

# **RIIO-2 Stakeholder Workshop**

## **- Delivering What Consumers Need**

**23 October 2017**

ofgem

- **Introduction (13:30 – 13:50)**
  - The purpose and context of the workshop
- **Stakeholder Views (13:50 – 14:20)**
  - Stephen Hassall – Cadent Gas
  - Paul Auckland – Electricity North West
  - Peter Smith – National Energy Action
- **Coffee and get into groups (14:20 – 14:30)**
- **Breakout Groups (14:30 – 15:45 20 mins per group + time for rotation)**
  - How can the framework ensure the delivery of whole system outcomes?
  - How can the framework support network companies in evolving their role and the services that they provide?
  - How can the framework successfully adapt to uncertainty?
- **Break (15:45 – 15:55)**
- **Report Back (15:55 – 16:15)**
  - Each group to present key discussion points
- **Wash Up and Closing Remarks (16:15-16:30)**
  - Next steps and further engagement

- In our open letter in July we set out our draft overarching objective detailing what we believe RIIO-2 will need to focus on, building on the RIIO-1 framework and making changes where we have learnt lessons or where we will need to adapt to the future.
- Building on the strong theme of enhanced stakeholder engagement that was brought about through RIIO-2 we want to make sure that we are involving our stakeholders early.
- As trailed in the launch webinar last week, today is one of a series of stakeholder workshops which we are holding over Oct and early Nov to build on the open letter and get your views on some of the key issues we will be considering as part of our framework consultation.

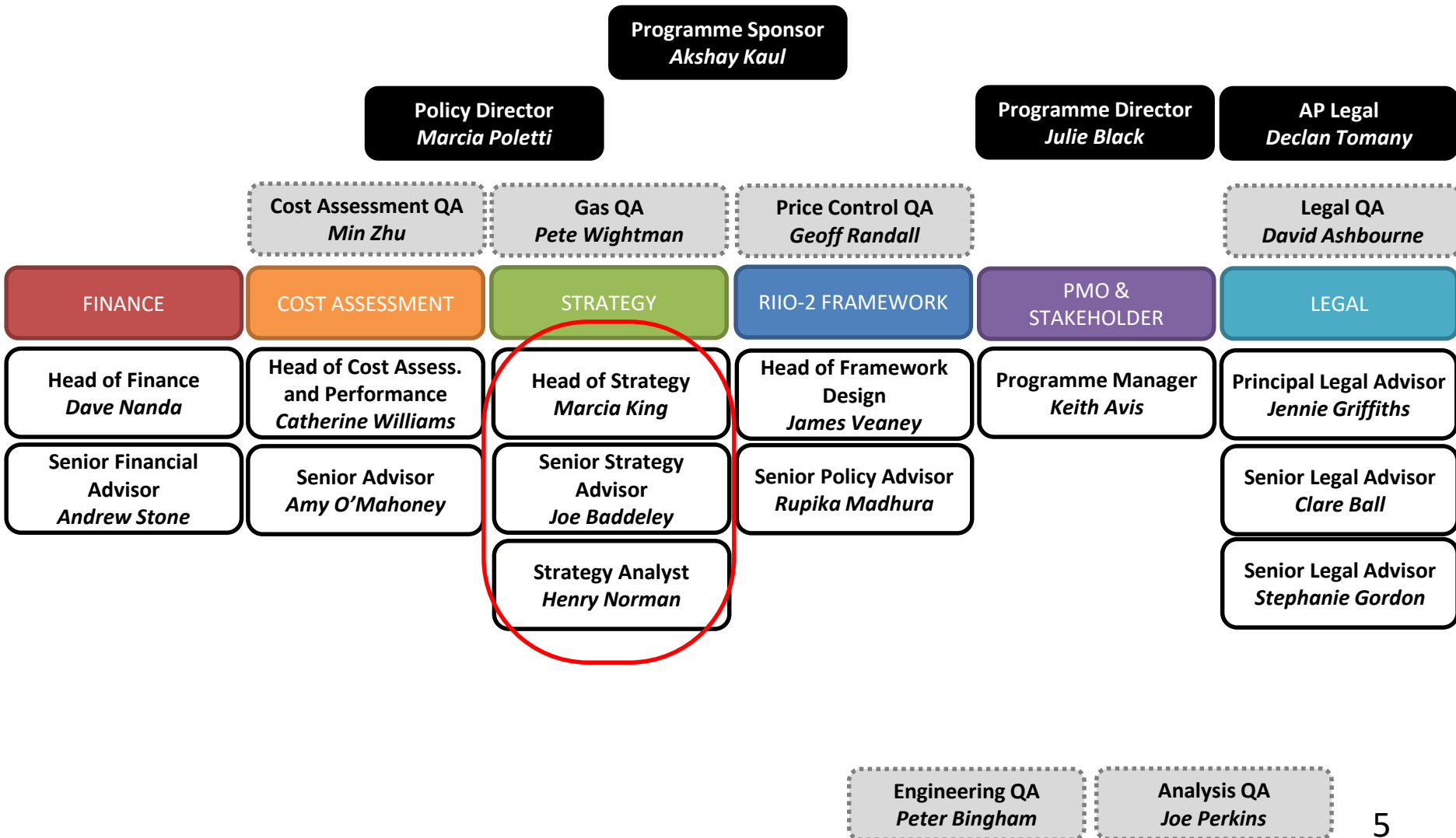
## **To ensure regulated network companies deliver the flexible services that consumers want and need.**

RIIO 2 will aim to achieve this by:

- 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 respond in ways that benefit consumers to the risks and opportunities created by potentially dramatic changes in how networks are used;
- 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.

Today's workshop focusses on how, in a potentially dramatically changing energy sector, we can ensure that network companies are delivering the services that consumers (both current and future) want and need, including how best to maximise the opportunities and minimise the risks associated with this transition.

Date	Workshop	Content
18 Oct	Consumer voice	<ul style="list-style-type: none"> <li>• What worked well in RIIO-1 and how it can be improved</li> <li>• Exploring alternative approaches</li> </ul>
23 Oct	Delivering what consumers need	<ul style="list-style-type: none"> <li>• How can RIIO-2 best ensure delivery of whole system outcomes?</li> <li>• How will RIIO-2 need to adapt to the wide range of potential energy transition futures?</li> </ul>
24 Oct	A fair return	<ul style="list-style-type: none"> <li>• What should the return a company earns reflect</li> <li>• How can we improve the framework to minimise 'undeserved' returns</li> <li>• Exploring alternative approaches to ensuring fair returns</li> </ul>
31 Oct	Simpler clearer	<ul style="list-style-type: none"> <li>• Reducing complexity in the price control</li> <li>• Increasing transparency in reporting and monitoring the price control</li> </ul>
1 Nov	Long term value for money	<ul style="list-style-type: none"> <li>• How well did RIIO-1 incentivise long term thinking and providing long-term value for money?</li> <li>• How should we incentivise innovation and what role should an innovation stimulus play?</li> <li>• What role should competition play in delivering long-term value?</li> </ul>





## **Marcia King**

- Heading the team responsible for reviewing the framework in light of some of the challenges we will face in the future. Particularly around the energy transition and how the framework will need to adapt.



## **Joe Baddeley**

- Focussed primarily on how the framework can deliver whole system outcomes, ensure efficient network utilisation and enhance the use of competition. Also the link to the SO team in relation to RIIO.



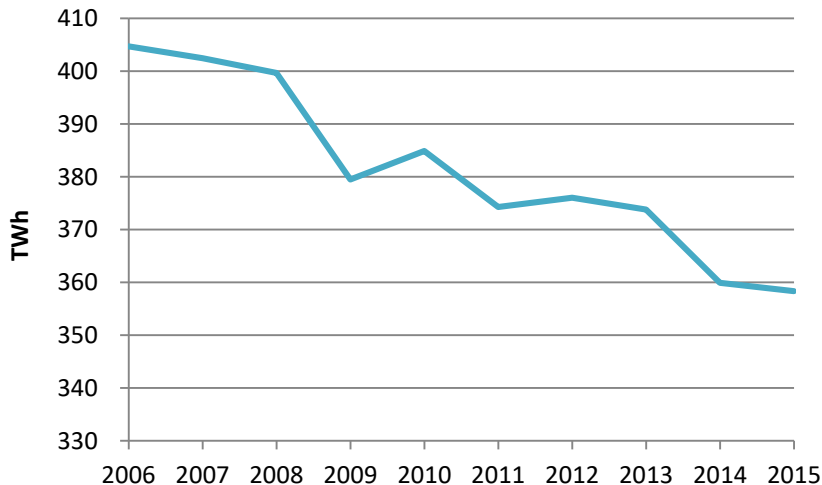
## **Henry Norman**

- Focussed primarily on innovation and how the stimulus may be used in future and the role that energy efficiency, as part of a suite of flexible services, might play in RIIO-2.

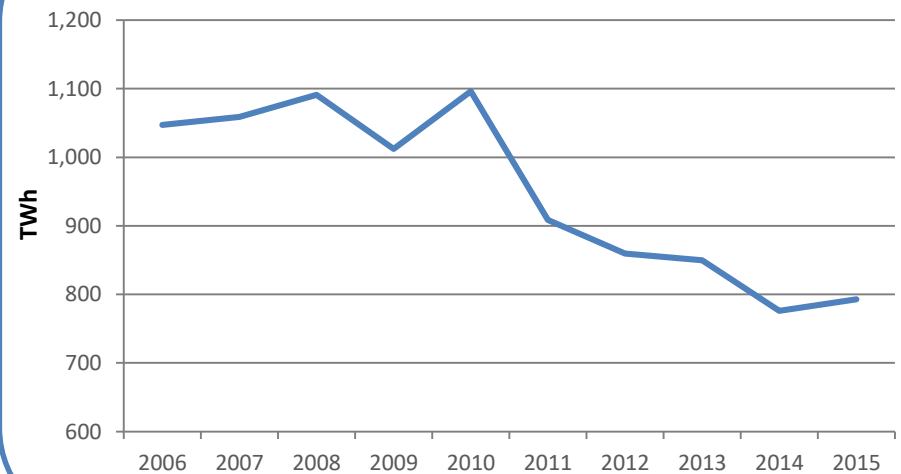
# How will uncertainty impact the price control?

- Energy transition is happening now in RII0-1 and will continue in RII0-2
- Network companies will need to continue to play a full part in managing the energy transition – in order to do so, they will need to adapt and evolve their businesses
- Network operators will need to prepare for what their future consumers may need and consider how this might impact the network system and services that they require
- The RII0-2 framework will need to support network companies to be able to manage this transition and deliver outcomes that are lowest cost across the whole system and deliver value for money for all consumers

**Electricity demand**

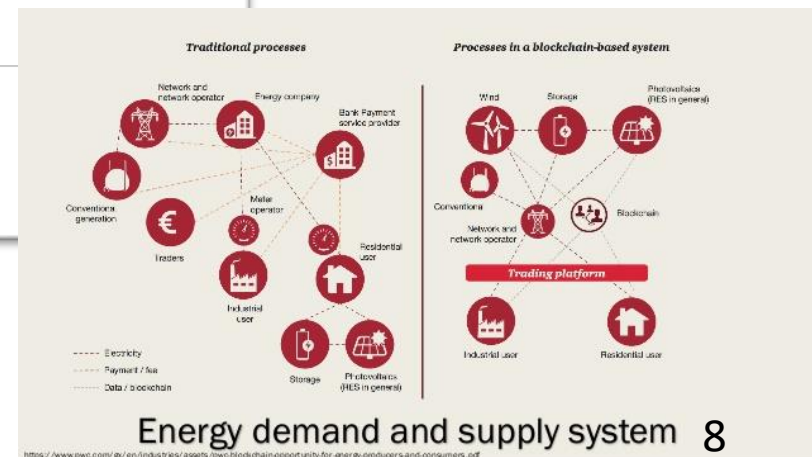
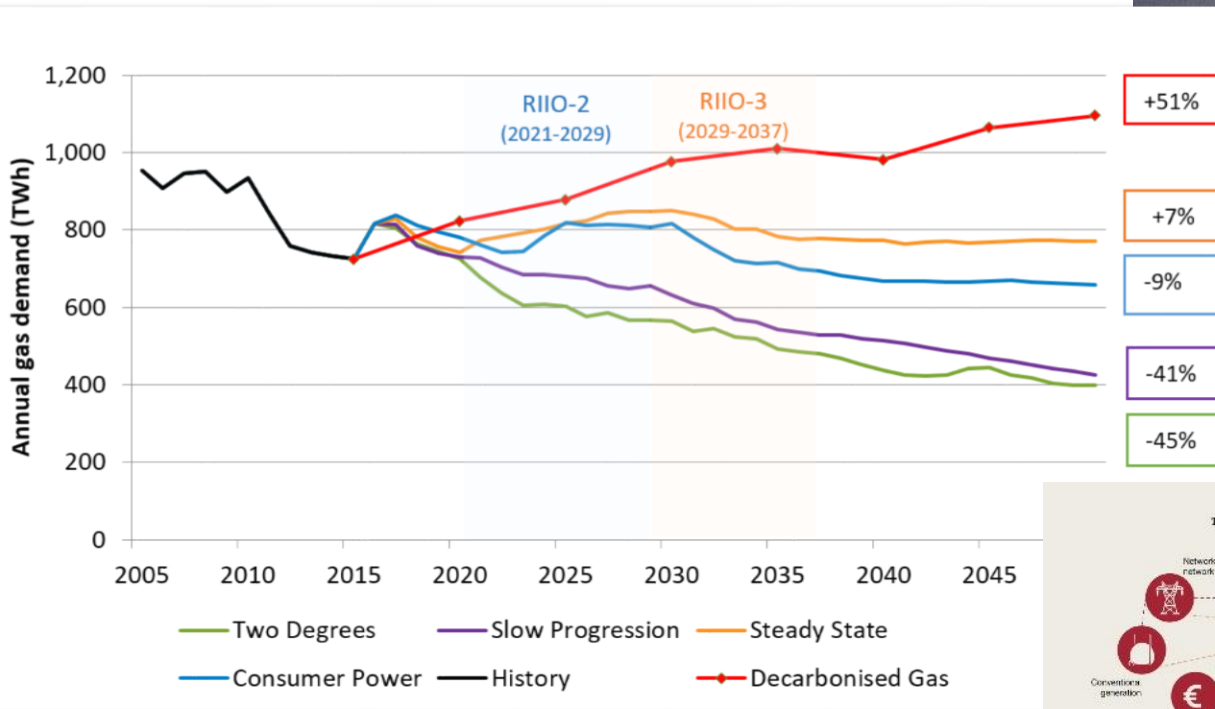


**Gas demand**



# The Energy Transition – the system is evolving...

- The energy transition is likely to present us with a wide range of uncertainty around demand, around services and business models, and more
- Level of uncertainty may potentially be wider than for RIIO-1

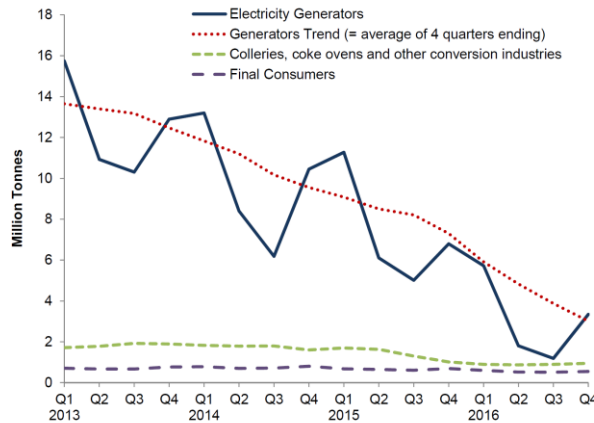




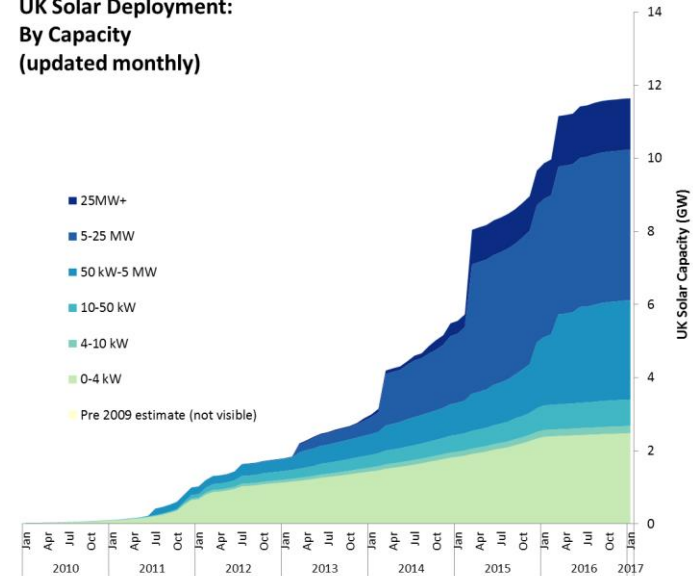
# The Energy Transition – the future is uncertain...

- We have seen rapid shifts in technology and moves towards decarbonisation, decentralisation and digitisation...

Chart 2.3 Coal consumption



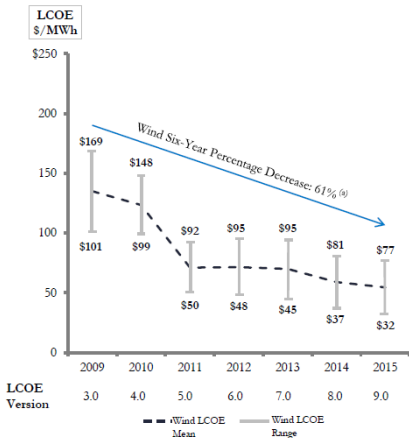
UK Solar Deployment: By Capacity (updated monthly)



## Unsubsidized Levelized Cost of Energy—Wind/Solar PV (Historical)

Over the last six years, wind and solar PV have become increasingly cost-competitive with conventional generation technologies, on an unsubsidized basis, in light of material declines in the pricing of system components (e.g. panels, inverters, racking, turbines, etc.), and dramatic improvements in efficiency, among other factors

WIND LCOE



SOLAR PV LCOE

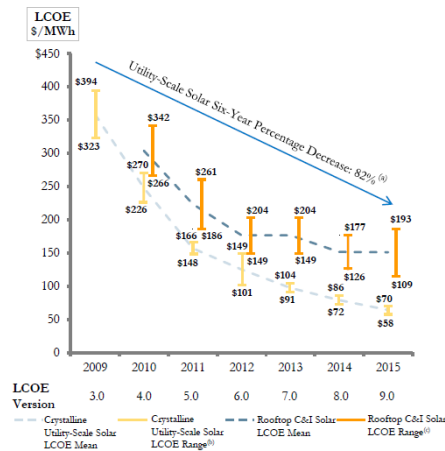
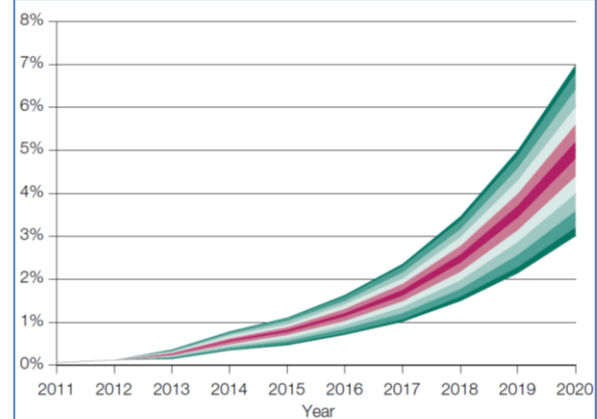


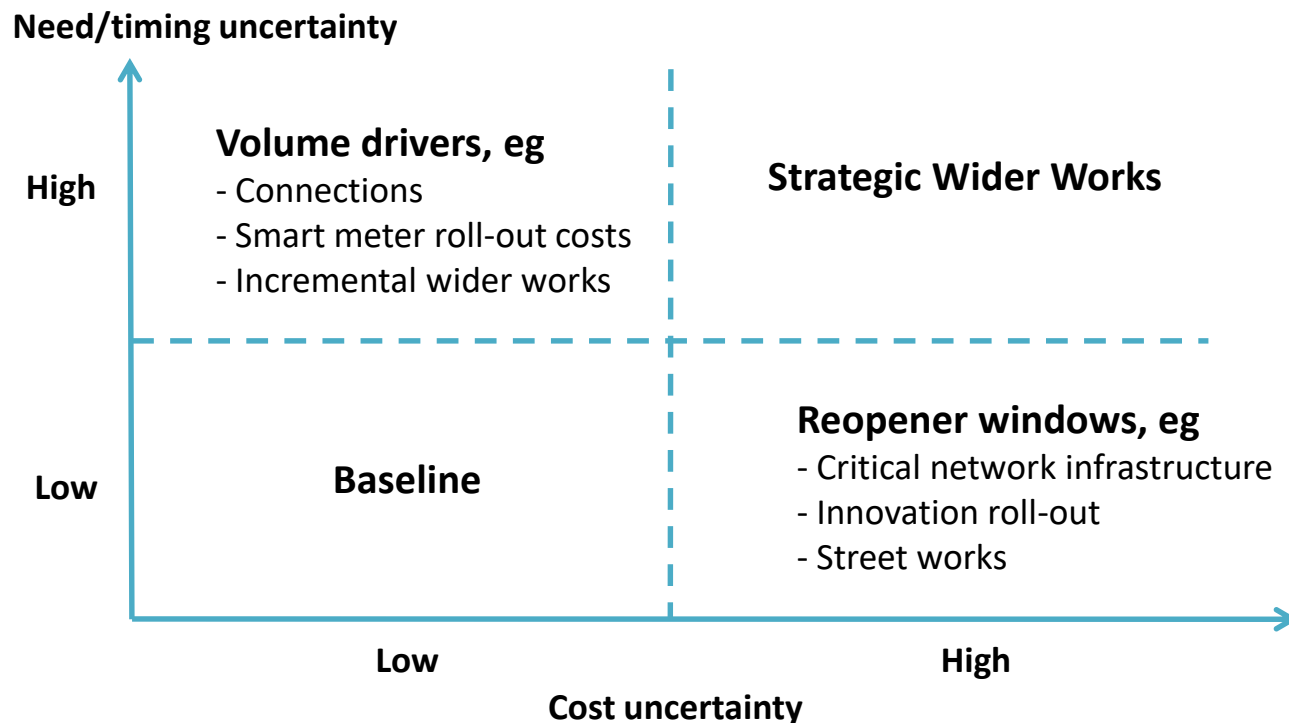
Figure 6.3 – Projected ULEV car sales as proportion of all car sales (2011–20)



Source: Department for Transport modelling

## Overarching principle for uncertainty mechanisms in RIIO-1

“We expect network companies to manage the uncertainty they face. The regulatory regime should not protect network companies against all forms of uncertainty. The use of uncertainty should be limited to instances in which they will deliver value for money for existing and future consumers while also protecting the ability of networks to finance efficient delivery.”



### Questions:

Has this principle changed?

What might impact the use of uncertainty mechanisms in RIIO-2?

Can the current uncertainty mechanisms be adapted to meet RIIO-2 challenges (in particular those associated with the energy transition)?

- The RIIO framework provides a high level of flexibility to manage uncertainty
  - We intend to work with stakeholders through early framework design through to detailed assessment of business plans to identify the right tools and approach to manage this uncertainty
  - At this stage we are keen to discuss what worked well in RIIO-1, how the energy transition might affect the next price control period and how RIIO-2 can best adapt to this (across the whole price control package, eg returns, length of control, business planning, uncertainty mechanisms, mid-period review)
- 
- As part of our work on Smart Systems and Flexibility, we have been working with industry to develop our thinking around flexibility, the DSO role and whole system outcomes
  - We are actively considering what changes might be needed at RIIO-2 to better enable whole system outcomes and to remove barriers to driving efficient system solutions, particularly across the price control sectors
  - We are keen to get your views on how the price control might best facilitate these goals
- Future roles, services and business models of companies may shift, as part of the transition, eg DSO roles, future of gas networks and services
  - We would expect companies to be considering this now as part of their long term thinking
  - We are interested in how this might affect RIIO-2

# What did we say in the open letter and how did stakeholders respond?

*“Although it is very likely that the transformation of the energy system will continue there is wide uncertainty about the direction and pace of change...the RIIO-2 price controls will need to be adaptable to a wide range of future scenarios while enabling network companies to innovate and proactively respond to changes in how networks are used to secure the best outcomes for consumers”*

## We said...

### Incentivising whole system coordination

There will need to be greater coordination across network boundaries to manage the system in a flexible way and reduce overall costs to the whole energy system. ***Do you think there are sufficient benefits in aligning the electricity price controls?***

### Flexibility

More needs to be done to ensure that network management solutions make full use of flexible services. ***What amendments to RIIO should we consider in supporting companies to make full use of smart alternatives to traditional network investment?***

### Options for managing uncertainty

The scale of uncertainty has changed. The framework must be able to adapt and flex as necessary with changes in how consumers use these networks. ***How do we need to adapt the RIIO framework to deal with uncertainty?***

## A snap shot of responses...

- Aligning RIIO-T2 and ED2 could enable a more common set of network outputs providing greater scope for efficiencies and frontier performance to be identified
- Ofgem must consider interactions between all sectors not just ET and ED – alternative ways include shared incentives and shared innovation funding
- Increased resource requirements in negotiating a rollover in addition to a new price control

- Totex incentive mechanism has provided a powerful incentive to encourage smart alternatives where they can deliver savings to benefit both customers and shareholders
- Helpful for the RIIO regime to explicitly recognise the validity of investment behind the meter
- Recognise longer term and wider system benefits of smart enabling investments

- There is a benefit of allowing reopeners on material items i.e. single totex reopener
- Move away from triggers to manage uncertainty – better to have volume drivers, reopeners and pass through costs
- Different assessment periods for load related expenditure compared to asset replacement



*Action for Warm Homes*

**Stephen Hassall**  
Regulatory Strategy Manager

**Paul Auckland**  
Head of Economic Regulation

**Peter Smith**  
Director of Policy and Research



# Facilitating a low carbon energy system

Ofgem RIIO-2 workshop:  
Delivering what consumers need  
23 October 2017

**Stephen Hassall**  
Regulatory Strategy Manager

**Cadent**  
Your Gas Network  
[cadentgas.com/RIIO](http://cadentgas.com/RIIO)

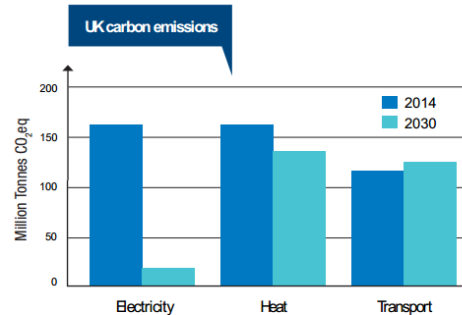
# The Challenge: Significant progress in decarbonising heat & transport is needed during RIIO-2 to meet 2050 targets . . .

## RIIO-1

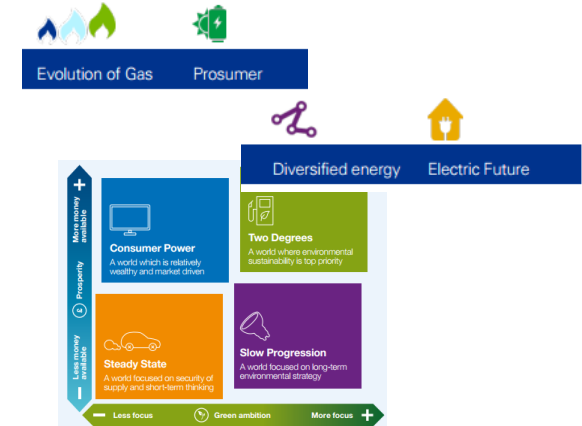
Focus on sustainability

Progress in power

Uncertainty over gas



Good progress decarbonising the power sector, but 'almost no progress in the rest of the economy' (CCC July 2016)



## RIIO-2

Rebalanced towards affordability & security

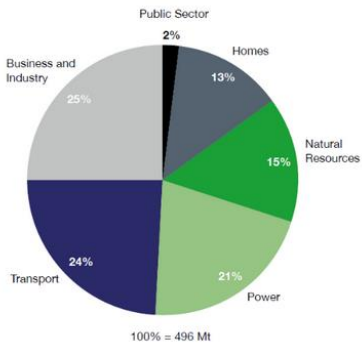
Need to tackle heat and transport

Wider range of supply & demand scenarios

[cadentgas.com/RIIO](http://cadentgas.com/RIIO)

# There is **no single solution** to meeting this challenge

## UK emissions by sector, 2015 Source BEIS



## Transport



1/4 directly attributable to road surface emissions from HGVs & buses

## Heat

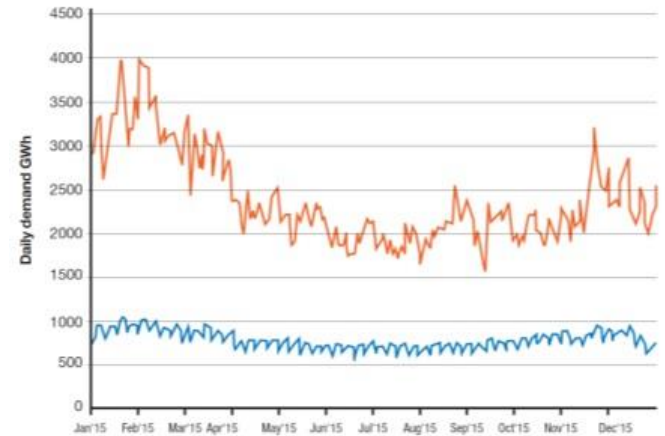
Over **23 million** UK gas customers.

Gas provides **80%** of heat at times of peak demand.

**320TWh** per annum to domestic customers.



## Daily electricity and gas demand



**It cannot be met by electricity alone**

[cadentgas.com/RIIO](http://cadentgas.com/RIIO)



# The benefits of leveraging existing assets in delivering the **lowest cost pathway** are clear for customers . . .



	Evolution of Gas	Prosumer	Diversified energy	Electric Future
Practical obstacles	Low/Medium	Very high	Medium/High	High
Incremental cost	£104-122bn	£251-289bn	£156-188bn	£274-318bn
Incremental cost per consumer up to 2050	£4,500-5,000	£11,000-12,500	£6,800-8,000	£12,000-14,000



## Total annual system cost

Today	2050 Efficient Gas Scenario	2050 High Heat Pump Scenario
£25.6bn	£29.7bn	£32.4bn

[cadentgas.com/RIIO](http://cadentgas.com/RIIO)

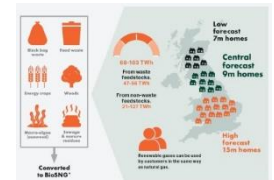
# ... and the Gas Networks have already made significant progress in **creating the 2050 pathway** during RIIO-1



**Stimulate debate** and frame the questions.

**Take action now**  
4/5th Carbon Budgets.

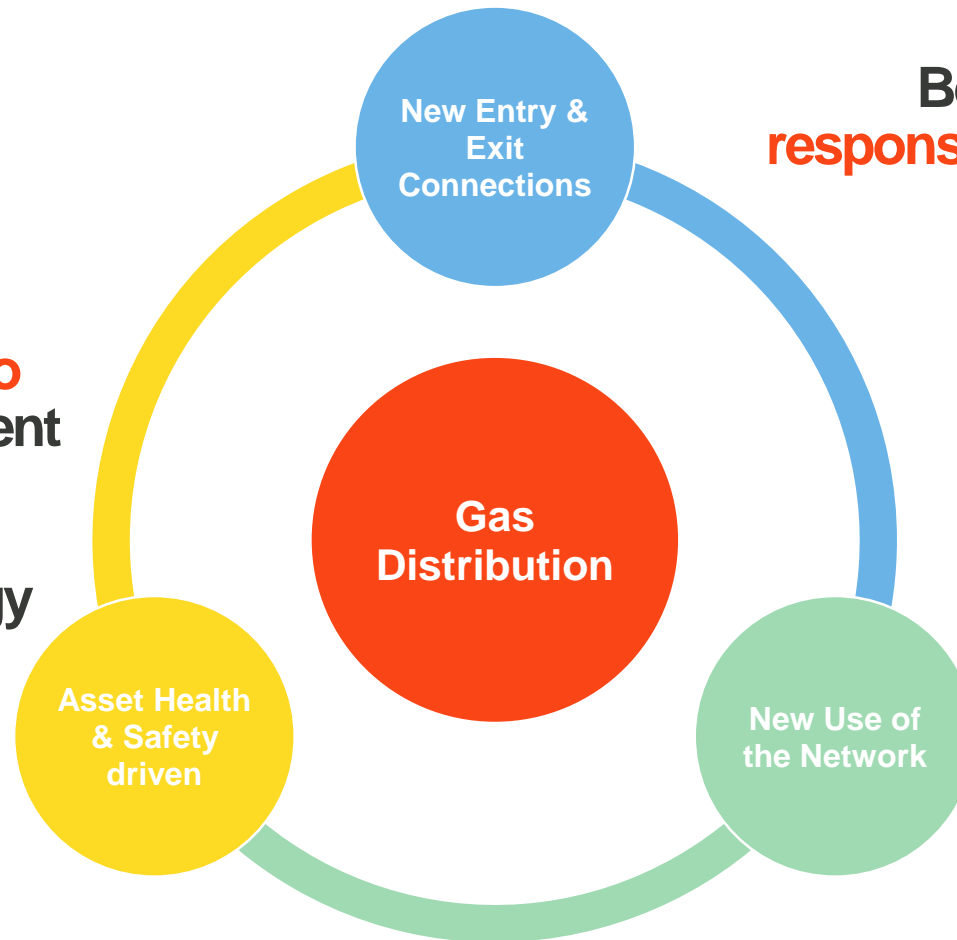
**Build evidence** case for new solutions.



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# So during RIIO-2 network companies need to . . .

Continue with **no regrets** investment needed for safe, secure & affordable energy now.

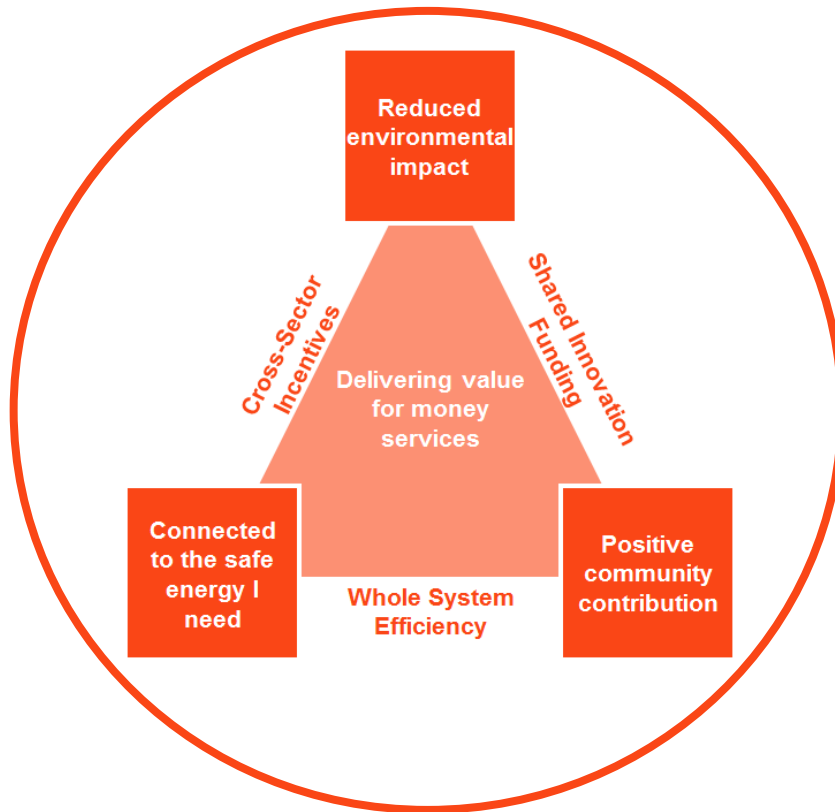


Be **adaptable** and **responsive** to customer driven change.

**Demonstrate** and be prepared to deliver the lowest cost solutions beyond RIIO-2.

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## This can be achieved by evolving the RIIO framework to **deliver the Outcomes that customers want & need**



In RIIO-2 the “O” is for **Outcomes**.

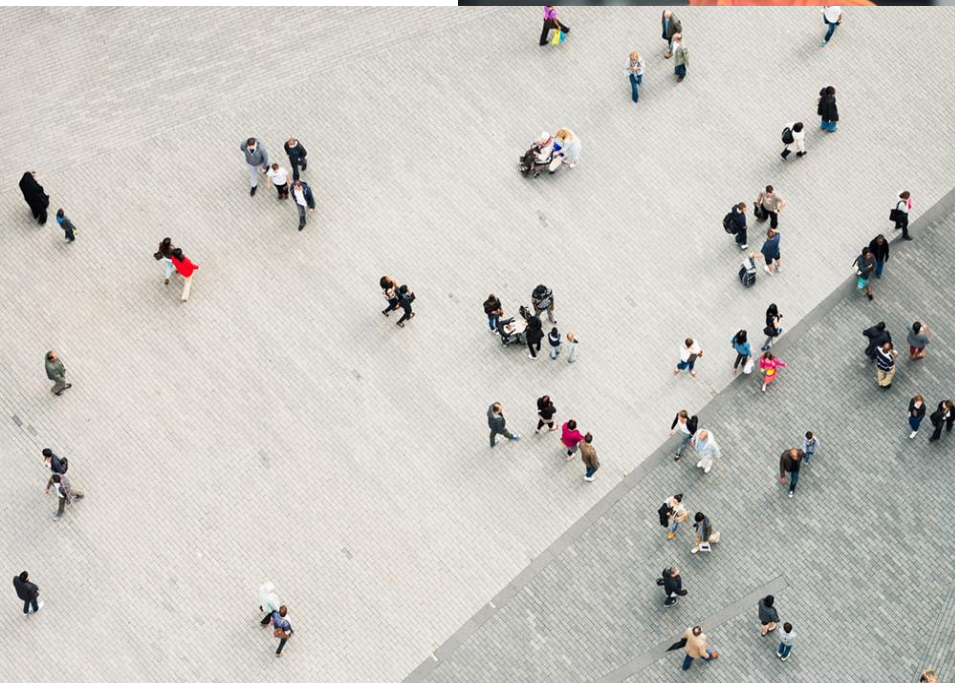
**Simplified** to enable greater customer engagement.

**Recognisable** across all sectors & regions so offsets & interactions can be understood.

Innovation & incentives focused on delivering value throughout the **whole energy system**.

**Lowest cost of heat** breaking the silos between gas & electricity.

[cadentgas.com/RIIO](http://cadentgas.com/RIIO)



# Thank you

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**Cadent**  
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**electricity**  
**north west**

Bringing energy to your door



# ENW – Delivering Customer Needs

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Head of Economic Regulation

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# Who we are



Electricity North West distributes:

- >23 000 giga-watt hours annually
- To 5 million people in 2.4 million premises
- With 99.99% reliability

We own and operate:

- 57 600 km of network
- 96 bulk supply substations
- 418 primary substations
- 34 700 transformers

Our plan for RIIO-ED1 was very challenging:

- Solid delivery in first 2 years against primary output measures
- Highest ever reliability levels
- Ongoing focus on cost efficiency and delivery



# Significant drivers of change



Penetration of DG and storage ahead of forecast.

Set to increase as Innovation lowers the costs to connect and panel/turbine prices continue to fall.

ENW >1GW/month



Flexible Low Carbon Technologies - electric cars & heat pumps will increase demand.

Tesla hot spot 20 x 120kW chargers equivalent to 4 super stores.



New markets are developing to complement existing tools. Roll out of commercial solutions such as CLASS crossing market boundaries.

DSO based balancing benefits could exceed £10bn



DNO business model RAV based but opportunities created by commercial solutions means business models might need to change. Focus on provision of capacity.

Change will drive new opportunities for delivering customer needs across traditional boundaries of electricity transmission and distribution and in completely new ways.








# A whole system approach benefits consumers in a time of change



- Design controls to acknowledge the emerging role of the DSO as ensuring efficient stewardship of network capacity;
- Achieve greater alignment between electricity transmission and distribution price controls;
- Mechanisms can be designed to reflect the levels of certainty across different areas of customer need.

# Change is already happening – CLASS project overview



<p>Objectives</p>	 <p>Reduction of peak demand</p>	 <p>Frequency response and voltage support</p>	 <p>Voltage and demand relationship</p>	 <p>No effect on customers</p>
<p>What?</p>	<p>Baseline measure: Spring 2014 Monitoring waves: Summer 2014 to Spring 2015 All <b>485 000</b> customers in test area received letter <b>696</b> customers recruited at <b>baseline</b> <b>1,357 monitoring</b> interviews</p> 			
<p>Customer hypothesis</p>	<p><b>“CLASS will be indiscernible to customers”</b> Customers will not see / observe / notice an impact on their supply quality when these innovative techniques are applied</p>			



## It's vital we engage customers and stakeholders to understand their needs

- Increasingly look across transmission and distribution for solutions;
- Align Transmission and Distribution controls;
- Assess levels of certainty for needs through business plan development and;
- Propose regulatory mechanisms that are cognizant of the degree of change (forecast as far as you can see) that also preserve strong long term incentives.

**Get involved** : - our DSO stakeholder event [Lauren.Webb@enwl.co.uk](mailto:Lauren.Webb@enwl.co.uk) coming up in early December.





*Action for Warm Homes*

**Peter Smith** - Director of Policy and Research  
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<http://www.nea.org.uk>

# Heat Decarbonisation

Potential impacts on social  
equity and fuel poverty



*Action for Warm Homes*

Final Report  
September 2017

**Authors:**

Maxine Frerk, Grid Edge Policy  
Dr Keith MacLean, Providence Policy

# What are your views? Breakout sessions

- Break into three groups to discuss the following topics for 20 mins before rotating to the next topic.
- There will then be a short break followed by a report back from each of the group moderators.

## How can the framework...

### **...ensure the delivery of whole system outcomes?**

To consider...

- What are the barriers to coordination across distribution/ transmission and gas/electricity?
- Is realignment of the price controls (either at the beginning or for RIIO-3) necessary in order to reduce the barriers?

### **...support network companies in evolving their role and the services that they provide?**

To consider...

- What might the DNO to DSO transition look like and what might the framework need to do to facilitate it?
- If the decrease in demand for gas continues, how will the business model for gas companies need to change?

### **...successfully adapt to uncertainty?**

To consider...

- What is the energy companies' role in managing the energy transition?
- How well did RIIO-1 deal with uncertainty?
- How might the range and scale of the plausible future scenarios impact the business planning process and the uncertainty mechanisms we use?

- **Thank you** for your time today!
- We very much welcome your engagement as we work towards developing our proposals for how the overarching framework may need to adapt in light of the lessons learned from RIIO-1 and also, as we have highlighted here today, the challenges the sector will face in RIIO-2.
- The next major milestone for the programme is the consultation document on the framework, which we are aiming to publish towards the end of Feb 2018 with a decision in the summer.
- We aim to publish slides and notes of the workshops following their conclusion.
- Please email [RIIO2@ofgem.gov.uk](mailto:RIIO2@ofgem.gov.uk) if you would like to provide more detailed comments on anything discussed here today or in any of the other workshops.

