



The Marine Energy cluster at UHI is a multi-disciplinary grouping of international researchers.



an estimated
206
gigawatts (GW)

of offshore wind, wave and tidal resource in Scottish waters; almost 40% of the UK total¹.

“Linking natural and social sciences with the key development challenges of marine energy.”

Resource and risk:

- Tidal resource assessment
- Wave climate assessment
- Device-environment interaction (including turbulence and array effect)
- Weather windowing
- Wave forecasting
- Sensor deployment.

Understanding the effects of marine renewable energy devices on the environment and ecology:

- Interaction of fish with devices
- Migratory species (focus on salmon)
- Seabird ecology
- Collision risks with marine life

- Acoustic footprint of devices
- Bio fouling, smothering and burial
- Reef effects of offshore structures
- Ecosystem impacts of devices
- Survey techniques for wave and tidal sites.

Understanding the social, economic and policy dimensions of marine renewable energy:

- Marine spatial planning
- Ecosystem services
- Environmental monitoring
- Social capital and the resilience of remote maritime communities
- Evaluating energy policies.

MARINE ENERGY:
Research themes

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