The background features a large, stylized white arrow pointing right, overlaid on a blurred image of a modern building with a glass facade and a large, glowing, multi-layered circular structure on the right side. The overall color palette is light blue and white with a soft glow.

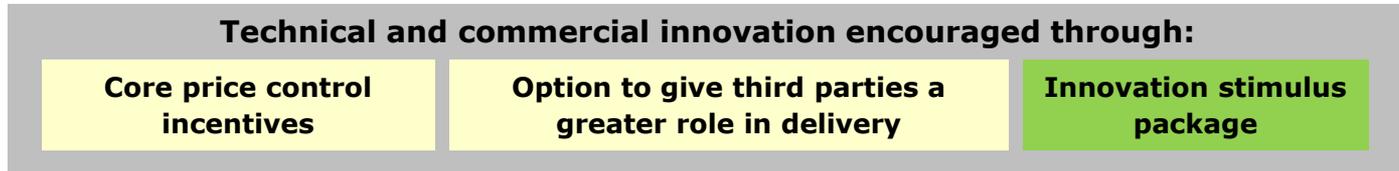
Network Innovation and Regulation

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- 1. Innovation in Next Price Control – RIIIO-ED1**
- 2. The Challenge**
- 3. Innovation in Current Price Control (DPCR5) - Low Carbon Networks Fund**

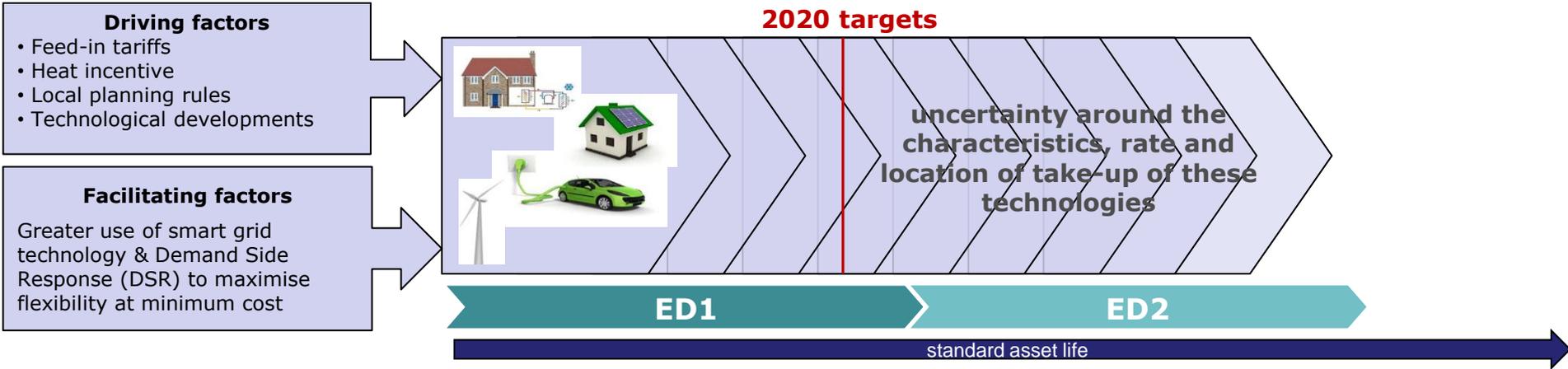
Taking innovation forward: RIIO framework



- RIIO
 - A new method of setting revenue earnings for network companies paid for by charges levied on network users over 8 year period
- Networks will need to be smarter, integrate intermittent sources and encourage customers to manage their demand.
- The shape of the low carbon future is not clear, therefore companies will need to innovate.

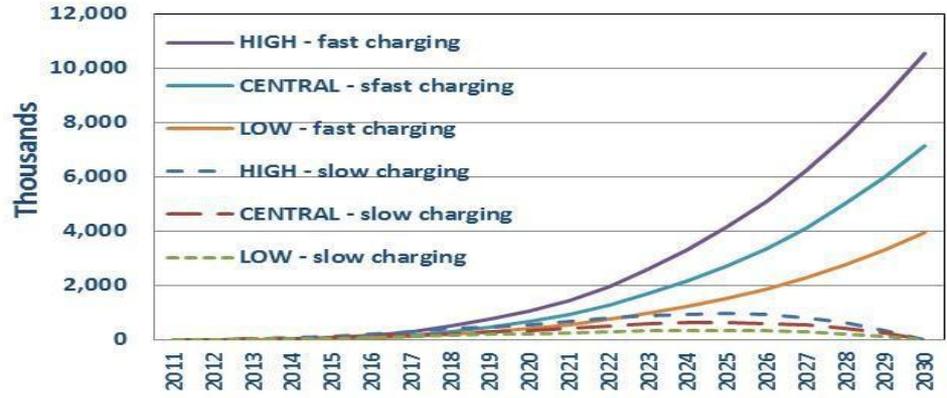
RIIO-Electricity Distribution 1 (RIIO-ED1) Key Challenge

Need to ensure low carbon technologies (LCTs) and generation can connect in appropriate time at appropriate cost, without causing network problems

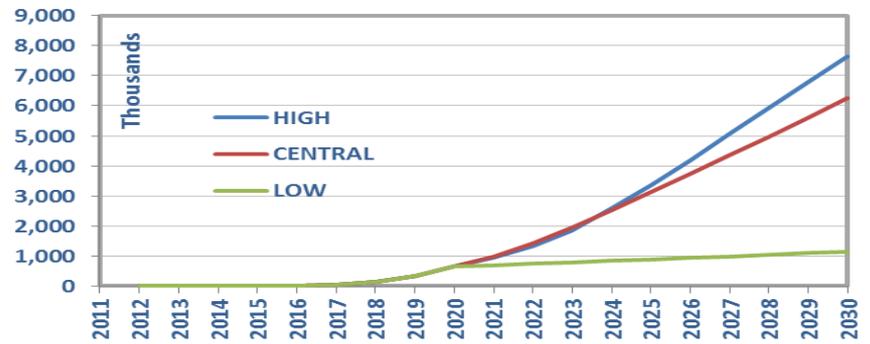


**RIIO framework encourages longer-term view and efficient management of uncertainty
RIIO-ED1 needs to drive Distribution Network Operator (DNO) mindset change**

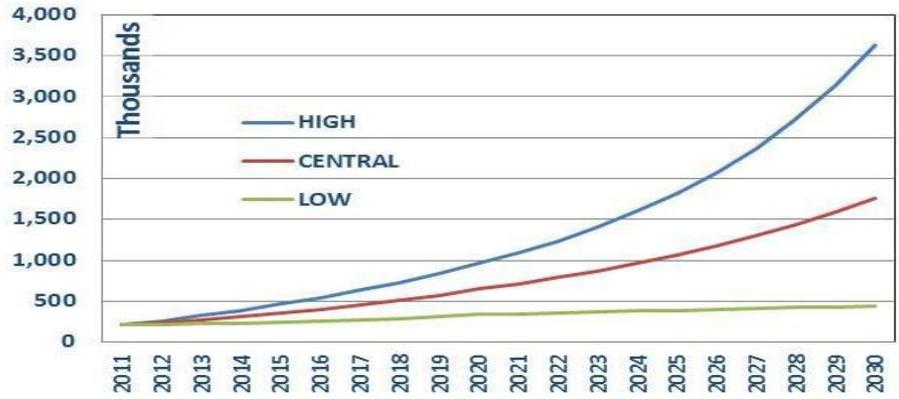
EV : GB uptake scenarios by charging type (number of units deployed - all sizes and types)



Residential HP: GB uptake scenarios (number of units deployed - all sizes and types)



PV : GB uptake scenarios (number of units deployed - all sizes and types)



Proposed ED1 outputs/incentives

Outputs are delivered at the most **efficient cost**

Reliability:

Reliability incentive, guaranteed standards, measure of customer satisfaction

Connections:

Time to connect incentive, guaranteed standards, measure of customer satisfaction

Efficiency incentive

Innovation Stimulus

Outputs incentivise DNOs to respond to developments or face penalties

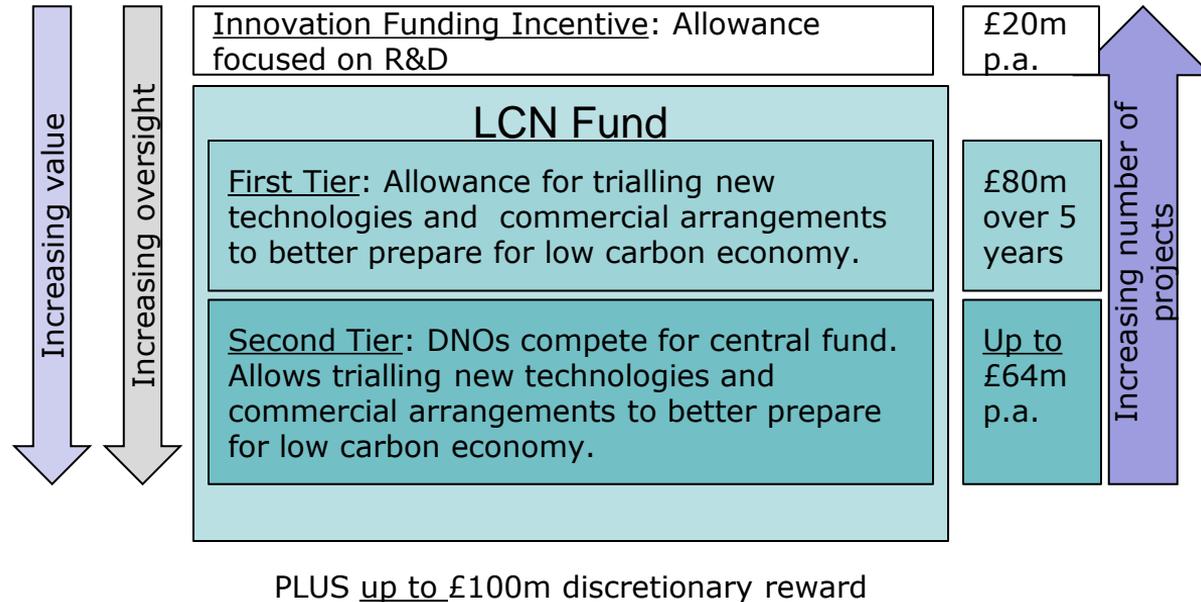
The efficiency incentive (sharing factor) will make them consider the most efficient response

Innovation

- Companies must engage with all stakeholders (with consumers at the heart) about long term plans
- Strong incentives to innovate as companies keep a large proportion of savings made in delivering outputs required by consumers
- Low Carbon Networks Fund - Direct innovation funding to companies through £1/2 billion Fund

The Low Carbon Networks (LCN) Fund

The LCN Fund comprises of up to £500m over the five year Distribution Price Control Review 5 (DPCR5) period



LCN Fund will develop key learning to inform radical shift in network use

The Low Carbon Networks Fund (Current price control – DPCR5)

- Designed to kick start innovation in network companies
- To ensure sufficient innovation in delivering low carbon benefits where projects might not be commercial
- So far:
 - 2010 Competition - 11 bids worth over £150m, 4 successful projects worth £63.6m
 - 2011 Competition - further 6 bids worth nearly £60m, all six projects successful
 - 2012 Competition - 7 bids passed Initial Screening worth over £80m
- Learning (positive and negative) disseminated to all

2010 Winning LCN Fund Projects

Customer-led Network Revolution

(Northern Powergrid)

Trialling of smart meters and customer-side interactions with new network technologies (such as storage).



Low Carbon London – a learning journey (UKPN)

Innovation to facilitate low carbon technologies into urban and suburban networks. Leverages London's low carbon initiatives.



Total Funding value = £63.6m

Low Carbon Hub (WPD)

Investigating how new network technologies can increase the capacity of generation (mainly wind) that can be connected to a rural distribution network. Exploring new commercial arrangements.



LV network templates for a low carbon future (WPD)

Assessing the impact of low carbon technologies connected to low voltage network to create generic network models to assist DNOs in efficiently planning and operating networks.



LESSONS LEARNED SO FAR ARE SHARED ACROSS THE INDUSTRY

Learning starting to emerge – 2012 key year for 1st year projects trials

Thank you

The background of the slide is a composite image. On the left, there are rows of solar panels under a bright sun. On the right, a hand is shown holding a white document. At the bottom, a water tap is visible with water spraying out. A dark blue horizontal bar is at the top of the slide.

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for all gas and electricity customers