

THE PROVISION OF FISHERIES RELATED ADVICE FOR ONSHORE WIND FARM DEVELOPMENTS



Introduction

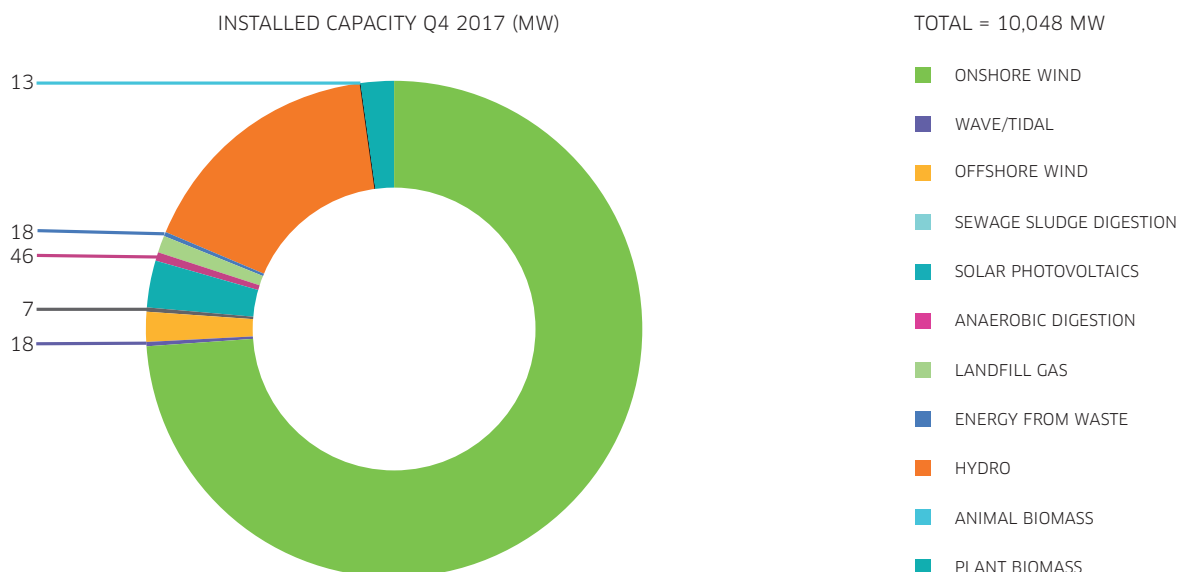
Salmon and trout fisheries are a significant sector of the Scottish economy and along with the European eel, are species of high conservation interest. Marine Scotland Science (MSS) plays a vital role in the regulatory process for onshore wind farm developments, ensuring that potential impacts on these fish populations and associated fisheries are properly considered.

With Scottish Government (SG) targets for the equivalent of 50% of the energy for Scotland's heat, transport and electricity consumption to be supplied from renewable sources, and an increase by 30% in the productivity of energy use across the Scottish economy by 2030, onshore wind is now amongst the lowest cost forms of electricity generation of any kind. In addition, it continues to be the largest contributor of renewable

electricity in Scotland (74% in the fourth quarter of 2017 according to Scottish Renewables in 2018).

Advice

Energy Consents Unit (ECU), within the SG's Directorate for Energy and Climate Change, processes applications, under Section 36 and 37 of the Electricity Act (1989), for stations generating electricity of 50 megawatts or more, power lines and associated infrastructure to inform Scottish Ministers when determining consent for proposed developments. ECU regularly seeks advice from MSS on freshwater and diadromous fish in relation to onshore wind farm developments.



Wind farm developments may impact fish populations and fisheries, and the following activities have the potential to impact fish populations:

- excavation and construction of turbine foundations and crane pads during construction
- excavation of borrow pits
- construction of control buildings/substations/ construction compounds
- road construction including water course crossings
- laying of cables.

Potential impacts from these activities on fish populations and fisheries can arise from:

- deterioration in water quality as a result of things such as the release of sediment, fuel spillage, concrete spillage and tree felling, which can have an effect on spawning success, hatching of eggs, production of juveniles and angling success
- poorly designed stream crossings such as culverts, bridges, fords or other physical obstruction which can affect fish migration
- alteration of surface water runoff and drainage rates which can lead to an increased risk of flooding, or very low flows, which can affect the survival of fish.

Proposed developments undergo an Environmental Impact Assessment (EIA) to assess the likely significant environmental effects arising from the proposals and MSS provides advice to ECU throughout the different stages of the EIA.

In addition to providing site specific advice for individual wind farm developments, MSS has issued guidance documents to help developers address fisheries related issues throughout the application process and establish a robust integrated monitoring programme such that any impacts can be detected and, if possible, rapidly remediated.

Research

MSS is currently carrying out research using data collected from a number of operational wind farms across Scotland of differing levels of acidification, peat depth, forestry management, number of wind turbines and wind farm design etc. to identify if there are any impacts on fish populations and water quality as a result of onshore wind farms. Whether these impacts vary with catchment characteristics or wind farm site design and management will also be explored. It is anticipated that the results of the study will assist MSS in the provision of advice relating to onshore wind farm developments.

Further information

Scottish Government (2017) Scottish Energy Strategy: The future of energy in Scotland.
<https://www.gov.scot/energystrategy>

Scottish Government (2018) Scoping advice on information required in environmental impact assessment reports to assessing risk to freshwater and diadromous fish and associated fisheries.

<https://www.gov.scot/Topics/marine/Salmon-Trout-Coarse/Freshwater/Research/onshoreren>

Scottish Government (2018) Generic monitoring programme for monitoring watercourses in relation to onshore wind farm developments.

<https://www.gov.scot/Topics/marine/Salmon-Trout-Coarse/Freshwater/Research/onshoreren>

Scottish Renewables (2018)

<https://www.scottishrenewables.com/sectors/renewables-in-numbers/>