

# Pumped Hydro Storage

Batteries are one key tool in addressing the impact of intermittent weather on the electricity supply, but at this stage of their development they are most effective over a short to medium duration.

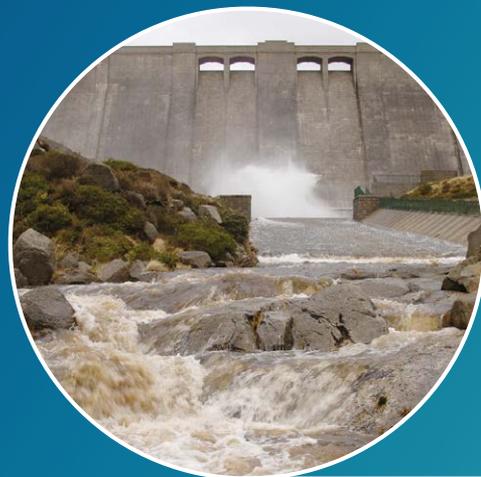
Another solution is needed to address more prolonged periods of intermittency such as in winter when the wind may not blow or the sun shine sufficiently for several weeks at a time.

In Britain nuclear power will help to address this challenge in the future. However, there are no nuclear plants on the island of Ireland.

## **We need, therefore, alternative solutions.**

Pumped hydro storage could be one. It uses surplus electricity from renewable sources at off-peak times to pump water from low ground to a reservoir at a higher elevation so increasing its gravitational potential energy.

When it is needed the reservoir is then opened and the gravity pulls the water down through turbine generators creating electricity which could be used over a prolonged period.



NI Water inherited a diverse range of such reservoirs - some large, some small, some in use and some de-commissioned - which could be used to produce hydro power. At Camlough, for instance, a pumped hydro scheme was under construction in the early seventies but was halted.

The demands of the renewable energy era, however, suggest that we need to think again about how we can revitalise such assets as part of an integrated energy plan for Northern Ireland.