

PENTLAND FIRTH COORDINATION COMMITTEE

Workstream Terms of Reference

<b>WORKSTREAM:</b>	Supply Chain
<b>LEAD ORGANISATION:</b>	HIE
<b>LEAD MANAGER:</b>	Audrey MacIver, HIE
<b>TEAM MEMBERS:</b>	Duncan Mackay, the Crown Estate Gavin Mackay, HIE ; Louise Smith, HIE; Fiona Macpherson, HIE; Colin Grant, HIE; Graeme Harrison, HIE; Lynne Vallance (Scottish Government)

**WORKSTREAM OBJECTIVES**

To understand the needs of the project developers and scope for indigenous businesses to be part of the supply chain

To alert and inform the existing supply chain of opportunities

To build confidence within the supply chain

To work with companies to help them to supply to the marine energy industry

To develop the skills needed

To help fill gaps in the supply chain through inward investment

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To help support wider business growth around the project (e.g. high energy users and support services)

## BACKGROUND

The Pentland Firth region (the immediate area of the Orkney Islands, Caithness and North Sutherland) and the wider Highlands and Islands, has a recognised skilled supply chain with capabilities in fabrication, engineering design, offshore operations, maintenance, project development, environmental consultancy and other support services. It also has certain relevant facilities and sites such as ports, industrial estates, factories and other infrastructure.

In the Highlands & Islands region, island economies, and also the economy of Caithness and North Sutherland (which is highly dependent on jobs at the Dounreay Decommissioning site), can potentially be of a more fragile nature than urban economies. Marine energy developments could provide a significant opportunity for economic development based on high value businesses and job opportunities.

So just as the marine energy industry needs to be supported by the region, the region should also benefit from the establishment of the industry, perhaps leading to the region becoming the global centre for marine energy device production. As well as this, there is the opportunity for the future export of products, skills and knowledge could be centred on this area. Marine energy opportunities may have some synergy and overlap with offshore wind and this needs to be considered.

Highlands & Islands Enterprise works with other organisations such as the Highland Council and Orkney Islands Council to support economic development and is already involved in providing advice and support of benefit to the marine energy industry. HIE will build upon its existing mechanisms, including account management, to continue to develop and deliver business growth.

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WORKSTREAM ACTIVITIES

Activity No.	Description	Start Date	Finish Date
100	Review Supply Chain Study being taken forward by the FREDs Marine Energy Group and the Supply Chain Baseline Study being commissioned by SE and HIE, to inform gaps in local capabilities and to identify opportunities for business growth and inward investment. (This will also be informed by the application process).	15 May 2009	FREDs MEG Supply Chain Study complete mid June 09 SE/HIE Supply Chain Study complete end June 09 Review of Info by end July 09
200	Raise awareness of market opportunity for local businesses (target project management, environmental consultancy, legal, financial services, engineering, manufacturing, mariners, vessel operators etc) through		

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	<p>a) briefing account managers in Area Teams and Business Gateways</p> <p>b) awareness raising events via industry groups (e.g OREF, NSIG), Chambers of Commerce</p> <p>c) Meet the Developer Events, including Summit for successful developers</p>	<p>June 09</p> <p>Summer 09</p> <p>Winter 09/10</p>	
300	<p>Based on intelligence gathered from supply chain study work and information from Developer Forum, work to attract new companies into the HIE area through inward investment to fill gaps in provision of products and services for the marine energy industry.</p>		September 2010
400	<p>Identify specialist businesses required to support marine energy industry and map existing</p>		September 2010

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	provision, effectively obtaining a shopping list of requirements.		
500	Continue to explore high energy user opportunities such as data	September 2010	
<p>                 a) Review of HVDC supply chain study                  b) Commissioning Gap Analysis report (of HVDC report for Othello Wood) Building upon Validation Facilities Review already completed for HVDC.             </p> <p>                 Commissioning of site specific             </p>			

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	market assessment studies on behalf of infrastructure site owners	June 09	
620	Develop strategy for infrastructure investment to ensure requirements are in place in advance of commercial need, including identifying and pursuing sources of finance.		Dec 2009
700	Assess the skills requirements (type and number) for varying scenarios of deployment and local content, and recommend projects/activity to address anticipated shortages, through <ul style="list-style-type: none"> <li>a) Review findings of MEG Supply Chain report</li> <li>b) Working with the SG Renewable Skills Group to initiate some quick wins</li> <li>c) Engagement with SDS,</li> </ul>	June 09  August 09	

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	Sector Skills Councils and NDA	August 09	
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WORKSTREAM DELIVERABLES

5-7 Workshops/awareness events for indigenous companies, account managers and Business Gateways

New companies attracted to the region (dates/numbers?) including establishment of at least 1 data centre and 1 fuel collocation

Partnership with the region (dates/numbers?) including establishment of at least 1 data centre and 1 fuel collocation

Develop a business case for an investment and agree with

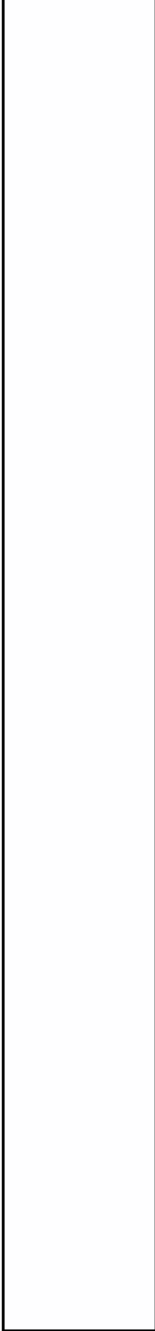
Develop a strategy and identify resources and support



<b>WORKSTREAM:</b>	Developers' Forum
<b>LEAD ORGANISATION:</b>	The Crown Estate
<b>LEAD MANAGER:</b>	Duncan Mackay
<b>TEAM MEMBERS:</b>	Fiona Macpherson (HIE) Neal Raftery (Scottish Government)

**WORKSTREAM OBJECTIVES**

<p><b>Objectives:-</b> Achieve developer alignment to contribute to resolving common issues</p> <p><b>Potential activities:-</b></p> <ul style="list-style-type: none"> <li>• Facilitating Set up developers forum</li> <li>• Engage representation from forum in above workstreams where appropriate.</li> </ul>
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**BACKGROUND**

There needs to be a direct reporting line from the developers doing the work on the ground back to the Coordination Committee. This workstream forms that conduit. Secondly, there is a need to coordinate activities on the ground. These activities will develop as the installation work begins to flow. As a minimum they are likely to cover a coordinated grid application and survey work. Other problems will emerge as the installation work develops.

**WORKSTREAM ACTIVITIES**

Activity No.	Description	Start Date	Finish Date
100	Establish Forum	03 August 2009	30 November 2009
200	Provide list of initial issues/areas of cooperation	05 October 2009	23 December 2009
300	Agree schedule of meeting dates	02 November 2009	23 December 2009

**WORKSTREAM DELIVERABLES**

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List of initial issues/cooperation areas.

Minutes of meetings fed into relevant workstreams/Coordination Committee

<b>WORKSTREAM:</b>	Health and Safety
<b>LEAD ORGANISATION:</b>	HIE
<b>LEAD MANAGER:</b>	Graeme Harrison, HIE
<b>TEAM MEMBERS:</b>	Duncan MacKay, the Crown Estate

#### WORKSTREAM OBJECTIVES

To encourage the industry development of suitable health and safety guidelines and standards in the Pentland Firth Strategic Area.

To ensure that industries servicing this area of work are available in this geographic area and that training opportunities are available for workers from the private sector who will engage in this activity.

#### BACKGROUND

UK wide health and safety for marine energy is currently covered by BWEA. BWEA has recently produced guidelines for wave and tidal energy devices, with the guide directing all those involved in developing wave and tidal energy devices and projects towards the current H&S legislation and industry best practice. These guidelines were produced with the support of the European Marine Energy Centre and their project for a suite of wave and tidal guidelines funded by the Scottish Government and Department for Energy and Climate Change. BWEA are taking forward consultation and further work on this.

There is a BWEA accredited Marine Safety Training Course currently only delivered by one training provider. Consideration needs to be

ven to a geographic focus on this type of training to support industry needs across this region.

**INDUSTRIAL ACTIVITIES**

Activity No.	Description	Start Date	Finish Date
10	Development of the current relationship with BWILA and IMHC to promote the guidelines that are being developed		
20	Review likely HRS training requirements		
30	Ann of current provision of training		
40	Develop programme for attracting / developing training facilities where appropriate		

**WORKSTREAM DELIVERABLES**

Training requirements review

Audit current training provision

Develop programme for training facilities/ providers

**MINISTER OF** **DEVELOPMENT FROM SYSTEMS**  
**LEAD ORGANIZATION** **TECHNOLOGY**  
**LEAD MANAGER** **TECHNOLOGY (from Skills)**  
**ORGANIZATION** **James Smith (M)**  
**Organization** **South Africa (Government)**

**WORKSHEET ON PROJECTS**

The role of the project manager is to ensure that the project is completed on time and within budget.

The project manager is responsible for the overall management of the project.

Project and teaming processes

Project and teaming processes

Project and teaming processes

Project and teaming processes

Project and teaming processes



**BACKGROUND**

The framework for development of marine energy projects in the Pentland Firth and Orkney Waters is emerging through processes of strategic environmental assessment and marine spatial planning. Potentially these processes can usefully guide the location of proposed developments into parts of the licence area which are most suitable for marine energy projects. Uncertainty about the sensitivity of receiving environments and the interaction of features (such as, for example, marine mammals) with wave and tidal devices, however, may lead to precautionary approaches to planning (and consenting) which unnecessarily restrict the extent of marine energy development or force it to locations that are more costly or are otherwise sub-optimal.

The Scottish Government has established a stakeholder group to promote and develop spatial planning in the marine environment called the Marine Energy Spatial Planning Group (MESPG). TCED sits on this group and is closely involved in MESPG activities including the development of a marine spatial plan for the Pentland Firth and Orkney Waters.

The consents regime for applications to construct and operate individual projects is evolving. The Scottish Marine Bill aims to reform the process by which projects are licensed and consented aiming to make it simpler and more streamlined. A new marine management organisation (Marine Scotland) will manage this process.

**WORKSTREAM ACTIVITIES**

Activity No.	Description	Start Date	Finish Date
100	Develop a clear understanding of the framework within which development in the Pentland Firth	April	End of May

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	<p>will be:</p> <p>a) <b>Planned.</b> Including an understanding of the strategic planning framework for the Pentland Firth and Orkney Waters, including implications of previous Strategic Environmental Assessment and Scottish strategies for the development of marine renewable energy. In addition emerging Marine Spatial Planning initiatives to be monitored (see below)</p> <p>b) <b>Licenses and consents.</b> Including tracking and of the evolving consents regime for marine projects in Scotland, including relevant changes in legislation and policy</p>		
200	Track and provide input to the Marine Spatial Planning (MSP) process currently being implemented for the Pentland Firth and Orkney Waters	March	Ongoing (expect draft plan by January 2010)
300	Maintain link and cross-flow of information relevant to planning between the Pentland Firth Coordination Committee and MESPG	March	Ongoing

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400	Identify key issues that could block or delay planning and consenting of marine energy projects, including identification of information gaps and research and prioritising needs. High examples of specific actions could include: a) Undertake a review of current information and case histories (e.g. Stranraer Long) workshop to be coordinated by TCC. b) Discuss aerial surveys of birds and engine elements with MISP/C and others. c) Explore specific research or marine mammal interactions.	June	Apr...
340	Explore opportunities for greater use of MARS to assist in planning of developments in 2017	May	Sept
400	Explore key planning and consenting challenges (led by MARS)	Sept	Ongoing
400	Define, develop and disseminate 2016-2020 HACC's position on planning and consenting issues relating to marine energy projects	Mar	Ongoing
		Mar	Ongoing
		Mar	Ongoing

**WORKSTREAM DELIVERABLES**

The key output of this workstream is expected to be a more timely and predictable route to consent for the level of development targeted. In achieving this it is anticipated that the project team will learn about the specific issues associated with the commercial scale levels of development of wave and tidal arrays and that this can be usefully applied to future rounds of development in the Pentland Firth Strategic Area.

Enhanced reputation of the project team as a facilitator of marine spatial planning and the responsible planning and development of marine energy projects.

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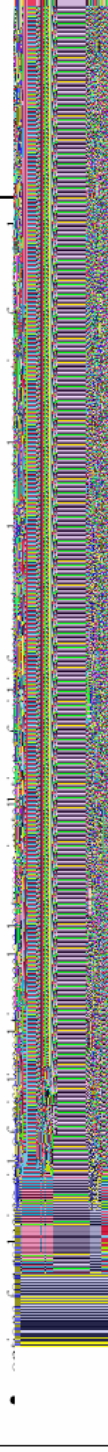
<b>WORKSTREAM:</b>	<b>Pentland Firth Grid</b>														
<b>LEAD ORGANISATION:</b>	<b>The Crown Estate</b>														
<b>LEAD MANAGER:</b>	<b>Danielle Lane</b>														
<b>TEAM MEMBERS:</b>	<table border="1"> <thead> <tr> <th>Name</th> <th>Organisation</th> </tr> </thead> <tbody> <tr> <td>Gavin Mackay</td> <td>HIE</td> </tr> <tr> <td>Louise Smith</td> <td>HIE</td> </tr> <tr> <td>Alex Reid</td> <td>Scottish Government</td> </tr> <tr> <td>Kenny Stott</td> <td>SSE Power Distribution</td> </tr> <tr> <td>Nigel Scott</td> <td>Xero Energy (consultants to TCE)</td> </tr> <tr> <td>Martin Moran</td> <td>National Grid</td> </tr> </tbody> </table>	Name	Organisation	Gavin Mackay	HIE	Louise Smith	HIE	Alex Reid	Scottish Government	Kenny Stott	SSE Power Distribution	Nigel Scott	Xero Energy (consultants to TCE)	Martin Moran	National Grid
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**WORKSTREAM OBJECTIVES**

**Objectives**

To consider, prepare and agree:

- work plan for 2009/10 with key deliverables, milestones and owners to feed into Pentland Firth development programme



- cost escalations and feeding in to planning and consenting workstream
- scope of work for a feasibility study for connection of pre-commercial projects in timescales appropriate for Salire Prize
  - options for connection of commercial arrays with a view to 2020 target and beyond
  - 'umbrella' applications for connection of wave and tidal projects
  - Identification of potential cable routes, locations for associated on shore and offshore infrastructure (converter stations, transformers, etc) and locations for pre-commercial and commercial projects
  - Provide locational input into Marine Energy Spatial Planning Group
  - Provide input to FREDS MEG and coordinate with other work on grid requirements for renewable generation regionally, in Scotland and across the UK

**BACKGROUND**

The Pentland Firth Project has been established to promote the development of marine renewables in the Pentland Firth Strategic Area. The first round of offshore leasing was launched on 29 September 2008 with an invitation to interested developers to pre-qualify for a tender to award options for seabed leases in the Strategic Area. The aim of the leasing round is to achieve at least 700 MW of marine

Delivery of timely grid connections for Pentland Firth marine renewable projects is a key constraint to the success of the programme. The grid workstream has been established to address this constraint and offer solutions to the developer community.

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Workstream Terms of Reference

WORKSTREAM ACTIVITIES

Activity No.	Description	Start Date	Finish Date
100	Further develop position on Pre-commercial v commercial arrays by investigating varying requirements of pre-commercial and commercial generation.	01/04/09	01/04/10
200	Engage consultant to support work stream	01/04/09	01/04/10
300	Consider local and wider grid issues	01/04/09	01/04/10
400	Consider with SHELL/NGET the level of detail	01/04/09	01/04/10



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

	necessary		
500	Investigate coordinated grid applications	01/04/09	01/04/10
510	Investigate developer led consortia applications	01/04/09	01/04/10
520	Investigate coordination or single developer applications.	01/04/09	01/04/10
530	SG and HIE to consider underwriting and assignment issues	01/04/09	01/04/10
540	Xero Energy to consider exit of HIE/3rd party	01/04/09	01/04/10



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

Workstream Terms of Reference



	- assignment, split out and cut-over.		
600	Summary of supply chain constraints	01/04/09	01/04/10
700	Identify impacts of regulatory changes	01/04/09	01/04/10


































































































































































































































































































































































































































































































































































































- Coordination with developers of connection applications for pre-commercial and commercial projects
- Scope of works for pre-commercial route selection and commercial route selection
- Provision of content for draft press release to communications workstreams

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WORKSTREAM:	Research and Development
LEAD ORGANISATION:	HIE
LEAD MANAGER:	Morven Cameron & Louise Smith, HIE
TEAM MEMBERS:	Graeme Harrison, HIE Elain Cameron, HIE Neal Rafferty, Scottish Government Duncan Mackay, the Crown Estate

**WORKSTREAM OBJECTIVES**

To co-ordinate research associated with the project, including academic and commercial.

To further develop the potential of HIE to respond to this opportunity in a commercial manner.

To develop a research hub

To provide a core step ahead for information of value to developers such as local IJAs, survey work, environmental information, what academic studies are underway, the latest technical R & D information, standards, codes, sources of good practice, and the like

To develop the opportunity to encourage research and development to happen in the Highlands and Islands both

with academic and commercial research for both environmental and technical sectors.

**BACKGROUND**

Research and development work represents a key economic opportunity for the region which already benefits from the presence of EMEC and research organisations which are working in marine energy. This needs to be built upon, making the region the accepted global leader for marine energy research and development. Relationships need to be further developed with other universities and institutes which have expertise in marine renewable energy.

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WORKSTREAM ACTIVITIES

Activity No.	Description	Start Date	Finish Date
100	Co-ordination of research and development associated with the project. <ul style="list-style-type: none"> <li>Liaison with Scottish/UK research groups on research programmes/ funding</li> <li>Coordination with academic and commercial R&amp;D partners in the H&amp;I region and nationally</li> </ul>	ongoing	
110	Development of the role of UHI ERG	ongoing	
120	Co-ordination with MESP on research funding plans		June 2009
200	The creation of a research hub to permit access to research and development and to deliver		

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	research on technology and environmental science. This will be done in conjunction with developers, manufacturers and suppliers.		
300	Develop the potential of EMEC to respond to this opportunity in a commercial manner, beginning with the assessment of	June 2009	



<b>WORKSTREAM:</b>	Stakeholder Management and Communication
<b>LEAD ORGANISATION:</b>	The Crown Estate

<b>LEAD MANAGER:</b>	Hannah Chalmers
<b>TEAM MEMBERS:</b>	UCR: Tom Matthews, Julie Laidlaw, Hilary Corcoran Scottish Government: Iain Hogg, Louise Smith.

**TEAM OBJECTIVES**

Success of the Pentland Firth Marine Energy Project and cultivate a positive public perception, increase in the West of Scotland's energy and the specific development objectives for the FFR Strategic Area, and maintain local community engagement.

Be able to react quickly and professionally to project issues

Coordinate, coordinate and lead all response to requests in the interests of the Scotland's energy. Where appropriate, in consultation with other stakeholders it will help with project development.

and service a Stakeholder Advisory Group (SAG) to work with and advise the Coordination Committee.

Other stakeholders and other established stakeholder groups to find and implement solutions to the major barriers to development, monitoring environmental impact



## PENTLAND FIRTH COORDINATION COMMITTEE

## Workstream Terms of Reference

### BACKGROUND

Following The Crown Estate's announcement to hold a commercial leasing round in the Pentland Firth area, the project team implemented an engagement programme with the above objectives. Engagement from The Crown Estate has been at a national level and includes: Government departments and agencies, trade associations, NGOs and other relevant groups. General topics for engagement are: (i) planning and consents (of which a large factor is environmental impact and monitoring) (ii) military considerations (iii) fishing interests (iv) navigation and shipping (v) recreational activities e.g sailing (vi) public perception (vii) grid provision (viii) supply chain. HIE have undertaken engagement at a local level including local supply chain, device developers, recreational interest groups etc.

The Scottish Government has established the Marine Energy Spatial Planning Group (MESPG) to promote and develop spatial planning in the marine environment.

The new coordination committee has given us the opportunity to define the framework for stakeholder management and communication. In reality this theme should underpin all of the workstreams as good communication on all levels is crucial to the success of the project.

### WORKSTREAM ACTIVITIES

Activity No.	Description	Start Date	Finish Date
100	Identify team members in partner organisations e.g HIE and discuss how best to run workstream/work together	April 2009	April 2009

2019	2020	2021	2022	2023	2024

	<ul style="list-style-type: none"> <li>• Collect feedback</li> </ul>		
400	Develop the idea of a regional event in Thurso in June: <ul style="list-style-type: none"> <li>• Float the idea with project partners</li> <li>• Tie in with supply chain workstream</li> <li>• What has already been done &amp; how can we build on it?</li> <li>• Ask for feedback at Developer event</li> </ul>	April 2009	June 2009
500	Newsletter to be developed to ensure all stakeholders are kept up to date. (Clare Lovett) Possibly quarterly.	April 2009	ongoing

**WORKSTREAM DELIVERABLES**

Overall: a smooth pathway to consent.

Specifically;

- A coherent record of engagement
- Happy local and national interest groups who are up to date with developments and supportive of the process (or at least who

understand what's going on and don't actively object)

- A greater understanding of the issues involved in putting 700MW of W&T energy in the Pentland Firth Strategic area. This will inform both this project and future developments.
- A strong stakeholder network for now and the future