

Integrating Wind into Complex Power Systems — Grid, Storage, and Real Operations

Authors:

Ian Froude, Pedal & Shift

Abstract ID: 180

Submitted: May 29, 2026

Call:: MRC 2026 Research & Technical Track - Call for Abstracts

What Theme Are You Submitting for?: Energy Production, Storage, and Grid Integration

Presenter Name: Remco Boersma, Ventolines | Chad Fowlow, Angler

Focus Area: Offshore Wind | Offshore Wind

Keywords: battery storage, energy systems modelling, grid integration, offshore wind, transmission

Collaborative submission: Ventolines + Angler Solutions

The pitch: Grid integration is one of the most consequential challenges facing offshore wind development in Canada. This session brings together Ventolines — which has built and operates grid-scale co-located battery storage projects and manages a 1.5 GW+ asset portfolio — and Angler Solutions, which brings advanced energy systems modelling capabilities and deep Atlantic Canada credentials including work directly for Marine Renewables Canada and Net Zero Atlantic.

The session would cover:

- What grid integration challenges look like at scale, from technical design through to live operational management
- How co-located battery storage (BESS) manages grid imbalances and improves project economics, drawing on Ventolines' 250 MW Dronter Energy Storage and 100 MW Energy Storage Westermeerdijk projects
- How energy systems modelling (Angler's MESO system) supports grid integration planning and scenario analysis in the Canadian context
- Lessons from Atlantic Canada grid and transmission work (Angler: NS Power ECEI, Net Zero Atlantic port assessment)
- What Canadian grid operators and offshore wind developers can apply as the sector scales up