

Incentivising deployment of smart grids

Clean power & smart grids conference
5 June 2013

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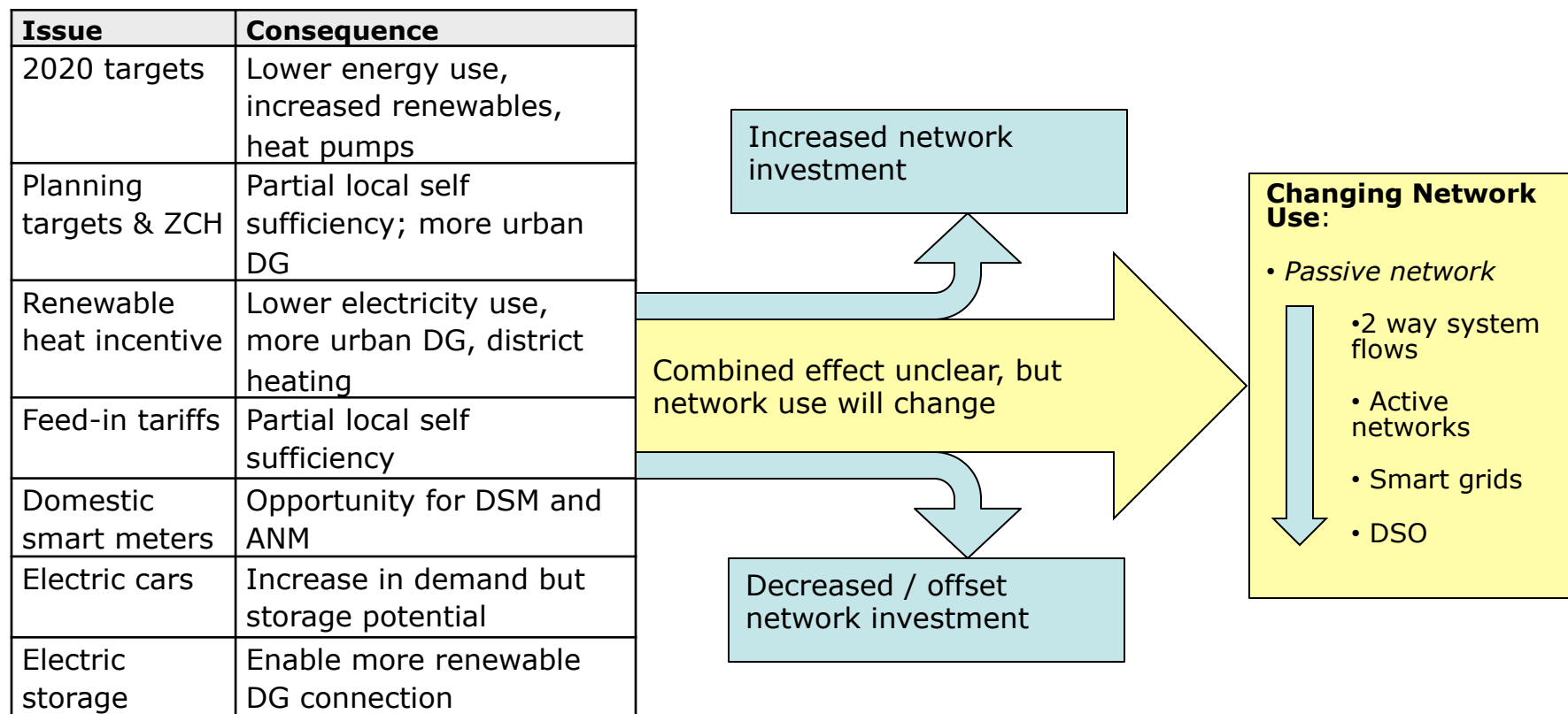
Mark Askew
Senior Manager, policy analysis

Contents

1. Encouraging companies to consider innovation
 - Low Carbon Network Fund
 - Innovation stimulus
2. Rewarding innovation
 - RIIO price control framework
 - Efficiency incentive
 - Totex approach
3. Removing barriers to the deployment of smart grids
 - Smart Grids Forum

1. Encouraging companies to consider innovation

Low carbon future = change in network use



Uncertainty around timing and scale of changes. LCN Fund established to encourage DNOs to trial ways of responding/anticipating this future

LCN Fund objective

OBJECTIVE:

To encourage the DNOs to use the DPCR5 period to prepare for the role they will have to play as GB moves to a low carbon economy

Respond:

Trial innovative commercial and technical network solutions to:

- Connect increasing renewables
- Manage network impact of increased renewables, demand side management, electric vehicles etc
- Explore active network management, smart grids and other commercial services

Facilitate:

Explore how climate change initiatives impact the networks and the role the DNOs can play, e.g. district heating, ground source heat pumps, energy efficiency measures etc.

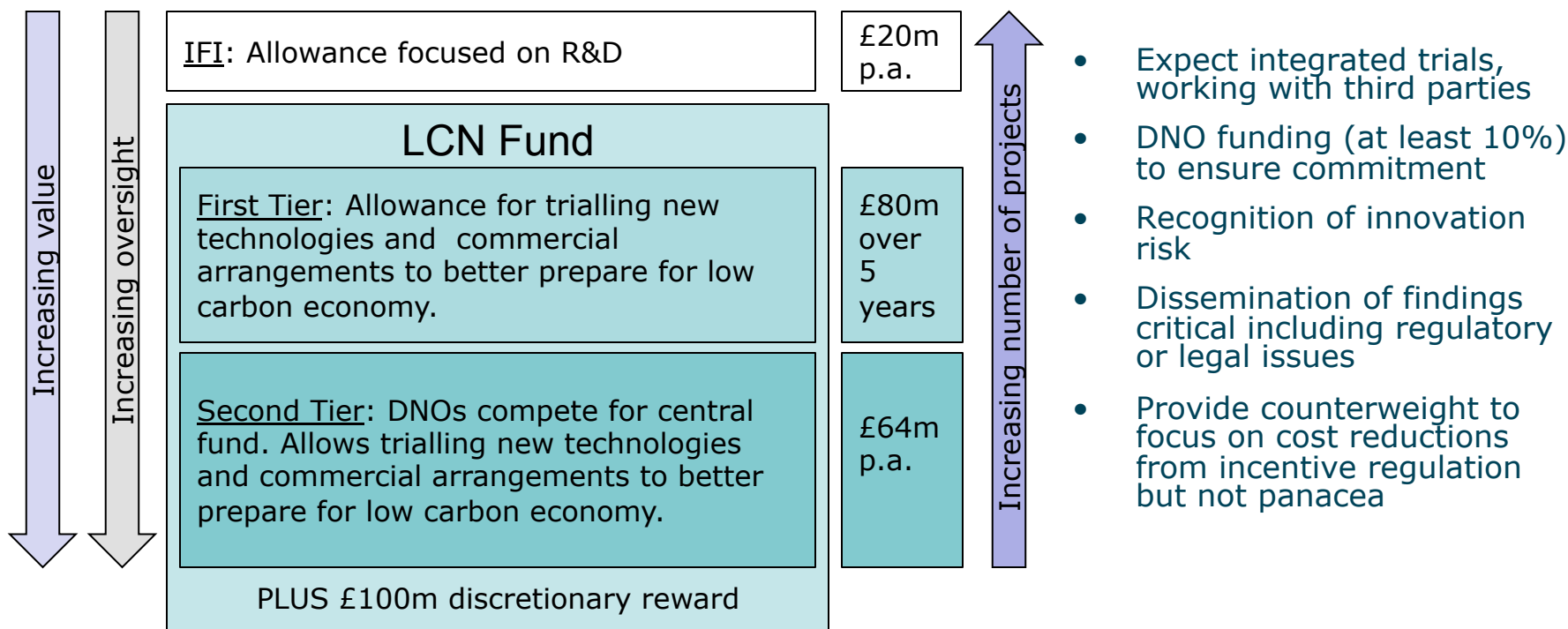
DNOs trial being a partner and facilitator to energy schemes, providing information, or developing new commercial arrangements

Trials will generate learning which will increase the speed and efficiency that DNOs respond to changes in network use

Provides a range of potential solutions to forthcoming challenges

Structure of LCN Fund

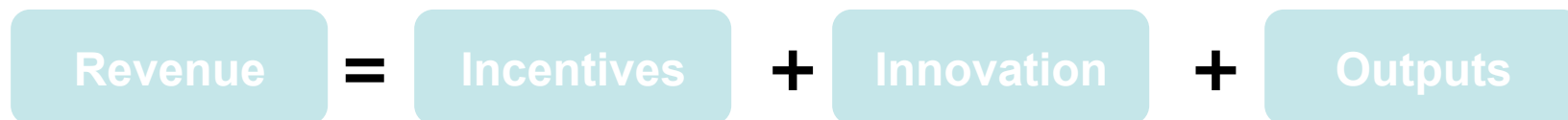
The LCN Fund comprises £500m over the five year price control period



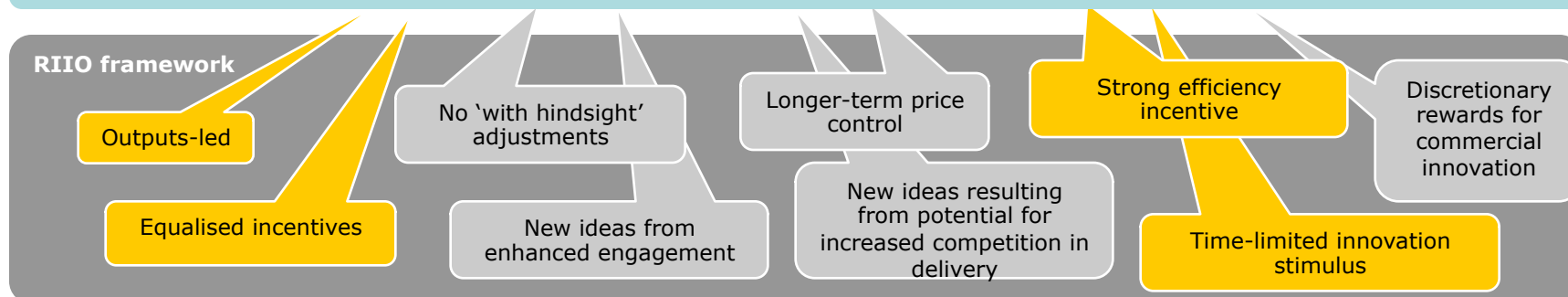
RIO is now taking this thinking further with the development of the innovation stimulus package

2. Rewarding innovation

RIIO price control framework

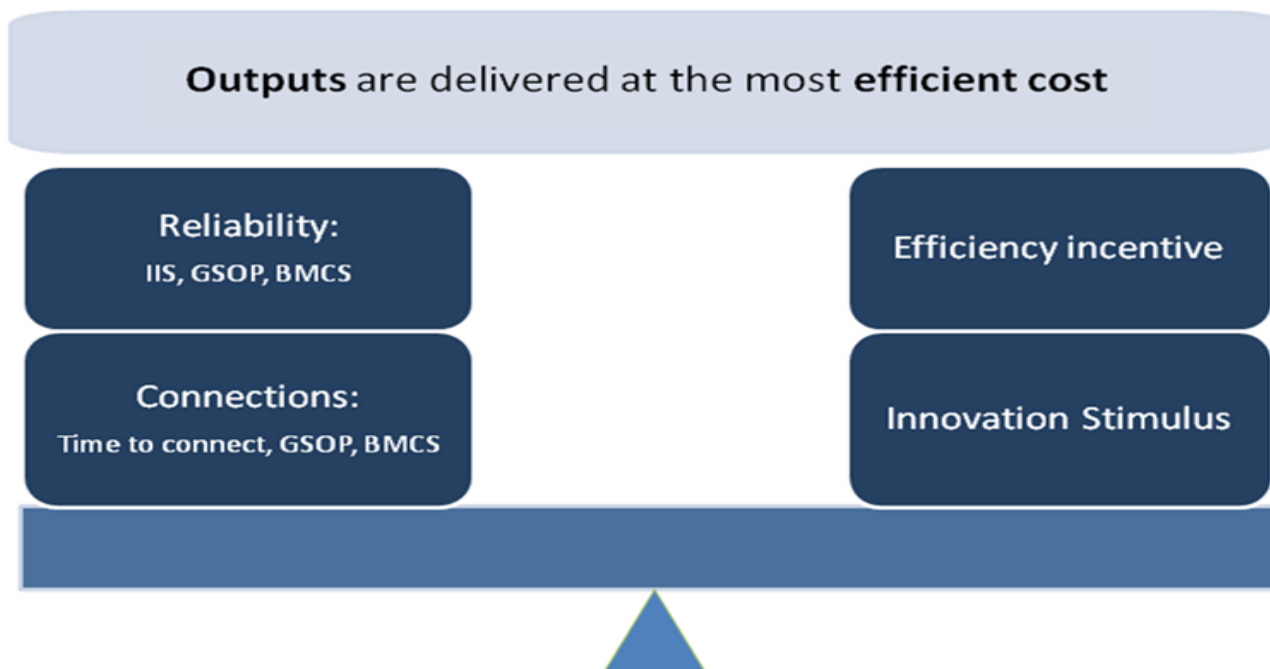


How RIIO will encourage innovation and smart grids



- **Ex ante allowance to deliver outputs** (outputs led)
- **Retain up to 70% of any under spend** (efficiency incentive)
- **No incentive to drive capex solutions** (equalised incentives)

High level framework - Outputs & Incentives for ED1



- The efficiency incentive (sharing factor) will make DNOs consider the most efficient response
- DNOs incentivised to use Smart Grids where it can maintain reliability or connect new customers more quickly and at lower cost
- LCNF today (NIA/NIC in the future) will allow testing of new Smart Grid solutions and revealing of more efficient costs

3. Removing barriers to smart grid deployment

Smart Grid Forum

- Established by DECC & Ofgem in May 2011
- Brings together DNOs, NG, suppliers, technology providers, consumer groups, academics, Government and Regulator
- 2nd year work programme consisted of 5 work streams

Work stream	Details
WS1	Developed DECC low carbon scenarios
WS2 - closed	High level Smart Grids evaluation framework
WS3	DNOs model building on evaluation framework
WS4	Identifying closing doors
WS5	Ways of working – learning dissemination
WS6	Regulatory & commercial issues

Year 3 work programme getting started and includes 1) consideration of the technical issues associated with accommodating active devices on the network and 2) production of a route map for smart grids in GB

Smart Grids Forum – Work Stream 6 – last year

- We have examined regulatory and commercial barriers to DNOs deploying smart grids incl. DSR during the next price control period ED1

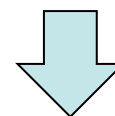
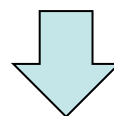
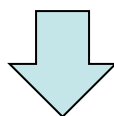
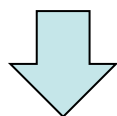
Conclusions on barriers to smart grids (incl. DSR) – ED1

1. There are relatively few – DNOs already using DSR!
 2. Some technical specifications may need updating – ER P2/6
 3. Connection charging rules may need slight amendment
- We have also identified a need to assess barriers and the need for commercial enablers from a broader perspective
 - Now taking this forward as part of 3rd year programme. Looking at roles and relationships required between parties and with customers

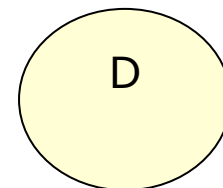
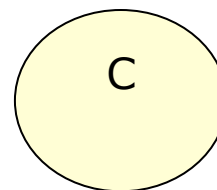
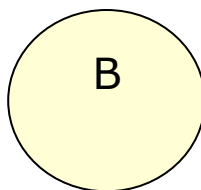
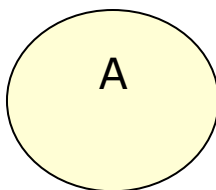
Work stream 6 – further programme

Stage 1

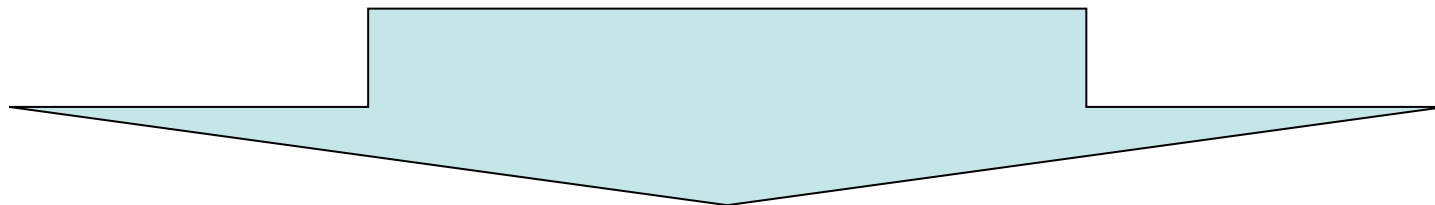
Develop a number of options for the development of and consumer engagement with Smart Grids



Stage 2 Roles and relationships for relevant parties under different options & trigger points for these roles



Stage 3 Commercial /regulatory arrangements for each option to effectively discharge roles & identify barriers to and enablers for these arrangements



Output

Defined roles and relationships with supporting commercial/regulatory arrangements across a range of options & trigger points



Promoting choice and value
for all gas and electricity customers