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Comments on the Open Letter on the RIIO-2 Framework

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1 INTRODUCTION

The Energy Policy Group (EPG) of the University of Exeter welcomes the chance to review the Open Letter on the RIIO-2 Framework².

The Open Letter (OL) is part of a group of related documents published on 4 August 2017: the Ofgem Strategy³ for Regulating the Future Energy System; a joint BEIS / Ofgem⁴ plan for a smart, flexible power system with the Government (which resulted from the January 2017 flexibility consultation (see the EPG submission⁵)) ; a paper about the direction of travel⁶ on proposals to separate the System Operator (SO, again see our submission to that consultation⁷); a launch statement⁸ for the Electricity Settlement significant code review; and a launch document for the Targeted Charging Review⁹.

EPG welcomes the fact that Ofgem is trying to bring coherence and integration to some of its regulatory decisions. The scope of the combined papers is very large and very important, and they all impact on each other. However, the descriptions and language within the documents are essentially status quo when it comes to the institutional arrangements of the future

¹ <http://projects.exeter.ac.uk/igov/>

² <https://www.ofgem.gov.uk/publications-and-updates/open-letter-riio-2-framework>

³ <https://www.ofgem.gov.uk/publications-and-updates/our-strategy-regulating-future-energy-system>

⁴ <https://www.ofgem.gov.uk/publications-and-updates/upgrading-our-energy-system-smart-systems-and-flexibility-plan>

⁵ <http://projects.exeter.ac.uk/igov/submission-beisofgem-smart-flexible-energy-system-a-call-for-evidence/>

⁶ <https://www.ofgem.gov.uk/publications-and-updates/future-arrangements-electricity-system-operator-response-consultation-so-separation>

⁷ <http://projects.exeter.ac.uk/igov/submission-ofgem-call-for-evidence-on-future-electricity-system-operator-arrangements/>

⁸ <https://www.ofgem.gov.uk/publications-and-updates/electricity-settlement-reform-significant-code-review-launch-statement-revised-timetable-and-request-applications-membership-target-operating-model-design-working-group>

⁹ <https://www.ofgem.gov.uk/publications-and-updates/targeted-charging-review-significant-code-review-launch>

energy system. In other words, the document implies that any regulatory changes which occur as a result of these documents, will occur in the same institutional framework as occurs now. Moreover, whilst the RIIO2 Open Letter itself argues for appropriate incentives on network companies, it does not set out (powerful) arguments about why ratchetting up performance based regulation (PBR) with an incentive mechanism might be an essential key to unlock the energy system transformation. We think this is a missed opportunity in both cases.

We are pleased that the Open Letter asks whether 8 year price controls are appropriate – and our view is that they are not, and should be considerably shortened. However, on a more general note, the Open Letter is discussing price controls for 2021, and in the case of distribution, for 2023. Moreover, one of the related documents asks about price control timelines for the transmission system operator. It is vital that RIIO-2 is restructured so that it does provide adequate incentives for innovation and for networks to be operated in a flexible, efficient way which meets customer wishes. If the output of this consultation gets it ‘wrong’, then GB is potentially trapped with a poor regulatory mechanism until 2031.

The carbon budget for the period 2028-2032 is 1,725 mt CO₂e¹⁰, equivalent to a 57% reduction on 1990 levels¹¹. In order to meet this budget the networks will not only need to consider heat and power but (following the statement released in July to end all sale of petrol and diesel cars by 2040¹²) increasingly transport.

RIIO as an acronym is fine. This comment paper does not mind there being a RIIO-2. It does argue however that the design of RIIO-2 has to be fundamentally restructured because of its significant weaknesses.

Finally, publishing the related papers in August and one month before the deadline for the RIIO-2 Open Letter is not be the best way to kick – off the consultation on such major issues or to include a wide set of stakeholders

This comment is set out as follows: the next section (Section 2) provides a general high-level discussion / critique of the GB governance system; RIIO; Section 3 critiques the seemingly piecemeal approach to regulation that appears to be occurring via Ofgem and BEIS; Section 4 argues that performance based regulation (PBR) and network charging are two central, inter-linked sources of revenue for network companies, and the key means to incentivise them to do what society wants of them; Section 5 sets out reasons why GB could learn lessons from other jurisdictions, even if those jurisdictions have different regulatory systems than our own; Section 6 provides a specific example of the problems of RIIO; Section 7 provides a high level critique of RIIO; Section 8 provides high level comments on the Open Letter; Section 9 answers some of the questions within the Open Letter, and Section 10 concludes.

¹⁰ <http://www.legislation.gov.uk/ukxi/2016/785/made>

¹¹ <https://www.theguardian.com/environment/2016/jun/30/uk-sets-ambitious-new-2030s-carbon-target>

¹² <https://www.gov.uk/government/news/plan-for-roadside-no2-concentrations-published>

2 IGOV'S BROAD ARGUMENT FOR INSTITUTIONAL AND REGULATORY CHANGE

IGov¹³ is a project undertaken by the EPG. It takes the view that institutional and regulatory change is required to enable a transformation of the energy system to one that is decarbonised, affordable and secure. IGov has argued that the current energy system governance framework in GB is not fit for purpose, and IGov has proposed a 'straw' governance framework which it argues is fit for purpose¹⁴. IGov argues that there are four key, inter-linked areas that require change, as shown in Figure 1¹⁵: the decision-making process, including its institutions; the resetting to be customer and demand-focused; a move to a flexible and coordinated cooperation and design; and regulatory reform.

All these aspects are necessary for the energy system transformation. No one aspect can be expected to enable that transformation on its own – and they need to be complementary to each other. GB energy governance therefore needs a more directed and coordinated approach, which includes ensuring that the system development is occurring at the required rate to meet the CCC carbon budgets¹⁶.

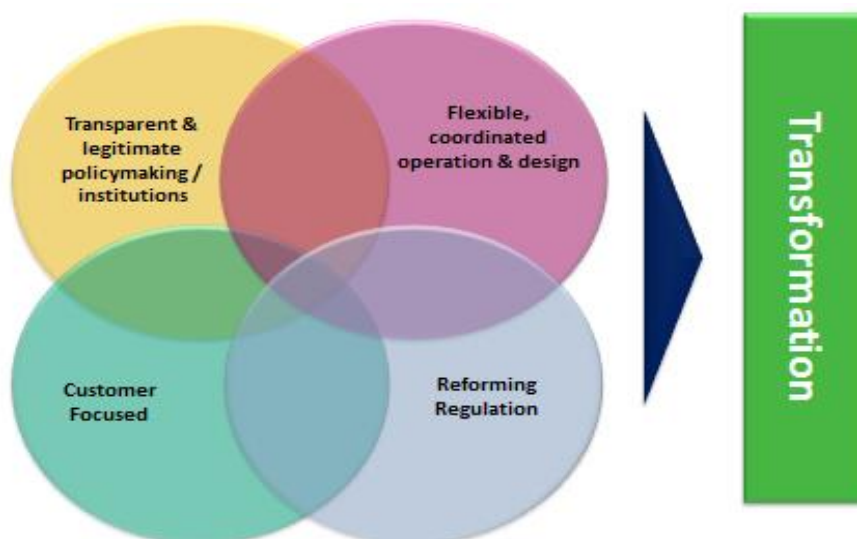


Figure 2-1 The four governance areas requiring change in GB

As such, in relation to the RIIO-2 Open Letter, we would argue that RIIOs design needs fundamental restructuring, and this includes RIIO's minor PBR component which needs to become much stronger. Overall, RIIO – GB's regulatory mechanism or whatever follows it, should be complementary to the other institutional, rules, regulations and incentives changes needed to enable a more flexible, integrated and co-ordinated system operation which also complements public policy goals and desired outputs.

¹³ Innovation and Governance for a Sustainable Economy 2012-2016 and Innovation and Governance for Future Energy Systems 2012-2019

¹⁴ <http://projects.exeter.ac.uk/igov/paper-gb-energy-governance-for-innovation-sustainability-and-affordability-2/>

¹⁵ <http://projects.exeter.ac.uk/igov/wp-content/uploads/2017/07/3.-Bringing-it-together-Catherine-1.pdf>

¹⁶ <https://www.theccc.org.uk/publication/2017-report-to-parliament-meeting-carbon-budgets-closing-the-policy-gap/>

3 INSTITUTIONAL CHANGE AND REGULATORY INTEGRATION IS MISSING FROM THE OPEN LETTER OBJECTIVES

The Open Letter lists a series of objectives for RIIO-2 (page 5), and then goes through those objectives in detail and asks a number of questions. Those questions are answered in Section 9.

The RIIO-2 objectives are:

- Giving consumers a stronger voice in setting outputs, shaping and assessing business plans;
- Allowing regulated companies to earn returns that are fair and represent good value for consumers, properly reflecting the risks faced in these businesses and prevailing financial market conditions;
- Incentivising companies to drive consumer value by shaping or proactively responding to changes in how networks are used and services are delivered;
- Using the regulatory framework, or competition where appropriate, to drive innovation and efficiency; and
- Simplifying the price controls by focusing on items of greatest value to consumers.

All of which make sense but they are not the solutions for the key challenges that networks have to address. Those key challenges were set out reasonably well in the context (1-4 of OL), and discussed below in Section 4.

We do not think the objectives of RIIO-2 respond effectively to those challenges. One reason why this is the case, is that there is no one dimension of the GB energy governance system which can be expected to meet those challenges, as explained in the section above. There will need to be several, inter-linked strands of governance to do so.

For example, this will require a higher proportion of utility revenue being linked to PBR and desired outputs. This will have to integrate with the network charging mechanism; institutional change (such as distribution network operators (DNOs) becoming distribution service providers (DSPs) or an integrated and independent system operator established to direct system change); data access; tariffs and public policy. Ofgem's strategy for regulating the future energy system does mention this need for regulatory integration (in general but not specific terms) but it completely ignores the necessary institutional change to do this. Given that the IGov framework argues that institutional change is a fundamental requirement of a successful energy system transformation, we consider this to be a major lack of both the RIIO-2 Open Letter and its 'related' documents (see Figure 3-1¹⁷ below).

We would argue that the RIIO-2 4th objective should read:

Initiating *institutional change*, using the regulatory framework or competition, where appropriate, to drive innovation and efficiency;

¹⁷ <http://projects.exeter.ac.uk/igov/wp-content/uploads/2017/07/CM-Pixie-Launch-July-2017.pdf>

We also argue that a further 6th objective should be added which is a specific RIIO objective to meet the challenges of energy system transformation, and one which recognises that PBR is not the whole answer but which should integrate with other regulatory drivers and incentives so that together greater encouragement is given for the desired outputs:

To better integrate RIIO incentives and desired outcomes with wider regulatory reforms/policies/changes to complement public policy goals in meeting the challenges of energy system transformation

As Figure 3-1 sets out, we argue that the ‘heart’ of the energy system is moving towards distribution and away from a linear, top down model to one of a more circular and integrated nature. We envisage a world where any actor which wishes to sell a resource (whether energy supply, energy demand, storage, system service etc.) is able to sell to whomever they wish either locally, or via the national wholesale market. In this world, distribution becomes more important as more of the transactions and decisions are taken at a local level (as customer preferences and needs change; as technologies become more decentralised; as heat and mobility decarbonisation policy start to become more inter-linked with electricity). That local level needs to be co-ordinated so that infrastructure and system costs do not spiral out of control, and again that integration and co-ordination needs institutional change.

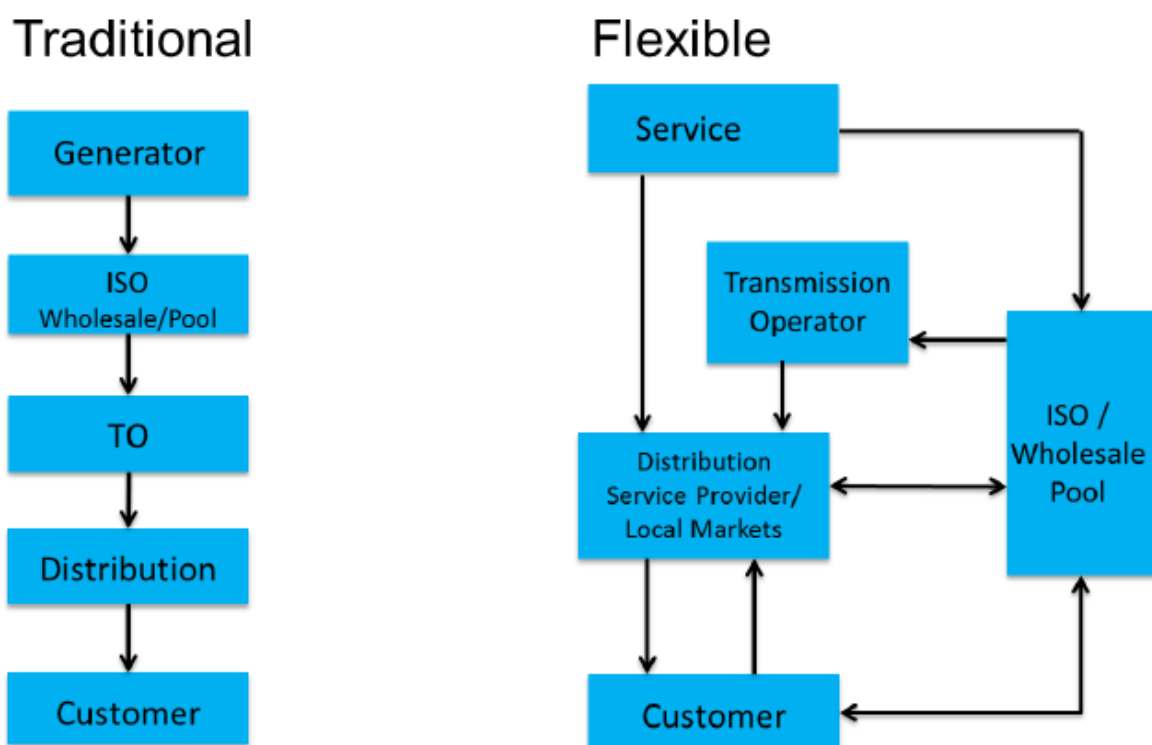


Figure 3-1 The Organisational and Institutional Structure of a Flexible, Integrated and Coordinated Electricity System

4 THE IMPORTANCE OF COMPLEMENTARY PBR AND NETWORK CHARGING RULES AND INCENTIVES

How to develop and pay for networks in an energy world of increasing proportions of onsite electricity generation has already become a central existential challenge in certain jurisdictions (such as Australia¹⁸), and one which GB needs to think carefully about. This high level question encompasses other sub-issues such as whether the GB gas network is necessary at all?; how to ensure universal access to energy and care for the vulnerable whilst network uses alters?; and how to establish greater links between network companies and other desired public policy outcomes?

Having decided on how to address this fundamental issue, the nuts and bolts of how networks should be charged for, in turn, depends on the PBR framework; the institutional framework; the extent to which distributed energy resources (DER) have been assessed and valued; the extent to which those DER values can be captured within markets and from system operation payments; the degree to which non-wire alternative can be incorporated into system operation; whether the system is operated in a top-down or a bottom-up fashion; and how successful energy efficiency of buildings, appliances, industry and so on is. In other words, network charging depends very much on how you expect networks to be used, and this depends very much on customers, and their demand, energy wishes and preferences. And getting networks to be operated and used in ways which reduce their total cost to customers and which meet the service requirements of customers, depends on the network regulatory mechanism – and we would argue that a very important part of that regulatory mechanism should be PBR.

PBR and network charging are two absolutely inter-linked revenue streams for a network (whether a combined wires and system operator or as two separate agents) where outputs are valued (as the RIIO-2 document say they are).

We argue below that PBR needs to become a more important part of our GB energy governance so that networks take their rightful place in a flexible, smart, cost-effective future. RIIO is one type of many PBR mechanisms around the globe today. At the moment, RIIO is an extremely poor¹⁹ incentive mechanism which has not incentivised innovation and which has very limited incentives for desired public policy goals, and none at all which link money to the environment. RIIO therefore needs a complete overhaul, described in Section 7 below.

The Targeted Charging Review appears to be leading on some network charging issues. It is vital that RIIO2 and the charging review work closely together.

4.1 COMPLEMENTARITY AND INTEGRATION

The BEIS and Ofgem Plan for a smart and flexible energy system, also published on 4 August, is welcomed. However, the nuts and bolts of **how** that plan is to be implemented is not so far spelt out and will have major distributional impacts. RIIO, (and the incentive mechanism

¹⁸<http://projects.exeter.ac.uk/igov/new-thinking-why-is-australia-becoming-an-interesting-case-study-for-energy-reform/> and <http://projects.exeter.ac.uk/igov/new-thinking-the-solution-to-south-australias-blackouts-a-market-which-rewards-der/>

¹⁹ Overview of RIIO Review <http://projects.exeter.ac.uk/igov/new-thinking-the-riio-edi-review-just-how-successful-is-riio/>

which replaces it), is one aspect of that plan; as is networking charging and so on. It should not be Ofgem who is de facto leading on these decisions so that the distributional impacts on GB occur ‘under the wire’ rather than as a transparent, agreed, discussed, consensus outcome²⁰.

So far, Ofgem’s and BEIS’s preference appears to be is to tackle each part of energy governance jigsaw puzzle bit by bit without providing the final picture those jigsaw puzzle pieces are meant to link together as. As has been argued before²¹, the outcomes of the various consultations by this ‘bit by bit’ approach have not necessarily either complemented each other, nor has each ‘bit’ been set up to meet the challenges it will face in the future energy system.

Moreover, if institutional change is absent from those regulatory decisions, then a ‘piece by piece’ or ‘bit by bit’ approach to regulatory change – without first providing the final jigsaw puzzle picture of what they are trying to do and how the various pieces link together - cannot lead to an effective whole system integration and transformation – particularly given the rapid technological change and the uncoordinated impact of that.

The current regulatory system, with no clear vision, is a confused mishmash of separate ideas with no cohesion between the separate gas and electricity systems and companies or between transmission and distribution. GBs piecemeal regulatory changes have so far been unimaginative, overly cautious plasters for symptoms, rather than an attempt to deal with the underlying problems. These plasters have broadly looked after the incumbents and stranded assets rather than customers and new entrants which are trying to innovate. In the meantime, whilst GB has more renewable electricity since 1990, the changes to the ‘smart and flexible’ electricity system, and heat and mobility systems on the ground are minimal, and absent in terms of integration. Moreover, the gap between technological possibilities and the pace of regulatory change is widening rather than narrowing.

GB has to speed up its energy system changes if we are to cut our greenhouse gases (GHG) to meet our targets, and it has to do this in an integrated fashion. We would hope that this Open Letter about RIIO-2, is the start of Ofgem trying to pull GB energy governance into a fit-for-purpose process.

5 LEARN FROM OTHER JURISDICTIONS

New York State (NYS) is unusual within global regulation because, whilst its mandate is still the same as it was a century ago, they have taken the view that the ‘norms’ of conventional regulation cannot transform NYS’s energy state cost effectively for the NYS energy customers. NYS took the decision to set out a Vision in 2014 (i.e. to set out the jigsaw puzzle picture to

²⁰ Argument for Ofgem to be reformed <http://projects.exeter.ac.uk/igov/new-thinking-ofgem-has-to-be-reformed-if-gb-is-to-meet-its-energy-policy-goals> in 3 part blog of Reset the reset (3 blog series) <http://projects.exeter.ac.uk/igov/new-thinking-reset-the-reset-1-we-need-institutional-governance-reform-and-we-need-it-now/>

²¹ Reset the reset (3 blog series) <http://projects.exeter.ac.uk/igov/new-thinking-reset-the-reset-1-we-need-institutional-governance-reform-and-we-need-it-now/>

follow on our analogy above) and since then has been trying to put in place new pieces of the jigsaw puzzle, or change current pieces, towards that end²².

We argue that it is important to make a distinction between the principles and ideas of the NY Reforming the Energy Vision (REV), and the day to day decisions which have been taken within the NY REV restructuring. We would argue that GB is, in many ways, in the same position as NYS was in 2014 before NYS decided to restructure its energy governance. Of course, the GB system is different from NYS but the ideas behind NY's Vision, which were intended to meet the challenges of the new energy system, appear sound to us. We think GB would do well to learn lessons from other jurisdictions, including NYS, albeit shaping those ideas to suit GB's particular situation.

The New York Reforming the Energy Vision (NY REV) has suggested bringing together public policy goals with new PBR incentives on distribution utilities so that total cost to customers is kept down whilst also ensuring that networks fit with public policy goals (see Figure 3-1²³).

Figure 3-1 sets out a conceptual idea for altering the basis of distribution network revenue, via PBR, in NYS²⁴. As can be seen, the network company moves from a broadly cost of service (i.e. a return on the asset base) + about 8 per cent PBR revenue to one after about 10-15 years with three basic sources of revenue: a cost of service element; a meeting of public policy goal

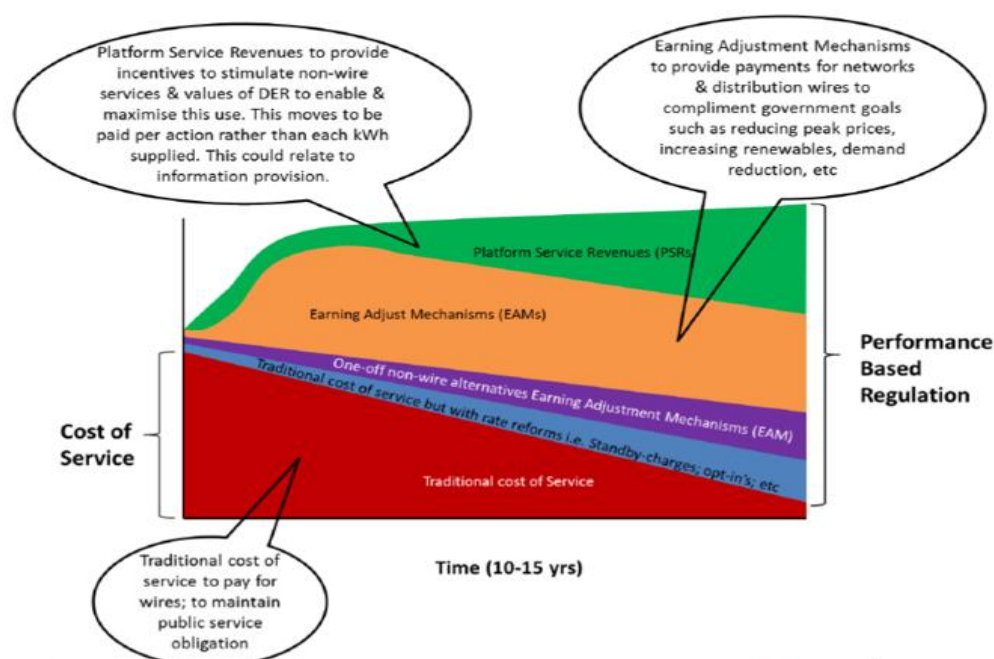


Figure 5-1 The way DSP's will earn revenue in NYS. Transforming of regulatory revenue over time - example of electricity distribution companies

²² A 6 part series on NYS & California, with NYS intro in Blog 2 <http://projects.exeter.ac.uk/igov/comparing-nys-and-ca-blog-1-series-overview/> and <http://projects.exeter.ac.uk/igov/new-thinking-transformational-regulation-comparing-the-ny-rev-riio/>

²³ <http://projects.exeter.ac.uk/igov/wp-content/uploads/2017/07/CM-Pixie-Launch-July-2017.pdf> and <http://projects.exeter.ac.uk/igov/notes-on-the-ny-rev-ratemaking-order-19-may-2016/> and <http://projects.exeter.ac.uk/igov/comparing-nys-and-ca-blog-1-series-overview/>

²⁴ This is revenue for a combined distribution SO, wires and supply business but in fact is as useful for a combined wires and SO business, with separated supply as in GB. If the SO part of a distribution service provider were separated from the wires, then it becomes even easier to pay for the networks in future years – but that creates major problems, at least in the short term, for distribution SO knowledge base

element, and a transaction element. Two thirds of this are related to PBR, and it is a carrot and stick approach. Although total costs of networks, infrastructure and energy prices to customers must come down, distribution companies are allowed a higher return provided they meet these PBR outputs.

We think RIIO-2 should be thinking in these sorts of terms, and this type of timescale. This means greater linkage between PBR, network charging, availability of data and public policy. This requires more direction from Government and institutional change – hence the need for a more crisply stated, whole system Vision.

6 AN EXAMPLE OF THE PRACTICAL PROBLEMS WHICH RIIO2 NEEDS TO ADDRESS

There are all sorts of issues with RIIO and these are discussed in the Section below. Figure 6-1²⁵ shows one of its fundamental problems. For more detail please go the blogs about this. It shows GB photovoltaic (PV) implementation versus the National Grid (NG) electricity system scenarios, which are a central aspect of the DNO's business plans. As can be seen, the actual take-up of PV was far more rapid than expected, and as a result local network capacity was used up quicker than expected (for example, in Western Power Distribution's (WPD) case within a year). There is no obvious means for the DNOs to access revenue to pay for more network capacity within the remaining years of the distribution price control (i.e. until 2023). Ofgem chose not to re-open the price control – which, in our view, was mistaken and a missed opportunity.

Figure 6-1 illuminates a number of issues: the rapidly changing technological landscape; the changing role of customers (and wishes); the altering make-up of electricity generation investors; the need for regulatory flexibility in the face of unexpected change; the need for a more open attitude to what might be energy system opportunities; the need for greater, meaningful involvement of stakeholders in these decisions, and the differences of experience between distribution network operators in different areas.

It also shows the interconnected nature between regulatory outcomes: National Grid's scenarios on PV implementation were wrong; the DNOs usually chose the most conservative scenario of them; Ofgem did not pick the DNOs up on their choice and passed the business plans; and the Government chose to see PV implementation (which was a new form of energy generation investment and customer involvement) as a major problem to be dampened down.

As we have said before, ultimately we see the responsibility for energy policy, and the implementation of that policy - including the factors required for the enabling system development - to be that of the Government²⁶. We regret that there still appears to be no

²⁵ <http://projects.exeter.ac.uk/igov/new-thinking-solar-surprise-revisited/> and <http://projects.exeter.ac.uk/igov/wp-content/uploads/2015/06/Lockwood-Institutional-inertia-STA-8-June1.pdf>

²⁶ <http://projects.exeter.ac.uk/igov/paper-gb-energy-governance-for-innovation-sustainability-and-affordability-2/>

appetite from BEIS to clarify Ofgem's role, via a strategic and policy statement²⁷ from BEIS to Ofgem.

This particular issue of PV implementation shows no one (i.e. the Government, Regulator, NG and DNO) in good light. RIIO-2 has to be a significant improvement on the design of RIIO.

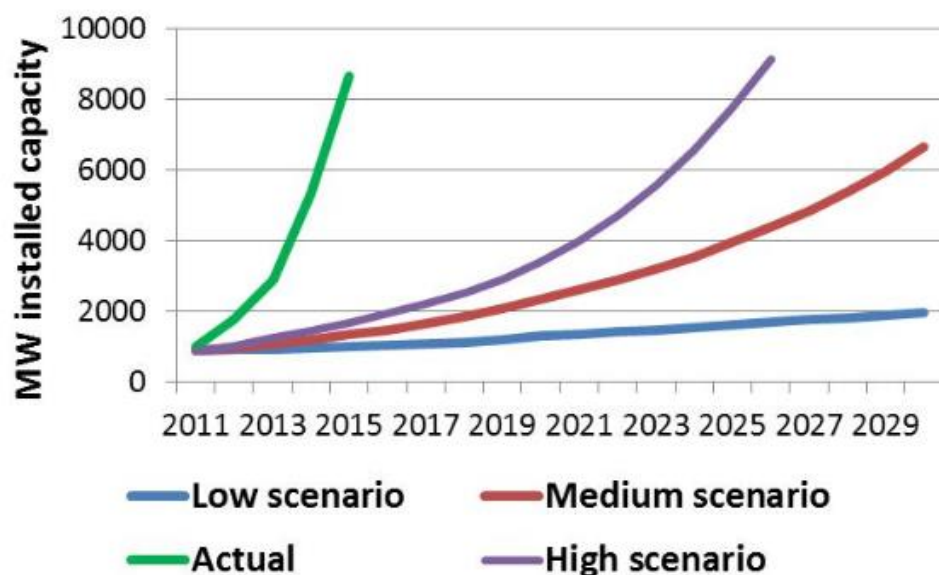


Figure 6-1 PV Implementation in GB versus NG Scenarios

7 HIGH LEVEL CRITIQUE OF RIIO

EPG recently published a blog on the RIIO EDI Review²⁸. The blog's conclusions about the electricity distribution RIIO were:

- RIIO is an improvement on RPI-X.
- Ofgem have reduced the capacity somewhat for distribution network companies to 'game' the base revenue allowance, but the incentive on companies to do so is still strong.
- The BMCS are a positive step

However,

- The need for benchmarking is a fundamental flaw of the RIIO design, which undermines innovation and encourages gaming
- The two-tracks of fast and slow should be scrapped
- The link between incentives and outputs is minimal, and in the case of the environment absent.

²⁷ <http://projects.exeter.ac.uk/igov/submission-to-decc-consultation-on-the-draft-strategy-and-policy-statement/> and <http://projects.exeter.ac.uk/igov/new-thinking-the-odd-couple-will-a-new-strategy-and-policy-statement-help-sort-out-the-relationship-between-government-and-ofgem/>

²⁸ <http://projects.exeter.ac.uk/igov/new-thinking-the-riio-edi-review-just-how-successful-is-riio/>

- Some of the DNO's used innovation funding to invest in projects such as micro-grids, low-carbon cities, local energy markets and active network management. However, these are still in the minority and none of the pipeline projects, either from RIIO or LCNF initiatives, applied for rollout funding (in other words, to become mainstream within DNO operation).
- The overall incentives, whether for 'innovation' or other named desired outputs is a minimal proportion of allowed revenue, and has to be increased significantly
- The 8 year price controls limit flexibility, and need to be reduced.

The RIIO process, obviously, encompasses far more than the electricity distribution price controls, but we think the problems of ED1 can be broadly generalised to other price controls.

Moreover, Citizens Advice published a report *Energy Consumers' Missing Billions*²⁹ the same day that the RIIO-2 Open Letter was released. The CAB analysis had a central estimate that customers are over-paying £7.5bn (£3.5-11.1 bn) to networks over the course of the 8 year price controls. The average profit is 10%, and none earn less than 7% - and CAB argue that networks are a low risk sector. The Energy and Climate Intelligence Unit (ECIU) has also published a critical report of DNO profits³⁰.

Our (EPG) response below to the particular questions asked in the RIIO-2 Open Letter reflect these EPG and CAB criticisms of the RIIO process, as well as the broader concerns about DNOs in the ECIU report.

As explained in Section 2, we do not support the continuation of the current governance system in GB – and that includes the current design of RIIO. We support a higher proportion of PBR – of which RIIO has a small percentage (6.5%).

RIIO is based on a benchmarking of very different DNO areas. As a result, their differences have to be 'smoothed' in order that benchmarking can occur.

It is far better, in our view, for regulation of networks to move towards PBR model based on desired outputs, which is not based on benchmarking; not based on fast and slow tracking but based on individual characteristics.

8 HIGH LEVEL CRITIQUE OF THE RIIO-2 OPEN LETTER

As set out in Section 3 we argue that the RIIO-2 objectives should be altered:

The RIIO-2 objectives are:

- Giving consumers a stronger voice in setting outputs, shaping and assessing business plans;

²⁹ <https://www.citizensadvice.org.uk/about-us/policy/policy-research-topics/energy-policy-research-and-consultation-responses/energy-policy-research/energy-consumers-missing-billions/>

³⁰ *Monopoly money: How the UK's electricity distribution network operators are posting big profits* <http://eciu.net/reports>

- Allowing regulated companies to earn returns that are fair and represent good value for consumers, properly reflecting the risks faced in these businesses and prevailing financial market conditions;
- Incentivising companies to drive consumer value by shaping or proactively responding to changes in how networks are used and services are delivered;
- Using the regulatory framework, or competition where appropriate, to drive innovation and efficiency; and
- Simplifying the price controls by focusing on items of greatest value to consumers.

We argue that:

The 4th objective should alter to become: Initiating *institutional change*, using the regulatory framework or competition, where appropriate, to drive innovation and efficiency;

We argue this because a central issue that arises from the Open Letter, and the wider set of documents to which it is related, is **how** to implement them in a cost effective way for customers, whilst also meeting public policy goals.

- we will argue in greater detail below that we think the 8 year period price controls – whilst put in place for responsible and understandable reasons – is too long given the rapid technological change of the energy system, which is in turn causing energy economics to fundamentally alter. Whilst we think it is a good idea to bring the price controls in line timewise, it is horrifying to think that to do this we may have to wait until 2023, if we continue with the current timetable. **How therefore can this process be speeded up?**
- we agree with many of the points raised within the Open Letter and the Ofgem Strategy for Regulating the Future Energy System, but we would argue that RIIO is fatally flawed because of its benchmarking basis and needs fundamental restructuring. We are pleased to see this in the RIIO-2 questions.
- as argued above, no one dimension of the energy system is the answer to energy system transformation. IGov argues there are 4 areas (see Figure 2-1) which need to work together. As discussed above, we see an entire absence of discussion about institutional reforms – for example, over such issues as open access to data - and about integration across the regulatory spectrum. **How therefore does RIIO integrate and complement the wider regulatory environment?**

The combination of these three points bring us to the conclusion that Ofgem need to think in a more strategic and structural way about RIIO-2, and how it fits into a wider governance package. The Ofgem Strategy paper talks about tools of regulation (i.e. principles of regulation etc.) and what it intends to do, but it does not address **how** it intends to implement its (and BEIS's) rhetoric for a smart and flexible energy system.

And that a 6th objective should be added:

To better integrate RIIO incentives with wider regulatory reforms/policies/ changes to complement public policy goals in meeting the challenges of energy system transformation

9 ANSWERING THE OPEN LETTER QUESTIONS

As said above, we do not think the GB governance structure is fit for purpose, and that includes RIIO³¹. We would much prefer that as a first step Ofgem and BEIS work out how each part of the GB governance process needs to fit together in a general way. Once that high level picture is provided – which would not take long – then the details of how to implement each part of that can be turned to in an ‘agile’ way – in other words, both knowing the general direction of travel but regularly, proactively reviewing, and if necessary resetting itself in light of new, technological, economic or social factors. This seems a much more rational and logical approach than the current piecemeal, often reactive approach.

9.1 GIVING CONSUMERS A STRONGER VOICE IN SETTING OUTPUTS, SHAPING AND ASSESSING BUSINESS PLANS

One way to give consumers a stronger voice is to think of them as customers (rather than consumers) which have preferences, and potentially unique if they had some way of making known what their wishes are (as opposed to reacting to suppliers ideas); and that they should be able to get the service they wish – even if not ‘cost-effective’ in the narrow way Ofgem seems to think of a service. This might include customers which want a PV panel on their roof, who then want to sell back any excess; it might include customers who want a new tariff with an electric vehicle³².

The introduction of the Broad Measure of Customer Satisfaction (BMCS) is welcomed. We agree that in order to transform the current energy system customers will need to be recognized not just as users of energy but also as providers of system services via DER³³ and therefore should be at the centre of the new system. We would welcome Ofgem’s suggestion to establish a more formal process e.g. bi-annual workshops with the representatives that are currently required by the RIIO framework. The workshop should **also** include customers who will be enabling future grid services, such as transactive energy providers and IT platforms.

It is also important to acknowledge that there is a need for *meaningful* engagement with customers, particularly householders, about why society is trying to change to a new system, how this may come about and how it could affect them – in a good and bad way – and how this will affect energy bills now and in the future. This is much more easily done at the local level. This is not an Ofgem-only issue which is why we argue for a ‘consensus building body’³⁴ who coordinates society wide connection to decision-making.

³¹ Our fit-for-purpose governance framework document: <http://projects.exeter.ac.uk/igov/paper-gb-energy-governance-for-innovation-sustainability-and-affordability-2/>

³² <http://projects.exeter.ac.uk/igov/working-paper-people-demand-and-governance-in-future-energy-systems/>

³³ Mitchell, C., Lockwood, M., Hoggett, R., Kuzemko, C. (2016) *Governing for Innovation, Sustainability and Affordability: An institutional framework*.

³⁴ <http://projects.exeter.ac.uk/igov/paper-gb-energy-governance-for-innovation-sustainability-and-affordability-2/>

9.1.1 Outputs framework

The Outputs Framework (Page 6) says the RIIO framework is designed around 6 areas but actually the outputs are incentivised differently. For example, the environment has no money attached to it³⁵.

The idea of having a structured approach and defining outputs without a long-term vision is limiting. We would encourage a move to PBR similar to that of the NY REV³⁶. We also envisage far more detailed outputs which can be incorporated into PBR – please see as an example, the Ratemaking Order of the NY REV Public Service Commission (PSC)³⁷.

The current RIIO performance based system does not give outputs as an overall aim to reach a decentralised, decarbonised, digitalised and democratic system (D4) but rather picks at certain small elements. This does not incentivise using innovative approaches, or allow the networks to be creative by delivering solutions which could achieve multiple outputs. The current incentives encourage keeping things ‘business as usual’ and allow networks to carry on in the same way - by efficient use of their current assets - rather than investment in new technologies and ideas which are essential in moving forwards. This can be seen by the fact that **no** DNO in the RIIO-ED1 price control applied for roll-out funding for **any** project.

With respect to the distribution price controls, we argue that each DNO should be expected to produce a distributed energy resource (DER) plan³⁸ as a required output before RIIO2 commences (preferably in 2021 – i.e. a reduced time period from 8 to 6 years for distribution). This plan would enable DNO’s to (1) know what distributed energy resources are available within their energy systems – in terms of place and time, and with respect of supply, demand side response, storage, other flexibility resources etc.; and (2) to have a parallel methodology of how to value that DER. We would expect this to happen over a 2 year process to recognize the value of future network systems, and to bring interested parties together with these parties included in the bi-annual consumer workshops. From this knowledge, it would be possible to incentivise various non-wire alternatives, services or goals, such as bringing down peak prices, peak capacity requirements, increase DSR etc.

The NY REV in New York State, and more recently, the Finkel Review³⁹ in Australia have occurred as a reaction to extreme weather events. To avoid having to be reactionary to possible future blackout events it would be recommended that extreme weather events are **not** excluded from the interruptions element of the BMCS. As severe weather events are expected to become more common due to climate change it would seem that innovative approaches to reducing the threat of blackout, such as microgrids, virtual power plants and the use of islanded generation should be part of a network business plan.

9.1.2 Clarifying outputs

We do not think the right level of outputs is given in RIIO – see section 9.1.1. Moreover the 6 there are have different incentives. Some outputs have a financial incentive and a reputational incentive for others (for example, the environment). This is saying to the networks that some outputs are more important than others – and that the environment is

³⁵ <http://projects.exeter.ac.uk/igov/new-thinking-the-riio-edi-review-just-how-successful-is-riio/>

³⁶ <http://projects.exeter.ac.uk/igov/comparing-ny-with-ca-blog-2-catching-up-with-the-ny-rev/>

³⁷ <http://projects.exeter.ac.uk/igov/notes-on-the-ny-rev-ratemaking-order-19-may-2016/> and <http://projects.exeter.ac.uk/igov/us-regulatory-reform-ny-utility-transformation/>

³⁸ <http://projects.exeter.ac.uk/igov/new-thinking-reset-the-reset-3-der-walking-the-walk/>

³⁹ <http://www.environment.gov.au/energy/national-electricity-market-review>

not important. For ED1 this led to a very BAU approach as the financial incentives were linked to improvements in efficiency – no different to RPI-X.

In order to move to a clean energy system **all** outputs must be considered equally important as each is vital in achieving system transformation.

New outputs, important to a smart flexible energy system will need to have value attached to them. These outputs could be bringing peak prices down; altering the proportion between network and non-network alternatives; reducing g /kWh carbon; increasing RE installation and so forth (and again, please see ⁴⁰).

9.1.3 Output incentives

If the objective of RIIO is a secure operation, stimulation of innovation and meeting of outputs which together will encourage GB networks to do their bit in keeping the GB energy system fit-for-purpose, then no, the RIIO-1 incentives are not appropriate. This is because financial incentives were targeted at economic efficiency measures. There were no incentives, other than reputational, for environmental outputs which encouraged decarbonisation - and no penalties or rewards for the use, or non-use, of the innovation funding. If we wish to transform our energy system then innovation is key, as is then assigning a value for these known, and future unknown, innovative services.

9.2 ALLOWING REGULATED COMPANIES TO EARN RETURNS THAT ARE FAIR AND REPRESENT GOOD VALUE FOR CONSUMERS, PROPERLY REFLECTING THE RISKS FACED IN THESE BUSINESSES, AND PREVAILING FINANCIAL MARKET CONDITIONS

The current RIIO framework is far too complex. It clearly is not good value for customers; the company profit does reflect the low risk; the incentives for the outputs are minimal or absent; the desired outcomes are unimaginative and not sufficiently related to moving to a flexible and smart energy system. 'Good value' should broadly mean transforming the energy system to make it fit for purpose, keeping costs down and moving it to decarbonisation (environmental), digitalisation, decentralisation (innovation) and democratisation (consumers). On this level, there is not good value.

We agree with the recommendations made by the CAB report⁴¹ concerning fair returns. We do think that RIIO incentives outputs must be tied to rapid energy system transformation capable of meeting CCC targets.

In order to reduce forecasting errors it will be necessary to reduce the price control period, or to develop some kind of rolling price control which allows 'opening up'. That the EDI price control was not opened up (see Section 6) shows how inflexible RIIO is.

To expect networks to be able to forecast costs over such a lengthy amount of time, especially with rapidly falling costs of new technologies and new ways of doing things, will undoubtedly lead to errors either over or under the base revenue allowance. This also gives the networks the opportunity to underspend or overspend on their forecast allowances and then to justify this as monetised risk.

⁴⁰ <http://projects.exeter.ac.uk/igov/notes-on-the-ny-rev-ratemaking-order-19-may-2016/> and <http://projects.exeter.ac.uk/igov/us-regulatory-reform-ny-utility-transformation/>

⁴¹ <https://www.citizensadvice.org.uk/Global/CitizensAdvice/Energy/EnergyConsumersMissingBillions.pdf>

9.3 INCENTIVISING COMPANIES TO DRIVE CONSUMER VALUE BY SHAPING OR PROACTIVELY RESPONDING TO CHANGES IN HOW NETWORKS ARE USED AND SERVICES ARE DELIVERED

We agree that **all** price controls should be aligned for the ease of implementation of the future energy system – We believe that to transform the energy system there will need to be greater coordination between gas, heat, electricity and transport – a whole system approach which would need changes to system direction, design and governance. Direction would be led by an independent integrated system operator (IISO) following decisions by the Secretary of State⁴². Governance will be based on legitimate direction from the top, optimisation of supply and demand from the bottom up, and then middle out facilitation through system and market institutions. In order to allow for this greater coordination of both the system and its governance it will be essential for price controls to reflect this coordination⁴³.

However, we are unhappy that we have to wait until 2023 for this (2021 for the non-electricity distribution price controls, and 2023 for the electricity distribution). The question of the transmission system operator timescales has also been discussed. One solution might be that the SO price control start is put off until 2021; the ED-I be reduced to 6 years, so end in 2021. The price control terms could then come together then – and be a much more integrated approach to energy system regulation.

In the meantime, this would allow the SO to be entirely separated from NG – as we argued for⁴⁴. It would also allow for Ofgem and BEIS to work out their own high level fit-for-governance package AND decide on future RIIO details.

9.3.1 Flexibility

As previously mentioned, a DER plan for each DNO area will be necessary to allow networks to know what DER they have in their area; and then to assess the value of DER – both for energy and for system solutions to link in with the Ofgem future energy system vision. Then those values have to be incorporated into the regulatory process - and this may need Code and License changes.

The value of DER and the size of its resource cannot really be known until the ‘data’ within an area – system data currently held by DNOs and customer data by suppliers – is opened up to all stakeholders. Establishing DER assessments would do that. We recommend a Data Body as is occurring in Denmark but we have also flagged possible links with Open Banking which is occurring in GB.⁴⁵

Only at that point can one understand what is ‘cost effective’.

If we wish companies to innovate and use smart and flexible alternatives to networks then the onus should be on incentives for innovative solutions being in the PBR – this absolutely is not the situation in RIIO-1. To achieve this in RIIO-2, we would recommend that the level of innovation should become an incentivised output. NYS has done this by incentivising non-wire transactions – i.e. a move away from a payment per energy unit crossing the network to

⁴² <http://projects.exeter.ac.uk/igov/paper-gb-energy-governance-for-innovation-sustainability-and-affordability-2/>

⁴³ Mitchell, C., Lockwood, M., Hoggett, R., Kuzemko, C. (2016) *Governing for Innovation, Sustainability and Affordability: An institutional framework*.

⁴⁴ <http://projects.exeter.ac.uk/igov/submission-ofgem-call-for-evidence-on-future-electricity-system-operator-arrangements/>

⁴⁵ Open energy / banking blog <http://projects.exeter.ac.uk/igov/new-thinking-open-banking-open-energy/>

payment per transaction. We would also recommend that a financial incentive only be given if **all** outputs are met.

We also support an end to ‘pilots’ for innovation. We have had the LCNF; now we have NIA and NIC. There are other monies which can be accessed for ‘innovation’. These have so far not been successful in moving these pilots on from pilots to part of the business plans. We argue that we need to move to DER plans, and an opening up of data so that new entrants can work out the value of different aspects of energy system operation + and then combine this with PBR on transactions and to support public policy goals.

9.3.2 Managing asset utilisation risk

Customers pay enormous amounts of money to these companies for a very poor service⁴⁶. The onus on the Regulator and the Government should be on transforming these companies into professional, well run ISOs or companies which are providing a service that customers want.

In IGov’s view the uncertainty of the future and the risk involved in transforming network companies is over-hyped. These companies which have done very well by doing very little in a low risk sector want it to continue this way.

It seems to IGov that the problem is not just to do with these companies but that Ofgem and the Regulator are too sympathetic to the companies. Ofgem and the Government should be sympathetic to customers, and doing the best for them, not continuing to keep companies which provide an expensive service going.

9.3.3 Options for managing uncertainty

Again, we think uncertainty is over-hyped. Yes, we do not exactly know what technologies are coming forward but we do know – at the global level - that energy systems are moving to a decentralised, decarbonised world. A least regret⁴⁷ policy is more renewables, more energy efficiency, more flexibility. The network companies can work to that, as investors are choosing to do.

We would also argue that as much ‘uncertainty’ has been caused by the GB Government having such a confused energy policy – particularly with respect to nuclear⁴⁸.

The fact that uncertainty mechanisms are needed shows that an eight-year price control is too long. The idea behind this length of control was to reduce the burden on the regulator to solve problems from previous price controls within the allocated time⁴⁹ and also to provide greater revenue certainty for investors. This implies that the expected pace of change of technology will lead to more of these mechanisms, which in turn creates more work and uncertainty than it fixes. RIIO-2 needs to get out of this design fault.

A shorter price control will allow more flexibility and adaptability to a rapidly changing environment whilst giving investors more confidence as to their final returns at the end of the price-control.

⁴⁶ <https://www.citizensadvice.org.uk/about-us/policy/policy-research-topics/energy-policy-research-and-consultation-responses/energy-policy-research/energy-consumers-missing-billions/>

⁴⁷ Six part series <http://projects.exeter.ac.uk/igov/new-thinking-a-no-regret-energy-policy-reduce-flatten-and-flex/>

⁴⁸ <http://projects.exeter.ac.uk/igov/new-thinking-hinkley-point-c-time-for-a-plan-b/>

⁴⁹ Smith, S., 2010. RPI_X@20. In The Beesley Lectures. London

9.4 USING THE REGULATORY FRAMEWORK, OR COMPETITION WHERE APPROPRIATE, TO DRIVE INNOVATION AND EFFICIENCY

We do not support benchmarking or having a sharing factor.

We think benchmarking is too intrusive and as an assessment tool has, given the returns of some of the underperforming companies, not really worked. We think companies are too different and that too much effort has to be made to make them reasonably similar in order to benchmark them. Far better, and easier, that the regulatory basis on these companies alters, and treats them as unique. The output regulation on them should lead them to deliver those outputs in the most effective way for their areas.

From the information in ED1 the IQI and the efficiency incentive still gave companies the opportunity to game the system. For example, WPD who were the only company in ED1 to be fast-tracked, submitted a business plan which met the objectives set out by Ofgem, but now shows a forecast overspend by 5% of their agreed business plan allowance. This suggests that WPD, in order to be fast-tracked, may have submitted a lower figure to the EDI process in order to show good value for customers. However, UKPN, whose business plan was the worst performing amongst the DNOs, and were given a low sharing factor, are able to offer their investors and themselves a higher return, and their customers greater savings over the ED1 period, as they have been able to achieve a £929m forecast underspend and an 11.5% RoRE.

We believe that Ofgem should expect the DNO's to submit quality business plans first time, and not be given a second chance, and more opportunity to game.

We think the network companies should have 3 basic sorts of revenue – cost of service for networks; revenue from meeting public policy goals; and revenue from increasing transactions, as set out in Section 5.

9.4.1 Innovation stimulus package

We feel that the innovation stimulus package has not been successful in driving change. The majority of NIC and NIA funding concentrated on improving asset health, capacity and reducing faults - something that the companies should be doing as part of normal business practice.

The companies used innovation funding as a means to gain more from those incentives that had a monetary value. This has meant, as the environmental output had no financial incentive, the networks gave little regard to the value of decarbonisation and decentralization and more to that of BAU efficiency

The current framework has made the networks think more about innovation than previously but, in the case of the DNOs, no innovation projects have then bid for roll-out funding. We believe that including innovation as an output, rather than a separate pot will encourage the networks to use innovative solutions to achieve benefits from all of the outputs. A financial incentive should only be given if all outputs have been met. This encourages more use of innovation which is able to achieve multiple outputs not just those which encourage BAU efficiency.

9.5 SIMPLIFYING THE PRICE CONTROLS BY FOCUSING ON ITEMS OF GREATEST VALUE TO CONSUMERS

As previously commented fast-tracking has shown no benefits to customers. In the case of the DNO's, there was only one fast-tracked company but as the CAB report has shown, all companies are showing percentage profits of around 10%. We would recommend that networks should only be given one opportunity to submit their business plans - reducing the ability to game, with sharing factors allocated as to the quality of these plans and how close they are to Ofgem's determination of efficient costs.

9.5.1 Monitoring and information

The use of benchmarking for monitoring performance allows for gaming amongst networks. As we move to a more decentralised grid, solutions for grid services will become more localised and the use of benchmarking more difficult. The move to PBR, such as that of the NY REV, allows for monitoring of performance against outputs, rather than against each other's performances, reducing this ability to game. This then drives innovation for meeting the challenges of a decentralised grid and reaching the required outputs.

We suggest looking at NY REV's ratemaking order which discusses not just outputs but also something called 'scorecards'. These scorecards are issues which may become incentivised outputs but which, at the current time, the Regulator does not have sufficient data to understand how best to incentivise them. The scorecards set up means of capturing information⁵⁰.

10 CONCLUSION

The EPG welcome the opportunity to review this Open Letter and are pleased that Ofgem see the need for change within the regulation of the networks.

We feel that the biggest issue facing the Regulator, is the need to speed up the rate of change of GB's energy system.

We hope that Ofgem will reduce the eight year price control down to 4 or 5 years, or a more rolling approach. The carbon budget for the period 2028-2032 is 1,725 mt CO₂e⁵¹, equivalent to a 57% reduction on 1990 levels⁵². In order to meet this budget the networks will not only need to consider heat and power, but also increasingly transport.

We do not believe Ofgem, or anyone else, is able to predict how technology will develop over this time, although we do think we know the direction of travel.

No one factor can make this transformation on its own. More integration of PBR, network charging, public policy goals and opening up of data are required. New ways of regulating the

⁵⁰ <http://projects.exeter.ac.uk/igov/notes-on-the-ny-rev-ratemaking-order-19-may-2016/> and <http://projects.exeter.ac.uk/igov/us-regulatory-reform-ny-utility-transformation/>; http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/About_Us/Organization/Commissioners/Michael_J_Picker/2016%20DER%20Action%20Plan%20FINAL.pdf; Blogs 2, 3 and 5 of this series <http://projects.exeter.ac.uk/igov/comparing-nys-and-ca-blog-1-series-overview/>; general NY REV site has all documents about all aspects of NY REV:

<http://www3.dps.ny.gov/W/PSCWeb.nsf/All/CC4F2EFA3A23551585257DEA007DCFE2?OpenDocument>

⁵¹ <http://www.legislation.gov.uk/ukxi/2016/785/made>

⁵² <https://www.theguardian.com/environment/2016/jun/30/uk-sets-ambitious-new-2030s-carbon-target>

energy system (i.e. more PBR), with new actors in new roles and new institutions will be needed. A new RIIO design is important as one dimension of this fit-for-purpose energy system governance.

In order to achieve regulatory flexibility and agility, we recommend that the length of the price control be reduced; that the price controls for gas and electricity and both for distribution and transmission, need to be aligned; and this needs to be set within a much more coherent governance framework.

We predict that the future decarbonised energy system will become decentralised, digitalised and more democratic, with a greater role for distribution companies. We need a firm plan from BEIS/Ofgem on the timescale and scope of this transformation, similar to that for the NY REV, which then gives networks a clearer vision of how the outputs to be incentivised, as set out by RIIO, will help to achieve energy system transformation. The current regulatory system, with no clear vision, is a confused mishmash of separate ideas with no cohesion between the separate gas and electricity companies or with transmission and distribution.

In ED1 some of the DNOs have shown that they are willing to innovate towards energy system transformation but the lack of financial incentives in the outputs means that these innovative practices have not been rolled-out.

By restructuring the current regulatory incentive mechanism to one with a greater emphasis on PBR, with monitoring and incentives based on how **all** outputs are met - rather than benchmarking, gives the networks more opportunity for creative thinking.

It is also essential that one of the outputs should be the development, and continual updating, of a DER plan. Another is the opening up and accessibility of customer and system data. These are the basis of understanding the value to non-network alternatives; encouraging new entrants and new services; and ease the transformation of DNO to that of distribution system provider.

The EPG believe that to leave RIIO as it stands now does not give enough incentive for the change that is needed to fulfil our carbon reduction targets. We see this RIIO-2 review as an opportunity for both BEIS and Ofgem to reset themselves and lead the world by providing regulation that enables a swift and efficient energy system transformation.