

Sustainable Thermal Energy Technologies Conference

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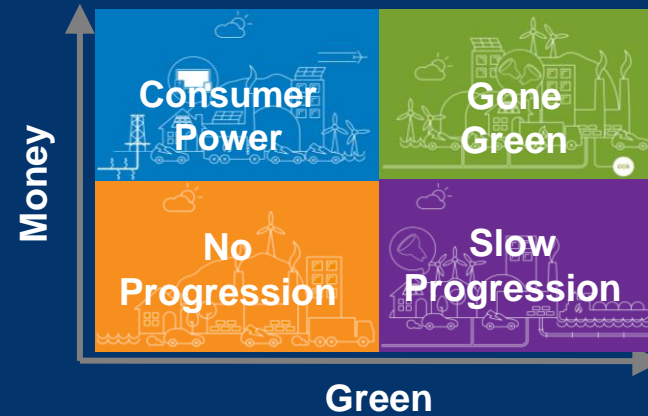
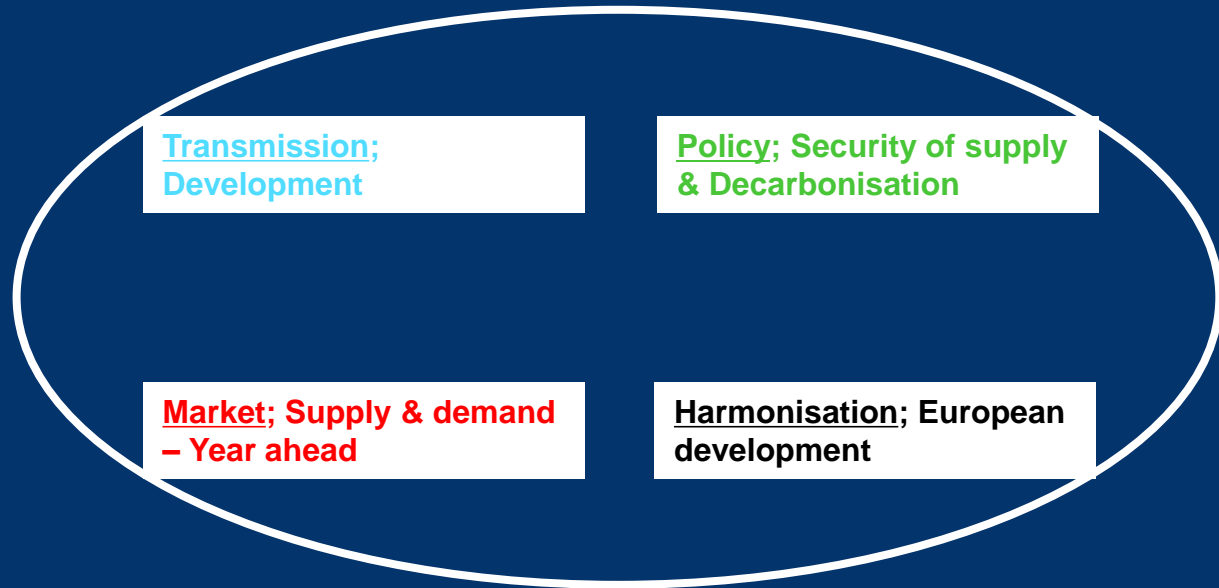
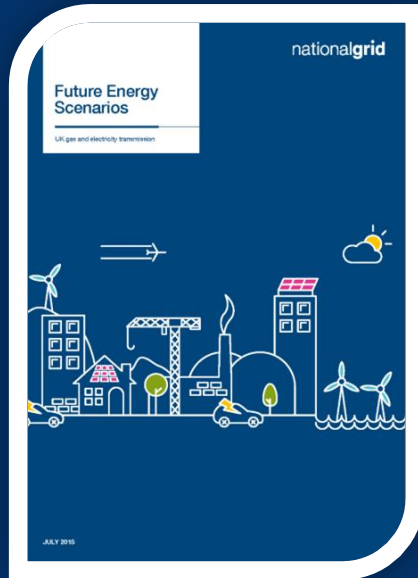
Future Energy Scenarios 13.04.15



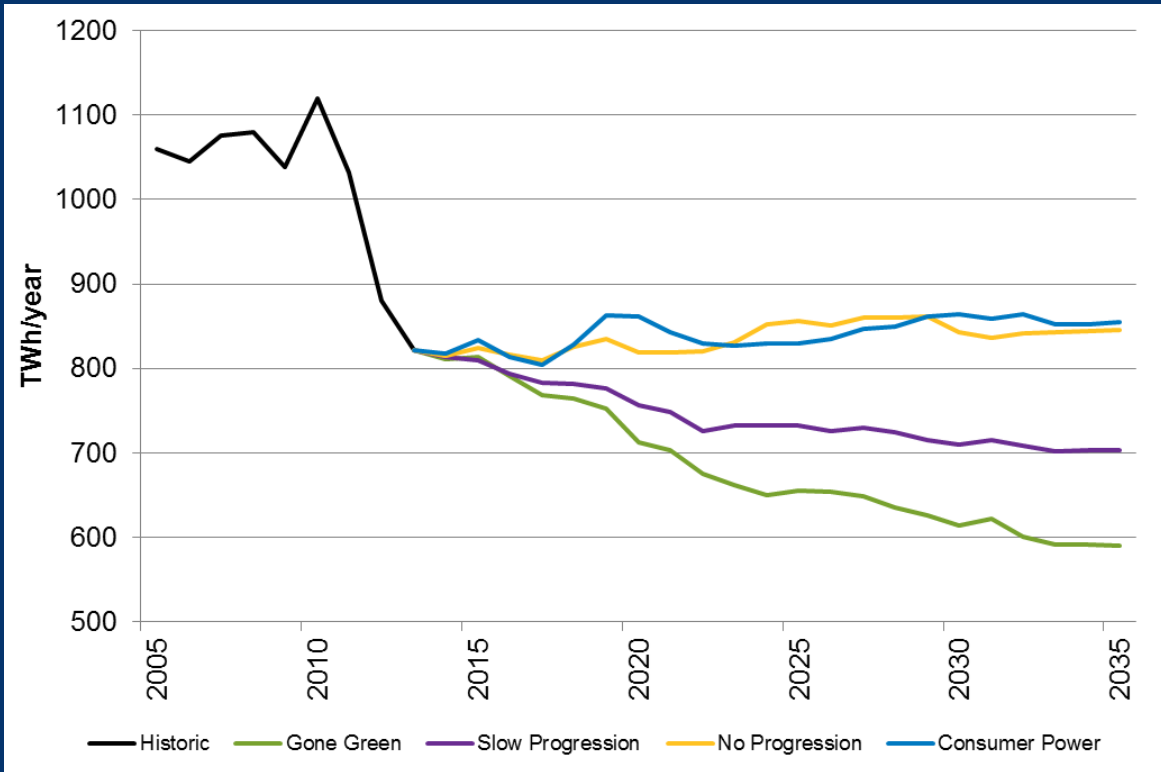
Agenda

- **Future Energy Scenarios**
 - **Summary**
 - **Heating**
- **Future Gas Demand**
 - **Low Carbon Technologies**
 - **Key Developments**
 - **Short, Medium & Long term**
- **Conclusion**

What it is

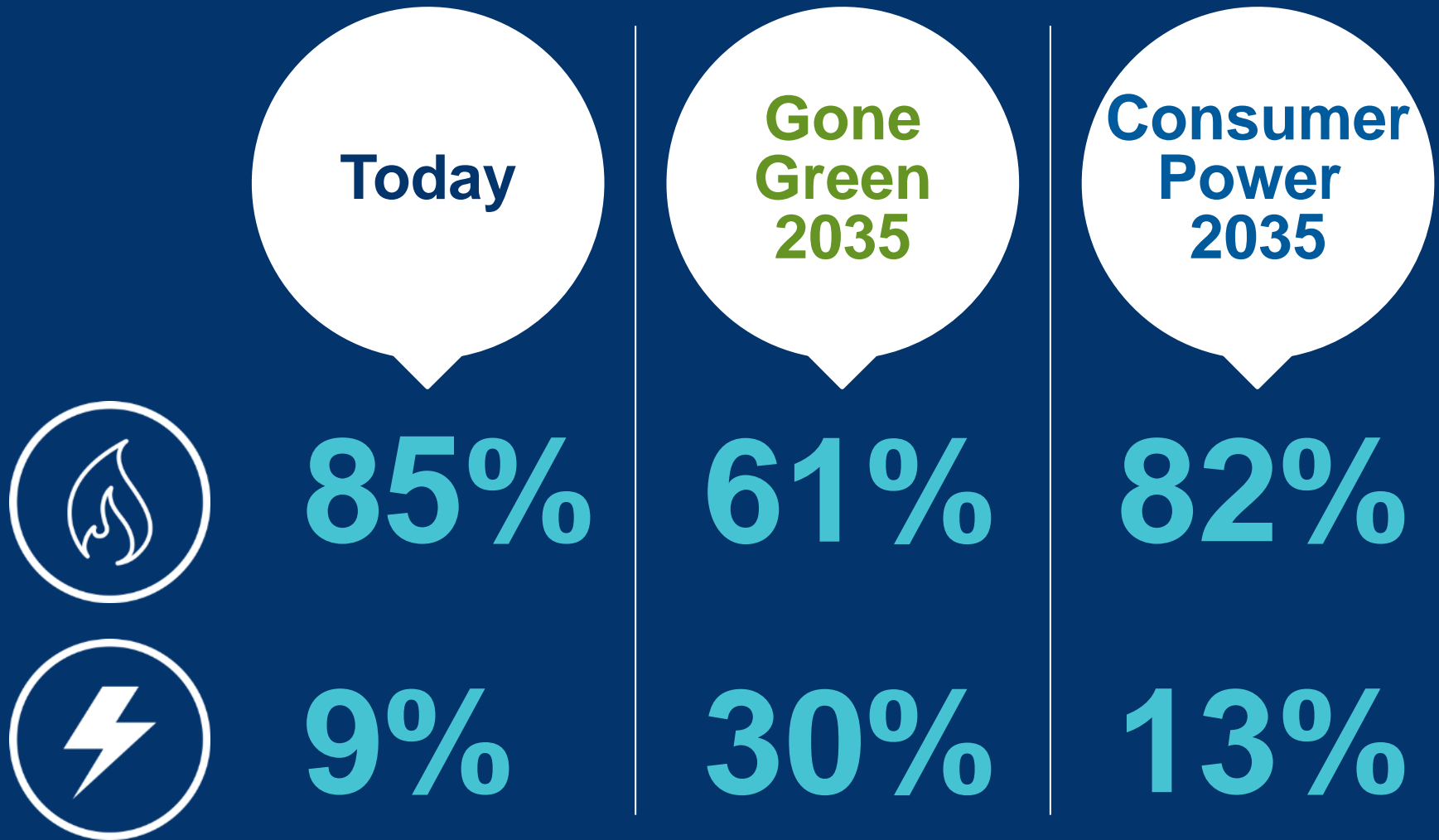


Future Gas Demand – FES 15



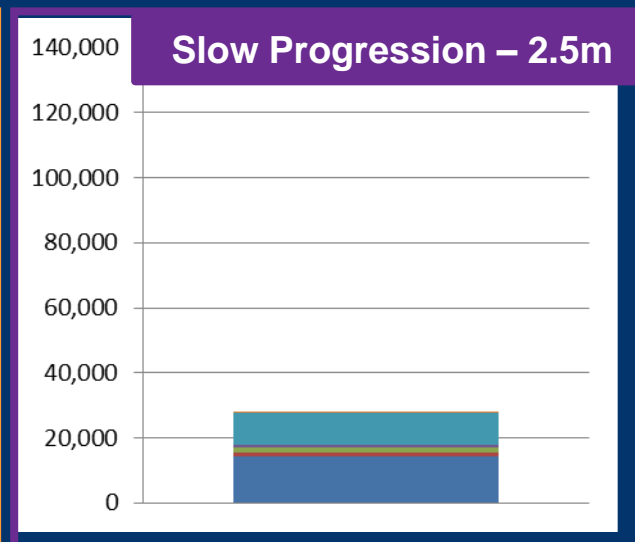
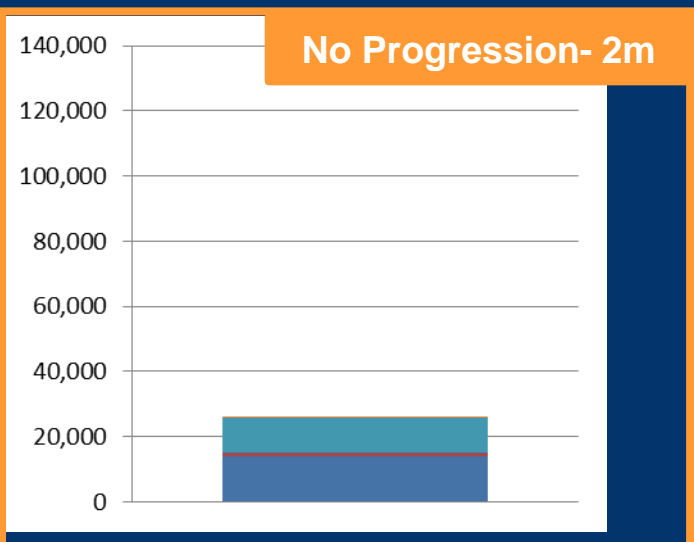
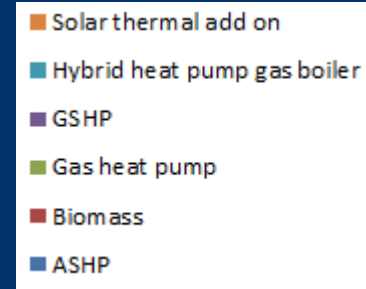
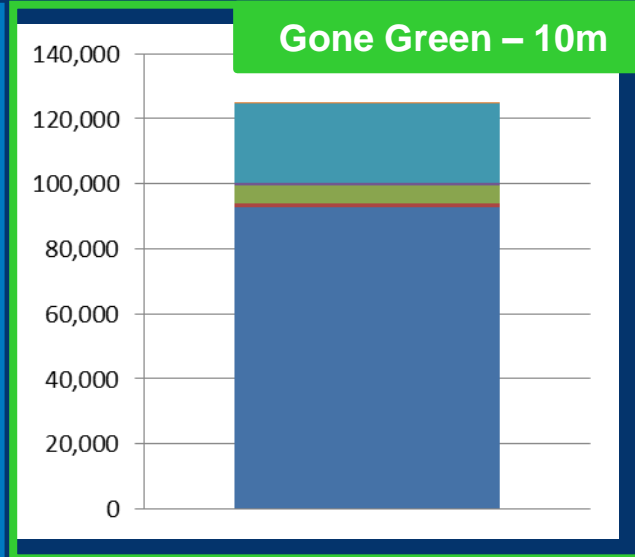
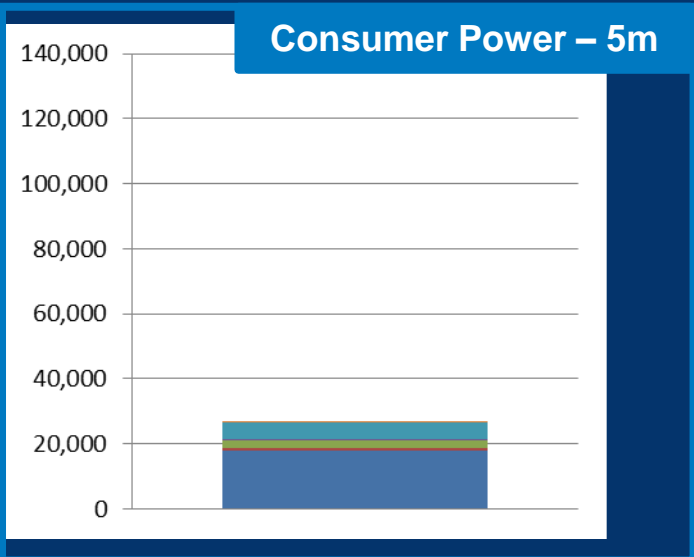
Sector	Percent age of demand (%)	Energy Demand (TWh/year)
Domestic	35.7	316
Commercial	13.2	117.4
Industrial	11	97.9
Exports	22.8	202.5
Power Station	17.2	152
Transport	0	0.3
Total	100	886

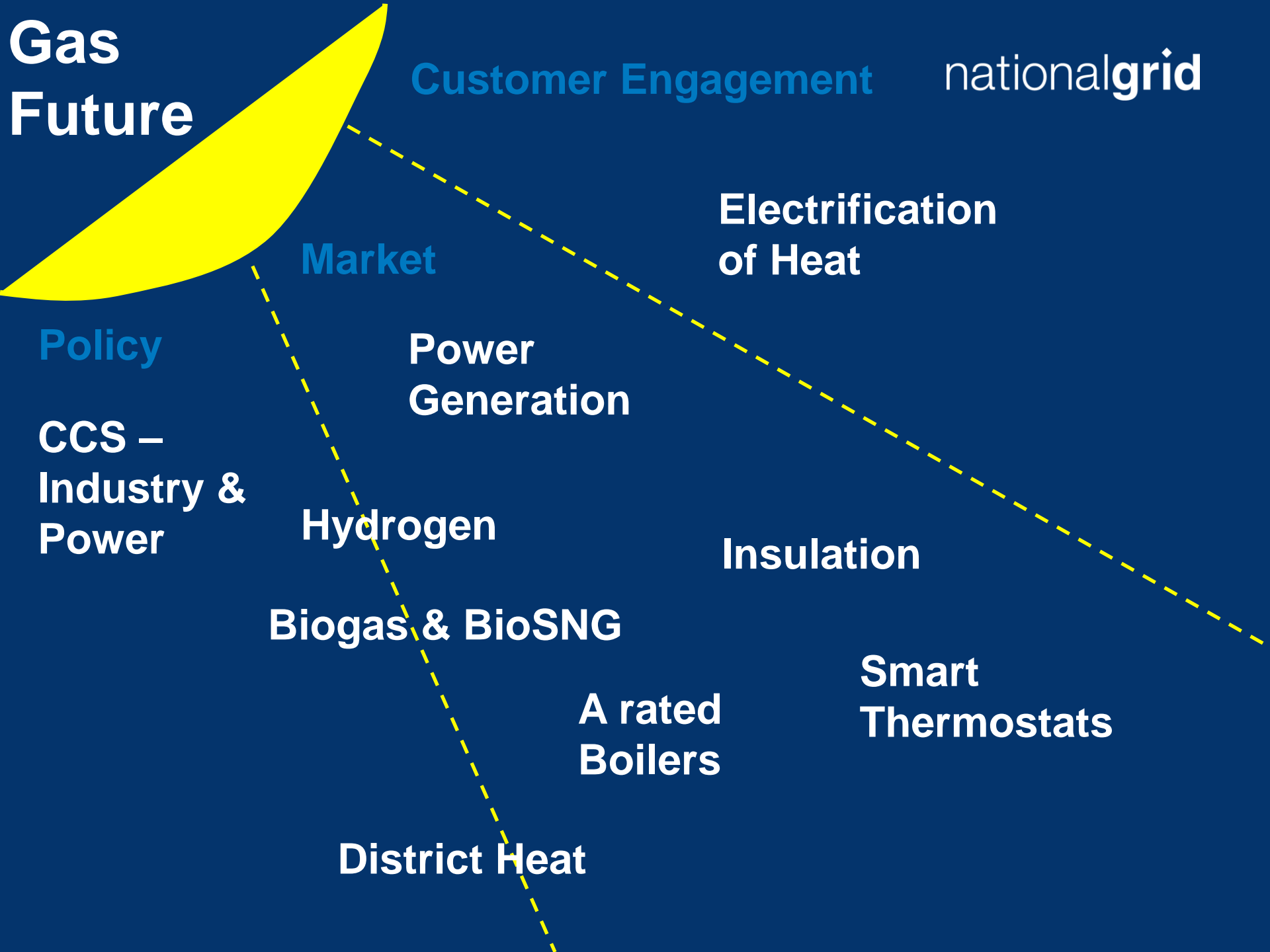
Heating in 2035



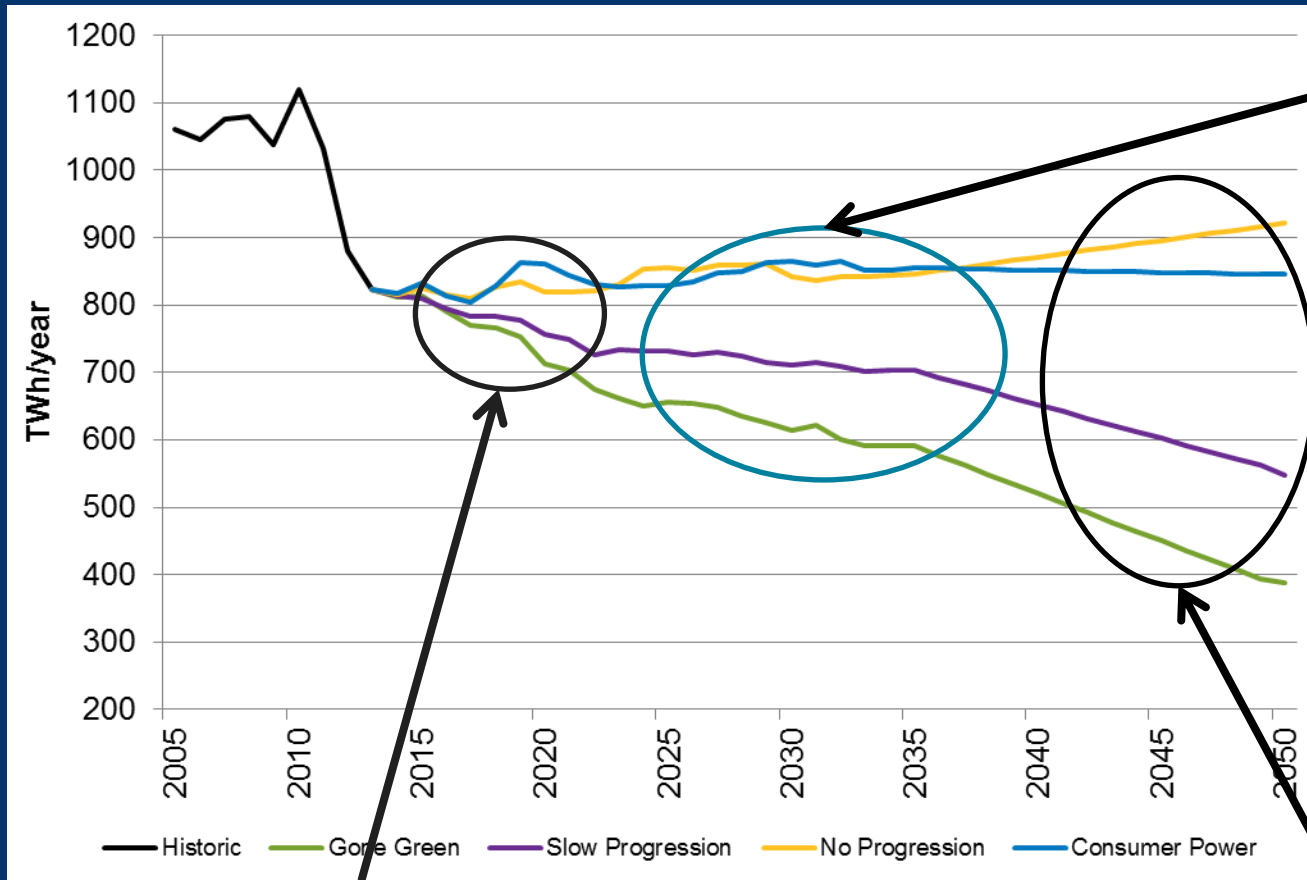
Gas Demand Displaced by Low carbon heating (GWh) – 2035

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Where are we and what are the sensitivities?



Medium term

- Still Upper end??
 - New CCGTs
 - Shale development
- Impact of District Heat?
- Electrification progress?
- CCS importance increases

Short term

- Upper end??
 - Low gas price
 - Coal plant closure
 - Slow uptake of Low Carbon Heating

Long term

- Pathway chosen?
 - Target hit?
 - Pathway?
 - Gas to Hydrogen?
 - Electrification

Heat is difficult to decarbonise

- **Uncertainty**
 - Cost effective decarbonisation?
 - Technology Innovations?
- **Certainty (ish)**
 - Gas important World Energy Source
 - Change takes time &
 - Costs – what can we afford
 - Customers need to be interested



Closing

FES 2015;

<http://www2.nationalgrid.com/uk/industry-information/future-of-energy/future-energy-scenarios/>

FES 2016; Due 5th July 2016

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