

Hydropower: scaling up and deploying the work horse of renewables:

Kate Gilmartin CEO BHA



- BHA is the leading trade membership association solely representing the interests of the UK hydropower industry
- Our Mission is to drive growth in the sector by engaging, influencing and promoting Hydropower, Tidal Range and Pumped Storage Hydro, making these technologies relevant within the Government's ambition to enable a decarbonised, secure grid by 2035.



What are we calling for?

Hydropower:	Tweak existing CfD to enable deployment of up to 1 GW
Pumped Storage Hydro:	A cap and floor, to enable delivery of the 15GW called for in the CCC report
Tidal Range:	Regulated Asset Base, (used for Nuclear), to enable delivery of 13GW

What's been the main barriers to support?

Hydropower:	Hard to raise relevance (too small, can't scale, too expensive)
Pumped Storage Hydro:	Geographically constrained, market can deliver batteries
Tidal Range:	Too expensive (Swansea Bay)

Why are these technologies important?

Hydropower:	Resource adequacy, hydropower is cheaper than gas peakers (Reservoir hydro currently provides 900GWhs of storage and load follows)
Pumped Storage Hydro:	Storage, reduced curtailment and balancing costs, grid stability/ flexibility (pump and generate) currently 29GWhs, pipeline 135GWhs
Tidal Range:	Non-weather dependent, generation near increasing demand centres (circumvents transmission constraints), flood defence

The counter points:

- Longevity:** All these technologies are intergenerational assets that will deliver well beyond 2050 – true energy security.
- Resource adequacy:** What's the answer to 3 week Low wind period in 2035?
- Energy sovereignty:** Indigenous energy generation. Gas interruption, interconnector failure, French nuclear fleet refurbishment.
- Reliability:** Hydro/ PSH/ TR are all proven, reliable, long lasting & deliverable.
- Cost:** LCOE? cheapest kWhs will not deliver a stable grid. Lowest cost is not always best value. We need to move to 'Enhanced' LCOE and account for Non price factors.
- Path to net zero:** Fraught with delivery risk and time slippages
To mitigate risk we need diversity
We need all technologies being progressed rather than a favoured few.
- Grid, Grid, Grid:** How can we deploy localised energy solutions that will not be hampered by Transmission constraints.

We need Hydropower to help face multiple barriers in the NZ journey:

- 1. Deliverability Risk**
- 2. Resource Adequacy**
- 3. Grid/ Flexibility and the roll out of Smart local energy solutions**

Hydropower is the workhorse of Renewable energy and is poised for deployment