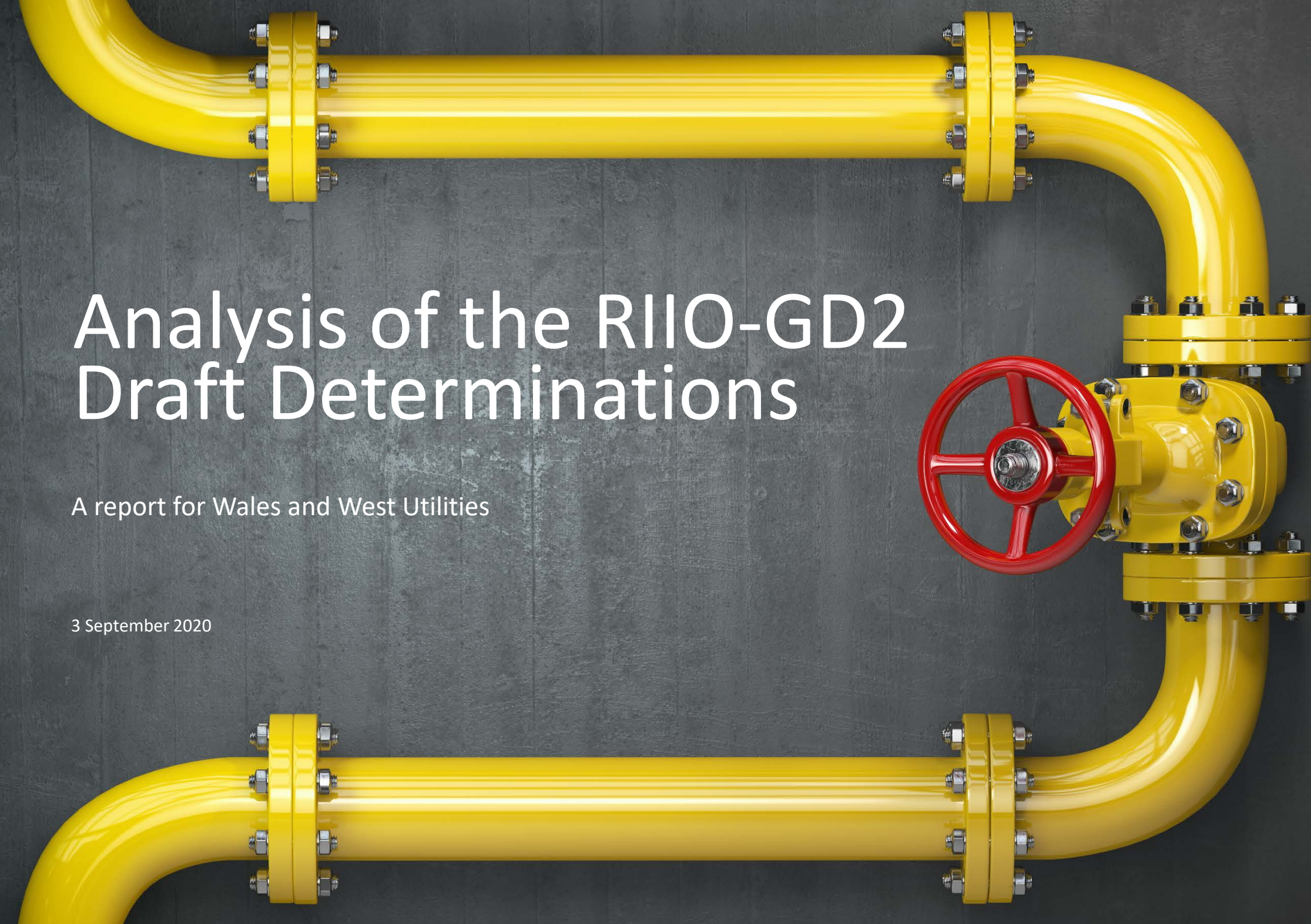

Analysis of the RIIO-GD2 Draft Determinations

A report for Wales and West Utilities

3 September 2020

Executive Summary

Ofgem's RIIO-2 Draft Determinations define a set of what they have said are challenging regulatory allowances. For Gas Distribution, Ofgem expects companies to deliver substantial cost efficiency improvements over GD2, with Ofgem's proposed allowances 20% lower than the companies' plans.

Wales and West Utilities have requested an analysis of the incentives, risk and uncertainty in the GD2 package.

The analysis is drawn from RIIO data, research into comparable sectors, and wider research where appropriate.

This assessment is broken down into three areas of analysis (presented as separate chapters in this report):

1. **Risk and incentivisation in the RIIO-GD2 package.** This section covers:
   - The GD2 incentive package, compared to GD1.
   - A comparison with recent learnings on incentivisation in the water sector.
   - Precedent and principles of incentive regulation, and the extent to which GD2 meets these.
   - The results of an exercise to model for GDNs the risk introduced in the GD2 package.
2. **The impact of Uncertainty Mechanisms in the RIIO-GD2 package.** This section covers:
   - An analysis of the design and proposed use of Uncertainty Mechanisms in GD2, including a focus on the Net Zero reopener.
   - Lessons from reopeners in RIIO1.
   - An assessment of the impact of uncertainty on cost efficiency and delivery of customer outputs.

Our analysis highlights the potential implications of the proposed approach to managing the level of risk and uncertainty in the RIIO-GD2 period.

- There is a greater emphasis on penalties and down side in the RIIO-GD2 DDs for WWU than in RIIO-GD1, with potential rewards reduced when compared to RIIO-GD1.
- There remains potential cost subject to Uncertainty Mechanisms, with WWU subject to 29 UMs in GD2.
- Our research has found evidence that this uncertainty can lead to fragmented procurement programmes, leading to increased cost to networks (and, ultimately, customers).

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Risk and incentivisation in the RIIO-GD2 package

The RIIO-GD2 incentive package

Ofgem's RIIO-GD2 Draft Determinations, announced in July 2020, included details of the proposed incentive packages on offer to network companies over the next price control period. The proposed maximum rewards on offer to networks are reduced from RIIO-GD1, with increases in the level of potential penalties that may be faced by companies.

There is a far greater emphasis on penalties and downside in the RIIO-GD2 DDs for WWU than in RIIO-GD1.

In a number of instances, Ofgem has made use of penalty-only or more penalty-skewed incentives, such as:

- A new Unplanned Interruptions penalty-only incentive, with a maximum penalty of 0.5% of base revenue;
- The Environmental Emissions Incentive (EEI) / Shrinkage incentive, which previously earned a reward of approx. 0.76% of base revenue for WWU, has been rescoped into a symmetric reward/penalty mechanism with potential penalties of 0.25% base revenue.

Although not captured in the potential penalty figures here, Ofgem has also doubled the value of Guaranteed Standards of Performance (GSOP) payments, further increasing the financial exposure to GDNs.

Many of the issues facing GD2 are also mirrored in RIIO-T2 incentive packages, including asymmetric skews towards penalties as shown below.

Potential rewards are reduced when compared to RIIO-GD1.

Rewards have been reduced or removed in areas in which WWU previous earned significant rewards during RIIO-GD1. These include:

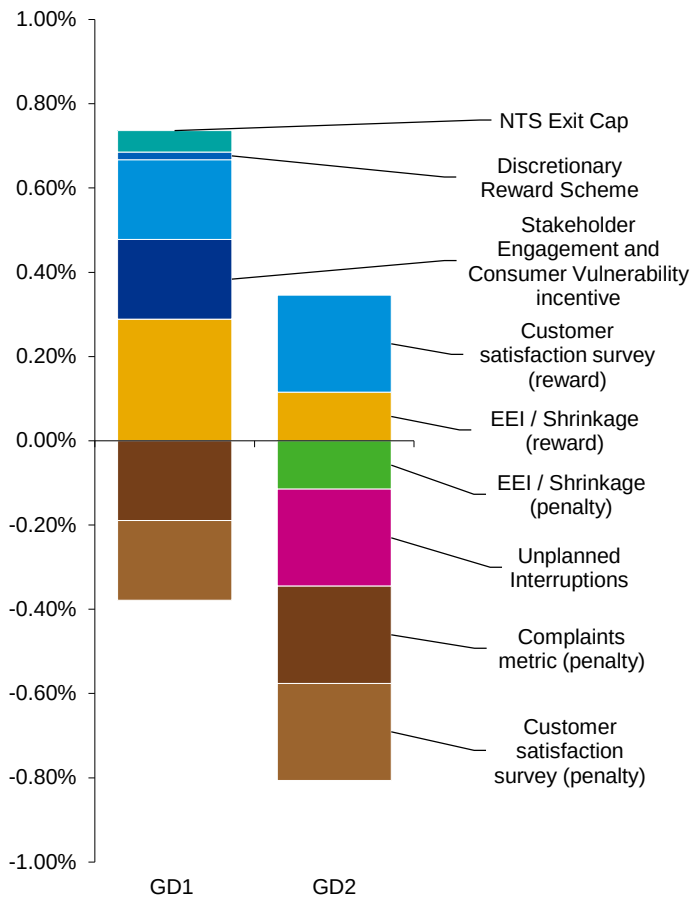
- The introduction of a cap on the EEI / Shrinkage incentive. In the first five years of RIIO-GD1, WWU earned a reward of approx. 0.76% of base revenue. This reward is now capped at 0.25%.
- The removal of the Stakeholder Engagement and Consumer Vulnerability incentive, which allowed a 0.5% base revenue reward
- The removal of both the discretionary reward scheme and NTS exit cap, which earned WWU a combined reward of 0.18% of base revenue to date in RIIO-GD1.

Table 1: RIIO-2 incentives in Return of Regulated Equity (RoRE) terms

Price control	Maximum potential reward	Maximum potential penalty
WWU GD2	+0.35%	-0.81%
WWU GD1	+0.74%	-0.38%
RIIO-GT2	*+0.6%*	*-0.7%*
RIIO-ET2	*+0.2%*	*-1.1%*

Sources: Ofgem GD2 Draft Determinations, Analysis of Ofgem data

Figure 1: WWU's RIIO incentives in RoRE terms



Sources: Ofgem GD2 Draft Determinations, Analysis of Ofgem data

Ofwat's approach to incentivisation at PR19

In contrast to Ofgem reducing the scope for incentivisation, Ofwat has increased the potential upside it allows for water companies between PR14 and PR19. It is important to note that Ofwat has widened the range of potential RoRE that companies can earn from incentives which gives greater scope for rewarding or for penalising differentials in performance.

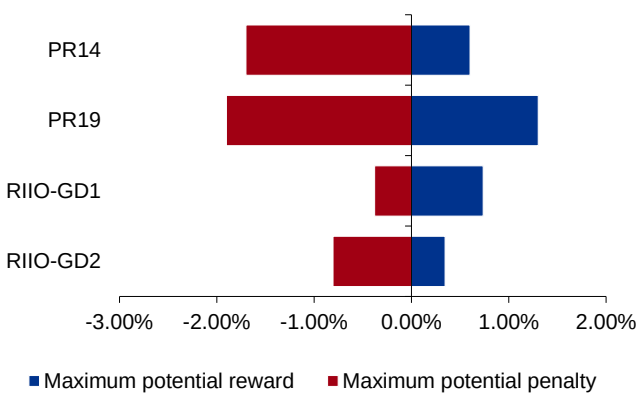
Ofwat have doubled the incentive upside allowed between PR14 and PR19, with the ratio of penalties to rewards being halved.

Potential rewards rose to 1.3% in PR19 (in RoRE terms), from 0.6% in PR14.

There was a small increase in the level of potential penalty, rising from 1.7% to 1.9%, but far smaller in magnitude than the increase in potential rewards.

Whilst an asymmetric skew towards penalties still exists, the potential difference was almost halved, with the ratio of potential penalties to rewards falling from 2.83:1 to 1.46:1.

Figure 2: Comparison of incentives between the water and gas sectors (in RoRE terms)



Source: Analysis of Ofgem and Ofwat data

Ofwat have allowed more bespoke incentives than Ofgem.

Ofwat indicated that bespoke outputs would play a key part in the PR19 incentive package, with water and waste water companies typically having around 30 bespoke performance commitments[1] in their final determination, with a range of financial and reputational incentives attached.

There was an average of 20 financial performance commitments for the water companies in WWU's area (Dŵr Cymru, Wessex Water, South West Water), capturing areas such as service quality, customer service, network resilience, and environmental improvements.

In contrast, Ofgem accepted only 2 bespoke outputs across the entire gas distribution sector, with these two penalty-only ODI-Fs for Cadent North London acting as minor modifications to the Unplanned Interruptions incentive faced by all other GDNs. WWU applied for 6 bespoke outputs, of which none were accepted.

Ofwat's final determination summary stated the importance of incentives packages "to drive further innovation", praising Severn Trent Water's "innovative set of performance commitments"[2].

Ofwat launched a consultation into incentivisation ahead of PR19, allowing them to identify key features of an incentive package and address these at PR19.

Ofwat's approach was informed by their "outcome framework" consultation undertaken in late 2016 as part of the build up to the periodic review for the 2019-2024 price control.

This included external reports from PwC and Frontier Economics, which examined the existing incentive structure, how lessons could be learnt from PR14, and what improvements could be made as part of PR19.

The report commissioned by Ofwat "Refining the balance of incentives for PR19" included key recommendations[3] for outputs and incentive structures, which included:

- Greater incentivisation to deliver on outcome measures by rebalancing the rewards and penalties from totex and ODI performance;
- Further incentives to increase innovation, including the development of a package of incentive mechanisms to support this aim.

[1] *Ofwat, 2019, PR19 Final Determinations: Overall stretch on costs, outcomes and cost of capital policy appendix, p43*

[2] *Ofwat 2019, PR19 Final Determinations: Overview of final determinations, Ofwat, p14*

[3] *PwC Economics, 2017, Refining the balance of incentives for PR19, p.2-4*

Incentivisation precedent and principles

Research from regulators and academics identify some key principles for building effective incentive regimes which deliver the outcomes desired by both consumers and regulators. The reduction in the upside rewards available at RIIO-2 seem to be a departure from previous precedent, from Ofgem and from the water sector, and from principles set out in academic research.

Ofgem's research ahead of RIIO-1 stated the importance of "clear and significant rewards"[4] to incentivise delivery of key output levels. At RIIO-2, the need for strong incentives was also highlighted in the SSMD[5] focused on issues important to customers, and which addressed the expected changes to energy network use.

Ofgem's consultation, ahead of RIIO-1, as part of the RPI-X@20 review, looked at the range of measures required to set and manage an effective price control.

The recommendations presented in Ofgem's report were supported by a previous paper[6] commissioned by Ofgem into the use of output measures as part of the regulatory framework.

The research stressed the importance of output, rather than input, based incentives to deliver the service quality improvements needed in the next price control period.

Achieving primary output levels would be incentivised through "the opportunity to earn clear and significant rewards", and that where companies did not deliver, they would face "real and significant downside".

Although there was limited evidence of incentivisation research ahead of RIIO-2, the ED2 SSMD identified the need for "strong but cost-efficient incentives". It also describes the need for a incentives framework which "focuses on "the things that really matter to consumers" and that responds to the "dramatic changes in how networks are used".

However, there is limited evidence in RIIO-ED2 of new or modified incentives, either common or bespoke, which seek to address the key customer or sector issues raised at RIIO-2

[4] Ofgem, 2010, Regulating energy networks for the future: RPI-X@20 Recommendations. Consultation

[5] Ofgem, 2019, RIIO-2 Sector Specific Methodology – Core document

[6] Frontier Economics, 2010, Output measures in the future regulatory framework

Ofwat's approach to the outputs and incentive package has been shaped by their review into incentivisation ahead of their PR19 determinations.

In important input into Ofwat's review was a report from PwC[7] which summarised the key research into incentives, and defined a set of key features of an incentive based regulatory regime. These included:

- **Combination of ex-ante and ex-post mechanisms.** This includes setting cost allowances in advance, but with the value of rewards / penalty being based on output performance;
- **Use of non-linear rewards and penalties.** This includes requires an assessment of where customers have an increasing or diminishing marginal utility for service improvements;
- **Selective use of penalty only incentives.** These incentives are described as powerful for achieving minimum standards, but that their power fades beyond the minimum level of performance;
- **Tools for reducing information asymmetries,** such as regulatory menus or business plan "fast-tracking";
- **A balance of cost efficiency incentives with service quality incentives.** Without significant incentives to drive service quality, networks may be incentivised to focus on cost outperformance;
- **Use of reputational incentives.**

These principles appear to have been followed at Ofwat's PR19 Final Determination, there is less evidence of Ofgem following this process for RIIO-GD2.

[7] PwC Economics, 2017, Refining the balance of incentives for PR19

Academic research into incentivisation describes the importance of setting output incentives as part of a package of measures, designed to address the key regulatory priorities.

Berg & Sotkiewicz (2000)[8] provide three key criteria for performance based regulation, requiring performance to be 1.) observable and verifiable, 2.) reflective of the utilities' efforts, and 3.) not greatly affected by random variation. It describes the ten guidelines set out by Sappington, which includes the importance of prioritising regulatory goals and design incentives to achieve these.

Sappington (2005)[9] argues for the importance of setting output incentives as part of a package of measures, to prevent offsetting or competing incentives, including from cost-efficiency incentives.

He also argues that penalty only incentives are useful incentivising companies to achieve a minimum level of service, but are unlikely to increase quality beyond this level. Penalty-only incentives should therefore only be used where the regulator aims to prevent a decrease in service delivery, but is insufficient in create or achieving ambitious performance targets.

Laffont & Tirole (1986)[10] highlighted the importance of highlighting company performance levels to provide strength to reputational incentives. Joskow (2008)[11] adds to this stating that repeat regulation, such as period price controls, increases the significance of reputation incentives. This can allow firm's to build credibility and trust with consumers and regulators.

[8] Berg & Sotkiewicz, October 2000, Introduction to the Fundamentals of Incentive Regulation

[9] Sappington, 2005, Regulating Service Quality: A Survey

[10] Laffont & Tirole, 1986, Using Cost Observations to Regulate Firms

[11] Joskow, 2008, Incentive Regulation and Its Application to Electricity Networks

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