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## **Ofgem's £6.5 billion investment proposals to boost customer service and cut carbon from regional electricity networks**

- **A £6.5 billion investment proposal for 2010-2015 will deliver new and renewed regional networks, building on £5.2 billion set in 2005-2010**
- **Ofgem requires companies to deliver investment plans for 17 per cent less than their forecasts**
- **This package will add less than £4 a year, on average, to annual domestic electricity bills**
- **New £500 million Low Carbon Networks Fund for large-scale trials of advanced technology and commercial initiatives**
- **Better deal on customer service with penalties for companies who fail significantly to improve their connections service**
- **Ofgem's package tough but fair deal that will deliver for energy customers today and in the future**

Energy regulator Ofgem has unveiled proposals that will deliver better customer service from the regional electricity network companies, maintain high network reliability and pave the way for further carbon reductions. The package will add an average of less than £4 a year to today's annual household electricity bill.

The proposals include funding for vital upgrades of the networks that were largely built in the 1950s and 1960s, as well as strong incentives on the companies to invest for a low-carbon future. To protect customers from unnecessary price rises in today's difficult economic environment, Ofgem has demanded that the companies deliver their investment plans for 17 per cent less than they forecast and that they collectively cut their operating costs to 10 per cent below their forecasts.

The proposals, approved by Ofgem's governing authority, include ambitious new incentives and other measures to reduce carbon emissions. Companies will have strong incentives to connect up to 10GW of low-carbon generation to their networks over the next five years and improved incentives to cut network losses – currently at a level equivalent to the electricity used in about six million homes. Ofgem is proposing a new £500 million Low-Carbon Networks Fund to support large-scale trials of advanced technology including smart grids, and new commercial arrangements with customers. These advances will help the networks to accommodate growth in local generation, electric vehicle use and other developments anticipated in a low-carbon economy.

In return for higher prices Ofgem requires the companies to deliver an even better deal for customers. The companies will earn additional rewards for outstanding customer service but face penalties for poor service. And there will be tough new standards on new connections. Companies will be penalised and have to pay compensation unless they significantly improve their existing connections service.

Ofgem's proposals have been informed by consumer research and the views of a new panel of independent consumer representatives and experts – the Consumer Challenge group - which was set up by Ofgem to advise on consumer priorities.

Ofgem Chief Executive Alistair Buchanan said: "Our electricity network proposals are tough but fair and will deliver for energy consumers today and in the future. We have accepted the companies' investment plans but told them to deliver them at much lower cost. In return for higher prices we expect even better customer service and reduced carbon emissions. We are looking in particular for better service in new connections where the companies will face penalties should they fail to meet new standards. And we have proposed ambitious new incentives and funding to deliver the networks we will need in a low-carbon economy.

"We are demonstrating that our eye is on ensuring customers' needs are met without losing sight of the importance of value for money in difficult times. Our new customer standards package will bring a step change in electricity network services. And we are continuing a consistent approach to costs, quality and the environment that has brought real gains for twenty years while keeping in check the effect on the bill.

"Meanwhile the companies need to adapt to the needs of a low-carbon economy. Greater use of electric vehicles, home-grown generation and other developments will demand radical change in the way networks are designed, managed and operated. Measures like Ofgem's £500 million Low-carbon Networks Fund will enable the companies to explore new technical and commercial routes to a low-carbon future."

Ofgem regulates the allowed revenues and expenditure of the regional electricity networks through price controls that are reviewed every five years. The measures described here are from the Initial Proposals for our next price control review which will cover 2010-2015. We will consult on these over the autumn and will make final proposals in the winter

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## **Notes to editors and analysts**

1. The 14 Distribution Network Operators (DNOs) are regional monopolies. So customers rely on regulation by Ofgem, rather than competition, to get the service they require at a reasonable price. We set the total revenues that DNOs can collect from customers and we place incentives on DNOs to innovate and find new ways to improve their efficiency and quality of service. This is achieved through a price control which we set every five years. The current price control expires on 31 March 2010 and we are conducting a review (the fifth distribution price control review, or DPCR5) to set the controls for 2010-2015.

### **2. Effect on bills**

We are now in a period of investment and transformation to modernise energy networks for consumers, maintain high levels of reliability and meet climate change priorities. This began in 2005 with a 50 per cent increase in capital allowances for DNOs. Electricity customers currently pay about £3.6 billion a year for the distribution of electricity from the high-voltage national grid to homes and businesses. This accounts for about a sixth of domestic customer electricity bills, with a household paying typically about £67 a year for electricity distribution. Assuming no change in the cost of capital for DNOs - the amount Ofgem assumes the company will earn - and assuming too that the customer continues to carry the full cost of pensions deficits, the average annual increase in the distribution element of household electricity bills will be 5.3 per cent - £3.76 a year for the next five years. But this will vary considerably across the country (see table). Business customers' bills cover a huge range but distribution charges can account for about £2,000 in a medium-sized business's bill.

**Increases in each DNO's allowed revenues assuming no change in cost of capital and pensions cost**

<b>Network companies</b>	<b>Annual allowed revenue increase (per cent)</b>
CN West	4.8
CN East	4.9
ENW	7.2
CE NEDL	7.0
CE YEDL	5.6
WPD-South Wales	5.0
WPD-South West	6.3
EDFE LPN	7.0
EDFE SPN	8.6
EDFE EPN	5.1
SP Distribution	-4.3
SP Manweb	8.6
SSE Hydro	4.5
SSE Southern	6.9
Total	5.3

### 3. Financial Facts

Ofgem has not yet made a decision for DPCR5 on weighted average cost of capital (WACC) – the allowed return for shareholders and bondholders in an efficient company. For modelling purposes, the allowed revenues presented today as Initial Proposals assume the same WACC as DPCR4 (5.55 per cent vanilla) and that customers carry the full costs of pensions deficits. Ofgem has commissioned external advice from PwC who proposed a range of 3.5 - 5.6 per cent for vanilla WACC.

Later this year the companies will change the structure of their charges to make them better reflect the cost of serving different customer groups. This is important for climate change as it will, for example, reward local generation connecting to the distribution network. The companies are still working through the details and will publish illustrative charges in December.

<b>PwC proposed WACC range</b>				
	<b>Cost of Equity</b>	<b>Cost of Debt</b>	<b>Gearing</b>	<b>Vanilla WACC</b>
Max	8.5%	4.0%	55.0%	<b>5.6%</b>
Min	4.0%	3.1%	65.0%	<b>3.5%</b>

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**Cost allowances table for capital expenditure, operating expenditure and total expenditure (capital plus operating expenditure) for each DNO**

Company	Capital expenditure		Operating expenditure		Total expenditure	
	Ofgem proposal (£m)	Proposal vs company forecast	Ofgem proposal (£m)	Proposal vs company forecast	Ofgem proposal (£m)	Proposal vs company forecast
CN West	585	-18%	516	-16%	1,101	-17%
CN East	592	-18%	532	-5%	1,124	-12%
ENW	524	-20%	508	-18%	1,033	-19%
CE NEDL	363	-20%	346	-8%	709	-14%
CE YEDL	460	-22%	469	-4%	928	-14%
WPD S Wales	202	-14%	315	-5%	517	-9%
WPD S West	307	-15%	426	-12%	733	-13%
EDFE LPN	514	-17%	510	-7%	1,023	-13%
EDFE SPN	518	-20%	509	-10%	1,027	-15%
EDFE EPN	657	-21%	792	-16%	1,449	-18%
SPD	412	-8%	420	-16%	832	-12%
SP Manweb	565	-10%	453	-13%	1,018	-12%
SSE Hydro	210	-8%	313	-7%	523	-8%
SSE Distribution	611	-14%	698	4%	1,309	-5%
<b>Average</b>	<b>6,520</b>	<b>-17%</b>	<b>6,806</b>	<b>-10%</b>	<b>13,326</b>	<b>-14%</b>

\* All figures are post-IQI adjustments

- The Ofgem Consumer Challenge Group was set up in July 2008 to help Ofgem in ensuring that the domestic and business consumer view is fully considered during Ofgem's review of the electricity distribution price control. The group operates at arms length from Ofgem in a 'critical friend' capacity. The members are: Sharon Darcy (Consumer Focus council member); Trisha McAuley (Head of Services and Advocacy, Consumer Focus Scotland); Jeremy Nicholson (Director Energy Intensive Users Group); Gill Owen (Chair, Public Utilities Access Forum and Senior Research Fellow at Warwick Business School); Simon Roberts (CEO, Centre of Sustainable Energy); and Bob Spears (Chair, Utility Consumers Consortium).
- Ofgem is the Office of the Gas and Electricity Markets, which supports the Gas and Electricity Markets Authority, the regulator of the gas and electricity industries in Great Britain. The Authority's powers and duties are largely provided for in statute, principally

the Gas Act 1986, the Electricity Act 1989, the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002, the Energy Act 2004 as well as arising from directly effective European Community legislation.

## WHAT WE WANT THE ELECTRICITY DISTRIBUTION COMPANIES TO DO FOR THE ENVIRONMENT

**In our initial proposals for our Distribution Price Control review for 2010-2015, we have sought to drive regional electricity networks to play a more active role in tackling climate change**

Our Price Control proposals will make sure that Distribution Network Operators (DNOs) adapt their networks to handle the changes in their use arising from local generation and other low-carbon initiatives.

We are encouraging the DNOs to:

- reduce their own environmental impact;
- make it easier for customers to be more energy efficient and install other low-carbon measures over the next five years;
- make sure they adjust in time to the profound changes to network use that are anticipated over the next five years and beyond.

### **Environmental impact**

The most significant way DNOs can reduce their own environmental impact is by reducing the electricity that is lost on the distribution network. Electricity lost from their networks is equivalent to the amount used each year by six million average households and accounts for 1.5 per cent of Britain's total greenhouse gas emissions.

Other measures the DNOs could use include using low-emission vehicles and making less impact on the landscape by, for example, laying cables underground where customers are willing to meet the cost.

### **Making it easier for consumers to adopt low-carbon measures**

DNOs can make it easier for those looking to invest in low-carbon technologies. These initiatives are often being taken by small businesses or households who are not familiar with the energy industry and who cannot afford to buy in expertise. Our proposals require the companies to provide simple, non-technical information about how to connect to their systems.

### **Adjusting to profound changes in network use**

Low-carbon initiatives by energy users could mean that the networks need new technology and to make fundamental changes to the ways they invest in, and operate their networks. Examples of such initiatives include the take-up of electric vehicles, investment in local or household generation, and users who choose to reduce consumption to balance demand and production. While the DNOs expect the main effect to begin to be felt only after 2015, the likely extent of change and the time needed to install new equipment means they should act now to get a clear understanding of what they need to do and trial the new technologies they will need.

### **How will these proposals bring change?**

There is already a losses incentive as well as incentives on DNOs to connect and use local generation – called distributed generation (DG). We propose to retain incentives to lay cable underground as well as the DG incentive and to revise the losses incentive to make it more

effective. Companies will receive funding to invest in lowering losses on their networks and will be set tougher losses targets to make sure that these investments actually deliver.

We have proposed a new fund worth £500 million to encourage DNOs to form partnerships to try out new technologies and new commercial arrangements needed to serve the low-carbon economy.

We propose to place several new requirements on DNOs, including obligations to:

- report their carbon footprint on an annual basis;
- improve information available to DG developers; and
- review their existing contracts with DG to ensure that users' rights are clear and non-discriminatory.

There is nothing within the price control that prevents the DNOs from transforming their networks and businesses in time to serve low-carbon or energy saving initiatives. We have made it possible for DNO allowed revenues to adjust if, for example, a rapid take up of electric vehicles means the DNO has to reinforce its network more than anticipated or if they have to install smart devices to accommodate more load with the same network capacity. At the extreme, if the pace of change dramatically outstrips DNOs' plans and the price control does not provide DNOs with the revenues they need to adapt, then the DNOs will be able to approach Ofgem to reset the control.

### **Losses incentive**

The current losses incentive penalises a DNO if its losses are lower than a target based on historic losses on the DNO's system and rewards the company should it improve on the target. This is designed to incentivise the DNO to invest in low-loss equipment, to introduce low-loss operational techniques and to seek out theft, unregistered meters and other non-technical losses.

There are a number of problems with the current incentive, but essentially they revolve around the difficulty in getting an accurate measure of losses and the difference in the techniques the DNOs use in reporting losses. Our approach is to address these problems so that customers only pay, and DNOs are only rewarded for real improvements.

### **Low-Carbon Network Fund**

The £100 million a year fund will enable DNOs to try out new technology and new commercial arrangements to see what arrangements will best enable them to provide the service that users will need in a low-carbon economy. A condition of participating will be that DNOs will have to share what they learn with all the other UK energy distribution network companies.

Our initial proposals suggest that up to 90 per cent of project finance will be covered by the fund with DNOs expected to provide the balance. About £80 million of the fund will be allocated directly to each DNO to use for small projects. DNOs will have to compete for an allocation from the majority of the rest of the fund - £320 million. We would expect this to finance a few flagship projects. A panel chaired by Ofgem would award funding annually. Some £100 million of the total fund amount would be held back and awarded to participating DNO consortia to recognise schemes that have brought particularly valuable learning to the industry.

### **What will the Low-Carbon Network Fund, fund?**

A world where millions of householders producing electricity for home use and selling surplus output while more and more small wind farms and other renewable plant connect to the regional networks is in prospect. The network technology that has served us well for more than a century is not going to get the best out of the 21<sup>st</sup> century's advances in power generation.

The network operators need to be able to respond to shifting patterns of use and demand to keep the systems in balance and to give consumers access to the possibilities offered by new technology. This smart grid technology is available and its potential is immense.

Imagine being able to set your electricity use so the tumble dryer or dishwasher come on during the lowest price band. Or set the central heating to come on at a certain time and for the boiler - which is also a generator - to produce power to sell if the price offered by the energy supplier is above a certain rate. Further ahead you may be able to use the batteries in your electric car to sell power back to the grid when demand is high and you are not using it. You could reduce the cost of recharging the batteries by telling it only to recharge when prices are low. These are illustrations of how smart grids might enable electricity consumers to manage their usage or to set preferences for the supplier to make automatic adjustments based on those choices. And smart grids will create opportunities for new consumer services, energy management offerings and products not currently possible with today's infrastructure.

Smart grids can reduce the need for building more networks and enable network operators to improve their management of energy demand.

A recent trial in the UK has showed some immediate gains even in what was only a partial use of smart grid technology. The DNO identified where meters had not been installed correctly and were able to make sure that customers were paying for the electricity they were using. And the system gave swifter indications of where and when faults occur which enabled the DNO to improve customer service by fixing network faults faster without having to wait for customers to call them and tell them there was a fault.

The system gave the DNO better information to use in making decisions on investment in the network and planning.

The communications system used in the trial provided elements that would be needed in the longer term for upgrading to a truly smart grid. The communications hub could enable consumers to elect to allow the supplier to reduce their power consumption to help in balancing supply and demand on the wires. It could provide automatic control of small generators connected to the network and many other options for managing power usage.

These are the sort of possibilities smart grids offer but the DNOs will have to invest to establish what works and what doesn't. The Low Carbon Network Fund will offer opportunities for companies to start to take steps along the path that could take them to full-blown smart grids.

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