

RIO - a new way to regulate energy networks

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RIO

Britain needs rewiring in a smarter way to ensure secure and sustainable energy supplies for consumers. Ofgem has introduced a new performance based model "RIO" to set price controls to ensure consumers pay a fair price for this vital investment.

Delivering a low carbon economy

Ofgem's Project Discovery identified **£200 billion** that needs to be found in the next ten years to secure sustainable energy supplies and keep costs as low as possible for consumers. While the Government is addressing the problem of attracting enough investment to build new forms of generation through its Electricity Market Reforms, there still remains **£32 billion** of network investment which falls within Ofgem's remit.

This **£32 billion** needs to be put into perspective: for an industry currently worth **£43 billion**, it represents an increase of over 75 per cent in the value of Britain's energy networks, effectively double the rate of investment over the last 20 years.

Smarter networks

But investment is only half the story, and it is not just a case of replacing like with like. Electricity networks were originally designed to transport power from large centrally-located power stations to homes and businesses around the country.

In the future they will need to be reconfigured to manage electricity flows from a much larger number of smaller renewable plant which will connect to the networks. In gas

there is uncertainty about the long-term challenges facing the network and how it may have to adapt. Part of the gas network might be used to transfer carbon emissions for clean coal plants to storage facilities under the north sea.

For example, energy networks will have to become smarter to meet the following challenges:

- connecting more home based microgeneration, i.e. solar panels and small scale renewable generation
- connecting more small scale renewables and CHP to the low voltage distribution network
- extending the high voltage transmission grid to connect renewable generation, often located in remote regions or offshore
- balancing the electricity network to manage large amounts of renewable generation which by its nature is intermittent
- coping with the predicted increase in generation needed to deliver the the electrification of transport and heat
- gas networks will face further growth in the use of Liquefied Natural Gas and carbon capture and storage facilities at power stations, and
- in the long term with the electrification of heat, the level of demand for gas is uncertain.

Uncertainty

These radical changes to Britain's energy industry will create uncertainty, and therefore network companies need to engage more effectively with their customers – end users, generators, shippers and suppliers – and other stakeholders to understand their needs and how they may change over the coming years. Network companies will need to plan for the long term, anticipating and responding to future demand whilst at the same time keeping their options open where future demand is highly uncertain. The RIIO model seeks to promote this behaviour by rewarding innovation and setting a long-term framework to encourage a more flexible and forward looking approach from network companies.

Why do we need a new approach to network regulation?

It is the scale of the investment challenge and the need to deliver smarter, more innovative networks which has led Ofgem to conclude after extensive consultation with a wide range of interested parties that a radical change is needed to the price control regime.

Ever since privatisation, regulation has been delivered using the Retail Price Index (RPI-X) formula. This formula encourages efficiency within these companies by taking the retail price index (i.e. the rate of inflation) as its benchmark for the allowed changes in network prices and then subtracting X – an efficiency factor – from it.

The 'RPI-X' method has served consumers well by delivering lower network prices (a 50 per cent reduction in network costs since 1990), **£35 billion** of increased investment and significant improvements in network reliability since the companies were privatised twenty years ago.

RIIO leading network regulation

Ofgem's new performance-based RIIO model seeks to ensure consumers get the necessary investment in Britain's energy networks at a fair price. RIIO stands for Revenue=Incentives+Innovation+Outputs.

RIIO will ensure that network costs do not rise any more than they need to by financially punishing inefficient companies that fail to deliver for consumers. Companies will have to meet performance targets, set in consultation with consumers and network users: failure to do so brings automatic penalties.

For example, if a network firm delivers a project under budget it gets to keep some of that saving as extra revenue, and consumers also gain as the development costs less to build. The incentives also bite the other way, reducing a firm's revenue if a project costs more to deliver than expected. Ofgem will also have the option to involve 3rd parties in delivering large scale projects to ensure costs are kept as low as possible for consumers.

Impact on bills

Ofgem estimates that the RIIO model will ensure that the cost of achieving this investment will be cheaper than if Ofgem had continued with RPI-X; initial estimates suggest that it may cut the investment bill by **£1 billion**.

However, the need to invest will increase consumers' bills, with network charges accounting for around 18 per cent of gas and electricity bills. Ofgem estimates that the cost of delivering the **£200 billion** would put up energy bills by between 14 and 25 per cent. However, the Government is planning an ambitious programme of energy efficiency measures to help reduce the cost of this investment for consumers.

Features of RIIO

In order to attract efficient investment, Ofgem's new RIIO framework rewards companies that innovate and run their networks to better meet the needs of consumers and network users. It does this by setting longer eight-year price controls, offering incentives focused on delivering results, and expanding **£500 million** the Low Carbon Network Fund to encourage the growth of smart grids.

However some features of the previous regime survive, including retaining an upfront price control so companies know the revenue they are allowed to earn, adjustments for inflation and a return on the regulatory asset value.

Other key features of the RIIO model include:

- delivering outputs that reflect what consumers want from energy networks and meeting the needs of a sustainable energy sector;
- potential early completion of price control reviews for companies which innovate, deliver good service and produce well-evidenced, long-term plans;
- higher returns for companies that deliver, and deliver at a lower cost. However, poorly performing companies will face much more intrusive and heavy handed regulation and will face lower returns;

- having the option to give new entrants responsibility for delivery of some large infrastructure projects where this can help with timely and lower cost delivery;
- providing clarity to investors to ensure that network companies can raise finance needed in a timely manner and at a reasonable cost to consumers; and
- ensuring, through a long-term approach, that the cost of investment is spread fairly between today's and tomorrow's consumers, giving value for money.

Delivering outputs

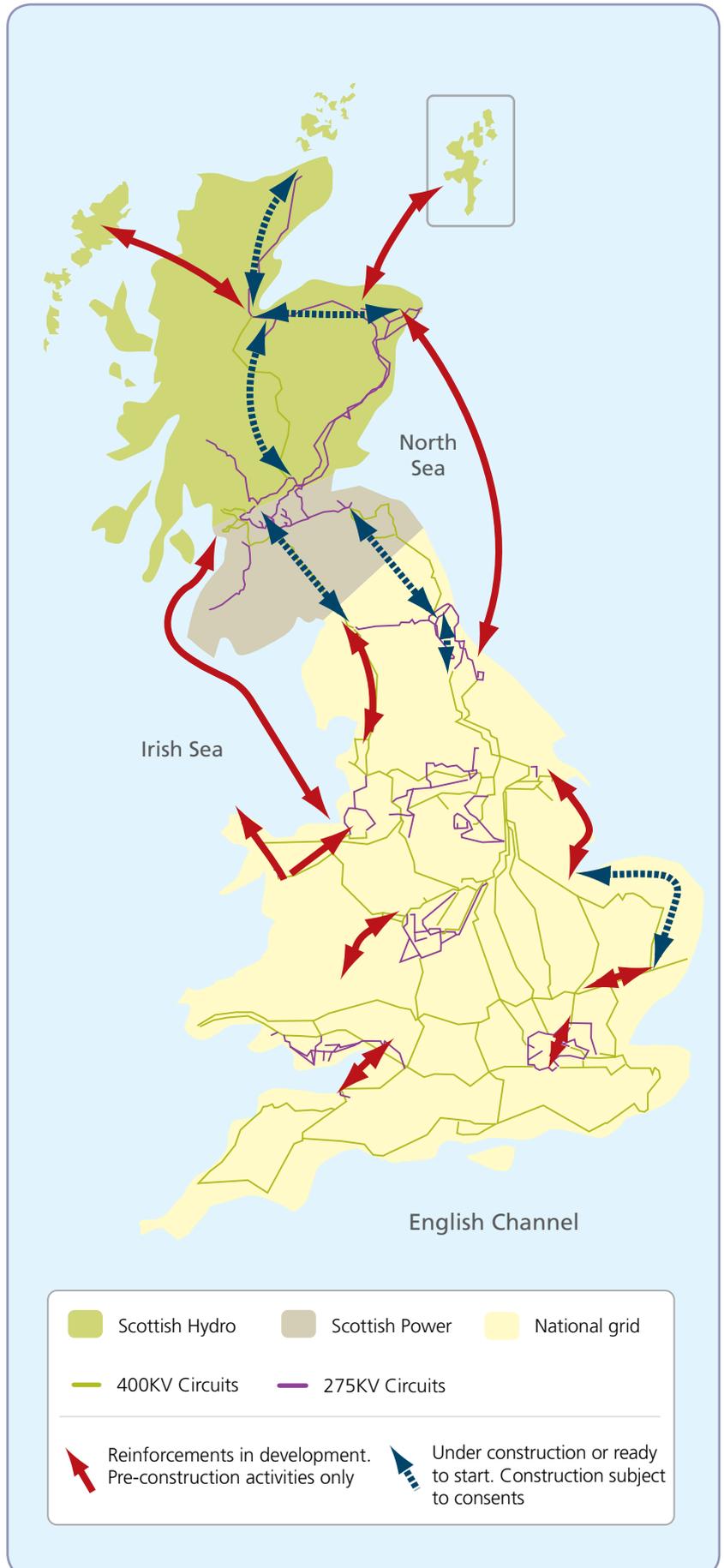
The overriding objectives of the RIIO framework for energy network companies are to encourage them to:

- play a full role in the delivery of a sustainable energy sector; and
- deliver network service with long-term value for money for existing and future consumers.

In order to deliver these changes the RIIO model moves to setting outputs that network companies are expected to deliver. The idea here is that these outputs act as a 'contract' between the network companies and their customers.

The primary outputs fall into the following categories:

- customer satisfaction
- reliability and availability
- safe network services
- connection terms
- environmental impact, and
- social obligations the network companies are required by government to deliver.



Kick starting innovation

Ofgem also proposes a significant extension of the **£500 million** Low Carbon Networks Fund (LCN Fund) agreed for the current 2010-2015 electricity distribution price control.

The fund was established to allow electricity distribution companies to trial the sort of technology and commercial arrangements that would be needed to deliver smart grids capable of supporting the growth of electric vehicles, or locally-based generation.

Under RIIO, a new innovation stimulus package would build on the LCN Fund, rolling it out to gas and electricity networks as well as allowing non-network parties the opportunity to bid in a competitive processes.

Investors

Investors will benefit from the new arrangements in a number of ways:

- the RIIO model is about setting out principles and providing commitment to these for future price control reviews; investors should be better able to understand how Ofgem is making decisions
- transparency for future treatment of the regulatory asset value
- clear, upfront rules and principles to provide certainty to investors, companies, ratings agencies and consumers on how the RIIO model will work
- the outputs and incentives system will provide clear opportunities for companies to earn higher returns if they operate and deliver efficiently and outperform their targets. It will also be clear to investors that companies will be penalised with lower returns if they under-perform, and
- clear principles set on when delivery of some large network projects could be open to competition, providing opportunities for other companies, and investors, to invest in special one-off developments bringing in innovation and more investment.

RIIO Timetable

The RIIO framework will first be implemented over the next two price controls for gas distribution and gas and electricity transmission. These are not due to start until 2013 and all proposals relating to these controls will be subjected to the usual open and transparent price control process. RIIO will be implemented for electricity distribution in 2015.

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