

Electrolysis: the power of water released

Whilst using our electricity supply more intelligently and efficiently through the Intelligent Operations Centre and using a combination of locally deployed batteries and hydropower could be vital ingredients in securing our renewable energy system, the greatest potential game-changer could be through electrolysis. This has been confirmed by the results of a 10 kilowatt (kW) pilot project which has just completed at Kinnegar WwTW in Holywood and a large 1 megawatt (MW) Demonstrator model will arrive in Belfast by the end of 2021.

Using recycled wastewater and renewable power sources, electrolysis produces hydrogen and oxygen which can be used both to help decarbonise our transport and heating systems whilst the oxygen, which is produced simultaneously, can increase waste processing capacity and enable our towns and cities to grow.

It is possible that deploying 120 MW of electrolysis capacity across the top 30 wastewater sites in Northern Ireland would incentivise wind and solar farm developers to invest to a similar scale, safe in the knowledge that the output of such schemes could be put to maximum use rather than having to be curtailed off-peak.



Increase processing capacity and reduce carbon emissions

Such certainty is often the difference between a decision to invest or not and, therefore, will be vital if Northern Ireland is to add the extra 1,600 MW of renewable generation needed to meet its 2030 target.

