



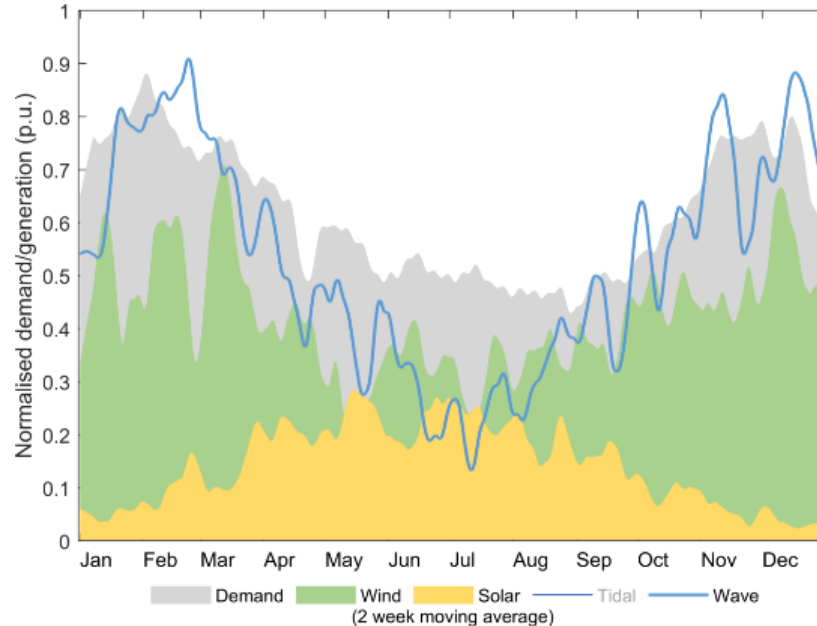
Tim Hurst - Wave Energy Scotland

How do we get policy makers to support wave energy

What do policy maker want?

- *Secure, low carbon energy technology, at competitive price, generating to a profile that matches demand, delivering significant economic benefit to Scotland/UK, deployed at a scale to impact our 2045/50 climate targets, whilst enabling a just transition from fossil fuels*
- **This is exactly what wave energy can deliver**

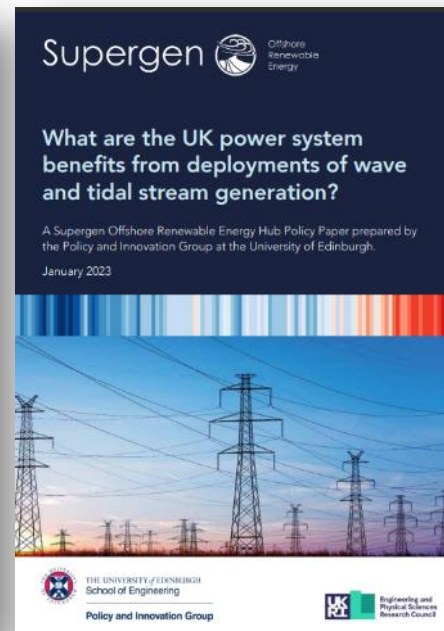
Wave Energy Generation Profile



- Electricity demand is highly seasonal in GB
- Wind generation higher in winter
- Solar generation higher in summer
- Tidal consistently available - in cycles
- Wave generation higher in winter – coinciding with peak demand – best match of OREs
- If wave can generate, it can be used – no need for storage

Wave Energy System and Wider Benefits

- Recent work by the University of Edinburgh as part of SuperGen ORE have identified the system benefits of marine energy, including decreased emissions and the reduced requirement for storage
- The resultant system benefits in 2050 are:
 - £1.03B annual reduction in cost of dispatch
 - 300 GWh reduction in fossil fuel dispatch
- Work by SuperGen Marine on deployment models predict the potential to deploy 6.4GW of wave energy by 2050 in the UK if 2030 LCOE costs for wave could reach £127/MWh (€150/MWh)
- The resultant GVA benefit to the UK economy of this level of deployment is:
 - £4B by 2050 from domestic deployment
 - £20B from the export market by 2050
- OWC techno-economic modelling predict that wave deployed with FOW can reach £125/MWh by 2030



Wave Energy Supply Chain

- WES sponsored technologies have UK supply chain content of ~80% and Scottish content of greater than 60%
- Economic opportunities will also come from O&M (not shown here) which will create high value jobs in coastal communities that are economically fragile
- The resultant GVA benefit to the UK economy of this level of deployment is:
 - £4B by 2050 from domestic deployment
 - £20B from the export market by 2050
- Enables a just transition as Oil and Gas companies join the supply chain
- As we move to MW scale devices, technology can be designed to utilise the UK FOWT supply chain to maintain or improve this position





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