

# Annex A: Progress on Actions

-  = Actions that are in progress
-  = Actions that have been completed

CROSS CUTTING Actions	Result	Comments
<p><b>Facilitating Access to the Grid:</b> Reform the onshore grid to ensure cost-effective grid investment and connection.</p>	<p></p> <p></p>	<p>In February 2012 the Electricity Networks Strategy Group published an updated assessment by the network companies of the network investment potentially required to accommodate new generation to 2020. It concluded that around £8.8bn of strategic investment may be required and that, provided the identified reinforcements were taken forward on time and the planning consents secured in a timely manner, the reinforcements can be delivered to required timescales.</p> <p>In April 2012 Ofgem approved Price Controls for 2013-21 with the Scottish Transmission Owners allowing up to £6bn of investment. In July 2012 Ofgem announced its Initial Proposals, worth up to £11.6bn of investment for National Grid's Business Plan for the same period. Ofgem plans to publish its Final Proposals for National Grid in December 2012. This should help ensure that new generation can be accommodated on the transmission network in a timely and cost-effective manner. In addition, Ofgem announced in January 2012 a further £72m of funding for strategic transmission network investment and in July approved funding for a 2.25GW sub-sea transmission link between Scotland and England valued at around £1.1bn.</p>
<p><b>Facilitating Access to the Grid:</b> Work with Ofgem through Project TransmiT to help plan grid investments and the regime for charging for new connections to the transmission network. National Grid to consult later this summer on Final Sums Liability. Monitor the impact of "Connect and Manage", and take corrective actions if necessary.</p>	<p></p>	<p>Ofgem concluded its review of the transmission charging regime through Project TransmiT in May 2012 with an instruction to National Grid and the Connection and Use of System Code (CUSC) industry group to develop changes to the charging methodology based on the Improved Investment Cost Related Pricing (ICRP) approach. The CUSC group is scheduled to put detailed changes to Ofgem for approval around the end of 2012, with implementation of the changes to follow during the 2013-14 charging year. The ICRP approach takes account of each generator's "load" as well as capacity when calculating the use of system charge. Ofgem considers that this approach better reflects the costs that all generators impose on the transmission network. It means that, for a given location, charges for an intermittent generator will be lower than for a base-load generator, and therefore it would be particularly beneficial to Scottish-based renewables.</p>

	<p>● The enduring “Connect and Manage” grid access regime which DECC introduced in August 2010 continues to deliver earlier connections. To date, 107 large generation projects (29.7GW) have advanced their connection dates by an average of six years. Of these, 100 projects (24GW) are renewables.</p>
<p><b>Facilitating Access to the Grid:</b> Establish the framework offshore necessary to deploy the levels of renewable electricity we anticipate are necessary for 2020</p>	<p>● In March 2012, DECC and Ofgem published the conclusions of the Offshore Transmission Coordination Project. A number of refinements to the policy and regulatory framework were put forward, to ensure that potentially significant savings from coordinated configurations can be achieved. These measures are currently being implemented in conjunction with industry. In particular, Ofgem is finalising an anticipatory investment process for authorising future-proofing of initial transmission assets, and it has also launched the Integrated Transmission Planning and Regulation (ITPR) project to consider what is needed with respect to system planning and asset classification to deliver an integrated transmission system onshore, offshore and cross-border. In addition, Department for Communities and Local Government has consulted on revised guidance documents for the major infrastructure planning regime, including changes to enable transmission infrastructure of an anticipatory nature to be considered as associated development.</p> <p>● In May 2012, DECC published a draft offshore transmission clause in the Energy Bill to address concerns regarding the commissioning of transmission assets under the generator build option. DECC will continue to liaise with stakeholders as this measure is progressed.</p> <p>● In November 2012 Ofgem set out policy proposals for updating the offshore transmission licence for future tenders, building on the current regime and taking into account experience gained from the initial tender rounds. This consultation closes on 22 February 2013.</p>
<p><b>Facilitating Access to the Grid:</b> Scotland</p>	<p>● In January 2012 Ofgem fast-tracked the business plans for the next price control period (2013-21) of the Scottish Transmission System Owners (TSOs – SHETL, part of SSE and SPTL, part of Scottish Power). This allowed the TSOs to immediately begin work on the transmission projects that are needed to connect Scottish renewable energy developments, approving up to £2.6bn of investment in Scottish Power’s area and up to £5.1bn in SSE’s.</p> <p>● Work on the Scottish transmission networks has progressed well over the last year. SHETL has begun construction on the Beaully-Denny upgrade, the West Coast subsea line is now out to tender prior to the construction phase, and various upgrades are well underway or completed, including the strengthening of the circuits over the border to England.</p>

<p><b>Ensuring long term investment certainty:</b> Put in place a transparent and long lived financial framework through the introduction of incentives for heat</p>	●	<p>RHI for the non-domestic sector launched in November 2011 which includes support for a wide range of renewable heat technologies. The RHPP, phase 2 opened in April 2012, supports both ground source and air source heat pumps, biomass and solar thermal.</p>
<p><b>Ensuring long term investment certainty:</b> Put in place a transparent and long lived financial framework through reforming the electricity market</p>	●	<p>With the publication of the Draft Energy Bill, and draft CfDs Operational Framework, Government has published further details of EMR, including how it will be implemented and how it will work in practice. These publications are written to provide the detail and certainty that industry have been asking for.</p>
	●	<p>And we have developed detailed proposals to provide new renewable generators with a period of choice between the existing RO and the new CfDs. The White Paper set out our conclusions that CfDs will provide the most efficient long term support for all forms of low-carbon generation. We have been working actively with relevant parties to enable early investment decision to progress to timetable wherever possible, including those required ahead of implementation of the FITs CfD.</p>
	●	<p>CfDs will provide long term support for all forms of low-carbon generation (not just renewable) so will make a greater contribution to our decarbonisation targets. This will enable more investment to come forward, sooner at a lower cost of capital - allowing us to meet our decarbonisation goals while reducing consumer bills in the medium and longer term. CfDs will facilitate the whole range of technologies coming forward, including nuclear, CCS, and renewables. It will also deliver new renewable energy at lower cost than the existing RO. Modelling suggests that combined CfDs and legacy RO support costs to 2030 are around 30% lower than retaining the RO.</p>
<p><b>Ensuring long term investment certainty:</b> Scotland</p>	●	<p>In March 2012, the Scottish Government announced the creation of the £103 million Renewable Energy Investment Fund (REIF), based on the principles of additionality, leverage and legacy, with investment initially focused on wave and tidal, district heating and community projects. The REIF will complement funding from the GIB, which will have its HQ in Edinburgh.</p>
<p><b>Ensuring long term investment certainty:</b> Take action to ensure a managed transition from the Renewables Obligation including bringing forward the Banding Review, to secure the 22GW of renewable electricity capacity currently in the pipeline as well as bring forward additional projects.</p>	●	<p>The Banding Review has been completed. An announcement of the response to the consultation on the proposals was made on 25 July 2012 and further announcements made on 18 December 2012. The changes will be incorporated when the ROO is amended in April 2013 subject to Parliamentary and State Aid approvals.</p>

<p><b>Tackling pre-and post consent delays:</b> Ensure a radar replacement programme for Air Defence is rolled out this year</p>		<p>A technological solution to Air Defence radar interference has been brought forward in the form of Lockheed Martin's TPS-77 radar. DECC, alongside industry and The Crown Estate, contributed to the capital costs for the installation of the first TPS-77 radar at RAF Trimmingham. Agreements to purchase two further TPS-77 radar at Staxton Wold and Brizlee Wood have been reached between consortia of developers and the MOD.</p>
<p><b>Tackling pre-and post consent delays:</b> Government is reforming the planning system for major infrastructure in England and Wales, to replace the Infrastructure Planning Commission with a democratically accountable system, and to ensure that local planning in England supports economic growth and gives local communities a greater say and stake in development.</p>		<p>On 27 March 2012, the Government published the new National Planning Policy Framework (NPPF) for England: <a href="http://www.communities.gov.uk/publications/planningandbuilding/nppf">http://www.communities.gov.uk/publications/planningandbuilding/nppf</a> This is a key part of reforms to make the planning system in England less complex and more accessible, to protect the environment and to promote sustainable growth. The NPPF consolidates previous local planning policy (including for energy projects below 50MW) into a single document. The new framework is built on a new presumption in favour of sustainable development (which includes appropriately sited renewable energy developments), reinforces the importance of Local Plans (developed in consultation with local people) as the keystone of the planning system, and encourages local authorities to have a positive strategy to promote renewable and low-carbon energy, including identifying suitable areas for renewable and low carbon energy sources.</p> <p>Regional renewable and low carbon capacity assessments previously funded by DECC and summarised in a report by the National Non-Food Crops Centre (issued on 18 July 2012): <a href="http://www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/ored_news/ored_news/method_assess/method_assess.aspx">http://www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/ored_news/ored_news/method_assess/method_assess.aspx</a>.</p> <p>This document may be used to assist local authorities in drawing up local plans. DECC is also working with several partners at RenewableUK, Town and Country Planning Association, Sustainability East, and Royal Society for the Protection of Birds to deliver a series of regional seminars during to 2012 to support proactive and positive local authority action on renewable energy.</p>
<p><b>Ensuring sustainable bioenergy feedstock supply:</b> Putting in place sustainability standards.</p>		<p>Consultation on support for biomass and improvements to the sustainability criteria was published on 7 September 2012 and closed 30 November 2012.</p>
<p><b>Ensuring sustainable bioenergy feedstock supply:</b> Developing a Bioenergy Strategy to be clear about the availability and best use of this resource, and ensuring that sustainable feedstocks are fully exploited.</p>		<p>The UK Bioenergy Strategy was published on 26 April 2012. It sets out a framework for the use of sustainably produced biomass feedstocks to the UK in 2020 and up to 2050, across the heat, electricity and transport sectors. It considers the likely carbon impacts of bioenergy compared to possible alternative uses for biomass.</p>

**Facilitating development of renewables supply chains:**

The Government's financial incentives for renewable energy will provide greater market confidence about future deployment levels, helping to stimulate supply chain development.



The announcement of the results of the RO banding review on 25 July 2012 should provide greater market confidence to provide for investment decisions to be made, which will stimulate deployment. That deployment will be factored into calculating the obligation.

DECC has consulted on a FITs Review. We separated the review into three phases – all of which are now complete, providing confirmation of new tariff levels for each technology:

- Phase 1 considered small-scale solar PV (with a total installed capacity of 250 kilowatts or less) prioritising energy efficiency by linking PV tariffs to specified minimum energy efficiency requirements from 1 April 2012, and introducing new multi-installation tariff rates for aggregated solar PV schemes, applying to new installations with an eligibility date after 1 April 2012
- Phase 2A of the review considered Solar PV Cost Control mechanisms. Through these changes, including introducing a tariff degression mechanism, the FITs scheme will continue to support sustainable growth in PV, and help to ensure that the scheme is for the many and not the few, in a way which provides value for money to bill payers.
- Phase 2B has considered all other technologies (wind, AD and micro-CHP) as well as scheme administration issues. This included the introduction of a tariff degression mechanism effective from 1 April 2014 and introduction of preliminary accreditation with tariff guarantees for all ROO-FIT technologies and community PV projects.

**Facilitating development of renewables supply chains:**  
Scotland

The Offshore Renewables Supply Chain Directory is a joint venture between Scottish Enterprise and Highlands & Islands Enterprise which profiles Scottish companies across over 100 sub-categories in the renewables supply chain.

**Facilitating development of renewables supply chains:**

Encourage the development of port and manufacturing facilities for offshore wind, Marine Energy Parks, charging infrastructure for plug-in vehicles, and plans for better certification and assessment of installers for small scale technologies, including domestic heat.

See Offshore Wind, Marine, Renewable Transport and Renewable Heat update on actions.

**Encouraging Innovation:**

We are committing an additional £50m over the next 4 years, subject to value for money assessment, to support innovation in offshore and marine technologies.

This £50m of funding has been split into two technologies - £30m for offshore wind, and £20m for marine technologies.



Of the £30m allocated to offshore wind innovation, £15m has been used for DECC Technology Strategy Board (TSB)'s component demonstration scheme. A call was held in November 2011 and 5 projects were selected. A second call closed in June, and a third call was launched on 5 November 2012 which will run in parallel with £3m for feasibility studies aimed to bring cost-lowering ideas into the UK supply chain from inside the sector and from parallel sectors.



On 5 April 2012 the Government launched its £20 million MEAD to support up to 2 pre-commercial projects to demonstrate the operation of wave and/or tidal devices in array formation. MEAD has received a number of applications for both wave and tidal energy technologies. The successful applicants will be announced in Winter 2012/13.

**Encouraging Innovation:**

Consider further allocation, including for energy from waste and biomass, details of which will be available in the Autumn.

DECC are supporting the development of advanced conversion technologies. DECC are leading an EU initiative to fund bio-energy demonstrator projects across the EU. EU negotiations are still in progress, and if successful, it will enable a pan-European competition for bio-energy demonstrators with a clear route to commercialisation to be launched, accessing up to €100m. DECC is also funding the Pyrolysis Challenge run by the Carbon Trust. The project will demonstrate the feasibility of using fast pyrolysis for the production of drop in biofuels from waste at scale.



DECC launched the Wetland Biomass to Bioenergy competition on 8th October and the application deadline was 14 November 2012. This competition aims to demonstrate an end-to-end bioenergy process that optimises wetland management activities and utilises the resulting biomass. If successful, this project will increase the amount of renewable bio-energy available to the UK whilst avoiding land use competition and land use change.



The Energy Technologies Institute has allocated £13m to demonstrate waste gasification and clean-up technology. Three successful bidders for Phase 1 of this project, to design a Waste gasification facility, will be announced in 2013. In 2014, one of these three designs will be selected to move forward into construction.



<p><b>Encouraging Innovation:</b> Scotland</p>		<p>The Energy Technology Partnership (ETP) is an alliance of Scottish Universities, engaged in world class related energy research, development and demonstration (RD&amp;D). It is the largest power and energy research partnership in Europe and promotes greater levels of collaboration between universities and industry to deliver significant energy RD&amp;D capability across a spectrum of energy technologies. The Scottish Energy Laboratory will facilitate access to all of Scotland's key test and demonstration facilities.</p>
<p><b>Community Engagement:</b> Scotland</p>		<p>In April 2012, the Scottish Government established a Community Benefit Register for Scotland. The register will encourage transparency and consistency in community benefits process and help communities to negotiate with developers and better understand what can be achieved.</p>
<p><b>ONSHORE WIND Actions</b></p>		
	<p><b>Result</b></p>	<p><b>Comments</b></p>
<p><b>Minimise investment risk:</b> Implement proposed electricity market reform and RO transition measures to secure long term certainty to 2020 and beyond and enable historically strong investor confidence in onshore wind to be maintained.</p>		<p>We expect continued investment under the RO while EMR is implemented, thus enabling achievement of interim and 2020 targets. With the publication of the Draft Energy Bill, and draft CfDs Operational Framework, Government has published further details of EMR, including how it will be implemented and how it will work in practice. These publications are written to provide the detail and certainty that industry have been asking for. We have increased certainty on implementation by publishing a timeline of how we are introducing legislation, setting up new institutional arrangements, and setting prices, showing we are on track to deliver CfDs by mid 2014 as planned; certainty on CfDs Design by providing detail of CfDs terms, including contract length and indexation; certainty for investment by introducing Delivery Plans to give 5-year foresight of CfDs prices, which will make planning easier, and help investors and developers to take investment decisions; and certainty on Transition through Fixed ROC provisions in the Bill. Overall, CfDs will provide earlier certainty of support levels than the RO as well as greater stability of revenue streams by providing a fixed strike price.</p>
<p><b>Reform the planning system in England and Wales:</b> Set out national need for new energy infrastructure including for renewables projects through ratification of National Policy Statements.</p>		<p>The Energy National Policy Statements were approved by Parliament and designated by the Secretary of State for Energy in July 2011.</p>

<p><b>Reform the planning system in England and Wales:</b> Replace the Infrastructure Planning Commission with a fast track process for major infrastructure projects.</p>	●	<p>Planning applications for renewable energy projects above 50MW and proposals for electric powers lines are treated as new nationally significant infrastructure. Following abolition of the Infrastructure Planning Commission (IPC) through the Localism Act 2011, a new National Infrastructure Directorate (NID, previously referred to as the Major Infrastructure Planning Unit or MIPU) was set up on 1 April 2012 within the Planning Inspectorate (part of DCLG) to consider applications for these projects . This means that decisions on major infrastructure projects in England and Wales will be taken by democratically accountable Ministers. For energy projects this will be the DECC Secretary of State.</p>
<p><b>Reform the planning system in England and Wales:</b> Reform the local planning system in England to ensure that it supports economic growth, give communities a greater say and stake in development.</p>	●	<p>On 27 March 2012 , the Government published the new National Planning Policy Framework for England. <a href="http://www.communities.gov.uk/publications/planningandbuilding/nppf">http://www.communities.gov.uk/publications/planningandbuilding/nppf</a>. This is a key part of reforms to make the planning system in England less complex and more accessible, to protect the environment and to promote sustainable growth. The NPPF consolidates previous local planning policy (including for energy projects below 50MW) into a single document. The new framework is built on a new presumption in favour of sustainable development (which includes appropriately sited renewable energy developments), reinforces the importance of Local Plans (developed in consultation with local people) as the keystone of the planning system and encourages local authorities to have a positive strategy to promote renewable and low-carbon energy, including identifying suitable areas for renewable and low-carbon energy sources.</p>
<p><b>Reform the planning system in England and Wales:</b> Help local authorities and communities to identify opportunities for the deployment of renewables using analysis from regional studies.</p>	●	<p>Regional renewable and low carbon capacity assessments previously funded by DECC and summarised in a report by the NNFFC (issued on 18 July 2012). <a href="http://www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/ored_news/ored_news/method_assess/method_assess.aspx">http://www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/ored_news/ored_news/method_assess/method_assess.aspx</a> This document may be used to assist local authorities in drawing up local plans. DECC will work with key stakeholders to help support proactive and positive local authority action on renewable energy. Other reforms aimed at ensuring communities have a greater say and stake in renewable energy developments.</p> <p>The White Paper “Local Growth: Realising Every Place’s Potential” published in October 2010 confirmed the Government’s recognition that communities hosting renewable energy installations play a vital role in meeting a national need for secure, clean energy, and that it is right that these communities should be rewarded for the contribution such installations make.</p> <ul style="list-style-type: none"> <li>– Community benefits (business rate retention): Government is legislating this session (through the Local Government Finance Bill) for the local retention of business rates which apply to new renewable energy developments in England, from April 2013.</li> </ul>

		<ul style="list-style-type: none"> <li>– Community ownership of renewables: Government is committed to supporting community ownership of renewable energy schemes and we are developing support for communities and local authorities to assist them with this process. In particular DECC is working with stakeholders to implement the 5 pledges contained in the Microgeneration Strategy <a href="http://www.decc.gov.uk/en/content/cms/meeting_energy/microgen/strategy/strategy.aspx">http://www.decc.gov.uk/en/content/cms/meeting_energy/microgen/strategy/strategy.aspx</a> published in June 2011.</li> </ul> <p>In Autumn 2011, the Chancellor announced the setting up of a £15m Rural Community Renewable Energy Fund. DECC and Defra are working together to deliver this Fund to help rural communities in England to meet the upfront cost of developing renewable energy projects. This is due to start issuing loans in 2013. It is expected that rural communities will be able to apply for loans towards the cost of undertaking the feasibility, pre-planning and planning stages of renewable energy projects. Those successful in obtaining planning permission will repay the loans out of the income generated by their renewable energy project, so that the Fund can be recycled to support further community renewable energy projects.</p>
<p><b>Reform the planning system in England and Wales:</b> Improve guidance on issues of public concern such as noise impact to ensure high quality planning decisions.</p>	●	<p>At the request of DECC, the Institute of Acoustics (IOA) has been developing good practice guidance on the implementation of existing guidelines on noise assessments used in wind farm planning applications. The IOA recently consulted on this and we expect a final version of the guidance is to be published in spring 2013.</p>
<p><b>Reform the planning system in Scotland:</b> Continued reform and improvement of planning and consents application process for onshore renewables developments</p>	●	<p>The Scottish Government is building on a number of successful initiatives to continue to streamline and improve the consent process for larger projects, and will strive to support local authorities in dealing with applications for smaller projects. Scottish Ministers have committed additional funding to assist local authorities process wind turbine applications where the need is greatest, and are currently considering how this funding might be allocated.</p>
<p><b>Overcome radar interference with windfarms:</b> Through the Aviation Plan facilitate development of technical solutions and broker roll-out of new technologies. Work with signatories of the new Memorandum of Understanding, signed in Spring 2011 to develop, fund and implement radar mitigation programmes over the first half of this decade.</p>	●	<p>The Aviation Plan has started to deliver progress and foster the development of new technologies specifically:</p> <ul style="list-style-type: none"> <li>– DECC, The Crown Estate and the Aviation Investment Fund Company Limited commissioned Raytheon to research and develop a package of modifications to NATS' fleet of en-route radars with the potential to mitigate against the interference caused by wind turbines under certain conditions. That research can be found on the DECC website. With support from the Aviation Management Board, NATS are now working with developers to fund the roll-out of upgrades and hope to have a business case approved in Q1 2013.</li> </ul>

- The Growth Review made a public commitment for a business case to be agreed with industry on next steps for Military Air Traffic Control radar. The Ministry of Defence (MOD) are currently in the process of drafting User Requirements with potential for technology providers to demonstrate their solutions in summer 2013.

### Ensure cost-effective grid investment and connection:

Work with Ofgem through Project TransmiT to help plan grid investments and the regime for charging new connections to the transmission network. National Grid to consult later this summer on Final Sums Liability. Monitor the impact of “Connect and Manage”, and take corrective actions if necessary.



In February 2012, the Electricity Networks Strategy Group published an updated assessment by the network companies of the network investment potentially required to accommodate new generation to 2020. It concluded that around £8.8bn of strategic investment may be required and that, provided the identified reinforcements were taken forward on time and the planning consents secured in a timely manner, the reinforcements can be delivered to required timescales.



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Ofgem concluded its review of the transmission charging regime through Project TransmiT in May 2012 with an instruction to National Grid and the CUSC industry group to develop changes to the charging methodology based on the Improved ICRP approach. The CUSC group is scheduled to put detailed changes to Ofgem for approval around the end of 2012, with implementation of the changes to follow during the 2013-14 charging year. The ICRP approach takes account of each generator’s “load” as well as capacity when calculating the use of system charge. Ofgem considers that this approach better reflects the costs that all generators impose on the transmission network. It means that for a given location, charges for a base-load generator will be higher than for an intermittent generator, and therefore it would be particularly beneficial to Scottish-based renewables.



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OFFSHORE WIND Actions	Result	Comments
<p><b>Innovate to reduce costs:</b> Establish an industry Task Force to set out a path and action plan to reduce the costs of offshore wind, from development, construction and operations to £100/MWh by 2020.</p>		<p>The Cost Reduction Task Force published its report on 13 June 2012 setting out an action plan to bring costs down to £100/MWh by 2020. This work will now be taken forward by the industry-led Offshore Wind Programme Board.</p>
<p><b>Innovate to reduce costs:</b> Deliver a coordinated portfolio of investment in offshore wind innovation including support of up to £30m in 2011-2015 to reduce costs through technology development and demonstration. Establish an offshore renewables Technology and Innovation Centre (TIC). The Energy Technologies Institute (ETI) will provide £25m investment in a drive train test facility at the National Renewable Energy Centre (NaREC).</p>		<p>In line with the findings of the Low Carbon Innovation Coordination Group's Offshore Wind Technology Innovation Need Assessment (TINA), the Low Carbon Innovation Coordination Group members are together investing in excess of £100m in this spending review period, in a number of activities to promote the development of innovative offshore wind technologies. Key parts of that portfolio include:</p> <ul style="list-style-type: none"> <li>– The establishment of the Offshore Renewable Energy (ORE) Catapult centre. The Catapult centre will focus on accelerating the pace at which technologies applicable to offshore wind, tidal and wave power are made commercial reality. It will do this by bringing together knowledge, expertise and state of the art facilities to help UK businesses innovate and so reduce the cost of offshore renewable energy. The Catapult Chair and CEO were announced during autumn 2012 and are currently working to refine the business plan.</li> <li>– Test facilities to support development of high yield reliable turbines: the Blade Test 2 facility at the National Renewable Energy Centre, the largest in the world and capable of testing blades up to 100m in length, will be commissioned in 2012. The ETI commissioned £25m drive train test facility at the National Renewable Energy Centre is progressing and due for completion in 2013.</li> <li>– Technology development and demonstration funding for key elements of the offshore wind system. For example: <ul style="list-style-type: none"> <li>○ Up to £15m through the DECC-TSB Components Technology Scheme. The first call was issued in November 2011 with 5 projects selected. A second call has closed recently and a third call will be launched in November which will run in parallel with £3m for feasibility studies aimed to bring cost-lowering ideas into the UK supply chain from inside the sector and from parallel sectors.</li> <li>○ The Offshore Wind Accelerator, a joint public-private sector innovation support programme managed by the Carbon Trust, continues to support developments in lower cost foundations, structures, installations and access for operations and maintenance.</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>○ The ETI's programme is delivering novel/innovative designs in turbines (demonstration of long blades up to 90m) and foundations (floating wind demonstrator).</li> </ul>
<p><b>Innovate to reduce costs:</b> Scotland</p>	<p>●</p> <p>●</p> <p>●</p>	<p>The ORE Catapult, with its headquarters in Glasgow and an Operations Centre in Blyth, Northumberland, will enable a ramp-up of critical offshore renewable technology development, directly leading to increased investment/accelerated commercial success. It is also designed to enable the UK's Research and Development, test and demonstration assets to effectively work together and is expected to go live for business early in 2013.</p> <p>Scotland's International Technology and Renewable Energy Zone (ITREZ) is set up so industry and academia may work together to meet the challenges associated with the development of the offshore renewables sector.</p> <p>Prototyping for Offshore Wind Energy Renewables Scotland (POWERS), a £35m fund administered by Scottish Enterprise and Highlands and Islands Enterprise, offers support for capital and operation costs associated with the full scale production of next generation offshore wind turbines.</p>
<p><b>Manage the risks and costs of RD&amp;D:</b> Establish an offshore renewables Technology and Innovation Centre (TIC).</p>	<p>●</p>	<p>The TIC is now the ORE Catapult (see above). A consortium has been selected, based in Glasgow and work is ongoing.</p>
<p><b>Develop the supply chain:</b> Provide up to £60m for the development of wind manufacturing facilities at ports; work with high-value added manufacturers to exploit supply chain opportunities.</p>	<p>●</p>	<p>This work is ongoing.</p>
<p><b>Develop the supply chain:</b> The Scottish Government will provide £70m to strengthen port and manufacturing facilities for offshore wind turbines and components in Scotland.</p>	<p>●</p>	<p>The National Renewables Infrastructure Plan and Fund has received applications from a wide range of port operators and consortia looking to upgrade facilities to provide essential manufacturing, test and demonstration infrastructure for the offshore wind supply chain. One of the first beneficiaries was the 53 hectare Westway industrial site and adjoining dock in Renfrewshire, which successfully secured £500,000 from the fund to support a £1.3 million project that will allow heavy components manufactured on site to be transported by water. Further awards are expected later in 2012 to support additional investment in key port locations around Scotland which are earmarked for renewables developments.</p>

<p><b>Develop the supply chain:</b> Scotland</p>	●	<p>The Offshore Wind Scotland Portal has been developed by the Scottish Government and its enterprise agencies and aims to highlight the opportunities represented by the offshore wind sector in Scotland and provide links to publications and sign-post more in-depth information provided by key partners and stakeholders.</p>
	●	<p>The Offshore Wind Expert Support Programme is a £900k Scottish Enterprise scheme which aims to support more than 600 Scottish businesses by offering up to 2 days of free specialist one-to-one support to help companies win business in the sector.</p>
<p><b>Ensure cost-effective grid investment and connection:</b> Offshore Transmission Coordination Project review of incentives for coordination to ensure coordinated development of Round 3 offshore transmission assets. Develop long-term position on security requirements for grid connection.</p>	●	<p>DECC and Ofgem published a report in March 2012 showing how more coordination might be achieved. Ofgem have published the conclusions of Coordination Project Review which identified regulatory barriers, and measures are being implemented to address these. The new regime for financial security requirements begins in April 2013, in which levels of security required fall as projects progress. Developers are being notified of the new requirements for their projects.</p>
<p><b>Planning and consenting:</b> Manage the potential impacts of offshore developments on other users of the sea and broader environmental considerations through publication of Offshore Strategic Environmental Assessment.</p>	●	<p>The outcome of the Offshore Energy SEA 2 was announced by way of a Written Ministerial Statement in October 2011. The report highlights that siting and consenting processes for offshore renewable energy developments must remain flexible to allow for technological innovation, including any mitigation measures. <a href="http://www.publications.parliament.uk/pa/cm201011/cmhansrd/cm111012/wmstext/111012m0001.htm">http://www.publications.parliament.uk/pa/cm201011/cmhansrd/cm111012/wmstext/111012m0001.htm</a></p>
<p><b>Planning and consenting:</b> Identify and, where appropriate, manage potential delays to consenting decisions.</p>	●	<p>In March 2012, Defra led a review of the implementation of the Habitats Directive and set out a series of measures to facilitate nationally significant infrastructure projects, improve implementation and streamline guidance. Defra will publish a report on progress on implementation in March 2013.</p>
<p><b>Planning and consenting:</b> Promoting greater streamlining and efficiency of Scotland's offshore renewables planning and consenting regimes.</p>	●	<p>In February 2012, the Scottish Government published the findings of a short-life planning and consenting taskforce. Its recommendations in a number of areas concerning developers, such as the access and sharing of environmental data, cumulative impact and resourcing within the marine planning and licensing processes, should be adopted into the practices of Scotland's marine planning, policy, advisory and regulatory bodies, as well as developers deploying projects in Scotland. A review of the recommendations has been undertaken and is currently being considered.</p>

<p><b>Minimise investment risk:</b> Complete accelerated RO Banding Review.</p>		<p>The review has been completed. An announcement of the response to the consultation to the proposals was made on 25 July 2012.</p>
<p><b>Minimise investment risk:</b> Implement electricity market reform.</p>		<p>On 22 May 2012, the Government introduced the Energy Bill in draft to allow for Pre-Legislative Scrutiny. The draft Bill includes measures necessary to reform the electricity market to deliver secure, clean and affordable electricity. At its core is the need to ensure that, as older power plants close (a fifth of current capacity within 10 years) and electricity demand continues to increase (almost doubling over next 40 years), the UK remains able to generate enough electricity to meet its needs. This requires billions of pounds of investment in new infrastructure to be brought forward and new market arrangements to ensure this investment will contribute to meeting our renewables and decarbonisation targets, while ensuring security of supply, in the most cost-effective way.</p> <p>The cornerstone of this Bill, Electricity Market Reform (EMR), will include provisions dealing with:</p> <ul style="list-style-type: none"> <li>– CfDs – long-term instruments to provide stable revenues incentivising companies to invest in low-carbon generation;</li> <li>– Final Investment Decisions – long term instruments to enable early investment in advance of the CfDs regime coming into force;</li> <li>– Capacity Market – to provide security of electricity supply, if required, by ensuring sufficient reliable capacity is available;</li> <li>– Conflicts of Interest and Contingency Arrangements – to ensure the institution which will deliver these schemes is fit for purpose;</li> <li>– Transitional arrangements for renewables – to ensure that existing investments under the Renewables Obligation remain stable, and</li> <li>– An Emissions Performance Standard – to curb the most polluting fossil fuel power stations, i.e. unabated coal.</li> </ul>
<p><b>Minimise investment risk:</b> Put in place EMR-RO transition arrangements.</p>		<p>We expect continued investment under the RO while EMR is implemented and thus enabling achievement of interim and 2020 targets. With the publication of the Draft Energy Bill, and draft CfDs Operational Framework, Government has published further details of EMR, including how it will be implemented, and how it will work in practice. The aim of those publications provide the detail and certainty that industry have been asking for. We have increased certainty on implementation by publishing a timeline of how we are introducing legislation, setting up new</p>

		institutional arrangements, and setting prices and shows we are on track to deliver CfDs by mid 2014 as planned; Certainty on CfDs Design by providing detail of CfDs terms, including contract length and indexation; Certainty for investment by introducing Delivery Plans to give 5-year foresight of CfDs prices, which will make planning easier and help investors and developers to take investment decisions and Certainty on Transition through Fixed ROC provisions in the Bill. Overall, CfDs provides earlier certainty of support levels than the RO and greater stability of revenue streams by providing a fixed strike price.	
<b>Access finance:</b> Take action to reduce investor uncertainty in relation to oil and gas clause in offshore windfarm leases.		Government has worked with RenewableUK and Oil & Gas UK to develop guidance on a compensation procedure to follow in the unlikely event that a renewable lease has to be determined to allow an oil/gas development to proceed and where commercial negotiation has been unsuccessful. Final guidance is expected to be published early in 2013.	
<b>Access finance:</b> Offshore wind will be a strong candidate for support from the Green Investment Bank (GIB). Work with developers and investors through the Offshore Wind Developers Forum to identify the investment capital required for offshore wind and whether further Government action is appropriate.		The GIB has now been established and was formally launched on 28 November 2012. GIB will initially seek to catalyse institutional capital into operating wind farms allowing the new capital to be recycled by owners into incremental construction.	
MARINE ENERGY Actions		Result	Comments
<b>Manage the risks and costs of RD&amp;D:</b> Deliver a coordinated, targeted programme of marine innovation support over the next four years, including: up to £20m of support from DECC for pre-commercial array demonstration.			On 5 April 2012, the Government launched its £20 million MEAD scheme to support up to 2 pre-commercial projects to demonstrate the operation of wave and/or tidal devices in array formation. The MEAD has received a number of applications for both wave and tidal energy technologies. The successful applicants will be announced in Winter 2012/13. DECC will continue to work with the Scottish government to maximise the benefits arising from the MEAD, the Scottish government's MRCF and the EU New Entrant's Reserve Fund 300 (NER300) competition.
<b>Manage the risks and costs of RD&amp;D:</b> The Scottish Government will announce details of their joint funding programme by the end of 2011.			In June 2012 the Scottish Government announced the launch of the £18m MRCF. The fund, that will be administered by the Carbon Trust on behalf of the Scottish Government, is available to provide capital support for projects thereby accelerating the deployment of commercial-scale wave and tidal stream energy arrays in Scottish waters. The closing date for applications, 1 August, has now passed. Five of the seven projects who submitted applications are now going through the due diligence phase of the MRCF process, and the Scottish Government expects to issue conditional contracts to the successful projects in January 2013.

<p><b>Manage the risks and costs of RD&amp;D:</b> The Scottish Government will announce details of their joint innovation funding programme with the TSB by the end of 2011.</p>		<p>Launched in January 2012, the Marine Energy: Supporting Array Technologies competition (MESAT) is a collaborative venture between Scottish Enterprise (on behalf of the Scottish WATERS partners), the Technology Strategy Board (TSB) and the National Environmental Research Council (NERC). The aim of MESAT is to identify and ultimately develop techniques to overcome the technical challenges common to those within the marine renewables industry e.g. cable installation, array interconnection etc. Eleven applications were received, and a formal announcement on the successful candidates and the awards will be made in the Autumn of 2012, with approximately £6.5m being distributed to the successful organisations.</p>
<p><b>Manage the risks and costs of RD&amp;D:</b> New programmes to support R&amp;D that will reduce the cost of marine energy.</p>		<p>The government announced in January 2012 that it was investing over £10 million to support the successful deployment and operation of the first series of wave and tidal energy arrays, complementing the MEAD scheme. The Marine Energy – Supporting Array Technologies scheme is now considering proposals that address areas including tidal-array cabling; subsea electrical hubs; installation and maintenance vessels for tidal arrays; navigation and collision avoidance, and anti-fouling and corrosion. Funding is provided by the Technology Strategy Board, Scottish Enterprise and the Natural Environment Research Council.</p>
<p><b>Manage the risks and costs of RD&amp;D:</b> Establishment of an Offshore Renewable Energy Technology and Innovation Centre (TIC).</p>		<p>The ETI announced, on the 23 May, it had awarded the Tidal Energy Converter (TEC) System Demonstrator project to a team led by Atlantis Resources Corporation. This project aims to identify routes to cost-effective installation and operation of tidal stream technologies in UK waters. Reducing costs to levels comparable to other low carbon systems. The project will adopt a system and through-life approach to identify, develop and prove the best routes and supply-chain options to commercially viable tidal stream technologies when deployed at array scale.</p>
<p><b>Manage the risks and costs of RD&amp;D:</b> Establishment of an Offshore Renewable Energy Technology and Innovation Centre (TIC).</p>		<p>The Technology Strategy Board announced in February 2012 that the UK-wide consortium bid from Carbon Trust, NaREC and Ocean Energy Innovation had been selected to set up the ORE Catapult (the rebranded name for TICs). The ORE Catapult will focus on accelerating the pace at which technologies applicable to offshore wind, tidal and wave power are made commercial reality. It will do this by bringing together knowledge, expertise and state of the art facilities to help UK businesses innovate and so reduce the cost of offshore renewable energy. The Catapult Chair and CEO were announced during autumn 2012 and are currently working to refine the business plan.</p>
<p><b>Manage the risks and costs of RD&amp;D:</b> Work with the Crown Estate to share knowledge to support development.</p>		<p>The Wave and Tidal Knowledge Network website (<a href="https://connect.innovateuk.org/web/wave-and-tidal">https://connect.innovateuk.org/web/wave-and-tidal</a>) was launched at the Marine Energy Programme Board meeting in July 2012. The Wave and Tidal Knowledge Network provides a platform for the exchange of information and sector data.</p>

<p><b>Manage the risks and costs of RD&amp;D:</b> Scotland</p>		<p>The Scottish Government has invested £18 million in the MRCF to help accelerate the deployment of commercial-scale wave and tidal arrays in Scottish Waters.</p> <p>The Scottish Government's £10 million Saltire Prize will accelerate the commercial development of marine energy.</p> <p>All the tidal testing berths at the European Marine Energy Centre (EMEC) are now fully committed, with ten devices now in the water. Clients include Aquamarine Power, Tidal Generation, Voith Hydro, Scottish Power Renewables and Pelamis Wave Power.</p>
<p><b>Secure the investment for commercial deployment:</b> Work with the UK Marine Energy Programme to assist the sector obtain investment funding;</p>		<p>It was through the Marine Energy Programme Board's Finance working group that the marine energy sector contributed to the development and design of the £20m MEAD scheme and fed into the development of the wave and tidal evidence base for deliberation during the RO banding review. The MEAD and the proposal to offer wave and tidal stream technologies 5 ROCs/MWh, to a 30MW project cap, is expected to unlock investment to enable the deployment of the first marine energy array projects to take place in the UK.</p>
<p><b>Development supply chain infrastructure:</b> Work with the sector to develop Marine Energy Parks through the publication of guidance by March 2012.</p>		<p>The South West established the UK's first Marine Energy Park in January 2012. This was soon followed by the Pentland Firth and Orkney Waters Area establishing the second Marine Energy Park in July 2012. To effectively focus on bringing together the strengths of a particular region, advice and guidance has been provided by DECC to those parties looking to establishing a Marine Energy Park on an ad hoc basis.</p>
<p><b>Planning and consenting:</b> Finalise outcome of the Strategic Environmental Assessment (SEA) consultation.</p>		<p>The outcome of the Offshore Energy SEA 2 was announced by way of a Written Ministerial Statement in October 2011. The environmental report highlights that siting and consenting processes for offshore renewable energy developments must remain flexible to allow for technological innovation, including any mitigation measures.</p> <p><a href="http://www.publications.parliament.uk/pa/cm201011/cmhansrd/cm111012/wmstext/111012m0001.htm">http://www.publications.parliament.uk/pa/cm201011/cmhansrd/cm111012/wmstext/111012m0001.htm</a></p>
<p><b>Planning and consenting:</b> Input to policy on use of the sea.</p>		<p>We continue to work across government to ensure that a balanced and proportionate approach is taken to implementing the Marine Strategy Framework Directive and designation of Marine Conservation Zones, as well as Marine Spatial Planning.</p>
<p><b>Planning and consenting:</b> Work with marine regulators to better understand the key barriers to deployment.</p>		<p>The Marine Energy Programme Board set up a Working Group on Planning &amp; Consenting to focus on a consistent and proportionate approach to consenting around the UK. The Terms of Reference for the Working Group has now been agreed.</p>

BIOELECTRICITY Actions	Result	Comments
<p><b>Minimise investment risk:</b> Accelerate RO Banding Review and implement proposed electricity market reform to improve revenue certainty for projects.</p>		<p>On 18 December 2012, DECC published the government response to the RO Banding Review Consultation for Biomass electricity. The Energy Bill was published on 29 November 2012 and EMR documents alongside are available at <a href="http://www.decc.gov.uk/en/content/cms/news/pn12_151/pn12_151.aspx">http://www.decc.gov.uk/en/content/cms/news/pn12_151/pn12_151.aspx</a>.</p>
<p><b>Minimise investment risk:</b> Publish a UK Bioenergy Strategy later this year articulating a clear vision for the growth of sustainable biomass energy in the UK.</p>		<p>The UK Bioenergy Strategy was published in April this year. It sets out a framework for the use of sustainably produced biomass feedstocks to the UK in 2020 and up to 2050, across the heat, electricity and transport sectors. It considers the likely carbon impacts of bioenergy compared to possible alternative uses for biomass.</p>
<p><b>De-risking the supply chain of sustainable feedstocks:</b> Align incentives to feedstock availability and from 2013 make payment of incentives dependent on meeting these.</p>		<p>A consultation on support for biomass and improvements to the sustainability criteria was published in September 2012. The response to the consultation was published on 18 December 2012.</p>
<p><b>Planning and consenting:</b> Work with Defra, the Welsh Government, the Environment Agency and stakeholders to ensure that environmental legislation does not have an unintended impact on the development of renewable energy plants, or, for waste to power plants, on Government's policy to minimise waste.</p>	  	<p>In March 2012, Defra published a report of progress in delivering the actions in the Government's Review of Waste Policy in England 2011. 90 per cent of actions were either completed or on track.</p> <p>In addition, in 2011, the Government undertook an initial phase of research to evaluate methods of determining the biogenic fraction of mixed waste fuels. DECC and Defra will jointly commission a short project to evaluate the findings of the feasibility trials and recommend whether there is a further role for the Government and Ofgem in providing support to bring more accurate fuel measurement techniques to market. Project to be completed by April 2013.</p>
<p><b>Access long-term waste fuel contracts:</b> Focus on measures to divert waste from landfill including possible landfill restrictions and improved information on available waste.</p>	  	<p>Defra have held initial discussions with stakeholders on possible restrictions on wood waste going to landfill. Defra launched a call for evidence on restricting wood waste to landfill in England. The call closed on 28 September and 37 responses were received from a range of sectors including the wood recycling industry, local authority bodies, waste management companies, green NGOs and wood producers. Defra are analysing the responses.</p> <p>Defra expect to publish a guide to help shape the debate around energy from waste around the end of 2012.</p>

		Defra and DECC invited the NNFCC to prepare a proposal in response to a specification requiring a critical review of the outcomes of the feasibility studies, ensuring that relevant stakeholders input into the process. A joint steering group has approved the NNFCC proposal and the study is scheduled to complete by the end of March 2013, with recommendations on the most appropriate measuring systems, basing this assessment on the technical evidence emerging from the feasibility studies and using other sources of relevant information gleaned through stakeholder interaction.
<b>Access finance:</b> Creation of the Green Investment Bank (GIB) to help accelerate private sector investment in energy from waste.		The GIB has now been established and was formally launched on 28 November 2012. The GIB has funding of £3 billion to 2015. 80% of this will go to 5 initial priority sectors, one of which is energy from waste. The Bank will be given borrowing powers from April 2015, subject to targets for reduction in national debt being met and further State aid approval being granted.
<b>BIOMASS HEAT Actions</b>	<b>Result</b>	<b>Comments</b>
<b>Technology costs:</b> Implement the RHI in Great Britain to make renewable heat from biomass boilers, municipal solid waste and onsite biogas combustion competitive with fossil fuel generation.		RHI for the non-domestic sector launched in November 2011 which includes support for biomass boilers (Including CHP biomass), heat generated from solid biomass contained in Municipal Waste and on-site biogas combustion. Consultations on improvements to the scheme and on further extensions to new technologies and the domestic sector were issued in July and September 2012 respectively.
<b>Technology costs:</b> Consult on a scheme to support renewable heat in Northern Ireland from April 2012 subject to the agreement of the Northern Ireland Executive.		Consultation on Northern Ireland RHI took place between July and October 2011. The Northern Ireland Renewable Heat Premium Payment was launched on 24 May 2012.
<b>Supply chain for sustainable fuel and qualified engineers:</b> Introduce reporting criteria in 2011 for the sustainability of biomass used under the RHI and introduce mandatory from 2013.		Biomass sustainability criteria in the RHI were consulted on during July 2012. DECC plans to implement minimum biomass sustainability criteria as a condition of RHI support. The RHI sustainability criteria will consist of a GHG lifecycle emissions target and land use criteria. Implementation will be through Regulations which will be brought forward as quickly as possible.
<b>Ensure that installation of 45 kWth or less are certified and have been installed by MCS (or equivalent) registered engineers.</b>		The Microgeneration Certification Scheme certification is mandatory as an eligibility criterion for RHPP. The consultation for a domestic RHI proposes that MCS certification be mandatory. This would be implemented through the scheme's Regulations.



<p><b>Planning and licensing processes:</b> Introducing permitted development rights for air source heat pumps on domestic properties in England, confirmation of details expected very shortly.</p>		<p>Permitted development rights for air source heat pumps on domestic properties in England were introduced in December 2011. This relaxation of planning requirements will be reviewed in December 2013 before consideration to extend to non-domestic sector.</p>
<p><b>Availability of good quality installers and engineers:</b> Developing national occupational standard and competences for installers, and consulting on extending the Microgeneration Certification Scheme (which covers heat pumps up to 45kW<sub>th</sub>) to ensure equipment meet high standards.</p>		<p>National occupational standards introduced in 2011 were published and are developing competences for installers.</p>
<p><b>Availability of good quality installers and engineers:</b> Consulting on extending the Microgeneration Certification Scheme (MCS) (which covers heat pumps up to 45kW<sub>th</sub>) to ensure equipment meet high standards.</p>		<p>The MCS has consulted on new competence criteria for the microgeneration technologies (which covers heat pumps up to 45kW<sub>th</sub>). MCS is looking at taking this work forward with a view to including the competence criteria in the MCS installation scheme documents in early 2013.</p>
<p><b>Demands on the electricity grid:</b> Monitoring usage patterns and the grid impact of existing installations, whilst setting Government's strategy for the future of our distribution networks.</p>		<p>DECC has developed projections for heat pumps, solar PV and with OLEV, electric vehicles to assist electricity distribution network companies and Ofgem to evaluate the impact of these technologies on electricity demand and investment in network reinforcement. In particular, the Smart Grid Forum (an industry group co-chaired by DECC and Ofgem) used these projections for its modelling work to estimate the value of smarter technologies. Early work has identified £5bn to £11bn of savings to 2050.</p>
<p><b>Performance and technical issues:</b> Undertaking UK studies and field trials to gain data on the variation in performance of heat pumps across installations to ensure efficiency.</p>		<p>Between April 2009 and 2010 industry, the Energy Savings Trust and DECC funded work by The Energy Saving Trust for field trials on 83 domestic heat pumps. DECC undertook detailed analysis of data collected during these trials and as a result, worked closely with industry to revise the Microgeneration Certification Standards for installation of heat pumps, and developed new standards (MIS 3005 Issue 3.1 came into force in April 2012). <a href="http://www.decc.gov.uk/publications/basket.aspx?filepath=/assets/decc/11/meeting-energy-demand/microgeneration/5045-heat-pump-field-trials.pdf&amp;filetype=4&amp;minwidth=true">http://www.decc.gov.uk/publications/basket.aspx?filepath=/assets/decc/11/meeting-energy-demand/microgeneration/5045-heat-pump-field-trials.pdf&amp;filetype=4&amp;minwidth=true</a>.</p>

	<p>Additionally, a further 43 sites were selected for interventions and monitored for a further year, from April 2011 to April 2012. This data is currently being analysed, and DECC will publish a report on results in April 2013. The RHPP scheme is monitoring domestic heat pumps extensively to investigate whether the new standards are actually resulting in better in-situ performance.</p>
	<p>Separately, DECC has commissioned two laboratory studies on cycling of heat pumps and heating domestic hot water with heat pumps. These will report by the end of 2012. Finally, DECC is a member of the International Energy Agency heat pump implementing agreement, and participates in the research annex on quality of installation &amp; maintenance.</p>
	<p>DECC has also allocated up to £2.8m innovation funding towards heat pumps and thermal storage kit to enhance learning on the Customer Led Network Revolution programme led by Northern Powergrid, British Gas and Durham University and funded under Ofgem's Low Carbon Networks Fund framework. This project will investigate the impact of heat pump clusters on the distribution network and monitor the potential for heat storage and a range of pricing tariffs to help displace electricity demand from peak loads on the grid.</p>

RENEWABLE TRANSPORT	Result	Comments
<p><b>Biofuel sustainability and deployment:</b> DfT's recent consultation on the RED and the FQD include proposals to introduce mandatory sustainability criteria for biofuels.</p>		<p>In 2011, the Government amended UK legislation so that from December 2011 all biofuels supplied in the UK are subject to mandatory sustainability criteria. This legislation also introduced an additional incentive for biofuels produced from wastes.</p>
<p><b>Biofuel sustainability and deployment:</b> DfT will examine proposals due from the EU in July 2011 for action on Indirect Land Use Change impacts and will shortly publish work on the best use of biofuels across modes.</p>		<p>On 17 October, the European Commission published a proposal designed to address ILUC impacts through amendments to the Renewable Energy Directive and the Fuel Quality Directive. This proposal will need to be agreed at European level through the ordinary legislative procedure. Research on the best use of biofuels across modes was published by DfT during the summer of 2012 and is available at <a href="https://www.gov.uk/government/publications/biofuel-research">https://www.gov.uk/government/publications/biofuel-research</a>. This issue was also discussed in the cross-government Bioenergy Strategy published in April 2012.</p>
<p><b>Plug-In Vehicle Infrastructure:</b> DfT, BIS and DECC (through the Office for Low Emission Vehicles – OLEV) are supporting the Plugged-In Places programme. Eight areas are installing charging infrastructure for plug-in vehicles.</p>		<p>There are currently over 6,000 chargepoints in the UK, of which over 2,500 have been provided through the eight PIP Projects (to end of September 2012) with the rest privately provided. Some 70% of the PIP chargepoints are publicly available. We continue to evaluate the progress of the PIPs; OLEV has a dedicated PIP Assurance team who are in frequent contact with all the PIPs and act as government point of expertise.</p>

	<p>PIP are required under the terms of the PIP grant to report financial, risk, chargepoint installation and other data on a quarterly basis to OLEV. When making grant claims, they are also required to submit evidence of installation and spend (such as invoices).</p>
<p><b>Financial support for the purchase of ultra-low emission vehicles:</b> OLEV launched the Plug-in Car Grant in January 2011 providing a 25% subsidy (up to £5000) for the purchase of eligible ultra-low emission cars which meet safety, environmental and performance standards.</p>	<p>In 2011 we put in place the Plug-In Car Grant and extended it to vans this year. This has helped generate a step change in the uptake of ULEVs. Total claims in the first half of 2012 were more than we saw in the whole of 2011. With new models coming to the market, we expect to see this trend sustained and growing.</p> <p>● The latest (30 September 2012) Plug-In Grant uptake figures show that 2,311 claims have been made through the Plug-in Car Grant scheme and 140 claims for the Plug-in Van Grant, with 646 vehicle grants being processed in the period 1 July to 30 September 2012. Ultra Low Emission Vehicles also receive more favourable tax treatment, including an exemption from Vehicle Excise Duty and reduced Company Car Tax.</p>
<p><b>Support for innovation:</b> Funding to support further development of low carbon vehicle technologies by identifying priority technologies for innovation, and funding through the Strategic Energy Technology Plan initiatives.</p>	<p>● The Department for Transport is funding a programme of research and development to support this new generation of vehicles. This is delivered through the Technology Strategy Board (TSB). It is also working closely with the industry and other government departments to support the development and strengthening of UK-based supply chains for ULEVs, maximising business opportunities and competitiveness in the transition to a green economy.</p> <p>● The TSB, OLEV, and the DfT are investing over £11m to encourage and assist UK road haulage operators to buy and use low carbon medium- and heavy-goods vehicles, as part of the Low Carbon Truck and Infrastructure Demonstration Trials. 13 demonstration projects have been selected to receive funding. Over 300 alternatively fuelled vehicles will be trialled and 11 public access gas refuelling stations will be installed.</p>

# Annex B: New Activities to Deliver Deployment

## CROSS CUTTING ACTIONS

### Facilitating Access to the Grid:

- On 28 September 2012, Ofgem published a strategy consultation for the electricity distribution network company price control RIIO ED1. This consultation closed on 23 November 2012. The new RIIO framework focuses on incentivising the delivery of outputs which has included proposals for the timely and cost-effective delivery of connections, including demand and distributed generation connections. Following closure of this consultation, the decision will be published in early 2013 and will then be followed by submission of electricity distribution business plans.
- Ofgem has approved the implementation in April 2013 of new pre-connection user commitment arrangements developed by National Grid. These will replace Final Sums Liability, and should reduce the barriers to entry for all new generators, including renewable projects.
- The Transmission Constraint Licence Condition (TCLC) came into force on 29 October 2012, and was notified to industry parties. The TCLC will expire after 5 years, with the potential to extend it by two years (following review). Enforcement of this measure is overseen by Ofgem. Ofgem is publishing guidance on how it enforces the TCLC which is available from the Ofgem: Working to promote competition and efficiency web page (<http://www.ofgem.gov.uk/Markets/WhlMkts/CompandEff/Pages/CompandEff.aspx>). It is intended to prevent generators being able to profit unfairly at the expense of consumers during periods of transmission constraint and should therefore help to avoid unnecessary constraint costs. Constraint payments are made to all types of generators including fossil fuel and renewables.
- The Scottish DNOs (SHEPD, part of SSE, and SPEN, part of Scottish Power) are now beginning early work on their business plans for the next distribution price control period (2015-23). The investments that will be set out in these plans are likely to be significant, and should allow a great deal of generation to connect to the distribution network.
- The Scottish Government has begun working in partnership with trade body Scottish Renewables and the distributed generator community to understand and address constraints on the distribution network. The Scottish Government also recently instituted a Community Energy Grid Networks Working Group, in partnership with the Scottish DNOs and Community Energy Scotland, to identify and fund pilot projects which would maximise utilisation of the current network around suitable communities which are interested in generating their own renewable energy, thereby saving money on expensive infrastructure upgrades
- National Grid has announced its preferred route and substation location for mid Wales infrastructure. Work will take place on Environmental Studies with negotiations with land owners, prior to applications to Public Inquiry and Powys County Councils expected in late 2013 early 2014. Unlike Mid Wales, North Wales already has major infrastructure and some spare capacity but investment is needed to replace ageing infrastructure as well as to support proposed new developments, including Wylfa and offshore wind. National Grid has published its first informal consultation on 3 October 2012 outlining strategic options.

- The Welsh Government will continue to work closely with National Grid and DNOs and other stakeholders to understand and address constraints on the distribution network as well as to explore issues relating to resilience and future capacity and connectivity in support of both tradition and renewable energy sources.

**Addressing barriers to growing the renewable energy sector in Wales:**

- The Energy Wales programme is tailored around actions to overcome barriers to growth of the sector in Wales, with a view to maximising benefits to the Welsh economy and communities. A number of actions are being rolled out in order to address some of the following cross-cutting priorities for the programme including:
  - Improving the planning and consenting regime.
  - Working to put in place an improved energy infrastructure.
  - Focusing on maximising the value from energy projects.
  - Providing support to Welsh businesses to enable them to compete for energy contracts to maximise the number of jobs and economic benefits.
  - Developing the Welsh workforce to meet the industry's needs through access to high quality apprenticeships, Skills Growth Wales and Jobs Growth Wales programmes, and through science, technology, engineering and mathematics in Welsh schools.
  - Ensuring communities have access to advice, expertise and funding to harness renewable energy.
  - Bringing the significant expertise in Wales together to position Wales at the forefront of innovation, research and development in unlocking the energy from our seas.

**Encouraging Community Renewable Schemes in Wales:**

- The Ynni'r Fro programme continues to provide advice, preparatory grants and capital support to community groups looking to set up their own social enterprises to generate energy. The programme is funded by the European Regional Development Fund matched by Welsh Government funding and is operated by the Energy Saving Trust. The programme offers grants of up to £30,000 to cover pre-planning costs, grants up to £300,000 for capital costs and capital loans up to £250,000. A network of technical development officers has been established across Wales to give guidance and support to social enterprises planning or undertaking a project. To date over fifty projects have benefitted from Ynni'r Fro support, receiving technical advice, including 30 communities receiving grants towards feasibility studies delivered by private consultants.

**Ensuring long term investment certainty:**

- Taking the Renewables Obligation Order 2012 through Parliament to give effect to government decisions from 1 April 2013.
- Implement Energy Market Reform through the Energy Bill. The Energy Bill is being introduced to Parliament in Autumn 2012. Although it is difficult to predict the passage of legislation through Parliament, we would expect to receive Royal Assent in Autumn 2013, enabling the first low-carbon projects

to be supported under the Bill's provisions in 2014. The Energy Bill was published on 29 November 2012 and EMR documents alongside are available at [http://www.decc.gov.uk/en/content/cms/news/pn12\\_151/pn12\\_151.aspx](http://www.decc.gov.uk/en/content/cms/news/pn12_151/pn12_151.aspx).

- The Government is aiming to publish the first draft CfDs strike prices for renewable electricity technologies in mid 2013 for consultation.
- Details on Capacity Market design will be set out in the coming months and consulted on in 2013. The Government aims to publish final detailed design proposals by May 2013. We will then develop the detailed secondary legislation and code and licence changes necessary to introduce the Capacity Market over the summer, and intend to consult on the final proposals and detailed rules in October 2013.
- The Government is initiating a process from January 2013 to prepare for the CfDs and identify the changes to the PPA market that may be required to provide a smooth transition. We anticipate that this process can provide important impetus to the transition to the CfDs and will produce key outputs including CfDs friendly PPA contracts and a voluntary code covering issues such as price transparency. However, reflecting the Government's commitment to ensuring that independent developers have appropriate access to the market, we are seeking powers in the Energy Bill that would enable Government to make modifications to electricity supply licences for the purpose of reducing barriers to entry associated with the PPA market. The Government will continue to explore regulatory options with market participants.
- An Independent Advisory Group, established to review the delivery of the planning system in Wales, has proposed new consenting arrangements for nationally significant infrastructure schemes.
- The Welsh Government is actively exploring and seeking to influence the shape and form of all key national and transnational funding sources applicable to the renewable energy sector to help support the industry in Wales and deliver investor confidence.
- The Government has issued consultations on improvements to the RHI non-domestic scheme and on further extensions to new technologies and the domestic sector were issued in July and September 2012 respectively. These include proposals for an appropriate financial mechanism to control spending, offer value for money, and certainty to industry. These consultations closed on 7 December and the responses are being considered.

**Ensuring RO affordability and value for money measures:**

- Following the publication of the RO Banding Review Government response, DECC consulted in September 2012 on the following areas to help ensure the RO delivers cost-effective growth of renewables electricity generation within the limits of the overall RO budget.
  - Introduction of a non-legislative cap of 400MW on new build dedicated biomass power under the RO.
  - The level of support for standard co-firing in 2013/14 and 2014/15.
  - Introduction of a voluntary cost control mechanism for co-firing and biomass conversions.
  - Removal of the energy crops uplift for standard co-firing.
  - The setting of support levels for solar PV.

The results of the consultations were published on 18 December 2012 and will be incorporated when the ROO is amended in April 2013 subject to Parliamentary and State Aid approvals.

**Strategic framework for heat:**

- Publish a heat policy options paper in early 2013.

**Rural Community Renewable Energy Fund:**

- DECC and Defra are working together to deliver the Rural Community Renewable Energy Fund to help rural communities in England to meet the upfront cost of developing renewable energy projects. This is due to start issuing loans in 2013. It is expected that rural communities will be able to apply for loans towards the cost of undertaking the feasibility, pre-planning and planning stages of renewable energy projects. Those successful in obtaining planning permission will repay the loans out of the income generated by their renewable energy project, so that the Fund can be recycled to support further such projects.

**Community Renewables (Scotland):**

- The Scottish Government has set a target of 500MW of community and locally owned renewables by 2020, which could be worth up to £2.4bn to Scottish communities and rural businesses over the projects' lifetime. At the end of June 2011, an estimated 147MW of community and locally owned renewable energy capacity was operational in Scotland, representing nearly 30% of the target.
- The Scottish Government's Community and Renewable Energy Scheme (CARES) provides finance at the high risk pre-planning stage, with a budget of £23.5 million over the next 3 years. CARES support also includes advice to communities on technical and financial issues.

**ONSHORE WIND****Minimise investment risk:**

- Following the Call for Evidence on Power Purchase Agreements (PPA) for independent renewable generators, consider the next steps to ensure that independent generators can continue to play an active role in the market. The Government will implement proposed EMR and RO transition measures to secure long term certainty to 2020 and beyond.

**Scottish Islands:**

- DECC will work with the Scottish Government and key stakeholders through the Scottish Islands Renewables steering group to identify the barriers, costs, options and value for money of increased deployment of wind and other renewables in the Scottish Islands.

**Overcome radar interference with windfarms:**

- MOD with support from DECC and Industry will publish their user requirements for Air Traffic Control Radar and run a technology demonstration project seeking mitigation solutions for interference caused by turbines. An outcome should be sought by Autumn 2013.

- DECC will work with National Air Traffic Services (NATS) to establish a radar modification programme for their civilian en-route radars with a proposal for the project to be in place by Q1 2013.

**Business Rate Retention:**

- DECC will work with DCLG on the agreed legislation to allow local authorities, on behalf of their communities, all business rates from renewable energy developments in England from April 2013. This policy ambition is set out in the Coalition agreement and is part of the Energy Bill.

**Communities:**

- DECC is undertaking a call for evidence on onshore wind industry costs, to report in early 2013. The call for evidence will also investigate how local communities can have more of a say over, and receive greater economic benefit from, hosting onshore windfarms. If the findings identify a significant change in costs, the Government will launch a formal review of support levels for onshore wind within the Renewables Obligation legislation. This could take effect from April 2014, with relevant grandfathering and grace periods for projects already financially committed as set out in the Renewables Obligation Government Response.
- Via the Energy Wales programme, a targeted programme of actions across a number of key strands (e.g. skills, supply chain, RD&I) will be rolled out to derive maximum benefits from onshore wind projects in Wales.

**OFFSHORE WIND****Innovate to reduce costs:**

- The establishment of the Offshore Renewable Energy Catapult centre which will focus on accelerating the commercialisation of technologies in offshore wind, tidal stream and wave energy. Colin Hood has been appointed Chair, and Andrew Jamieson has been appointed CEO.
- The continued development of test facilities to support testing of high yield reliable turbines: the Blade Test 2 facility at the National Renewable Energy Centre, the largest in the world and capable of testing blades up to 100m in length, was commissioned on 3 December 2012. The ETI commissioned a £25m drive train test facility at the National Renewable Energy Centre is progressing and due for completion in 2013. Technology development and demonstration funding for key elements of the offshore wind system. For example: Up to £15m through the DECC-TSB Components Technology Scheme. The first call was issued in November 2011 with 5 projects selected. A second call closed in June 2012, and a third call was launched on 5 November 2012 which will run in parallel with £3m for feasibility studies aimed to bring cost-lowering ideas into the UK supply chain from inside the sector and from parallel sectors.
- The Offshore Wind Accelerator, a joint public-private sector innovation support programme managed by the Carbon Trust, continues to support developments in lower cost foundations, structures, installations and access for operations and maintenance.
- The ETI's programme is delivering novel/innovative designs in turbines (demonstration of long blades up to 90m) and foundations (floating wind demonstrator).

**Drive cost reduction by identifying and addressing cost reduction opportunities in the sector:**

- We will work with industry to reduce costs to £100/MWh by 2020, through the industry led Offshore Wind Programme Board (OWPB) which will also tackle programme level barriers to offshore wind deployment. The Chair of the OWPB was recently announced as Adam Bruce of Mainstream Renewable Power.

**As part of the wider industrial strategy programme develop an offshore wind sector strategy:**

- The Government will work with industry - engaging with the OWPB - to develop a sector strategy for the offshore wind industry early in 2013. The aim will be to set out a shared vision and action plan for the development of the offshore wind sector, supporting its contribution to economic growth and job creation in the UK. This will build on the recommendations of the CRTF and support progress toward realising the developers' aspiration of at least 50% UK content in the supply chain.

**Develop the supply chain:**

- To enable cost reduction, we will support new manufacturing capacity through initiatives such as Regional Growth Fund, Advanced Manufacturing Supply Chain Initiative and DECC capital funding for new offshore wind manufacturing infrastructure.
- We will work with BIS, RenewablesUK and industry to assist new entrants to enter the sector - working with the Manufacturing Advisory Service to help steer companies in pre-qualification phase. We will also work with industry, through the Offshore Wind Programme Board, to identify key bottlenecks in supply chain and barriers preventing investment.

**Develop the domestic manufacturing supply chain:**

- We will work with industry to realise the aspiration of the UK being the centre for offshore technology with a competitive supply chain supplying 50% UK content.
- To support this, we will work with developers to develop a methodology to benchmark offshore wind projects and identify the level of UK content on a consistent basis.
- We will work with the OWPB to ensure that all levels of the supply chain have greater visibility of project timelines to enable investment.
- We will work jointly with BIS to develop an offshore wind Industrial Strategy and Supply Chain Action Plan for the sector, to be launched at an Industry Supply Chain Summit in the first quarter of 2013.

**Develop supporting infrastructure to support rapid deployment:**

- We will work with potential investors to secure major investments in the offshore wind manufacturing supply chain, including by providing capital funding to support investment at port sites by major manufacturers, as well as by key supply chain participants.

**Ensure cost-effective grid investment and connection:**

- DECC will continue to monitor progress on implementation of measures to support offshore network coordination. On 7 December 2012, Ofgem launched a consultation on a proposed framework to enable coordination of offshore transmission, and Ofgem plans to consult on potential high level options for integrated transmission planning and regulation in spring 2013.
- The Government's Energy Bill includes a clause to provide greater certainty to generator-builders of offshore transmission assets in the commissioning of those assets. Future tenders for offshore transmission assets will be governed by the enduring tender regulations, which Ofgem consulted on in autumn 2012 and which are due to come into force in early 2013.

**Reduce risks and increase certainty in the pre-application phase:**

- We will take forward strategic research in partnership with the Crown Estate, Marine Scotland and industry. Four priority projects have been identified, on issues related to bird collision rates and noise impacts, and Government will contribute to initial funding for this research in order to get projects up and running quickly.
- We will implement recommendations from the Habitats Review and work with priority offshore wind projects to give more certainty in pre-application phase. Key to this is the establishment, in April 2011, of the cross-Government Major Infrastructure and Environment Unit to facilitate swift, proportion resolution of Habitats and Wild Birds Directive issues for nationally significant infrastructure projects in England at the pre-application stage. In July we established a Habitats and Wild Birds Directives Marine Evidence Group, bringing together Government, its agencies, The Crown Estate, industry, environmental organisations and academia.
- We will ensure a rapid literature review is undertaken to identify the measures that could be taken to mitigate or compensate for the impacts of offshore wind projects have on European protected sites due to bird collision or displacement. If appropriate, we will provide guidance on which measures will be considered to be effective and whether they count as mitigation or compensation. This will be completed by end of May 2013
- Until improved evidence is available consenting decisions will need to deal with scientific uncertainty. This will affect a number of projects already in the consenting process. We will work to develop a strategy to deal with consenting decisions around these projects and in particular we will engage closely with ongoing work looking at how we take account of the cumulative impact of projects on European protected sites in the decision-making process. If appropriate this will include consideration of how alternatives and imperative reasons of overriding public interest (IROPI) would be considered if projects are assessed to have an adverse effect on the integrity of European protected sites. This will be completed by the end of July 2013.

**Access finance:**

- DECC will implement the EMR programme to give certainty to developers and investors for projects from March 2017 onwards. Bringing in new investment into offshore wind remains a key challenge for the industry against a backdrop of disrupted long term capital markets and constrained bank lending appetite. The GIB has now been established and was formally launched on 28 November 2012. GIB will initially seek to catalyse institutional capital into operating wind farms allowing the new capital to be recycled by owners into incremental construction. In due course, GIB hopes also to catalyse institutional investment directly into the construction phase itself.

## MARINE ENERGY

### **Manage the risks and costs of RD&D:**

- The marine energy Technology Innovation Needs Assessment summary report was published in August 2012 to provide a robust shared knowledge base to guide government innovation investment decisions. DECC will work with the UK Marine Energy Programme Board (MEPB) to ensure the sector provides appropriate evidence in any future assessment of how to resolve issues affecting renewable generation.
- Wales is also focussing on progressing the marine exploitation study that has been instigated and in facilitating industry access to RD&I funding as well as building supply chain capacity.

### **Secure the investment for commercial deployment:**

- DECC will work with MEPB members to understand the potential for cost reduction in wave and tidal in the future to help inform EMR.
- DECC will work to facilitate dialogue between the marine and finance sectors to get a common understanding of how to make marine energy projects financeable and to reduce investment risk.

### **Ensure cost-effective grid investment and connection:**

- Work with the MEPB members to ensure the sector provides evidence to assist acceptable resolution of issues affecting renewable generation on the Scottish Islands including the Island Transmission Charging issue. The Marine Renewables Infrastructure Study will identify the necessary grid investment, landfall sites and connection options in Wales needed to support the emerging industry. The first phase of the study completed in November 2012. The study has now entered its implementation phase.

## SOLAR PV

### **Provide a clear vision for the development of Solar PV in the UK:**

- In 2013, DECC will produce a solar PV Strategy, in which we will outline the Government's strategic approach to solar PV. The Strategy will reflect both Government and industry perspectives as to the main challenges facing the deployment of solar PV.

### **Ensure financial predictability:**

- DECC will complete the delivery of changes flowing from the recent comprehensive review of the FITs scheme by April 2013. This includes providing greater investor certainty for solar PV by setting up a pre-accreditation system (that began operation from 1 December 2012) for installations greater than 50kW.
- We have published the Government Response to the RO Solar Consultation on 18 December 2012, setting out the new rates under the RO for the next four years and DECC will have the new rates in place by April 2013 (subject to Parliamentary and State Aid approval).

**Increase Industry Engagement & investor confidence:**

- As part of the solar PV Strategy, DECC will establish new structures for engaging with industry at both Ministerial and official level to build effective partnership working. We will work to establish advisory groups which can offer support and advice at both Ministerial and official level to government, and harness the expertise in the sector.
- DECC is considering how best to gain access to the data generated through the FITs scheme, such as information on solar PV performance and load factors, in order to help give greater confidence to investors and to provide more information to consumers, researchers and businesses.

**Increase cost efficiency:**

- As part of the solar PV strategy, DECC will consider the best approach to continuing work on cost reduction in order to provide insight as to the key areas that can provide ways to increase cost efficiency. In partnership with industry, DECC will also use the coming year to identify learning from overseas which can be applied to the UK context in order to drive down costs.

**Promote Innovation:**

- DECC will work with industry, the Research Councils and other members of the LCICG to understand progress of the research undertaken and the outcomes in order to influence policy developments and encourage deployment by summer 2013.

**Continue to understand network issues:**

- DECC will continue to work with Ofgem, National Grid and the electricity distribution companies to consider the impacts of low carbon technologies on electricity distribution networks.
- DECC will continue to work with the industry and the network companies to ensure that proposed solar PV installations have clear sight of the costs and timetables for their grid connection.

**BIOELECTRICITY****De-risk the supply chain of sustainable feedstocks - Introduce sustainability standards for solid biomass:**

- The Government intends to introduce revised sustainability criteria under the RO for implementation by October 2013. These will provide the greater certainty needed to secure investment in new generation and sustainable supply-chains. The proposals, set out in the consultation published on 7 September 2012 (and closed on 30 November 2012), includes:
  - Providing greater certainty through limited grandfathering of improved sustainability criteria for solid biomass and biogas under the RO to 2020, with a trajectory leading up to 2025 to allow generators to plan for the future.
  - Strengthening and streamlining biomass criteria with improved monitoring and reporting, including reporting on use of high quality wood.
  - Adding sustainable forest management criteria for woodfuel that build on established sustainability schemes, such as the FSC and PEFC.

**Implementation of Anaerobic Digestion (AD) Strategy:**

- The Government, working with stakeholders, will complete implementation of the AD Strategy and Action Plan, identifying responsibility for ongoing activities. The Government will continue to work with industry and other stakeholders to monitor uptake of different AD systems to achieve the goal of increasing the energy from waste produced by AD.

**Reduce Barriers for Innovative low carbon technologies:**

- In line with the findings of the Bioenergy Strategy, DECC and the Low Carbon Innovation Groups Bioenergy Technology Innovation Need Assessment will undertake a number of activities to promote the development of low carbon innovative biomass technologies:
  - ERANET: DECC are leading an EU initiative to fund bio-energy demonstrator projects across the EU. EU negotiations are still in progress, and if successful, it will enable a pan-European competition for bio-energy demonstrators to be launched early in 2013, accessing up to €100million.
  - Pyrolysis Challenge: The Carbon Trust will continue to manage the Pyrolysis Challenge project for DECC that will demonstrate the feasibility of using fast pyrolysis for the production of drop in biofuels from waste at scale.
  - DECC will continue to work through the LCICG to deliver a coordinated suite of support to low carbon technology development including bioenergy.

**BIOMASS HEAT****Access finance:**

- Non-domestic RHI preliminary accreditation provides assurance to those involved in medium and large biomass, biogas and geothermal installations that their project will be eligible for support from the scheme, providing applicants with greater certainty and supporting lender decision making. In our summer consultation, “Renewable Heat Incentive: Providing Certainty, Improving Performance” we sought evidence as to whether further improvements to preliminary accreditation were needed. We are currently considering the responses to that consultation and will publish a response as soon as possible.
- As part of the development of proposals for a domestic RHI scheme, DECC continues to work with industry and finance providers to look at what mechanism can be put in place to help provide low cost finance for meeting the up-front cost of renewable heating systems. The possible availability of Green Deal support may also allow for some finance to be provided.

**Technology Costs:**

- We are currently consulting on proposals for non-domestic RHI support of biogas combustion of above 200kWth, and a separate tariff to support biomass and bioliquid CHP. The government response should be issued in early 2013 and will provide clarity on biogas, biomass, and bioliquid CHP support from the RHI.
- A European Commission state aid decision resulted in the original proposals for the non-domestic RHI large-biomass tariff being reduced from 2.7p/kWh to 1p/kWh. In order not to delay the introduction of the scheme as a whole, DECC agreed to this change. Subsequent projections of fossil fuel costs suggest that this should be sufficient to incentivise significant large scale biomass. However, market evidence suggests that very few projects are

going ahead under the current tariff and many that were previously going ahead have been cancelled. Therefore DECC has issued a call for evidence to establish why projects have been cancelled and to verify modelling. The information gathered through this call for evidence will provide us with a better understanding for the lack of uptake of large biomass and so that we can ensure that the RHI tariff is set at the correct level.

**Biomass sustainability:**

- DECC proposes implementing minimum biomass sustainability criteria as a condition of RHI support under both the non-domestic and domestic schemes. The RHI sustainability criteria would consist of a GHG lifecycle emissions target and land use criteria. Government will continue to work with stakeholders to ensure sustainability criteria are proportionate to the scale of biomass suppliers.
- Government will continue to work with private businesses to deliver the Forestry Commission's Woodfuel Implementation Plan in England. This plan aims to significantly increase the area of woodland in active management, stimulated by increased demand for woodfuel. Government will also explore opportunities to use energy markets to drive woodland creation in appropriate areas.

**Investor confidence:**

- Bringing forward an approach to budget management for the RHI, which is expected to be in place in time for 2013/14. This will improve certainty, transparency and confidence for investors by setting out clearly in advance the circumstances under which tariff reductions could occur.

**GROUND AND AIR SOURCE HEAT PUMPS****Technology costs:**

- We finished consulting on proposals for a scheme to support renewable heat in the domestic sector on 7 December 2012. This includes proposals on support for ground source and air source heat pumps. We have also consulted on the inclusion of additional technologies in the non-domestic RHI including air source heat pumps. We aim to introduce support for the domestic sector and for the additional technologies in the non-domestic RHI in Summer 2013.
- The existing tariff in the non-domestic scheme for ground source heat pumps has not brought forward the number of installations of this technology we expected. Discussions with the industry have indicated that this may be due to assumptions about the costs, efficiencies and load factors of installations. We have issued a call for evidence to review our current assumptions and intend to publish a response in early 2013.

**Planning and licensing processes:**

- DCLG is currently carrying out the first year review of Permitted Development Rights for air-source heat pumps with the aim of reporting by 30 March 2013.
- DECC launched a National Heat Map in March 2012. The Map was commissioned by DECC and created by The Centre for Sustainable Energy. The purpose of the Map is to support planning and deployment of local low-carbon energy projects in England. It aims to achieve this by providing publicly accessible high-resolution web-based maps of heat demand by area.

- The Scottish Government funded Fife and Perth & Kinross Councils to undertake heat mapping exercises using the same methodology as that used for the Highland Council map the Scottish Government funded in 2011. As the methodology is rolled out, it will create a high resolution Scotland-wide heat map to allow strategic planning for investment in heating, particularly district heating. Scotland will continue to work closely with all three local authorities to ensure positive outcomes from the exercise can be established as exemplars to other councils.

**Availability of good quality installers and engineers:**

- The MCS has consulted on the development of competency criteria for installation companies with the aim of introducing new criteria by spring 2013. This should help to more easily identify the competence requirements of installers and training options.
- The consultation for the domestic RHI outlines a key role for MCS installers in ensuring high performing systems. We will be working with MCS to ensure that high standards are achieved amongst installers and proper auditing arrangements are in place.

**Demands on the electricity grid:**

- DECC published a document in August 2012 (<http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/future-elec-network/6098-electricity-system-assessment-future-chall.pdf>) setting out the challenges the electricity system will face due to changes in the demand for electricity and the generation mix and exploring how balancing technologies, such as storage and DSR, can help balance the demand for and supply of electricity.
- Through the Smart Grid Forum DECC is working actively with Ofgem and industry to ensure the right distribution network investment is made through the next distribution Price Control and beyond to support increased distributed generation and the electrification of transport and heat.
- DECC will continue to update projections for low carbon technologies to ensure Ofgem and the DNOs have the latest analysis while developing business plans for the RII0-ED1 price control review. The Smart Grid Forum will also publish their report on the commercial and regulatory barriers to deployment of the Smart Grid and possible solutions to remove these barriers.

**Performance and technical issues:**

- Through the MCS, the Government, working in partnership with industry, introduced stronger standards that aim to help to improve the design, installation and performance of heat pumps. This revision to the MCS heat pump installation standards built on the learning from heat pump 'field trials' conducted by the Energy Saving Trust (EST), which showed some heat pumps were performing badly due to poor installation practices.
- Further work is being carried out under phase two of the EST's heat pump field trials, which is due to report in the Spring of 2013. We are also gathering valuable data on performance of heat pumps installed under both phases of the RHPP scheme. Installations supported through this programme involve metered heat pumps, which should further help to build understanding of the performance of heat pumps. The new MCS heat pump standards will be used for some of these installations so that we are able to gather comparative data. We expect this evaluation of performance will conclude in summer 2013.

- We have consulted on minimum Seasonal Performance Factor (SPF) efficiency requirements for heat pumps for the RHI as part of our consultation on a domestic RHI which closed on 7 December 2012. The consultation on the domestic RHI also sets out a number of options on how the policy might drive performance for heat pumps.

## RENEWABLE TRANSPORT

### **Biofuel sustainability and deployment:**

- On 17 October, the European Commission published a proposal designed to address ILUC impacts through amendments to the Renewable Energy Directive and the Fuel Quality Directive. This proposal will be agreed through the ordinary legislative procedure over the coming year.

### **Plug-In Vehicle Infrastructure:**

- OLEV is supporting the eight Plugged-In Places. The National Charge point Registry (NCR) is live and available at [data.gov.uk](http://data.gov.uk), and we have a commitment to review “Making the Connection” by May 2013.

### **Financial support for the purchase of ultra-low emission vehicles:**

- OLEV launched the Plug-in Car Grant in January 2011 providing a 25% subsidy (up to £5000) and in February 2012 the Plug-In Van Grant was launched providing a subsidy of 20% (up to £8,000). Similar to the PiCG, the PiVG assists purchasers with the upfront costs of buying vans that meet the emission, safety and performance criteria with a 20% Grant, up to a maximum of £8,000. Ultra-Low Emission Vans benefit from more favourable tax treatment, including an exemption from Vehicle Excise Duty and the Van Benefit Charge.

### **Support for innovation:**

- Providing £82m support for research and development which is managed by Technology Strategy Board. Five strategic technologies have been identified:
  - Internal Combustion Engines.
  - Energy Storage and Energy Management.
  - Intelligent Transport Systems.
  - Lightweight Vehicle and Powertrain Structures.
  - Electric Machines and Power Electronic.

### **Hydrogen:**

- UKH2Mobility was launched in January 2012. This joint undertaking with key industry stakeholders will evaluate the potential for hydrogen as a fuel for ultra-low carbon vehicles in the UK before developing an action plan for an possible roll-out to consumers in 2014/15