Hydroelectric power stations

In 2013 Ireland had 237 MW of hydropower from five main hydroelectric power plants and many small-scale hydro generators. The largest plant is the 85 MW hydro power station at Ardnacrusha on the River Shannon, in operation since 1927. Hydroelectric power stations generated about 750 GWh in 2013.

Trajectory 1

Trajectory 1 assumes that hydropower is discontinued in Ireland and Ardnacrusha is closed down by 2030.

Trajectory 2

Trajectory 2 assumes that the total hydropower generating capacity is maintained at its 2013 level of 237 MW up to 2050, typically producing around 750 GWh of electricity annually.

Trajectory 3

Trajectory 3 assumes that small scale hydropower is developed in line with any unexploited potential for micro hydroelectricity. Installed capacity reaches 350 MW by 2030 with the refurbishment of existing schemes and additional micro-hydro sites. About 1 TWh of electricity is generated annually.

Trajectory 4

Trajectory 4 assumes that hydropower capacity reaches almost 500 MW by 2050,[52] generating around 1.6 TWh/y of electricity. This is more than a 100% increase compared to the energy output of Ireland's current hydropower resource. While this may be technically feasible, it would raise environmental and planning concerns.

Figure 29: The Ardnacrusha hydroelectric power plant on the Shannon, 1929.

Figure 30: Electricity produced under 4 trajectories (TWh/yr)