Achieving our low-carbon pathway to 2030
Consultation questions

You can respond online at www.gov.wales/consultation.

1. Are you responding as an individual or on behalf of an organisation? If you're responding on behalf of an organisation, please provide the organisation's name.

[ ] Individual [x] Organisation

Name of organisation:

2. Do you live in Wales?

[ ] Yes [x] No

We've identified some potential actions to reduce emissions between now and 2030 but want to know how you think we should take these ideas forward and what else could be done. We also want to understand where to focus efforts in the short-term and understand how we might enhance the relationships between sectors to reduce emissions.

When we talk about sectors we mean the emission reduction sectors (such as Transport, Power, Waste, Industry, Agriculture, Land use and Forestry, Buildings and Public sector) and cross-cutting areas (such as Innovation, Skills, Planning, Procurement and wider enabling mechanisms).

3. Overall, to what extent do you agree with the potential actions for reducing emissions set out in this document? (1=completely agree, 5=completely disagree)

1 [x] 2 [ ] 3 [ ] 4 [ ] 5 [ ]

Please explain the reasons for your answer:

The Renewable Energy Association (REA) is pleased to submit this response to the above consultation. The REA represents a wide variety of organisations, including generators, project developers, fuel and power suppliers, investors, equipment producers and service providers. Members range in size from major multinationals to sole traders. There are over 550 corporate members of the REA, making it the largest renewable energy trade association in the UK. The REA represent a number of members based in Wales.

80 Strand,
London WC2R 0DT
Tel: 020 7925 3570
http://www.r-e-a.net/

We welcome the proposals for a high proportion of renewable energy generation and decarbonisation of the transport sector because of the positive impacts on jobs, investment and air quality in Wales. We also welcome the setting of interim carbon reduction targets before 2050 as an important step along the way to the longer term target, but note that these must be updated should the Committee on Climate Change's interim targets also change between now and 2050.

80 Strand,
London WC2R 0DT
Tel: 020 7925 3570
http://www.r-e-a.net/

4. Please tell us if you have any ideas for how we should deliver the potential actions for reducing emissions.

There are obvious constraints to Welsh Government action in the energy sector, however, one particularly fruitful area could be that of building regulations and planning, where local authorities could be encouraged to go much further than existing requirements and policies in terms of encouraging on-site renewable generation, energy efficiency, and sustainable transport.

In this context, we support the approach of SPECIFIC and the new Active Building Centre, who directly promote the increased deployment of integrated renewable energy generation and storage within buildings. Fostering so-called 'Active Buildings' provides the opportunity to develop energy resilient communities which use embedded generation and storage to balance the local and national electricity supply networks. This approach presents a progressive opportunity for Wales as a region.

We also support the aim to procure only renewable power for the public sector in Wales by 2020 as this could help support locally based and locally owned renewable generation projects. This should target local projects, ideally new build, that can use such procurement as a route to market in the face of low public support. We think the target for only using renewable heat could be sped up from the 2030 target using innovative technologies and potentially the development of more heat networks.

Further areas to consider supporting would be innovative manufacturing in renewables, as well as innovative technology/software which is increasingly key, and cyber-security – a growing market for energy. These could help create Welsh company champions in the sector to really deliver the most benefit for Wales from the energy transition.

We would also highlight the need for continued investment in and support of existing schemes such the Arbed Retrofit Programme. As part of the Welsh Government's Warm Homes Programme this scheme provides funding for energy efficiency improvements to low income households and those living in deprived communities across Wales. Ensuring this scheme remains active and utilised will deliver both emissions and cost savings to those living in fuel poverty. Furthermore, this could also help address grid constraints across wales with behind-the-meter and demand side response being delivered at scale through housing.

More recently, we have also seen investment in new, energy efficient homes through the Government's Innovative Housing Programme. It is imperative that this investment continues in order to update the country's low-efficiency housing stock, thereby reducing emissions from domestic heating.

In terms of delivering these recommendations, The Welsh Development Bank is a possible source of low carbon financing and can therefore be used to expedite investment. Equally, the Welsh pension fund could be used for investment in low carbon housing – for example, through build-to-rent models.

5. What other ideas do you have for reducing emissions between now and 2030?

There are a wide range of potential actions which could be taken. These include:

Pressuring central UK Government to deliver tax support for new renewable energy projects – for example EIS relief and 0% VAT rates for smaller scale renewables.

Supporting retention of an Export Tariff as part of the reform to the Feed-in Tariff (or introduce a Welsh Feed-in Tariff with the same structure).

Supporting reform of the ECO scheme to include payment for the installation of on-site renewables, in conjunction with insulation measures, for fuel-poor households – saving them more money on their energy bills than insulation alone.

Pressuring central Government to change Benefit-in-Kind rates for Electric Vehicles to reverse the planned increase in rates this year.

Mandating that all public land sold to private developers is for 'zero carbon' developments only.

Ensuring that all new publicly funded buildings in Wales are 'Active Buildings' as defined by a Publicly Available Specification (PAS). This will ensure that public money is not being spent on high heat-demand and low efficiency buildings, thereby creating both cost and emissions savings (for further information see SPECIFIC/Swansea University response).

Prioritising and supporting innovation for the decarbonisation of heat (for example, SPECIFIC's Active Buildings or the Freedom Project).

Public Sector Leadership to enable a flexible region for low carbon heat, power and transport. The Welsh Government should use its devolved powers, access to capital and innovation expertise to establish greater collaboration with relevant bodies (UK government, Ofgem and others) to address critical market failures and challenges to accelerate a shift to low carbon buildings and transport. A regional approach to testing new flexible energy markets based in Wales, or part of Wales such as a District Network Operator area, should be developed to encourage the use of buildings and transport which enable flexibility around heat, power and transport and to test technical integration and consumer responses.

The Welsh Government should include e-bicycles and mopeds when considering electric vehicles, and invest in suitable infrastructure. Smaller electric vehicles have the potential to integrate well with Active Buildings and open up cost effective mobility options. Increased sensitivity to these technological shifts alongside infrastructural investment will expedite a transition to low- or zero-emissions transport. This will be a key approach over the next decade and provide positive externalities such as improved mobility and air quality. This being said, the REA also stresses the importance of ensuring that electric vehicle use is underpinned by renewable power generation - otherwise, rather than decarbonising the transport

process, it simply moves the point of fossil fuel combustion elsewhere.

In Wales, we have already seen signs of transition away from fossil-fuelled energy generation. For example, Aberthaw coal-fired power station, formerly Wales' largest emitter of CO2 has been partially converted to run on combustible biomass. Further conversion both at Aberthaw and at existing coal-powered sites has the potential to significantly decarbonise the Welsh energy infrastructure, thereby lowering emissions.

Relatedly, the technology of carbon capture and storage (CCS) is of great value to Wales in lowering emissions and should comprise part of its low carbon pathway. Specifically, Biomass CCS (BECCS) provides a unique opportunity for 'negative net emissions'. Here, captured carbon can be permanently 'utilised' by storing it in useful materials such as plastics or concrete. The ability to not just prevent carbon generated by combustion from entering the atmosphere, but to take out more than is generated via combustion (utilising the carbon sequestered in plants for biomass fuels) would position Wales as a low-carbon leader on an international stage. It is worth highlighting that coupling bioenergy with CCS is an indispensable tool for significantly reducing emissions, as CCS alone is unlikely to be practical on a 2030 timescale.

Elsewhere, and, given Wales' history as a mining nation, the country now has considerable geothermal potential. Namely, disused coal mines have slowly filled with percolating water to become underground reservoirs of warm water, highlighting the capacity for geothermal application. Lessons could be learnt from the Scotland's consideration of capitalising on the untapped geothermal potential provided by underground reservoirs beneath Glasgow, also a part of Scotland's mining heritage. The plan here is to use geothermal technology to provide hot water for buildings and the same application is likely viable on an even wider scale in Wales, given the country's numerous disused coal mines. The potential for this renewable heat needs to be mapped out strategically.

In order to deliver significant emission reductions across the national infrastructure, a more interconnected and synergistic system is required. Namely, heat and cooling use should be coordinated across local authorities who seek to not only manage and reduce their own heat demand, but redirect excess heat into storage. On the demand side, warm water reservoirs in disused mines provide a clear source for geothermal potential. On the storage side, there is potential to promote these same underground resources as storage for excess heat (e.g. during the summer months), which can then be utilised during winter. This provides a solution for both the decarbonisation of heat and cooling in Wales.

6. Considering the opportunities and challenges in each sector, what are your views on whether action should be prioritised in some sectors over others?

The programme as a whole is important and, as such, the REA strongly support actions across power, transport and housing in order to offer the greatest levels of carbon reductions, bill savings and clean energy alongside investment, increased jobs and benefits to air quality.

7. How could we encourage more collaboration and innovation between sectors? Pilot and testing schemes could be launched for innovative collaboration programmes. There are many innovative programmes and research projects underway in other parts of the UK and Europe seeking similar outcomes and the lessons from these should be captured and harnessed. Examples include the Horizon 2020 and InnovateUK funded projects, while, more locally, Wales and West/Western Power Distribution have an innovative scheme on power to gas. Another option is the creation of a 'climate change' body which seeks to pull together government departments, academic institutions, businesses and finance. This would institutionalise the task of ensuring collaboration across a wide range of stakeholders. This would also have the effect of raising the profile of existing work and the opportunity for collaboration/bringing together of expertise.

80 Strand,
London WC2R 0DT
Tel: 020 7925 3570
http://www.r-e-a.net/

Through our actions to reduce emissions, we want to maximise the wider benefits and minimise adverse effects for the people of Wales, both now and in the future.

When we talk about potential actions we mean the ideas in this document and any other ideas you have mentioned in Question 3.

8. How do you think the potential actions to reduce emissions might affect you or the organisation you work for?

As the UK's leading renewable energy and clean tech trade association, we believe the impact of these potential actions will be favourable for the renewable energy industry in Wales and therefore support jobs and investment in local communities.

9. How do you think the potential actions to reduce emissions might affect the following?

    - Public health

Favourably – the measures should improve air and water quality for example, which will increase levels of general health. For example, more EVs in cities and towns will directly reduce particulate emissions which cause long term health conditions. This in turn will increase productivity and reduce health service costs. Elsewhere, tackling domestic heating and thereby fuel poverty will result in warmer, dryer homes. This will reduce the incidence rate and severity of respiratory problems caused by mould alongside repair costs to users whilst also reducing strain on local health services.

    - Communities

Favourably – renewables provide an opportunity for local communities to own and operate their energy assets and this will provide potential additional revenue opportunities locally, as well as directly engaging local people and their communities with their energy supplies and climate change.

    - The Welsh language

We will leave it for others better suited to comment on this question, to do so.

    - Equality

Spreading energy ownership more widely should be positive for equality in Wales, as well as improving health equality levels due to the above benefits.

- Children’s rights

We will leave it for others better suited to comment on this question, to do so.

80 Strand,
London WC2R 0DT
Tel: 020 7925 3570
http://www.r-e-a.net/

10. How do you think the potential actions to reduce emissions might contribute to achieving the national well-being goals? You can read descriptions of the goals at https://futuregenerations.wales/about-us/future-generations-act.

The proposed plan should impact positively on the national well-being goals. In particular we would highlight goals 1,2,3, 5 and 7 (prosperity, resilience, health, cohesive communities and global responsibility, respectively) as being particularly beneficially impacted.

There will be a positive impact on prosperity due to wider ownership of energy generation, and a larger number of more distributed energy assets.

A positive impact on resilience as local energy production increases the resilience of those communities where it is generated.

Health levels in Wales will be improved due to lower emissions of damaging particulates, NOx and Sulphur Dioxide, which have been proven to cause long term health problems.

Communities will become more cohesive as the installation of new renewables increases and they transition away from older, polluting forms of energy. These changes will provide safer and more health-oriented communities, centred on the mutual benefits obtained from increasingly shared and decentralised energy.

Finally, delivering a more sustainable energy system and therefore reducing carbon emissions, clearly characterises Wales as a globally responsible country.

11. Do you have any other comments about this consultation?

The proposals set out an ambitious and welcome plan for a more sustainable energy future for the country. Delivering it will also deliver associated prosperity, health and equality gains for citizens and local communities.

80 Strand,
London WC2R 0DT
Tel: 020 7925 3570
http://www.r-e-a.net/