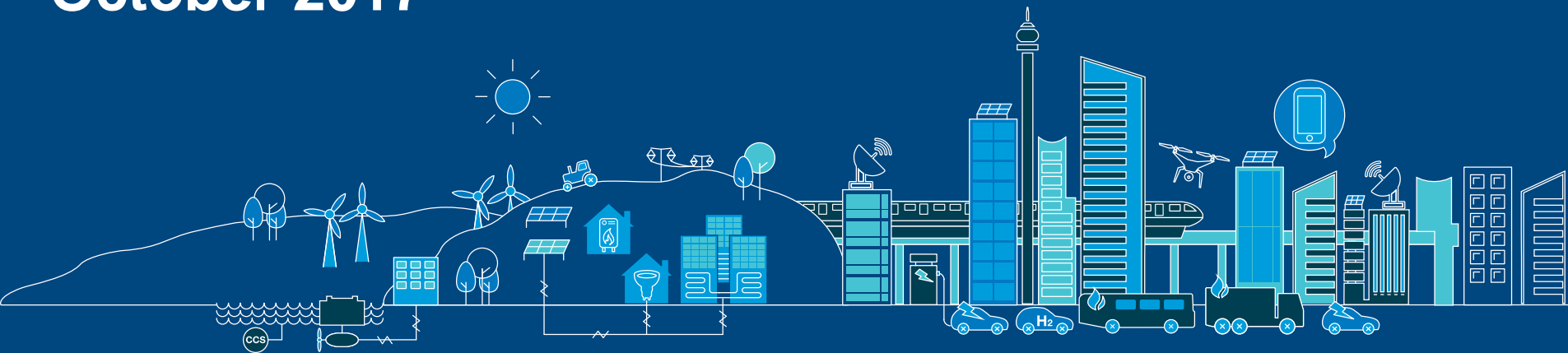




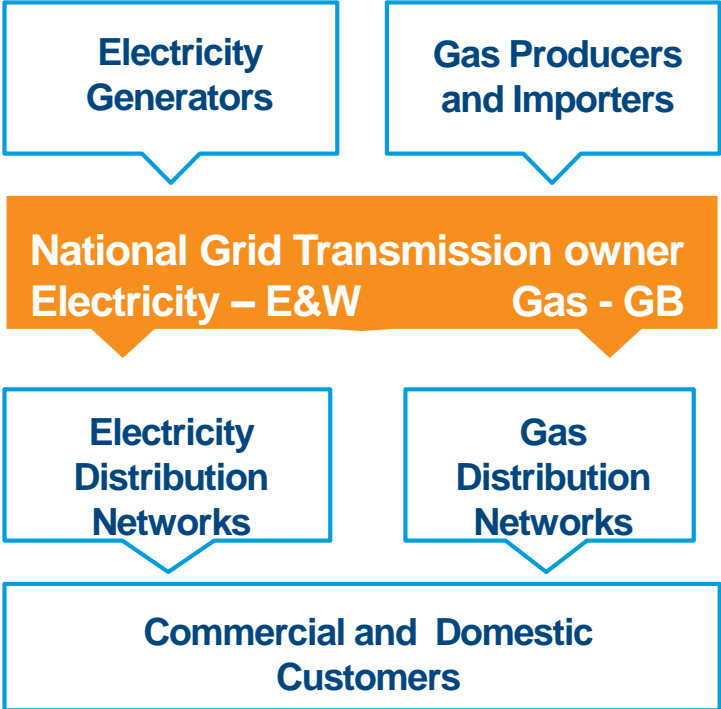
# Future Energy Scenarios 2017

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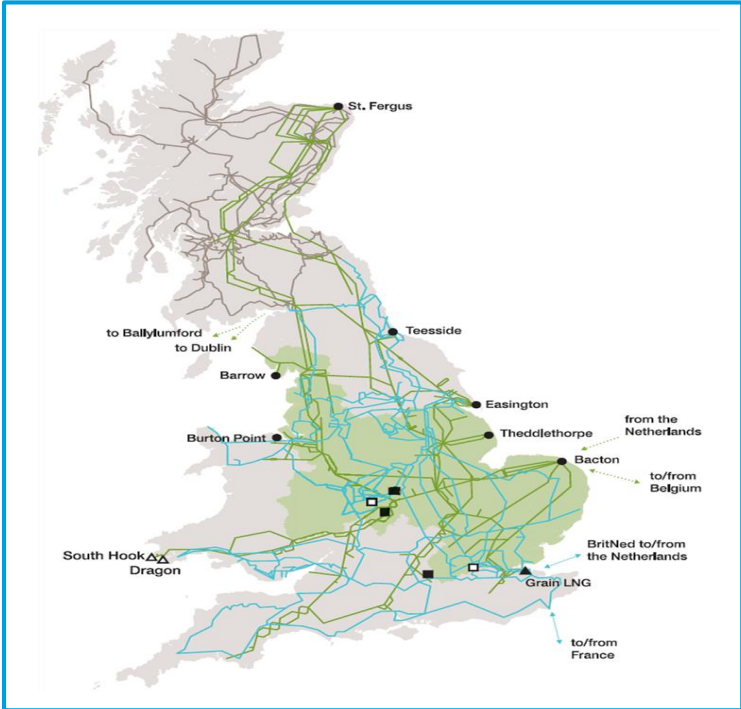
Marcus Stewart  
Head of Energy Insights  
October 2017



# Briefly about National Grid...



System Operator

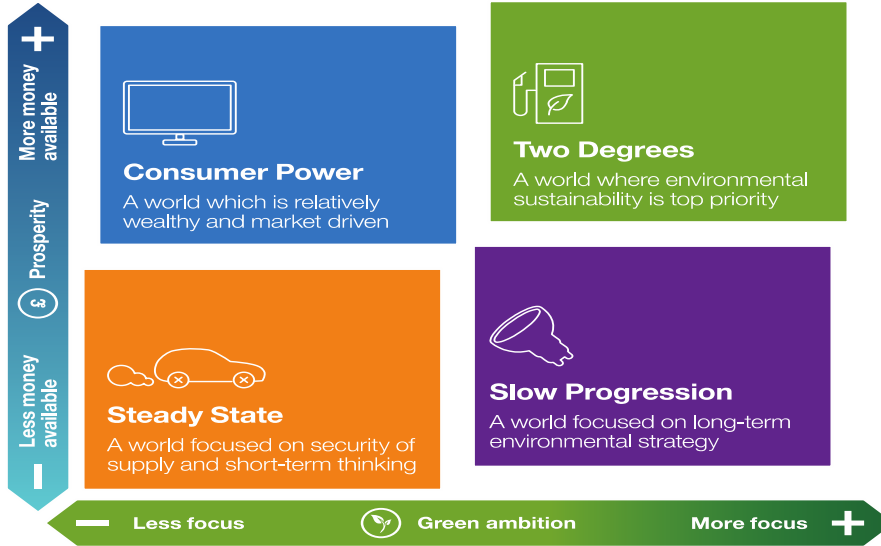


# We develop future energy scenarios and explore those through our thought pieces

nationalgrid

## Scenarios

## Thought pieces

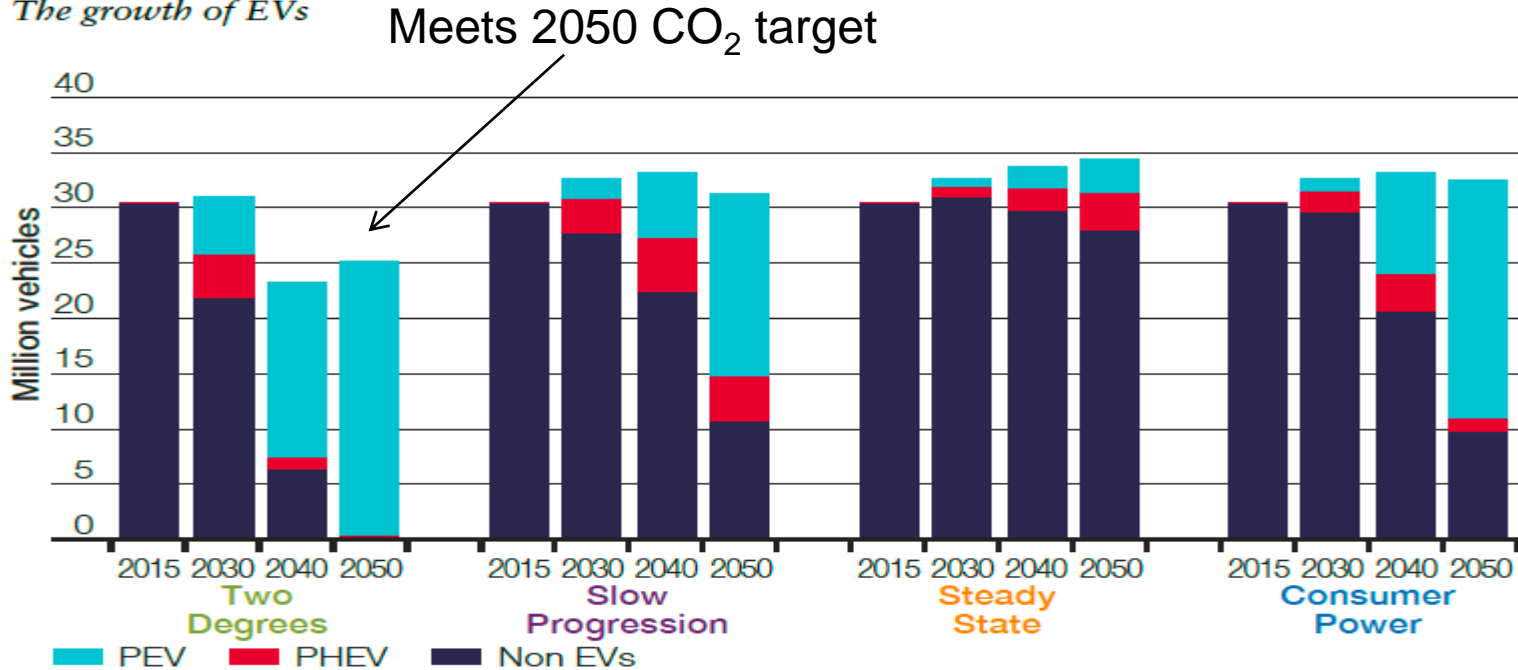


<http://fes.nationalgrid.com/fes>

# We expect growth in all our scenarios

## – with all cars electric by 2050 in Two Degrees scenario

Figure 3.13  
The growth of EVs



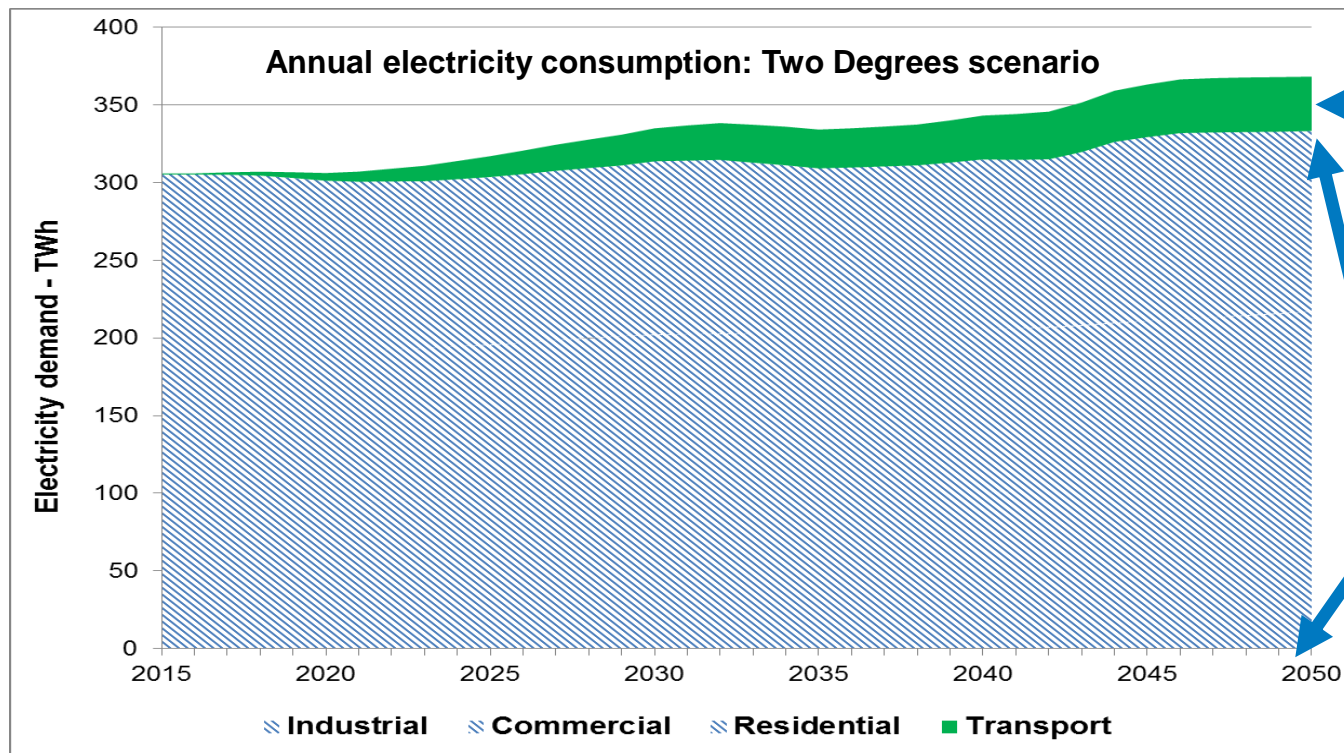
There are around 30 million vehicles on the road today

Of which ~100,000 are EVs

Heavy good vehicles likely to move to natural gas or hydrogen before they electrify



# However, the impact on annual electricity consumption is less significant... nationalgrid

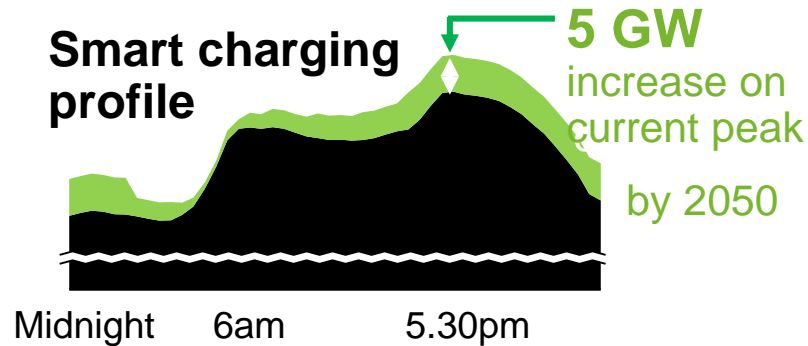
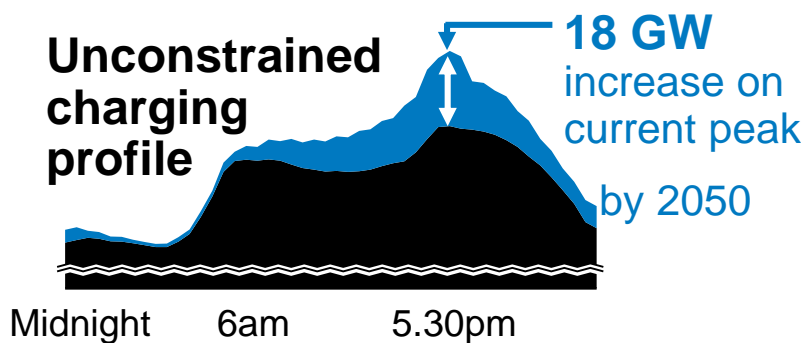


Electric vehicles add 35 TWh of demand by 2050, just over 10% of today's demand

Non transport demand increases by ~10% from around 300 TWh today to 333 TWh by 2050



It is not just how much energy is required, but when it is required, and how it is charged...



Home charging



Charging stations



Vehicle to Grid ?



# Key conclusions

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- **Electric vehicles are expected to develop rapidly, driven by technology and legislation.**
- **Electric vehicles will increase electricity demand, and smart charging will be essential if they are to be efficiently integrated into the electricity system.**
- **To meet diverse consumer needs, we expect there to be a mosaic of charging solutions, ranging from in home to rapid charge. Investment and innovation in electricity networks will be needed to accommodate the growth.**



# Please get in touch to carry on the conversation:

Read our Future Energy Scenarios

<http://fes.nationalgrid.com/fes-document/>

Contact us about our Future Energy Scenarios  
Join our mailing list.

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Read our Thought Pieces:

<http://fes.nationalgrid.com/insights/>



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Keep up to date on key issues relating to National Grid via our Connecting website:  
[www.nationalgridconnecting.com/](http://www.nationalgridconnecting.com/)

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