Future Energy Scenarios Stakeholder workshop

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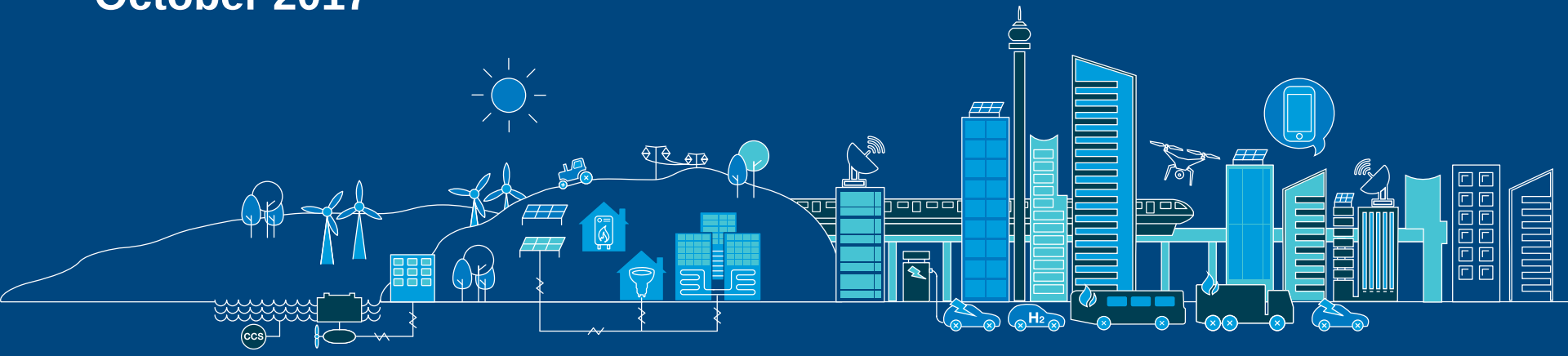
FES Overview

October 2017



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Briefly about National Grid…

Electricity Generators

Gas Producers and Importers

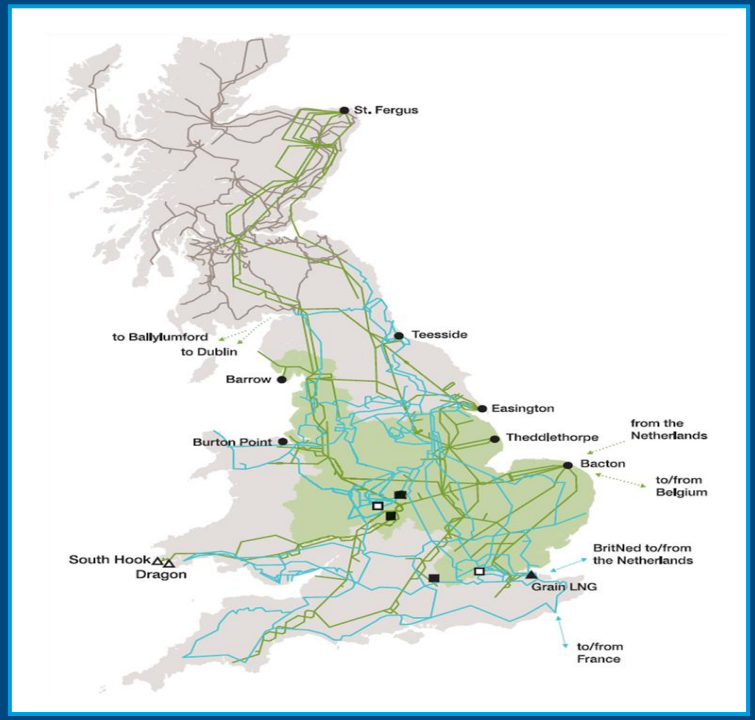
National Grid Transmission owner Electricity – E&W Gas - GB

Electricity Distribution Networks

Gas Distribution Networks

Commercial and Domestic Customers

System Operator



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What are the Future Energy Scenarios and how are they used?

- Credible energy pathways to 2050
- Consider energy demand and supply on a whole system basis
- Unconstrained

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What are the Future Energy Scenarios and how are they used?

Transmission system development

System operability

Security of supply

European developments

Network Options Assessment

Capacity Market

Charging

Strategy projects

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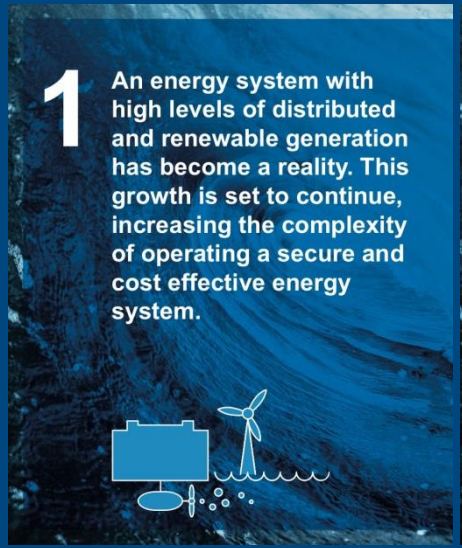
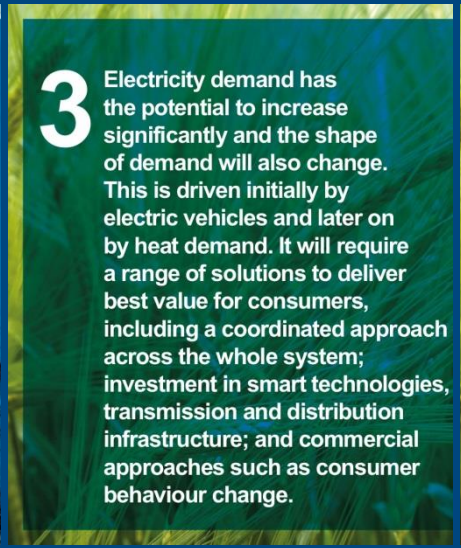
Developing FES with stakeholders

Our stakeholder engagement this year involved:

- Over 390 organisations engaged
- Webinars on a range of subjects
- Workshops across four locations
- Continuing the conversation through thought pieces and newsletters

FES 2017 – Key messages





COMPLEX **ADAPT** **CONSUMER** **GAS**

Our 2017 scenario matrix

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2017 sensitivities

High Electrification

Decarbonised Gas

Consumer Renewables

High EV

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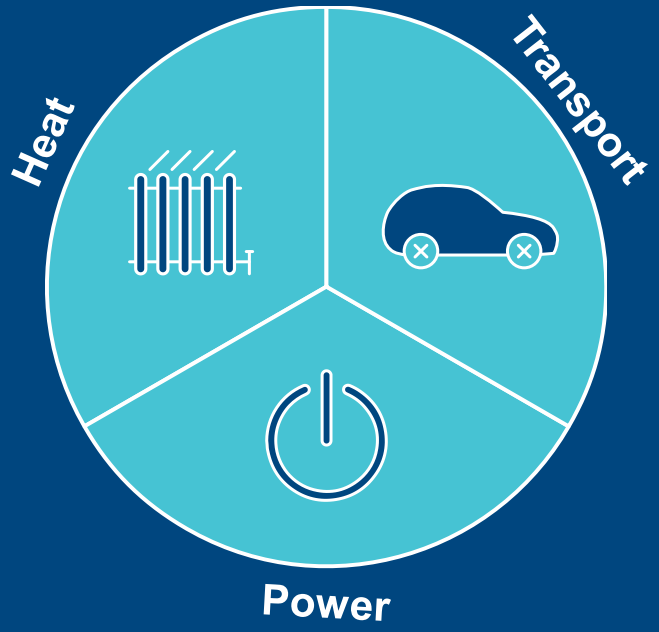
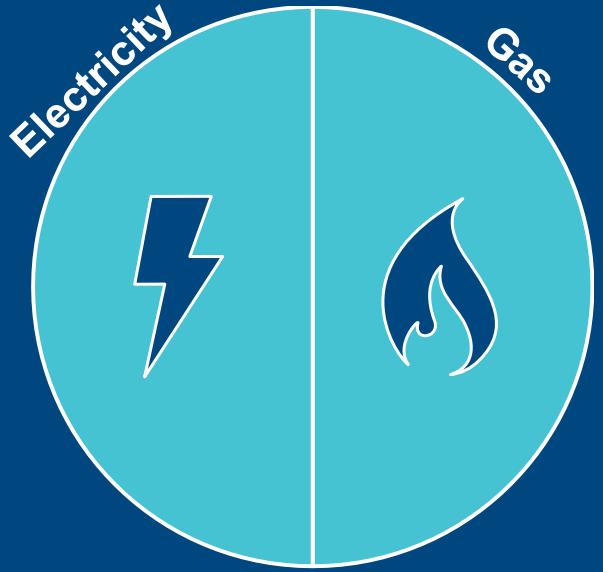
Demand



Supply



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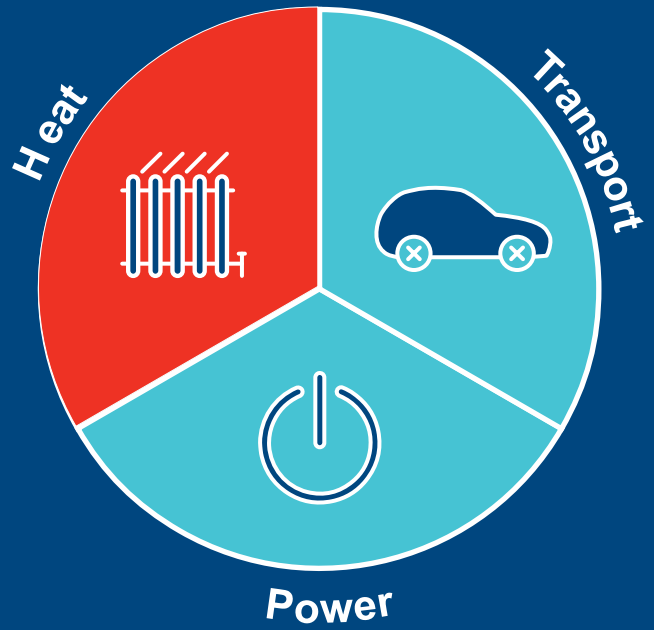
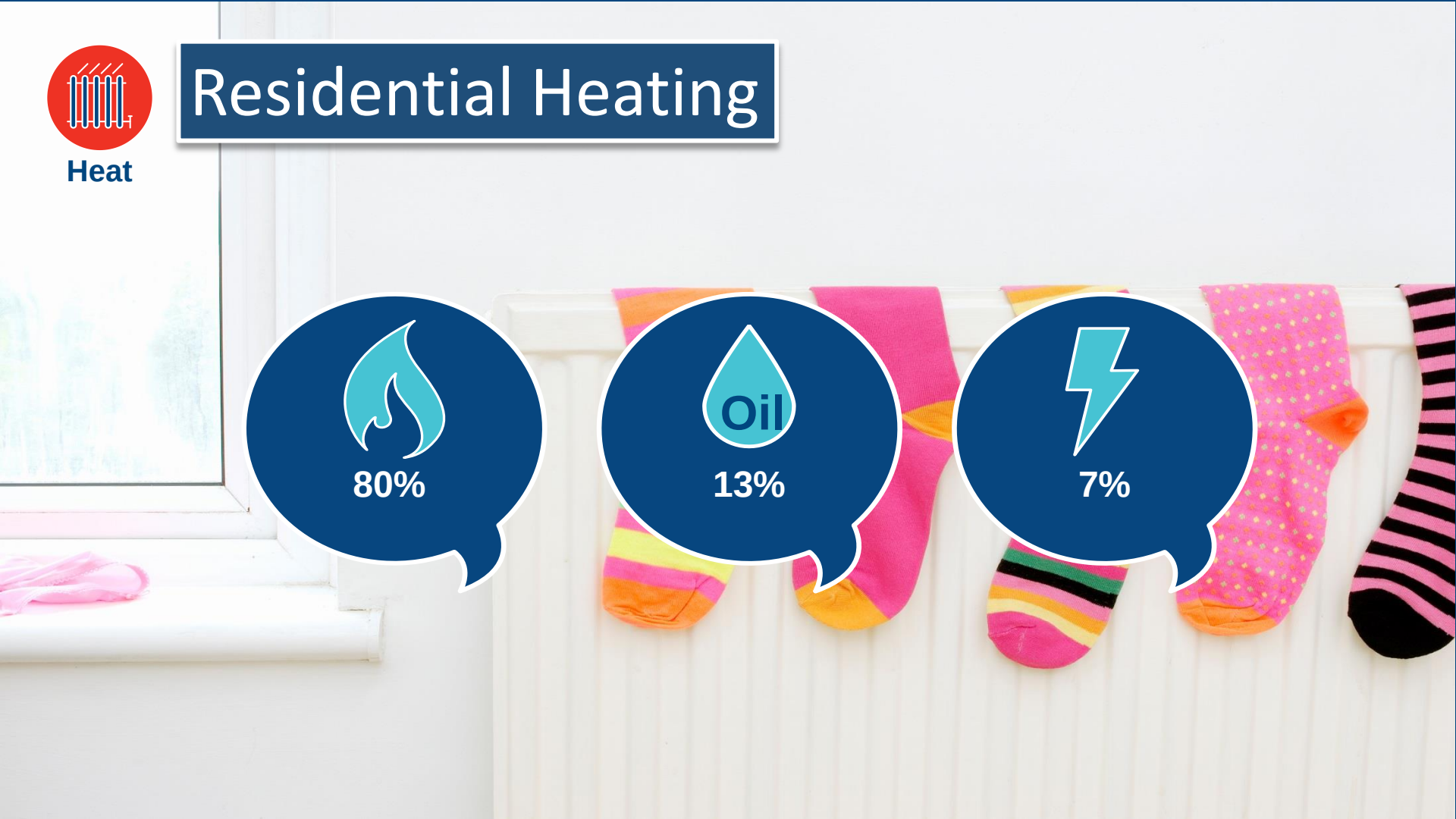
Demand



Heat

Residential Heating



Heat

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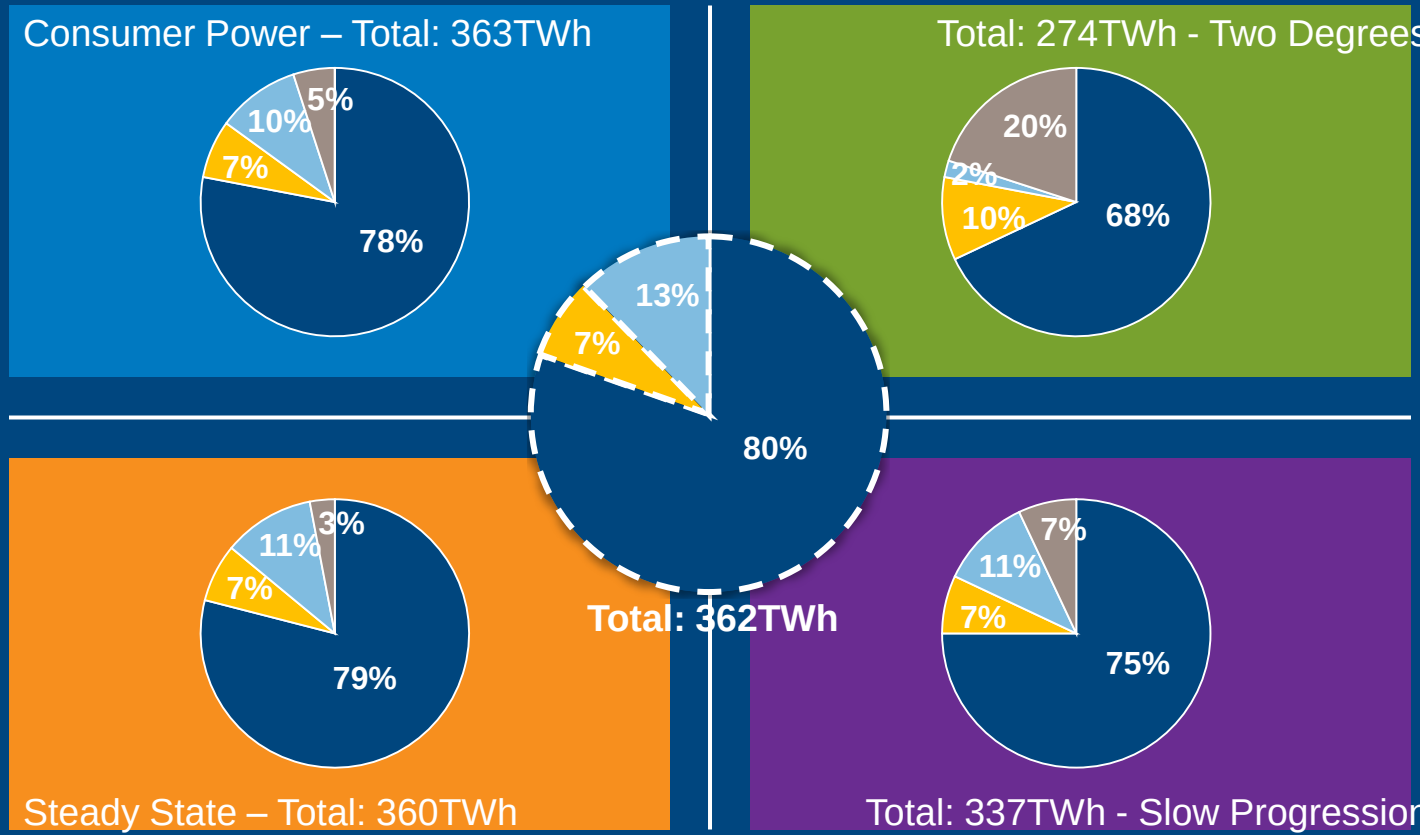
Residential demand - 2030



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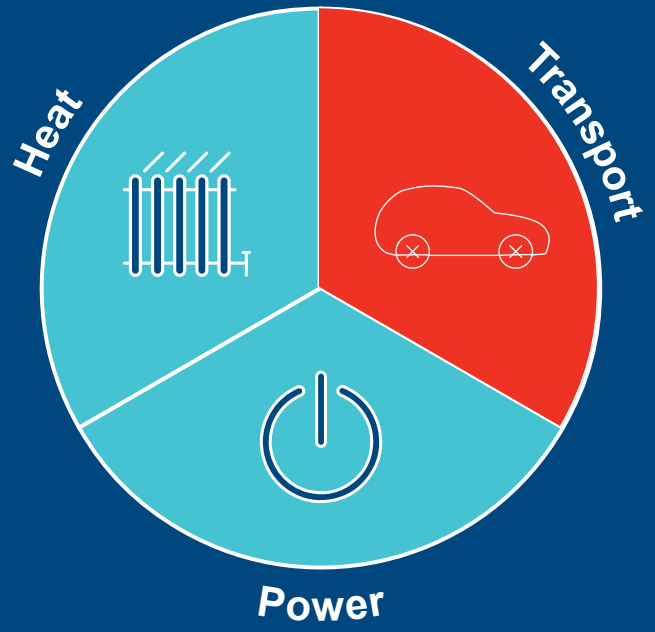
Demand



Transport

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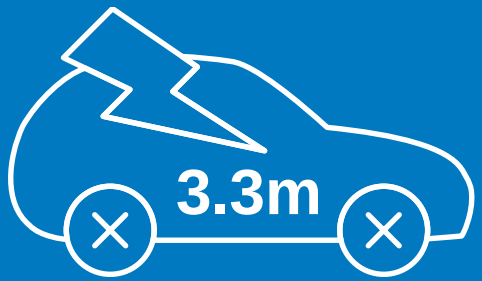
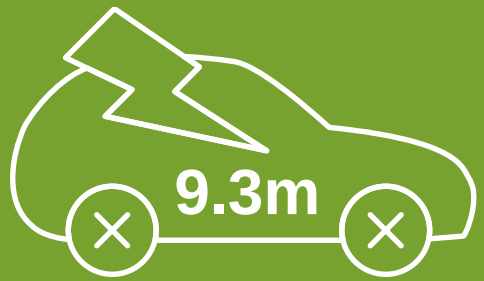
Number of EVs - 2030

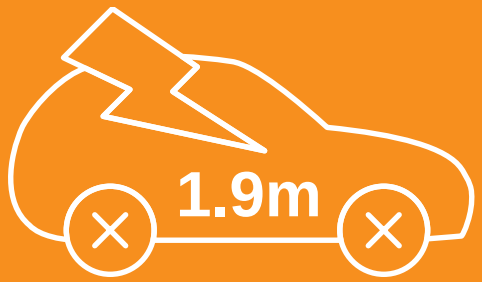
Consumer Power



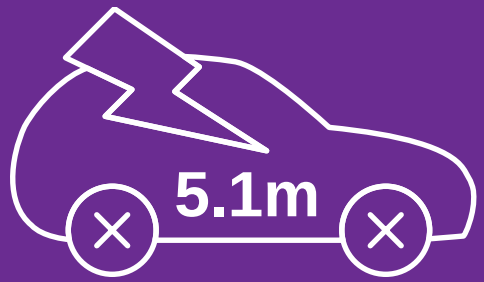
Two Degrees



100K



Steady State



Slow Progression

Transport

Total electricity demand for EVs

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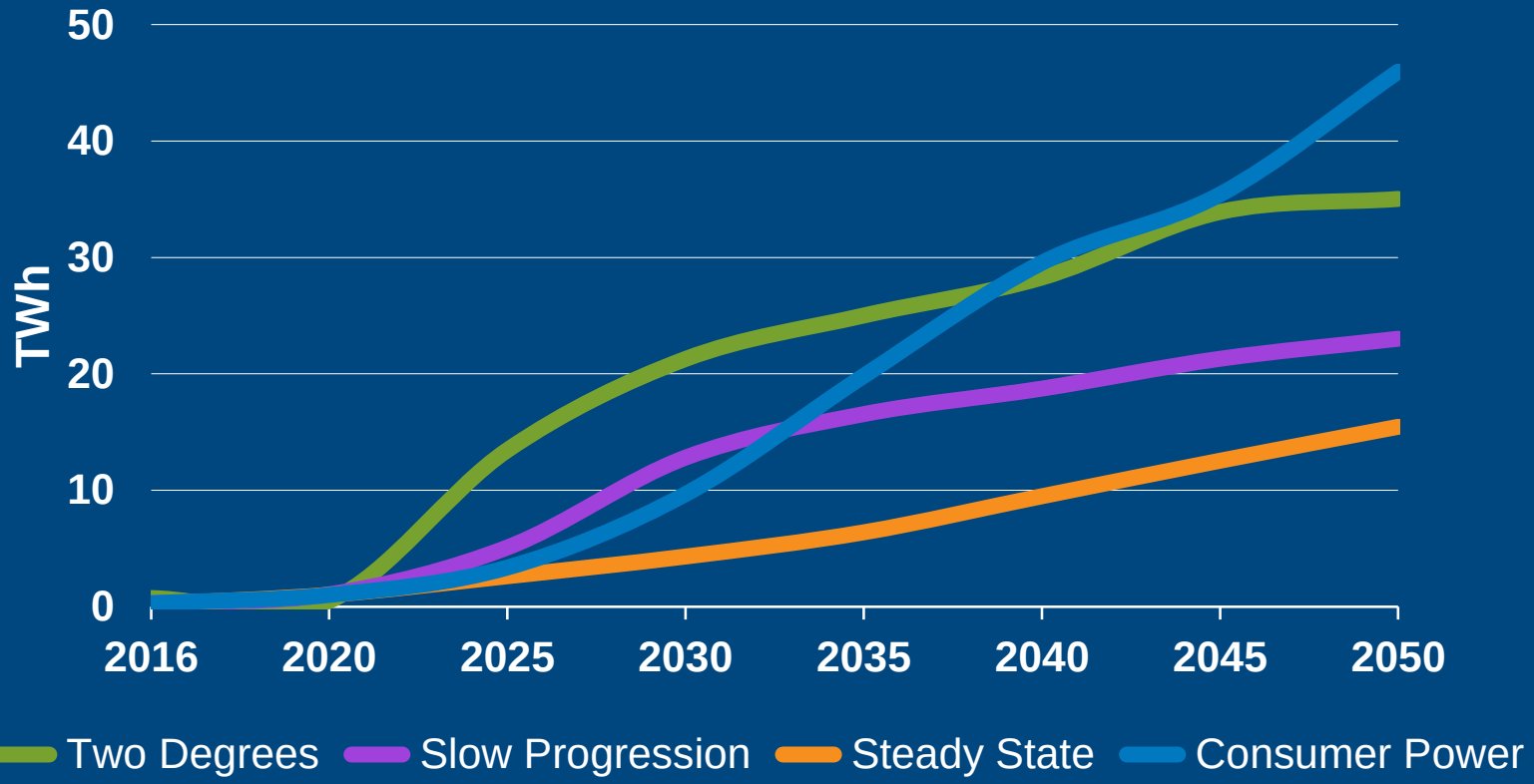

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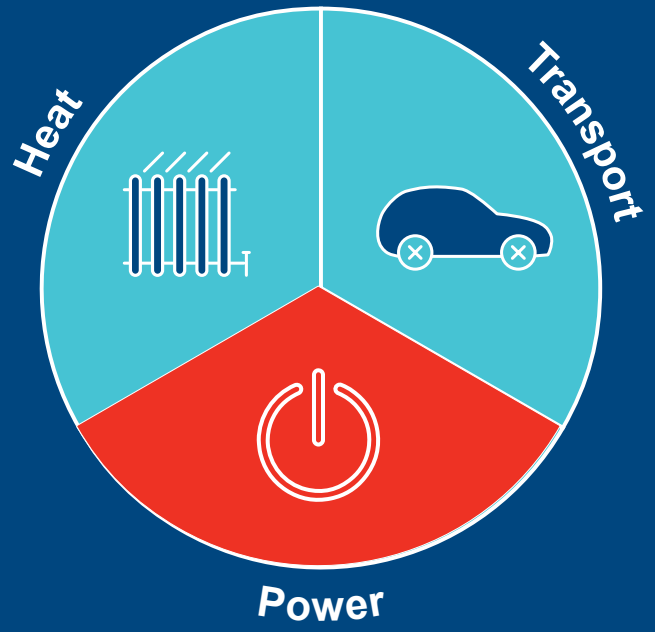
Demand



Power

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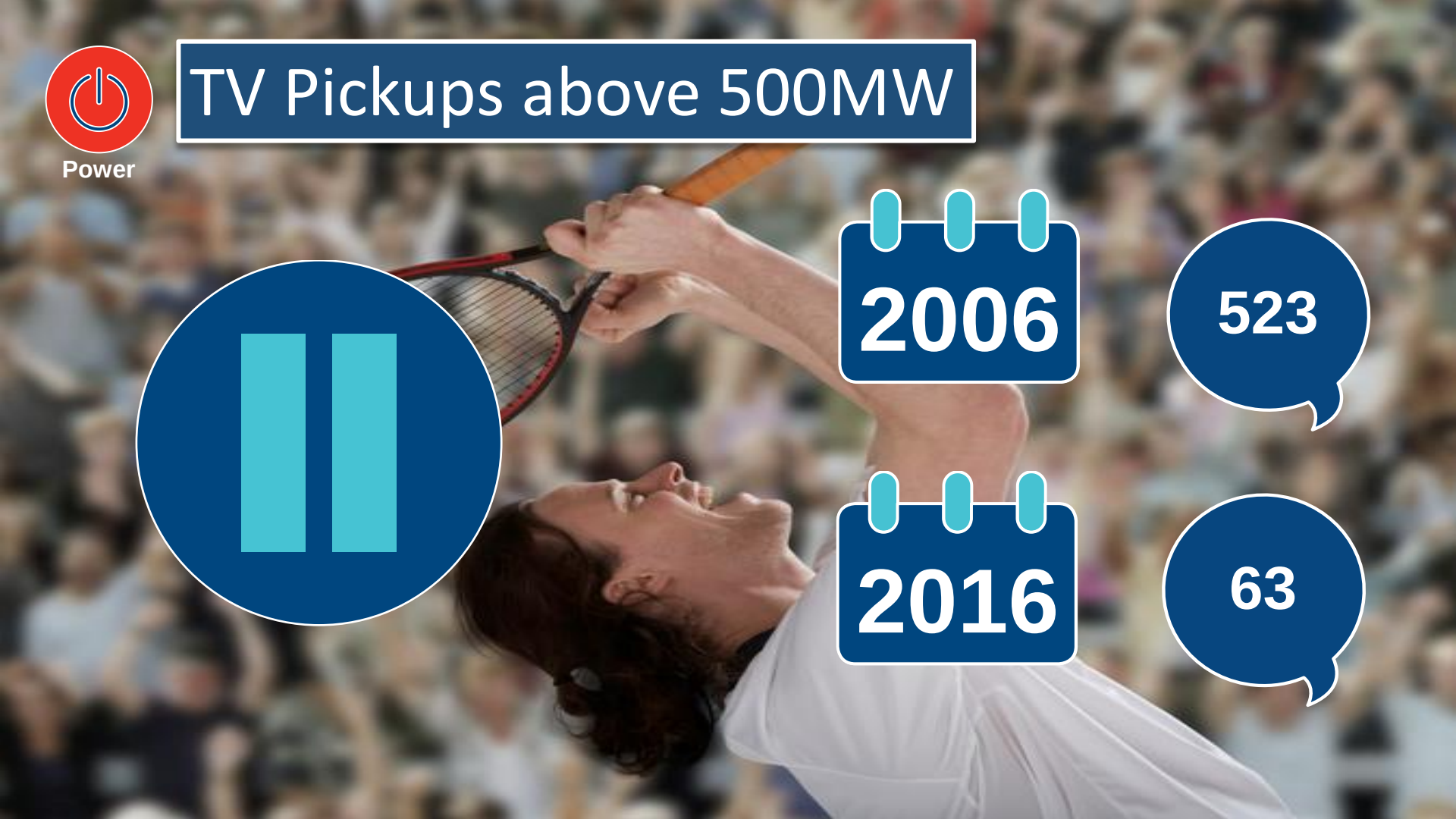
60W

10W

5W


Power
TV Pickups above 500MW
2006
523
2016
63

Effects of Smart technology and Consumer Choice

Power

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Electricity

Total Annual Electricity Demand

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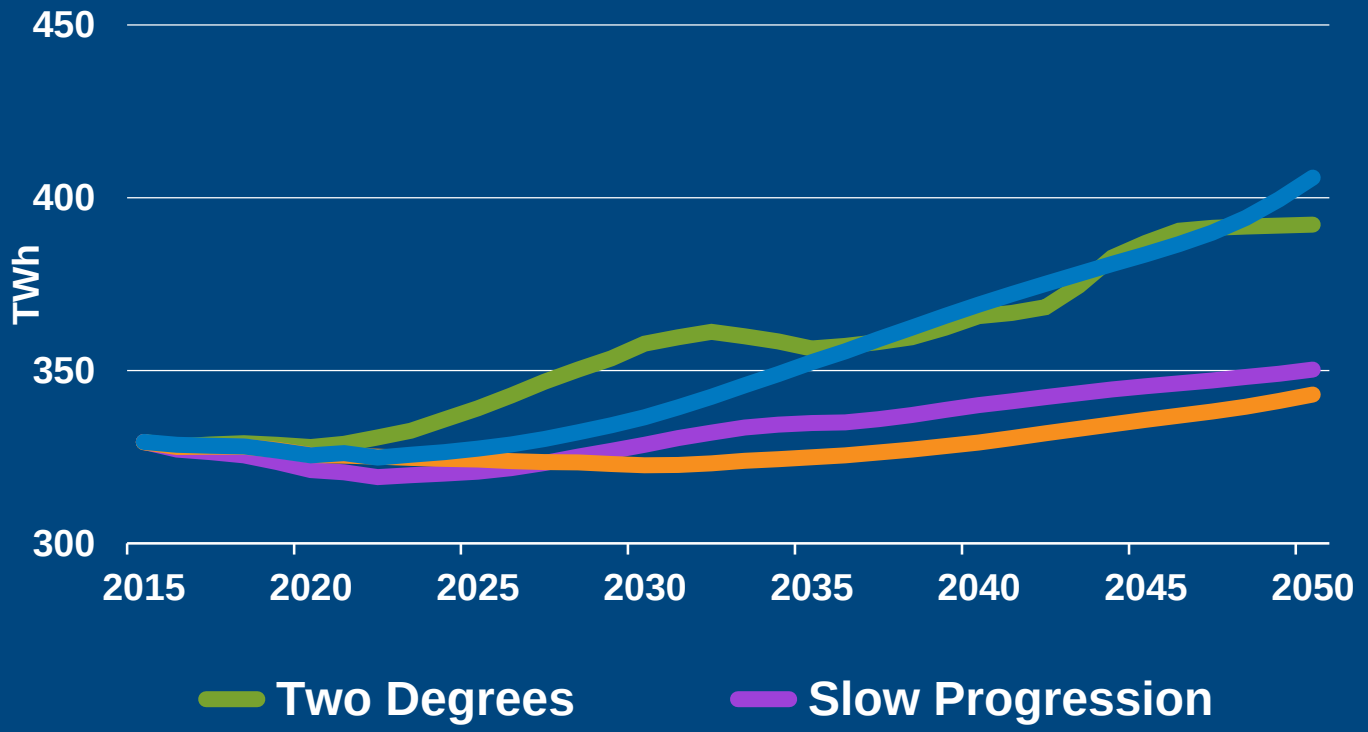

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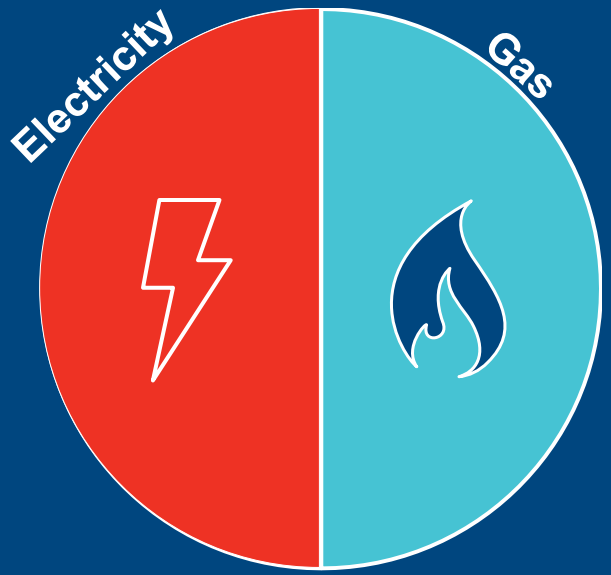
Supply




52%
Greenest summer ever

Electricity

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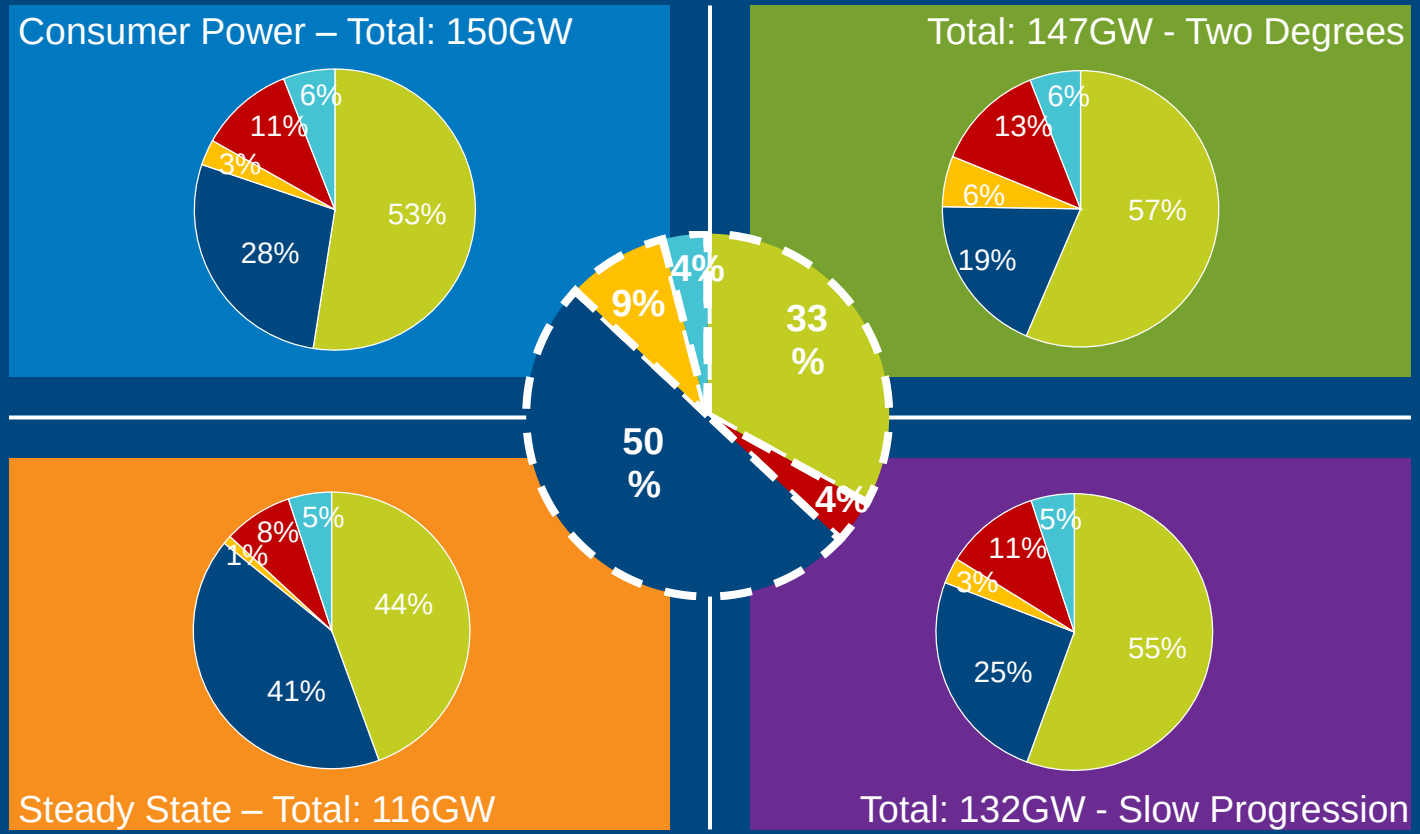
Installed capacities type - 2030



Thermal | Renewables | Nuclear | Interconnectors | Storage

Electricity

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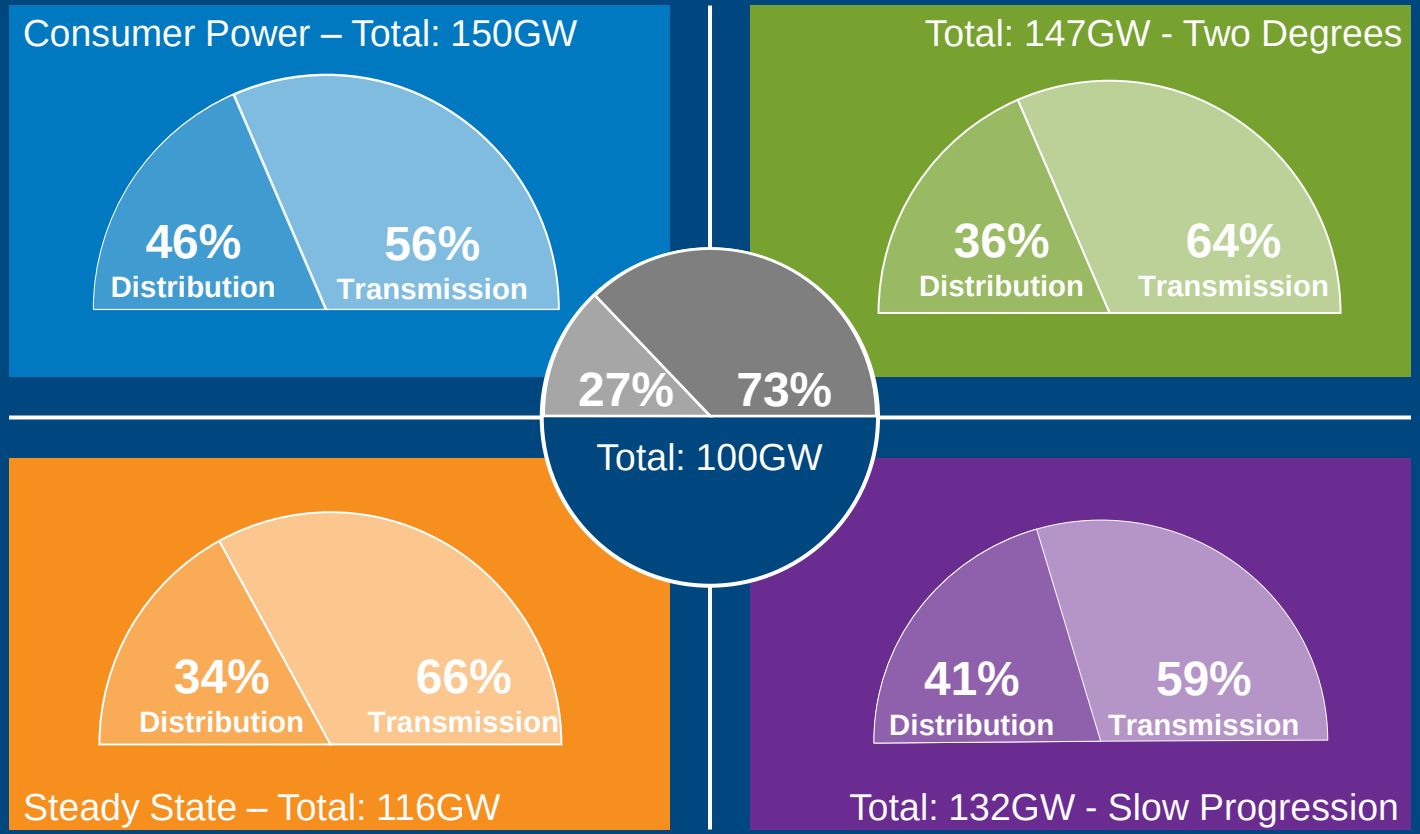
Installed capacities location - 2030



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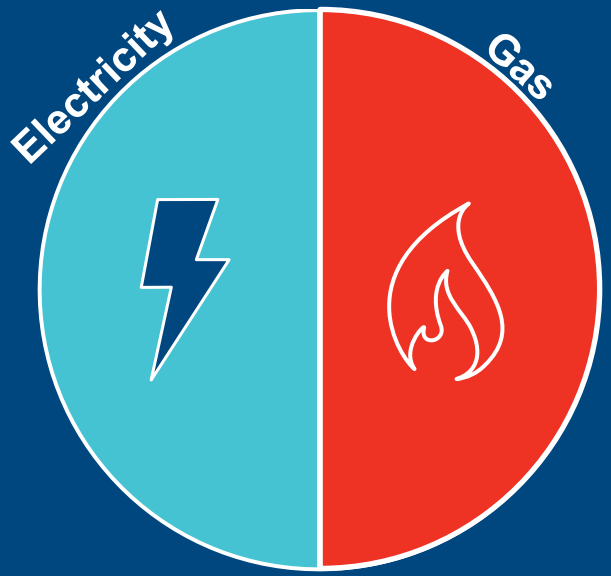
Supply



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Gas

465 mcm

Jan 2010

114 mcm

Sep 2012

Gas

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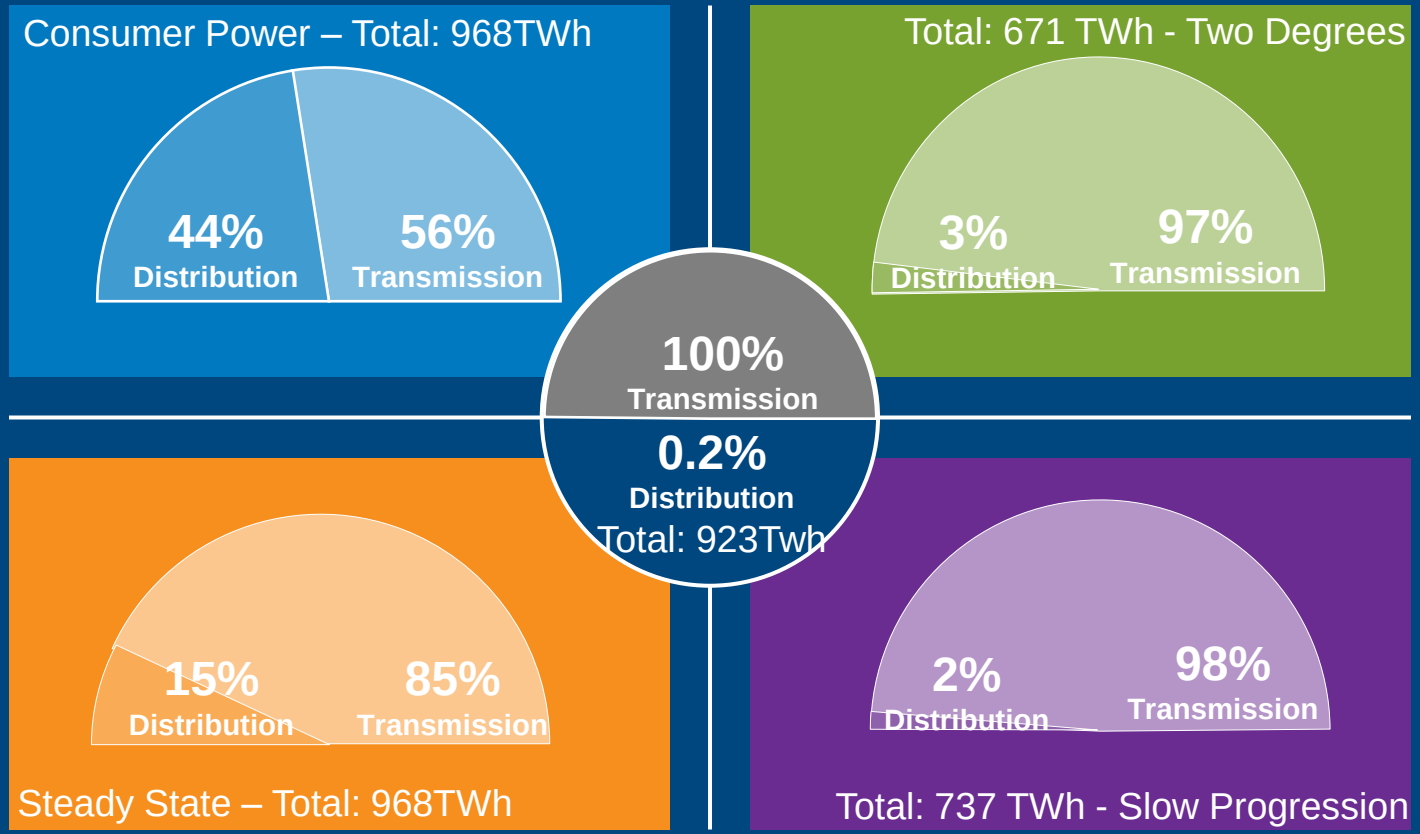
Distributed gas potential - 2030



Gas

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Indigenous Supply - 2050

Consumer Power

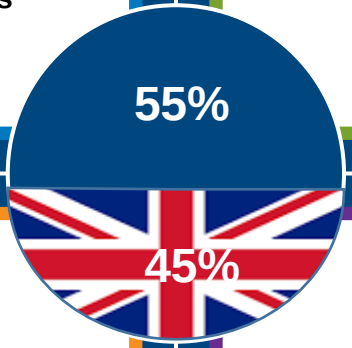
Imported gas
51%

Indigenous gas
49%

Two Degrees

Imported gas
87%

Indigenous gas
13%



Steady State

Imported gas
79%

Indigenous gas
21%

Slow Progression

Imported gas
93%

Indigenous gas
7%

What next?