses in terms of business size and sector.

Table 2 Sample Profile of Businesses (n=157)			
		Sample (%)	Sample (n)
Business Size	Sole operator	12	18
	1-5	8	13
	6-10	9	14
	10-25	11	17
	26-49	11	17
	50-249	24	37
	250+	26	41
Business Sector	Accommodation and food service activities	8	13
	Business administration and support service activities	9	14
	Agriculture, forestry and fishing	3	5
	Arts, entertainment and recreation	2	3
	Construction	12	19
	Education	1	2
	Electricity, gas, steam and air conditioning supply	2	3
	Financial and insurance activities	10	16
	Human health and social work activities	6	10
	Information and communication	6	9
	Manufacturing / production	15	23
	Mining, quarrying and utilities	-	-
	Professional, scientific and technical activities	5	9
	Public administration and defence	1	7
	Real estate activities	2	2
	Transportation and storage (incl. postal)	1	3
	Water supply, sewerage, waste management and remediation activities	1	1
	Retail trade or wholesale trade; repair of motor vehicles and motorcycles	12	18

3. Results from focus groups with the general public

3.1 Expected changes in the next 5 to 10 years.

All focus group participants expected to see changes in the next 5 to 10 years in the way we generate our power, how we travel, how we heat our homes and the ways in which we must become more energy efficient. Most expected to see fossil fuels being phased out and power generated instead by renewables. Most expected a revolution in personal travel and a wider use of EVs. The main changes expected in home heating were a greater emphasis on being energy efficient, more use of smart technology and greater reliance on gas. The main points made were:

- Fossil fuels are on the way to being phased out
- More solar panels and wind farms

"I expect we should get to the point where we use our wind and sea for all our power.

- More walking and cycling
- More EVs on the roads
- Less personal travel, and a change in how it is done with
- Greater use of public transport and, therefore, fewer cars
- More restrictions on travel, fewer flights and less non-essential travel
- Buses and other forms of public transport will use renewable fuel or hydrogen

> *"The world has gained from a reduction in travel during COVID It has given us all a wakeup call. Cheap travel pollutes the atmosphere and there is a false reasoning about not being able to do without travel."*

- Cleaner air
- Coal fires will be a thing of the past and oil phased out Gas boilers will be done away with but could be expensive to get rid of them
- Buildings will become more energy efficient, and these will be worth more.
- Older buildings will have to be insulated as they lose heat so easily
- A roll out of smart meters
- Consumers will demand that buildings are more energy efficient
- Builders should take the opportunity of building smarter homes.
- New builds will have smarter connections to the electricity supply.
- New buildings will have solar panels and we can sell power back to the grid.

"The whole building sector will change. I think much of the opportunities will be through new builds. New homes will be smarter, better insulated and eco-friendly."

'I think we will have more remote and smart ways of controlling things in the home."

"They have smart meters in GB, but we haven't caught up here yet."

3.2 Opportunities as changes come into being.

Focus group participants expect to be able to adopt more energy efficient and cheaper forms of home heating and to focus as much as they can on energy efficiency as a means of cutting their bills. Most said they would probably walk and cycle more for short trips, but for longer journeys and essential travel such as shopping they would still use a car or public transport. Some are planning to buy a hybrid car next time, but the preference is mostly for "self-charging" hybrids. Most did not understand the difference between "self-charging" hybrids and plug in EVs.

"I'll definitely try to use more public transport where possible, as long as it is less polluting."

"I think that very few people are in a financial position to choose an EV."

"I could definitely see myself walking more but only short distances. It would be difficult not to use the car for going to work and I can't bring home a week's shopping on the back of my bike."

Some commented that there need to be opportunities for everybody to participate, but the general public will need to be incentivised to do so.

"All these changes, ordinary people can't afford it, we will get left behind by the rich unless we get financial help."

"Saving money, paying up front is too expensive for ordinary people."

"We need to make sure that we all have the same opportunities, with the solar panels I feel that better off people got all the benefit."

"We know these things (opportunities to participate) are out there, but our Executive is terrible at pushing things forward to us and for us."

3.3 In what ways might you become an active consumer?

Most had never heard of active consumers in the sense of being active in buying and selling energy. Most were cautious about becoming an active consumer. Those who would consider it were motivated by cost savings or returns and not by a reduction in their carbon use. There was a high level of interest in having a smart meter and most were willing to become more active in small ways regarding energy efficiency.

"We are becoming more aware that we are all part of the environment, it starts with us saving money and making small changes like switching off lights that also help our planet."

No-one was willing to eat less meat for environmental considerations, only for health or cost reasons. Some were willing to consider micro production of electricity, but more from an entrepreneurial perspective rather than a climate perspective

"I might consider becoming a micro producer, but it depends how long it would take to get back the cost of installation. It is all about the money in the end."

"I could see myself installing a wind turbine, but it's all about how much you need to invest for a proper return."

3.4 Whose responsibility is it? Do you think you will have to make changes personally?

There was a consensus that everyone has a part to play in energy transition. However there was a passivity to many of the comments, with focus group participants looking for others to take the lead and some suggesting that they will not make personal changes until they are pushed or there is legislation.

"If I was made aware of what to do, I would play my part, but I haven't been given enough information at the minute."

"Most people will be looking to government to provide leadership, information, direction and financial incentive."

"It all our responsibility but it has to be led by government and supported at the start with information and finance."

"People will want to play a part, but we need help and direction and more than anything information."

"The onus is on government to promote change and raise awareness."

A substantial minority in the focus groups will not engage with change unless they are pushed to do so.

> *"There is personal responsibility, but we also need a bit of a push".*
>
> *"Everyone believes they will have to change, but they do it willingly or off their own bat? Most will of them will wait until they are pushed."*
>
> *"Changes will be forced on us eventually and then, and only then, I will make choices that work for me financially."*
>
> *"I'll make changes only when I am pushed into it"*
>
> *"I'm not willing to start making changes or to pay more for lower carbon, not until I am absolutely forced to it. I have other things to spend my money on right now".*
>
> *"Just legislate, tell us what to do and we will do it."*

Some mentioned that everyone having a responsibility, means that the whole world has a responsibility. There were references to developing economies going through their economic revolution and the need to ensure that their economic activity caused the least harm possible. Most agreed, however, that the reluctance or inability of other countries to meet climate change targets was not a justification for us to do nothing.

> *"There is no point in whipping ourselves when other countries, like China, could be doing so much more."*
>
> *"They're having their industrial revolution, just like we did in the 1800s. Let them catch up"*
>
> *"The big economies of the world need to act quickly, maybe even more quickly than us, but that doesn't stop us being responsible for the part we have to play too."*

3.5 How would you rate your current habits in terms of energy conservation and low carbon emissions?

Most focus group members said that they already take measures to be energy efficient. Largely this was to save money.

> *"I am very aware, I have installed LED lights and we keep a close watch on our electricity consumption because the bills can be very high if you are not careful."*
>
> *" I am getting timers for lights and I try to save electricity to keep the cost down."*
>
> *"I have cut down on using the tumble dryer and I make sure everything is turned off at night."*
>
> *"I am doing all I can to save money, tell me what more I can do that doesn't cost me money and I will try to do it."*

It was clear that some people could not afford to heat their homes to a comfortable temperature. Keeping the heat off was a way of saving money, rather than being energy efficient.

> *"I already reduce my heating, the thermostat is down to sixteen degrees."*
>
> *"I can't turn my heat down anymore. I already go cold sometimes in the winter because I can't afford to run the heating."*

Some admitted that although they are aware of carbon emissions, it is not at the forefront of their daily lives.

> *"I don't think too much about energy conservation, it's not top of my agenda."*

"I am probably a 4 out of 10, but I am not willing to pay more to be more energy efficient."

"Sometimes you just get caught up in life and don't think about it. I know I could do better."

"People are aware about climate change but don't really care, they think it won't apply to me it's someone else's problem."

"I don't practice what I preach, and I don't think about it enough, I like to be warm and comfy and I like using my car even though I know about carbon and the climate."

Some said that being more energy efficient did not fit with their lifestyle, their work pattern or their family's needs.

"It all depends on your lifestyle. I am a care worker and I have to use my car a lot for work. Then I have to ferry the children about as we live in a rural area. I can't cut down on my travel."

"I could probably be better on energy efficiency, but convenience comes into play especially when you have children."

"I like to travel it is part of my way of life and I won't change that."

"I love my car, I'd be lost without it, not having a car does not fit in with my lifestyle or family needs and I can't afford an EV."

" With a family, money drives most things, and you go for the cheapest option. Carbon, the planet and all that comes further down the list."

3.6 Should it be a priority to develop our own indigenous energy resources?

Most thought that it would be a good idea to develop our indigenous energy resources. This was less to do with energy security and more to do with taking advantage of the resources for our own needs.

"We are ideally situated for renewables as we are an island it should be a priority to follow Scotland's lead."

"Ireland north and south is an island, and we should be working together to develop an all island grid. With all this water around us we should be making hydrogen too."

There were, however, concerns about the cost of developing these indigenous resources.

"It would be a great thing in principle, but if it costs more, then people will be turned off."

"The cost of electricity is already high. I wouldn't want to be paying more just to produce more in NI."

"How would that be charged? I'd have to be assured that it is used to benefit the environment, me and efficiency."

Focus group participants also commented on the priority that should be given to developing indigenous resources, who should pay and who might profit.

"It will all have to be paid for. Health and education should come first, lower carbon is further down the list."

"Add a wee bit to corporation tax to pay for indigenous energy."

"We are beginning to produce more and more ourselves, but I worry about profits being excessive and ordinary people paying more than they should."

3.7 Electric vehicles

Opinions on electric vehicles varied, but most thought that they were too expensive and were worried about vehicle range and the charging infrastructure not being well enough developed.

> *"At the moment, I wouldn't consider one. They need to fix the range, the price and the battery charging infrastructure."*
>
> *"They're not quite there yet, are they? Too pricey, don't go far enough on a charge and you can't fill them up at a petrol station."*
>
> *"What happens if you are in a traffic jam and your battery runs out?"*
>
> *"Ordinary people like me can't afford to change their heating or buy an electric car"*
>
> *"If you had an EV you wouldn't use it more, I'd be afraid of running out of charge."*

Most people in the focus groups did not see EVs as being affordable to them in the near future, partly because they do not buy their cars new.

> *"I buy my cars third hand, I can't be a part of this great electrification thing, that's for people a lot better off than me."*
>
> *"My car is 10 years old, and I will change this year, but can't afford an EV, they are a bit too new."*
>
> *"So many of us buy our cars second hand. It's going to be a long time before we are in the market for a used EV, and then you have to think, is a used EV reliable?*

Reliability was a worry for those who buy their cars second hand, but there were also general concerns about reliability and servicing. Servicing costs and the ability of mechanics to deal with an EV were particularly concerning for those who service their cars outside of main dealer franchises.

> *"What mechanic are you going to go to with your EV when it breaks down, who is going to service it and what will the cost be?"*
>
> *"I don't know how much repairs would be. It would need a lot of research."*
>
> *"I can't afford to take my car to the dealer, I have a friend who does my servicing. How is he going to take care of an EV for me? Will I be forced to pay main dealer prices for servicing?*
>
> *"I would worry about the battery life. I would need to be getting at least 10 years out of a battery and for it still to be in a good enough state to sell the car.*

Many felt that tax breaks and incentives would eventually stop and that EVs would become as expensive to run as their current petrol or diesel cars.

> *"When we all move to EVs the road tax will come back and we'll end up paying a lot to get our cars charged."*
>
> *"Motorists are just a cash cow for government whether we are electric or not."*
>
> *"Charging should be at a standard tariff and should be regulated. There will be too much temptation to put electric prices up once we are all more dependent on having cars that we need to charge."*

Most felt that they needed much more information and knowledge before they could make a choice about an EV. There was also a low level of understanding about the different types of hybrids currently on sale. One person reported that they their employer had provided them with a hybrid vehicle but that they never plugged

it in, running it solely on petrol.

> *"I would need a lot more information before I could say yes to and EV even then I couldn't afford a new one. Maybe a second hand hybrid would suit me."*

> *"Hybrids are the rational choice at the moment because the charging infrastructure and the range just isn't there with pure EV. I might get a self-charging hybrid next time."*

> *"There are so many different types of EVs and hybrids. It is hard to understand what it all means."*

> *"My husband has a company car, a hybrid, but we don't have a charging point so he never charges the battery, he just puts petrol in it."*

Focus group participants pointed out that they do not buy a new car (or a second hand car) very often and, if they have made a recent purchase, they will not think about an EV for some time to come. Many said that they would hold on until EVs were available at lower prices and until there is an evident improvement to the number of charging stations

> *"People who have invested in a car in the last few years will hold fire until EV prices come down further.*

> *"Rapid charging points are very scarce. More charging points would reassure people that EVs are becoming a mainstream thing.*

> *"I like the idea of them, but the range and charging points are not up to it yet. I just don't see them as viable just yet."*

Some commented that an EV wasn't practical for their motoring needs.

> *"It wouldn't be convenient because I have to have my car available night and day, so when am I going to charge it?"*

> *"The length of time taken to charge a car in the middle of a journey just isn't practical. I do a lot of mileage and a fill of petrol takes a few minutes, but a charge, assuming you don't have to queue to use it, is much longer. That's down time as far as I am concerned."*

> *What happens if you don't have a driveway? I have to park on the street and not always in the same spot. Where am I going to charge it?"*

3.8 Affordability

Opinions were split on whether energy prices currently offer good value for money compared to other costs such as phone contracts or TV contracts.

> *"Everything is expensive nowadays, electricity, gas, broadband, SKY, they all get as much out of you as they can."*

> *"Energy is not good value at the moment as we are paying for all the renewable infrastructure."*

> *"Energy charges are fair enough when you think about what you get for it compared to the SKY package.*

> *"Power is relatively good value for money."*

There were numerous comments about the upfront costs of making changes to heating systems, or other low carbon solutions.

> *"I'd be worried about the upfront costs of all this and how long it takes to get your money back and will the thing last that long?*
>
> *"I have oil heating and would love to change to gas but I can't afford the cost of installing a new system.".*
>
> *"Ordinary people will need help with the costs of changing heating, otherwise we just won't do it."*
>
> *"Ordinary people can't afford to change we all need help with the installation costs."*
>
> *"Government needs to support all this with money, the installation should be "at cost" to people."*
>
> *"I was quoted £15,000 for a heat pump versus £1,500 for a gas boiler. Even for the environment, I couldn't afford the heat pump. Now I have the new boiler I won't be changing for a long time."*

People expect that there will be lower running costs from renewables or more efficient appliances and systems. There are concerns, however, that costs will creep back up again and eventually become more expensive than they are at the moment.

> *"I'd like to change my heating but it would need to be as efficient as I have now and be cheaper to run."*
>
> *"Renewables should costs less in the long run, so over several years your initial costs will get recovered, maybe 10 years, if I live that long!"*
>
> *"Will the cost go back up again? We need to be told honestly that there will be no price hikes if we change to new systems or tariffs."*
>
> *"Eventually we should be getting indigenous power at a greatly reduced rate."*

3.9 How can financial assistance be made available

Whilst all agreed that financial help is needed to help people migrate to lower carbon solutions, there were differing suggestions as to how that help might be delivered. Support for changes to rates or tax breaks found little favour. Non-repayable grants were the most favoured. Some preferred universal grants whilst others said that grants should be means tested. Amongst those who thought they should be means tested there was unresolved discussion as to whether this should be on household income or disposable income. Some suggested that utilities companies should offer to pay in return for consumers giving them their business.

> *"Why can't the people who sell you gas, change the system for you, it's in their interests."*
>
> *"Grants are always means tested and they should in fact be universal for things like more efficient heating."*
>
> *"Grants should be means tested in some way and the fairest way is on disposable income because that takes account of family size and other outgoings."*
>
> *"There are grants out there already, but the criteria are very tight, they need to be more generous and available to a bigger range of people."*

There was also support for part or all of the financial assistance being given as low interest loans but, again, there was strong disagreement from some.

> *"The best way would be a combination of non-repayable grants and repayable loans."*

"Loans are not a good idea, people are already living in fuel poverty."

"Not loans. You should only have to pay what you can afford and not be encouraged into debt."

When asked what combinations of assistance might work best, most focus group participants were willing to compromise. A combination of grants and loans were the most favoured.

"There should be a mix of grants and repayable loans. These should be mix and match depending on income."

"Grants should be available but means tested in a way the even slightly better off people get some help."

"There should be a sliding scale depending on income with repayable loans being phased in the higher up the income scale you go."

Various combinations of grant and loan were tested on focus group participants. There was a high degree of consensus on the following:

1. A fixed level of universal grant set at x% amount of the initial capital cost and available to all.

2. The remainder of the financial support to be means tested and made up of one (or combinations of) the following:

   - further grant up to 100% of the total cost for those on the lowest incomes.
   - a low-cost loan to cover some or all of the balance, on a sliding scale depending on income.
   - a personal contribution from those who can afford it.

3.10 What information do you need?

Most focus group members said that they didn't have enough information about carbon neutrality to make informed decisions. Furthermore, there was a degree of passivity in that people wanted the information brought to their attention by the authorities.

"We need a lot more information on what damage is being done to the planet and what we can do as individuals to alleviate the damage."

"I've never heard of active consumers, but I would like to get involved. Why is there not more publicity about it and how we can take part?"

"It is hard to know what the best thing is to do, so we need independent information to log into or call that will help us make the right decisions."

"I have no idea where to go for information and I am hearing a lot of stuff tonight that I didn't know about, so why is there not more information out there, not stuff you have to look for but pushed at you, pushed at us all."

"I'm not going to go looking for information on this stuff. It's up to government to shove it under my nose."

"We need lots more information thrown at us all until we are sick of it and do something about it"

Simple information that makes it possible to make informed decisions is preferred by all.

"Give us information in leaflets and also ads on TV, for example what does it cost to boil a kettle and how much would it cost if you switched to another form of energy."

"You need to know how much you are paying per unit and how that varies and how it might be cheaper at a different time."

"Yes, we need the kind of information that allows you to compare and make informed choices."

"Too much information is in complicated jargon and that is difficult for many people. It should all be made simple."

"We need much more information on the costs of installation and maintenance."

Some suggested that it would be useful to teach much more about carbon neutrality in schools. Some referred to the part played by school pupils in convincing their parents of the benefits of recycling. A similar strategy could be pursued, they said, with carbon neutrality.

"Teach all about energy conservation in schools. They are the adults of tomorrow."

"It should start with children, recycling started with information at schools who got their parents into it. So our children or grandchildren should be taught it and they will bring it home."

"I think in a funny way, maybe our children should be in the lead. They drove the recycling because they were taught it in school, and they carried the messages home to mum and dad."

Others suggested that information from fellow consumers was likely to lack bias and offered a way of learning from other people choices, decisions and experiences.

"Salesmen will always try to sell you the most profitable thing. Even government, they will always push the thing they prefer. But hearing from other people, real people and their real experiences, you can't beat that, that's priceless."

"There's the Consumer Council. I would trust them to operate a portal for reviews and experiences."

Government departments (local civil servants) and organisations such as the Consumer Council were seen as the most trustworthy sources of information.

"We trust government departments to give us accurate information but not our politicians."

"It depends where info comes from it has to be a trustworthy source. Like it or not, that is probably government."

"The Northern Ireland Executive should be pushing this, not London. We need our own local push on this."

"Government should be the source of information, the N.I. government because we have no trust in Westminster."

3.11 Reliability and new technology.

Most consumers had concerns about the reliability of new technologies. Some expressed doubt about the full-life cost of technology from manufacture to recycling.

"Where will all these batteries go after they come to the end of their life? Landfill, have we even thought about all that. We need to get that infrastructure in place too."

"I have major concerns about the production of batteries, it can't go on as it is it is unsustainable. In any system that is put into your home should be heavily regulated and suppliers tightly controlled."

Most members of the focus groups were uncertain about the ability of installers and vendors to carry out the

work to the correct standard and to stand over the product and installation if things go wrong. Whilst most thought that having an approved list of installers was a good idea, some suggested that this leads to higher prices and poor workmanship. Some suggested that manufacturer or supplier warranties should be underwritten by government or insurers so that, if all else fails, the consumer can still get redress.

> *"We need properly qualified installers and an approved lists of contractors."*
>
> *"To avail of grants there is a list of approved contractors that you have to use, but they cost more, and they get sloppy when they are on lists and greedy for the work."*
>
> *"There should a rotating list of installers that people get bumped off after a while and also if they get bad feedback. Then other installers could get a chance to get on the list."*
>
> *"There is too much room for installers to rip the backside out of it or sell me last year's tech."*
>
> *"What happens if the company goes bust, what use is the warranty then? Government or insurance needs to underwrite all this and make sure that consumers don't lose out to the cowboys or fly-by-nights."*

With technological change moving rapidly, some consumers had fears that they might make the wrong choice and get left behind by further technological advance.

> *"Tech moves on very quickly. If we buy too soon and tech changes, what will your vehicle be worth and how would you catch up."*
>
> *"Someone might sell you stuff cheap because it is about to be phased out or overtaken buy a new model."*
>
> *"I would be very worried about batteries in EVs. If technology moves on you are left behind and your trade in value will plummet."*
>
> *"I really need a new gas boiler, but I'm afraid to go for it in case things move on."*
>
> *"You would need a guarantee that it would last or be beneficial for a certain length of time if it became obsolete."*

3.12 Measuring success.

There were few suggestions about how we might measure success apart from the obvious one that we have met our targets. Some suggested input measures such as the number of EVs, smart meters and solar panels. Suggestions for output measures were mostly framed around having knowledge of individual and collective carbon use.

> *"You could measure your own success if you had something in your house that tots up all your energy use."*
>
> *"If we all knew more about our footprint it would motivate us all."*
>
> *"An overall NI carbon footprint measurement.*
>
> *"A central portal where we can find details of our progress at an NI level and an individual level. That would have to be with a government department to manage."*

3.13 Participants overall reactions and impressions at the end of focus groups.

Almost all the participants said that they had learned something from their participation in the focus groups. Many consumers had heard about smart meters and active consumers for the first time. Some commented that they would start to think more about their personal contribution to lower carbon.

> *"I realise after tonight that I haven't been thinking about it as much as I should, I'll focus more from now on."*
>
> *"I'll be more conscientious about my driving in future."*
>
> *"After talking about all this, I realise that I need to become more actively involved."*

Others said that their key takeaway was the need for everyone to work together.

> *"Listening to the whole range of views has been great, there is a need for more awareness and coming together on this."*
>
> *"We need to work together on all this, everybody needs to play a part.*
>
> *"We have to get going on it together, time is running out."*
>
> *"Just listening to people in this discussion is good, we should have more public debate, we are all in this together."*

The majority of focus group participants thought that co-design was a good idea as long as it was a genuine exercise in listening.

> *"Having a panel to get involved in developing policy, that would be great idea as long as they really listened to you."*

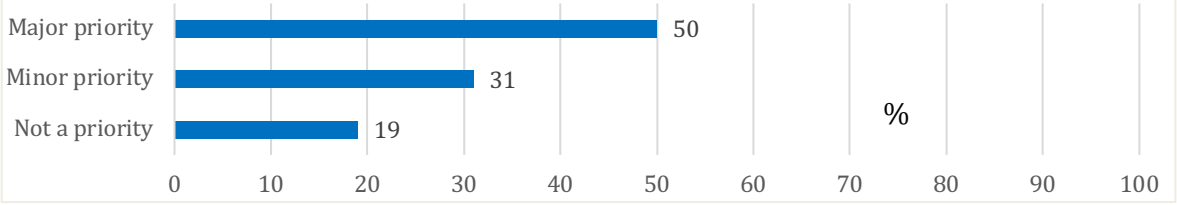
4. Results from Survey of Businesses

This section of the report presents the findings from a survey of Northern Ireland businesses. A copy of the survey questionnaire is included as Appendix 2.

4.1 Taking Action to Reduce Carbon Emissions as a Business Priority

Approximately eight out of ten (81%) businesses surveyed said that taking actions to help limit the effects of harmful carbon emissions is a priority (major priority, 50%: minor priority, 31%). Approximately one in five (19%) said that taking action to help limits the effects of harmful carbon emissions is not currently a priority for their business.

Figure 4.1: Currently how much of a priority is it for your business to take actions to help limit the effects of harmful carbon emissions? (base=157)

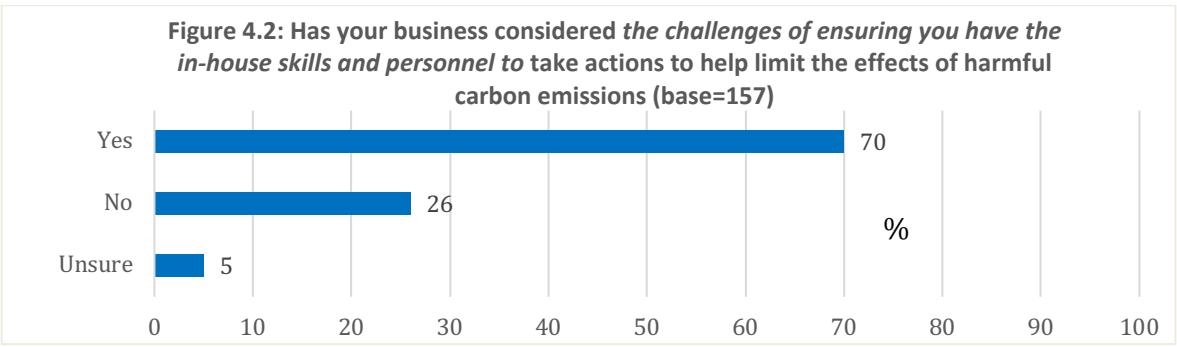


Analysis by business size[1] and sector[2] found no significant differences in the level of priority attached to taking actions to help limit the effects of harmful carbon emissions.

4.2 Availability of Inhouse Skills and Personnel to Support Energy Transition

Seven out of ten (70%) businesses said they have considered the challenges of ensuring they have the in-house skills and personnel to take actions to help limit the effects of harmful carbon emissions. Approximately one in four (26%) businesses said they have not considered this, and 5% reported to be unsure.

Figure 4.2: Has your business considered *the challenges of ensuring you have the in-house skills and personnel to* take actions to help limit the effects of harmful carbon emissions (base=157)



Smaller businesses (58%), compared with medium (87%) and larger (78%) businesses, were significantly less likely to report having considered the challenges of ensuring they have the in-house skills and personnel to take actions to help limit the effects of harmful carbon emissions.

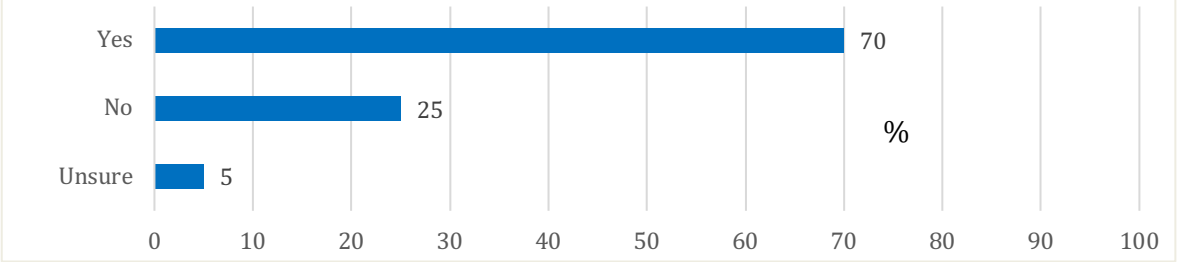
Although not statistically significant, manufacturing and production-based businesses were more likely to have considered the challenges of ensuring they have the in-house skills and personnel to take actions (services, 65%: manufacturing and production, 96%; construction, 63%; other 78%).

[1] For the purposes of analysis businesses have been classified by number of employees: small (0-49; medium; 50-249: large, 250+)
[2] For the purposes of analysis businesses have been classified by the following sectors: services; manufacturing and production; construction; and, other)

4.3 Businesses Taking Action to Help Reduce Carbon Emissions

A majority (70%) of businesses reported having taken some action to help reduce carbon emissions, 25% had not, and 5% were unsure. There were no significant differences in response to this question by business size or sector.

Figure 4.3: Has your business taken any action to help reduce carbon emissions? (base=157)



Actions Taken by Business to Help Reduce Carbon Emissions

Businesses who said they have taken action to help reduce carbon emissions most commonly said they had introduced electric or hybrid vehicles (17%), installed solar panels (14%), or recycled (12%).

Table 4.1 Actions taken by business to help reduce carbon emissions (n=112)	
	%
Introduction of electric/hybrid vehicles	17
Installed solar Panels	14
Recycling	12
Energy saving bulbs/LEDs/automated lighting	7
Reduce levels of business travel	7
Adopting a digital office environment/paperless office	6
Support environmental and renewable companies	6
Being energy aware, monitoring energy efficiency	5
Introduction of hybrid working methods/working from home/hot desking	5
Only use recycled packaging/products	5
Encourage active travel - walking to work/cycle to work schemes	4
Reduce and measure carbon footprint to reduce carbon emissions	4
Introduction of car sharing scheme	4
Reducing air pollution/filtering fumes	4
Using sustainable materials	4
Reduce consumption/smart stock control/reduce unnecessary orders	3
Reduce the use of plastics and chemicals	3
Change heating system	2
Reduce packaging	2
Windmills/wind generation	2
Reduce carbon in production methods	2
Encourage driving efficiency practises/vehicle tracking/improved route planning	2
Encourage the use of public transport	2
Planting more trees	2
Using digital meeting platforms - Zoom or Microsoft teams	2
Improve/upgrade insulation	1
Reduce heating levels	1
Reduce office space or the size of premises	1
Other	12
Don't know	1

Reasons Businesses Have Not Taken Action to Help Reduce Carbon Emissions

The most common reasons why businesses said that taking action to help reduce carbon emissions is not a priority included: not a business priority (21%); cost (15%); and, that the issue is not applicable to their business (15%).

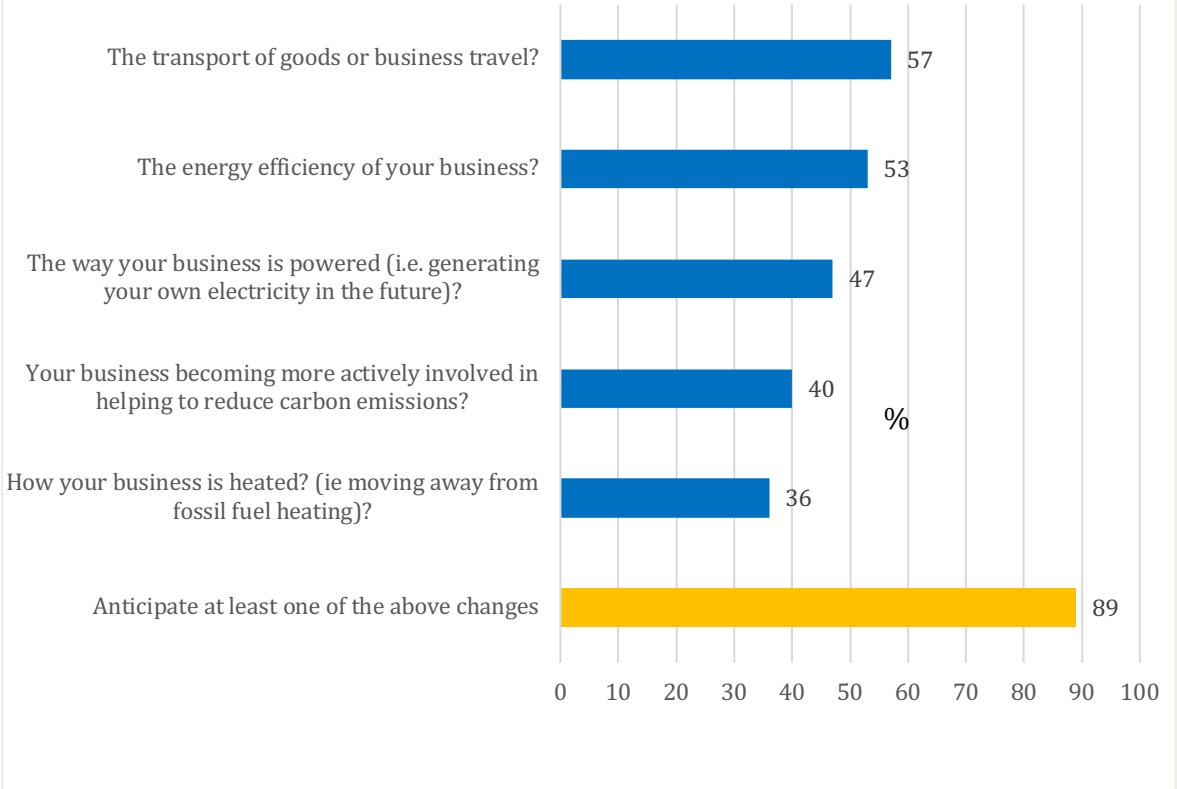
Table 4.2 Reasons for not taking any actions to help reduce carbon emissions (n=39)	
	%
It's not a priority	21
Cost	15
Not applicable to my business	15
Because of the pandemic	10
I don't know how to/need guidance help	5
I don't want to	5
Work from home	3
Already have measures in place	3
No time	3
Less vehicle use	3
I run a small business, so my emissions are minimal	3
There is no way to reduce carbon emissions in my company	3
Waiting for a financial incentive or grant	3
No one has forced me to do anything	3
Other	5
Don't know	3

4.4 Anticipated Changes to Businesses Over the Next 5-10 Years

Businesses were asked if in the next 5 to 10 years they see any changes to their business in terms of the type of energy used to power their business, transport and travel, how they heat their business, energy efficiency within their business, and becoming an active business in terms of contributing to reducing carbon emissions and reducing the effects of climate change.

Figure 4.4 shows that businesses were more likely to anticipate changes to their business in relation to transport and travel (57%) and energy efficiency (53%). Just under half (47%) anticipate changes to the way their business is powered, with relatively fewer businesses anticipating changes to how their business is heated (36%) and how their business can become more actively involved in helping to reduce carbon emissions (40%). Almost nine out of ten (89%) businesses said they anticipate at least one of the changes listed in Figure 4.4, with no statistically significant differences in response by business size or sector.

Figure 4.4: Please say if in the next 5-10 years you anticipate any changes to your business in terms of each of the following? (base=157)



4.4.1 Specific Changes to Businesses Over the Next 5-10 Years

Businesses who indicated that they anticipate changes to their businesses over the next 5-10 years were asked to specify what these changes are likely to be, with their responses below presented under each theme.

The way your business is powered (i.e. generating your own electricity in the future)?

Changes included: adopting solar power technologies (36%); focusing on energy efficiency (6%); adopting a digital office approach (3%); changing heating system (1%); and minimising unnecessary travel (1%).

The transport of goods or business travel?

Changes included: introduction of more electric vehicles (33%); reduction in unnecessary business travel 12%); increased use of digital meeting platforms (9%); introduction of hybrid vehicles (7%); more cycle to work

schemes (4%); increased use of public transport (3%); more agile working schemes (3%); more car share schemes (3%); encourage more active travel (2%); better route planning (2%); more focus on essential travel (2%); expecting greener choices to become cheaper (1%); fewer business flights (1%); reduce consumption (1%); more focus on supplying local community to reduce travel distances (1%); and, becoming more environmentally conscious (1%).

How businesses are heated? (i.e. moving away from fossil fuel heating)?

Changes included: changing to solar panels for heating (32%); only purchase energy from renewable sources (16%); use wind generated power (7%); move away from fossil fuel powered systems (7%); focus more on energy efficiency (5%); change to biomass heating (5%); change from gas (4%); change heating system (4%); improve insulation (2%); change from oil (2%); and reduce carbon dioxide emissions (2%).

The energy efficiency of your business?

Changes included: being more energy efficient (14%); reducing energy consumption (13%); install solar panels (12%); increased monitoring of energy use such as SMART meters (7%); using renewable energy sources / phasing out fossil fuel use (7%); use energy efficient lighting systems (5%); reducing costs (4%); purchase more energy efficient equipment (4%); improved insulation (4%); compliance will be drive by legislation (1%); increased use of electric vehicles (1%); reduce carbon footprint (1%); and getting paid to generate (1%).

Your business becoming more actively involved in helping to reduce carbon emissions?

Changes included: introduction of electric/hybrid vehicles (19%); increased corporate responsibility focusing on environmental issues (18%); use renewable energy sources (12%); better quality/improved recycling methods (5%); use less paper/card/packaging (5%); will be led by government legislation (5%); more employee involvement and education (5%); solar panels (5%); exploration of how we can reduce our carbon footprint/including supplier reviews (5%); and, increased efficiency/leading to a reduction in emissions and waste (5%); change heating source/method (4%); minimising unnecessary travel (2%); and, revise our production processes (2%).

4.4.2 Other Anticipated Changes to Businesses to Help Reduce Carbon Emissions

Businesses listed a range of other anticipated changes in the next 5-10 years which included: change to hybrid/electric vehicles (7%); increase/improve recycling levels (6%); only use renewable energy resources (5%); further investigate carbon offsetting options/plan how to reduce carbon footprint (5%); maintain agile working options (4%); minimise unnecessary travel/less business travel/better route planning (4%); fit solar panels (2%); further reduce use of plastics (2%); increased costs (2%); changing heating methods/sources (2%); use of more monitoring systems/smart meters/buildings (1%); focus more on digital business solutions (1%); need additional government support (1%); will use less paper/card or packaging (1%); plant more trees (1%); upgrade technology/equipment to increase efficiency (1%); and, use more recycled products and materials (1%).

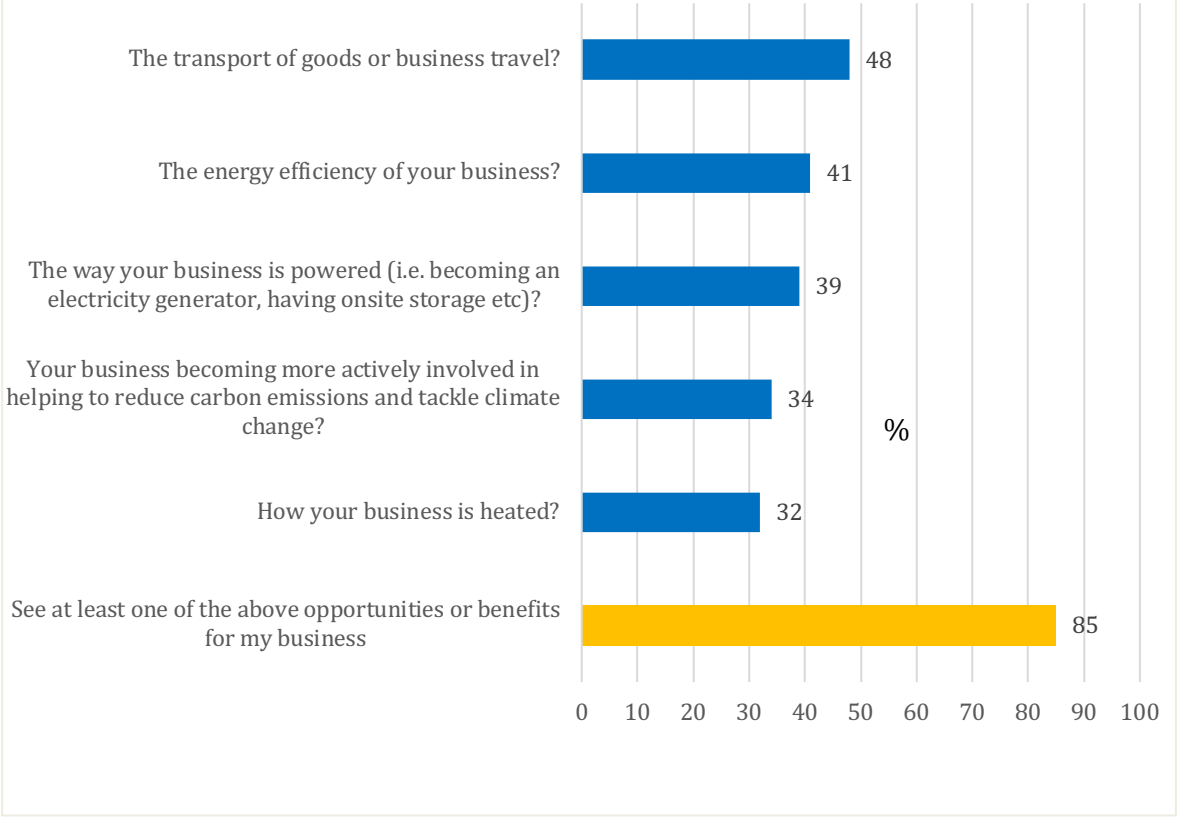
4.5 Anticipated Opportunities and Benefits to Businesses Over the Next 5-10 Years

Respondents were asked if in the next 5 to 10 years they see any opportunities or benefits for their business to help reduce the effects of climate change.

Figure 4.5 shows that businesses were more likely to see opportunities or benefits for their business in relation to the transport of goods or business travel (48%), and energy efficiency (41%). Thirty nine percent could see opportunities or benefits for their business in relation to how their business is powered. Relatively fewer respondents could see opportunities or benefits for their business in terms of how their business is heated (32%) or how their business can become more actively involved in helping to reduce the effects of climate change (34%).

More than eight out of ten (85%) businesses said they see at least one of the opportunities or benefits listed in Figure 4.5, with no statistically significant differences in response by business size or sector.

Figure 4.5: As we try to reduce the effects of climate change over the next 5-10 years, do you see any opportunities or benefits for your business in terms of each of the following? (base=157)



4.5.1 Opportunities and Benefits Anticipated by Businesses Over the Next 5-10 Years

Respondents who indicated that they anticipate opportunities and benefits for their business over the next 5-10 years (in relation to reducing carbon emissions) were asked what opportunities and benefits they see, with their responses below presented under each theme.

The way your business is powered (i.e. generating your own electricity in the future)?

Opportunities and benefits anticipated by businesses included: cost savings/benefits (34%); income through energy generation (11%); opportunity and increased choice to embrace clean energy sources (11%); solar (11%); to become more environmentally friendly (7%); opportunity to reduce carbon footprint (5%); cleaner way of doing business (5%); increase sustainability (3%); adoption of electric/hybrid vehicles (2%); improve corporate image (2%); become more energy efficient (2%); and, generate new employment opportunities (2%).

The transport of goods or business travel?

Opportunities and benefits anticipated by businesses included: reduced costs (27%); introduction of hybrid/electric vehicles and improved charging infrastructure (17%); opportunity to use greener/cleaner fuel (13%); more environmentally kind/less damaging to the environment (6%); opportunity to adopt renewable energy sources (6%); minimise unnecessary travel/better route planning (5%); opportunity to adopt and embed digital platform opportunities which minimise travel (5%); introduction of agile working techniques/less travel encourages a better work/life balance (4%); encourage more active travel - walking or cycling to work (4%); reduce emissions and improve air quality (4%); and possible government funding/green grants (3%).

How your business is heated? (i.e. moving away from fossil fuel heating)?

Opportunities and benefits anticipated by businesses included: cost reductions/savings (41%); use clean/renewable energy source and phase out the use of fossil fuels (14%); reduce carbon footprint/emissions (11%); opportunity to generate income from generating renewable energy (5%); focus more on thermal efficiency/insulation (5%); opportunity to look at safer ways to heat the business (2%); solar panels/power/energy (7%); environmentally kinder/less damaging (2%); more choice of heating sources and methods (5%).

The energy efficiency of your business?

Opportunities and benefits anticipated by businesses included: cost savings (40%); moving to cleaner energy sources (6%); opportunities to get government funding and support (6%); encourages us to look at more effective and efficient working/businesses practises (6%); beneficial for long term investment (5%); solar panels generating income (3%); reduce energy/electricity consumption (3%); environmental benefits/less pollution/help meet government carbon neutral targets (3%); being a more socially responsible and therefore attractive employer (3%); change to energy efficient lighting (3%); generate income from generating renewable energy (2%); opportunity to reinvest savings made (2%).

Your business becoming more actively involved in helping to reduce carbon emissions?

Opportunities and benefits anticipated by businesses included: cost savings - electric cars are cheaper to run/ reduce printing use less paper (18%); opportunities to help the environment (11%); cleaner air/less pollution(6%); achieving an Eco Hallmark - attract more business by becoming a Zero emission firm (4%); educating our customers/communities leading by example will generate business (6%); no choice it's a necessary change for all businesses moving forward (2%); better employee relations/increased employer advocacy (2%); opportunity to secure grants (4%); reputational advantage/improve corporate image (8%); improved production methods - increase efficiency (6%); less wastage (6%); being part of the larger conversation/picture - helping to create a circular economy (2%); streamline working processes (2%).

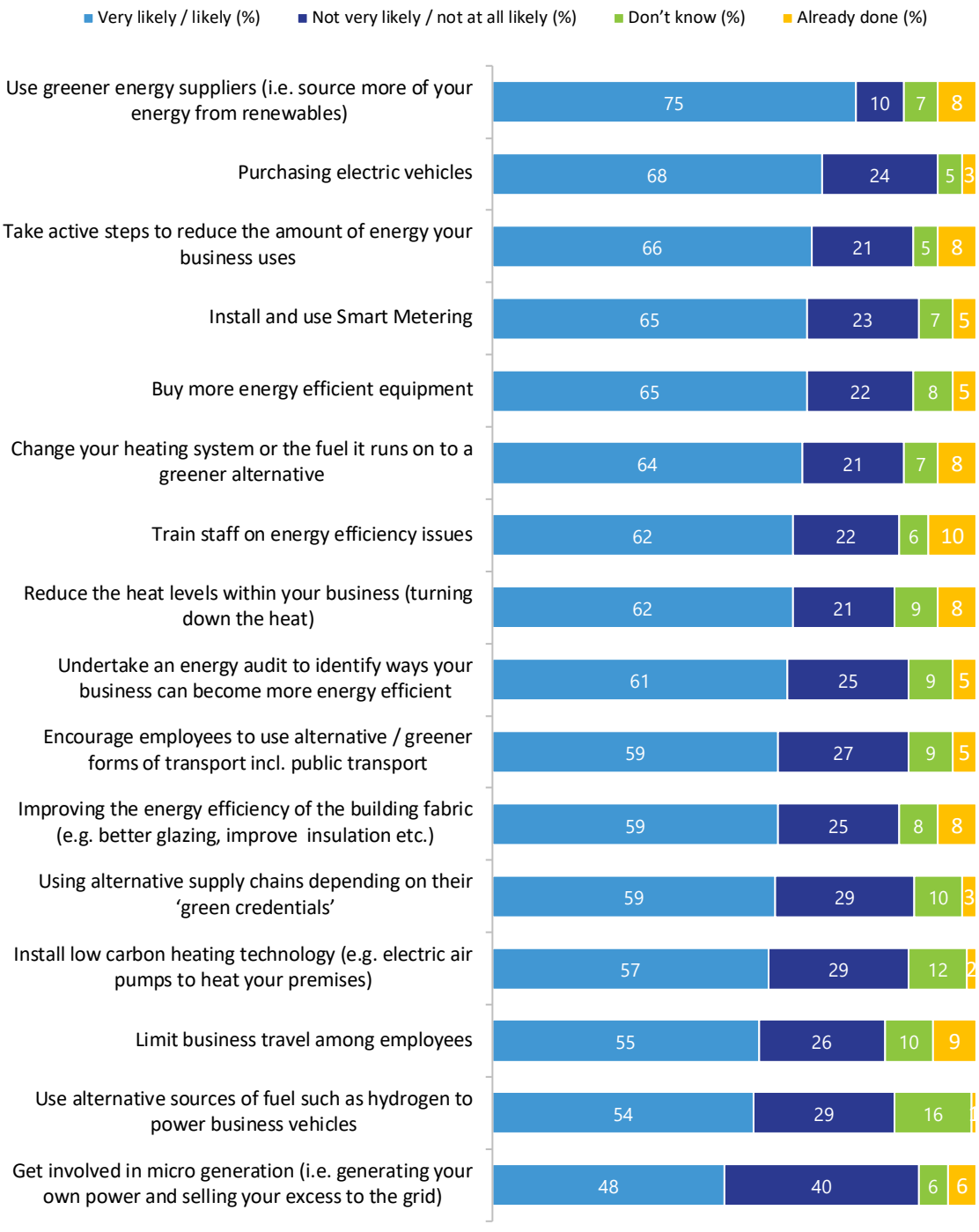
4.5.2 Other Anticipated Opportunities and Benefits for Businesses to Help Reduce Carbon Emissions

Businesses suggested a range of other opportunities and benefits in helping to reduce carbon emissions including: cost savings (6%); improved customer perceptions/reputational advantage/ corporate image (5%); possible government incentives/support (3%); could be a unique selling point (1%); continue agile/flexible working practises (1%); improved air quality (1%); a new way of doing business which present additional opportunities yet unknown (2%); cheaper electric prices (1%); a healthier way of doing business (1%); less reliance on the international supply chain fostering more local suppliers (1%); improved technology - communications (1%); be part of a global community (1%); and, reduce carbon footprint (3%).

4.6 Likelihood of Businesses Introducing Changes to Tackle the Effects of Climate Change

There are different ways that businesses in Northern Ireland can become more active in terms of contributing to a reduction in carbon emissions to help limit the effects of climate change. With this in mind, businesses were asked to say how likely it is that their business would introduce a range of specific changes to help tackle the effects of climate change. Figure 4.6 shows that the most common changes included using greener energy suppliers (75%) and purchasing electric vehicles (68%). Relatively fewer businesses said they would be likely to get involved in micro generation (48%).

Figure 4.6: Please say how likely it is that your business would introduce any of the following changes to help tackle the effects of climate change? (n=157)



4.7 Single Most Factor in Encouraging Businesses to Become More Active in Reducing Carbon Emissions

Businesses were asked to list the single most important thing that would encourage or motivate their business to become more active in reducing carbon emissions and helping to reduce the effects of climate change. Table 4.2 shows that businesses most commonly suggested government grants (24%) and cost savings (17%).

Table 4.2 Single most important thing that would encourage or motivate their business to become more active in reducing carbon emissions (n=157)

	%
Government grants linked to compliance	24
Cost savings	17
Tax incentives/relief	10
Overriding Environmental concerns	8
Changing to electric vehicles	3
Agile working practises	3
Answer not relevant to question	3
Education	2
Customer demand	1
Potential new business opportunities	1
Recycling	1
Changing our business model	1
Understanding / knowing how much carbon we can save as an organisation - carbon audits	1
Solar panel	1
None	4
Other	12
Don't know	7

4.8 Single Biggest Barrier to Businesses Becoming More Active in Reducing Carbon Emissions

Businesses were asked to list the single biggest barrier to their business becoming more active in reducing carbon emissions and helping to reduce the effects of climate change, with cost cited by just over half (51%) of respondents.

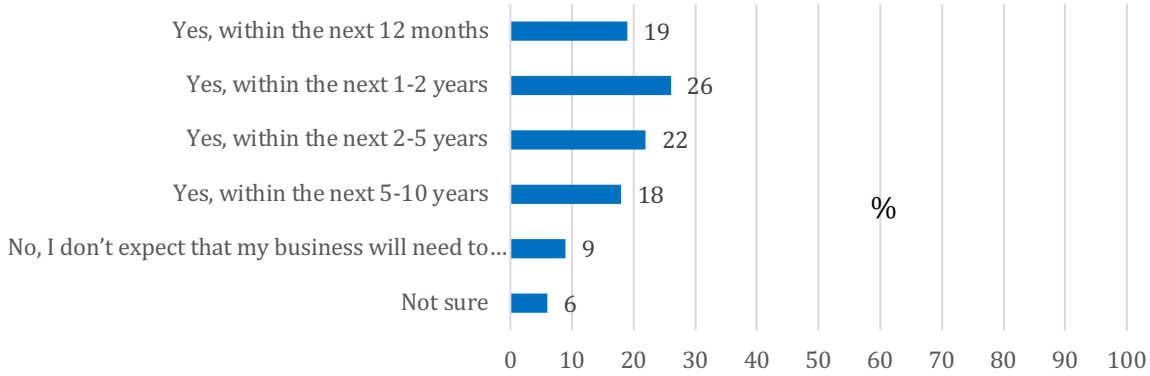
Table 4.3 Single biggest barrier to businesses becoming more active in reducing carbon emissions and helping to reduce the effects of climate change (n=157)

	%
Initial cost/investment	51
No barriers	12
Electricity suppliers/lack of choice/poor infrastructure	3
Securing workforce buy in	3
No time to implement change/too much disruption	3
The current premises we use/rented/leased	2
Affordability	1
Legislation/red tape	1
No help from councils	1
Don't believe in climate change	1
Lack of funding	1
Lack of public transport	1
Concerned about picking the wrong technology	1
Too much effort "making work for a chore"	1
Availability of materials/supplies	1
The pandemic/Covid 19	1
Lack of in-house expertise/knowledge	1
None	4
Other	12
Don't know	7

4.9 Expectations Around Change to Help Support N Ireland Meeting its Climate Targets

Almost one in five (19%) businesses said that in the next 12 months they expect that they will have to make changes to the way they operate to help support Northern Ireland's effort to meet its climate targets. Approximately a quarter (26%) believe they will have to make changes in the next 1-2 years, 22% within the next 2-5 years, and 18% within the next 5-10 years. Nine percent said they don't expect that their business will need to make changes. Combining the response categories in Figure 4.7 shows that 85% of businesses believe they will have to make changes to their businesses within the next 10 years, with no significant difference by business size or sector.

Figure 4.7: Do you expect that you will have to make changes to the way you operate your business to help support Northern Ireland's effort to meet its climate targets? (base=157)



Changes Businesses Believe they will have to Make to Support NI Meeting Climate Targets

Businesses who expect that they will have to make changes to the way they operate were asked to say what changes they expect to make with the most common being having to change to renewable energy sources (13%), increased energy efficiency (6%) and adopting more efficient processes and equipment (6%).

Table 4.4 Changes businesses expect to have to make to support N Ireland meeting it climate targets (n=157)

	%
Change to renewable energy sources	13
Increase energy efficiency	6
Adopt/introduce more efficient processes and equipment	6
Install solar panels	5
Motivate staff	5
Reduce consumption/waste	4
Adopt agile/flexible working practises	3
Changing to environmentally friendly/sustainable materials and products	3
Review supplier contracts	2
Increase recycling levels	2
Meet government legislative requirements	2
Improve insulation	1
Improve ventilation/air quality	1
Reduce premise size	1
Encourage more carpooling/car share schemes	1
Introduce LED/energy saving lighting	1
Other	24
DK	9
Nothing	2

Reasons Why Businesses Believe they will not have to Make Change to Support NI Meeting Climate Targets

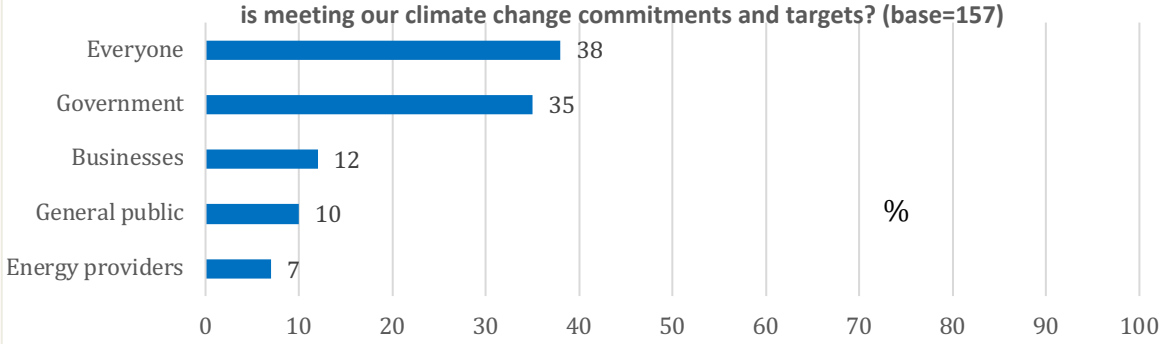
Businesses who don't expect to have to change to help support Northern Ireland's effort to meet its climate targets offered the following views: we will do what we can; already established / introduced changes; business provides service as customer premises; it might be will need to change but at the moment I don't see that it will happen; home based business; it's fine as it is; it's too small; currently doing well with our energy efficiency; have already taken a lot of steps to improve our energy efficiency; we have no way of changing, and I'd expect climate change hysteria will change to an impending ice age; and, depends on the research funding.

4.10 Responsibility for Ensuring N Ireland is Meeting its Climate Change Commitments and Targets

Businesses were asked who they feel is **most responsible** for ensuring that Northern Ireland is meeting its climate change commitments and targets, with similar numbers suggesting everyone (38%) and government (35%).

Analysis by business size found that small and large businesses were proportionately more likely to say that government should have most responsibility for ensuring that Northern Ireland is meeting its climate change commitments and targets (small, 40%: medium, 11%: large, 43%), with medium sized businesses more likely to suggest that everyone is responsible (small, 3%: medium, 51%: large, 23%). There was no significant difference in response by business sector.

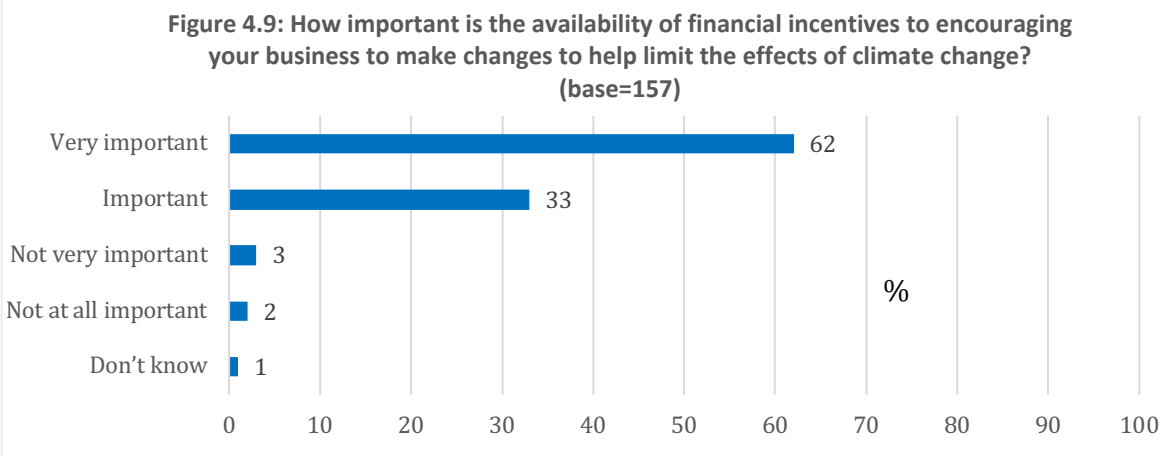
Figure 4.8: Who do you feel is most responsible for ensuring that Northern Ireland is meeting our climate change commitments and targets? (base=157)



4.11 Importance of Financial Incentives To Encouraging Businesses to Make Changes

More than nine out of ten (95%) businesses said that the availability of financial incentives is important to encouraging their business to make changes to help limit the effects of climate change (very important, 62%: important, 33%). Five percent said financial incentives are either not very or not at all important with 1% answering, 'don't know'. There was no statistically significant differences in response by business size or sector.

Figure 4.9: How important is the availability of financial incentives to encouraging your business to make changes to help limit the effects of climate change? (base=157)

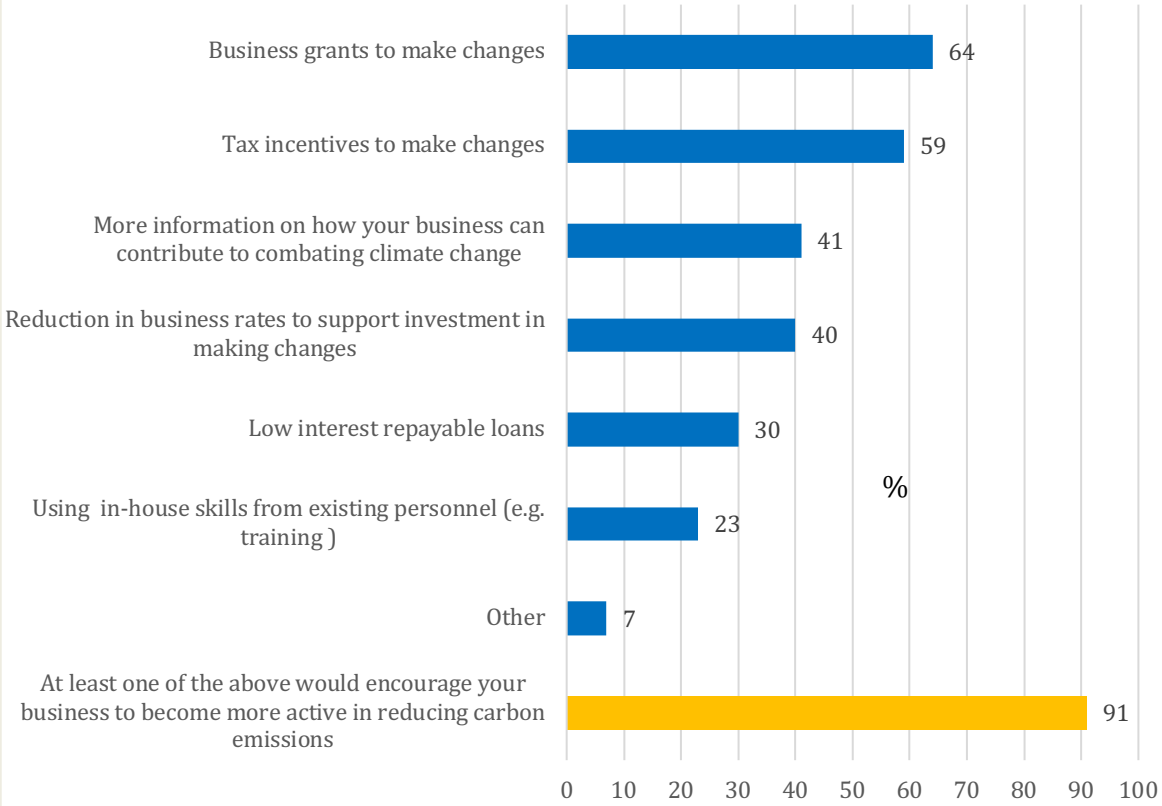


4.12 Factors Encouraging Businesses to Become More Active in Reducing Carbon Emissions

Figure 4.10 shows that business grants (64%), and tax incentives (59%), were the most common factors that would encourage businesses to become more active in reducing carbon emissions. Other factors such as using in-house skills from existing personnel (23%), and low interest repayable loans (30%), were found to be less attractive to businesses.

Note that of all the factors listed in Figure 4.10, business grants to make changes was identified as the most important factor (41%), followed by tax incentives (27%) [more information, 16%: low interest repayable loans, 8%: reduction in business rates, 7%: using in-house skills from existing personnel, 1%].

Figure 4.10: Of the following, which if any, would encourage your business to become more active in reducing carbon emissions? (base=157)

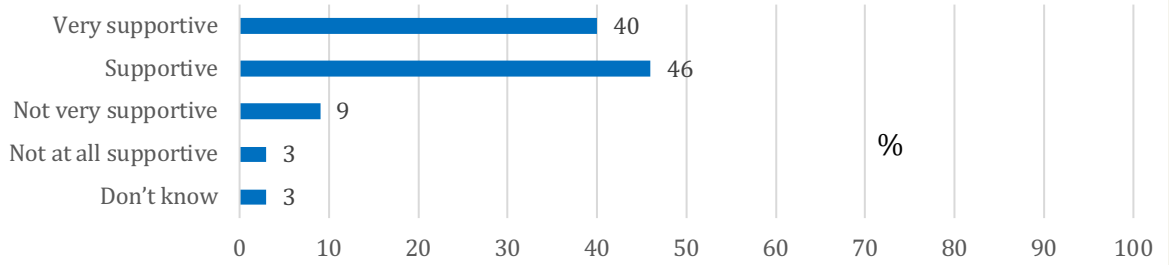


4.13 Support for Reducing Business Reliance on Fossil Fuels

Given that Northern Ireland's New Energy Strategy will make a commitment to reducing the reliance of businesses on fossil fuels (gas, oil and coal), businesses were asked how supportive they are of reducing business reliance on fossil fuels. Figure 4.11 shows that 86% of businesses are supportive (very supportive, 40%: supportive, 46%). Twelve percent were unsupportive (not very supportive, 9%: not at all supportive, 3%), and three percent were unsure.

There were no statistically significant differences in response to this question by business size or sector.

Figure 4.11: How supportive are you of reducing business reliance on fossil fuels? (base=157)



Reasons why businesses are unsupportive of reducing business reliance on fossil fuels

The most common reasons why businesses said they are unsupportive of reducing business reliance included: just not supportive; unreliable technologies; high cost; not sure it's a good idea; do not see a better alternative; don't think we have anything that could properly replace fossil fuels as yet; don't use fossil fuels for my business; no incentives available; no education; not enough financial support; not much help given; not sure; there are no viable alternatives; not bothered; we need fossil fuels; and lack willingness to change.

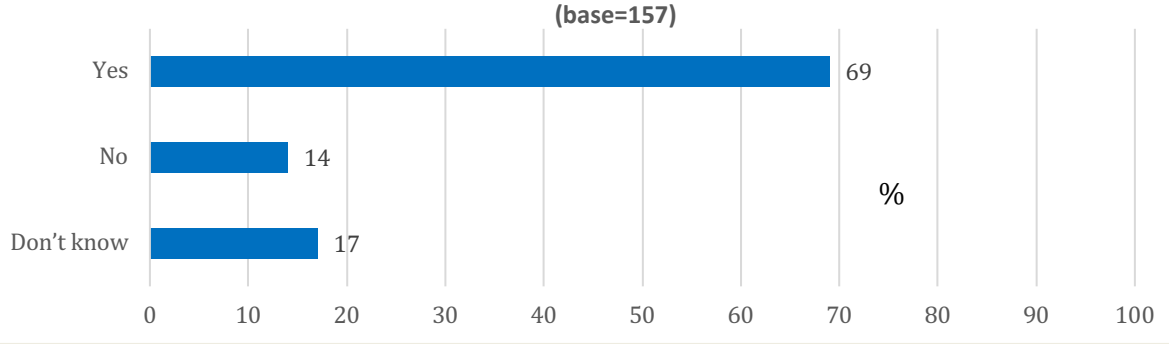
4.14 Paying More Now for Cleaner Energy and Reducing the Burden on Future Generations

Reducing business reliance on fossil fuels will mean that we will have a greater reliance on indigenous renewable energy sources such as wind and solar. Moving to renewables will require substantial investment costs but will ultimately lead to a cheaper energy system in the long-term.

Given this information, businesses were then asked if they accept that paying a little more now for cleaner energy is better than allowing the burden of payment to fall heavily on future generations. Figure 4.12 shows that most (69%) businesses said they would accept paying a little more now, 14% said they would not accept paying a little more now, with 17% undecided.

Businesses in the construction sector were more likely to say they would accept paying a little more now (services, 64%: manufacturing and production, 78%: construction, 95%: other, 56%).

Figure 4.12: Do you accept that paying a little more now for cleaner energy is better than allowing the burden of payment to fall heavily on future generations? (base=157)



Reasons for Accepting Paying a Little More Now

Reasons included: it's the right thing to do to help the environment (24%); we are running out of time / need to change now (12%); green / renewable energy is the future (3%); cheaper to do it now (6%); good for business (1%); will reduce cost in the future (1%); and reputational advantage (1%).

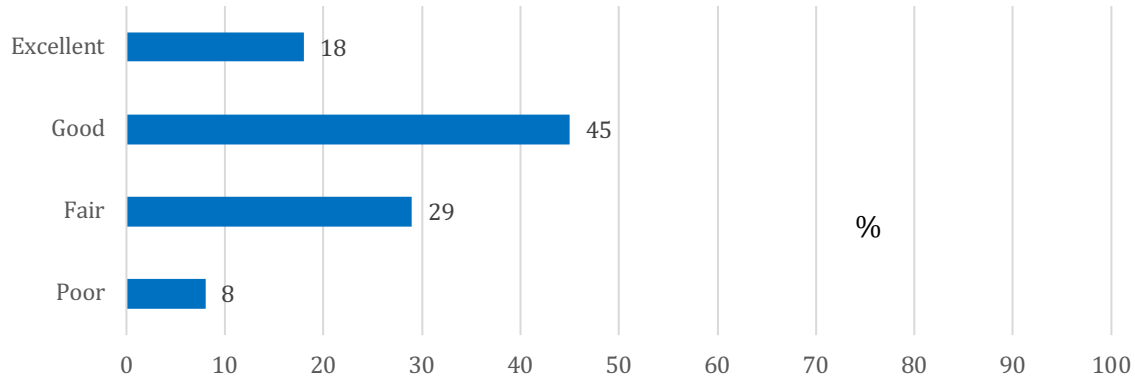
Reasons for Not Accepting Paying a Little More Now

Reasons included: initial investment costs prohibitive (5%); uncertainty (1%); no motivation / incentive to make changes (3%); At the moment companies struggling to survive (1%); energy is already too expensive (1%); don't know what is available (1%); better information required (2%); We have already invested in change not sure if we can afford more (1%); and, needs to be a global approach (1%).

4.15 Current Energy Use by Businesses and Perception of Value for Money

More than six out of ten (63%) respondents rated the energy use within their business as either excellent (18%) or good (45%), with 29% rating value for money as fair and 8% as poor. There were no statistically significant differences in response to this question by business size or sector.

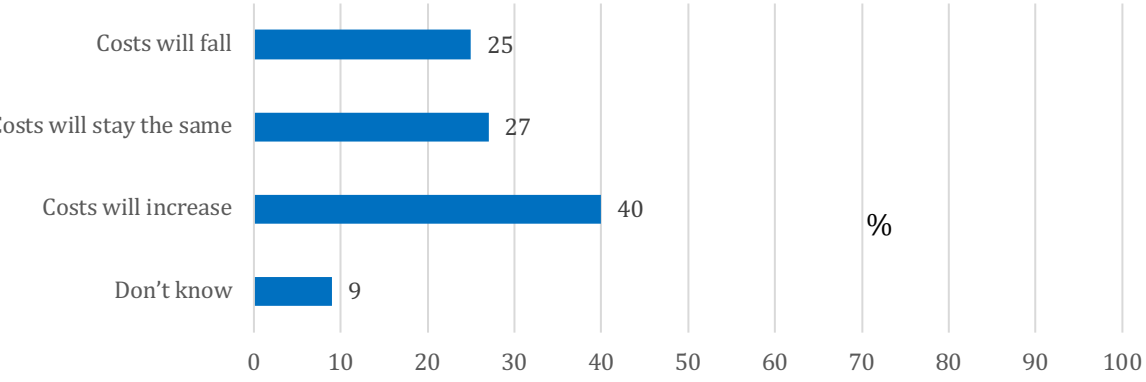
Figure 4.13: Thinking about energy use within your business, how would you rate this in terms of value for money? (base=157)



4.16 Impact of Tackling Climate Change on Business Costs

Businesses most commonly believe that business costs will increase (40%) as we make progress in tackling climate change over the next 5-10 years, with 25% of the view that costs will fall, and 27% believing that costs will stay the same. Nine percent answered, don't know. There were no statistically significant differences in response to this question by business size or sector.

Figure 4.14: As we make progress in tackling climate change of the next 5-10 years, what impact do you think this change will have on your business costs? (base=157)



Reasons why businesses believe costs will fall

Included: increased energy efficiency (1%); will be cheaper in the long run (6%); and, save unnecessary expenses (1%).

Reasons why businesses believe costs will stay the same

Included: grants will keep prices capped (1%); not sure it will increase or decrease costs (6%); I can't see my business making any significant changes (2%); we have already made changes (1%); costs will be passed to customers (1%); and, unaffordable (1%).

Reasons why businesses believe costs will increase

Included: increased costs (10%); initial investment costs (14%); environmental/greener solutions are often more expensive (5%); it's not cheaper / just better for the environment (2%); lack of choice (1%); It has to happen to achieve environmental change (3%); and, cost recovery is a long process (1%).

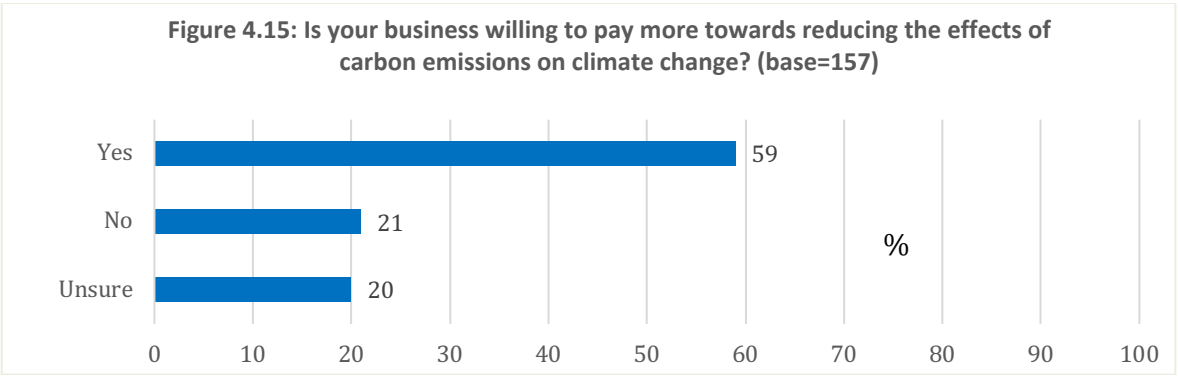
4.17 Willingness to Pay more towards reducing the effects of carbon emissions on climate change

It is likely that businesses in Northern Ireland will have to pay something towards reducing carbon emissions whether it is through investing in new technologies (e.g. new heating systems) or paying more on energy bills for cleaner energy. Given this information, businesses were asked if they would be willing to pay more towards reducing the effects of carbon emissions on climate change.

Figure 4.15 shows that most (59%) businesses said they would be willing to pay more towards reducing the effects of carbon emissions on climate change, with 21% saying they would be unwilling to pay more, and 20% undecided. There were no statistically significant differences in response to this question by business size or sector.

Those who indicated that their businesses would be willing to pay more towards reducing the effects of carbon emissions on climate change, said they would pay 29% more on average. Among those willing to pay more, businesses in the construction sector were willing to pay more on average (services, 25%: manufacturing and production, 22%: construction, 48%: other, 28%).

Figure 4.15: Is your business willing to pay more towards reducing the effects of carbon emissions on climate change? (base=157)

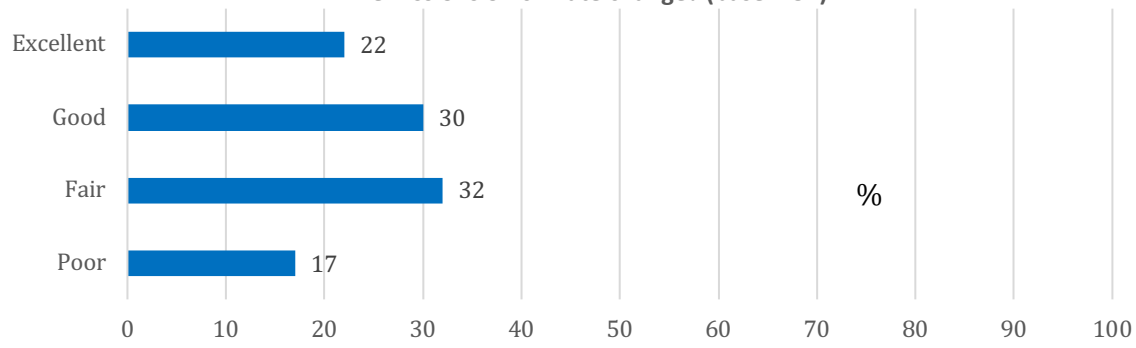


4.18 New Technologies Supporting Businesses to Reduce Effects of Carbon Emissions on Climate Change

4.18.1 Awareness of New Technologies to Reduce Effects of Carbon Emissions on Climate Change

Just over half (52%) of businesses said they had either an excellent (22%) or good (30%) awareness of the upfront costs of introducing new technologies to their business to help reduce the effects of carbon emissions on climate change. Approximately one in three (32%) rated their awareness as fair, with 17% rating their awareness as poor. There were no statistically significant differences in response to this question by business size or sector.

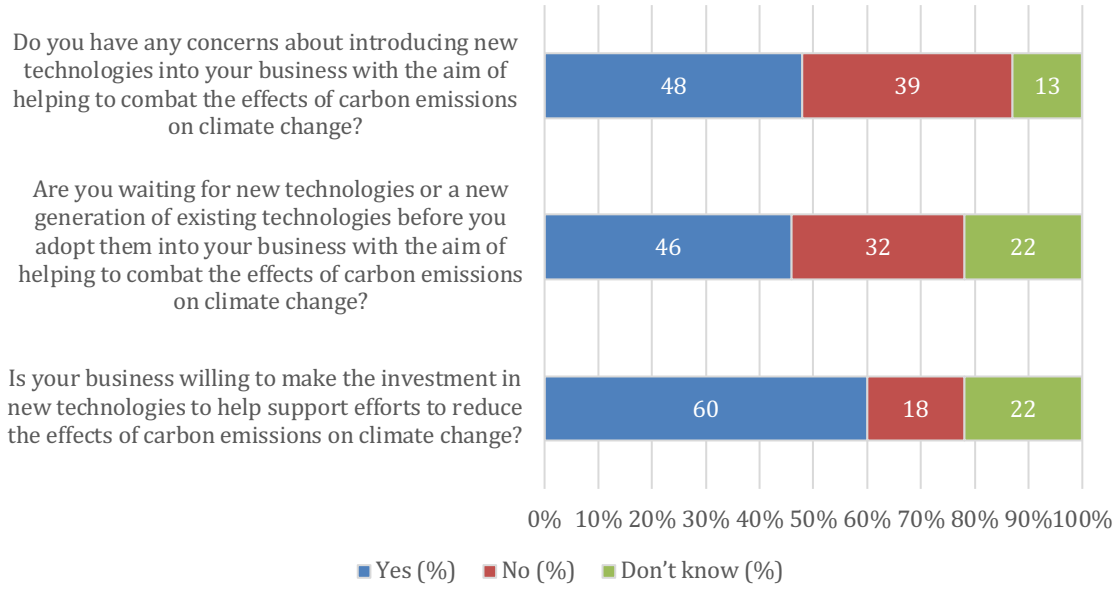
Figure 4.16: How would you rate your awareness of the upfront costs of introducing new technologies to your business to help reduce the effects of carbon emissions on climate change? (base=157)



4.18.2 Business Concerns about Introducing New Technologies

Figure 4.17 shows that almost half (48%) of businesses said they have concerns about introducing new technologies with the aim of supporting climate change, with 46% saying they are waiting for new technologies, or a new generation of existing technologies, before they adopt them. More than half (60%) of businesses said they are willing to make the investment in new technologies to help support efforts to reduce the effects of carbon emissions on climate change.

Figure 4.17: Business Perceptions Around New Technologies to Help Tackle Climate Change (base=157)



Concerns

Included: cost and expense (43%); affordability (6%); timing/another burden on top of Covid/Brexit (3%); technology is not quite there yet/will it deliver what is required (9%); could be detrimental to company profits/survival (3%); staff training (1%); potential disruption to business operations (7%); can't keep up with the speed of change (3%); and, lack of motivation/reluctant to change (3%).

Technologies Businesses Waiting For

Included: local Green Energy Provider (6%); cheaper electric/hybrid vehicles (6%); smart building/smart meter technology (4%); wind power (1%); computers/phones (8%); hydrogen-based technology (3%); better solar panels/tiles (8%); alternative heating solutions (4%); cheaper technology (7%); improved technology/software (4%); want technology to be tried and tested before adopting it (7%); faster internet speeds (1%); and, better storage batteries (1%).

Reasons for being Willing to make investment

Included: want to help environment (9%); government incentives / grants 5%); want to lead the way/reputational advantage (3%); beneficial in the long term (5%); More efficient/save time (2%); corporate responsibility (3%); no choice its inevitable (1%); we need to adapt (4%); and, good for business (1%).

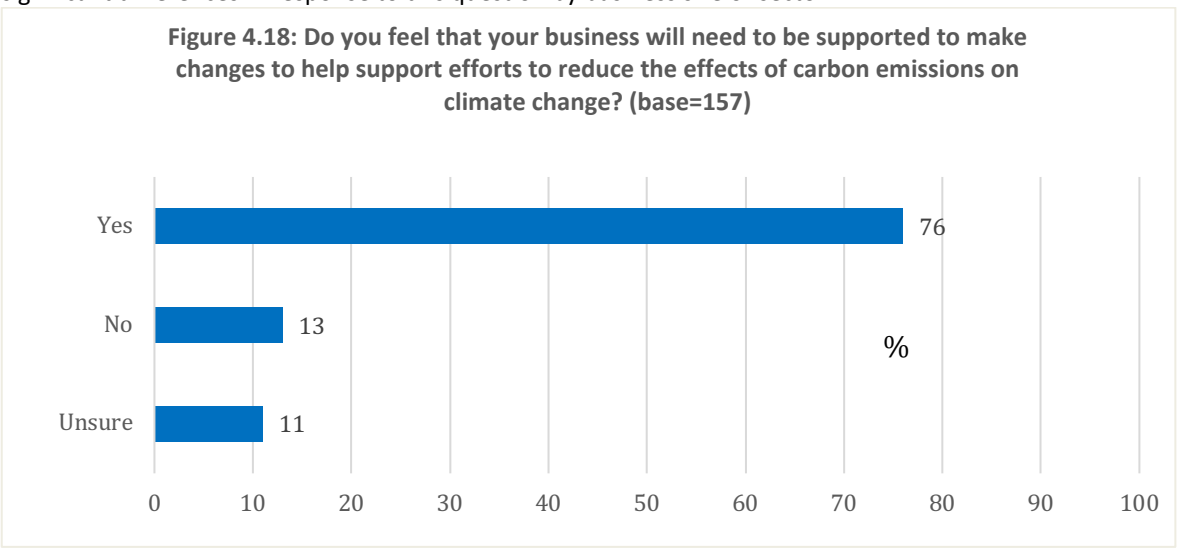
Reasons for being Unwilling to make investment

Included: cost (11%); too expensive (3%); we want/or are already making changes/investment (11%); not my property so cannot make changes (1%); affordability (3%); here is nothing I can change at the moment (1%); and need to more information to make decision (2%).

4.19 Supporting Businesses to Make Changes to Reduce Effects of Carbon Emissions

Approximately three out of four (76%) respondents said they feel that their business will need to be supported to make changes to help support efforts to reduce the effects of carbon emissions on climate change. Thirteen percent feel their business will not need to be supported, with 11% undecided. There were no statistically significant differences in response to this question by business size or sector.

Figure 4.18: Do you feel that your business will need to be supported to make changes to help support efforts to reduce the effects of carbon emissions on climate change? (base=157)



4.19.1 Best Way to Support Businesses to Make Changes to Reduce Effects of Carbon Emissions

Table 4.5 shows that tax incentives (23%) and grants (37%), were the most commonly suggested ways of supporting businesses to make changes to help reduce carbon emissions.

Table 4.5: Best ways to support businesses to make changes to reduce carbon emissions(n=157)

	%
Grants	37
Tax incentives	23
Information/reviews on new technology where to source/buy/how to install	8
Education/training/guidance	6
Government Loans - low interest	3
Cheaper electric/hybrid vehicles	2
More help from the government - generic	2
Carbon Audits - how much carbon have we saved could save by making changes	1
Better public transport	1
Information on benefits to individuals/organisations of making changes	1
Availability of Renewable Energy suppliers	1
Minimise unnecessary legislative expenses/red tape	1
Lower costs/introduce cost controls	1
Other ways	25

4.20 Payback Period for Businesses to Recoup Investment Costs to Support Reducing Carbon Emissions

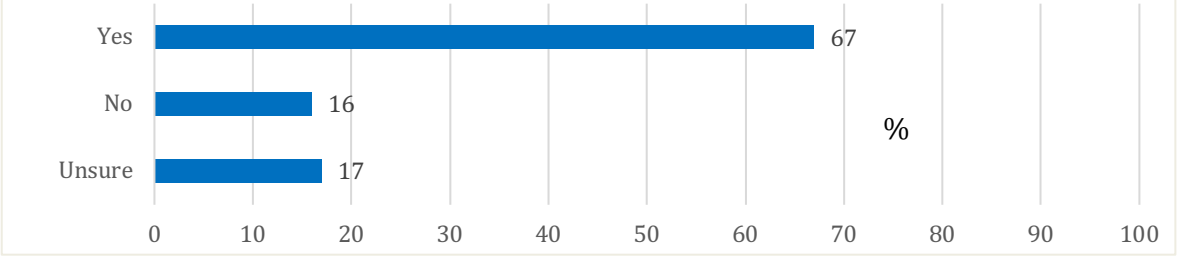
Businesses will be required to make changes to the way they operate to help meet net zero carbon targets. This will require businesses to invest in new technologies and this will come at a cost.

Given this information, businesses were asked to say what they believe would be a reasonable payback period to recoup these costs or a reasonable part of these costs. Overall, businesses reported an average pay back period of 9 years, with no significant variation by business size or sector.

4.21 Expectation of Lower Business Costs if Invested in New Technologies to Tackle Climate Change

Approximately two out of three (67%) businesses said that if they did invest in new technologies, to combat the effect of carbon emissions on climate change, they would expect lower running costs generally. Sixteen percent said they would not expect lower running costs and 17% were unsure. There was no significant variation in response by business size or sector.

Figure 4.19: If your business did invest in new technologies to help combat the effect of carbon emissions on climate change, would you expect lower running costs generally? (base=157)



4.22 Measuring Business Performance in Making a Positive Contribution to Climate Change

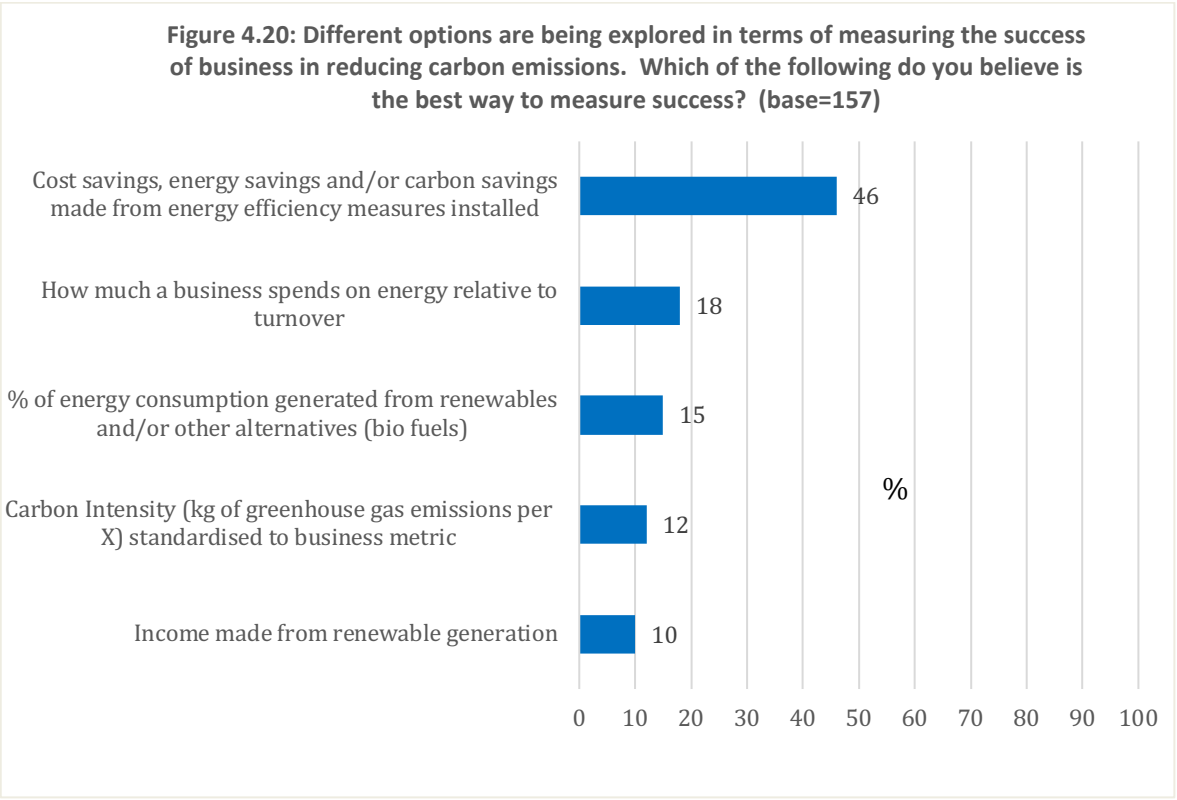
Businesses suggested a number of indicators which could be used to measure business performance in making a positive contribution to climate change with the most common being reduced costs (18%), reduced energy consumption (8%); smart metering / monitoring (6%); and carbon audits / energy efficiency audits (6%).

Table 4.6: Suggestions on measuring success of businesses to measure performance in making a positive contribution to climate change (n=157)	
	%
Reduced costs	18
Reduced energy consumption	8
Smart meter/monitoring	6
Carbon audits/energy efficiency survey	6
Profitability	4
External/independent audit system	2
By receiving financial incentives/tax incentives	2
It needs to be user friendly/easy to understand	1
Reduced travel	1
Electric cars	1
Less waste	1
Have industry targets	1
None	3
Other	25
Don't know	23

4.22.1 Support for Options Aimed at Measuring Business Success at Tackling Climate Change

Cost savings, energy savings and/or carbon savings made from energy efficiency measures installed (46%) was most commonly cited by businesses as the best way to measure the success of businesses reducing carbon emissions. Other approaches to measuring success were cited by relatively fewer businesses. There were no significant variations in response by business size or sector.

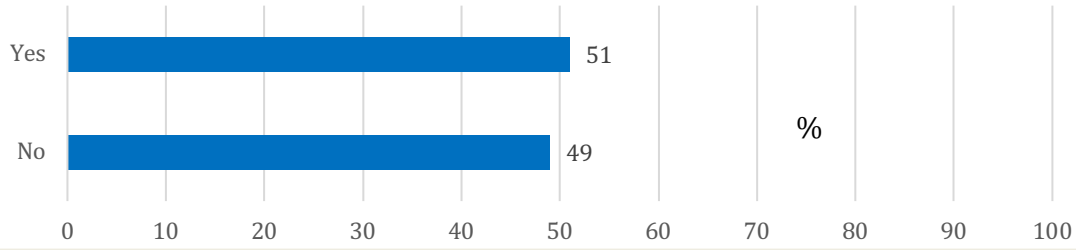
Figure 4.20: Different options are being explored in terms of measuring the success of business in reducing carbon emissions. Which of the following do you believe is the best way to measure success? (base=157)



4.23 Businesses Having Enough Information to Introduce Change to Reduce Carbon Emissions

There was a mixed response to a question on whether businesses believe they have enough information to support them to introduce changes to help reduce the effects of carbon emissions, with 51% saying they have enough information and a similar number saying they do not. There were no significant variations in response by business size or sector.

Figure 4.21: Do you feel you have enough information to support your business to introduce changes to help reduce the effects of carbon emissions? (base=157)



Those businesses who said they do not have enough information were asked what information they would find helpful. Suggestions included: savings to business (18%); energy source comparisons - usage versus cost (9%); smart metre (7%); carbon audit/energy saving audit (5%); external audit system (2%); user friendly information (1%); and carbon footprint comparison between - electric/hybrid diesel and petrol vehicles (4%).

4.24 Protection Needed by Businesses when Making Changes to Help Reduce Carbon Emissions

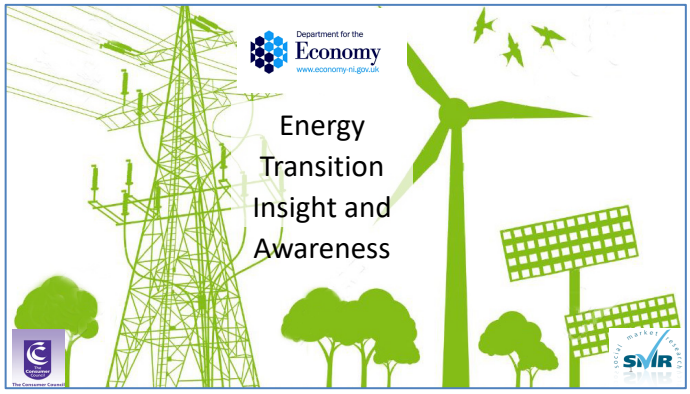
Respondents made a number of suggestions in terms of protections needed by business when making changes to help reduce carbon emissions: financial help from government - grants (12%); guarantees / insurance/ warranties (11%); government sticking to their commitments (1%); support/help/advice/information if needed (2%); income protection from loss of earnings (3%); financial incentives /tax/rate breaks (3%); cost caps (5%); staff/employee safety (1%); and reliable services (1%).

4.25 Suggestions for Inclusion in the new Energy Strategy for Northern Ireland

Finally, respondents made a range of suggestions for inclusion in the new Energy Strategy for Northern Ireland: information on grants (8%); time scales (1%); more consultation with businesses (1%); fair system for organisations of all sizes (1%); more research and development into renewables (1%); more information/guidance/advice (1%); better electric car charging infrastructure (1%); positive messaging (1%); removal of ni protocol (1%); information about tax incentives/breaks (3%); a grace period (1%); well-structured plans (1%); transparency (1%); and, information on costs/how to reduce (1%).

Appendices

Appendix 1 (Focus Group schedule)


Department for the Economy
www.economy-ni.gov.uk
Energy Transition Insight and Awareness


• Focus group guidelines
• Request to record
• Confidential
• Not attributable
Focus Group
Opinions
Data
Beliefs
Interactive
Analysis
Ideas
SURVEY
Question
MARKETING
QUALITATIVE RESEARCH
PEOPLE
Research
Viewpoint
Department for the Economy
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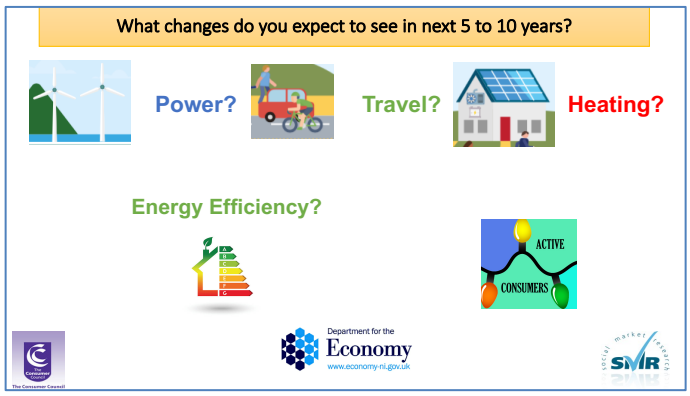
What changes do you expect to see in next 5 to 10 years?
Power?
Travel?
Heating?
Energy Efficiency?
ACTIVE CONSUMERS
Department for the Economy
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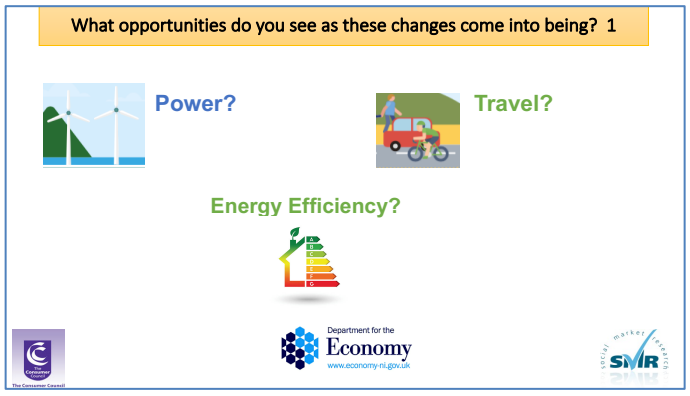
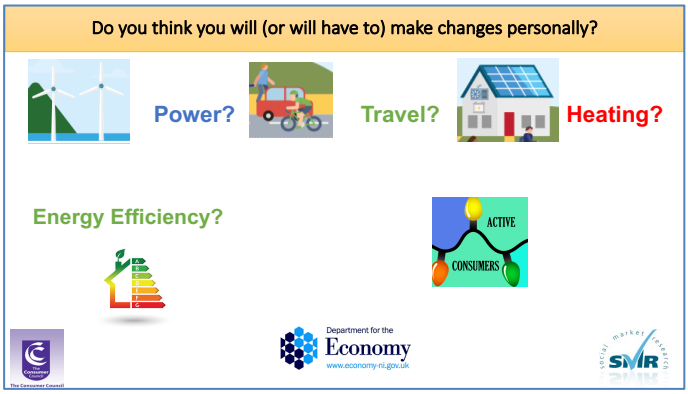
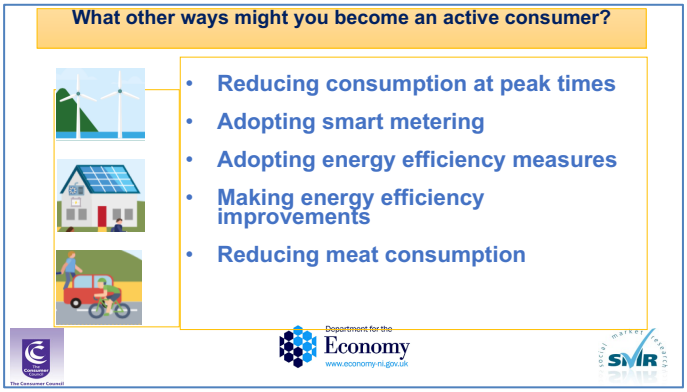
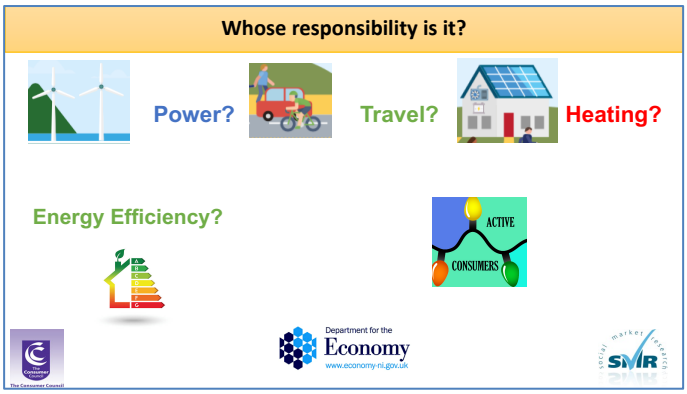
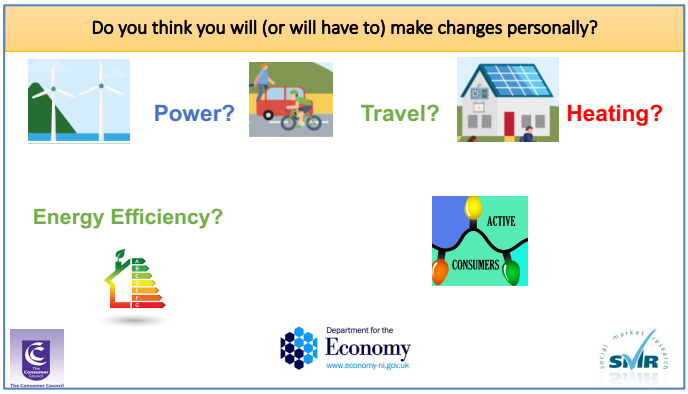
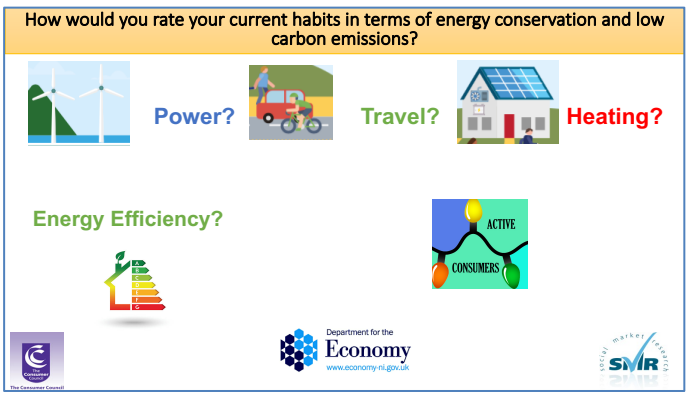

What opportunities do you see as these changes come into being? 1
Power?
Travel?
Energy Efficiency?
Department for the Economy
www.economy-ni.gov.uk


Do you think you will (or will have to) make changes personally?
Power?
Travel?
Heating?
Energy Efficiency?
ACTIVE CONSUMERS
Department for the Economy
www.economy-ni.gov.uk

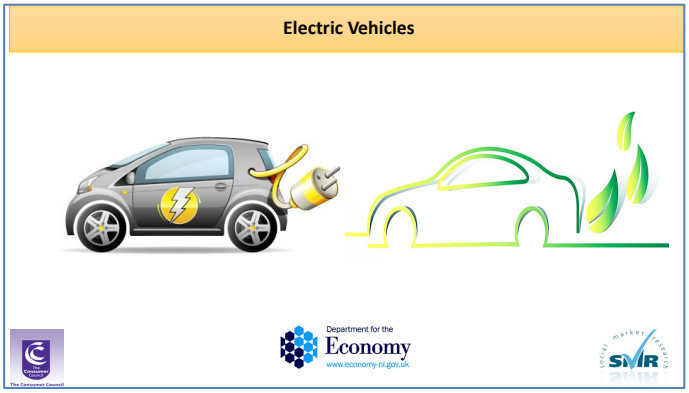

What other ways might you become an active consumer?
Reducing consumption at peak times
Adopting smart metering
Adopting energy efficiency measures
Making energy efficiency improvements
Reducing meat consumption
Department for the Economy
www.economy-ni.gov.uk

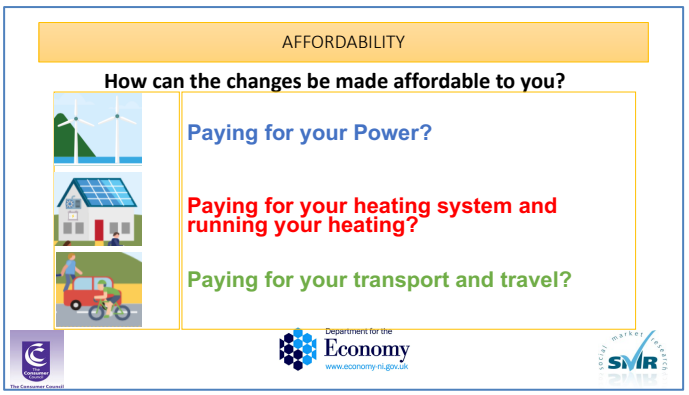

Whose responsibility is it?
Power?
Travel?
Heating?
Energy Efficiency?
ACTIVE CONSUMERS
Department for the Economy
www.economy-ni.gov.uk

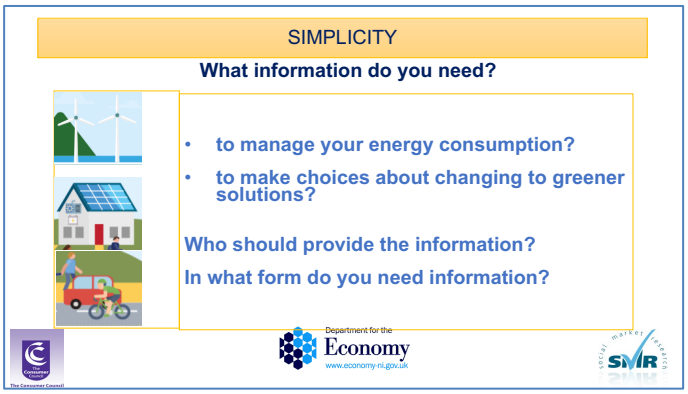

Do you think you will (or will have to) make changes personally?
Power?
Travel?
Heating?
Energy Efficiency?
ACTIVE CONSUMERS
Department for the Economy
www.economy-ni.gov.uk

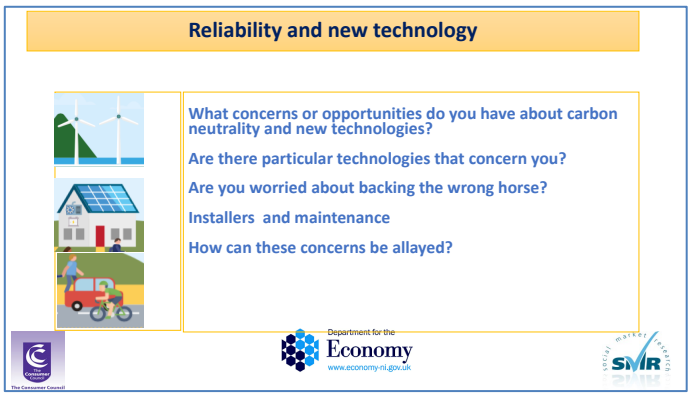

How would you rate your current habits in terms of energy conservation and low carbon emissions?
Power?
Travel?
Heating?
Energy Efficiency?
ACTIVE CONSUMERS
Department for the Economy
www.economy-ni.gov.uk

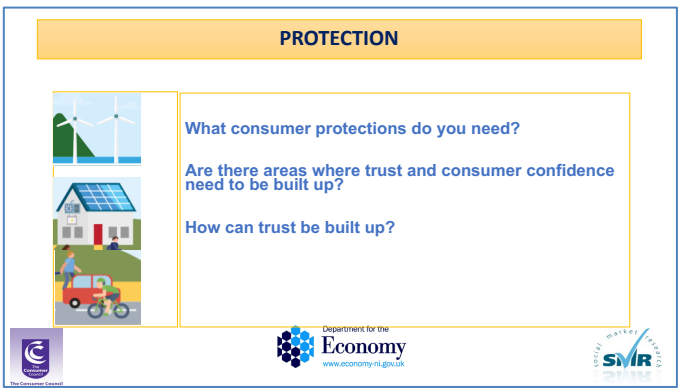

Do you think it is a priority to develop our indigenous energy sources?
Department for the Economy
www.economy-ni.gov.uk

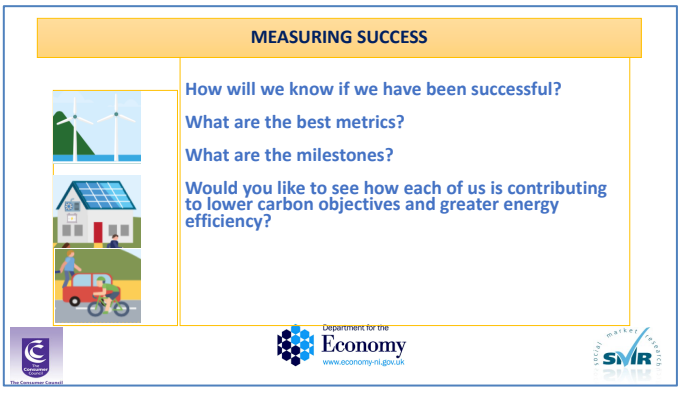

Electric Vehicles
Department for the Economy
www.economy-ni.gov.uk


AFFORDABILITY
How can the changes be made affordable to you?
Paying for your Power?
Paying for your heating system and running your heating?
Paying for your transport and travel?
Department for the Economy
www.economy-ni.gov.uk


SIMPLICITY
What information do you need?
to manage your energy consumption?
to make choices about changing to greener solutions?
Who should provide the information?
In what form do you need information?
Department for the Economy
www.economy-ni.gov.uk


Reliability and new technology
What concerns or opportunities do you have about carbon neutrality and new technologies?
Are there particular technologies that concern you?
Are you worried about backing the wrong horse?
Installers and maintenance
How can these concerns be allayed?
Department for the Economy
www.economy-ni.gov.uk


PROTECTION
What consumer protections do you need?
Are there areas where trust and consumer confidence need to be built up?
How can trust be built up?
Department for the Economy
www.economy-ni.gov.uk


MEASURING SUCCESS
How will we know if we have been successful?
What are the best metrics?
What are the milestones?
Would you like to see how each of us is contributing to lower carbon objectives and greater energy efficiency?
Department for the Economy
www.economy-ni.gov.uk


LEARNING AND KEY TAKEAWAYS
Have you learned anything from the focus group?
Overall, what are the top things that you take away from the focus group?
What will be your biggest challenge in terms of energy transition?
Department for the Economy
www.economy-ni.gov.uk

Appendix 2 (Survey questionnaire)

ENERGY STRATEGY CONSUMER VIRTUAL INSIGHT AND AWARENESS CONSULTATION FOCUS GROUPS

Business Survey (FINAL)

25 August 2021

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Belfast BT9 6DJ
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Survey of Businesses on Energy Issues (2021)

The Department for the Economy are in the process of developing a New Energy Strategy for Northern Ireland. The new Energy Strategy will set out a roadmap to 2030 as part of a longer-term pathway to 2050 that will help deliver the "net zero" emissions targets included in the UK Government's Climate Change Act 2008 (2050 Amendment) Order 2019.

We are conducting this survey to better understand the views of Northern Ireland businesses on energy issues. **The survey findings will allow us to ensure that the views of Northern Ireland businesses are reflected in the New Energy Strategy.**

The survey will take less than 10 minutes, your responses will be confidential and your rights are protected under GDPR. Please be as honest as possible in your response. Remember that there are no right or wrong answers.

Section A: General Awareness and Behaviour

Businesses across Northern Ireland can do different things to help reduce carbon emissions and therefore combat the effects of climate change over the next 5-10 years. This includes things like using different types of renewable energy sources (e.g. wind and solar etc.) to heat and power their businesses, purchase electric vehicles, encourage employees to use public transport where appropriate, looking at ways to be more energy efficient and to become more active in terms of reducing carbon emissions.

A1. Currently how much of a priority is it for your business to take actions to help limit the effects of harmful carbon emissions? **(Select one only)**

Major priority	1
Minor priority	2
Not currently a priority	3

A2. Has your business considered *the challenges of ensuring you have the in-house skills and personnel to* take actions to help limit the effects of harmful carbon emissions*?* **(Select one only)**

Yes	1
No	2
Not sure	3

A3. Has your business taken any action to help reduce carbon emissions? **(Select one only)**

Yes	1
No	2
Not sure	3

ASK IF A3 EQ 1

A4. What actions has your business taken to help reduce carbon emissions and therefore limit the effects of climate change?

ASK IF A3 EQ 2

A5. Why has your business not taken any action to help limit the effects of carbon emissions on climate change?

Section B: Changes in the Next 5 to 10 Years

We now want to ask you if in the next 5 to 10 years you see any changes to your business in terms of the type of energy used to power your business, transport and travel, how you heat your business, energy efficiency within your business, and becoming an active business in terms of contributing to reducing carbon emissions and reducing the effects of climate change.

B1. Please say if in the next 5-10 years **you anticipate any changes to your business** in terms of each of the following? **(Select all that apply)**

a	The way your business is powered (i.e. generating your own electricity in the future)?	1
b	The transport of goods or business travel?	1
c	How your business is heated? (i.e. moving away from fossil fuel heating)?	1
d	The energy efficiency of your business?	1
e	Your business becoming more actively involved in helping to reduce carbon emissions?	1
f	Don't anticipate any of the above changes	1

ASK IF b1a EQ 1

B2a. What changes do you anticipate in the way your business is powered? [open comment]

ASK IF b1b EQ 1

B2b. What changes do you anticipate in relation to travel and transport? [open comment]

ASK IF b1c EQ 1

B2c. What changes do you anticipate in the way your business is heated? [open comment]

ASK IF b1d EQ 1

B2d. What changes do you anticipate in the energy efficiency of your business? [open comment]

ASK IF b1e EQ 1

B2e. What changes do you anticipate in terms of your business becoming more actively involved in helping to reduce carbon emissions and tackle climate change? [open comment]

B3. Please say if you anticipate **any other changes to your business** which will contribute to reducing carbon emissions and combat the effects of climate change?

Section C: Opportunities and Benefits for Your Business

C1. As we try to reduce the effects of climate change over the next 5-10 years, do you see **any opportunities or benefits for your business** in terms of each of the following? **(Select all that apply)**

a	The way your business is powered (i.e. becoming an electricity generator, having onsite storage etc)?	1
b	The transport of goods or business travel?	1
c	How your business is heated?	1
d	The energy efficiency of your business?	1
e	Your business becoming more actively involved in helping to reduce carbon emissions and tackle climate change?	1
f	Don't see any of the above opportunities or benefits for my business	1

ASK IF c1a EQ 1

C2a. What opportunities or benefits do you see in terms of how your business is powered? [open comment]

ASK IF c1b EQ 1

C2b. What opportunities or benefits do you see in terms of travel and transport? [open comment]

ASK IF c1c EQ 1

C2c. What opportunities or benefits do you see in terms of the way your business is heated? [open comment]

ASK IF c1d EQ 1

C2d. What opportunities or benefits do you see in terms of the energy efficiency of your business? [open comment]

ASK IF c1e EQ 1

C2e. What opportunities or benefits do you see in terms of becoming more actively involved in helping to reduce carbon emissions and tackle climate change? [open comment]

C3. Please say if you anticipate any **other opportunities or benefits for your business** as we try to reduce the effects of carbon emissions?

C4. There are different ways that businesses in Northern Ireland can become more active in terms of contributing to a reduction in carbon emissions to help limit the effects of climate change. Please say how likely it is that your business would introduce any of the following changes to help tackle the effects of climate change?

Very likely	1
Likely	2
Not very likely	3
Not at all likely	4
Don't know	5
Already done	6

Use greener energy suppliers (i.e. source more of your energy from renewables)	1
Purchasing electric vehicles	2
Using alternative supply chains depending on their 'green credentials'	3
Improving the energy efficiency of the building fabric (e.g. better glazing, improve insulation etc.)	4
Take active steps to reduce the amount of energy your business uses	5
Reduce the heat levels within your business (turning down the heat)	6
Buy more energy efficient equipment	7
Undertake an energy audit to identify ways your business can become more energy efficient	8
Install low carbon heating technology (e.g. electric air pumps to heat your premises)	9
Install and use Smart Metering	10
Change your heating system or the fuel it runs on to a greener alternative	11
Get involved in micro generation (i.e. generating your own power and selling your excess to the grid)	12
Limit business travel among employees	13
Encourage employees to use alternative / greener forms of transport incl. public transport	14
Use alternative sources of fuel such as hydrogen to power business vehicles	15
Train staff on energy efficiency issues	16
Would not consider introducing any of these changes	17

C5. What is **the single most important thing** that would **encourage or motivate your business** to become more active in reducing carbon emissions and helping to reduce the effects of climate change?

C6. What is **the single biggest barrier to your business** becoming more active in reducing carbon emissions and helping to reduce the effects of climate change?

C7. Do you expect that you will have to make changes to the way you operate your business to help support Northern Ireland's effort to meet its climate targets? **(Select one only)**

Yes, within the next 12 months	1
Yes, within the next 1-2 years	2
Yes, within the next 2-5 years	3
Yes, within the next 5-10 years	4
No, I don't expect that my business will need to change	5
Not sure	6

ASK IF C7 LE 4

C8. What are the changes you think you will have to make?

ASK IF C7 EQ 5

C9. Why do you say that your business will not need to change?

Section D: Willingness to Change

D1. Who do you feel is **most responsible** for ensuring that Northern Ireland is meeting our climate change commitments and targets? **(Select one only)**

General public	1
Businesses	2
Government	3
Energy providers	4
Everyone	5
Other (please specify)	6

D2. How important is the availability of financial incentives to encouraging your business to make changes to help limit the effects of climate change? **(Select one only)**

Very important	1
Important	2
Not very important	3
Not at all important	4
Don't know	5

D3. Of the following, which if any, would encourage your business to become more active in reducing carbon emissions? **(Select all that apply)**

More information on how your business can contribute to combating climate change	1
Tax incentives to make changes	2
Business grants to make changes	3
Low interest repayable loans	4
Reduction in business rates to support investment in making changes	5
Using in-house skills from existing personnel (e.g. training)	6
Other (please specify)	7

D4. Of the following, which would be the **most important** in encouraging your business to become more active in reducing carbon emissions? **(Select one only)**

More information on how your business can contribute to combating climate change	1
Tax incentives to make changes	2
Business grants to make changes	3
Low interest repayable loans	4
Reduction in business rates to support investment in making changes	5
Using in-house skills from existing personnel (e.g. training)	6
Other (please specify)	7

D5. Northern Ireland's new Energy Strategy will make a commitment to reducing the reliance of businesses on fossil fuels (gas, oil and coal). How supportive are you of reducing business reliance on fossil fuels? **(Select one only)**

Very supportive	1
Supportive	2
Not very supportive	3
Not at all supportive	4
Don't know	5

ASK IF D5 EQ 3, 4 or 5

D6. Why are you not supportive of reducing business reliance on fossil fuels?

D7. Reducing business reliance on fossil fuels will mean that we will have a greater reliance on indigenous renewable energy sources such as wind and solar. Moving to renewables will require substantial investment costs but will ultimately lead to a cheaper energy system in the long-term. Given this, do you accept that paying a little more now for cleaner energy is better than allowing the burden of payment to fall heavily on future generations? **(Select one only)**

Yes	1
No	2
Don't know	3

D8. Why do you say that?

Section E: Affordability and Supporting Businesses to Make Positive Changes

E1. Thinking about energy use within your business, how would you rate this in terms of value for money? **(Select one only)**

Excellent	1
Good	2
Fair	3
Poor	4

E2. As we make progress in tackling climate change of the next 5-10 years, what impact do you think this change will have on your business costs? **(Select one only)**

Costs will fall	1
Costs will stay the same	2
Costs will increase	3
Don't know	4

E3. Why do you say that?

E4. It is likely that businesses in Northern Ireland will have to pay something towards reducing carbon emissions whether it is through investing in new technologies (e.g. new heating systems) or paying more on energy bills for cleaner energy. Is your business willing to pay more towards reducing the effects of carbon emissions on climate change?
(Select one only)

Yes,	1
No	2
Don't know	3

ASK IF E4 EQ 1

E4a. In percentage terms, how much more is you business willing to pay to help reduce the effects ofcarbon emissions?

E5. How would you rate your awareness of the upfront costs of introducing new technologies to your business to help reduce the effects of carbon emissions on climate change? **(Select one only)**

Excellent	1
Good	2
Fair	3
Poor	4

E6. Do you have any concerns about introducing new technologies into your business with the aim of helping to combat the effects of carbon emissions on climate change? **(Select one only)**

Yes	1
No	2
Don't know	3

ASK IF E6 EQ 1

E7. What are your concerns?

E8 Are you wating for new technologies or a new generation of existing technologies before you adopt them into your business with the aim of helping to combat the effects of carbon emissions on climate change? **(Select one only)**

Yes	1
No	2
Don't know	3

ASK IF E8 EQ 1

E9. What technologies are you waiting for?

E10. Is your business willing to make the investment in new technologies to help support efforts to reduce the effects of carbon emissions on climate change? **(Select one only)**

Yes	1
No	2
Don't know	3

E11. Why do you say that?

E12. Do you feel that your business will need to be supported to make changes to help support efforts to reduce the effects of carbon emissions on climate change? **(Select one only)**

Yes	1
No	2
Don't know	3

E13. It is likely that some businesses in Northern Ireland will need to be supported to make changes to help tackle the reduction in carbon emissions. Thinking of your own business what is the best way to support you to make these changes?

E14. Businesses will be required to make changes to the way they operate to help meet our net zero carbon targets. This will require businesses to invest in new technologies and this will come at a cost. What would be a reasonable payback period for your business to recoup these costs or a reasonable part of these costs? **(Please answer in years)**

E15. If your business did invest in new technologies to help combat the effect of carbon emissions on climate change, would you expect lower running costs generally? **(Select one only)**

Yes	1
No	2
Don't know	3

E16. If your business was making a positive contribution to reducing the effects of carbon emissions , what would this look like or how could this be measured?

E17. Different options are being explored in terms of measuring the success of business in reducing carbon emissions. Which of the following do you believe is **the best way** to measure success? **(Select one only)**

How much a business spends on energy relative to turnover	1
Cost savings, energy savings and/or carbon savings made from energy efficiency measures installed	2
% of energy consumption generated from renewables and/or other alternatives (bio fuels)	3
Income made from renewable generation	4
Carbon Intensity (kg of greenhouse gas emissions per X) standardised to business metric e.g. o kg co2e/£100k turnover o kgco2e/100m2 footprint of their building(s) o kg co2e/passenger numbers o kg co2e/tonne of production	5
Other (please specify)	6

E18. Do you feel you have enough information to support your business to introduce changes to help reduce the effects of carbon emissions? **(Select one only)**

Yes	1
No	2

ASK IF E18 EQ 2

E19. What additional information would be helpful?

E20. Who should be providing information for businesses on how they can reduce carbon emissions?

E21. What protections, if any, does your business need when making changes to the help reduce carbon emissions?

E22. Please say if there is anything in particular, and from a business perspective, that you would like to see in the new Energy Strategy for Northern Ireland?

Finally, a few questions about your business.

F1. How many employees are in your business? **(Select one only)**

Sole operator	1
1-5	2
6-10	3
10-25	4
26-50	5
50+	6

F2. In which sector does your business operate? **(Select one only)**

Accommodation and food service activities	1
Business administration and support service activities	2
Agriculture, forestry and fishing	3
Arts, entertainment and recreation	4
Construction	5
Education	6
Electricity, gas, steam and air conditioning supply	7
Financial and insurance activities	8
Human health and social work activities	9
Information and communication	10
Manufacturing / production	11
Mining, quarrying and utilities	12
Professional, scientific and technical activities	13
Public administration and defence	14
Real estate activities	15
Transportation and storage (incl. postal)	16
Water supply, sewerage, waste management and remediation activities	17
retail trade or wholesale trade; repair of motor vehicles and motorcycles	18
Other (please specify)	19

F3. Please say what your business does.

F4. Finally, which area is your business / head office based? **(Select one only)**

Antrim and Newtownabbey Borough Council	1
Ards and North Down	2
Armagh City, Banbridge and Craigavon	3
Belfast	4
Causeway Coast and Glens	5
Derry and Strabane	6
Fermanagh and Omagh	7
Lisburn and Castlereagh	8
Mid and East Antrim	9
Mid Ulster	10
Newry, Mourne and Down	11
Other (please specify)	12

THANK AND CLOSE