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Dear Alun Ffred

Thank you for a very interesting committee session on 13 January. We hope that the evidence we provided to the committee shows that our energy strategy is designed to play a major role in both climate change mitigation and in driving economic growth.

We committed to a number of action points during the session, and you have also requested further evidence on a number of topics. This information is provided in the paper that accompanies this letter. We do hope that you find it helpful, and we look forward to hearing the findings of your inquiry.

Yours sincerely,

Carl Sargeant AC / AM

Y Gweinidog Cyfoeth Naturiol Minister for Natural Resources **Edwina Hart AC/AM**

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Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

Environment & Sustainability Committee - Action Points & Additional Evidence

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Action Points

1. Ministers agreed to provide the Committee with the total figure for the amount of renewable energy produced in Wales, calculated using the same definition for 'community energy' as that used in Scotland.

The Scottish Government defines 'Community and locally owned' as the installed capacity owned by:

- Community groups
- Local authorities
- Housing associations
- Other Scottish public bodies
- · Charities, including faith organisations
- Further and higher education establishments
- Local businesses
- Scottish farms and estates

At the end of September 2015:

- An estimated minimum of 508MW of community and locally owned renewable energy capacity was operational in Scotland.
- This is a 41% increase on the operational capacity in the last report (capacity at June 2014), when the operating capacity was estimated at 361MW.
- The operating capacity results from a total of more than 11,940 individual renewable energy installations.

As the data that we have in Wales was gathered in order to understand the total level of deployment, it is not directly comparable to the Scottish figures without further work to establish the precise nature of ownership of all 51,302 renewable developments. In the absence of a robust way to produce comparative data based on ownership, we have used the definition of community scale energy (developments up to 10 MW) in order to generate the figures below, which provides a more realistic comparison of the progress in Wales. We have excluded domestic scale projects, which will exclude some public sector and housing association schemes, but have included all business developments, as it is not possible to identify those that are local under the Scottish definition from current data. The figures therefore will include a significant proportion of business-owned generation that would be excluded under the Scottish definition, and comparable Welsh figures will be lower than those provided below.

Since 2012 the total capacity for renewable energy in Wales has grown by 84% to 2,025 MW as at the end of 2014.

At the end of 2014, 610 MW of generation of a scale between 10kw and 10 MW was operational in Wales.

This operating capacity results from a total of 4887 individual renewable energy installations.

2. Ministers agreed to provide the Committee with a note on the nature and source of the funding for the feasibility study for Smart City in the Swansea Region and other initiatives in RCT and Flintshire.

The Natural Resources Minister has provided up to £145,000 for initial feasibility studies and data collection for local authorities in West Wales (Pembrokeshire, Carmarthen, Neath Port Talbot and Swansea), Blaenau Gwent and Bridgend. These include feasibility work on developing zero carbon areas, themed smart energy developments, a local area catalysing energy model, and input to the Energy Technologies Institute/Energy Systems Catapult Smart Systems and Heat Programme. These schemes form part of the first wave of demonstrators for the Smart Living programme.

Through the cross departmental support for Smart Living Initiatives, Wales has attracted Phase 1 support of £30 million from the Energy Technologies Institute, consisting of smart tools, systems and processes which will be demonstrators in Phase 2 of the ETI programme covering Bridgend as well as Newcastle and Greater Manchester. DECC is leading on securing funding for the Phase 2 demonstrators. Officials have also been working with Scottish Power Energy Networks, which has secured funding from Ofgem under the Network Innovation Competition for a £15 million scheme in Anglesey, which will contribute to providing multiple benefits to this area.

Officials have been working with Flintshire and RCT in developing proposals for using energy resources smartly and more efficiently. Flintshire requires changes in regulatory requirements, and we are liaising with Ofgem on this. For RCT we are working with key stakeholders from private and academia to maximise opportunities and investment for managing demand on the network as a key demonstrator.

3. The Minister for Economy, Science and Transport agreed to provide the Committee with a copy of the discussion points from the Energy Wales Strategic Delivery Group.

The Minister for Economy, Science and Transport has established two industry, and expert, led Task & Finish Groups which will report in March.

The executive summaries of these reports will be made available to the committee.

The Marine Energy Task & Finish group is considering how long term growth and sustainable job creation can be achieved in the emerging marine energy sector. Matters under consideration by the group are:

- barriers, solutions and actions
- targets and delivery route map
- strategy development
- communication
- marine energy supply chain development
- access to funding

The Rural Economy Development Task and Finish is developing a strategic plan for a sustainable approach to economic growth and well being in the Rural Economy; investigating and considering the barriers to growth of the development of renewable energy in rural areas, including grid constraints, planning, consenting, and efficient energy storage.

4. The Minister for Natural Resources agreed to consider publishing a Technical Advice Note on 'One Planet' developments in more built-up areas, to complement the existing advice for rural areas.

Guidance on One Planet Development (OPD) is found in Technical Advice Note 6 Planning for Sustainable Rural Communities and supported by the One Planet Development Practice Guide. OPD proposals have typically, to date, been located outside of settlement boundaries, more often than not in rural locations and in the open countryside. However, the guidance may equally apply to sites adjacent to settlements in less rural locations.

OPDs are a lifestyle choice and can take the form of single homes, co-operative communities or larger settlements, but all require sufficient land to provide for the minimum needs of the inhabitants in terms of income, food, energy and waste assimilation. The specialist nature of such developments and the strict planning requirements that apply (due to the general presumption against other non essential and unjustified development in the countryside) suggests that the numbers of OPD developments will remain small. It is ultimately for the local planning authority to be satisfied with the level of evidence provided in each case, whether in a rural location or not, in order to determine whether a development is appropriate in any particular location.

In terms of developing mainstream sustainable housing, which does not have the lifestyle implications of One Plant Development (as described above), guidance has been provided in the Welsh Government's practice guide Planning for Sustainable Buildings (July 2014), which was prepared by the Design Commission for Wales. This document is intended to assist the delivery of good quality, well designed, energy efficient homes and buildings which positively contribute to townscape and landscape, and which help capture the wider benefits of sustainable development. All of these documents can be found on the Welsh Government website.

Additional Evidence

Overall vision/leadership

 What is the balance between the Green Growth Local Energy agenda of minimising dependence on central generation and the policy of encouraging major new renewable projects? [The Economy, Science & Transport Minister's April 2015 statement says the Welsh Government will "maximise economic opportunities through both indigenous developments and attracting inward investments." The Local Energy document says it will minimise dependence on central generation].

Our energy policy is set out in **Energy Wales: A Low Carbon Transition**. Our aim is a low carbon economy that delivers jobs and long term prosperity working in partnership with businesses and communities.

Wales has a long standing tradition of energy at the heart of our economy, and we have a significant opportunity to continue that tradition by leading the transition to a low carbon future, but we must have control over our own destiny if we are to ensure an energy mix that delivers for Wales.

It is important during this period of transition to a low carbon economy that, whilst we may not have all the levers, we maintain a diverse generation and energy mix in Wales that delivers an affordable and secure supply to protect the most vulnerable in society, at a cost that does not threaten industry and jobs.

Our energy strategy is designed to play a major role not only in climate change mitigation, but in driving social benefit, economic growth, supporting the growth of green jobs and skills, increasing the competitiveness of Welsh business, and encouraging low carbon investment.

The future of energy in Wales will be founded on a flexible and diverse energy mix at all scales. However, there is an important and increasing role for local generation and supply, based on renewable sources, smart storage and local grid management, in addition to larger renewable energy developments, nuclear and modernised gas. Increased local generation enables Welsh businesses, householders and communities to invest in energy in ways that have never been possible before. This indigenous capital investment offers an opportunity to better link individuals to the energy they use and also to retain economic benefits to Wales, rather than allowing it to leak beyond our borders.

The scale and location of such developments will be subject to the full range of considerations that are already balanced through planning processes. Consideration of energy, both supply and demand, will need to feature more evidently in many local development plans in future and we will continue to provide support and advice to local planning authorities to help ensure that our ambitions are realised.

Targets/carbon budgets

• Does the Welsh Government have sufficient information about current patterns of energy consumption, the potential for renewable energy and the constraints of the transmission/distribution grid?

We have published information about electricity and gas use in Wales as part of our Programme for Government indicators, and information on patterns of energy consumption is published by DECC on a regular basis. The detailed understanding of supply and demand is a matter for electricity supply companies. The introduction of smart meters provides great opportunity for better understanding of domestic energy use and for matching it to supply.

We are working with NRW to develop greater clarity about the potential for renewable energy, as seen by the adoption of low, medium and high risk areas for hydropower development, and we will continue to improve and extend this approach. We have also published a toolkit to support local authorities in fulfilling the expectation that they will plan positively for renewable energy in their own areas.

National Grid publishes the Electricity Ten Year Statement (ETYS) as part of its annual Future Energy Scenarios. The ETYS is National Grid's view of the future transmission requirements, and includes a specific assessment of the Welsh Transmission Grid. We engage with National Grid to understand the implications of new and ongoing connections on the transmission infrastructure.

The District Network Operators also make available information on the constraints on the distribution grid through "heat maps" of their networks, and we have worked with them and with community groups to increase local access to this information.

Housing stock

- What is the scale of retrofitting required given the fact that many of the houses that will exist in 2050 are already built and the larger percentage of hard-totreat properties in Wales compared with other parts of the UK.
- Whether the Welsh Government's revised energy efficiency strategy will prioritise the retrofitting of the existing housing stock.
- How a Welsh Government might make such retrofitting affordable to all.
- The Welsh Government's views on the ResPublica idea of linking energy efficiency improvements to Stamp Duty Land Tax.

The first Energy Efficiency Strategy for Wales, to be published soon, covers all three sectors; householders, businesses and the public sector. This outlines our vision for accelerating energy efficiency in Wales over the next ten years. Welsh Government support is prioritised on those households living in the most energy inefficient properties and on the lowest incomes.

The Welsh Government has had significant impact with its energy efficiency programmes to date, and by setting out the long-term direction in the first Wales Energy Efficiency Strategy, we will have the opportunity to engage more widely in realising the opportunities and addressing barriers to uptake.

With regard to the scale of the challenge, Welsh Government does not hold up to date information that accurately quantifies the opportunity specifically for Wales; however, we will continue to develop our knowledge in this area, as our data about the building stock in Wales improves.

We provide support to home and business owners to help them identify the most appropriate energy efficiency and generation improvements to the properties that they own, which will add value to the property. Resource Efficient Wales provides a one stop shop for people looking for independent advice and support to make these improvements.

ResPublica present some interesting points in their most recent report. Linking the cost of stamp duty to the energy performance of a house would be likely to start to increase the value of energy efficient homes.

Regulation/grid/storage

- What steps the Welsh Government itself could take to improve the distribution and transmission grid – including potentially funding enhancements.
- Their views on the current roll-out of smart meters by the big six energy companies.
- The role that the Welsh Government should play in the development of energy storage to support distributed generation in local supply energy systems.
- What Welsh Government policies are being developed to encourage a shift to electric vehicles.

There is a need to address electricity grid matters in Wales strategically, particularly in network distribution. There is a difficult balance to be struck between transforming the power networks and ensuring affordability and security are maintained.

Grid consents and market regulation are not devolved; therefore we work actively with UK Government, the grid operators, and Ofgem to secure the transformation in the market which we need for Wales, and to ensure the fitness of the power networks to meet the changes we expect to occur over the coming decades.

There are significant costs to developers and bill payers from increased infrastructure and as a consequence, we must make sure that increased infrastructure works for the benefit of Wales. An example of this would be that, in certain circumstances, Welsh Government could seek to underwrite the delivery of new network infrastructure, but the cost is significant and we would have no control over who would then connect in to the infrastructure. We could therefore create infrastructure that would not deliver the benefits to Wales we would like to see. We continue to influence Ofgem to introduce a range of regulatory reforms to enable the benefits from the low carbon transition to be retained in Wales.

The Smart Meter roll out is an opportunity for customers to more actively manage and reduce their demand for energy linked to either specific appliances or the use of generation equipment. The effectiveness of Smart Meters is very much dependent upon their roll out and how they are used by householders and businesses. Our officials have met with the main energy suppliers on an individual basis to gain an understanding of their implementation plans and potential impact upon the citizens of Wales. Each energy company is developing a slightly different strategy to manage the roll out of Smart Meters, which they are required to complete by 2020.

The future direction of energy in Wales will be founded upon a flexible and diverse energy mix at all scales. There will be an important and increasing role for smart storage and local grid management. There are many potential energy storage technologies, but most of these haven't yet reached commercial viability in the UK. There is some exciting work currently underway through the Low Carbon Research Institute and SPECIFIC looking into the opportunities for cost effective energy storage deployment. The role of storage within a modernised grid is being considered by the Rural Economy Task and Finish Group, and it is clear that energy storage will form part of our approach to innovation at the local level.

Welsh Government continues to work with projects to deliver energy storage facilities through the Smart Living project, Green Growth Wales and our Local Energy service. We are in discussion with ERDF programme managers on a backbone project to support storage as well as generation.

The low carbon vehicle steering group was established by the Minister for Economy Science, and Technology to provide advice and recommendations on the development of the low carbon vehicle sector in Wales. This places Wales in a good position to develop as a centre of excellence for low carbon vehicles, stimulate new growth opportunities and capitalise on the economic benefits. The Group has reported back and officials are considering recommendations and how they can best be implemented in Wales to promote and encourage the uptake of low carbon vehicles.

Planning/consenting

- The steps that the Welsh Government has taken to require local planning authorities to plan positively for renewable and low carbon developments.
- The Ministers' reaction to Richard Cowell's suggestion that some "potentially attractive major energy investments targeted on Wales ought not be supported, because their presence in the energy system reinforces the status quo and is likely to divert resources from, and distort progress towards pathways that may be more sustainable in the future.
- The progress on implementing the Committee's previous recommendations about the planning/consenting process for energy projects, specifically:
 - a one-stop shop for advice to businesses and community groups to help them navigate the renewable energy planning/consenting processes [Accepted in principle]
 - streamlining the planning/environmental permitting process for renewable energy projects [Accepted in principle]
- How has the guidance toolkit to assist communities and businesses developing a renewable energy project (prepared by the <u>Energy Savings Trust</u>) been publicised and how well is it used. [Minister's letter of 16 December]
- Whether the Welsh Government would consider introducing a 'presumption in favour' into the planning regime for certain community energy projects.
- What plans there are for prioritising renewable energy in the implementation of the Planning (Wales) Act 2015.

Our national planning policy provides a framework in which local planning authorities should plan positively for all forms of renewable energy development. We recently (September 2015) published updated guidance to help local planning authorities to assess the potential for renewable and low carbon energy in their area and develop policies in their local development plans to guide appropriate development.

In December 2015 the Minister for Natural Resources wrote to all local planning authorities setting out our expectations that they plan positively for renewable and low carbon developments with appropriate policies in their local development plans.

To implement our expectations of local planning authorities in facilitating community renewable energy projects, we have appointed the Energy Saving Trust to deliver a pilot training programme to local planning authorities on planning for community renewables.

With regard to Richard Cowell's suggestion, our energy strategy must both support the low carbon transition and drive a strong economy, supporting jobs and prosperity, whilst providing an affordable secure supply to protect the most vulnerable in society.

Major energy projects not only offer the potential for thousands of jobs during construction, but the opportunity to stimulate world class innovation and research in Wales, not least in marine energy.

The Resource Efficient Wales service was launched in October 2014 and provides a one-stop shop for advice on renewable energy and energy efficiency.

The main purpose of the service is to provide the people of Wales (domestic, business, community, third, and public sector audiences) with access to information, advice and support on: using energy more efficiently; generating renewable energy; using water more efficiently; reducing the generation of all forms of material waste and; supplier market development, training and accreditation. The service also signposts people to other national or local programmes and schemes that can help them.

To facilitate small scale renewable energy development, we have introduced permitted development rights for domestic and non-domestic properties to install various types of small scale renewable energy without the need for planning permission. We are commissioning research to explore the scope to further extend Permitted Development Rights for non-domestic solar renewable energy development in Wales.

Natural Resources Wales has streamlined the process for issuing abstraction licences for hydropower projects, speeding up the process particularly for low risk schemes, reducing the amount of evidence needed during licencing and therefore the cost.

We advocate a guidance based approach to planning for renewable energy. Developments should be targeted at the most appropriate areas and areas where there will be least environmental risk. We encourage those intending to apply for planning permission to engage in pre-application consultation so that those opinions shape the development before it comes into the planning system.

We have developed a toolkit as a result of the learning from our Ynni'r Fro programme, also incorporating the learning from the Scottish community sector. The toolkit is being used by communities and others developing projects, and feedback to date is positive. We are developing it further, in collaboration with users, in light of the requirements of the Wellbeing of Future Generations Act, and it will be used as the basis of our new local energy support programme. Using standard tools such as these will help us identify the most appropriate projects to support in future.

We are committed to promoting renewable energy projects. However, planning decisions should be based on an assessment of the impacts of any proposed development, irrespective of who the applicant is. Therefore, a presumption in favour of community energy projects is not appropriate. Our national planning policy recognises the potential for communities and small businesses to invest in ownership of renewable energy projects or to develop their own projects for local benefit. Our policy expects local planning authorities to ensure that development plan policies are supportive of projects of this scale

Creating an appropriate and timely consenting process for Developments of National Significance is key to the delivery of the Welsh Government's renewable energy aspirations. Legislation has recently been laid relating to Developments of National Significance, which enables developers of energy projects of between 10MW-50MW to submit planning applications for such developments directly to the Welsh Ministers. The Welsh Ministers will be responsible for processing and deciding

planning applications and connected consents for this category of development in one streamlined process.

The forthcoming changes to the consenting regimes promised through the UK Energy and Wales Bills, as well as the implementation of the Developments of National Significance (DNS) regime onshore mean that the future for renewable energy developments has the opportunity to provide a more positive outcome for the people of Wales.

Finance

- How might the Welsh Government provide additional financial support for local and community energy projects.
- What are the actual plans to make "significant additional investments" in Welsh-owned energy generation and energy efficiency projects from 2016/17 [Green Growth Local Energy document].
- Progress on introducing a Scottish CARES-type loan scheme into Wales (as previously recommended by the committee and accepted by the Welsh Government).
- The take-up of loans through Salix and Invest To Save for energy efficiency projects. [referred to in the Energy efficiency strategy consultation document]
- Details of the new Local Energy Service that will be launched in January 2016 and the range of funding models that are being explored to replace UK support tariffs. [Minister's letter to the Committee dated – 16 December 2015]
- The scope for greater use of European funds (including the Rural Development Programme) to support renewable energy developments or grid enhancements.
- The potential role that Finance Wales could play in providing low interest loans.
- The potential for local authorities to use their own borrowing powers.

The Minister for Natural Resources will be launching the new Welsh Government Local Energy support service shortly and he will be writing to Assembly Members with details of the service shortly. We are continuing to develop a pipeline of locally owned renewable energy projects through this support. We are also working with officials managing European funding to develop a new WG and ERDF funded local energy support service, which is likely to include funding for smart grid and storage solutions where these deliver local benefit.

In terms of public support for local energy, including the public sector, we have already announced £8m of additional investment from WIIP funding for energy efficiency measures in the public sector in 2016/17 and we hope to be able to add to that figure, depending on decisions about capital finance. This is on top of some £20m of existing investments through SALIX and Invest to Save Green Growth, which provides ongoing funding as loans or grants.

SALIX were originally provided with £10.4m of funding, which is loaned to public bodies at 0% with repayments typically required over 6 years. The fund is essentially fully invested, with a total of £15.2m committed to date (this figure includes reinvestment of funds repaid).

Invest to save funding for energy efficiency has also been successful, with some £3.2m funded in the current year. Our Green Growth pipeline support work, which began in the autumn, has already brought £8.3m of further bids to the process, the majority of which we will be able to support using the Green Growth funding we have already announced for this year and next. The Minister for Natural Resources has therefore agreed with the Finance Minister that new funding will be allocated through a recently introduced element of Invest to Save – "Invest to Save Green Growth". This is additional to some £20m already invested, and will provide an ongoing source of funds for energy efficiency as repayments are recycled.

There is significant potential for local authorities to use their borrowing powers or Capital Reserves to fund this work, and some already are. Our view is that the biggest factor in encouraging local authorities to take advantage of their borrowing powers will be the development of compelling and credible business cases. Our pipeline support work, with the transactional support now being provided by Local Partnerships, technical support via the Resource Efficient Wales framework, and a new EIB funded REFIT programme is intended to help create a step change in project development across the public sector, including Local Authorities.

We are working with providers to continue our local energy fund, which currently provides loans to fund renewable projects that benefit local communities. In order to retain access to central government price support, these loans have to be made on commercial terms. Alongside that we are also continuing to provide grants for the earliest stage of projects, where this constraint does not apply.

The need and nature of financial support varies according to the stage of the proposal. At the earliest, pre planning stage, project risks are high. There is a need for seed funding that can be 'written off' in the event that, for example, planning consent is not secured. We have supported projects at this stage through loans and grants, and continue to do so.

Once a project proceeds to construction, projects need to be able to access funding at reasonable commercial rates. This has been funded via our support service, managed on our behalf by The Energy Saving Trust and WCVA. As we go forward we will continue this arrangement, with the Local Energy service providing project development support and access to grants, and a Local Energy Fund able to provide loans.

Skills/training/Research & Development

- Whether the Welsh Government has a clear long-term vision of the skills that will be required to deliver a clean energy transformation and how these skills are to be provided.
- Whether Higher and Further Education establishments in Wales are prepared to provide the necessary training, both for renewable energy projects and energy efficiency developments.
- What are the potential advantages of being 'first in the game', especially if higher building regulation standards are to be introduced in Wales before England.
- How will the Welsh Government ensure that the existing Research and Development base in Wales (e.g.: SPECIFIC, Marine energy, Anglesey Energy Island) shapes the delivery of its energy policies.
- What work is underway to encourage and develop the necessary supply chains in renewable technologies and in energy efficiency retrofitting measures.

We are working closely with businesses across key energy sectors to ensure that we develop a fit for purpose workforce when it is needed, and providing opportunities for our young people.

Our aim is to deliver a skills system which supports our future competitiveness and helps us evolve into a highly skilled society and, at the same time, tackle poverty. The Policy Statement on Skills, published in January 2014, sets out the long-term policy action we should take to enable such a change to take place. To underpin the delivery of our wider skills policy we published a Skills Implementation Plan detailing our intended actions for delivery.

Our focus continues to be on raising productivity, reducing barriers into work and supporting people into sustainable employment. The actions we are taking forward will be of direct benefit to the Energy and Environment sector given the focus on skills investment, engaging employers, developing vocational qualifications and apprenticeships, and strengthening the relationship between employers and schools.

The Skills Implementation Plan made a commitment to develop "Skills that respond to local needs". We are continuing to support the work of the three Regional Skills Partnerships (RSP) in North, South West and Central and South East Wales to undertake regional prioritisation of skills investment. Each RSP has representation from Higher and Further Educations establishments on their Boards. RSPs are asked to identify key priorities for their region through an annual Regional Employment and Skills Plan. The aim of the plans is to offer a strategic and collaborative response from stakeholders that prioritises investment in order to maximise the potential of available employment and skills support, including EU and other funding, to deliver economic benefits in the region.

The Energy and Environment sector has been identified as a key economic priority by both the North Wales Economic Ambition Board and the South West and Central Regional Learning Partnership. We are encouraging sector employers to engage with those RSPs to ensure their needs are reflected in regional prioritisation and

planning. We are also ensuring that RSPs highlight skills needs arising from major energy infrastructure projects, work across borders, and closely align to City Regions and Enterprise Zones.

Research is a key priority for the Welsh Government and we will continue to encourage the Higher Education Funding Council for Wales (HEFCW) to focus on research as well as other key Government priorities in the Ministerial remit letter to the Council. We will continue to work with HEFCW and HE institutions to build core capacity and research excellence across Wales, which will in turn shape the delivery of energy policies. Welsh Government works closely with developers of key infrastructure projects, such as Tidal Lagoon and Wylfa Newydd, and with key energy sub sectors such as marine and renewables. By developing close links with developers and their associated stakeholders, we are able to determine specific skills needs and provide appropriate support by promoting positive relationships, working closely with the Regional Skills Partnerships.

In the research arena, projects such as the Solcer house demonstrate Welsh academia's leading role and are welcome demonstrations of technologies and design available now which could be the basis of our zero carbon future. However, the markets for these products need to develop and confidence needs to build. The next step is for further piloting at scale, and we understand that there has been interest from social housing providers and others that could lead to housing developments based on the Solcer house.

In many respects Wales is already ahead of the game. Currently, new non domestic buildings in Wales have to achieve carbon reductions that are on average 10% better than those required in England (in 2013 England raised standards by 9% on 2010 standards, in 2014 we raised them an average of 20%). In considering the advantages of 'being first' we always need to be mindful of wider consequences and the cumulative effect of additional costs and unintended consequences of policies.

In Wales we benefit from a much flatter political structure than that of the UK where decision making and policy development are much closer to those being affected. The Minister for Economy Science and Transport values the input of a number of expert panels to make recommendations that directly impact government policy and the strategies we put in place to deliver these.

The Marine Energy Task & Finish Group was set up as an outcome from an Energy Wales Strategic Delivery Group investigation into marine energy, and reports to the EW SDG. The task & finish group includes representatives from the two marine energy demonstration zones in Wales, and has explored RD&I as part of its remit. It will be submitting initial recommendations to MEST shortly.

The Energy & Environment Sector Panel is a group of key industrialists in Wales with the remit of being the voice of employers to promote growth and employment within the energy and environmental goods and services sectors. As well as representation from Anglesey Energy Island, the group benefits from the expertise of Kevin Bygate, CEO of SPECIFIC, and David Williams whose company Eco2 Ltd backed Tidal Energy Ltd in deploying the first marine energy device in Welsh waters.

Taking a view across all sectors, the Science Advisory Council supports the Chief Scientific Adviser (Prof. Julie Williams) by providing a strategic view on science-related matters in Wales issues. SACW reports directly to the Chief Scientific Adviser, advising on science in Wales at a strategic level with an emphasis on future developments. The council's members have a broad range of expertise at a senior level with both commercial and academic experience in a range of sectors and scientific disciplines, including representation from SPECIFIC, the Centre for Alternative Technology, Centre for Advanced Software Technology, the Climate Change Commission for Wales and HEFCW.

The UK Energy Research Centre (UKERC) is a focal point of UK energy research and a gateway between the UK and the international energy research communities with the main aim of informing UK policy development and research strategy. Officials met with UKERC representatives just before Christmas to input into the design of their next round of research activities.