Electricity SO incentive scheme gets extreme make-over

Ofgem has just published final proposals for the first two year electricity system operator (SO) incentive scheme, which it intends to apply retrospectively from 1 April this year. The delay to implementing the new scheme reflects the major change in the approach being adopted and the development work currently being undertaken to achieve it. In this week's *Energy Perspective* we take a closer look at the proposals, which seem to represent a substantial improvement on the basis for previous schemes, although the development process is not yet complete.

Grand designs

An integrated single year scheme to incentivise National Grid to operate the system efficiently has been in place since the introduction of the New Electricity Trading Arrangements in 2001, but moving to a longer-term scheme has been on the cards for some time. In May 2009 Ofgem published an open letter arguing that longer-term incentives would encourage measures that would increase information transparency and reduce administration costs. But the obstacle of moving in this direction, which has been a long-running problem for the single year schemes themselves, is the difficulty of determining cost drivers and separating out the factors that National Grid can control and to what extent.

In earlier SO incentive schemes the potential impact of unpredictable external factors was dealt with through specific adjustment mechanisms. These include the Net Imbalance Adjustment, which adjusts for market length, to isolate the impact of specific cost drivers. But this did not capture all the relevant drivers, and as SO costs have risen and become more volatile (particularly for constraint costs), the need to get a better handle on what National Grid can and cannot control for the purposes of the incentive scheme has become more pressing.

Historic System operator incentive schemes

	Target IBC £m	Sharing factors		Cap £m	Floor £m	Payment to / from NGET £m	Actual IBC £m
		Upside (%)	Downside (%)				
2001/02	382	40	12	46.3	-15.4	46.3	263
2002/03	367	60	50	60	-45	48.6	286
2003/04	340	50	50	40	-40	32.2	281
2004/05	320	40	40	40	-40	12.2	289
2005/06	378	40	20	40	-20	-4.0	427
2006/07	No scheme agreed[7]						495
2007/08	430-445	20	20	10	-10	-1.2	451
2008/09	530-545	25	25	15	-15	-15	827
2009/10	586.43-616.43[8]	25	15	15	-15	15	417
2010/11	511.1-566.1[9]	15	15	15	-15	15	282[10]

Source: Ofgem

Because of these factors it has been difficult to judge whether the scheme target, termed the Incentivised Balancing Costs (IBC), and the scheme parameters have been set at reasonable levels. And this has not been made easier by the asymmetry of information between National Grid and the regulator. Ofgem has tried to counter this and increase transparency and customer engagement by changing the process for developing the proposals in 2007. Since then National Grid consults on its own proposals in the first instance—rather than Ofgem issuing proposals after discussion with National Grid—with the regulator forming a view on the proposals as revised and stakeholder responses.

The limits of the current were reached in March last year when, following a series of major changes that National Grid made to its forecast costs for 2010-11, Ofgem decided that its forecasting was not up to the task. It was concerned that National Grid was not considering the market fundamentals affecting the key drivers of its costs and that its models relied too much on historic data. A further problem was that National Grid was never incentivised to produce accurate cost forecasts and indeed it even had an incentive in talking them up.

Another one year incentive was implemented on that occasion instead of the two year scheme proposed by National Grid. But the regulator put in place a licence requirement for the company to co-operate with a comprehensive review of its incentive methodology and the models it uses.

Ground force

The review, conducted by National Grid, has been an in-depth exercise that has entailed extensive development of its modelling approach. This result is that the models that will be used to support the scheme have been re-developed to capture more accurately the drivers of its costs. In particular the modelling of energy costs has been improved, and the suite of models for constraint costs has also been replaced with a single one that considers the GB system as a whole.

A key improvement in the new methodology is that it should enable National Grid to take much better account of the impact of unpredictable and uncontrollable external factors affecting its cost base, which will reduce the scope for

windfall gains and losses under the scheme. This enhancement will be achieved by allowing the incentive target to be adjusted at the end of the scheme period for these factors. National Grid should then be better incentivised to manage the costs within its control. This will be particularly important in developing longer-term schemes where the risk is that uncontrolled factors can over time distort the outcome.

National Grid identified six different categories of Balancing Services Incentive Scheme (BSIS) costs around which to structure its assessment of underlying cost drivers. These included: generation availability and running; demand level and volatility; and transmission availability and capacity. Each cost driver could be assessed for suitability as an ex ante input—one set at the start of the scheme which would be used whenever the models were run—or ex post input—collated on a monthly basis and added into the model—based on its overall effect on BSIS costs.

One important advantage of this new approach is an improved level of transparency in that National Grid has developed (and is consulting on) three new methodology statements on the treatment of modelling inputs as well as its methodologies for modelling constraint and energy costs. To some extent this addresses the criticism that the modelling has been a "black box". But specific model parameters and the actual data used will not be made public because of the potential for interested parties to determine the SO's incentivised target costs and potentially influence its performance. This limitation has understandably created some nervousness, particularly when combined with the lack of track-record of the arrangements, but the regulator has satisfied itself that an appropriate balance has been struck.

To reflect the change in the methodology, particularly that the scope for windfall gains and losses is reduced, Ofgem has proposed to change the scheme parameters, with strengthened sharing factors, substantially increased (by £35mn to £50mn albeit over two years) caps and collars and a reduced deadband *(see chart left)*. It has decided to maintain a bundled scheme, rather than separating out separate elements as happens in gas, to give a perspective across all SO activities and enable National Grid to consider trade-offs between separate activities.

And, as noted above, an important feature of the new design is that no IBC target will be agreed prior to the start of the scheme, and it will only be known once the uncontrollable external factors are known and entered into the model. That said National Grid has estimated underlying BSUoS costs based on estimated ex post costs at £720mn and £653mn respectively in the two years.

Changing rooms

Ofgem is now confident that the methodology is robust enough to handle the uncertainties inherent in a longer period. But development work will continue. The regulator has proposed a number of further improvements, to be enforced by new conditions in National Grid's licence. These include improving its ability to forecast wind and its effect on Balancing Mechanism prices, aspects of network and transmission losses modelling and how it will procure black start services.

The current scheme will finish in time for the start of the next transmission price control in April 2013. Within this longer perspective, the current changes represent a prototype with Ofgem looking to develop incentives further in-line with the new price control principles.

Pimp my ride

While it may take time for the new scheme to gain the confidence of the industry, the incentive scheme looks in much better shape overall to adapt to future challenges. But there is one important qualification here.

While it is understandable that these changes have taken a while to pin down, the negotiating context has meant that there has been no reliable information on BSUoS charges for 2011-12 until 14 June. A longer-term framework may help visibility of these costs, but the current position is inadequate. National Grid should be obligated at all times to have a current year and year-ahead forecast of these costs and publish these on its website, and also to reconcile the implied IBC values to the forecasts. We invite Ofgem to consider this enhancement to the reporting framework embodied in the revised licence conditions it is presently finalising.