

Information Quality Incentive

RIIO - an incentive led price control

For the RIIO price control strategy to be effective each key element of the formula must be present and delivering the intended outcomes. Ofgem have stated that the slow track process has delivered considerable benefits for consumers through reduced costs (**R**evenue), improved **O**utputs and by means of progressive **I**nnovation.

*'The remaining DNOs have revised their plans. They have provided a **strong** package of outputs, with more justification at a **lower cost** (by more than £700m) than their previous plans... The package of outputs and funding for **innovation** trials will ensure they do this efficiently...'.¹*

Under RIIO the strong Incentive to accurately forecast information and submit an efficient and competitive business plan is expected to be rewarded under the IQI mechanism and supported by the efficiency sharing factor, encouraging pursuit of further savings for customers. The draft determinations recognise that DNOs have proposed significant efficiency gains for customers plus stretching output targets across reliability, customer service and the environment.

- It is essential that the IQI mechanism rewards networks for stretching plans and is strong and effective, ensuring customer benefits continue to be realised through improved service and efficiency.

The proposed calibration of the IQI matrix and accompanying efficiency sharing factors within the draft determination fail to meet these expectations. The result is to weaken the efficacy of any future IQI mechanisms and dilute incentives within RIIO to pursue the further savings which Ofgem assert exist in further Innovation potential.

The calibration and application of the IQI mechanism must also reflect RIIO strategy and should remain consistent with the precedent of recent price controls. We believe that there has been a weakening of the IQI mechanism between the most recent distribution price control in gas, GD1 (2012), and the proposals outlined in the ED1 draft determination.

We believe that Ofgem should amend the design and application of the matrix to recognise the relative efficiency of controllable DNO costs, excluding areas heavily influenced by exogenous factors. The IQI matrix should reflect an industry frontier set by an actual network licensee and referenced against the established industry upper quartile.

- Networks should be rewarded for achieving this industry leading edge position.

¹ RIIO-ED1: Draft determinations for the slow-track electricity distribution Companies Overview

RIIO Strategy – creating a strong incentive

IQI Matrix should reflect industry performance

The IQI matrix was intended to translate the Totex choice of a DNO into an efficiency sharing factor and also relate the quality of the information and justification provided into a reward. When the result of the cost assessment process is plotted against this matrix the expectation is that the industry would be arranged with some DNOs forecasting better than upper quartile expenditure for RIIO-ED1.

Leading networks, combining a history of efficient delivery and the ability to generate future savings, should be able to submit a business plan forecasting expenditure below or close to the industry upper quartile. It was recognised in the RIIO strategy that to encourage provision of clear and transparent business plans (information asymmetry) and to further promote efficiency improvements the IQI should exhibit strong incentive properties.

Therefore an efficient and well justified business plan should be rewarded through a material IQI return complemented by an efficiency ratio set at the upper end of the efficiency scale, recognising the increased risk delivery adopted by the network. By so doing, customers could expect the continued improvement in frontier efficiency across the DNO groups.

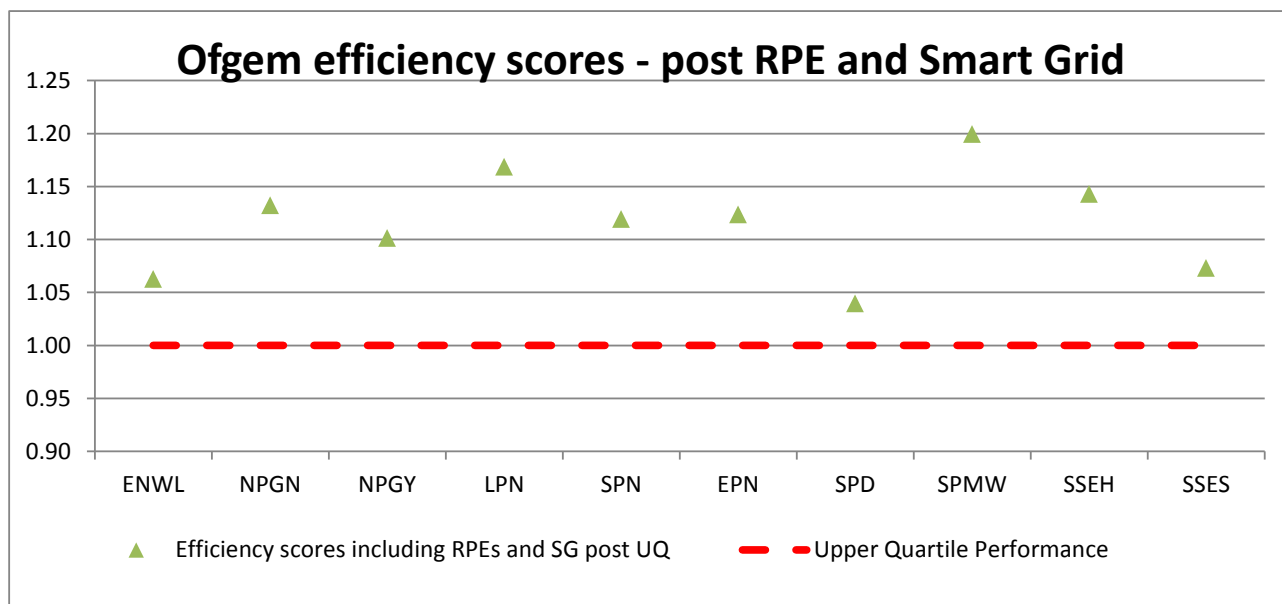
Recognise demonstrable efficiency

The output of the RIIO-ED1 cost assessment process clearly demonstrated which network operators exhibit consistent and ongoing efficiency in their business plans. Whether under the fast track assessment methodology or that applied for slow track SSEPD remains in the top two network groups. This position and that of the other industry leading networks should be expected to inform the output of the IQI matrix.

The conclusions of the draft determination are skewed by the impact of industry adjustments for RPEs and Smart Grid savings. These two very material issues are addressed within our consultation response and, supported by considerable expert opinion, are shown to be unfounded or at best uncertain.

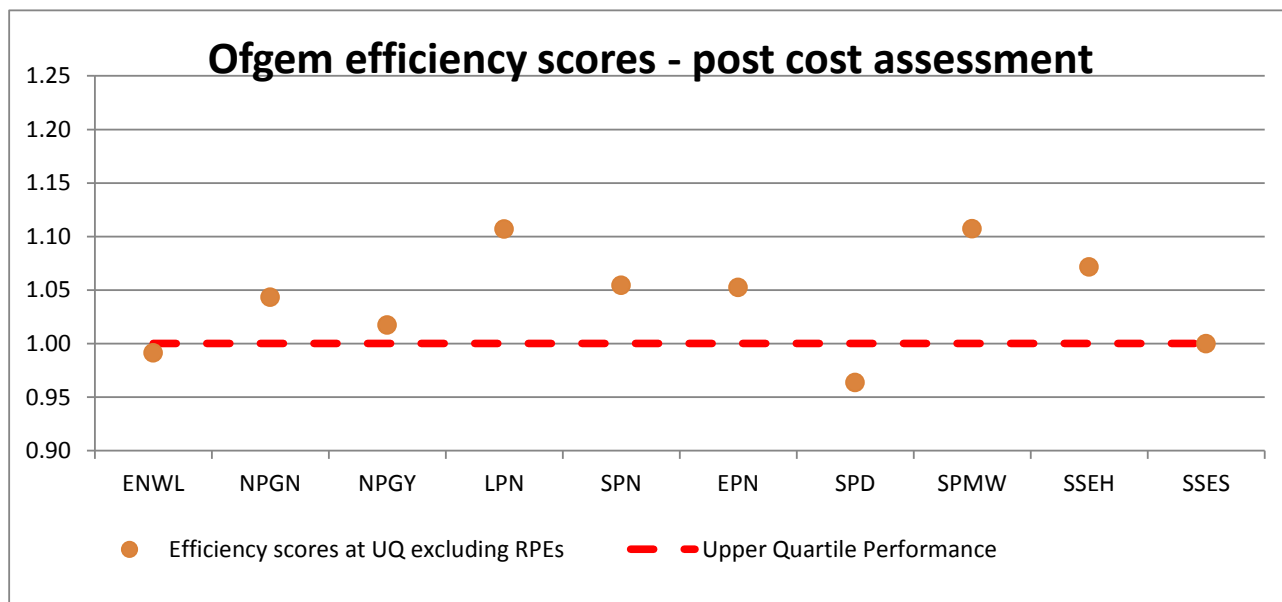
The following graph shows the industry position relative to the determined upper quartile efficiency set by Ofgem in the draft determination. This would suggest that no network is efficient and that there therefore exists a theoretical 'Frankenstein' network at the frontier.

Figure 1. Draft Determination: DNOs relative to upper quartile



Conversely the following graph illustrates a distribution of efficiency scores based on DNO controllable expenditure which is in line with the expectations of the RIIO strategy.

Figure 2. Cost assessment (excl RPEs & Smart): DNOs relative to upper quartile



RIIO Strategy – Rewarding efficient and accurate forecasts

Strategy Paper – March 2013

Within the RIIO-ED1 strategy document, March 2013, the role of IQI in guiding DNO responses to the price control was clearly stated,

*6.20. The aim of the IQI is to encourage companies to **submit more accurate expenditure forecasts** in their business plans.²*

*9.7 The IQI is designed to **incentivise the network companies to provide accurate cost forecasts** in their business plans and drive efficient expenditure. We will continue to use it in RIIO-ED1.³*

The expectation of DNOs was that submitting an efficient, evidenced and informed business plan would lead to improved performance relative to Ofgem's benchmark efficient costs and, therefore, recognised through the IQI assessment. The strategy recognised that only costs which could be controlled or forecast with a suitable level of accuracy should be included in this assessment. This includes forecasting future movement in costs which remain highly speculative or subject to the influence and impact of exogenous factors.

Where expenditure remained uncertain this was excluded from the cost assessment process and did not influence the ratio of forecast to assessed costs through the IQI matrix. Examples include the activities covered by uncertainty mechanisms and pass through costs.

Under the RIIO strategy it was intended that activities such as RPEs and efficiency savings should be included in the measure of ED1 efficiency and influence the IQI assessment, as noted in the Strategy document, March 2013.

9.8 We will include Real Price Effects (RPEs) in the costs that form part of the IQI assessment... This provides a strong incentive for DNOs to submit robust forecasts for RPEs.³

This position did not however allow for the scenarios under which the ability of networks or Ofgem to arrive at 'robust' forecast was compromised, thus rendering the strategy decision to include within the IQI assessment inapplicable. Ofgem recognised this change within their draft determination document.

*4.21. We have updated our RPE assumptions from those at fast-track.... This is mainly driven by using actual data as a measure of growth for 2012-13 and 2013-14. **Some of this data was not available to DNOs at the time of their slow-track submissions.**¹*

Furthermore, increased uncertainty regarding RPE and Smart savings forecasts reinforce the need for interpolation between DNO and Ofgem forecasts to address the potential penalty which will arise from the effects of exogenous factors on the assessed IQI ratio.

² Strategy decision for the RIIO-ED1 electricity distribution price control Overview

³ Strategy decision for the RIIO-ED1 electricity distribution price control Outputs, incentives and innovation

RIO Strategy – consistency with previous price controls

Ofgem stated in their RIO strategy, March 2013, and within subsequent publications that their intention was to remain consistent with the precedent set by previous price controls.

*6.16. We want to ensure that DNOs face strong financial incentives to control costs and implement approaches that provide good value for money for existing and future consumers. We will therefore continue to use **an efficiency incentive and the IQI, similar to those used in DPCR5, RIO-T1 and GD1.***²

Consistent application of regulatory principles within and particularly between price controls is essential, where appropriate, to ensure that perceived risk within network settlements is minimised.

Comparison to RIO-GD1

Within RIO-GD1 Ofgem established a number of precedents in order to ensure the incentive strength of the IQI and efficiency sharing factor remained effective in encouraging transparent and accurate future forecasting and driving the pursuit of further efficiency improvements. This was achieved by calibrating the IQI matrix to recognise a number of factors. These are discussed below and are contrasted with the approach under RIO-ED1.

- **IQI reflects response of networks to slow track process**

GDNs responded to the justification and efficiency challenge in their second business plans and significantly reduced forecast Totex. This was recognised by calibration of the break even point at around 103.9 and a relatively high efficiency factor to encourage further performance improvement (60-67%).

- Ofgem recognised in their draft determination that the slow track business plans represent significant cost reductions on DPCR5 and the fast track submission. However the calibration of IQI breakeven has been set lower than GD1 at 102.9
- Furthermore, Ofgem acknowledge that the efficiency gap reported in draft determination is the result of their assessment of RPEs and Smart savings. Underlying controllable forecast costs are shown to be efficient for the industry leading DNOs.
- However, while recognising that networks have risen to the challenge and therefore are carrying more risk in respect of their ability to continue to improve performance, the efficiency factor remains considerably lower than that applied at GD1; between 45-65% for ED1 draft determination, compared to 60-67% for GD1 final proposals.

- **Cost assessment is not an exact science**

The use of statistical modelling introduced errors into the models results which should not be accounted for as relative efficiency. When the results for network business plans showed an efficiency range of 106.5 to 117.8, this indicated that no network occupied the theoretical frontier and that the matrix should be calibrated to reflect the industry results.

- The efficiency ranges assessed at ED1 draft determination, notwithstanding the issues we and other networks have addressed regarding the assessment of RPEs and Smart savings, show similar patterns to that witnessed under GD1. Efficiency ratios start at 106.0 and rise to 120 (excluding fast track DNOs).
- A similar approach should be taken as in GD1 to recognise that the output of the modelling is not perfect and the consistent position of the industry leading groups would indicate relative efficiency.
- This would warrant a higher calibration of the matrix or recognition that there may be distorting factors in the assessment of relative efficiency which we suggest can be demonstrated to be RPEs and Smart savings.

- **GD1 relied on shorter term forecasts of costs**

The Totex analysis undertaken by Ofgem under GD1 used 4 year actual historic cost and 2 year forecast cost models with equal weighting applied to each. This emphasised the increased potential for statistical error as the forecast periods extend out to eight years of a price control.

- RIIO-ED1 draft determinations cost assessment Totex models are based on 13 years data, 5 years DCPR5 + 8 years ED1.
- As modelling become less stable as the assessed period moves further into the future there is justification in expecting the variation between DNO forecast and Ofgem assessed costs to increase towards the end of ED1.
- This could increase the model error component of the efficiency ratio assessment and, if not recognised in the calibration of the IQI matrix, penalise DNOs for the amended ED1 methodology.
- We note that Ofgem did not utilise 8 years ED1 data for the fast track assessment as it was considered unreliable.

In summary there are distinct differences between the determination of IQI under the last gas distribution price control, GD1, and the current ED1 draft determinations. These are:

Figure 3. GD1 and ED1 IQI matrix comparisons

	RIIO-GD1 – 2012	RIIO-ED1 - 2014
Breakeven point	➤ Set at 103.9	❖ Proposed at 102.9
Average industry IQI reward %	➤ 1.0%	❖ (0.2%)
IQI range	➤ 106.5-117.8	❖ 106.0-120.0
Efficiency sharing range	➤ 60 – 67% ➤ Strong incentive for further efficiency	❖ 45 – 65% ❖ Weakened incentive for further efficiency
Efficiency sharing factor at upper quartile	➤ Set at 65% for IQI ratio of 100 ➤ Recognised industry relative result	❖ Proposed at 60% for IQI ratio of 100, ❖ Points to Frankenstein network
Modelling basis	➤ 4yr actual + 2 yr forecast Totex	❖ 4 yr actual + 9 yr forecast Totex

This clearly shows a weakening of the IQI incentive strength from GD1 to ED1. This is particularly evident in the lower average industry IQI reward percentage. These differences must be addressed in Final Proposals.

RIIO Draft

Implication of draft determination on strategy

The treatment of the two key issues of RPEs and Smart Grid savings in the RIIO-ED1 draft determinations has created a scenario where the application of the IQI and efficiency factor has diverged from the strategy intent outlined in March 2013. The application of RPEs and Smart Grid potential savings in the final ED1 proposals contravene the conditions under which the IQI matrix was designed to operate

- The level and timing of future costs can be reasonably forecast
- The outcome is not significantly influenced by exogenous factors
- The forecast can be effectively evaluated by Ofgem

For RPEs and Smart Grid savings each of these criteria no longer hold as we move into an ED1 price control period.

Figure 4. Key issues impacting IQI assessment

Activity	Factors impacting forecast	Impact on IQI assessment
RPEs	<ul style="list-style-type: none"> ➤ Impact of recession of input price trajectory ➤ Uncertainty over growth in earnings post recession ➤ Use of applicable indices, e.g. use of industry specific ➤ Size and continued effect of RPI factor 	<ul style="list-style-type: none"> ❖ DNOs penalised under IQI mechanism for difference between proposed and justified RPE forecasts and Ofgem assessment – acknowledge to be of sufficient uncertainty to require consultation
Smart Grid Savings	<ul style="list-style-type: none"> ➤ Industry experts unable to substantiate calculation of total savings potential ➤ Delivery of savings dependent on innovation success; availability of suitable innovation application conditions ➤ Highly dependent on exogenous factors such as roll out of Smart Metering – since delayed further ➤ Definitional issues resulting in genuine innovation initiatives being discounted and their benefits not accounted for 	<ul style="list-style-type: none"> ❖ IQI distorted by disallowed savings identified in plan ❖ Efficiency scores lowered as DNOs challenged to deliver savings over which they do not have full control

Ofgem have recognised in their draft determination that these significant Totex components can no longer reasonably be forecast.

*4.21. We have updated our RPE assumptions from those at fast-track. This results in an RPE forecast that is significantly less than that of the DNOs.... This is mainly driven by using actual data as a measure of growth for 2012-13 and 2013-14. **Some of this data was not available to DNOs** at the time of their slow-track submissions.¹*

*4.24. (DD) This indicates that there **may be increased uncertainty in a forecast of RPEs which may cast doubt over the use of an ex ante forecast** for an eight-year control.¹*

*Based on this profile it is **difficult to anticipate** if and when RPEs will return to positive growth and what the growth rate may be. This makes it **difficult to set an eight-year forecast with confidence**.... We have set ex ante forecasts for RPEs in previous price controls.... Figure 1 indicates that there is **potentially a greater degree of uncertainty now than there was in the past**.⁴*

Both these issues are addressed in detail within our consultation response where we set out the range and quality of expert opinion in support of our proposals for ED1. Notwithstanding our confidence in being able to justify our proposals, we would argue that the divergence of industry opinion and the recognised uncertainty surrounding the basis and methodology for each issue warrants careful treatment in respect of the IQI assessment.

⁴ Consultation on the treatment of real price effects for RIIO-ED1 slow-track electricity distribution network operators

RIIO – next steps to Final proposals

In the preceding sections we highlighted the purpose and characteristics of a properly constructed IQI mechanisms and the strategy for the assessment of IQI as outlined in March 2013. We then demonstrated significant inconsistencies in IQI assessment between ED1 and the most recent industry price control, RIIO-GD1. Finally we showed that the significant issues and uncertainty surrounding the assessment of RPEs and Smart savings undermined the conclusions reached in respect of the IQI.

We propose that the draft determination proposals should be amended to address the errors identified, reward demonstrable controllable underlying efficiency and provide a strong incentive for continued performance improvement through to ED2. Potential solutions are noted below with further detail in Appendix 1.

Amendment to IQI for Final Proposals

This can be achieved in either of two ways:

1. Exclude exogenous and uncertain effects

- Establish upper quartile efficiency as output of cost assessment process
- Determine IQI based on modelled upper quartile relative to DNO submitted costs
- Apply conclusion of Ofgem's assessment of Real Price Effects (RPEs) and Smart Grid savings
- Apply interpolation of modelled to submitted costs

2. Adjust matrix for exogenous and uncertain effects

- Establish upper quartile efficiency as output of cost assessment process
- Apply conclusion of Ofgem's assessment of Real Price Effects (RPEs) and Smart Grid savings
- Determine IQI based on final modelled costs
 - adjust breakeven point above 102.9 and increase collar efficiency range to reflect uncertainty in post cost assessment conclusions and increased industry Totex savings proposals
- Apply interpolation of modelled to submitted costs

In either approach we believe it is reasonable to continue to apply the interpolation between DNO and Ofgem total proposed Totex, including RPEs and efficiency savings, while allowing the IQI reward and efficiency factor to be determined by underlying controllable efficiency ratios.

While either solution addresses the particular issues in the ED1 draft determination we believe it is essential to ensure the assessment under the IQI matrix preserves the key principles of the strong incentive mechanism:

- The IQI matrix must reflect the result of industry cost assessment where the upper quartile and frontier are defined by real business forecasts.
- The significant reduction in Totex forecasts from DPCR5 and from the initial business plans, plus the consistency of network groups at or near the frontier, should be recognised through a strengthening of the IQI reward and incentive rate.
- The IQI exists to encourage DNOs to address information asymmetry by providing justified and efficient business plans. The effects of exogenous factors and uncertain events should not distort the assessment of a DNOs response and, ultimately, weaken the incentive strength.
- Networks which have responded to the information incentive and continue to demonstrate industry leading relative efficiency the IQI assessment must adequately rewarded for this. This ensures the ongoing efficacy of the IQI mechanism.

Appendix 1: Illustration of potential revised IQI

We propose that the following matrix addresses each of these issues while ensuring customers are able to benefit further during RIIO-ED1. This has been based on option 1 above, exclusion of exogenous and uncertain effects from the IQI assessment.

Figure 5. Amended IQI matrix – Option 1

IQI MATRIX (For information only)									
DNO:Ofgem Ratio	90	95	100	105	110	115	120	125	130
Efficiency Incentive	65%	64%	63%	61%	60%	59%	58%	56%	55%
Additional income (£/100m)	3.2	2.5	1.7	0.9	0.1	-0.8	-1.7	-2.6	-3.6
Rewards & Penalties									
Allowed expenditure	97.50	98.75	100.00	101.25	102.50	103.75	105.00	106.25	107.50
Actual Exp									
90	8.08	8.0	8.0	7.8	7.6	7.3	7.0	6.5	6.1
95	4.8	4.86	4.8	4.7	4.6	4.4	4.1	3.7	3.3
100	1.6	1.7	1.7	1.7	1.6	1.4	1.2	0.9	0.6
105	-1.7	-1.5	-1.4	-1.4	-1.4	-1.5	-1.7	-1.9	-2.2
110	-4.9	-4.7	-4.6	-4.5	-4.4	-4.5	-4.6	-4.7	-4.9
115	-8.2	-7.9	-7.7	-7.5	-7.4	-7.4	-7.4	-7.5	-7.7
120	-11.4	-11.1	-10.8	-10.6	-10.4	-10.3	-10.3	-10.3	-10.4
125	-14.7	-14.3	-13.9	-13.6	-13.4	-13.3	-13.2	-13.1	-13.2
130	-17.9	-17.5	-17.1	-16.7	-16.4	-16.2	-16.1	-16.0	-15.9
135	-21.2	-20.6	-20.2	-19.8	-19.4	-19.1	-18.9	-18.8	-18.7
140	-24.4	-23.8	-23.3	-22.8	-22.4	-22.1	-21.8	-21.6	-21.4
145	-27.7	-27.0	-26.4	-25.9	-25.4	-25.0	-24.7	-24.4	-24.2
150	-30.9	-30.2	-29.6	-29.0	-28.4	-28.0	-27.6	-27.2	-26.9

Determining the IQI outcome prior to RPEs and Smart Grid savings would produce the following IQI rewards and efficiency sharing ratios. These have been based on the published metrics of DNOs at draft determinations and are subject change through revised cost assessment prior to final proposals.

Figure 6. Impact of IQI Matrix Option 1 on DNO assessment

By DNO	IQI ratio	Efficiency incentive rate	Additional income, penalty (%)
ENWL	99.1	62.7%	1.83%
NPG	102.8	61.8%	1.25%
UKPN	106.9	60.8%	0.60%
SP	103.8	61.6%	1.10%
SSE	102.3	61.9%	1.34%

Interpolation of Ofgem assessed and DNO forecast Totex would occur as outlined within the draft determination and in the example above result in the same Totex allowances as published in the draft determination.

These proposals require the following changes to the IQI matrix and process:

- IQI ratios and reward should be determined by the notional controllable efficiency ratios, i.e. pre RPEs and Smart Grid Savings
- The efficiency incentive range should be set at 55-65%; less than the GD1 settlement of 60-67%, less than the fast track set rate of 70%

Allowed Expenditure would continue to be derived using the interpolation of Ofgem's benchmarked costs and DNO forecasts.