



## **FREDS 7<sup>th</sup> Meeting**

**3<sup>rd</sup> October 2005 – Meridian Court, Glasgow**

### **Agenda**

1. Welcome and introduction
2. Minutes of 6th meeting- FREDS2005(13)
3. Matters arising: update on EU Developments; Renewables Advisory Board; Renewables Obligation Scotland; R&D sub group; Grid Interaction with Future Renewables Developments; and Renewable Heat/Biomass sub group
4. Progress Report and Delivery Plan - FREDS2005(14), FREDS2005(15) and FREDS2005(16)
5. Community and Economic Benefits/Local Content FREDS 2005(17) – (Presentation and discussion)
6. Update on the review of NPPG6 and associated Scottish SEA
7. Update on progress of hydrogen group
8. Update on grid issues
9. A.O.B.



## **FREDS Progress Report**

### **Purpose**

This paper provides a brief report on progress against the actions set out in the FREDS Delivery Plan (see paper FREDS2005(15)).

Also included are a number of other documents tracking progress:

- Annex A - a table setting out the status of the actions agreed at the 6<sup>th</sup> meeting of FREDS;
- Annex B – providing totals of the various generation technologies in various categories; and
- Annex C - a table showing the status of all of the actions from the FREDS Delivery Plan.

### **Background**

At the 4th meeting of FREDS, members agreed the recommendation - set out in paper FREDS2004(11) – that at each meeting FREDS should receive a brief report summarising how the published recommendations of each sub-group are being advanced. The attached one-page summary report is the second such report.

### **Action**

Members are invited to consider the progress report and confirm that they are content with the approach and with the progress being made.

**PROGRESS IN KEY AREAS SINCE LAST MEETING**

- **Marine Energy**
  - Marine Energy Network Established and meetings scheduled on quarterly basis – June 05.
  - SEA contractor appointed – July 05.
  - Draft business case submitted by EMEC on marine standards/certification. – July 05.
  - SEA Steering Group established – August 05.
  - SRF recruitment process for Marine/Biomass Development Officer commenced – Aug 05.
  - European Wave and Tidal Conference (EWTEC) held – Sept 05.
  - High level proposals for the provision of support via the RO(S) set out in consultation paper – Sept 05.
- **Biomass Energy**
  - Scottish Executive announcement confirming commitment to provide support to biomass – May 05.
  - Biomass Energy Network established and meetings scheduled on quarterly basis – June 05.
  - Agreement between Scottish Executive and Forestry Commission to fund Wood Fuel Information Officers for East and West of Scotland – June 05.
  - Discussions held between Scottish Executive, DTI, Ofgem and biomass industry on offsite blending (discussions ongoing) – June 05.
  - Discussions held with Scottish Executive, SEPA and industry on EU Waste Directives (discussions ongoing) – July 05.
  - Wood fuel information website under development by Forestry Commission – July 05.
  - SRF recruitment process for Marine/Biomass Development Officer commenced – Aug 05.
  - Wood fuel information officers appointed for East and West of Scotland – Sept 05.
- **Hydrogen**
  - IPA consultants appointed to analyses various aspects of hydrogen and fuel cells markets – July 05.
  - Draft Executive Summary produced for FREDS 6<sup>th</sup> meeting – May 05.
- **Skills**
  - Actions arising from recommendations identified and included in FREDS Delivery Plan – Aug 05.
  - Report published – Sept 05.
  - R&D terms of reference prepared – Sept 05.
- **Future Generation**
  - Report finalised/published – June 05.
  - Actions arising from recommendations identified and included in FREDS Delivery Plan – Aug 05.
- **General**
  - Scottish Executive public awareness campaign launched – August 05.

**KEY MILESTONES GOING FORWARD**

Milestone	Target Date
▪ SRF Marine/Biomass Development officer appointed	Oct 05
▪ Forestry Commission wood fuel information website 'go live'	Dec 05
▪ Full Functional Occupational Mapping undertaken for renewables skills in Scotland	Dec 05
▪ Renewables sector development group established	Dec 05
▪ Hydrogen report tabled at FREDS 8 <sup>th</sup> meeting	January 05
▪ Paper produced on maximising UK content in renewables	January 05

**ISSUES/RISKS REQUIRING ADDITIONAL ACTION/DISCUSSION**

- None

## Actions from previous (6<sup>th</sup>) FREDS Meeting

Action	Owner	Status	Comment
<b>Agenda Item 3</b>			
SE to arrange an initial meeting bringing together representatives from FREDS, UKREP, DTI, SEEUO and the Directorate General for Energy and Transport to discuss EU issues impacting on renewables in Scotland. An update to be provided to the next FREDS meeting.	SE	Started	Meeting held in September. Verbal update to be provided at FREDS 7 <sup>th</sup> meeting.
FREDS secretariat to provide minutes of next meeting of Environmental Advisory Forum on Renewable Energy as soon as they are available. Report to be provided to next FREDS meeting.	SE	Complete	FREDS minutes provided to Environmental Forum. Environmental Forum minutes circulated to FREDS members. Verbal update on discussions to be provided at FREDS 7 <sup>th</sup> meeting.
Donald Workman to provide update on meeting(s) of DTI's Renewables Advisory Board (RAB) Finance Group to next FREDS meeting.	Donald Workman	Ongoing	Meeting held in September 05. Verbal update to be at FREDS 7 <sup>th</sup> meeting.
<b>Agenda Item 4</b>			
Colin Taylor to consider matrix form of presentation of actions in Delivery Plan with a view to presenting to next FREDS meeting.	Colin Taylor	Complete	Matrix form of presentation prepared.
Sarah Kydd to set up meeting between joint chairs of MEG and DTI to discuss issues around proposed marine energy assistance package.	Sarah Kydd	Complete	Meeting held.
<b>Agenda Item 5</b>			
HEG progress to be reported to next meeting.	David Sigsworth	Complete	Work of HEG progressing in line with timetable set out at 6 <sup>th</sup> FREDS meeting. Update to be provided at FREDS 7 <sup>th</sup> meeting.
<b>Agenda Item 6</b>			
Skills report to be published and finalised as soon as possible.	Paul Mckelvie/ Bobby Ronnie	Complete	Report published September 05.
<b>Agenda Item 7</b>			
Future Generation report to be amended to state that targets are not caps. Report to be published as soon as possible.	Neil Stewart	Complete	Report published July 2005.
Highlands and Islands Enterprise to give presentation on community and economic benefits at next FREDS meeting.	HIE	Complete.	Presentation to be made to FREDS 7 <sup>th</sup> meeting.

## Renewable Generation Totals by Category

Further to the action from the FREDS Future Generation report regarding the need to track progress towards Scotland's renewable targets, totals of the various generation technologies in the various categories are provided below.

### Onshore Wind

Operating	453 MW
Under construction	466 MW
Consented	770 MW
Sub-total	1689 MW

### Hydro

Operating	1324 MW
Consented	119 MW
Sub-total	1443 MW

### Biomass

Operating	15 MW
Consented	47 MW
Sub-total	62 MW

**Grand total**                      **3173 MW**

<b>DELIVERY PLAN REFERENCE</b>	<b>ACTION</b>	<b>STATUS</b>	<b>TARGET DATE</b>	<b>DELIVERY DATE</b>	<b>COMMENT/PROGRESS UPDATE</b>
<b>MARINE</b>					
1.1 Establishing Marine Energy Network	<ul style="list-style-type: none"> <li>▪ MEN Established</li> </ul>	Complete	June 05	June 05	First meeting held on 24 <sup>th</sup> May. Ongoing meetings to be held on a quarterly basis. Recruitment process of SRF Biomass and Marine Energy Development Officer (part funded by SE) commenced. Updates on discussions to be provided to FREDS as required.
1.2 Strategic Environmental Assessment	<ul style="list-style-type: none"> <li>▪ Tenders issued</li> <li>▪ Contractor appointed</li> <li>▪ Results published</li> </ul>	Complete Complete Started	May 05 June 05 March 06	April 05 July 05 September 06	Output originally scheduled for publication by end March 2006 - now scheduled for September 2006 due to tender and contractor approval process taking longer than anticipated. SEA Steering Group established August 2005 with regular meetings to be scheduled as work progresses.
1.3 Provision of Support	<ul style="list-style-type: none"> <li>▪ DTI Announcement</li> <li>▪ SE to continue to engage with various stakeholders and ensure that support requirements in Scotland are addressed.</li> </ul>	Complete Started	May 05 Ongoing	May 05 Ongoing	Further to action from 6th meeting of FREDS, MEG representatives and DTI met in late July to discuss issues. High level proposals for provision of support via RO(S) set out in consultation paper of September 2005.
1.4 Developing the role of EMEC	<ul style="list-style-type: none"> <li>▪ Funding partners to confirm support for tidal extension.</li> <li>▪ EMEC to continue to work to actively promote its activities.</li> <li>▪ EMEC to appoint chairman to take leading role in promotional activities.</li> </ul>	Complete Started Complete	February 05 Ongoing July 05	Complete Ongoing July 05	EMEC participation in European Wave and Tidal Conference (EWTEC) in September 05.  New chairman (Bill Edgar, ex Wood Group and former CEO of NEL) officially appointed following meeting of EMEC Board on 2 <sup>nd</sup> August.
1.5 Establishing Scotland as the centre for marine energy certification	<ul style="list-style-type: none"> <li>▪ EMEC to prepare business case for work on development of appropriate standards.</li> <li>▪ Business case to be revised to address comments.</li> </ul>	Started Started	June 05 Oct 05	July 05 Oct 05	Draft business case submitted to EMEC funding partners during July. Currently being revised to address comments received.

<b>DELIVERY PLAN REFERENCE</b>	<b>ACTION</b>	<b>STATUS</b>	<b>TARGET DATE</b>	<b>DELIVERY DATE</b>	<b>COMMENT/PROGRESS UPDATE</b>
1.6 Review of GBRO	<ul style="list-style-type: none"> <li>▪ SE to consider how further support might be provided as part of its review of ROS.</li> </ul>	Started	March 05	March 05	<p>Issues raised in initial consultation.</p> <p>High level proposals for provision of support via RO(S) set out in consultation paper of September 2005.</p>
	<ul style="list-style-type: none"> <li>▪ SE to set out high level proposal in RO(S) consultation.</li> </ul>	Complete	Sept 05	Sept 05	
	<ul style="list-style-type: none"> <li>▪ SE and DTI to ensure that information from MEG fully utilised in review.</li> </ul>	Started	Ongoing	Ongoing	
1.7 Planning Guidance	<ul style="list-style-type: none"> <li>▪ Scottish Executive and DTI to consider various planning issues and agree timetable for production of planning guidance.</li> </ul>	Started	March 06	March 06	To be taken forward as part of review of NPPG6 and via work on SEA.
1.8 Transmission Access & Charging	<ul style="list-style-type: none"> <li>▪ SE to continue to engage in discussions and consultations.</li> <li>▪ FREDS to evaluate position at end of March 06 and determine further actions.</li> </ul>	Started	Ongoing	Ongoing	
		-	March 06	March 06	
1.9 Supporting manufacturing and the supply chain	<ul style="list-style-type: none"> <li>▪ Scottish Enterprise and Highlands &amp; Islands Enterprise to review strategies and policies and report back to FREDS</li> <li>▪ SE, DTI and Enterprise Agencies to produce paper on maximising UK content in renewables</li> </ul>	Started	January 06	January 06	<p>Work ongoing between SE, Enterprise Agencies and DTI on increasing UK content in renewables. Enterprise agencies reviewing their supply chain databases to include all businesses with the skills and experience necessary to work in the marine and biomass sectors. Actions also delivering recommendations in Biomass and Future Generation workstreams (Delivery Plan references 2.12 and 4.1).</p>
		Started	January 06	January 06	
1.10 International conference on marine energy opportunities in Scotland	<ul style="list-style-type: none"> <li>▪ Conference organised/scheduled.</li> <li>▪ Conference delivered</li> </ul>	Complete	February 05	February 05	<p>European Wave and Tidal Conference (EWTEC) held at Strathclyde University during week commencing 29<sup>th</sup> August.</p>
		Complete	September 05	September 05	

1.11 Meeting future demand for graduate skills and consolidating research base.	<ul style="list-style-type: none"> <li>▪ Full FOM undertaken.</li> <li>▪ FOM undertaken, actions identified.</li> </ul>	Started  -	December 05  March 06	December 05  March 06	Actions delivered via Skills workstream (Delivery Plan reference 3.2, 3.5 and 3.6).
1.12 Marine energy sector to demonstrate ability to achieve greater efficiencies.	-	-	-	-	To be delivered once pilot/actual schemes are in place.
<b>BIOMASS</b>					
2.1 Establishing Biomass Energy Network	<ul style="list-style-type: none"> <li>▪ BEN Established</li> <li>▪ BEN to ensure liaison between forestry and biomass sectors.</li> </ul>	Complete  Started	June 05  Ongoing	June 05  Ongoing	First meeting held on 24 <sup>th</sup> May. Ongoing meetings to be held on a quarterly basis. Recruitment process of SRF Biomass and Marine Energy Development Officer (part funded by SE) commenced. Updates on discussions to be provided to FREDs as required.
2.2 Provision of support	<ul style="list-style-type: none"> <li>▪ SE to consider the provision of support for biomass.</li> <li>▪ SE to consider how support might best be provided and outline its proposals.</li> </ul>	Complete  Started	May 05  March 06	May 05  March 06	SE announcement on 23 <sup>rd</sup> May 2005 confirming its commitment to the provision of support for biomass.
2.3 Provision of information to Biomass Sector	<ul style="list-style-type: none"> <li>▪ SE to consider provision of funding to support employment of wood fuel information officers.</li> <li>▪ BEN to review information currently available, liaise with SEPA and Ofgem to fill information gaps and identify the most effective means of communicating with the biomass sector.</li> </ul>	Complete  Started	July 05  December 05	July 05  December 05	Wood Fuel Information Officers for East and West of Scotland to be appointed in September.  Discussions ongoing via BEN. Wood fuel information website currently under development by Forestry Commission – scheduled to be operational by end of 2005

2.4 Certification of blended fuels	<ul style="list-style-type: none"> <li>▪ SE/DTI to ensure that this issue receives appropriate consultation throughout GBRO review.</li> <li>▪ SE/DTI to ensure that this issue is considered in the preliminary consultation of the GBRO review.</li> <li>▪ SE to develop potential solution(s) that might enable certification of fuels at sites other than power stations and submit as part of GBRO review.</li> </ul>	Started	Ongoing	Ongoing	<p>Issue raised in initial consultation. Next consultation paper on RO(S) to be issued in September 2005.</p> <p>Several meetings held with DTI, Ofgem and industry. Discussions ongoing, delivery date revised to December 05.</p>
2.5 Definition of energy crops in renewables obligation (Scotland) order 2004.	<ul style="list-style-type: none"> <li>▪ SE to consult on issue as part of GBRO review.</li> <li>▪ SE to set out proposed position in consultation.</li> </ul>	Complete	April 05	April 05	<p>Issue raised in initial consultation.</p> <p>Proposal is that amendment is not required immediately and for the matter to be considered further at future RO review.</p>
2.6 Discussions with SEPA on implementation of EU waste directives	<ul style="list-style-type: none"> <li>▪ SE and the BEN to engage with SEPA and endeavour to seek resolution of current issues around interpretation and implementation of EU Waste Directives in relation to forestry brash, root/stump etc.</li> </ul>	Started	September 05	March 06	<p>Initial meetings held in June and July. Further meetings scheduled for September/October. Delivery date revised to March 06.</p>
2.7 Planning guidance	<ul style="list-style-type: none"> <li>▪ SE to produce Planning Advice Note (PAN) on biomass developments.</li> </ul>	Started	Dec 06	Dec 06	<p>Planning guidance to be prepared as part of review of NPPG6.</p>
2.8 Issues for the forestry commission	<ul style="list-style-type: none"> <li>▪ Review of wood fuel resource estimates and arrangements in place to provide ongoing advice.</li> <li>▪ FC to liaise with</li> </ul>	Started	May 06	May 06	<p>Study completed on wood fuel resource and assessment of usage. Regular updates to be provided. Wood fuel information website currently under development by Forestry Commission – scheduled to be operational by end of 2005.</p>
		Started	Ongoing	Ongoing	

	BEN on an ongoing basis to review the level of support provided.				Forestry Commission to be represented on BEN.
2.9 Transmission/distribution infrastructure issues	<ul style="list-style-type: none"> <li>▪ SE to continue to engage in discussions with Ofgem/DTI on transmission charging and access under BETTA.</li> <li>▪ FREDS to evaluate position and consider future actions.</li> </ul>	Started	Ongoing	Ongoing	
		Started	March 06	March 06	
2.10 Public awareness campaign	<ul style="list-style-type: none"> <li>▪ SE to continue to engage closely with national information campaign.</li> <li>▪ SE and DTI to develop specific biomass campaign.</li> </ul>	Started	Ongoing	Ongoing	SE public awareness campaign launched in August 2005 covering all renewable technologies (including biomass).
		-	May 06	May 06	
2.11 Ongoing monitoring of developments	<ul style="list-style-type: none"> <li>▪ Ongoing developments monitored and actions proposed as required.</li> </ul>	Started	Ongoing	Ongoing	
<u>2.12 Supporting manufacturing and the supply chain</u>	<ul style="list-style-type: none"> <li>▪ Scottish Enterprise and Highlands &amp; Islands Enterprise to review strategies/policies and report back to FREDS</li> <li>▪ SE, DTI and Enterprise Agencies to produce paper on maximising UK content.</li> </ul>	Started	January 06	January 06	Work ongoing between SE, Enterprise Agencies and DTI on increasing UK content in renewables. Enterprise agencies reviewing their supply chain databases to include all businesses with the skills and experience necessary to work in the marine and biomass sectors. Actions also delivering recommendations in Marine and Future Generation workstreams (Delivery Plan references 1.9 and 4.1).
		Started	January 06	January 06	
<u>2.13 Engaging with other regulatory agencies</u>	<ul style="list-style-type: none"> <li>▪ SE to continue to engage with all relevant regulatory agencies.</li> </ul>	Started	Ongoing	Ongoing	
<b>SKILLS</b>					
3.1 Lead responsibility in identifying future skills requirements.	<ul style="list-style-type: none"> <li>▪ Sector Skills Councils to accept recommendation to lead in this</li> </ul>	Complete	July 05	July 05	

	area.				
3.2 Undertake full FOM exercise	<ul style="list-style-type: none"> <li>▪ Full FOM undertaken.</li> <li>▪ FOM reviewed and actions identified.</li> </ul>	Started  -	December 05  March 06	December 05  March 06	
3.3 Availability of labour market information on renewables.	<ul style="list-style-type: none"> <li>▪ SE to facilitate discussions between the various agencies with a view to early preparation of proposals.</li> </ul>	Started	December 05	December 05	
3.4 Analysis of skills gaps identified by HEG	<ul style="list-style-type: none"> <li>▪ FSS to complete analysis of impact of gaps and identification of actions.</li> <li>▪ HEG to consider recommendations.</li> </ul>	-  -	May 06  Sept 06	May 06  Sept 06	
3.5 Establishing Sector Development Group	<ul style="list-style-type: none"> <li>▪ Group established, work programme agreed</li> <li>▪ FREDS paper on skills issues arising from future market need and technological opportunities.</li> </ul>	-  -	December 05  February 06	December 05  February 06	
3.6 Development of standards and qualifications	<ul style="list-style-type: none"> <li>▪ Development of appropriate occupational standards.</li> <li>▪ SQA to review and develop renewable qualifications as necessary.</li> </ul>	-  -	December 07  December 09	December 07  December 09	
3.7 Development of energy 'skills for work' course.	<ul style="list-style-type: none"> <li>▪ High level proposals developed.</li> </ul>	-	December 07	December 07	
3.8 R&D requirements	<ul style="list-style-type: none"> <li>▪ Discussions at FREDS</li> </ul>	Started	September 05	September 05	Issue to be discussed at FREDS 7 <sup>th</sup> meeting.
<b>FUTURE GENERATION</b>					
4.1 Maximising economic benefit	<ul style="list-style-type: none"> <li>▪ SE, DTI and Enterprise Agencies to produce paper on maximising UK content in renewables</li> </ul>	Started	January 06	January 06	Work ongoing between SE, Enterprise Agencies and DTI on increasing UK content in renewables. Enterprise agencies reviewing their supply chain databases to include all businesses with the skills and experience necessary to work in the marine and biomass sectors. Actions also delivering recommendations in Marine and

					Biomass workstreams (Delivery Plan references 1.9 and 2.12).
4.2 Delivery of FREDS recommendations and monitoring of progress against generation targets.	<ul style="list-style-type: none"> <li>▪ FREDS secretariat to actively drive and monitor delivery of agreed actions via Delivery Plan</li> <li>▪ FREDS secretariat to monitor, record and report levels of renewables consented, under construction and connected in Scotland.</li> </ul>	Started	Ongoing	Ongoing	Progress monitored via Delivery Plan and associated actions.
		Started	Ongoing	Ongoing	Report to be provided as part of Summary Progress Report



## **FREDS Delivery Plan**

### **Purpose**

This paper sets out the Delivery Plan of the Forum for Renewable Energy Development in Scotland (FREDS). The Delivery Plan (the plan) identifies the key actions that will be delivered by FREDS in supporting the policy objectives of the Executive in relation to renewable energy and associated economic development.

### **Background**

Since it was established in October 2003, FREDS has ensured a focused approach from government, industry, finance and academia to the development of renewable energy in Scotland. To date, a number of sub-groups have been established to make recommendations on the actions required to deliver the objectives of FREDS as set out in its terms of reference (see Appendix 2).

The key recommendations made by all of the sub-groups to date and the associated actions are captured in the plan. Progress against the plan will be monitored on an ongoing basis and the plan amended as required to capture additional actions as they are identified.

A brief report on progress against the plan will be presented to each FREDS meeting.

### **Structure**

The plan is divided into a number of sections (delivery workstreams), each dealing with the actions associated with a particular sub-group. The sub-groups that have been established by FREDS can be split into two categories:

- those established to promote and accelerate the penetration of specific technologies (such as the Marine Energy Group, the Hydrogen Group and the Biomass Energy Group) ; and
- those established to support the development of the renewables sector in general (such as the Skills Group and the Future Generation Group).

There is therefore scope for a degree of legitimate overlap between some of the recommendations and actions associated with the specific groups and those of the general groups. Where overlap exists then this is recorded in the relevant sections of the plan.

### **Target Date**

Where target dates are listed then this indicates that completion is targeted for the end of the specified month.

## **Abbreviations**

The following abbreviations have been used in the plan.

BEN – Biomass Energy Network  
DTI – Department of Trade and Industry  
CS – Careers Scotland  
EMEC – European Marine Energy Centre  
EUS – Energy and Utility Skills

FC – Forestry Commission  
FSS – Future Skills Scotland  
HiEnt – Highland and Island Enterprise

MEN – Marine Energy Network  
ScotEnt – Scottish Enterprise  
SSC – Sector Skills Councils  
SDG – Sector Development Group  
SEPA – Scottish Environmental Protection Agency  
SE – Scottish Executive  
SQA – Scottish Qualifications Authority

## 1. MARINE ENERGY

### 1.1 ESTABLISHING MARINE ENERGY NETWORK

#### Recommendation(s):

- The enterprise agencies, alongside the Scottish Renewables Forum (SRF) should support the development of a Marine Energy Network (MEN).

Action:	Target Date	Outcome /Deliverable	Owner	Status
MEN established.	June 05	First meeting held	MEN	Complete

### 1.2 STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA)

- The Scottish Executive, with the DTI must, as a matter of urgency, commission a Strategic Environmental Assessment (SEA) of Scotland's coastline.

Action:	Target Date	Outcome /Deliverable	Owner	Status
Complete discussions with DTI and other parties and issue tenders to prospective contractors.	April 05	Tenders issued	SE	Complete
Tenders evaluated and contractor appointed	June 05	Contractor appointed	SE	Complete
Data analysed and published	Sept 06	Published data	SE	-

### 1.3 PROVISION OF SUPPORT

#### Recommendation(s):

- The Scottish Executive and UK Government should acknowledge the case for additional public sector support for marine energy, and give a clear and early commitment to work together to determine the most efficient method and level of financial assistance that can be provided.
- The Executive and UK Government should consider supporting early commercial development of marine energy by underwriting grid connection for 1<sup>st</sup> and 2<sup>nd</sup> generation projects.

Action:	Target Date	Outcome /Deliverable	Owner	Status
DTI to announce further detail on its £50m funding package.	May 05	DTI Announcement	DTI	Complete
SE to continue to engage with various stakeholders to ensure that support requirements in Scotland are addressed.	Ongoing	Regular SE discussions	SE	Started

#### 1.4 DEVELOPING THE ROLE OF THE EUROPEAN MARINE ENERGY CENTRE (EMEC)

##### Recommendation(s):

- Subject to the production of a satisfactory business case, EMEC's funding partners should confirm their willingness to support the required extension to accommodate tidal device testing, without delay.

Action:	Target Date	Outcome /Deliverable	Owner	Status
Funding partners to confirm support for extension.	Feb. 05	Announcement on provision of support	EMEC funding partners	Complete

##### Recommendation(s):

- EMEC should work with Scottish Development International and other trade partners to actively promote overseas marketing of its services, facilities and expertise.

Action:	Target Date	Outcome /Deliverable	Owner	Status
EMEC to continue to work to actively promote overseas marketing of its services, facilities and expertise.	Ongoing	Ongoing promotional activities	EMEC	Started
EMEC to appoint Chairman whose duties will include taking a leading role in promotional activities.	July 05	Chairman appointed	EMEC	Complete

#### 1.5 ESTABLISHING SCOTLAND AS THE CENTRE FOR MARINE ENERGY CERTIFICATION

##### Recommendation(s):

- EMEC must be supported in the work it has already begun to establish Scotland as the internationally recognised centre for marine energy technical, operating and safety standards.
- EMEC, in partnership with the Carbon Trust, SuperGen, the Scottish Executive and the DTI, should jointly sponsor a programme of work with representatives of the industry, developers, standards agencies and the financial sector, to identify the standards required and agree how these will be developed as quickly as possible.

Action:	Target Date	Outcome /Deliverable	Owner	Status
EMEC to prepare business case for development of appropriate standards.	June 05	Business case prepared	EMEC	Complete
Business case to be revised to address comments received.	Oct 05	Business case revised	EMEC	Started

## 1.6 REVIEW OF GB RENEWABLE OBLIGATIONS

- Both administrations should also ensure that the evidence gathered by MEG and in the various studies mentioned here is fully utilised to inform the forthcoming major review of the GB Renewables Obligation.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SE to consider how further support might be provided to emerging technologies as part of its review of the Renewable Obligation (Scotland) Order.	March 05	Initial consultation issued	SE	Complete
SE to set out high level proposal in consultation paper.	Sept 05	Consultation paper	SE	Complete
SE and DTI to ensure that information from MEG report is fully utilised in review of GBRO.	Ongoing	MEG issues addressed in consultations.	SE/DTI	Ongoing

## 1.7 PLANNING GUIDANCE

- The Scottish Executive, working with the Crown Estate, should agree and publish clear guidance on the marine energy consents procedure.
- The Scottish Executive should give consideration to the need for a suitable forum to enable its various Departments and agencies to contribute to appropriate planning guidance for marine energy developers, grid operators and the relevant local planning and environmental agencies.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SE and DTI to work together to consider the various planning issues and agree a timetable for the production of planning guidance.	March 06	Timetable agreed	SE /DTI	Started

## 1.8 TRANSMISSION ACCESS AND CHARGING

### Recommendation(s):

- The regulator and grid operator should prioritise action on transmission investment, with particular regard to connecting those remote mainland and island locations that can provide the greatest renewable generation capacity. The cost of this investment must be shared equitably amongst users and beneficiaries, and cannot be borne by host communities and developers alone.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SE to continue to engage in discussions with Ofgem, DTI and transmission companies via the DTI Transmission Issues Working Group and other forums to ensure that issues around connections to potential marine sites continue to receive consideration.	Ongoing	Regular attendance at TIWG and submission of consultation responses	SE	Started

**Recommendation(s):**

- The Executive should continue to press the regulator to ensure that infrastructure charging mechanisms do not discriminate against emerging industries such as marine energy.

<b>Action:</b>	<b>Target Date</b>	<b>Outcome /Deliverable</b>	<b>Owner</b>	<b>Status</b>
SE to continue to engage in discussions with Ofgem and DTI on transmission charging and access under BETTA.	Ongoing	Regular discussions, responses to consultations	SE	Started
FREDS to evaluate position at end of March 2006 and determine future actions.	March 06	Agreed actions	FREDS members	-

**1.9 SUPPORTING MANUFACTURING AND THE SUPPLY CHAIN****Recommendation(s):**

- The enterprise agencies should review their economic development strategies and policies to ensure that they can adequately support a vibrant Scottish manufacturing and supply chain for marine energy.
- Scottish Executive, the enterprise agencies, EMEC and ITI(E) should continue to work with existing and new initiatives such as SuperGen, Marine Energy Challenge and UKERC to maximise the synergies and opportunities that will establish marine energy technology and its manufacturing industry.

<b>Action:</b>	<b>Target Date</b>	<b>Outcome /Deliverable</b>	<b>Owner</b>	<b>Status</b>
SE and Highlands & Islands Enterprise to review strategies and policies and report back to FREDS	Jan 06	FREDS paper	ScotEnt /HiEnt	Started
SE, DTI and enterprise agencies to produce paper on maximising UK content in renewables.	Jan 06	FREDS paper	SE/DTI /ScotEnt/ HIEnt	Started

**Notes: Actions in relation to supply chain and manufacturing capability also delivering recommendations under the Biomass and Future Generation workstreams (delivery plan reference 1.9 and 4.1).**

**1.10 INTERNATIONAL CONFERENCE ON MARINE ENERGY OPPORTUNITIES IN SCOTLAND****Recommendation(s):**

- Scottish Renewables Forum should organise a major international conference to showcase progress and future opportunities for marine energy in Scotland.

<b>Action:</b>	<b>Target Date</b>	<b>Outcome /Deliverable</b>	<b>Owner</b>	<b>Status</b>
Major conference to be organised.	Feb. 05	Conference organised.	SRF	Complete
Major conference delivered,	Sept. 05	Conference delivered.	SRF	Complete

## **1.11 SKILLS/R&D**

### **Recommendation(s):**

- The enterprise agencies should use the Gap Analysis Report to produce a detailed assessment of the effects of skills gaps on the marine energy sector, and produce a list of specific actions to tackle the issues raised.

### **To be delivered via Skills workstream (delivery plan references 3.2).**

- The Scottish academic sector – funding councils, Universities Scotland and individual institutions - should review and reinforce existing capability in marine energy undergraduate teaching, research and development to meet the future demand for graduate skills and to consolidate the research base.

### **To be delivered via Skills workstream (delivery plan references 3.5 and 3.6).**

## **1.12 COST EFFICIENCY**

- The marine energy sector itself must demonstrate the ability to achieve greater efficiencies and drive down capital and operating costs.

### **To be delivered once pilot/actual schemes are in place.**

## 2. BIOMASS ENERGY

### 2.1 ESTABLISHING BIOMASS ENERGY NETWORK

#### Recommendation(s):

- The Scottish Renewables Forum (SRF), working with the Scottish Forest Industries Cluster, the Forestry Commission, Scottish Enterprise and Highlands and Islands Enterprise, should develop a customer and industry-led Biomass Energy Network (BEN).

Action:	Target Date	Outcome /Deliverable	Owner	Status
BEN established and first meeting held.	June 05	First meeting held	BEN	Complete

- New biomass plants for CHP and power generation should, where possible, be located in or close to areas of wood fuel availability to minimise possible transport difficulties and costs. The forestry and biomass energy sectors should consider developing integrated sites which would attract a range of wood using activities.

Action:	Target Date	Outcome /Deliverable	Owner	Status
BEN to ensure appropriate liaison between forestry and biomass energy sectors.	Ongoing	Ongoing liaison between sectors.	BEN	Started

### 2.2 PROVISION OF SUPPORT

#### Recommendation(s):

- The Scottish Executive and the DTI should acknowledge the continuing need for public sector support for biomass plants for CHP and power generation of all sizes and should give an early commitment that they will work to determine how that need can be met.
- The Scottish Executive should consider how to meet the need for public sector support for CHP plants in particular and also for support infrastructure.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SE to consider the provision of support to the Biomass sector.	May 05	Announcement by SE	SE	Complete
SE to consider how support might best be provided and outline its proposals.	March 06	Announcement by SE	SE	Started

## 2.3 PROVISION OF INFORMATION TO BIOMASS SECTOR

### Recommendation(s):

- The Forestry Commission, working with the Biomass Energy Network should consider the appointment of wood fuel information officers to provide advice to all who are interested in developing biomass wood fuel opportunities.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SE to consider provision of funding to support employment of wood fuel information officers.	July 05	Announcement by SE	SE/FC	Complete

### Recommendation(s):

- SEPA should examine its procedures to ensure consistency of approach in relation to the implementation of legislation relating to waste products and, along with Ofgem, should ensure that information about regulatory issues is made more readily available to the biomass sector.

Action:	Target Date	Outcome /Deliverable	Owner	Status
BEN to review information currently available, liaise with SEPA and Ofgem to fill information gaps and identify the most effective means of communicating with the biomass sector.	Dec. 05	Ongoing communication with Biomass sector and SEPA/Ofgem	BEN	Started

## 2.4 CERTIFICATION OF BLENDED FUELS

### Recommendation(s):

- Ofgem and industry should work together to develop secure arrangements whereby Ofgem can certify blended fuels for co-firing as eligible for ROCs at sites other than the power station.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SE/DTI to ensure that this issue receives appropriate consultation throughout GBRO review.	Ongoing	Issue addressed in ongoing consultations.	SE/DTI	Started
SE/DTI to ensure that this issue is considered in the preliminary consultation of the GBRO review.	April 05	Issue addressed in consultation.	SE/DTI	Complete
SE to develop potential solution(s) that might enable certification of fuels at sites other than power stations and submit as part of GBRO review.	Dec. 05	Potential solution(s) proposed.	SE	Ongoing

## 2.5 DEFINITION OF ENERGY CROPS IN RENEWABLES OBLIGATION (SCOTLAND) ORDER 2004

### Recommendation(s):

- The Scottish Executive should consult on amending the definition of energy crops in the Renewables Obligation (Scotland) Order 2004 to include material derived from any sustainably managed woodland, i.e., woodland certified to the UK Woodland Assurance Standard.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SE to consult on issue as part of GBRO review.	April 05	Issue raised in initial consultation.	SE	Complete
SE to set out proposed position in consultation.	Sept. 05	Consultation issued.	SE	Complete

## 2.6 DISCUSSIONS WITH SEPA ON IMPLEMENTATION OF EU WASTE DIRECTIVES

### Recommendation(s):

- SEPA should re-examine how it implements the provisions of the EU Council Directives on waste and on the incineration of waste. Forestry brash, root/stump, lop and top derived from the harvesting of standard timber and any secondary products of primary processing of logs and small round wood should be treated in the same way as short rotation coppice and other energy crops.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SE and BEN to engage with SEPA and endeavour to seek resolution of current issues around interpretation and implementation of EU Waste Directives in relation to forestry brash, root/stump etc.	March 06	Further actions identified.	SE	Complete

## 2.7 PLANNING GUIDANCE

### Recommendation(s):

- As part of its planned review of NPPG 6 and PAN 45, the Scottish Executive should at an early date provide updated guidance on biomass developments. This guidance should encourage local authorities to consider the wider impact of biomass projects in relation to sustainable development and the employment impacts of plant.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SE to produce Planning Advice Note (PAN) on biomass developments.	Dec 06	PAN produced.	SE	Started

## 2.8 ISSUES FOR THE FORESTRY COMMISSION

### Recommendation(s):

- Further work should be undertaken by the Forestry Commission to refine the wood fuel resource estimates in Scotland and to provide more detailed information to wood users and the biomass energy sector. This information should be reviewed/ updated every five years.

Action:	Target Date	Outcome /Deliverable	Owner	Status
Information reviewed and disseminated with arrangements in place to provide ongoing advice as required	May 06	Information updated.	FC	Started

### Recommendation(s):

- The Forestry Commission should keep under close review, in consultation with the industry, the level of support that it provides to the growers of energy crops in Scotland.

Action:	Target Date	Outcome /Deliverable	Owner	Status
Forestry Commission to liaise with BEN on an ongoing basis to review the level of support provided.	Ongoing	Ongoing discussions via BEN.	FC	Started

## 2.9 TRANSMISSION/DISTRIBUTION INFRASTRUCTURE ISSUES

### Recommendation(s):

- Ofgem, the distribution network operators and the transmission operator should ensure fair and financially secure access to the electrical grid at all levels.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SE to continue to engage in discussions with Ofgem/DTI on transmission charging and access under BETTA.	Ongoing	Regular discussions, responses to consultations.	SE	Started
FREDS to evaluate position and consider future actions.	March 06	Agreed actions.	FREDS	Started

## 2.10 PUBLIC AWARENESS CAMPAIGN

### Recommendation:

- Public awareness and acceptance of biomass as a renewable fuel is crucial. The Scottish Executive should assess the effect of the national information campaign, Renewable Energy - It's Only Natural in relation to public knowledge and acceptance of biomass developments and develop a specific campaign to explain, support and reassure on the advantages of biomass energy.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SE to continue to engage closely with national information campaign.	Ongoing	Ongoing discussions with DTI.	SE	Started
SE and DTI to develop specific biomass campaign.	May 07	Campaign launched.	SE /DTI	-

## 2.11 ONGOING MONITORING OF DEVELOPMENTS

### Recommendation:

- Government and industry should consider any further recommendations for action arising from other studies into the biomass sector; continue to monitor how the sector develops in Scotland; and take further action if that is required.
- While this report does not make specific recommendations in relation to heat, given the importance of the heat component in building a mature biomass market, BEG strongly supports the Scottish Executive and DTI's commitment to consider a means by which to support development of renewable heat. We believe that it would be useful for FREDS to reconvene BEG once the outcome of the relevant UK Government review of the heat sector has been completed, to ascertain whether further action needs to be taken specifically in Scotland.

Action:	Target Date	Outcome /Deliverable	Owner	Status
Ongoing developments monitored, actions proposed and BEG reconvened as required.	Ongoing	Actions proposed at each FREDS meeting.	FREDS members	Started

## 2.12 SUPPORTING MANUFACTURING AND THE SUPPLY CHAIN

### Recommendation:

- The Scottish Executive and the Enterprise Networks should consider appropriate means to support supply chain infrastructure innovation and development, and with others, should consider local manufacturing of established non-UK products under licence; they should also consider the need for appropriate skills training.

Action:	Target Date	Outcome /Deliverable	Owner	Status
Scottish Enterprise and Highlands & Islands Enterprise to review economic development strategies and policies and report to FREDS.	Jan 06	FREDS paper	ScotEnt /HiEnt	Started
SE, DTI and enterprise agencies to produce a paper on maximising UK content in renewables.	Jan 06	FREDS paper	SE/DTI /ScotEnt/ HIEnt	Started

**Notes: Actions in relation to supply chain and manufacturing capability also delivering recommendations under the Marine and Future Generation workstream (delivery plan reference 1.9 and 4.1). The need for appropriate skills training is being considered under the Skills workstream (delivery plan reference 3.5 and 3.6).**

## 2.13 ENGAGING WITH OTHER REGULATORY AGENCIES

### Recommendation:

- All the regulatory agencies must recognise the opportunity which exists to develop renewable power sources (with all the wider inherent benefits). This opportunity will be greatly enhanced by a more proactive approach to overcoming problems.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SE to continue to engage with all relevant regulatory agencies.	Ongoing	Ongoing engagement.	SE	Started

### 3. SKILLS

#### 3.1 LEAD RESPONSIBILITY IN IDENTIFYING FUTURE SKILLS REQUIREMENTS

##### Recommendation(s):

- The Sector Skills Councils should lead in identifying the future skills requirements of the renewables industry in Scotland.

Action:	Target Date	Outcome /Deliverable	Owner	Status
Sector Skills Councils to accept recommendation to lead in this area.	July 05	Recommendation accepted.	SSC	Complete

#### 3.2 UNDERTAKE FULL FUNCTIONAL OCCUPATIONAL MAPPING (FOM) EXERCISE

##### Recommendation(s):

- Energy and Utility Skills should lead a full Functional Occupational Mapping (FOM) exercise for renewable skills in Scotland. This should be produced by the end of 2005.

Action:	Target Date	Outcome /Deliverable	Owner	Status
Full FOM undertaken.	Dec 05	FOM completed and documented.	EUS	Started
FOM reviewed and actions identified.	March 06	FREDS paper.	SE and EUS	-

#### 3.3 AVAILABILITY OF LABOUR MARKET INFORMATION ON RENEWABLES

##### Recommendation(s):

- Careers Scotland and the Sector Skills Councils should work together and approach Futureskills Scotland to develop proposals to improve the availability of Labour Market Information re: renewables. The proposals should aim to encourage the transfer of existing skills from the UK Continental Shelf (UKCS) to new opportunities in the renewables sector.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SE to facilitate discussions between the various agencies with a view to early preparation of proposals.	Dec 05	Proposals developed.	SE, CS, SSCs and FSS	Started

### 3.4 ANALYSIS OF SKILLS GAPS IDENTIFIED BY HYDROGEN SUB-GROUP

#### Recommendation(s):

- Futureskills Scotland should be invited to investigate and provide analysis on the skills gaps identified by the FREDS Hydrogen sub-group.
- The FREDS Hydrogen sub-group should consider any recommendations from the commissioned Futureskills Scotland report and report back to the main FREDS group for consideration as necessary.

Action:	Target Date	Outcome /Deliverable	Owner	Status
Analysis of impact of skills gaps and identification of actions required.	May 06	Documented analysis/actions.	FSS	-
Hydrogen Group to consider recommendations from FSS report.	Sept 06	FREDS paper.	HEG	-

### 3.5 ESTABLISHING SECTOR DEVELOPMENT GROUP AND AGREEING WORK PROGRAMME

#### Recommendation(s):

- Although Energy and Utility Skills will act as the lead organisation in identifying future skills needs, it has become clear a multi agency approach is required to consider any skills and careers opportunities arising from renewables. To achieve this the Sector Skills Councils, colleges, Higher Education Institutions, SQA, and the Enterprise Networks should establish a sector development group and work together to ensure that both skills and careers opportunities are taken forward. The Scottish Executive's Enterprise, Transport and Lifelong Learning Department should take the lead in setting this up.
- As part of the multi-agency approach, the sector development group should liaise with the Energy Intermediary Technology Institute (ITI) to assess and identify skills issues arising from future market needs and technological opportunities in the renewables sector.
- The Sector Skills Councils should work with the Enterprise Networks, including Careers Scotland, colleges and Higher Education Establishments to develop in parallel the appropriate and relevant education, training and qualifications that meet the identified needs of employers and employees in the renewables sector. This should be supported by the Funding Council and SQA.
- Careers Scotland should develop proposals to raise the awareness of renewable energy amongst careers advisors as well as within Enterprise in education activities which support the Scottish Executive's determined to succeed strategy.
- Industry-led initiatives such as the Power Academy and Grow Your Future Workforce should be encouraged and developed to help promote the career opportunities which Renewables will provide.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SDG established with agreed work programme to include actions to progress relevant recommendations of FREDS Skills group.	Dec 05	Group established, programme agreed.	SE/SDG	Started
Identification/assessment of skills issues arising from future market need and technological opportunities.	Feb 06	FREDS paper.	SE/SDG	-

### 3.6 DEVELOPMENT OF STANDARDS AND QUALIFICATIONS

#### Recommendation(s):

- Sector Skills Councils led by Energy and Utility Skills should through their own research capabilities and through working with other relevant organisations such as SQA, develop appropriate occupational standards for the renewable energy sector by early 2007.
- Using the occupational standards developed by the Sector Skills Councils, and drawing on the FOM exercise SQA should review and develop 'renewables' qualifications as necessary, ensuring that any new qualifications have 'currency' with employers. Consideration should be given to those qualifications that already contribute skills to the 'traditional' energy sector and others and which could be transferred to the renewable sector, including those in engineering, construction, project management, environmental management and planning.

Action:	Target Date	Outcome /Deliverable	Owner	Status
Development of appropriate occupational standards.	Dec 07	Standards developed.	EUS/ SSCs	-
SQA to review and develop renewable qualifications as necessary.	Dec 09	Qualifications reviewed / developed	SQA	-

### 3.7 DEVELOPMENT OF ENERGY “SKILLS FOR WORK” COURSE

#### Recommendation(s):

- SQA in conjunction with the Sector Skills Councils and accredited centres should develop and pilot an Energy “Skills for Work” course.

Action:	Target Date	Outcome /Deliverable	Owner	Status
High level proposals developed for energy “Skills for Work” course.	Dec 07	High level proposals developed.	SQA	-

### 3.8 RESEARCH AND DEVELOPMENT

#### Recommendation(s):

- The Skills group agreed that the issues surrounding R&D should be reviewed as they could be important to the development of Scotland’s renewable industry and needed to be considered in further detail. FREDS should be invited to commission more detailed research and work in this important area as soon as possible.

Action:	Target Date	Outcome /Deliverable	Owner	Status
Options for progressing review of R&D issues to be discussed at FREDS 7 <sup>th</sup> meeting.	Oct 05	Discussion at FREDS meeting.	FREDS Secretariat	Started

## 4. FUTURE GENERATION

### 4.1 MAXIMISING ECONOMIC BENEFIT

#### Recommendation(s):

- We believe that there is a need for a better understanding of potential economic impacts and recommend that the Scottish Executive looks into the feasibility of commissioning further work to look at how Scotland can maximise economic benefits from all of the technologies, taking account of existing work of the other FREDS groups.

Action:	Target Date	Outcome /Deliverable	Owner	Status
SE, DTI and enterprise agencies to produce a paper on maximising UK content in renewables.	Jan 06	FREDS paper	SE/DTI /ScotEnt/HIEnt	Started

**Note: Action also delivering recommendations under Marine and Biomass workstreams (delivery plan reference 1.9 and 2.12).**

### 4.2 DELIVERY OF FREDS RECOMMENDATIONS

#### Recommendation(s):

- All concerned should urgently implement the recommendations of the FREDS biomass, marine and hydrogen sub-groups in order that these technologies can be developed to a stage where they become commercially viable and can contribute to the achievement of the target and to the Executive's aim of achieving a diverse renewable energy generation portfolio. The key issues are those already identified in the FREDS marine and biomass reports, and the hydrogen report which will be published shortly (see Annex C for summary of marine and biomass group recommendations).
- FREDS should, on a regular basis, monitor the implementation of the recommendations contained in this report together with progress towards achievement of the Executive's target.

Action:	Target Date	Outcome /Deliverable	Owner	Status
FREDS secretariat to actively drive and monitor delivery of agreed actions via Delivery Plan	Ongoing	Progress reports at each FREDS meeting.	SE	Started
FREDS secretariat to monitor, record and report levels of renewables consented, under construction and connected in Scotland.	Ongoing	Report to each FREDS meeting.	SE	Started

## **APPENDIX 1: GANTT CHARTS**

## **APPENDIX 2: FREDS TERMS OF REFERENCE**

# FORUM FOR RENEWABLE ENERGY DEVELOPMENT IN SCOTLAND

## Terms of Reference

### Context

The Executive is committed – *in A Partnership for a Better Scotland* – to working towards the target of 40% of electricity generation from renewable sources as set out in ***Securing a Renewable Future: Scotland's Renewable Energy***. The Executive's policy is based on our commitment to make a significant contribution to reducing the emission of harmful greenhouse gases and our belief that renewables can provide valuable economic development opportunities for Scotland, not least in more remote and rural areas.

### Remit

Through a partnership between the Scottish Executive and industry the role of the Forum for Renewable Energy Development in Scotland will be to ***provide the leadership necessary to create the conditions which will support and promote the development of Scotland's renewable energy and maximise the economic development opportunities.***

In particular, the Forum will:

- Seek to promote and develop the areas of renewable generation, technology development, and exports;
- In the context of the Executive's green jobs strategy, promote the creation of sustainable employment in Scotland's renewables industry;
- Produce an action plan for the promotion and development of marine energy, aimed at ensuring that Scotland can become a world leader and exporter of marine power technology;
- Produce an action plan for the promotion and development of biomass technology;
- Build on the potential synergies between Scotland's existing offshore expertise from the UKCS and the commercialisation of new offshore renewable technologies, including offshore wind, wave and tidal technologies;
- Have regard to action being taken on a UK basis to develop renewables, in particular, action being taken by the Renewables Advisory Board. The Forum will not, however, seek to duplicate work that can be done appropriately elsewhere.
- Set target milestones in the areas of generation, technology development, jobs and exports.

The Forum will also identify other action that it believes necessary to fully exploit Scotland's economic development potential in the area of renewable energy.



## **FREDS Delivery Matrix**

### **Purpose**

The attached matrix indicates how the recommendations from the various FREDS reports that have been published to date are being delivered via the actions set out in the FREDS Delivery plan. The matrix maps each recommendation against the relevant Delivery Plan workstream(s) and action(s).

### **Background**

At the 6th meeting of FREDS, members agreed an action that a matrix form of presentation should be used to demonstrate that all of the FREDS recommendations are covered by the Delivery Plan and to show relationships between Delivery Plan workstreams. This paper delivers the agreed action.

### **Action**

Members are invited to consider the attached matrix and confirm that they are content with this form of presentation.

Delivery Workstream	Recommendation	Delivery Workstream				Delivery Plan Reference
		BEG	MEG	Skills	Future Gen.	
Marine	<ul style="list-style-type: none"> <li>The Scottish Executive and UK Government should acknowledge the case for additional public sector support for marine energy, and give a clear and early commitment to work together to determine the most efficient method and level of financial assistance that can be provided.</li> </ul>		X			1.3
Marine	<ul style="list-style-type: none"> <li>Both administrations should also ensure that the evidence gathered by MEG and in the various studies mentioned here is fully utilised to inform the forthcoming major review of the GB Renewables Obligations.</li> </ul>		X			1.6
Marine	<ul style="list-style-type: none"> <li>The marine energy sector itself must demonstrate the ability to achieve greater efficiencies and drive down capital and operating costs.</li> </ul>		X			1.12
Marine	<ul style="list-style-type: none"> <li>Subject to the production of a satisfactory business case, EMEC's funding partners should confirm their willingness to support the required extension to accommodate tidal device testing, without delay.</li> </ul>		X			1.4
Marine	<ul style="list-style-type: none"> <li>EMEC should work with Scottish Development International and other trade partners to actively promote overseas marketing of its services, facilities and expertise.</li> </ul>		X			1.4

Delivery Workstream	Recommendation	Delivery Workstream				Delivery Plan Reference
		BEG	MEG	Skills	Future Gen.	
Marine	<ul style="list-style-type: none"> <li>EMEC must be supported in the work it has already begun to establish Scotland as the internationally recognised centre for marine energy technical, operating and safety standards.</li> </ul>		X			1.5
Marine	<ul style="list-style-type: none"> <li>EMEC, in partnership with the Carbon Trust, SuperGen, the Scottish Executive and the DTI, should jointly sponsor a programme of work with representatives of the industry, developers, standards agencies and the financial sector, to identify the standards required and agree how these will be developed as quickly as possible.</li> </ul>		X			1.5
Marine	<ul style="list-style-type: none"> <li>The Scottish Executive, with the DTI must, as a matter of urgency, commission an SEA of Scotland's coastline.</li> </ul>		X			1.2
Marine	<ul style="list-style-type: none"> <li>The Scottish Executive, working with the Crown Estate, should agree and publish clear guidance on the marine energy consents procedure.</li> </ul>		X			1.2
Marine	<ul style="list-style-type: none"> <li>The Scottish Executive should give consideration to the need for a suitable forum to enable its various Departments and agencies to contribute to appropriate planning guidance for marine energy developers, grid operators and the relevant local planning and environmental agencies.</li> </ul>		X			1.2

Delivery Workstream	Recommendation	Delivery Workstream				Delivery Plan Reference
		BEG	MEG	Skills	Future Gen.	
Marine	<ul style="list-style-type: none"> <li>The regulator and grid operator should prioritise action on transmission investment, with particular regard to connecting those remote mainland and island locations that can provide the greatest renewable generation capacity. The cost of this investment must be shared equitably amongst users and beneficiaries, and cannot be borne by host communities and developers alone.</li> </ul>		X			1.8
Marine	<ul style="list-style-type: none"> <li>The Executive and UK Government should consider supporting early commercial development of marine energy by underwriting grid connection for 1st and 2nd generation projects.</li> </ul>		X			1.3
Marine	<ul style="list-style-type: none"> <li>The Executive should continue to press the regulator to ensure that infrastructure charging mechanisms do not discriminate against emerging industries such as marine energy.</li> </ul>		X			1.8
Marine	<ul style="list-style-type: none"> <li>The Scottish academic sector – funding councils, Universities Scotland and individual institutions - should review and reinforce existing capability in marine energy undergraduate teaching, research and development to meet the future demand for graduate skills and to consolidate the research</li> </ul>			X		3.5, 3.6

Delivery Workstream	Recommendation	Delivery Workstream				Delivery Plan Reference
		BEG	MEG	Skills	Future Gen.	
	base.					
<b>Marine</b>	<ul style="list-style-type: none"> <li>Scottish Executive, the enterprise agencies, EMEC and ITI(E) should continue to work with existing and new initiatives such as SuperGen, Marine Energy Challenge and UKERC to maximise the synergies and opportunities that will establish marine energy technology and its manufacturing industry.</li> </ul>		X			1.9
<b>Marine</b>	<ul style="list-style-type: none"> <li>The enterprise agencies should review their economic development strategies and policies to ensure that they can adequately support a vibrant Scottish manufacturing and supply chain for marine energy.</li> </ul>	X	X			1.9, 2.12
<b>Marine</b>	<ul style="list-style-type: none"> <li>The enterprise agencies should use the Gap Analysis Report to produce a detailed assessment of the effects of skills gaps on the marine energy sector, and produce a list of specific actions to tackle the issues raised.</li> </ul>			X		3.2
<b>Marine</b>	<ul style="list-style-type: none"> <li>The enterprise agencies, alongside the Scottish Renewables Forum, should support the development of an industry-led Marine Energy Network.</li> </ul>	X				1.1
<b>Marine</b>	<ul style="list-style-type: none"> <li>Scottish Renewables Forum should organise a major international conference to showcase progress and future opportunities for marine</li> </ul>		X			1.10

Delivery Workstream	Recommendation	Delivery Workstream				Delivery Plan Reference
		BEG	MEG	Skills	Future Gen.	
	energy in Scotland.					
<b>Biomass</b>	<ul style="list-style-type: none"> <li>▪ Further work should be undertaken by the Forestry Commission to refine the wood fuel resource estimates in Scotland and to provide more detailed information to wood users and the biomass energy sector. This information should be reviewed/ updated every five years.</li> </ul>	X				2.8
<b>Biomass</b>	<ul style="list-style-type: none"> <li>▪ New biomass plants for CHP and power generation should, where possible, be located in or close to areas of wood fuel availability to minimise possible transport difficulties and costs. The forestry and biomass energy sectors should consider developing integrated sites which would attract a range of wood using activities.</li> </ul>	X				2.1
<b>Biomass</b>	<ul style="list-style-type: none"> <li>▪ The Scottish Executive and the Enterprise Networks should consider appropriate means to support supply chain infrastructure innovation and development, and with others, should consider local manufacturing of established non-UK products under licence; they should also consider the need for appropriate skills training.</li> </ul>	X	X	X	X	1.9,2.12, 3.2,3.5,3.6, 4.1
<b>Biomass</b>	<ul style="list-style-type: none"> <li>▪ Ofgem, the distribution network operators and the transmission operator</li> </ul>	X				2.9

Delivery Workstream	Recommendation	Delivery Workstream				Delivery Plan Reference
		BEG	MEG	Skills	Future Gen.	
	should ensure fair and financially secure access to the electrical grid at all levels.					
<b>Biomass</b>	<ul style="list-style-type: none"> <li>▪ The Scottish Executive and the DTI should acknowledge the continuing need for public sector support for biomass plants for CHP and power generation of all sizes and should give an early commitment that they will work to determine how that need can be met.</li> </ul>	X				2.2
<b>Biomass</b>	<ul style="list-style-type: none"> <li>▪ The Scottish Executive should consider how to meet the need for public sector support for CHP plants in particular and also for support infrastructure.</li> </ul>	X				2.2
<b>Biomass</b>	<ul style="list-style-type: none"> <li>▪ As part of its planned review of NPPG 6 and PAN 45, the Scottish Executive should at an early date provide updated guidance on biomass developments. This guidance should encourage local authorities to consider the wider impact of biomass projects in relation to sustainable development and the employment impacts of plant.</li> </ul>	X				2.7
<b>Biomass</b>	<ul style="list-style-type: none"> <li>▪ All the regulatory agencies must recognise the opportunity which exists to develop renewable power sources (with all the wider inherent benefits). This opportunity will be greatly enhanced by a more proactive approach to overcoming problems.</li> </ul>	X				2.13

Delivery Workstream	Recommendation	Delivery Workstream				Delivery Plan Reference
		BEG	MEG	Skills	Future Gen.	
<b>Biomass</b>	<ul style="list-style-type: none"> <li>SEPA should examine its procedures to ensure consistency of approach in relation to the implementation of legislation relating to waste products and, along with Ofgem, should ensure that information about regulatory issues is made more readily available to the biomass sector.</li> </ul>	X				2.3
<b>Biomass</b>	<ul style="list-style-type: none"> <li>SEPA should re-examine how it implements the provisions of the EU Council Directives on waste and on the incineration of waste. Forestry brash, root/stump, lop and top derived from the harvesting of standard timber and any secondary products of primary processing of logs and small round wood should be treated in the same way as short rotation coppice and other energy crops.</li> </ul>	X				2.6
<b>Biomass</b>	<ul style="list-style-type: none"> <li>Ofgem and industry should work together to develop secure arrangements whereby Ofgem can certify blended fuels for co-firing as eligible for ROCs at sites other than the power station.</li> </ul>	X				2.4
<b>Biomass</b>	<ul style="list-style-type: none"> <li>The Scottish Executive should consult on amending the definition of energy crops in the Renewables Obligation (Scotland) Order 2004 to include material derived from any sustainably managed woodland, i.e., a woodland certified to</li> </ul>	X				2.5

Delivery Workstream	Recommendation	Delivery Workstream				Delivery Plan Reference
		BEG	MEG	Skills	Future Gen.	
	the UK Woodland Assurance Standard.					
<b>Biomass</b>	<ul style="list-style-type: none"> <li>▪ The Scottish Renewables Forum, working with the Scottish Forest Industries Cluster, the Forestry Commission, Scottish Enterprise and Highlands and Islands Enterprise, should develop a customer and industry-led Biomass Energy Network.</li> </ul>	X				2.1
<b>Biomass</b>	<ul style="list-style-type: none"> <li>▪ Ongoing developments to be monitored and BEG to be reconvened once the outcome of the relevant UK Government review of the heat sector has been completed, to ascertain whether further action needs to be taken specifically in Scotland.</li> </ul>	X				2.11
<b>Biomass</b>	<ul style="list-style-type: none"> <li>▪ All the regulatory agencies must recognise the opportunity which exists to develop renewable power sources (with all the wider inherent benefits). This opportunity will be greatly enhanced by a more proactive approach to overcoming problems.</li> </ul>	X				2.13
<b>Skills</b>	<ul style="list-style-type: none"> <li>▪ The Sector Skills Councils should lead in identifying the future skills requirements of the renewables industry in Scotland.</li> </ul>			X		3.1

Delivery Workstream	Recommendation	Delivery Workstream				Delivery Plan Reference
		BEG	MEG	Skills	Future Gen.	
Skills	<ul style="list-style-type: none"> <li>Energy and Utility Sector Skills should lead a full Functional Occupational Mapping (FOM) exercise for renewable skills in Scotland. This should be produced by the end of 2005.</li> </ul>			X		3.2
Skills	<ul style="list-style-type: none"> <li>Careers Scotland and the Sector Skills Councils should work together and approach Futureskills Scotland to develop proposals to improve the availability of Labour Market Information re: renewables. The proposals should aim to encourage the transfer of existing skills from the UK Continental Shelf (UKCS) to new opportunities in the renewables sector.</li> </ul>			X		3.3
Skills	<ul style="list-style-type: none"> <li>Futureskills Scotland should be invited to investigate and provide analysis on the skills gaps identified by the FREDS Hydrogen sub-group.</li> </ul>			X		3.4
Skills	<ul style="list-style-type: none"> <li>The FREDS Hydrogen sub-group should consider any recommendations from the commissioned Futureskills Scotland report and report back to the main FREDS group for consideration as necessary.</li> </ul>			X		3.4
Skills	<ul style="list-style-type: none"> <li>The Sector Skills Councils, colleges, Higher Education Institutions, SQA, and the Enterprise Networks should establish a sector development group and work together to ensure that both skills and</li> </ul>			X		3.5

Delivery Workstream	Recommendation	Delivery Workstream				Delivery Plan Reference
		BEG	MEG	Skills	Future Gen.	
	careers opportunities are taken forward. The Scottish Executive's Enterprise, Transport and Lifelong Learning Department should take the lead in setting this up.					
<b>Skills</b>	<ul style="list-style-type: none"> <li>▪ As part of the multi-agency approach, the sector development group should liaise with the Energy Intermediary Technology Institute (ITI) to assess and identify skills issues arising from future market needs and technological opportunities in the renewables sector.</li> </ul>			X		3.5
<b>Skills</b>	<ul style="list-style-type: none"> <li>▪ The Sector Skills Councils should work with the Enterprise Networks, including Careers Scotland, colleges and Higher Education Establishments to develop in parallel the appropriate and relevant education, training and qualifications that meet the identified needs of employers and employees in the renewables sector. This should be supported by the Funding Council and SQA.</li> </ul>			X		3.5
<b>Skills</b>	<ul style="list-style-type: none"> <li>▪ Careers Scotland should develop proposals to raise the awareness of renewable energy amongst careers advisors as well as within Enterprise in education activities which support the Scottish Executive's determined to succeed strategy.</li> </ul>			X		3.5

Delivery Workstream	Recommendation	Delivery Workstream				Delivery Plan Reference
		BEG	MEG	Skills	Future Gen.	
Skills	<ul style="list-style-type: none"> <li>Industry-led initiatives such as the Power Academy and Grow Your Future Workforce should be encouraged and developed to help promote the career opportunities which Renewables will provide.</li> </ul>			X		3.5
Skills	<ul style="list-style-type: none"> <li>Sector Skills Councils led by Energy and Utility Skills should through their own research capabilities and through working with other relevant organisations such as SQA, develop appropriate occupational standards for the renewable energy sector by early 2007.</li> </ul>			X		3.6
Skills	<ul style="list-style-type: none"> <li>SQA should review and develop 'renewables' qualifications as necessary, ensuring that any new qualifications have 'currency' with employers. Consideration should be given to those qualifications that already contribute skills to the 'traditional' energy sector and others and which could be transferred to the renewable sector, including those in engineering, construction, project management, environmental management and planning.</li> </ul>			X		3.6
Skills	<ul style="list-style-type: none"> <li>SQA in conjunction with the Sector Skills Councils and accredited centres should develop and pilot an Energy</li> </ul>			X		3.7

Delivery Workstream	Recommendation	Delivery Workstream				Delivery Plan Reference
		BEG	MEG	Skills	Future Gen.	
	“Skills for Work” course.					
<b>Skills</b>	<ul style="list-style-type: none"> <li>The Skills group agreed that the issues surrounding R&amp;D should be reviewed as they could be important to the development of Scotland’s renewable industry and needed to be considered in further detail. FREDS should be invited to commission more detailed research and work in this important area as soon as possible.</li> </ul>			X		3.8
<b>Future Gen.</b>	<ul style="list-style-type: none"> <li>Scottish Executive to look into the feasibility of commissioning further work to look at how Scotland can maximise economic benefits from all of the technologies, taking account of existing work of the other FREDS groups.</li> </ul>	X	X		X	1.9,2.12,4.1
<b>Future Gen.</b>	<ul style="list-style-type: none"> <li>All concerned should urgently implement the recommendations of the FREDS biomass, marine and hydrogen sub-groups in order that these technologies can be developed to a stage where they become commercially viable and can contribute to the achievement of the target and to the Executive's aim of achieving a diverse renewable energy generation portfolio.</li> </ul>	X	X	X	X	4.2 and all Delivery Plan actions
<b>Future Gen.</b>	<ul style="list-style-type: none"> <li>FREDS should, on a regular basis, monitor the implementation of the recommendations contained in this report together with progress</li> </ul>				X	4.2

Delivery Workstream	Recommendation	Delivery Workstream				Delivery Plan Reference
		BEG	MEG	Skills	Future Gen.	
	towards achievement of the Executive's target.					



## **FREDS WORK ON INCREASING LOCAL CONTENT IN RENEWABLES**

### **Update**

Work is underway involving the Executive, DTI and the Enterprise Agencies to investigate how Scottish/UK content, in terms of the supply chain, might be maximised.

This work will include:

- establishing the current level of Scottish/UK content in Scottish renewables;
- investigating practice in European countries where local content is high (such as Spain); and
- considering potential legal issues.

To date, information has been gathered on:

- the extent of local content in completed onshore wind farms in Scotland (paper from Avayl Consulting commissioned by HIE); and
- local benefit practices within the wind industry in Spain including discussion on some of the legal issues (paper from Garrad Hassan commissioned by HIE).

Further work will be undertaken with a view to producing a paper for the FREDS meeting in January.

### **Points of Interest From Material Received So Far**

#### *Avayl paper*

The Avayl paper states that expenditure to date on commercial windfarms in Scotland is £388m (including grid costs) with the estimates split as follows:

Scotland	Rest of UK	Rest of Europe
24% (£92m)	19% (£74m)	57% (£222m)

The paper comments that the selected turbine supplier plays a key part in determining the level of local content since the turbine supply contract is estimated to account for, on average, 61% of the total development cost. The following analysis is provided in relation to the turbine costs (including the tower plus transport and erection) of £238m:

Scotland	Rest of UK	Rest of Europe
7% (£15m)	9% (£23m)	84% (£200m)

The following list of factors likely to increase local content is provided based on discussions with developers.

- Strong local wind farm market.
- Large single projects resulting in large orders to one turbine manufacturer.
- High Developer support for local content.
- Turbine manufacturers with “local manufacture” philosophy.
- Turbine manufacturer with no competing UK/ European facilities.

- Well developed local manufacturing and construction capacity.
- Framework agreements or preferred contractor status with regional contractors.
- Well developed and publicised preconstruction subcontracting strategy addressing local sub contractors at lower tiers.
- Well developed competitive local supply chain.
- Sufficient local skilled workforce.

### *Garrad Hassan paper*

The paper comments that regional planning policy in Spain has encouraged the development of an indigenous manufacturing industry and highlights the fact that some regional governments have encouraged many foreign companies to establish joint ventures with local industry. It states that Spanish-owned turbine manufacturers have a 74% share of domestic sales and a 21% share of the world market. It further states that there are over 500 companies participating in the industry in Spain, through the various stages of the value chain, covering activities such as:

- Turbine manufacture.
- Component manufacture.
- Wind farm development.
- Wind farm construction.
- Wind farm operation.
- Finance.
- Transmission and distribution.

It quantifies the cumulative employment in Spain as 106,000 man years split into 26,500 direct jobs and 79,500 indirect jobs.

The main conclusions set out in the paper are as follows:

- There appears to be no explicit, formal requirement to provide local content that is not caveated in terms sufficiently compliant with EU law (i.e. requirements are carefully designed to ensure compliance).
- Regardless of any formal documentation there is clear understanding amongst developers that local content is required.

The paper quotes legal opinion from McGrigors and suggests that there are avenues in the UK through which more might be done to secure local content.