



Challenges and Opportunities of Renewable Energy

Thursday 30th June 2016
QEII Conference Centre, London

PROGRAMME

9:30	Registration & Exhibition	
10:00	Welcome – Prof Tim Wheeler, Director for Science & Innovation, NERC	
	Marine Renewable Energy	Land-based Renewable Energy
	Session 1: Environmental Interactions with Energy Infrastructure	Session 1: Broader implications on natural capital
	Chair: Dr Ian Davies, Marine Scotland Science	Chair: Prof Gail Taylor, University of Southampton
	<i>Presenting findings from studies aimed at understanding the impact on physical processes and responses of marine vertebrates to large scale marine energy infrastructure.</i>	<i>Exploring the broad scale implications of renewable energy on natural capital from carbon sequestration by energy crops to algae harvesting to human well-being in Sub-Saharan Africa.</i>
10:20	Introduction to session Dr. Ian Davies, Marine Scotland	Introduction to session Prof Gail Taylor, University of Southampton
10:25	From device to array – using the FLOWBEC platform to understand interactions with surrounding ecosystems Dr. Benjamin Williamson, University of Aberdeen	An assessment of the wider ecosystem services impacts of bioenergy deployment in the UK Dr. Rob Holland, University of Southampton
10:35	Uncertainty in avian collision risk modelling Dr. Ali McCluskie, RSPB	Carbon sequestration under perennial energy crops: possible win-wins through novel planting regimes Dr. Goetz Richter, Rothamsted Research
10:45	Using fine scale tracking systems to study interactions between marine mammals and renewables infrastructure Dr. Dave Thompson, Sea Mammal Research Unit, St Andrews University	Algae: a nuisance or potential biofuel resource? Dr. Jagroop Pandhal, University of Sheffield
10:55	Combining lab, large-scale and offshore experiments to predict impacts and consequences of marine noise for fish Dr. Steve Simpson, University of Exeter	Socio economic and environmental impacts of biofuels in Africa Dr. Carla Romeu-Dalmau, University of Oxford
11:05	Break, Networking & Exhibition	

Session 2: Environmental and socio-economic costs and benefits		Session 2: Towards a framework for best practice	
Chair: Dr. Huw Powell, DONG Energy		Chair: Dr. Matt Davey, Phytofutures Ltd	
<i>Discussing array scale environmental and socio-economic impacts of marine renewable energy, and exploring potential impacts on fish and the fishing industry, potential for carbon sequestration, risks and uncertainties for industry.</i>		<i>Reporting R&D which contributes to development of a framework for best practice for solar, wind and crop renewable energy systems and their deployment. It explores trade-offs in ecosystem services and system capacities.</i>	
11:40	Introduction to session Dr. Huw Powell, DONG Energy	11:40	Introduction to session Dr. Matt Davey, Phytofutures Ltd
11:45	Stakeholder perceptions on co-locating commercial and recreational fishing at offshore windfarms Dr. Tara Hooper, Plymouth Marine Laboratory	11:45	Biochar effects on soil biodiversity and carbon cycling in temperate agricultural soils Dr. Adam Vanbergen, Centre for Hydrology & Ecology
11:55	Consequences for fish and fisheries at Offshore Windfarms: Insights from fish and vessel telemetry Prof. David Sims, Marine Biological Association, Plymouth	11:55	Working with stakeholders to identify and resolve conflicts between wind energy and bat conservation Dr. Fiona Mathews, University of Exeter
12:05	Will large arrays of windfarms alter the ability of the North sea to sequester carbon? Dr. Helen Smith, University of Exeter	12:05	Landscape response to hosting wind energy installation Prof. Susan Waldron, University of Glasgow
12:15	Risks and uncertainties associated with development of marine renewables Dr. Simon Jude, Cranfield University	12:15	A framework for reviewing the trade-offs between, renewable energy, food, feed and wood production Dr. David Howard, Centre for Ecology & Hydrology
12:25	Lunch, Networking & Exhibition		
Session 3: What are the innovation and research needs for marine renewables?		Session 3: What are the innovation and research needs for land based renewables?	
Facilitator: Michelle Carter & Yvonne Armitage, KTN		Facilitator: Jenni McDonnell & Liliya Serazetdinova, KTN	
<i>Presenting research to help inform discussion that will follow. Discussion points relate to: What are the future strategic science priorities? What are the innovation and translational R&D needs and issues? What are the opportunities for NERC R&D?</i>		<i>Presenting research to help inform discussion that will follow. Discussion points relate to: What are the future strategic science priorities? What are the innovation and translational R&D needs and issues? What are the opportunities for NERC R&D?</i>	
13:30	Introduction to session KTN	13:30	Introduction to session KTN
13:35	What are the potential consequences of very large-scale tidal arrays on marine hydrodynamics and hydrography in the near- and far-field? Prof. Judith Wolf, National Oceanography Centre	13:35	Understanding the variability and predictability of wind power Dr. Daniel Drew, University of Reading

13:45	Ecological trade-offs as a strategic solution to multiple and sustainable use - insights from a regional case study Dr. Beth Scott, University of Aberdeen	Lab-scale evaluation of biogas potential from micro algae – Drs. Matt Davey, University of Cambridge and Brenda Parker, UCL
13:55	Scaling the collision issue: from single turbines to the commercially viable arrays Prof. Ben Wilson, Scottish Association for Marine Science.	Best-practice for research on energy and the environment: lessons learned from hydropower Dr. Gary Bilotta, University of Brighton
14:05	Emerging opportunities for marine autonomous systems and the renewable energy sector Prof. Russell Wynn, National Oceanography Centre	Genome editing and the sustainable environment: better bioenergy crops? Prof. Gail Taylor, University of Southampton
14:15	Scoping workshop	Scoping workshop
15:15	Networking break	
15:45	Scoping workshop continued	Scoping workshop continued
16:45	Discussion regarding way forward – closing remarks	
17.00	Drinks Reception <i>sponsored by NERC</i>	