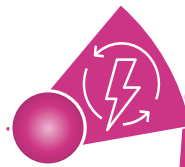


## NET ZERO ENERGY 2030



### SHIFT TO 100% RENEWABLE ELECTRICITY

Meeting net zero will require that our electricity consumption, whether produced on site or procured from the grid, is 100% renewable by 2030.

Our day-to-day operations across our £3bn asset base are heavily dependent on electricity. We rely on electricity to run equipment that turns raw water into drinking water and pump it to the right place. Similarly, we rely on large amounts of electricity to collect and pump the contents of our sewers to our wastewater treatment works.

NI Water is Northern Ireland's single, largest electricity consumer.

We access most of our power from the electricity grid. Each unit of power we are currently supplied with is made up of 55% electricity from fossil fuel sources and 45% renewables<sup>12</sup>. Not only is this energy carbon intensive, but it is also subject to price volatility associated with fossil fuel markets and geopolitical factors.

Our path to decarbonising our power requires us to fully switch away from power produced by fossil fuels and

use only renewable power. We are already making positive steps in this direction as demonstrated by our purchase of renewable electricity and investment in solar, green hydrogen and industrial batteries.

**Our plan for shifting to 100% renewable electricity is to:**

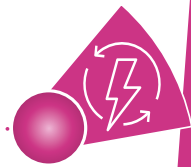
- invest in solar generation and industrial batteries. We will double our installation of solar, supported by industrial batteries, to provide around 10% of our total demand;
- explore the development of wind farms. We will seek the ability to invest in securing our own wind farm (or farms) with enough capacity to match our demands – around 75MW. This will provide access to renewable power and price stability; and
- agree terms for renewable energy from power purchase agreements. Should it not be possible to secure our own wind farm, or at the scale envisaged, then we will look to long term power purchase agreements and secure access to certified renewable power.



Piloting the production of green hydrogen - NI Water staff showing Alliance Party of Northern Ireland MLA's Andrew Muir MLA and Stewart Dickson MLA the 10kW Electrolyser at Kinnegar Wastewater Treatment Works in Belfast.

<sup>12</sup><https://www.economy-ni.gov.uk/sites/default/files/publications/economy/Energy-in-Northern-Ireland-2022.pdf>

## NET ZERO ENERGY 2030



### SOLAR POWER

NI Water has successfully invested in 60 solar installations at sites across the region. This includes a major solar farm at its largest electricity consuming water treatment works at Dunore, near Antrim. Built using 24,000 solar panels on 30 acres of land, this 6MW installation has consistently out-performed expectation, providing renewable electricity and reducing costs.

A further investment is planned at Dunore water treatment works to extend the generating capacity by 2.5MW as well as to deploy a 5MW industrial scale battery.

The battery will enable NI Water to store low-cost solar power that is not immediately used. This can then be deployed during more expensive periods and make use of more renewable electricity at night. As well as providing NI Water with resilience in the event of an interruption to supply, the battery will provide a range of essential services for the electricity distribution network to operate.

We deployed our first battery energy storage system at Ballykelly wastewater treatment works, County Derry/Londonderry in 2022/23. The battery system enables the treatment works to operate using on site solar power for much of the year. In winter months, during periods of lower solar generation, the battery system can be topped up from the grid using off-peak cheaper energy tariffs. Reed beds are used as part of the treatment process, which scooped a 2022 International Green Apple Environment Award and



NI Water CEO at the Dunore solar farm, County Antrim.



Solar powered battery energy system at Ballykelly wastewater treatment works, County Derry/Londonderry.

was named Infrastructure Project of the Year at the 2022 ICE Sustainability Awards and the CEF Construction Excellence Awards.

NI Water will continue to identify solar investment opportunities alongside its electricity consuming assets. This includes expansion of solar at other sites, installation of more solar farms, and large-scale battery deployment.



Find out more: <https://www.niwater.com/dunore-solar-farm/>

Moving to 100% renewables will not be enough to deliver our net zero energy 2030 target. This is due to the need to decarbonise our heating and transport.