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

Renewable Electricity Pipeline

FOR NORTHERN IRELAND

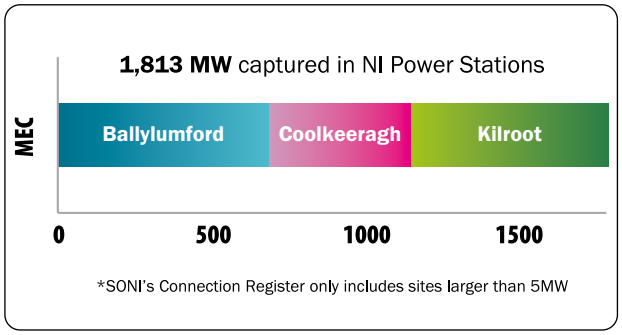
SEPTEMBER 2020

Current Capacity in Northern Ireland

According to System Operator for Northern Ireland (SONI) connection register[1], Northern Ireland has a maximum export capacity (MEC) of 3,031 MW.

Around 60% of NI's generation comes from traditional fossil fueled power stations. The remaining capacity is installed across NI renewable electricity sites.

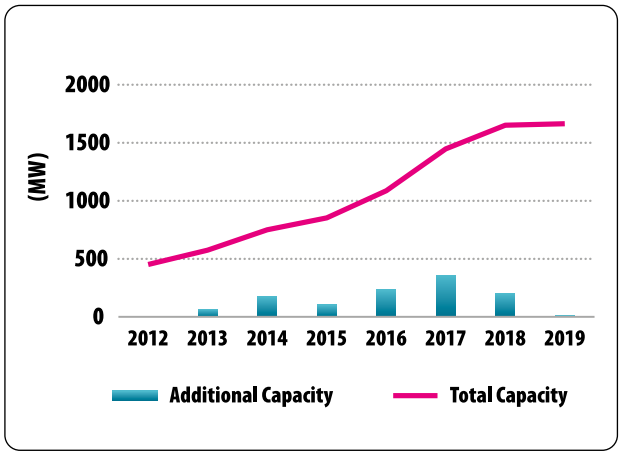
All NI's power stations, including two large scale renewable sites are connected to the transmission network.The remaining renewable sites are connected to the distribution network.

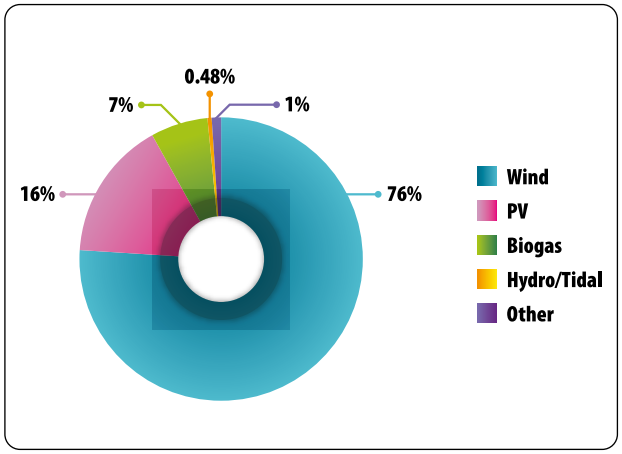


Renewable Generation in Northern Ireland

According to Northern Ireland Electricity Network (NIEN) Northern Ireland has around 1,684 MW of connected renewable generation technologies.

2017 saw the largest increase in additional capacity in any given year. Sites commissioned in 2017 started construction at least two year prior to generation, with planning approval dating as far back as 2007.





Onshore wind accounts for 76% of total connected renewable generation. Solar photovoltaics (PV) has the second highest capacity, with 268 MW installed across NI. Other technologies include biogas, hydro, landfill gas and other mixed schemes.

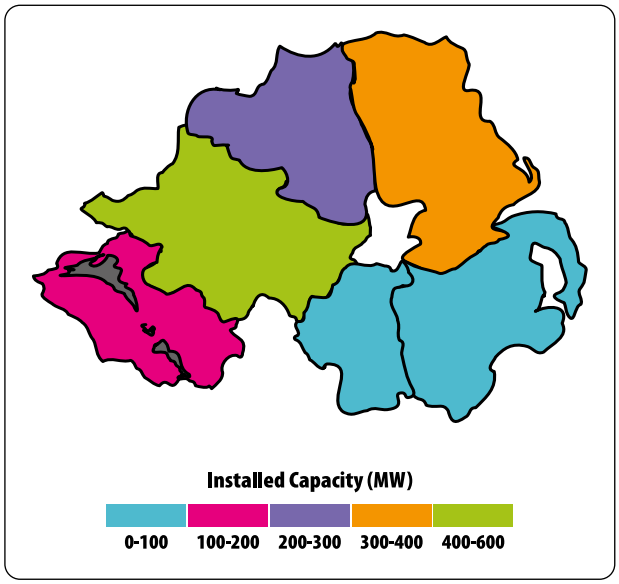
1 SONI. Connections and Applications - Northern Ireland. wwRetrieved from http://www.soni.ltd.uk/customer-and-industry/general-customer-information/connections-and-applicati/index.xml

Where is current renewable capacity in Northern Ireland located?

According to BEIS Renewable Energy Planning Database (REPD)[2] produced in June 2020, current operational capacity is largely located in the North-West of Northern Ireland. Co. Tyrone is the largest contributor with around 554 MW of installed renewable capacity, dominated by larger scale on-shore wind sites.

In comparison Co. Down has a capacity of 9 MW installed, made up of A.D. and solar PV technologies.

The latest sites to be constructed and fully energisied are located in Co. Fermanagh and Tyrone. (July 2018).

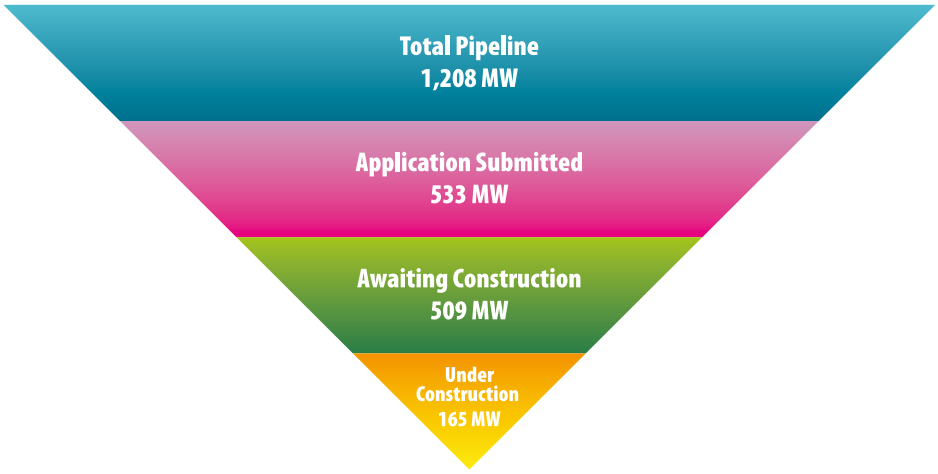


Potential Pipeline Capacity

According to REPD, Northern Ireland has a total pipeline capacity, including battery storage of 1,208MW

A large proportion of these developments are at the awaiting construction phase – where a site has planning permission accepted, but no construction has commenced. Consented sites, accumulating 509 MW, illustrates the large potential NI has available.

If construction is stalled for another 2 years, NI has the potential to lose a further 212 MW of capacity, due to planning permission timeframes.



NI currently has five sites under construction, that include a wide range of technologies such as onshore wind, energy from waste (EfW) and battery storage.

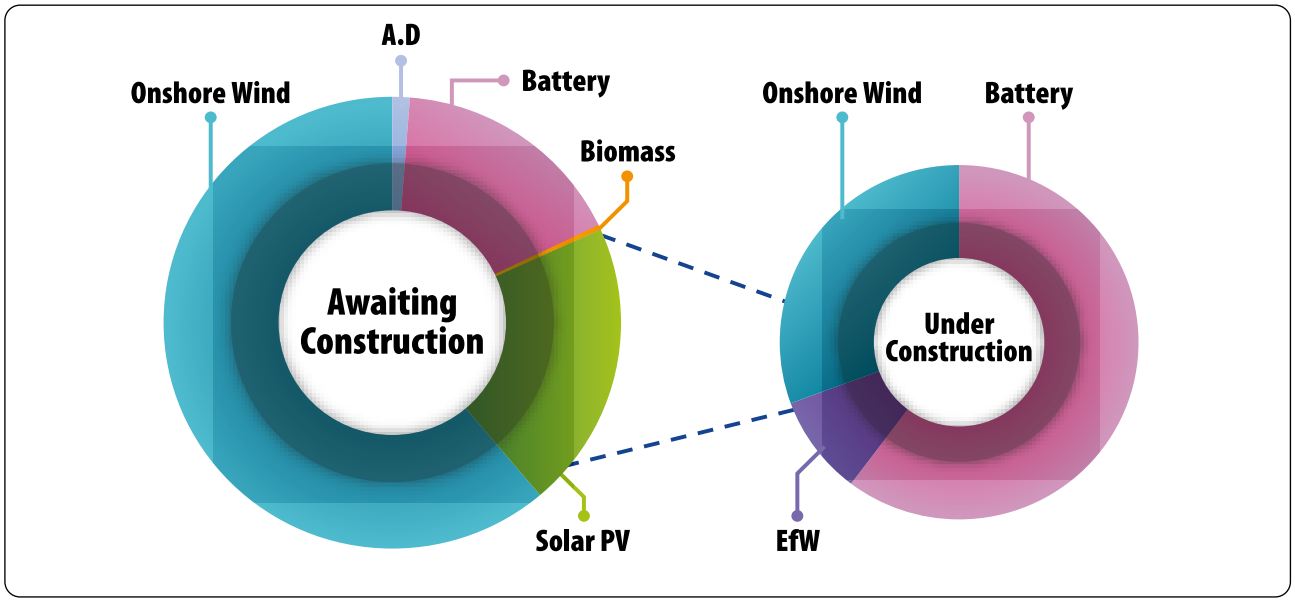
2 Department for Business, E. &. (n.d.). Renewable Energy Planning Database. Retrieved from https://www.gov.uk/government/publications/renewable-energy-planning-database-monthly-extract

Emerging Technologies

While onshore wind still dominates the pipeline, Northern Ireland is beginning to see a small alteration in renewable generation and storage technologies at the two construction phases.

There are three large scale Solar PV sites awaiting construction, with a combined capacity of 102 MW. Planning permission has been granted for NI largest Solar PV site (39.5 MW), with the introduction of South Antrim Solar Park Phase 2.

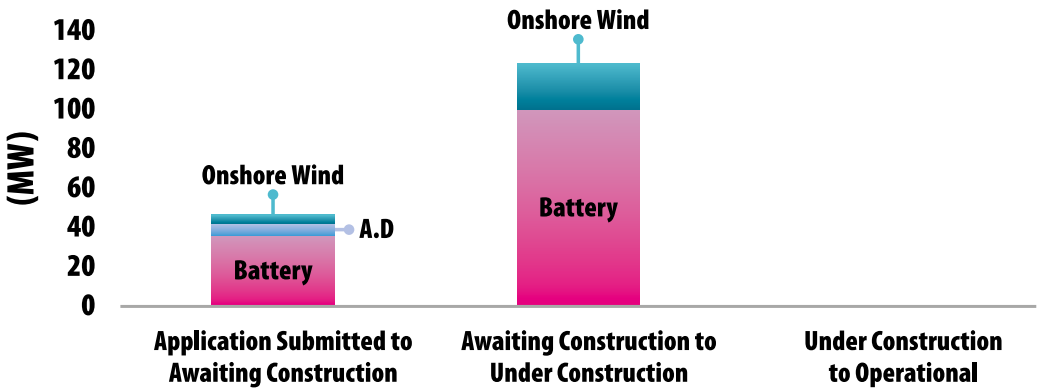
Four storage facilities are in the pipeline, accumulating 184 MW of storage potential. Steps are moving forward, storage applications have been submitted to SONI for these pipeline sites.



Northern Ireland pipeline capacity includes one marine energy technology. Fair head tidal site is currently in the planning system for a 100 MW development.

Changes in the pipeline since 2019

Since an initial assessment in winter 2019 there has been relatively little change in Northern Ireland pipeline. The most substantial change was the initial construction of two battery storage facility in Dungannon and Craigavon.



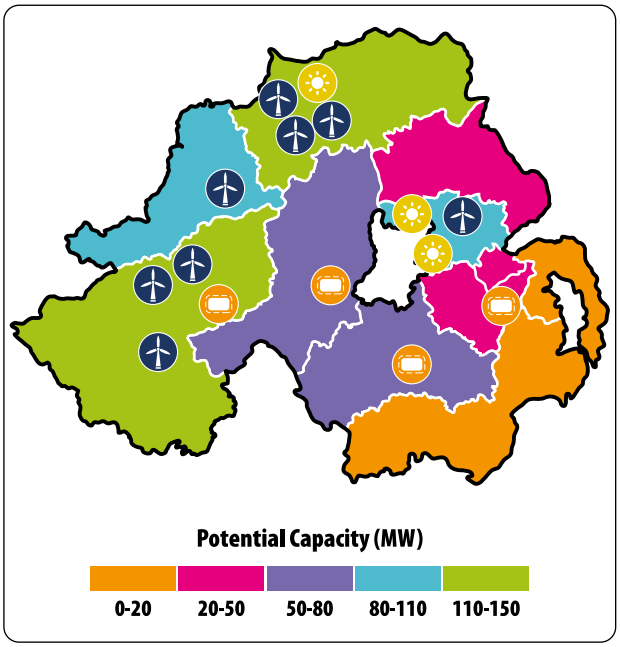
Northern Ireland consented sites by council area

Causeway Coast and Glens Borough Council has the largest value of capacity with consented planning permission (141 MW), followed closely by Fermanagh and Omagh District Council (129 MW).

Mid Ulster District Council have significant potential, as it represents 42% of total planning applications currently in the system.

Consented solar PV, battery storage and onshore wind sites over the capacity of 20MW are presented in the map using the symbols below;

*Mapping is an estimation of the renewable sites geographical location



Methodology

Current Connected Generation

SONI's connection register and NIE Networks generation growth chart provides information on generation sites that are connected to electricity distribution and transmission networks, providing electricity to the Northern Ireland consumers.

SONI's connection register only includes large scale generation sites, with a maximum export capacity greater than 5MW. The register includes electricity produced through renewable electricity generation and NI fossil fueled power stations.

NIE Networks generation growth chart includes large scale generation, small scale generation (between 5MW and 3.68kW) and micro generation (below 3.68kw or less single phase, or up to 11.04kW three phase). The data only included renewable electricity generation connected to the electricity network.

Future Capacity Potential

Renewable Energy Planning Database (REPD) is produced by the Department for Business, Energy & Industrial Strategy (BEIS). The database tracks the progress of renewable electricity projects and electricity storage projects from inception, through planning, construction, operation and decommissioning. The database only includes renewable electricity projects that have submitted planning permission.

Pipeline capacity is calculated using the REPD database, based on the level of projects at different stages of development. There is no guarantee that each site will come to fruition, due to several barriers such as planning permission approval, available grid capacity and financial certainty.

Pipeline capacity includes potential renewable electricity capacity that can be used to generation electricity. Alongside battery storage that can be used to store electricity generated through the renewable electricity technologies.