

Regulating energy networks for the future: RPI-X@20

***Delivering value for money and a
sustainable energy sector***

Workshop – Imperial College London
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Plan for today

Introduction and update on RPI-X@20

How can we encourage networks to facilitate efficient delivery of a sustainable energy sector?

Do we need to do more to stimulate innovation?

Is more consumer and network user engagement beneficial?

We hope the session will be interactive:

- More you than us!
- Insights from speakers to stimulate debate

Update on RPI-X@20

What is RPI-X@20?

- The RPI-X framework has been used to regulate Britain's energy networks for nearly 20 years
- RPI-X@20 will review the current approach to energy network regulation and develop recommendations for the way we regulate in future

What are the drivers of the review?

Good housekeeping

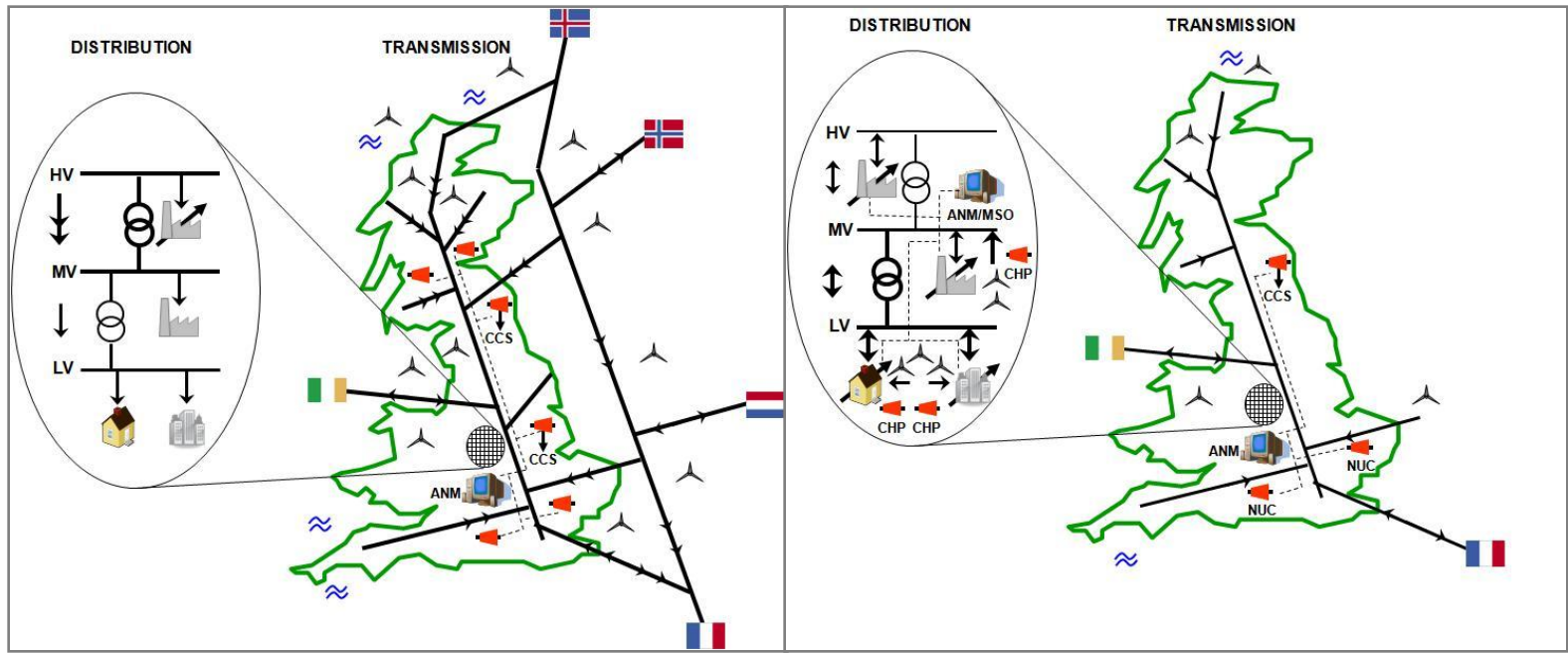
Meeting new and emerging challenges

Simplification?

Approach to the review

- Open scope with no preconceptions about the outcomes
- Need a clear rationale for change; will not make change for change's sake
- Seek to be transparent to ensure there are no surprises

LENS demonstrates uncertainty on the networks

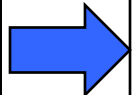


Big transmission and distribution?

or

Micro-grids?

Gas networks also face uncertainty



- Declining domestic demand once electricity decarbonised?
- Increased demand to power local generation (micro-CHP)?
- Declining gas generation when 'clean' generation online?
- Changing mix of gas supplies: LNG/'green' gases?
- GB as hub for Europe?
- Alternative uses of gas pipes (e.g. Carbon capture and storage)?

Energy policy continues to add to the uncertainty



National

- Environmental targets set for 2020 and developing for 2050 – Climate Change Committee taking lead
- Focus on ensuring security of supply: 2015/16 and beyond
- Wide ranging Energy White Paper in July: Renewable Energy Strategy (RES), smart metering, smart grids, social tariffs, CESP, Heat and Energy Saving, Carbon Capture Storage
- Select Committee report in summer – future of energy grids;
- Major political parties appear to be focused on 'Big T&D' and discussing role for networks in delivering energy efficiency and social measures



EU

- Environment, security of supply and broader energy policy
- Third Package implementation and Implications of EU Energy Agency
- Consequences of 2nd Strategic Energy Review
- Developing ideas on cross-border regulatory frameworks and Regional Initiatives

Addressing these apparent tensions is central to RPI-X@20 and Discovery

Credit crunch continues to cause concern

Financial
markets

Current concerns:

- Will networks be able to raise finance for large (risky) investment programmes? Will the cost of financing increase? How will capital markets assess financeability?

Longer term concerns:

- Is this a step change in how financial markets operate?
- Can regulatory framework and networks adapt to future shocks?

Economic
downturn

Current concerns

- Are there implications of downturn for demand, financing of renewable and network projects, input price uncertainty, timing of capacity requirements, fuel poverty and regulation?

Long-term concerns:

- Can regulatory framework and networks adapt to economic cycles?

How do we develop a regulatory framework that is robust to the above?

RPI-X has delivered since privatisation and continues to do so

Lower costs and hence lower network charges

Improved quality of service

Increased capital investment

There are concerns about

Delivery of increased investment requirements

Increased uncertainty (direction of networks, environmental and social targets, economy/financial markets)

Focus on consumers

Role of networks in ensuring security of supply

We have addressed these issues in previous and current price reviews

- Understand how controls have evolved and why
- Is a step-change needed for future?

Networks of today have been shaped by the regulatory framework

What kind of network companies has RPI-X 'created'?

Do networks have an **appetite for risk**?

Are networks focused on **'beating' the regulatory contract** or more widely focused?

Are there indications that the networks are trying to be **proactive**?

Are networks seeking to **innovate** or are they sticking to what they know?

Do networks think about **interactions with the markets** and other networks?

Are networks **engaging with consumers and network users** or is there greater focus on understanding Ofgem's expectations?

Principles, Process and Issues

Initial consultation document published in February 2009

The paper set out:

- Rationale for/aims of RPI-X@20
- The approach to the review
- Our initial view of the key issues


Identified two key themes:

- Focusing on consumer needs
- Delivering a sustainable energy sector

- The document was an issues paper – no proposals or decisions
 - A number of supporting papers were also published

Responses are available on the Ofgem website

**Ongoing
engagement
through**



- Industry workshop, Advisory Panel and Academic workshop
- Ofgem's RPI-X@20 web forum and working papers
- The progression of issues via industry working groups
- Future consultation documents
- Other forums as appropriate

We want to consider how regulation can encourage networks to:

Focus on
needs of
existing and
future
consumers

- Engagement with consumers (us and networks)
- Continue to provide value for money and quality of service for existing and future consumers
- Simplicity of the regime and possible right to appeal

Facilitate
delivery of a
sustainable
energy sector

- Security of supply – are networks, and the regulatory framework, part of the solution or a constraint? Implications of Project Discovery
- Ambitious government targets for:
 - CO₂ reduction – what does this mean for networks?;
 - Other environmental targets – Greenhouse gases, Nox, Sox?
 - Renewables – implications for transmission and distribution
 - Demand management and smart meters – will the role of the networks change?
 - Network adaptation to climate change
- Networks play a role in delivering social objectives, including fuel poverty: will they be required to do more?

Preliminary ideas in February document

- We are open to a range of ideas on future regulatory frameworks
- Don't expect to have 'one size fits all' across networks but consistency of principles

Tidy-up current regimes

- **Clarity on role of networks:** align incentives between T/D/SO
- **Efficient capital investment:** innovation; long-term efficiency
 - **Financeability** checks

'Add-ons' to current regime

- **Role of parties:** consumer engagement; guiding mind;
 - **Efficiency focus:** output monitoring;
 - **'Mimic' competition:** tendering; franchising

Alternatives

- **Deregulation:** 'local loop' competition in energy services
- **Ex-post regulation:** for all activities or some?

None of these are mutually exclusive and the list is not exhaustive

Responses show support for RPI-X@20

23 responses across a range of interest groups

- Supportive of the rationale for RPI-X@20 – timely given challenges
 - Complimentary on process of review and on February papers

Aims,
principles
and
approach

- Guiding principles welcomed
 - Joined up thinking needed across Ofgem projects
 - Timetable for the review broadly seen as appropriate
 - Emphasis on need to consider gas as well as electricity

Setting the
scene

- RPI-X perceived to have delivered significant benefits
 - Networks of today are 'created' by the regime
- Going forward, be mindful of EU and government policy

Themes

- RPI-X not necessarily broken
- Themes considered appropriate
- Welcome focus on 'sustainability'

More consumer engagement supported, but as complement to regulation

- More engagement is desirable and Ofgem is right to explore
 - BUT formal models are too difficult to implement
 - Ongoing role for Ofgem; approach in DPCR5 welcomed
- Suppliers could represent consumers but their incentives are not always aligned

Constructive Engagement

- Some recognise merits
- Networks sceptical given barriers to consumer engagement

Consumer right of appeal

- A respondent thought this could facilitate consumer engagement
- Networks unsupportive

Suggestions

- Build on success of consumer challenge group
- Introduce a consumer engagement obligation
- Explore US examples

Role of consumers is also a key issue for DPCR5

Respondents agreed that delivery of a sustainable energy sector is key issue

- Agreement that this will require big changes for networks and big investment
 - Framework should be aligned to government objectives
- Concern that social/security of supply issues should not be overlooked

Role of government and industry

- Support for a clearer signal from government
- Need to understand supply chain interrelationships and align incentives

Networks of the future

- Innovation needed
 - Reward long run efficient investment
 - Recognise risk of 'failure' and asset stranding

Suggestions

- Consider gas and electricity separately
- Need to balance delivery of social objectives with environmental objectives

We are already discussing these issues in DPCR5

Focus of work since February

Clarify what we want future regulatory framework to 'look like'

Are the current frameworks delivering?

Ideas on potential changes

Emerging thinking on regulatory frameworks
(gas T, elec T, gas D, elec D)

More stakeholder engagement

Four industry working groups up and running

Investment

Financing

**Focus on
consumers**

Innovation

Why are we doing this?

- Requests for more involvement/engagement in policy development
- Opportunity for us to hear stakeholder views on policy development
- Regular working group meetings – may have ad hoc discussion groups
 - Discussion group rather than decision making
 - Expecting outputs on our web forum

Our first working paper looked at what we want future regulatory framework to deliver

Networks focus on needs of current and future consumers by:

Providing value for money

<p>Efficiency (long-term)</p>	<p>Quality of service -Standards -Incentives</p>	<p>Choice - of service offering - of network provider</p>
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AND

Networks play their role in delivering a sustainable energy sector:

<p>Security of supply (picking up on Discovery)</p>	<p>Environmental targets -Low carbon -Greenhouse gases</p>	<p>Specified social targets</p>
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Reward networks that deliver

Taking forward our thinking

Outcomes work – what do we want the regulatory regime to deliver?

Progressing thinking on a number of key issues and options

Innovation

Investment

Financing

Consumers

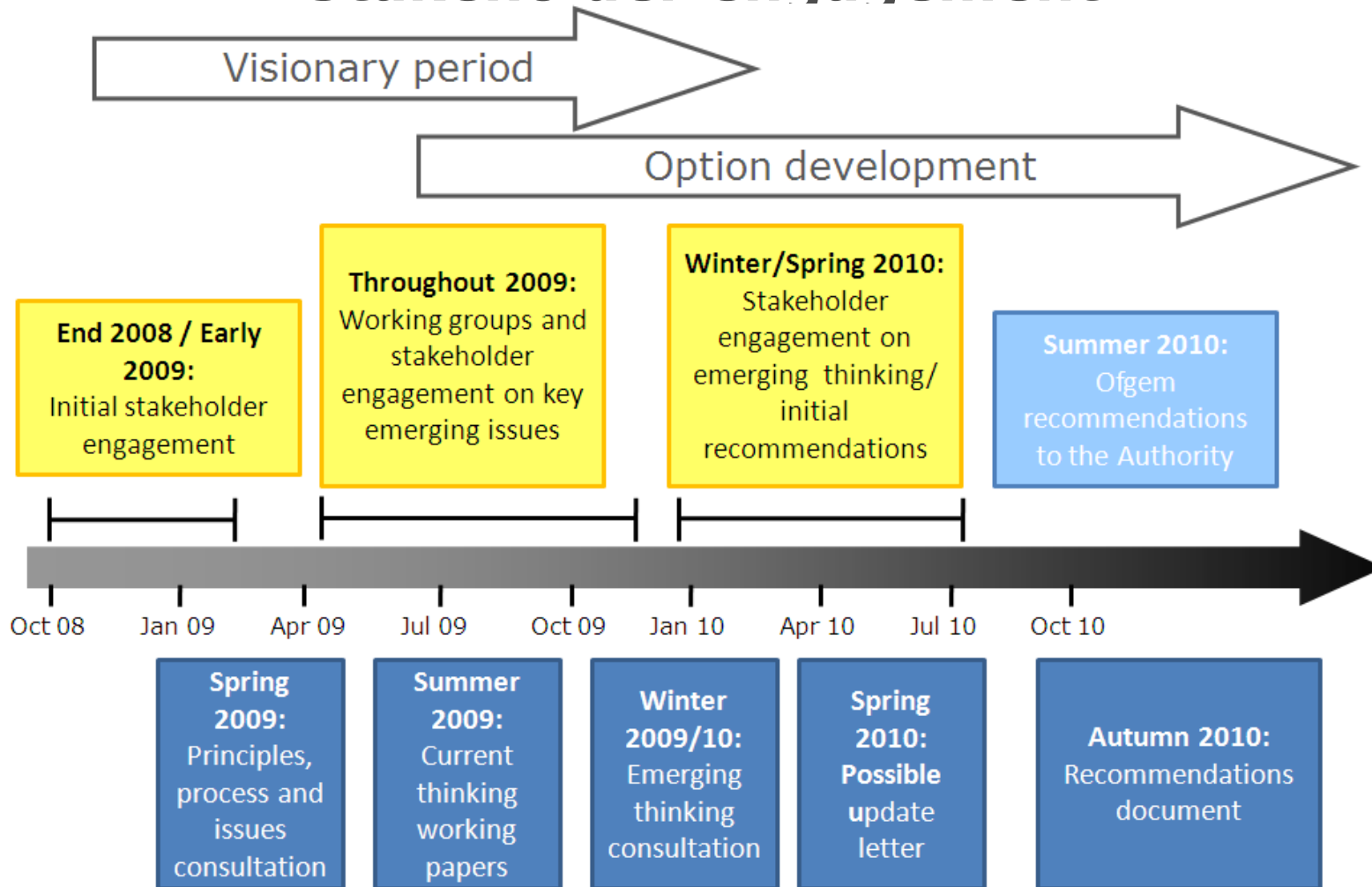
Uncertainty

Develop high level overarching future regulatory frameworks

➤ Also looking into a number of alternative frameworks and lessons learned from other regulated industries

Timely opportunity to get your views on these issues

Stakeholder engagement



Efficient delivery of a sustainable energy sector

Background

RPI-X@20 is underpinned by a view that the future will be different for the energy sector

- There is general acceptance that the energy sector is facing new challenges that will change the nature of the sector in the future.
- There is also general acceptance that networks are part of the solution to meeting these challenges.
- There is significant, and unprecedented uncertainty, about what networks of the future will need to look like and what the future role of networks will be.
- The future regulatory framework will need to be adaptable and robust to changes over time.

We want to ensure that the regulatory framework ensures networks deliver sustainable energy sector AND value for money.

Key issues for us to consider

- Delivering sustainable energy sector may change what it means to 'develop, maintain, and operate an efficient, co-ordinated and economical system'
- We have discussed what changes might be needed with range of stakeholders

What do we mean by efficiency?

- dynamic efficiency (total cost) and output delivery
- making best use of existing assets and investing in new assets
- innovation
- recognise choices and optionality

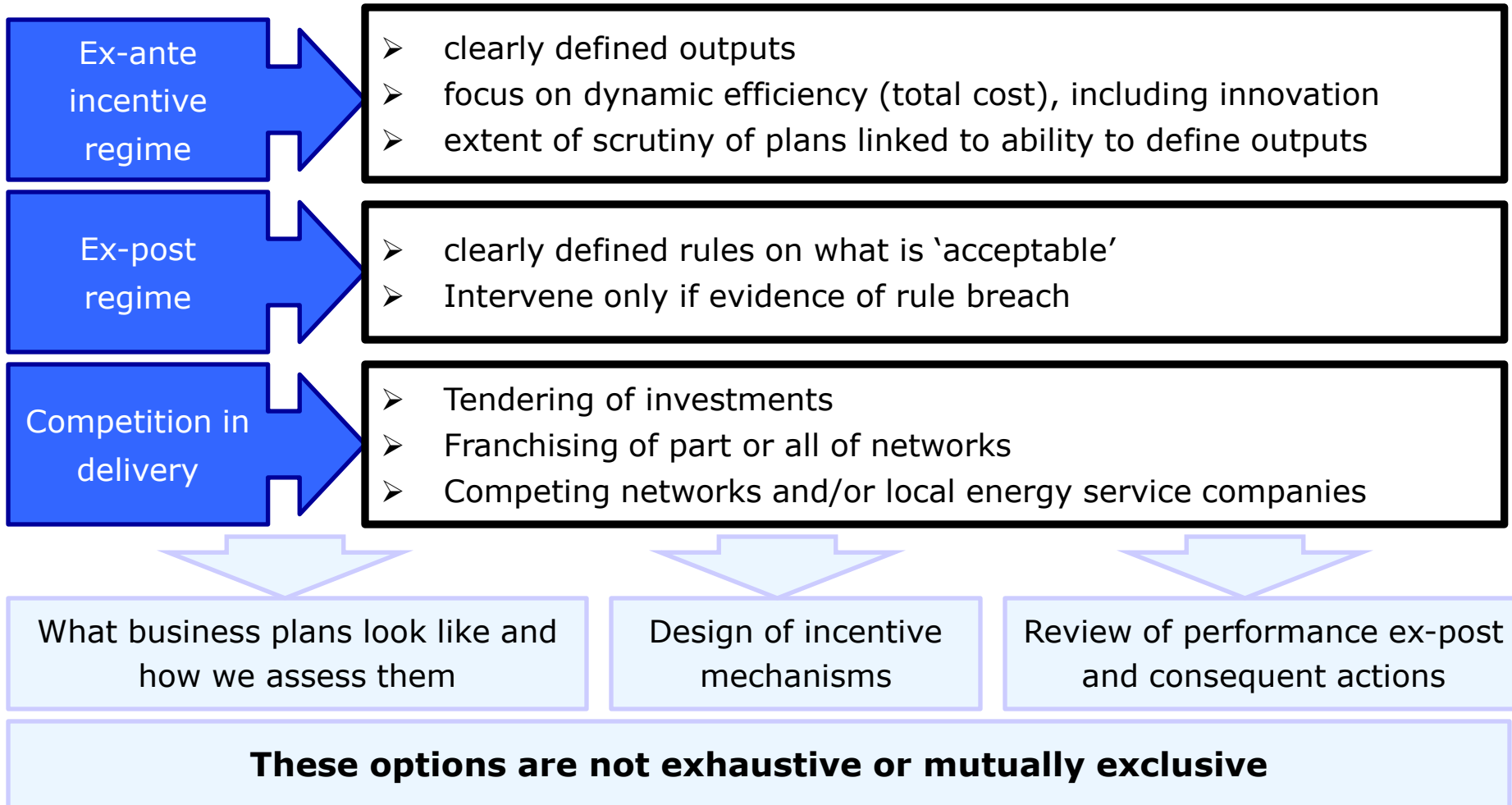
How do we incentivise delivery?

- balance reward to reflect risk and performance
- vary regime by type of investment
- allow competition in delivery
- change role of networks (e.g. DNOs to become SOs)

How do we assess performance?

- focus on outputs or costs or both
- lowest cost or maximum benefit to consumers at least cost
- Evidence of better industry communication/co-ordination
- detailed scrutiny of projects or hands-off
- focus on long term with five-year reviews

Strawmen options for regulation (for discussion)



Rest of session

- Martin Cave, Lessons from other sectors
- Michael Pollitt, Ideas on how to regulate to encourage long-term efficiency
- Discussion

Stimulating more innovation

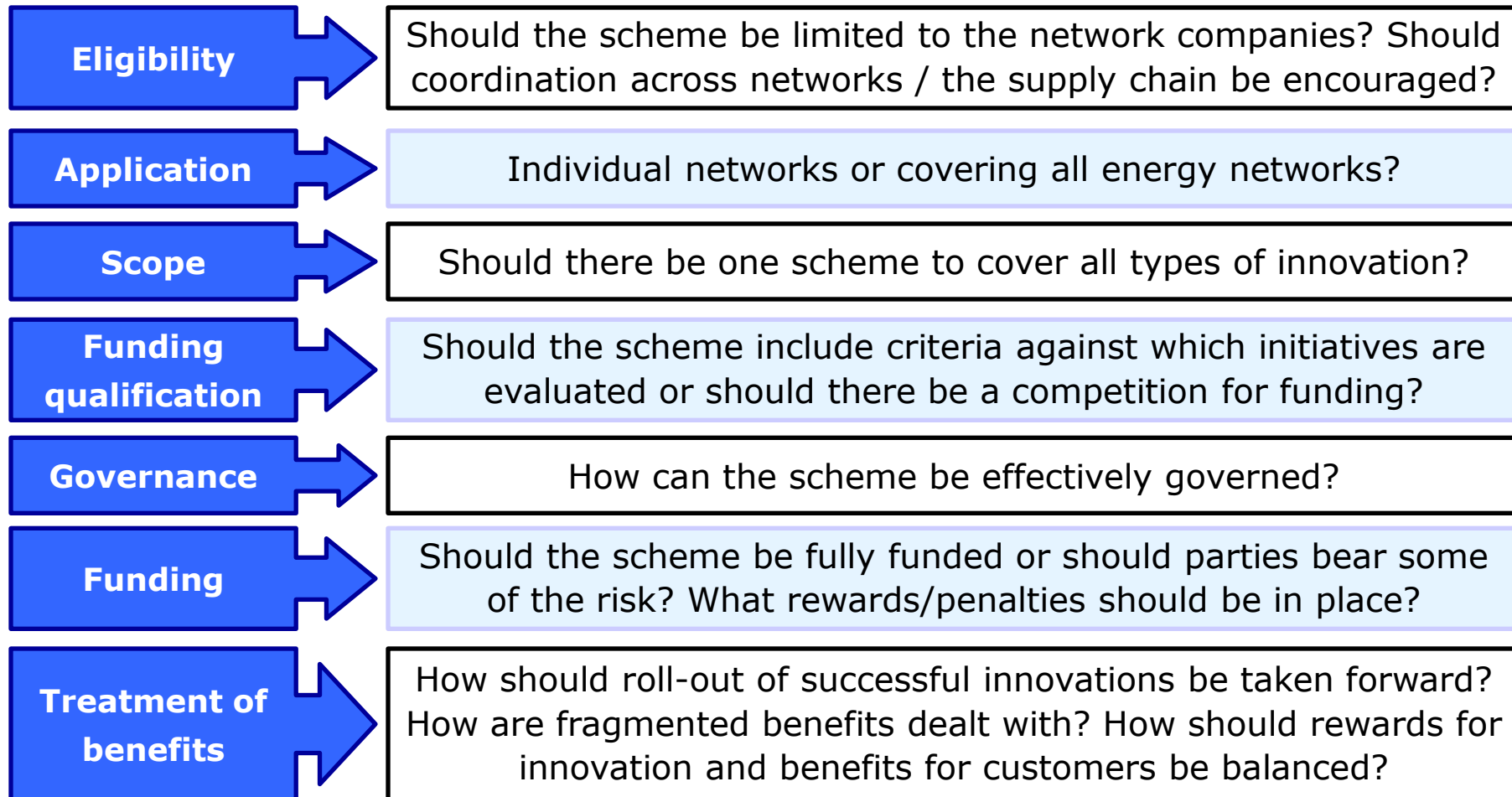
Background

Innovation is needed across the four energy networks to ensure the sectors are able to meet challenges that they face

- Need different types of innovation: e.g. production technology, communications technology ('smart'), commercial innovation
- Spend in R&D fell post-privatisation and remains at comparatively low level
- Stakeholders have identified inability to earn high returns and not being allowed to 'fail' as key barriers
- Consider whether monopoly networks are 'fit for the job' – culture, skills, proactivity
- There are innovation incentives in place in the existing regulatory frameworks, and these are being extended in DPCR5

Need to ask whether a revised regulatory framework, and the markets, will be sufficient to stimulate innovation

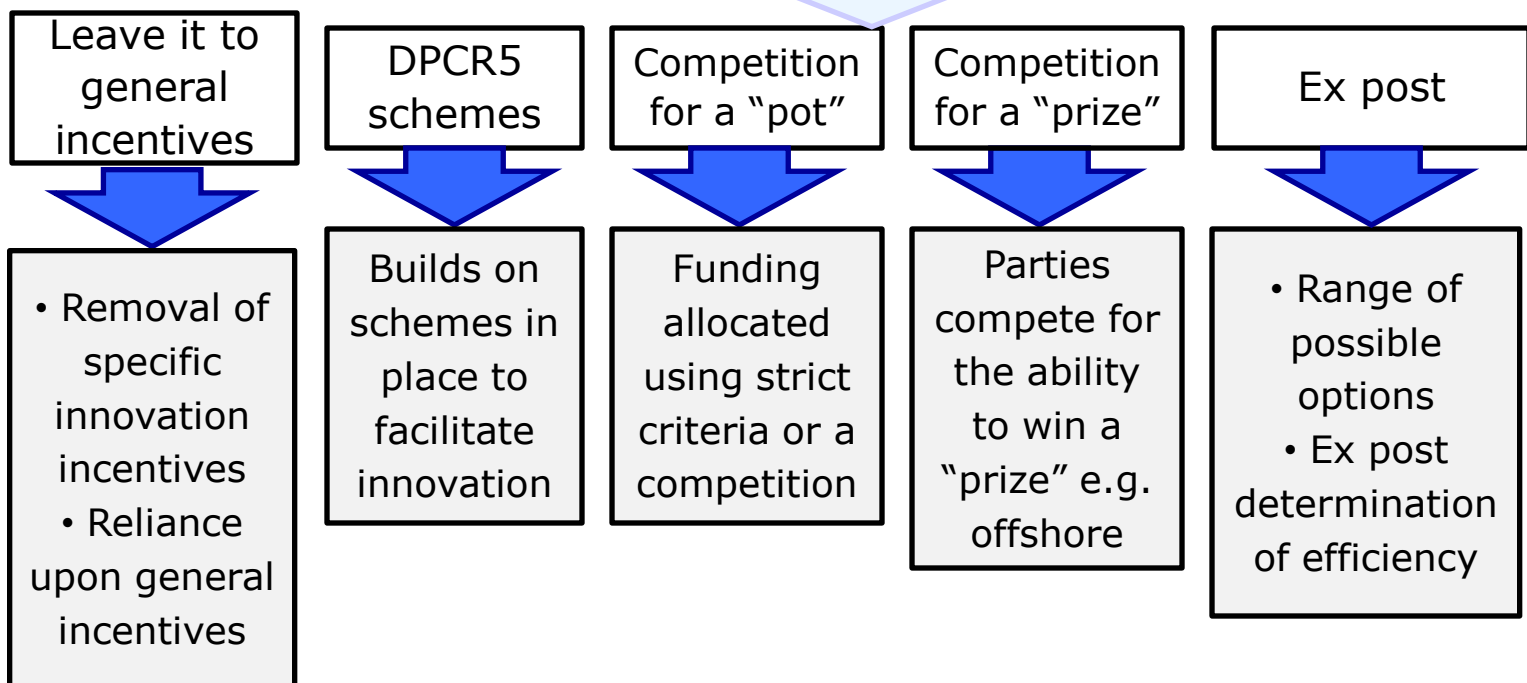
Potential issues to consider for an innovation scheme



Strawmen options for regulation (for discussion)

Stimulate innovation through the market (competition)

OR stimulate innovation through regulatory regime



Rest of session

- Peter Boait, Innovation in action: smart grid-smart meter-smart home interactions
- Chris Decker, Ideas on how to encourage more innovation
- Discussion

Role of consumers

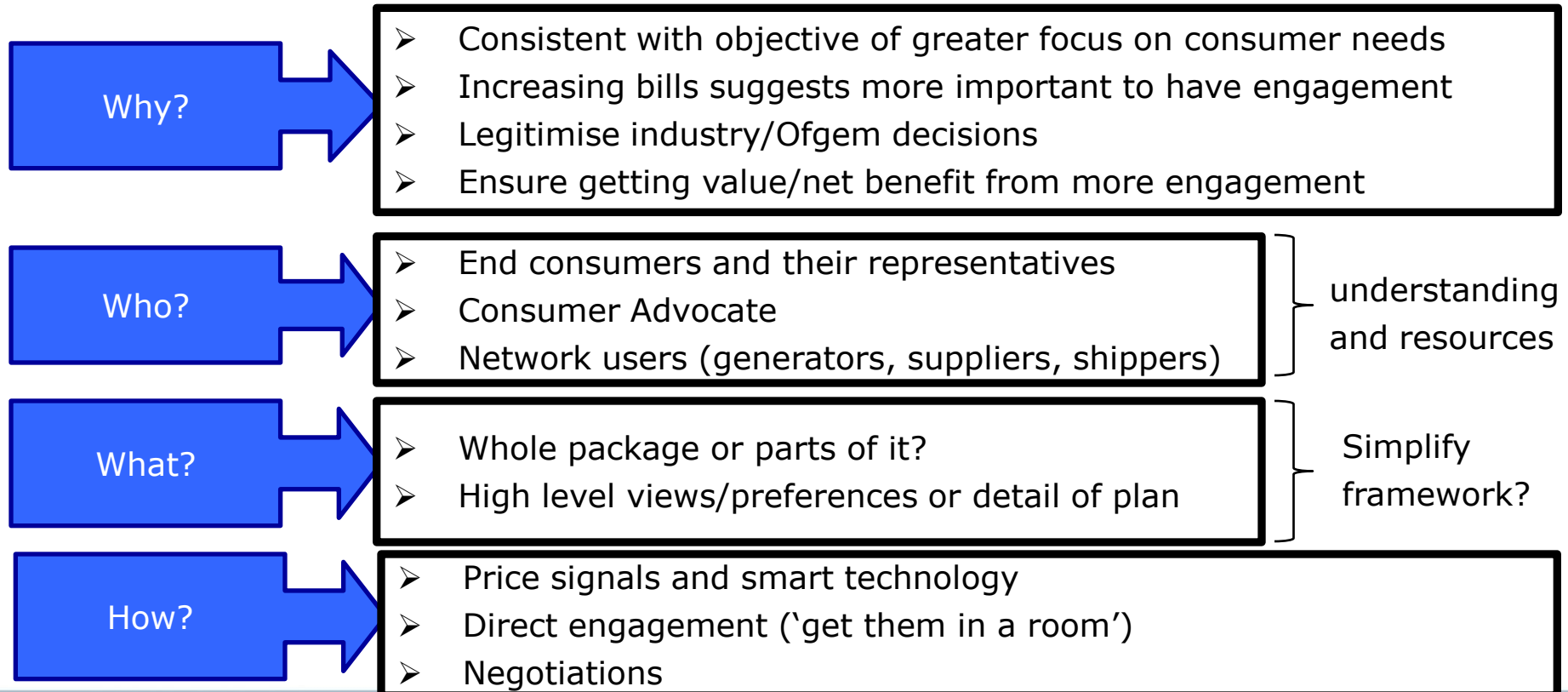
Background

A wide range of interested parties have suggested that networks and Ofgem should engage more with consumers and network users

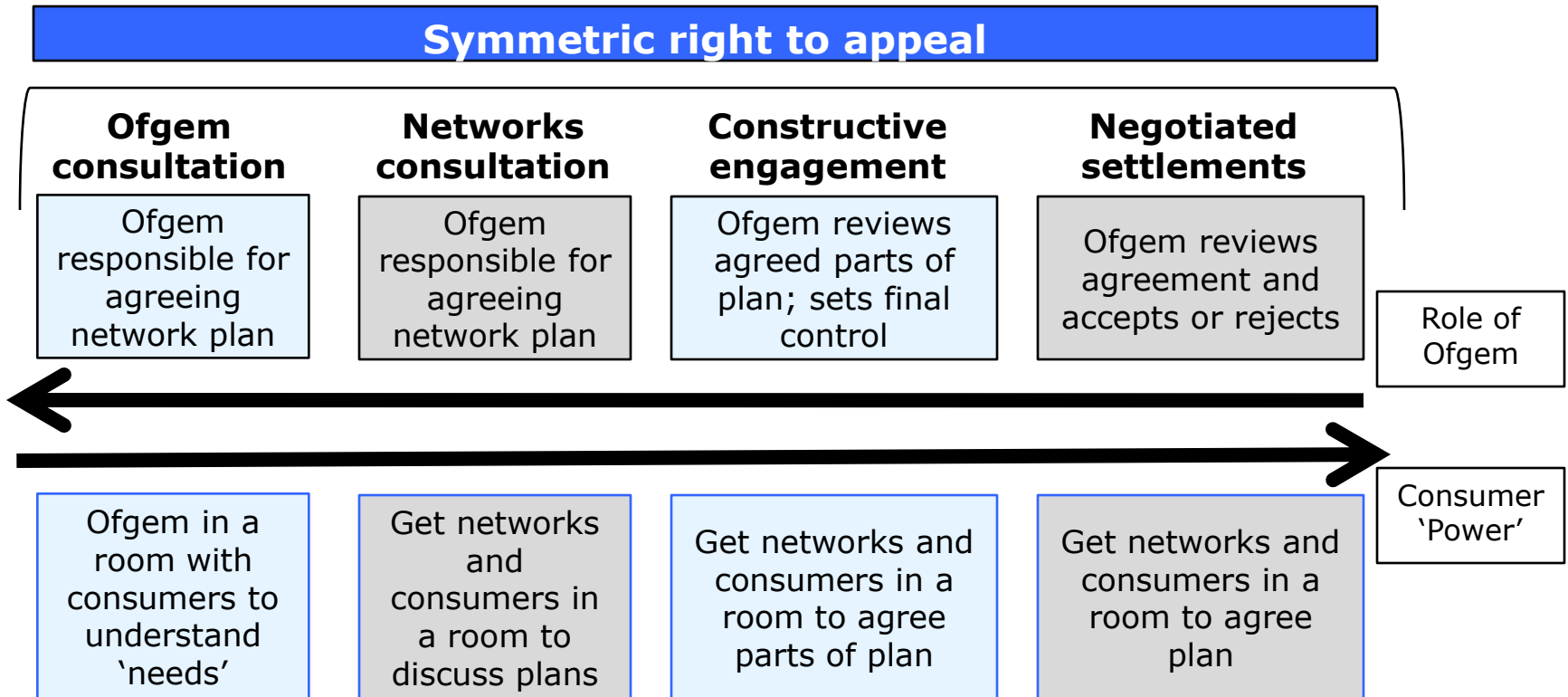
- Networks recognise that more or better engagement is a good thing in principle but argue that it has limited benefits relative to the effort involved.
- We are, through DPCR5 and other projects, adopting new approaches for engaging with consumers which we consider to be valuable.
- The issue of third party right to appeal has been raised a number of times, at previous reviews and in the context of RPI-X@20
- There is evidence, from other sectors and other countries, that engagement between regulated businesses and their consumers is beneficial
- In other sectors and countries an evolutionary approach to consumer engagement has been adopted.

Key issues to consider

➤ We have discussed role of consumers with range of stakeholders: emerging ideas



Potential strawmen options for consumer engagement



Models not mutually exclusive

Different models for electricity and gas? Transmission and distribution?

Rest of session

- Ian Clayton, Pros, cons and practicalities of constructive engagement in airports
- Stephen Littlechild, The case for introducing constructive engagement in TPCR5
- Discussion

The logo for ofgem, consisting of the word "ofgem" in a white, lowercase, sans-serif font, centered within an orange rounded rectangle. The background of the slide features a collage of images: solar panels on the left, a large white arrow pointing right, and a close-up of a gas meter on the right.

ofgem

Promoting choice and value
for all gas and electricity customers