

**Electricity
Transmission**

The Pathway to Net Zero: reimagining the future network

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national**grid**



An aerial photograph of a high-voltage power line tower in a rural landscape. The tower is a tall, white, lattice-structured structure with multiple cross-arms. It is surrounded by a paved access road and a small fenced-in area. The landscape is green and hilly, with a road and a fence line visible in the foreground. The sky is overcast and grey. The text "We're responding to a world impacted by conflict in energy and climate change..." is overlaid in white, bold font across the center of the image.

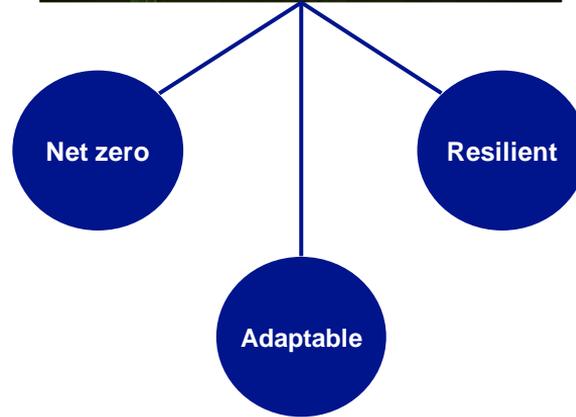
We're responding to a world impacted by conflict in energy and climate change...

Meeting net zero targets for 2030, 2035 and 2050

In the 1950-70s we designed & built a grid with the future in mind...



We know the energy grid of 2050 will be a different grid from today...



...in 2020/30/40s we must therefore fully upgrade & reimagine the grid

Enable and support delivery of the **government's ambitious targets** on the pathway to 2050:



600,000 heat pump installations p.a. by 2028



2030 ban on new petrol and diesel cars & vans



Up to 50GW OSW by 2030



Fully decarbonised electricity system by 2035

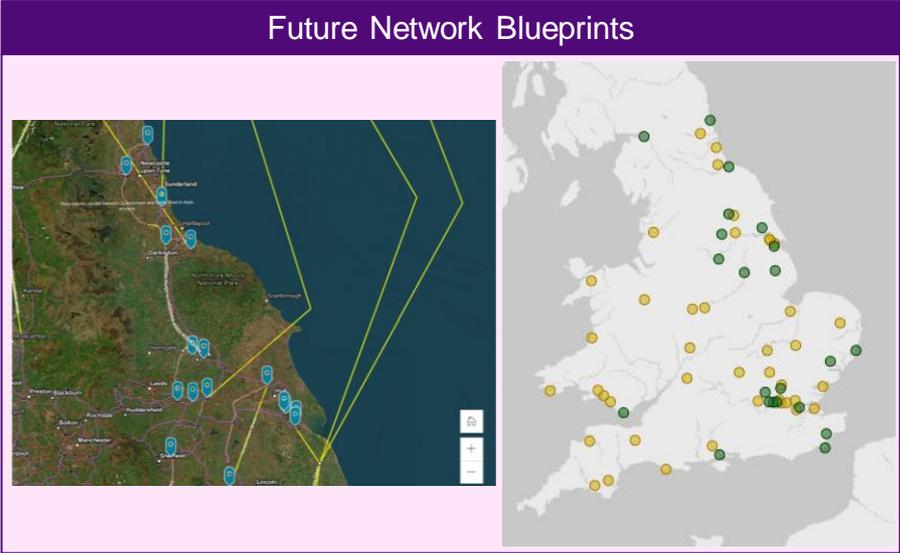
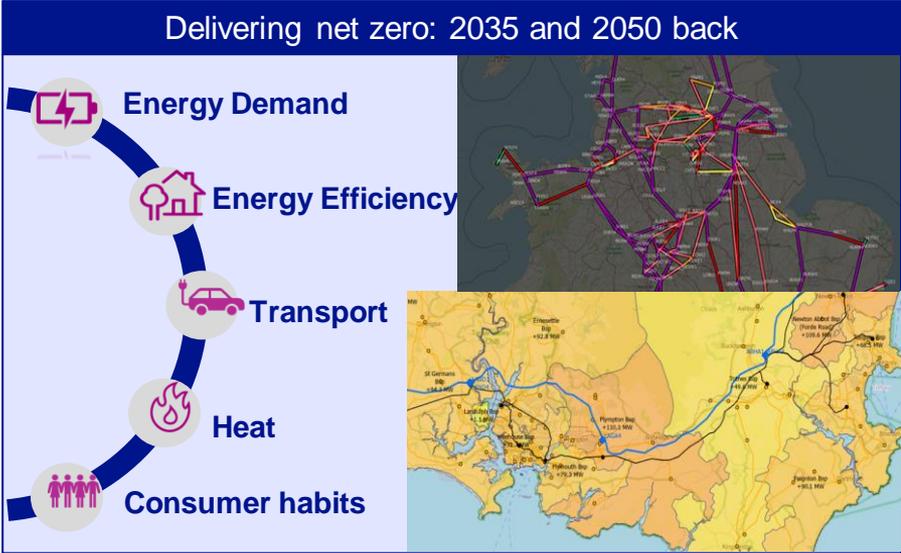
We need to listen... and bring consumers and communities with us

The Great Grid Upgrade



A campaign for consumers to connect decarbonised energy with our everyday lives

Understanding how to hit the 2035 and 2050 targets



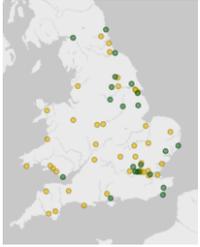
***The results show significant implications to deliver the required investments. Changes to the regulatory framework increases the chances of achieving both 2035 & 2050 targets**

Considerations...

Ageing assets + Fast growth for connecting wind = Peak of work during PC26

Future Network Blueprints
assesses scale and hotspots for plans and network



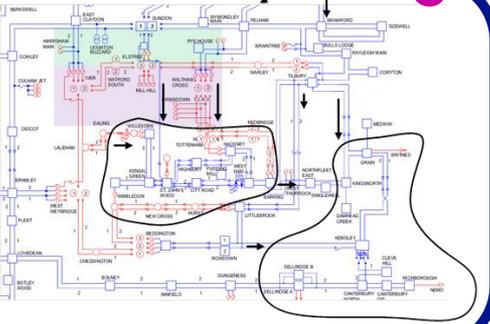
 Next phase of works is to holistically review deliverability and optimisation of decisions

 Supply chain strategy

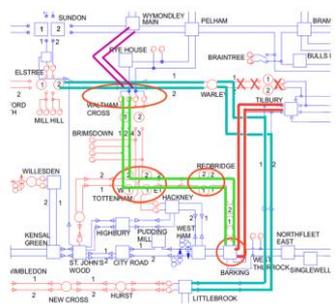
 An appropriate asset management strategy

 Skilled resource

System access will likely influence work sequencing and approach



We need to take a regional view of system access challenges



The future regulatory framework must enable positive consumer outcomes, while overcoming the macro-challenges facing the energy transition

The regulatory framework needs to enable us to support positive consumer outcomes

- Fair Prices**
 - Prevent excessive profits 
 - Achieve cost efficiency  
 - Protect consumer welfare 
- Quality & Standards**
 - Accessible and responsive  
 - Transparent and enables choice
 - Enhanced protections for the vulnerable 
- Low-Cost Transition**
 - Enable infrastructure and markets required for net zero transition   
 - Minimises cost of net zero transition   
 - Apply innovative solutions  
- Resilience**
 - Maintain security of supply  
 - Robust to market developments & external shocks   
 - Ensure sector is investable 

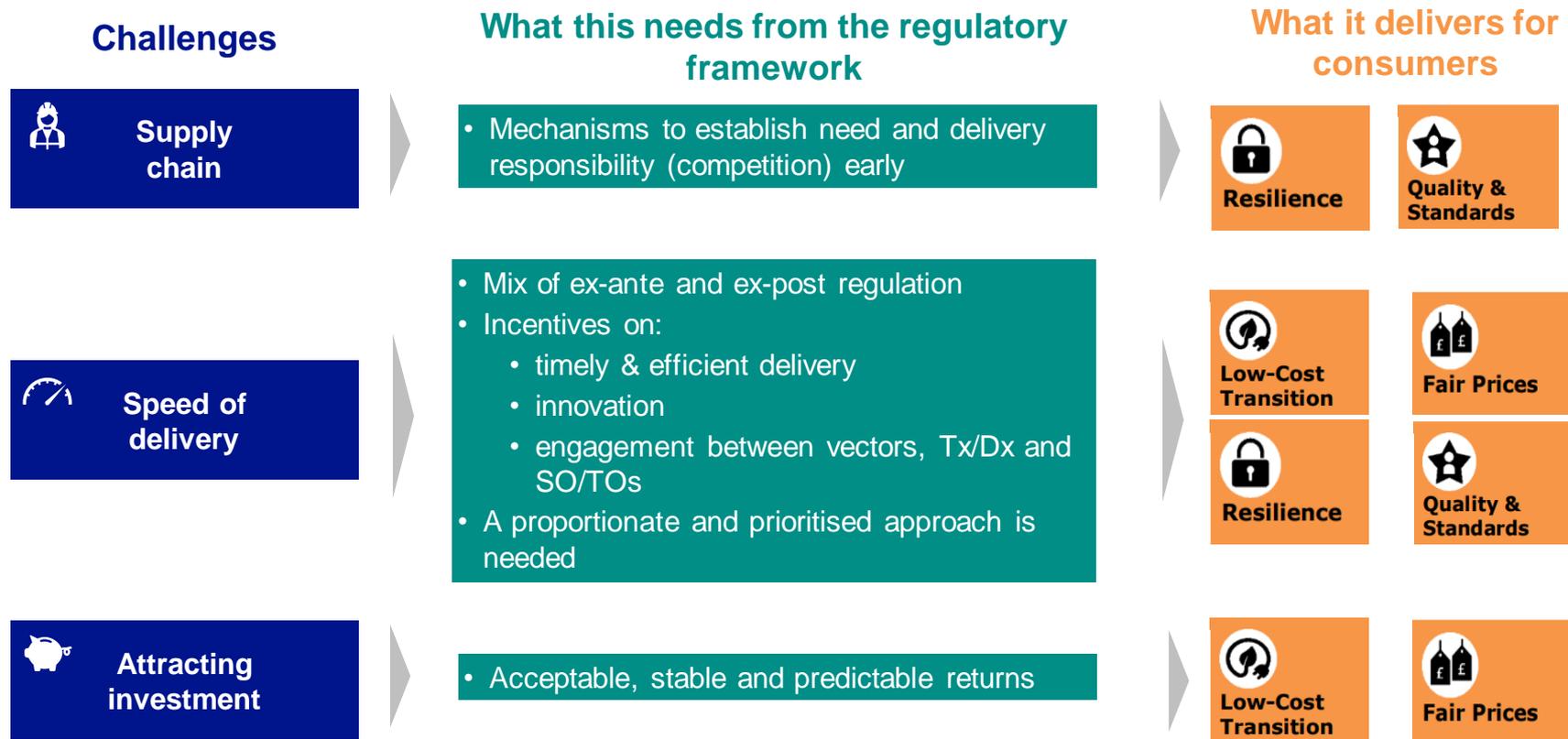
Challenges the framework needs to help us overcome to support these outcomes

 **Managing global supply chain challenges and ensuring necessary resources & skills**

 **Enabling investment and progress at the required pace, including managing system access**

 **Attracting the investment needed for the unprecedented scale of network development**

We have identified some key principles we think the framework needs to reflect to overcome the challenges and deliver positive consumer outcomes



Takeaways ...



The grid of 2035 will be different from that of today, with a scale and level of transformation we have not seen in our working lifetimes



We want to ensure we prioritise the right investments for consumers and UK plc



Critical to this will be supporting Ofgem to make sure the regulatory framework delivers the investments needed