



RIIO Team

Network Price Controls

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The Welsh Government response to Ofgem's Consultation on the RIIO-2 Sector Specific Methodology

Introduction

The rapid decarbonisation of energy presents both enormous opportunities and challenges. In recent history, the provision of power, heating and transport fuel has been largely separate and centralised. This system is now undergoing significant change, with energy generation and delivery becoming more distributed in the communities and regions where the energy is used.

The boundaries between systems are also becoming blurred, with energy being converted into different forms to address a range of needs. In future, electric vehicle batteries may transfer electricity from workplace solar charging to supply homes during peak demand. Heating may be from hybrid heat pump and boiler systems using electricity or gas depending on which places least demand on the system at that time. We may see renewable electricity being converted to gas to be stored when demand is low. The gas could be used to generate electricity or to fuel heat or transport. This “multi-vector system” approach will be required to fully exploit the inter-relationships and synergies between the power, heat and transport sectors.

A multi-vector system could deliver the low-carbon energy transition at low cost to citizens, preserving security of supply even at peak demand. This affordable, high security, low-carbon energy transition offers an attractive low-carbon investment at both a large central and smaller local scale. New smart use of energy and storage will be driven by the powerful global digital revolution and be much more locally determined. Distribution and transmission networks will provide the grid balancing and security of supply. We will also see greater energy efficiency in buildings and appliances, and the use of new building fabrics turning buildings into power stations.

However, if the people of Wales are to welcome and support this change, it must increase wellbeing within Wales. We are establishing a strong policy and regulatory framework to ensure this happens.

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.

We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

Decarbonisation

The Well-being of Future Generations (Wales) Act 2015, the Environment (Wales) Act 2016 and the Planning (Wales) Act 2015 have put in place the legislation needed to secure the long-term well-being of Wales.

The Environment (Wales) Act 2016 sets a decarbonisation framework for Wales with a minimum of 80% reduction by 2050 and a supporting carbon budgeting framework. We recently announced our interim targets for decarbonisation and the first two carbon budgets, which are as follows:

- 2020: 27% reduction against the 1990 baseline
- 2030: 45% reduction
- 2040: 67% reduction
- Carbon budget 1 (2016-20): Average of 23% reduction
- Carbon budget 2 (2021-25): Average of 33% reduction

These targets and budgets provide a clear trajectory for Wales. 34% of Wales' emissions came from power generation in 2016 and the power sector will be important in achieving these targets.

In 2016, power sector emissions increased by 22% compared to 2015, driven by an increase in emissions from power stations, in particular from natural gas combustion. To meet our targets, power sector emissions must reduce to 37% below 1990 levels in 2030. At the same time, increased electrification of transport and heating is likely to increase electricity demand, in spite of progressively more efficient end use.

Last year we set ambitious targets for renewable energy generation in Wales. These targets are:

- to generate 70% of electricity consumption from renewable energy by 2030;
- one Gigawatt of renewable electricity capacity in Wales to be locally owned by 2030; and
- an expectation for new renewable energy developments in Wales to have at least an element of local ownership from 2020

Since 2010, electricity generation in Wales from renewable sources has trebled. In 2016 renewables generated an amount equivalent to 43% of the electricity consumed in Wales. Meeting the 70% target will require significant additional effort, both on energy efficiency and to bring forward additional generation to meet the increased need from the electrification of transport and heat.

The National Development Framework (NDF) provides Wales with an opportunity to consider the infrastructure needed for a multi-vector system in a holistic way. We are working to identify renewable resources in Wales, and the impacts of harnessing them, in order to inform the NDF and identify the most appropriate areas for generation to be encouraged.

We are also progressing work on our local ownership targets, to ensure they deliver the purpose of retaining benefit locally, without acting as a barrier to the new

generation needed to meet the 70% target. Research undertaken by the Centre for Low Carbon Futures, across a range of global city regions, shows significant export of economic value, with between 5.9% and 18% of GVA being exported from UK regions studied, simply by paying energy bills. Locally owned generation provides a strong opportunity to retain money in the local economy, contributing to prosperity. We have committed to publishing a policy statement on ownership of energy generation this year.

Welsh transmission and distribution grids experience challenges in connecting both generation and demand. Although limited consenting powers were devolved under the Wales Act, the UK Government plays the key role in decisions on grid in Wales. The plans for a transmission connection in mid Wales, to enable wind development set out in Planning Policy, were shelved following decisions by UK Ministers.

Officials are working with Ofgem, National Grid, the District Network Operators and developers, to gain a greater understanding of solutions to these issues in Wales.

Welsh Government enables action through a range of mechanisms in Wales. The Welsh Government Energy Service brings together our support for the public and community sectors, encouraging a place based focus. European funding supports marine energy, energy efficiency, communities and innovation. Our innovation support and Smart Living programme enable a range of academic/business/public sector collaborations which are actively delivering new approaches and technologies for a smarter energy future for Wales, securing benefits from the low carbon transition.

Ofgem must consider the views of the devolved nations in its management of the UK energy system. A sustainable energy mix in Wales will be different to that in England, due to our different natural environments, resource potential and strategic priorities.

Balancing, Smartening and Storage

Whilst the increase in distributed renewable energy provides the potential for a locally owned and more resilient system, intermittency has not yet been fully addressed. Balancing dispersed and intermittent sources across the UK system presents a new problem for the System Operator. Achieving the cost optimal route to distributed local networks will require new support mechanisms to encourage the necessary innovation.

We consider the UK Government should introduce incentives to ensure this happens more quickly. It should not look to fund this from energy bills. The previous network was built from the public purse and investment in networks has fallen significantly since privatisation. Public investment in network infrastructure is likely to be needed to deliver the scale and rate of change. This investment could potentially repay revenue to the exchequer over a long period.

To achieve the low cost and multi-vector approach described, the price control frameworks for gas and electricity network operators must ensure the two systems can develop together and appropriately inter-connect. The current separation inhibits

viable and innovative solutions and places a focus on cost at the expense of value to the consumer and the UK in general.

We urge Ofgem to recognise the additional social and economic value provided from the appropriate networks to enable effective operation of both large scale and distributed generation, and require their delivery within the control framework, in the same way as is required in Wales under the Wellbeing of Future Generations Act.

In summary, our experience in Wales is of a disparity between what market mechanisms are - or are not – delivering, and what is needed for the rapid, efficient and cost effective transition to a low carbon energy system. In our view the power system needs the necessary diversity to achieve affordable security in conjunction with transition to low carbon energy. The next framework must support this development.

We also agree with OFGEM's priority to protect the most vulnerable energy users by managing the cost of the transition. We expect the RIIO-2 methodology to consider the needs of vulnerable people, particularly those in poverty, who are most likely to be impacted by climate change, over the next thirty years within this five year framework. The mechanism must strike a balance between ensuring energy remains affordable and enabling investment in the infrastructure required to enable the low carbon transition.

We acknowledge the considerable challenge this presents for Ofgem. However, we cannot underestimate the importance of the future frameworks for both transmission and distribution in not just enabling but driving the transformation of the energy system, to drive the more prosperous low carbon economy to which Welsh Government is committed.