



**RIIO-ED1: REVIEW OF THE DNOs' BUSINESS PLANS**  
**ANNEX 3: INCENTIVES AND OUTPUTS**  
**A REPORT FOR CENTRICA**

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## EXECUTIVE SUMMARY

### *Purpose*

The electricity distribution network operators (DNOs) have submitted their business plans to Ofgem for the next electricity distribution price control.

Centrica, as a key integrated user of the electricity distribution network, has commissioned CEPA to provide our independent view and assessment of the DNOs' plans to help inform its response to Ofgem's consultation.

In this paper we analyse regulatory incentives, output delivery targets, the interactions with the DNOs' stakeholder engagement and willingness to pay analysis, and the implications for customer benefits and value for money.

### *Key findings – incentive principles*

Our analysis of historical DNO performance under incentives suggests that, overall, DNOs will earn significant rewards from key incentives that were set in DPCR5 and against this background a similar package of output incentive schemes, with increased power in some cases, is now being proposed for RIIO-ED1.

We therefore suggest that to avoid over rewarding the DNOs, Ofgem needs to consider carefully whether it has the necessary information and analysis to ensure that:

- the targets and the expected value of delivery incentive schemes applied in RIIO-ED1 will be correctly set; and
- it is appropriate to strengthen the power of certain incentive schemes, without having applied a certain level of scrutiny to the DNOs' business plans.

Where the DNOs have generally sought to implement changes in their distribution businesses to improve the quality of their service, we would of course expect them to be rewarded, consistent with an outputs based incentive framework like RIIO. However, there is a key customer value for money question of how long outturn performance improvements, against regulatory targets, should result in rewards for DNOs rather than being reflected in updated and tightened performance target levels, that share the benefits with customers.

Customers should, in our view, also only pay extra rewards (i.e. above required investor returns) for *greater than average* (rather than average) DNO delivery performance, and where improvements in performance are in areas where the DNOs have clearly demonstrated that their customers are willing to pay for improvements. This principle is reflected in Ofgem's adoption of an upper quartile level benchmark for cost efficiency, so we suggest should also be incorporated into delivery performance incentives. This means that where Ofgem is setting a package of incentives for ED1, in aggregate, we would *not* envisage that the expected value of incentives on an enduring basis should broadly be greater than zero.

From a customer perspective, if DNOs are already demonstrating good expected performance against delivery incentives, and have earned associated rewards, this would also suggest Ofgem needs to scrutinise the DNOs plans, to avoid a risk that a level of future resources are provided which are far greater than what customers are reasonably willing to pay for performance improvements, and could result in inequitable sharing of the benefits from investment and output delivery innovation between customers and the DNOs' investors.

We believe this means that the targets for incentives in ED1 do need to be carefully calibrated through DNOs' stakeholder engagement and customers willingness to pay analysis.

#### *Key findings – DNO stakeholder engagement and customer willingness to pay analysis*

From our high-level review of the business plans it is clear all the DNOs have made some attempt to justify their proposed output delivery improvements and future expenditure priorities through stakeholder engagement analysis.

A number of the companies have gone through a detailed process of stakeholder grouping, prioritised research and business plan consultations. Customer needs, combined with network requirements, have then been translated by the companies' into outputs, ED1 delivery strategies and, therefore, expenditure requirements.

The stakeholder engagement undertaken, and the improvements and deliverables proposed by the DNOs' across the six output categories, should be welcomed in helping to support the networks in delivering in the areas that stakeholders, in particular customers, have prioritised.

However, the companies' proposals and indeed some of the findings of their analysis do bring into focus the question of what DNOs (and indeed Ofgem) can reasonably expect customers to fund in terms of performance improvements, through base revenues, next to how targets should be set for incentive rewards relative to current levels of outperformance.

#### *Conclusions*

We would therefore encourage Ofgem to think carefully about the targets it sets for incentives in RIIO-ED1 based on the principles above and evidence from customer willingness to pay analysis for further performance improvements under certain output categories.

Based on our review of the business plans, it is clear that while all of the DNOs have made some attempt to justify their output delivery improvements according to these principles (i.e. customer willingness to pay and stakeholder engagement analysis), as with other aspects of the companies' plans, there are DNOs that appear to have more effectively taken account of these findings.

Our initial, high-level sweep of the DNOs' submissions in this area, informed by discussions with Centrica on its ongoing engagement with the DNOs, has allowed us to indicate potentially the best performing DNOs in this area. Given the findings of this analysis, and how it is reflected in DNOs output and expenditure plans, are what we would consider to be a key element of any well justified business plan, these findings may also be useful in the more general fast-track discussion.

# 1. INTRODUCTION

## 1.1. Context

The electricity distribution network operators (DNOs) have submitted their business plans to Ofgem for the next electricity distribution price control. The price control will set the outputs the DNOs need to deliver for their customers and the associated revenues they are allowed to collect for the eight-year period from 1 April 2015 to 31 March 2023. It is the first price control review in the electricity distribution sector to be conducted under Ofgem's new RIIO model (Revenue = Incentives + Innovation + Outputs) and is, therefore, referred to as RIIO-ED1.

Before completing its initial assessment of the business plans, which will impact on the form of assessment that Ofgem expects to apply to individual DNOs over the course of price review, Ofgem has asked for stakeholder views on the plans.<sup>1</sup> It has asked stakeholders to feedback on a number of areas, including whether:

- the overall quality of the plans are comprehensive and well-justified, and provide clear expectations of what the DNOs will deliver in RIIO-ED1;
- the plans reflect what customers value, and accommodate the views of final consumers, suppliers and investors from stakeholder engagement; and
- the DNOs have identified and justified their expenditure requirements to deliver their output proposals over the eight year price control period, including the package of proposed finance measures.

Centrica, as a key integrated user of the electricity distribution network, has commissioned CEPA to provide our independent view and assessment of the DNOs' plans to help inform its response to Ofgem's consultation.

## 1.2. Remit

We have been asked to focus on a number of key price review areas, such as the DNOs' proposals on financial parameters, the interactions between incentives, DNO outputs and expenditure plans, and whether the DNOs plans overall, appear sufficiently well-justified to qualify for the rewards of being "fast-tracked" through the RIIO-ED1 review process. In this paper we analyse regulatory incentives, output delivery targets, the interactions with stakeholder engagement and willingness to pay analysis, and the implications for customer benefits and value for money.

## 1.3. Document structure

The remainder of this paper is structured as follows:

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<sup>1</sup> Ofgem (2013): 'RIIO-ED1: Electricity Distribution Networks Operators' (DNOs) business plans – publication, views and next steps'

- Section 2 reviews the RIIO-ED1 outputs and incentives package;
- Section 3 then analyses the DNOs performance under selected incentives in DPCR5;
- Section 4 comments on the DNOs' business plan analysis of required outputs, including their submissions on stakeholder engagement and willingness to pay analysis; and
- Section 5 provides conclusions and recommendations.

## 2. PROPOSED RIIO-ED1 PACKAGE OF OUTPUTS AND INCENTIVES

In this section we briefing review the RIIO-ED1 incentives package, how it is changing from DPCR5 and the implications for network customers.

### 2.1. Summary of package

Table 2.1 below summarises the ED1 package, focusing on the delivery incentives which carry a financial reward, and which Ofgem proposes to apply in addition to the efficient delivery incentives that operate through the IQI. It also compares RIIO-ED1 with DPCR5 incentives, highlighting any expected changes from the current price control package.

*Table 2.1: Summary of ED1 outputs and incentive package*

Primary output category	Proposed outputs and incentives	Incentive strength/rate	Comparison to DCPR5?
Safety	Compliance with HSE legislative and regulatory framework	n/a	No change
Environmental impact	Reputational incentives <sup>2</sup> and a discretionary reward for efficient and innovative losses reduction	Discretionary	Replacement DPCR5 losses incentive
Customer satisfaction	Broad Measure of Customer Satisfaction (BMCS) as introduced at DPCR5 <sup>3</sup>	+/- 1.5 per cent of base revenues	Increase in incentive strength
Social obligations	Various measures to improve information and engage with customers linked to the BMCS	Linked to BMCS	Increase in incentive for stakeholder engagement
Connections	Guaranteed standards, customer satisfaction survey, time to connect incentive and ICE <sup>4</sup>	+0.9 and -0.5 to -1.4 per cent of base revenues	Increase in incentive strength
Reliability and availability	Continue with Interruption Incentive Scheme (IIS) <sup>5</sup> and other measures (such as mechanism for worst served customers)	+/- 2.5 per cent of base revenues	Maintain existing incentive arrangements

<sup>2</sup> For example, reporting on business carbon footprint and broad environmental impact.

<sup>3</sup> The BMCS has three components: i) a customer satisfaction survey that covers connections (+/- 0.5 % of annual base allowed revenue), interruptions (+/- 0.3 % of base revenue) and general enquiries (+/- 0.2% of base revenue); ii) a complaints metric (with a maximum penalty of 0.5 % of base revenue); and a stakeholder engagement incentive of up to 0.5 per cent of base revenue).

<sup>4</sup> The time to connect incentive targets are expected to be based on performance data captured in DPCR5 (and involve a reward only). The ICE is a penalty based scheme which requires each DNO to submit evidence of how they have identified, engaged with and responded to the needs of major connection customers.

<sup>5</sup> DNOs are incentivised on the number and duration of network supply interruptions versus a target derived from benchmark industry performance. Separate planned and unplanned targets are proposed with planned target setting set at the annual average level of planned interruptions and minutes lost over the previous three year period.

Table 2.1 shows that there are many similarities between the ED1 and DPCR5 packages. For example, Ofgem is proposing to retain (and indeed strengthen) the customer satisfaction incentive (the Broad Measure of Customer Satisfaction (BMCS)) introduced at DPCR5 and the existing interruptions incentive scheme (IIS).

There are also changes being proposed. For example, the existing losses incentive will be replaced with a discretionary reward system for RIIO-ED1, based on an ex post assessment of efficient and innovative loss reduction initiatives.<sup>6</sup> For larger connection types, Ofgem has also proposed to introduce a new Incentive on Connections Engagement (ICE) which will require the DNOs to engage with and understand the requirements of different customer groups.

## **2.2. Implications for customers**

From a customer perspective, these incentives will have various impacts. In theory they should incentivise the DNOs to deliver the outcomes and outputs which they require from their electricity distribution networks, a core objective of RIIO. Incentive payments will also affect cash-flow volatility and, therefore, potentially customer charging volatility.

Whether they offer value for money for the customer, however, will depend on whether they genuinely reward good network performance and customers' value that performance or increase in output delivery performance.

We would argue that the *expected value* of potential incentive rewards across the DNOs should be broadly zero if genuinely good performance is being incentivised (with the exception of safety related output measures that involve delivery of guaranteed legislative and regulatory standards set by the Health and Safety Executive (HSE)). Where that is not the case, delivery incentives on aggregate arguably contribute to an overly generous regulatory package and expected levels of returns given the risks that are involved with delivery.

We can look to the observed outcomes under the existing DPCR5 incentive schemes to help with answering some of these questions, as well as any evidence of DNOs having demonstrated customer willingness to pay for further output delivery improvements. This is the focus of our analysis in the following sections of this paper.

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<sup>6</sup> The DNOs will be required to set out how they will reduce losses in their business plans, and then publish annual reports on what loss reductions they planned versus what they have achieved.



### **3. DNO PERFORMANCE UNDER SELECTED DPCR5 INCENTIVES**

#### **3.1. Introduction**

While there is limited published information on incentive performance during DPCR5, some data is available on the DNOs' historical performance against the more material existing delivery incentives, including the IIS (which falls under the reliability and availability output category) and customer service based incentives (part of the BMCS and customer satisfaction output category).

In this section we review each of these incentives in turn, before considering the wider implications of observed DNO incentive performance for RIIO-ED1.

While we are supportive of incentives for network innovation and output delivery improvements, the benefits need to be shared equitably between current and future customers, and the DNOs' investors. This would imply that Ofgem's assessment of baseline costs, and incentive target levels, needs to be carefully calibrated to account for the expected benefits.

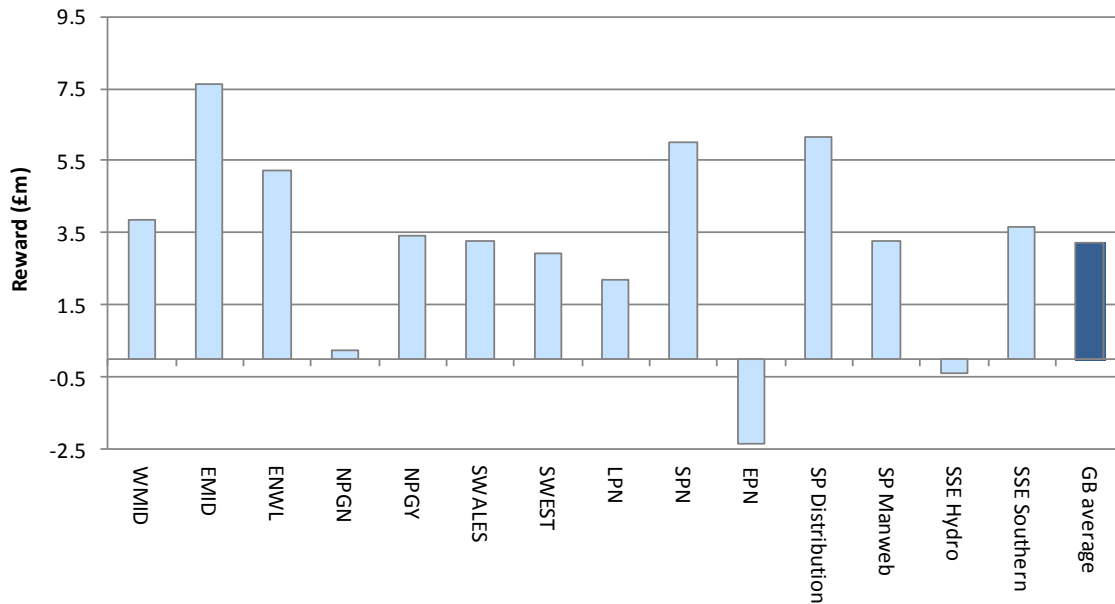
#### **3.2. Interruptions incentive**

Starting with the IIS, in 2010/11, on average DNOs beat their DPCR5 customer interruptions (CI) and customer minutes lost (CML) targets by 9 per cent and 11 per cent respectively. Over a longer period from 2002-03 to 2010-11, the DNOs' CI and CML performance has improved by 17 per cent and 25 per cent respectively.

These results would suggest that the DNOs have responded positively to the incentives which Ofgem has set for improved network reliability. As performance better than the target leads to a reward for the DNO, the results also mean that (for 2010/11) the majority of the DNOs will also have generated additional returns from the interruptions incentive.

At the DPCR5 incentive rates, we estimate the value of rewards for 2010/11 were in excess of £45m (2007/08 prices) across DNOs, or approximately £1.60 per customer. However, as Figure 3.1 shows, while the DNOs have gained on average, it is notable that some have done substantially better than others.

Figure 3.1: DNOs performance under the interruptions incentive for 2010/11



Source: CEPA

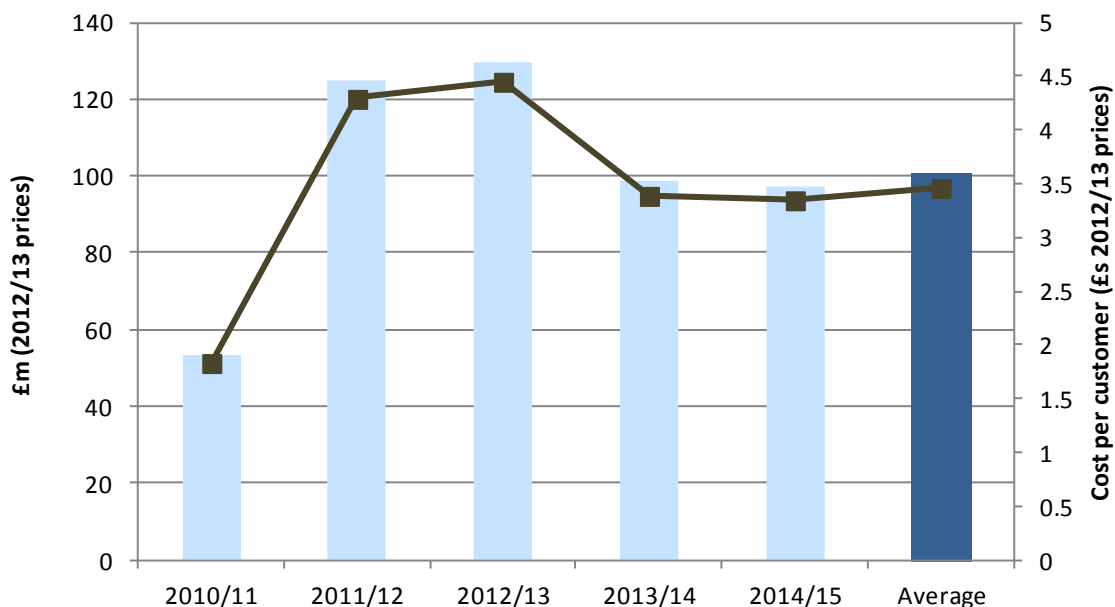
For the majority of the DNOs, the CI and CML targets are fixed at similar values for the duration of DPCR5, although some of the DNOs have been set falling targets, which should make earning rewards more difficult towards the end of DPCR5.

Nevertheless, on the evidence so far from 2010/11, there is no reason to believe that a majority of the DNOs will not be able to continue to beat the interruptions incentive targets, which, as the analysis above demonstrates, can command a significant amount of money from customers.

We can seek to estimate the extent of this outperformance by reviewing the DNOs' forecasts of future network charges, and by forming scenarios of future IIS targets and the DNOs expected performance against those future targets.

Figure 3.2 below shows projected IIS rewards (for all DNOs) for the last four years of DPCR5 (as provided by Centrica). In this case, the projections are based on the data published as part of the DNOs' network use of system charge forecasts (DCP066 reports).

Figure 3.2: Projected payments under the IIS for DPCR5



Source: Centrica and CEPA analysis

Based on these projections, the rewards from the IIS could be more than £100m by 2014/15 (in 2012/13 prices) or approximately £3.44 per customer.

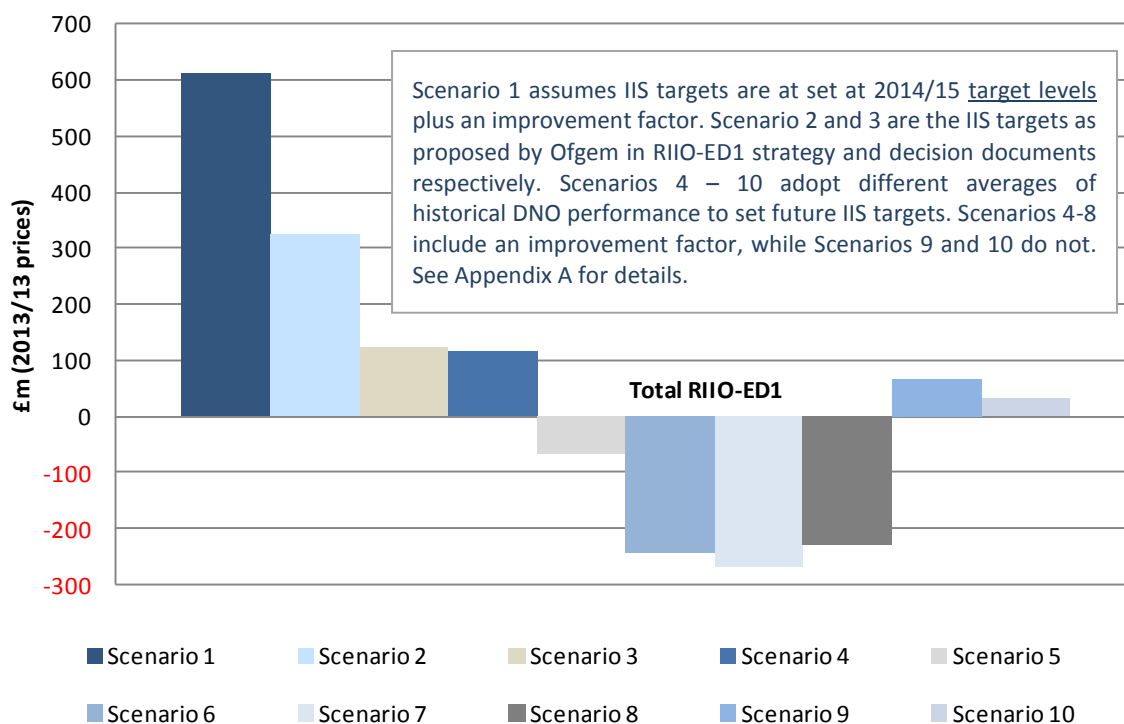
Looking forward to RIIO-ED1, we can also estimate the level of rewards that might be available to the DNOs in the forthcoming price control period, by adopting assumptions of the methodology that will be used by Ofgem for setting future targets for the IIS and the level of performance improvement it also accommodates within the targets.

To do this, working with Centrica, we have developed a set of scenarios which reflect different approaches which could be used to set the IIS targets in RIIO-ED1 (see Appendix A) and different assumptions of the level of future improvement in interruptions performance that are built *into* the regulatory targets set by Ofgem.<sup>7</sup>

Figure 3.3 below then shows the possible IIS rewards (for all DNOs) based on each of the target setting scenarios described in Appendix A and estimates of DNO *outturn* performance under the IIS performance measures, based on published IIS outturn performance data by Ofgem (available for 2010/11) and DNO DCP066 reports.

<sup>7</sup> For the scenarios where performance improvement is reflected in the targets (see Appendix A) we adopt an assumption of 1.5% improvement for CML and 1.0% for CI.

Figure 3.3: Projected payments under the IIS for RIIO-ED1



Source: Centrica and CEPA analysis

The analysis in Figure 3.3 would indicate that IIS targets based on similar benchmarks as the close-out year of DPCR5, could result in the DNOs being able to earn significant rewards from the IIS in RIIO-ED1, even with an improvement factor built into the target.

While the targets that Ofgem has proposed in the ED1 strategy decision could reduce the total projected quantum of outperformance, it is only when the targets begin to reflect DNO outturn historical performance that companies would need to make further improvements to continue to receive rewards under the scheme.

Firstly, the analysis would indicate that Ofgem (although it has already set out a proposal in its March Strategy Decision) does need to look quite carefully at future IIS targets, and whether it is appropriate for DNOs (given the benefits that will have received in DPCR5), to continue to receive IIS rewards without making further improvements against DPCR5 performance levels. Customers appear to have funded and rewarded DNOs (in DPCR5) for improvements leading to current performance levels. Should the targets not now be recalibrated to reflect the a new normal baseline position for the industry?

It also does beg the question of on what basis future incentive rewards should be provided to DNOs for continued IIS improvements?

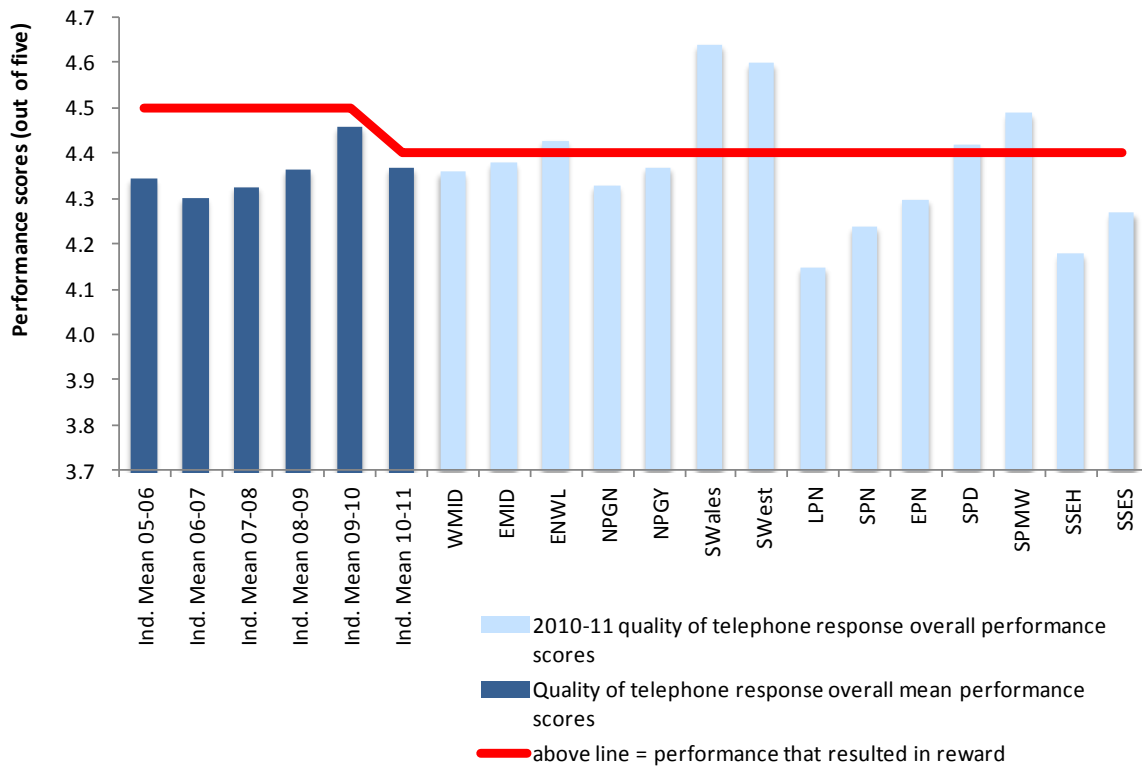
We would suggest that if the DNOs business plans clearly demonstrate the importance to customers of reliability and availability improvements from current industry performance levels, there could be

a rationale, although even then there is a debate whether average performing DNOs, relative to frontier performing companies, should be eligible for further incentive rewards.

### 3.3. Customer service

Four of the DNOs (see Figure 3.4 below) also received a reward in 2010/11 under the telephony incentive scheme. This measure is derived from monthly customer satisfaction surveys but will be replaced by the BMCS from 2012/13 to cover two additional metrics, including customer complaints and an assessment of stakeholder engagement.

Figure 3.4: Customer interruption performance as a percentage of DPCR5 2010/11 targets



Source: Ofgem

While the total value of the telephone incentive scheme is currently much lower than the DPCR5 IIS, Table 1.1 indicates that with the introduction of the BMCS from 2012/13, the rewards that are available to the DNOs from customer service are expected to increase in RIIO-ED1 (the strategy decision proposes +/- 1.5 per cent of base revenue).

We would suggest that performance in 2010/11 under the telephone incentive scheme, indicates a customer satisfaction incentive that has been reasonably well set, such that the rewards, while on average greater than zero, are not overly excessive, and only reward genuinely good DNO performance. In the case of the telephony incentive, in a majority of cases DNOs are performing acceptably and, therefore, received no reward.

### 3.4. Implications

The analysis above, albeit based on limited published data and a sample of DNO delivery incentives, at least indicates that Ofgem needs to consider very carefully the targets that it proposes for the key ED1 delivery incentives, particularly the IIS, and how performance against incentives is accommodated in the ED1 expenditure baseline assessment.

While symmetry (potential for DNO rewards and penalties) and a principle of zero expected value from incentives may be reflected in the incentive design<sup>8</sup>, outturn rewards from incentives will of course also depend on the extent to which Ofgem chooses to reflect revealed outturn DNO performance in DCPR5 in future incentive targets.

Analysis of available data on DPCR5 to date, suggests that the expected value of a number of the key DNO incentive schemes, if not carefully calibrated by Ogem, could be well in excess of zero (on average) across the DNOs, which would provide the companies with the ability to earn an *expected* return that is higher than their allowed cost of capital.

Of course, part of the observed outperformance under many of the delivery incentives can be put down to good performance, and a positive response by the companies to the regulatory incentives that were given to them. Where the DNOs have generally sought to implement changes in their businesses to improve the quality of their service, we would expect them to be rewarded, consistent with an outputs based incentive framework.

But as we have suggested in previous reports for Centrica, including submissions at DPCR5, where Ofgem is setting a package of incentives, in aggregate, we would *not* envisage that the expected value of incentives on an enduring basis should broadly be greater than zero. Delivery incentives should not be a way in which DNOs, in aggregate, obtain substantially higher returns without Ofgem explaining explicitly how it has taken account of this when setting the cost of capital.

This principle we believe has important implications for target setting in RIIO-ED1. For example, assuming the level of rewards are as high as those projected above, this would seem to raise key regulatory policy questions on:

- How long the DNOs should reasonably be allowed to retain observed rewards from outperformance from some of the key incentive schemes?
- Whether the strength of the incentives really reflect customers willingness to pay for the levels of output delivery improvements?<sup>9</sup> And
- Linked to both previous questions, whether RIIO-ED1 should be the price control period where incentive targets (e.g. the IIS) are tightened to ensure that on aggregate the expected value of delivery incentives are not significantly positive?

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<sup>8</sup> Which Table 2.1 from the previous section, and Ofgem's RIIO-ED1 Regulatory Return on Equity (RoRE) analysis from the Strategy Decision, would indicate is at least partially the case.

<sup>9</sup> Which we would expect to be demonstrated through the DNOs' business plans.

From a customer perspective, if DNOs are already demonstrating good expected performance against delivery incentives, and have earned associated rewards, this would suggest Ofgem needs to scrutinise the DNOs plans, and future incentive targets, to avoid a risk that a level of future resources are provided which are far greater than what customers are reasonably willing to pay for performance improvements.

These questions are difficult to answer without scrutinising in detail the DNOs plans, their projected output delivery performance, stakeholder engagement and projected expenditure requirements.

What we can observe from an initial, very high-level, review of the plans, is that at least at an industry level (see our accompanying report on cost efficiency and expenditure) average annual totex for the DNOs is essentially flat between DPCR5 Final Proposals and the ED1 business plans.

On the assumption that incentive targets are tightened, to reflect the improvements in the level of DNO performance in DPCR5, this could suggest that customers may stand to benefit from the proposed ED1 incentives, provided the DNOs maintain their current levels of output delivery and performance, and are incentivised to deliver with similar or less resources and expenditure as reflected in Ofgem's baseline assessment of efficient costs.

The key decision which Ofgem must make is whether there is sufficient information and understanding of historical performance in DPCR5, and the DNOs' business plans, to effectively calibrate an incentives package and baseline view of costs, that will allow it to reach a fast-track decision that can be expected to deliver customer value for money.

We would suggest that this question can be partly addressed through a review of the stakeholder engagement and customer willingness to pay analysis that the DNOs have now submitted as part of their business plans. Given that the findings from this analysis, and how it has been reflected in DNOs output and expenditure plans, are what we would consider to be a key element of any well-justified plan, this review is also important to the more general fast-track discussion.

We therefore briefly review the stakeholder engagement and willingness to pay analysis undertaken by the DNOs and any implications this may have for the general calibration of outputs, associated incentives and the general fast-track decision, in the section which follows.

## 4. OUTPUTS, STAKEHOLDER ENGAGEMENT AND WILLINGNESS TO PAY

Following from the analysis in the previous section, in this section we briefly summarise the key points we have drawn from the DNOs business plans on customer outputs, focusing on companies' stakeholder engagement strategies and willingness to pay analysis.

### 4.1. Key findings

From our high-level review of the business plans it is clear all the DNOs have made some attempt to justify their proposed output delivery improvements and expenditure priorities through engagement analysis. A number of the companies have gone through a detailed process of stakeholder grouping, prioritised research and business plan consultations. Customer needs, combined with network requirements, have then for most companies been translated into outputs, ED1 delivery strategies and, therefore, expenditure requirements.

Network reliability, affordability and customer service are identified as key stakeholder priorities for what DNOs need to deliver in ED1 which we note are closely associated with the financial incentive schemes reviewed in the previous section. The importance of value for money is also a recurring theme across all of the DNOs plans.

Within key output categories of reliability, connections and customer satisfaction, a number of DNOs have tried to translate this stakeholder feedback into proposals for improvement in performance and future expenditure requirements. For example, ENW states in its plan that:

*“We will improve Reliability (measured by Customer Interruptions) and Availability (measured by Customer Minutes Lost) by 20% of their 2012 levels by 2019.*

*We can only deliver this improvement if we maintain the underlying stability and resilience of our network. We therefore need to invest in some additional deliverables which address network risk and resilience.”<sup>10</sup>*

From a customer satisfaction perspective, ENW have also set a goal of achieving a score of 85% against Ofgem's BMCS by the start of the RIIO-ED1 and propose to main or improve this level of performance for the duration of the price control period.

WPD are proposing to reduce the average number of times its customers lose power supply by 13% (reliability) and reduce the length of time its customers are without power by 20% (availability). It also proposes to reduce the overall 'average time to connect' by 20% and to be the best DNO group in the Ofgem BMCS. It has highlighted the importance of investment priorities in areas such as network investment to support these improvements.

SP's business plan highlights similar areas of focus for RIIO-ED1, outlining that their stakeholders have prioritised areas such as:

- managing an aging network to maintain safety standards;

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<sup>10</sup> ENW (2013): 'RIIO-ED1 Business Plan – Executive Summary', p.6.

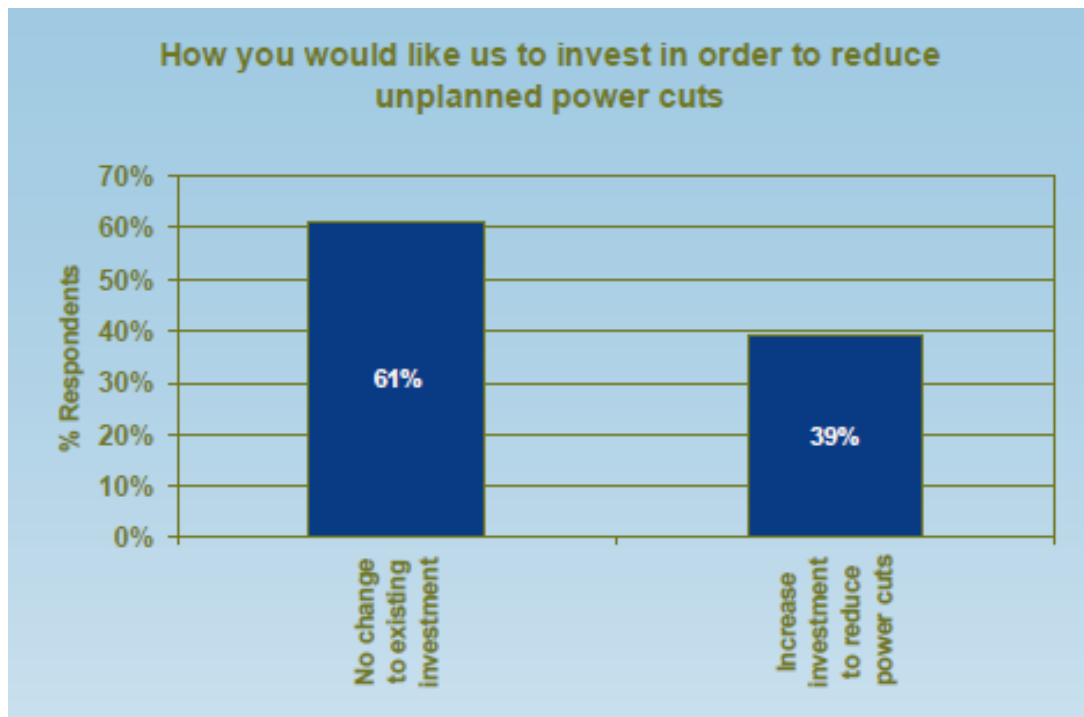


- reducing the number and length of power cuts;
- improving customer service;
- improving service to poorly served customers;
- preparing the network for low carbon technologies; and
- delivering value for money.

In key areas such as reliability and availability, the SP plan sets the goal that by 2023 they will have reduced the number of customer power cuts by 7%, the average length of those power cuts by 16% and the time that its average customer is without electricity by 25%.<sup>11</sup>

SSEPD has set out twelve commitments to its customers, including reducing the number of power cuts by 5% and their duration by a quarter. For example, if a customer does experience an unexpected power cut, it has also set the goal of informing the customer of how it is addressing the issue within ten minutes. These commitments have been developed through various forms of stakeholder engagement (including interviews, surveys and consultations) on whether it should be investing in these activities (see Figure 4.1 below as an example for interruptions).

Figure 4.1: SSEPD stakeholder feedback – responses on interruptions



Source: SSEPD Business plan

<sup>11</sup> SP Energy Networks (2013): ‘RIIO-ED1 Business Plan – Executive Summary’, p.2.

UKPN's plan states that its stakeholder engagement has highlighted the importance of:

- increased transparency around reporting, decisions and processes (particularly in connections) of its networks business;
- improved customer service particularly in connections (including support for the development of a contestable customer connections market);
- transitioning to smart grid which has been reflected in the business plan taking an incremental smart solution implementation strategy;
- infrastructure development, including whether there is sufficient capacity to accommodate future customer connection requests in certain areas of the network; and
- efficiency of cost delivery, including more comparative information on the relative efficiency of UKPN networks in delivering outputs compared to other GB DNOs.

In key financial incentive areas, such as reliability and availability, UKPN are targeting improvements in performance, for example 7% improvement in CIs and 8% improvement for CMLs for its LPN network, with even larger performance improvements for its EPN and SPN networks.

As part of its stakeholder engagement process, UKPN has also undertaken a quantitative willingness to pay survey (see discussion below) which has helped the company to identify its customer priorities outlined above. UKPN also note that:

*“It is noticeable however that in absolute terms customers are not prepared to pay significantly more on top of their existing bills for enhanced services and we have taken affordability into account in our Business Plan and in our proposed revenues which include a real terms price cut for customers.”<sup>12</sup>*

Finally Northern Powergrid highlight improved reliability, increased resilience to flooding, faster connections, improved communications, more support for the vulnerable in its communities and reduced risk of environmental damage, as particular priorities that it has drawn from its stakeholder engagement. It also highlighted that while its stakeholders were keen to see the company invest in its workforce, keeping control of costs was a key message they received from the process:

*“In one particularly striking piece of research, we asked over 1,000 stakeholders what they would tell us to do with an extra £10 p.a. The answer that received the largest allocation, by some margin, was to refund the money. Over the whole sample, that accounted for £3.19 of the £10, with the rest being allocated to a wide variety of service improvements.”<sup>13</sup>*

Northern Powergrid's stakeholder research report then notes that: *“the remaining £6.81 being split between 19 investment options. Invest in flood defences at substations at risk of flash flooding’ (£1.17), ‘Replace network equipment in worst served areas to reduce the number of power cuts experienced’ (£0.65) and ‘Create*

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<sup>12</sup> UKPN (2013): ‘RIIO-ED1 Business Plan – Executive Summary’, p. 35

<sup>13</sup> UKPN (2013): ‘RIIO-ED1 Business Plan – Executive Summary – introducing ourselves and our plan’, p. 4

*opportunities for apprenticeships and for trainee engineers' (£0.54) were the three areas which respondents wanted to receive the greatest amount of investment.”<sup>14</sup>*

## **4.2. Implications**

The stakeholder engagement undertaken, and the improvements and deliverables proposed by the DNOs’ across the six output categories, should be welcomed in helping to support the networks in delivering in the areas that stakeholders, in particular customers, have prioritised.

However, the companies’ proposals do bring into focus some of the conclusions and questions from the previous section of what DNOs (and indeed Ofgem) can reasonably expect customers to fund in terms of performance improvements through base revenues, next to how targets should be set for incentive rewards relative to current levels of outperformance.

If the DNOs are forecasting further performance improvements in areas such as reliability and availability (linked to financial rewards under the IIS), are also requesting funding to invest and deliver these improvements *and* have received rewards under DPCR5 incentives from performance improvements, it does bring into question whether customers (while still prioritising areas such as reliability and availability) will receive value from money from these improvements unless the targets are carefully recalibrated to reflect current industry performance levels.

This is an area where we believe customer willingness to pay and customer prioritisation research potentially becomes important in helping to understand the overall justification of the companies’ plans and the required calibration of delivery incentives.

Northern Powergrid, for example, has undertaken customer prioritisation research, focus groups on key issues (e.g. customer service and distributed generation), events and workshops, online activities and bulletins (as have the other DNOs). However, it has also then linked this customer prioritisation rankings to overall willingness to pay metrics (as highlighted above)

WPD and UKPN appear to have taken this a step further with relatively detailed qualitative and quantitative customer willingness to pay analysis to support their investment priorities.

For example, WPD’s analysis, suggests that domestic customers’ willingness to pay for different levels of service ranges from £0.38 to £3.27 (in 2023). The top priority areas identified (attracting willingness to pay scores greater than £2.00) are power cuts, duration of power cuts, undergrounding and replacing leaking cables.

UKPN’s research suggests that customer priorities are strongly focused towards investing in infrastructure to:

- detect loss of supply;
- allow cheaper and quicker connection of new low carbon generators of electricity;
- to support take up of low carbon electric heating technologies; and

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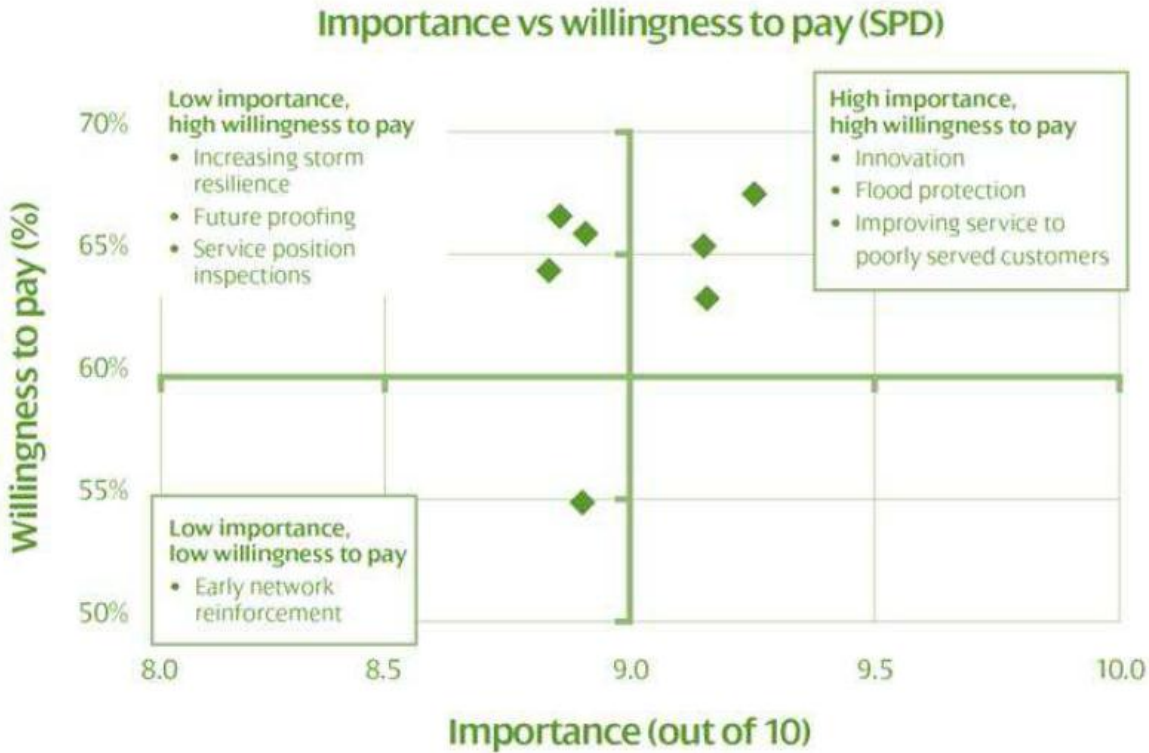
<sup>14</sup> NPG (2013): “Annex G.9 Stakeholder research reports summary”

- enable the take up of microgeneration.

Investment in infrastructure to support delivery in these areas attracted willingness to pay scores in the range £2-3 across UPKN’s distribution areas.

SP also provide some informative analysis that compares the importance of outputs and willingness to pay (see Figure 4.2 below). This analysis indicates that innovation, flood protection and improving services for poorly served customers are high importance, high willingness to pay areas.

Figure 4.2: SPD customer prioritisation and willingness to pay analysis



Source: SP energy networks

This research (subject of course to the limitations that such analysis will always face<sup>15</sup>) could suggest that further improvements in industry performance under incentives, such as the IIS and BCMS, while still needing to reward frontier levels of delivery performance, are valued by DNOs’ customers and are therefore justified. However, it also shows that there are clearly limits to customer willingness to pay for improvements. Northern Powergrid’s finding that the customers it surveyed indicated they value most the company returning money rather than spending it on providing various service improvements is particularly striking in this regard. Even where companies have taken account of this in their expenditure plans, we believe Ofgem should also bear these findings in mind when setting its regulatory targets for incentives.

<sup>15</sup> For example, how choices are framed for customers taking part in the research and the methodology used to assign monetary values to particular performance improvements.

Therefore, while in the time available we have not been able to review all the companies' analysis in detail, we have attempted to make a high-level assessment of which companies appear to be the leading industry performers in this area and could justifiably be considered for a fast track decision and the benefits discussed elsewhere within our reports.

Our conclusions are summarised in Table 4.1 below. Note our assessment only applies to stakeholder engagement measures and willingness to pay analysis *not* the overall quality and justification of the individual company plans.

Companies highlighted in green we consider have demonstrated a reasonably high quality plan, *in this particular area*, while companies that are highlighted in amber, are companies that demonstrated what we considered to be a reasonable level of stakeholder engagement analysis. While none of the companies were in our view particularly poor in this area, if that had been the case they would have been highlighted in red.

*Table 4.1: Ranking of DNOs stakeholder engagement and customer willingness to pay analysis*

<b>DNO</b>	<b>Assessment <sup>1</sup></b>	<b>Key comments</b>
NPG	Reasonable to very good	Good links between customer prioritisation and quantification of areas customers value
ENW	Reasonable to good	Good links between customer engagement and future investment priorities
WPD	Reasonable to very good	High quality willingness to pay analysis (quantitative and qualitative)
UKPN	Reasonable to very good	High quality willingness to pay analysis (quantitative and qualitative)
SSEPD	Reasonable to good	Clear presentation of stakeholder priorities and some account taken of customer willingness to pay
SP	Reasonable to good	Interesting analysis comparing stakeholder importance and willingness to pay analysis

*Source: CEPA*

*Note 1: in terms of business plan stakeholder engagement and willingness to pay analysis only*

### **4.3. Conclusions**

In conclusion, the DNOs plans do appear to demonstrate that investment and customer priorities are being focused in the key areas that are expected to be subject to incentives in RIIO-ED1. This should be acknowledged and welcomed by Ofgem.

However, the improvements that the DNOs are forecasting (and the investment they suggest is needed to deliver these improvements) does bring into focus the questions raised in the previous section of the principles on which incentive rewards are provided and in particular how performance improvement targets are set in calibrating incentives.

The DNOs that have demonstrated this best (for example, by customer willingness to pay analysis) have helped to justify the overall focus of investment priorities and the package of outputs and

incentives. As result, they might be considered to have a provided the most well-justified plans (in this particular area) with the associated implications for Ofgem's fast-track decision.

## 5. CONCLUSIONS AND RECOMMENDATIONS

Our analysis in this paper of historical DNO performance under incentives suggests that, overall, DNOs will earn significant rewards from key incentives that were set in DPCR5 and against this background a similar package of output incentive schemes, with increased power in some cases, is now being proposed for RIIO-ED1.

We would suggest that to avoid over rewarding the DNOs, Ofgem needs to consider carefully whether it has the necessary information and analysis to ensure that:

- the targets and the expected value of delivery incentive schemes applied in RIIO-ED1 will have been correctly set; and
- it is appropriate to strengthen the power of certain incentive schemes, without having applied a certain level of scrutiny to the DNOs' business plans.

Where the DNOs have generally sought to implement changes in their businesses to improve the quality of their service, we would of course expect them to be rewarded, consistent with an outputs based incentive framework. However, there is key regulatory (customer value for money) policy question of how long outturn performance improvements against targets should result in rewards for DNOs rather than being reflected in updated and tightened performance target levels, that share the benefits with customers.

Customers should, in our view, also only pay extra rewards (i.e. above required investor returns) for *greater than average* (rather than average) DNO delivery performance, and where improvements in performance are in areas where the DNOs have clearly demonstrated that their customers are willing to pay for improvements.

Based on our review of the business plans, it is clear that while all of the DNOs have made some attempt to justify their output delivery improvements according to these principles (i.e. customer willingness to pay and stakeholder engagement analysis), as with other aspects of the companies' plans, there are DNOs that appear to have more effectively taken account of these findings.

Our initial, high-level sweep of the DNOs' submissions in this area, informed by discussions with Centrica on its ongoing engagement with the DNOs, has allowed us to indicate who we believe are the best performing DNOs in this particular area.

## APPENDIX A: IIS MODELLING SCENARIOS

The table below summarises the assumptions that were used to develop the IIS target and DNO performance improvement scenarios that inform the analysis in Section 3.

*Table A1: IIS target setting scenarios*

<b>Approach</b>	<b>Description</b>
Scenario 1	Assuming IIS targets set at 2014/15 targets (plus improvement factor) <sup>1</sup>
Scenario 2	Assuming IIS targets as per RIIO ED1 Sep-12 Strategy document
Scenario 3	Assuming IIS targets as per RIIO ED1 Mar-13 Strategy decision document
Scenario 4	Assuming IIS targets set using 4 year average to 2012/13 (plus improvement factor)
Scenario 5	Assuming IIS targets set using 4 year average to 2013/14 (plus improvement factor)
Scenario 6	Assuming IIS targets set using 4 year average to 2014/15 (plus improvement factor)
Scenario 7	Assuming IIS targets set using 3 year average to 2013/14 (plus improvement factor)
Scenario 8	Assuming IIS targets set using 3 year average to 2014/15 (plus improvement factor)
Scenario 9	Assuming IIS targets set using 4 year rolling target (no improvement factor)
Scenario 10	Assuming IIS targets set using 3 year rolling target(no improvement factor)

*Source: Centrica and CEPA analysis*

*Note 1: Assumed improvement factor is 1.5% for CML and 1% for CI*