

TBE 2010: Development of Energy Scenarios

Richard Smith, Manager, Future Transmission Networks

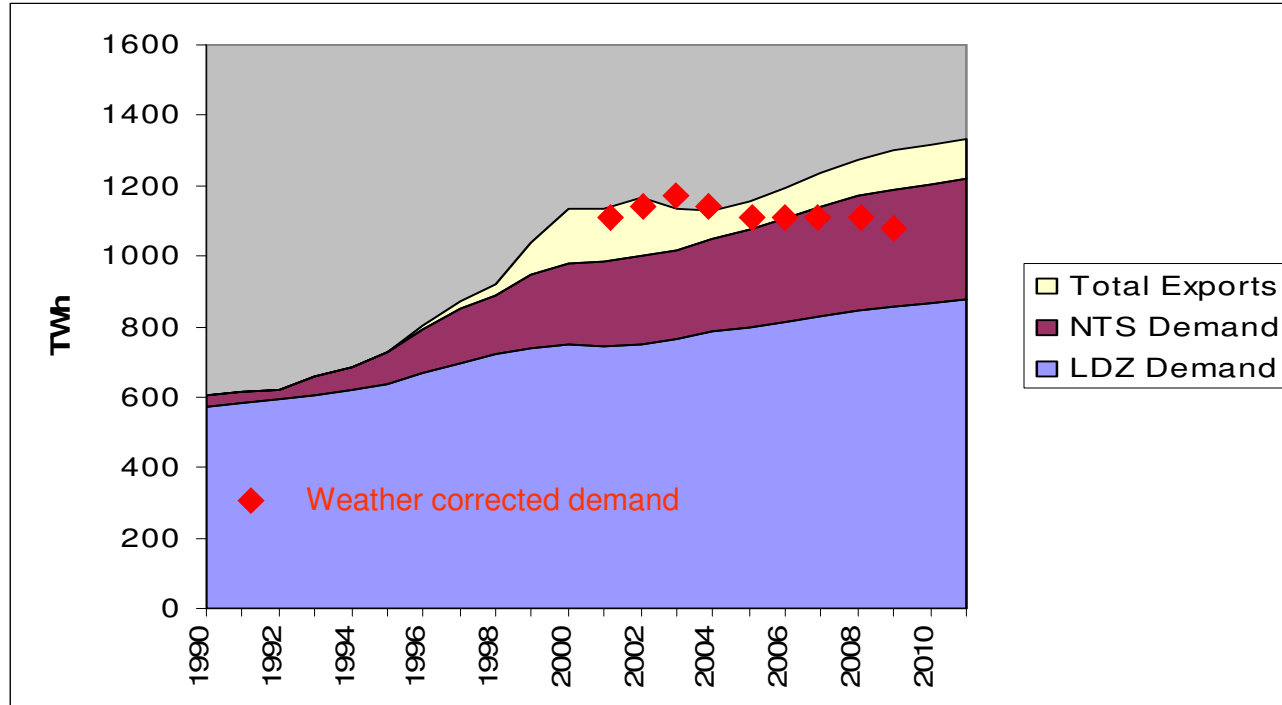


How good/bad have our forecasts been?

Forecast Annual Demand to 2011

(Demand relates to Transco's system only – not direct loads)

Transco

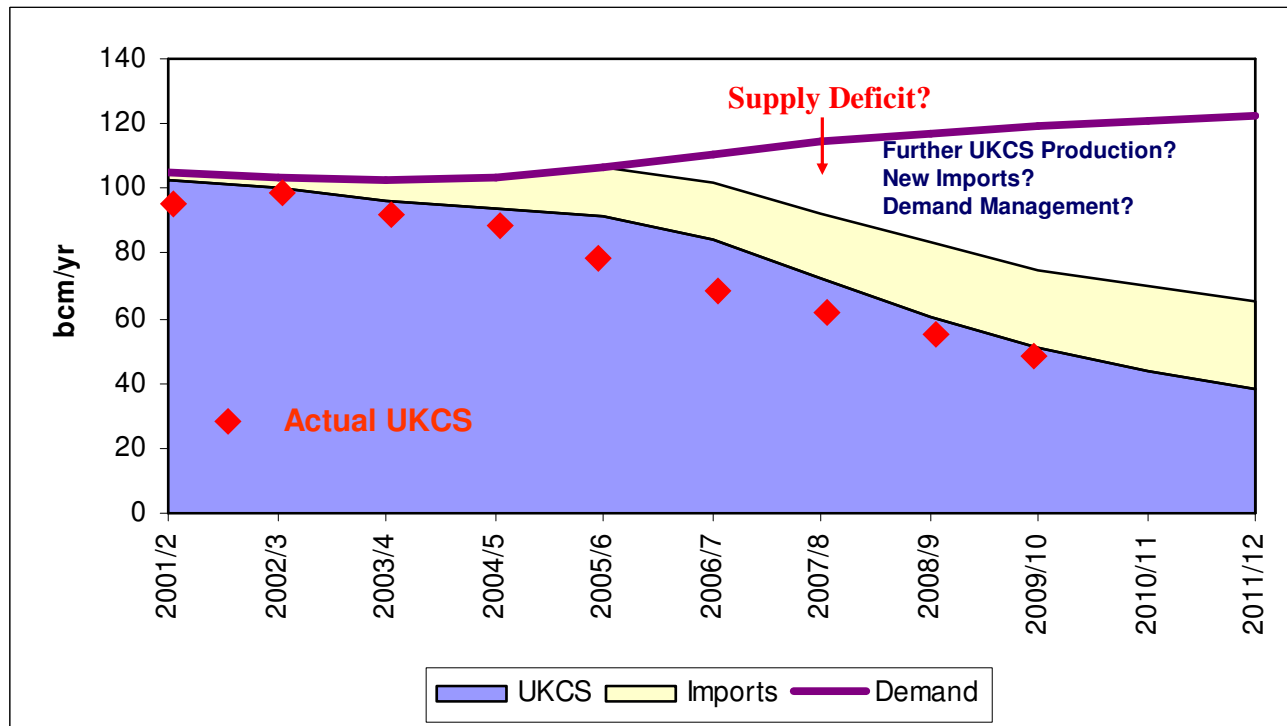


How good/bad have our forecasts been?

Supply

(Demand relates to Transco's system only – not direct loads)

Transco

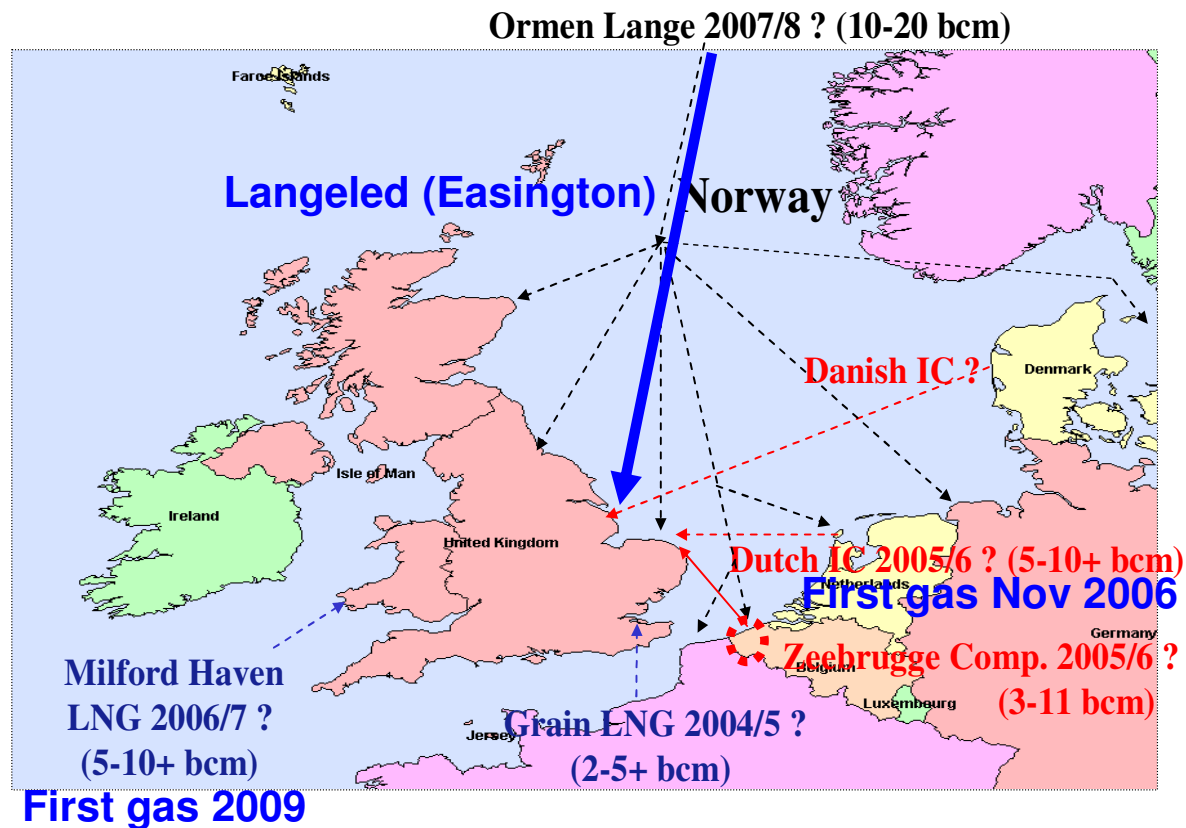


How good/bad have our forecasts been?

Import Options

(Indicate earliest dates and annual flows)

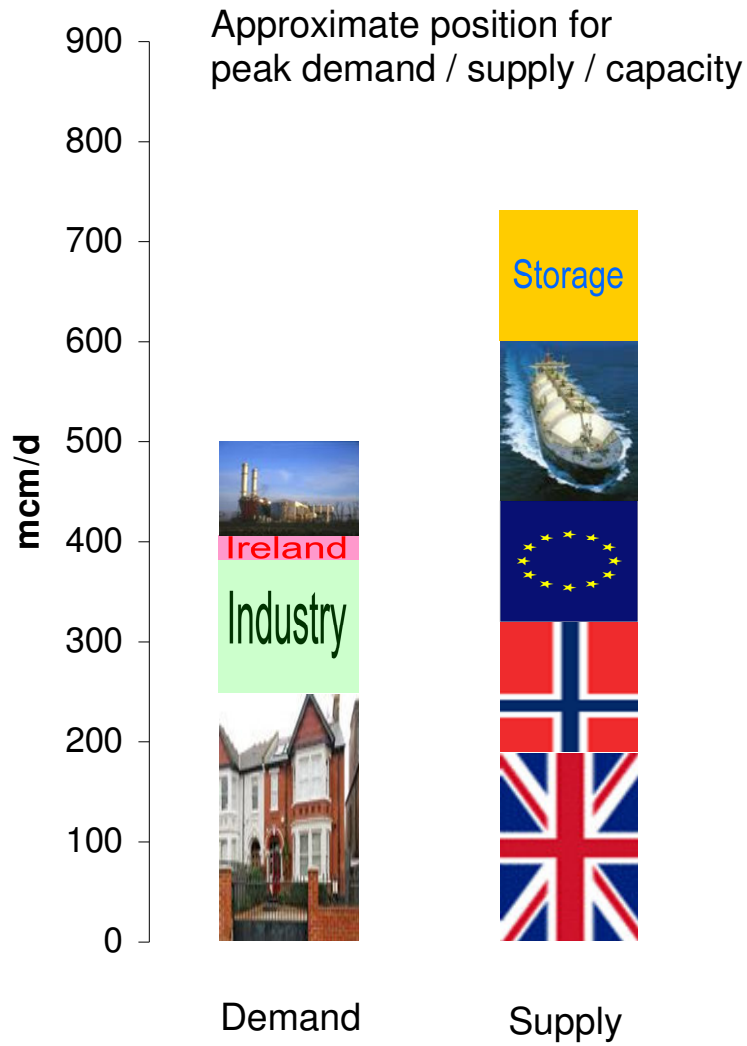
Transco



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2010



2010

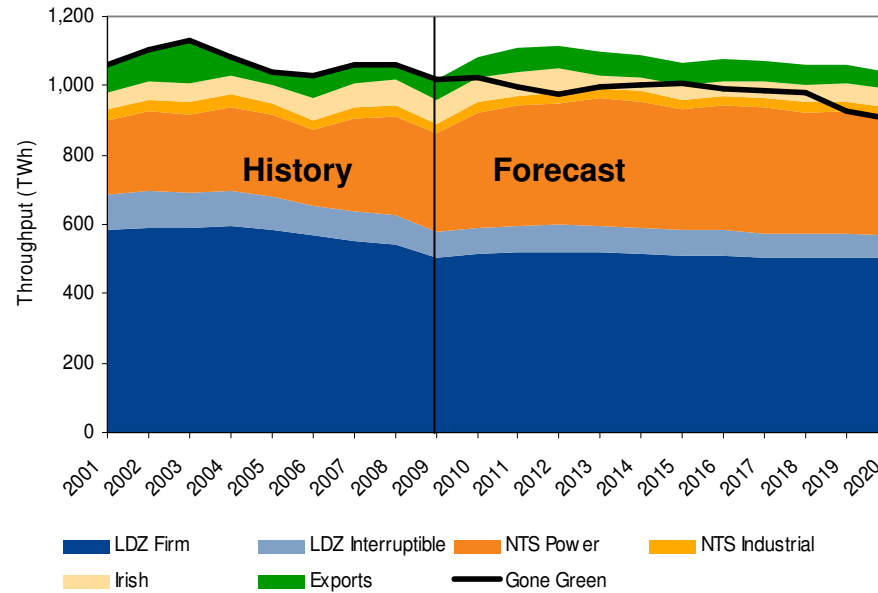


Demand view to 2020



Ireland

Industry



Little or no demand growth over next decade

Demand view to 2020



power station demand set to increase in short term

2.5 GW of additional plant recently connected
7 GW of plant under construction

Longer term CCGTs will increasingly act as back up plant to cover **wind intermittency**

Demand view to 2020



power station demand set to increase in short term

Ireland

Exports to Ireland to fall in medium term due to indigenous supplies

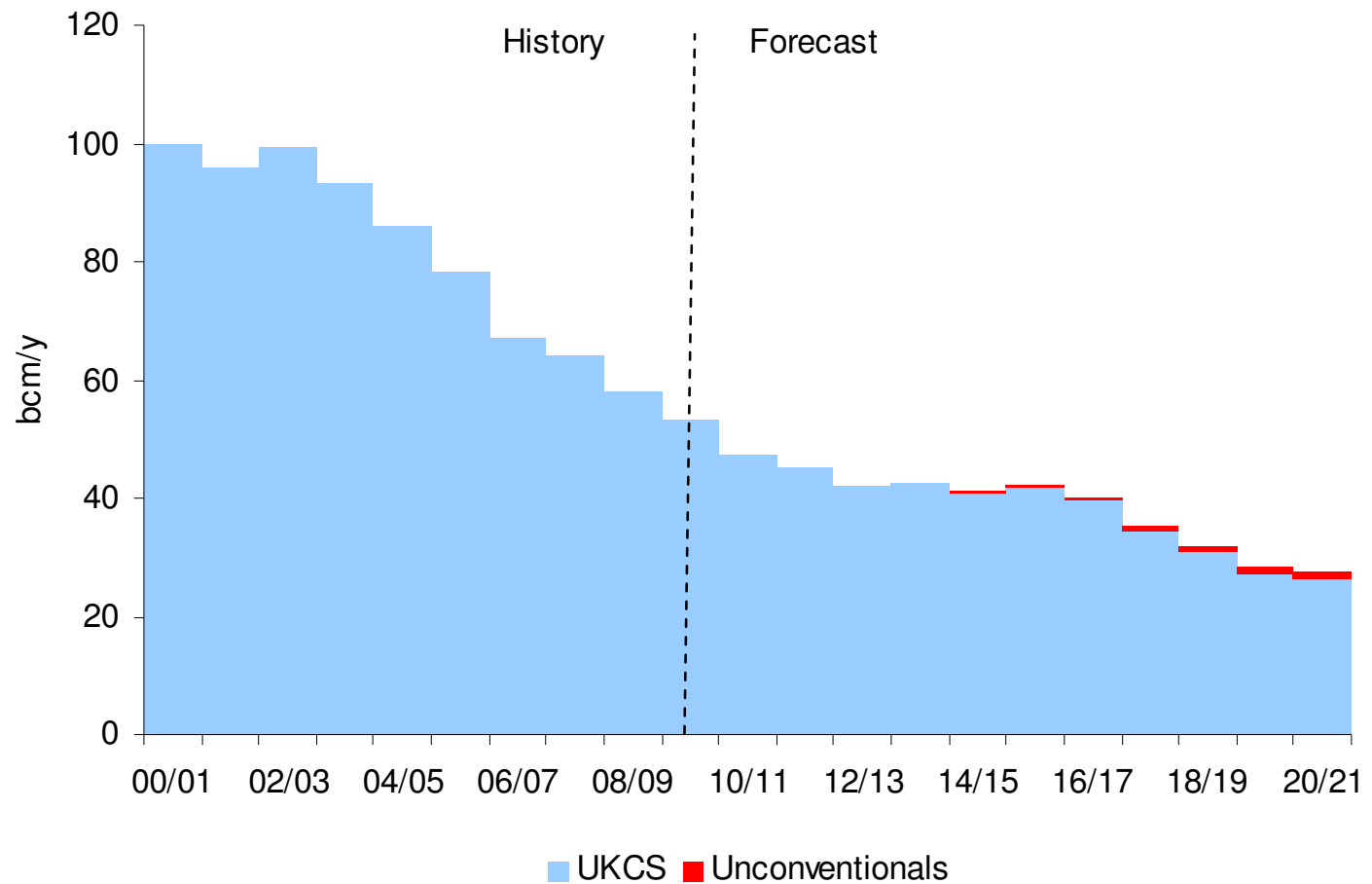
Industry

Industrial demand static



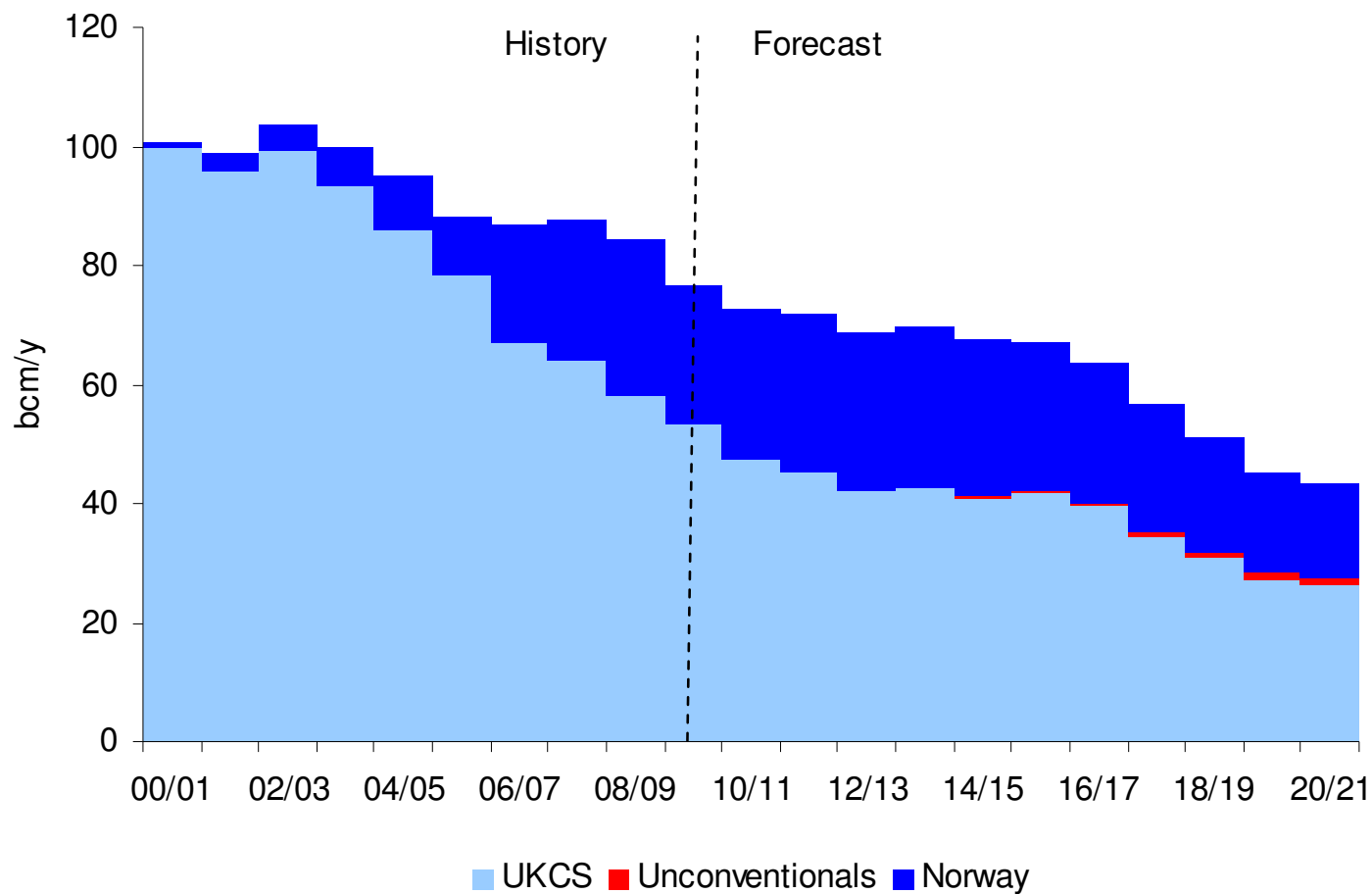
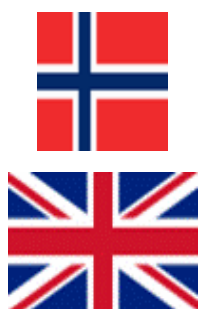
Domestic demand static: increase housing stock offset by **efficiency measures**

Supply view to 2020



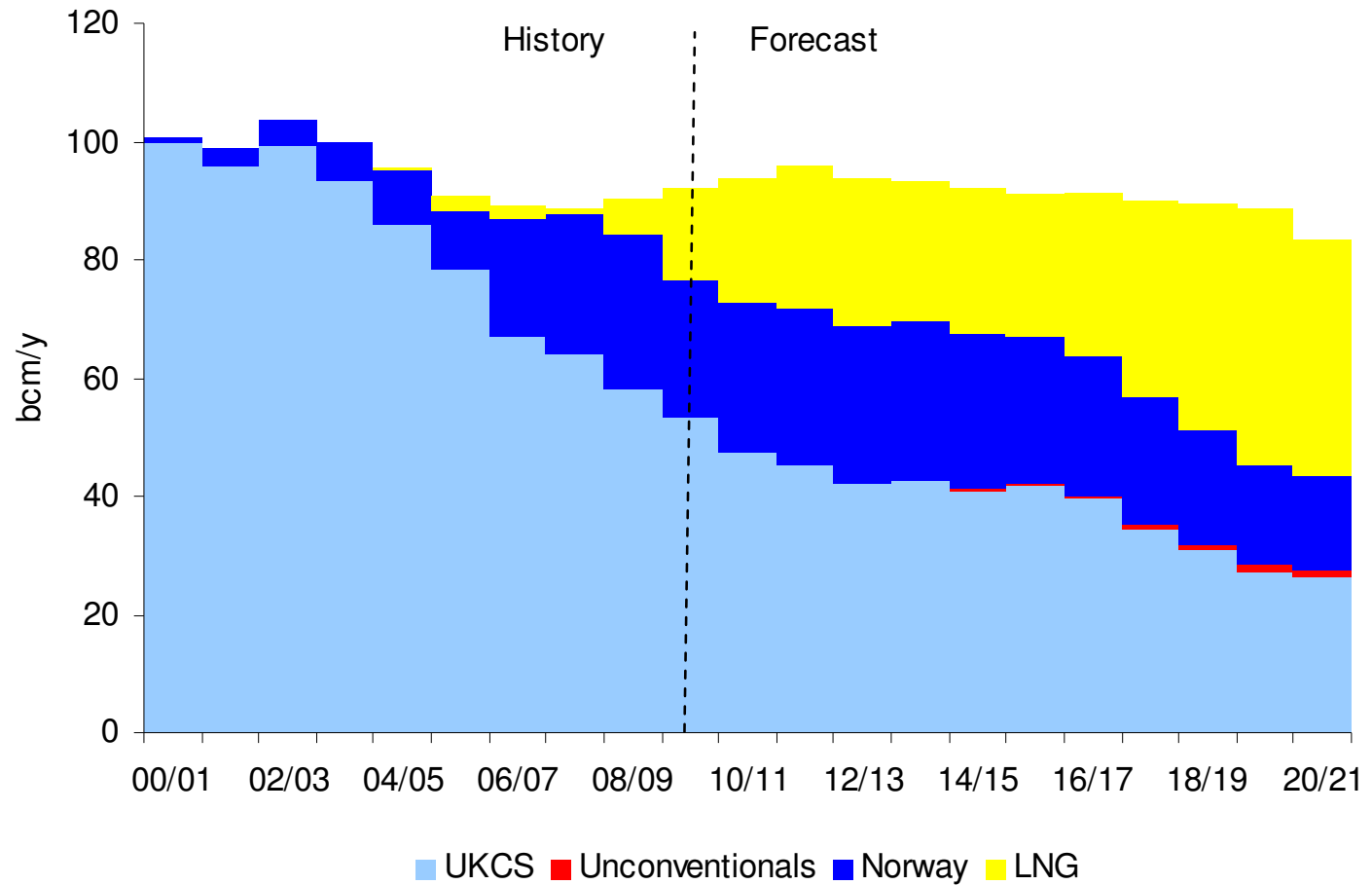
UKCS: Continued decline

Supply view to 2020



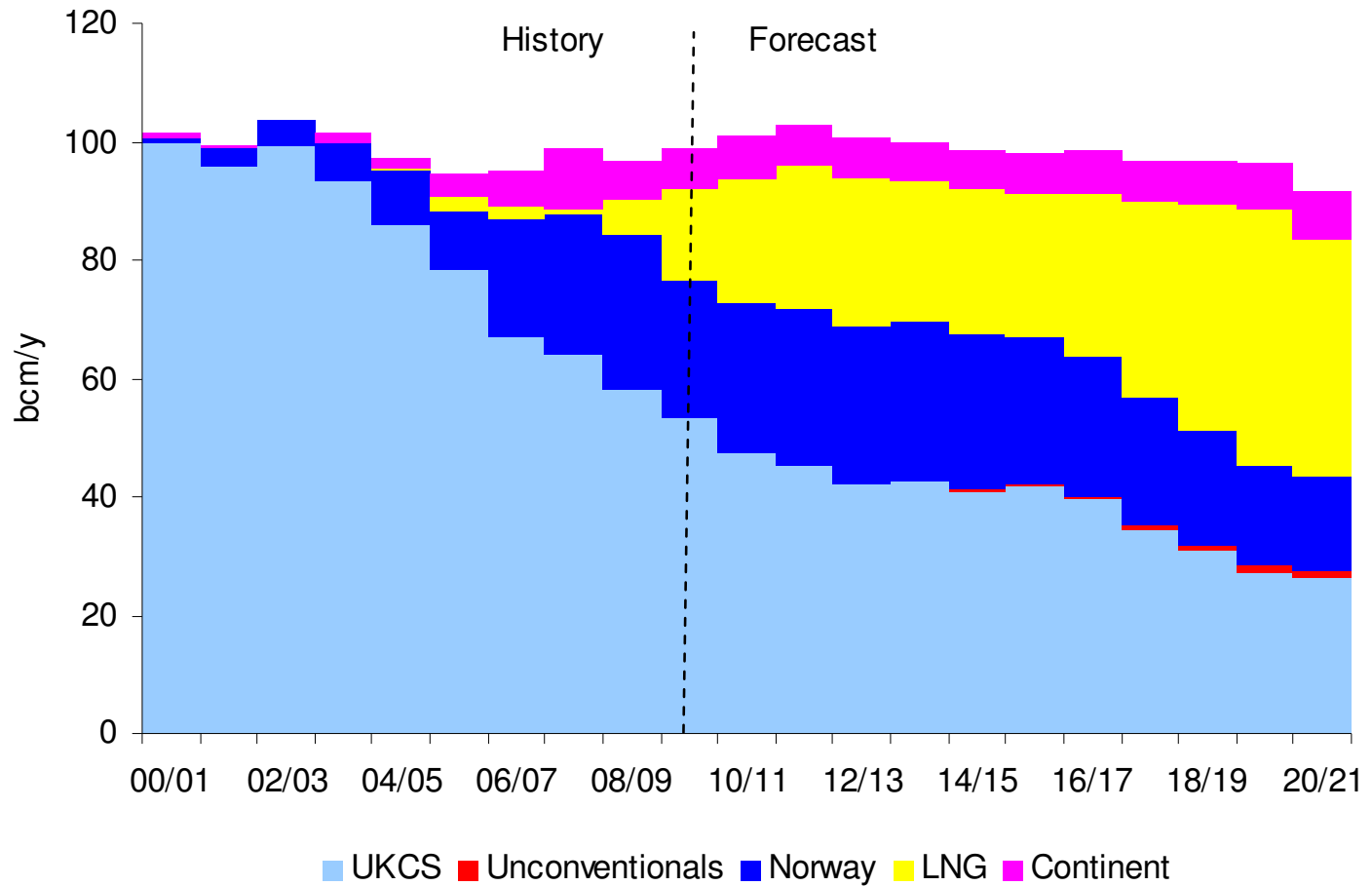
Norway: plateau then decline?

Supply view to 2020



LNG: significant growth

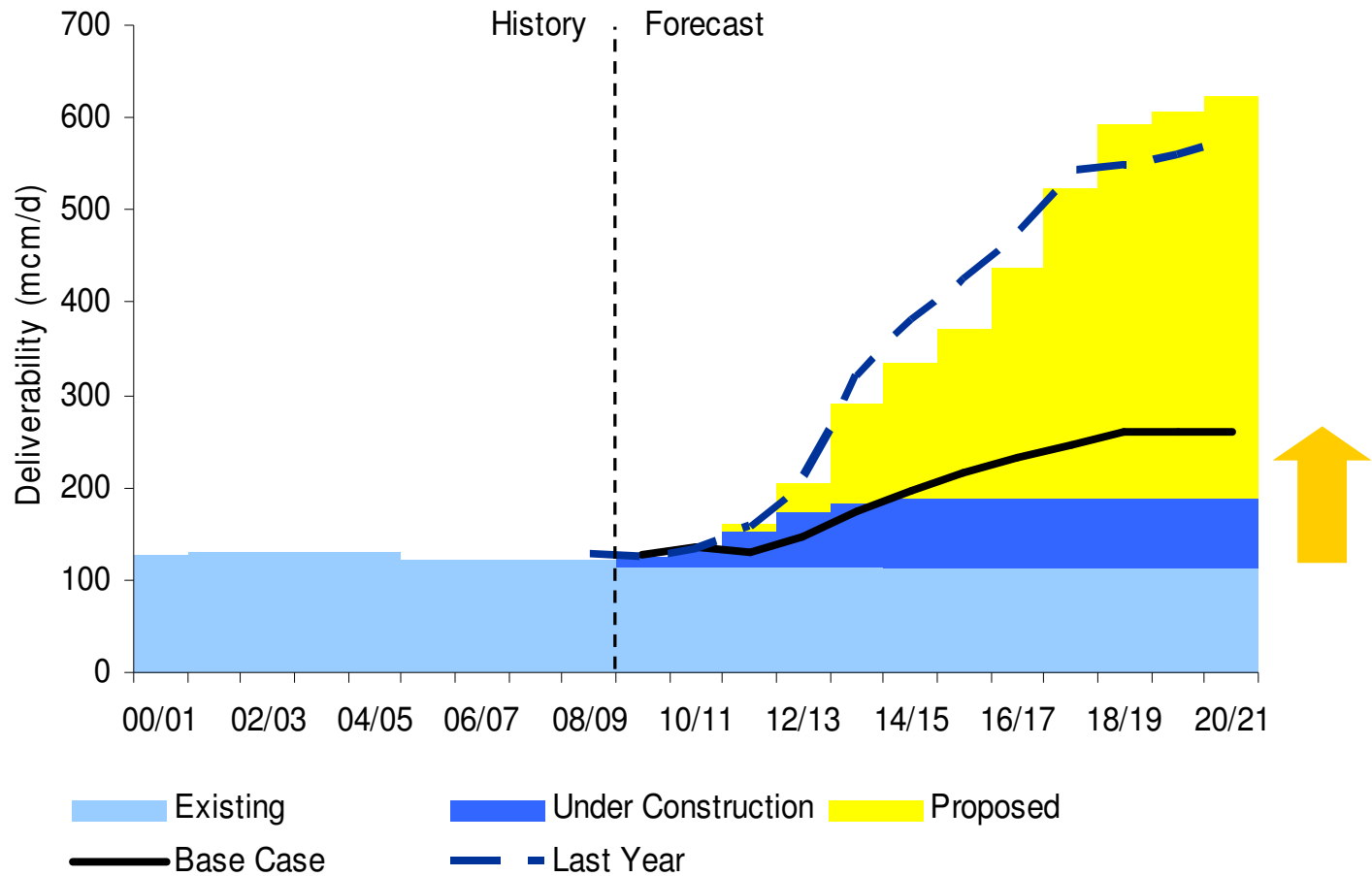
Supply view to 2020



Interconnectors: little change

Supply view to 2020

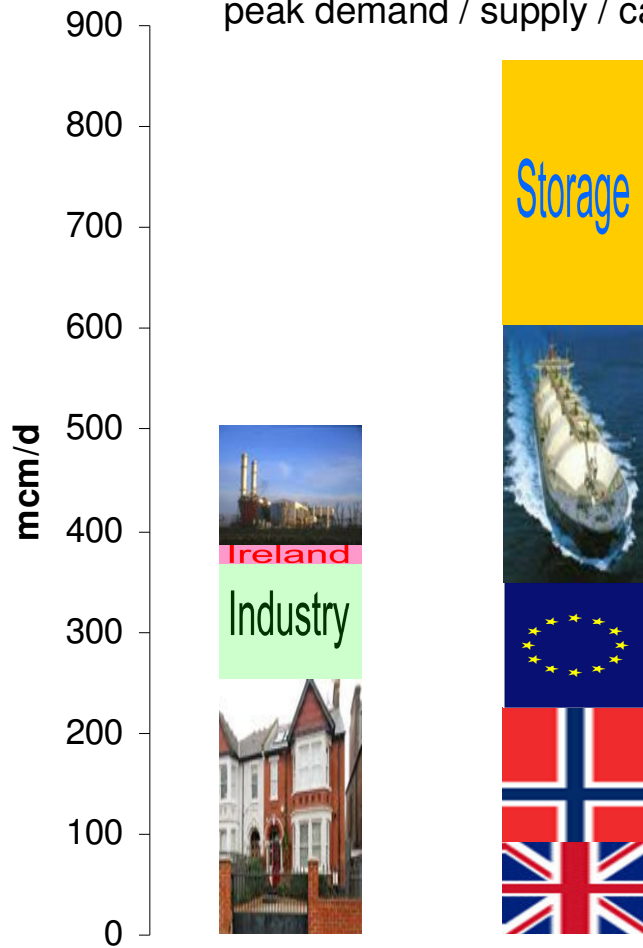
Storage



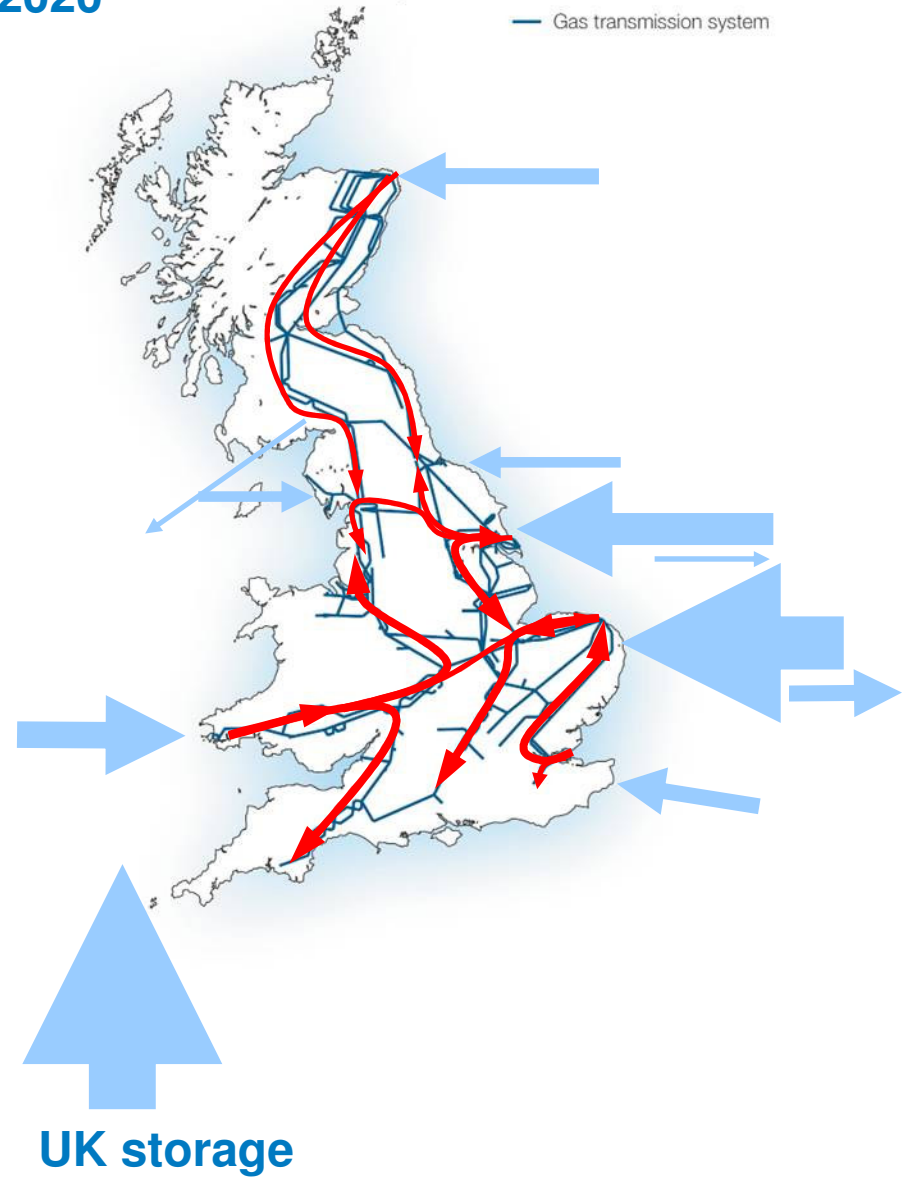
Storage: Forecast of doubling of deliverability

2020

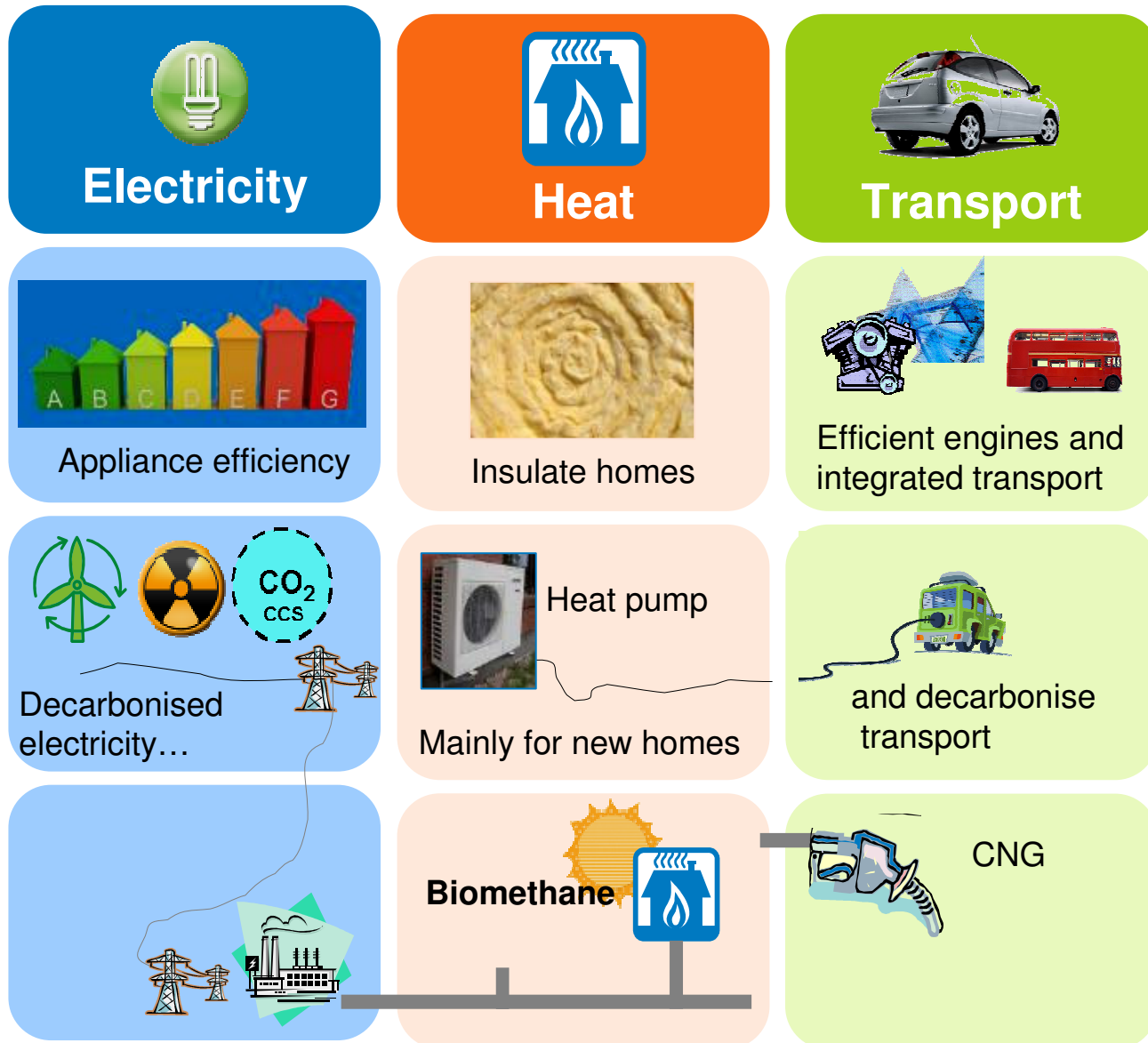
Approximate position for peak demand / supply / capacity



2020



The future – efficiency and electrification



Simple efficiency measures across all sectors

Appliance efficiency

Insulate homes

Efficient engines and integrated transport

Decarbonised electricity fuels zero emission vehicles

Decarbonised electricity...

Heat pump
Mainly for new homes

and decarbonise transport

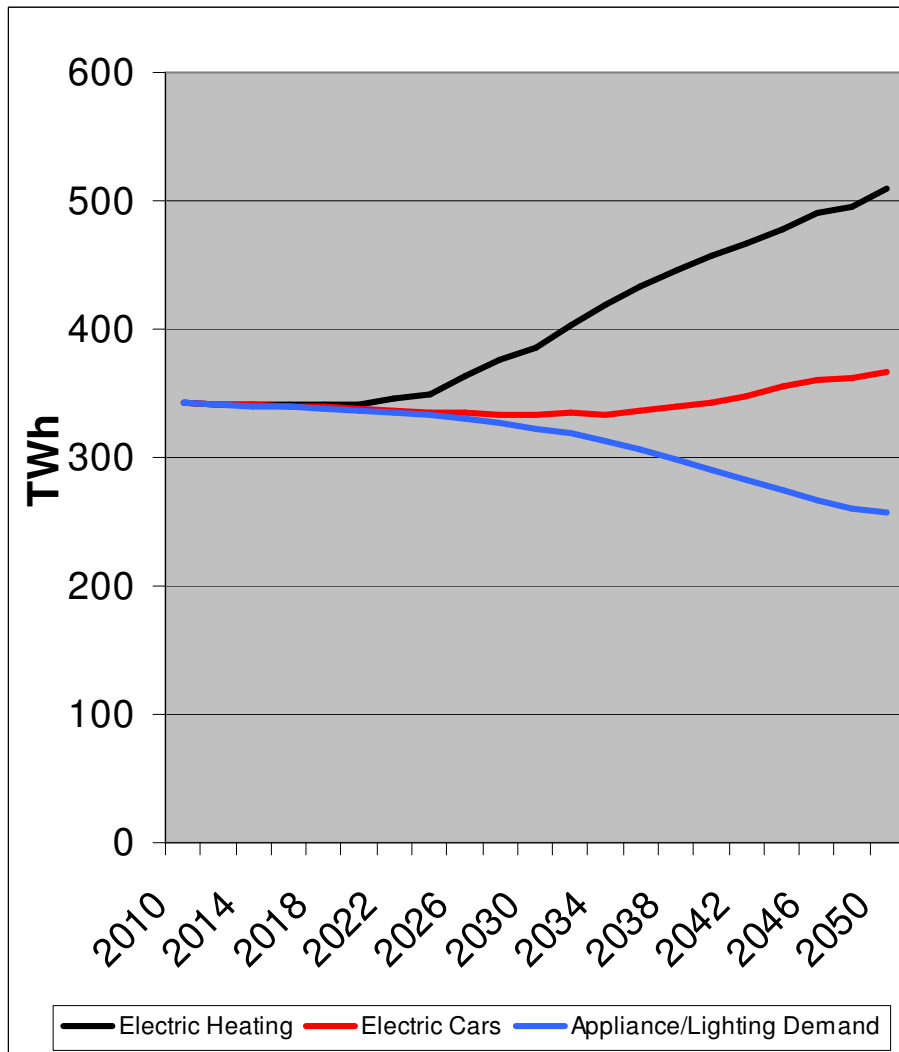
Decarbonise gas using biomethane

Decarbonise gas using biomethane

Biomethane

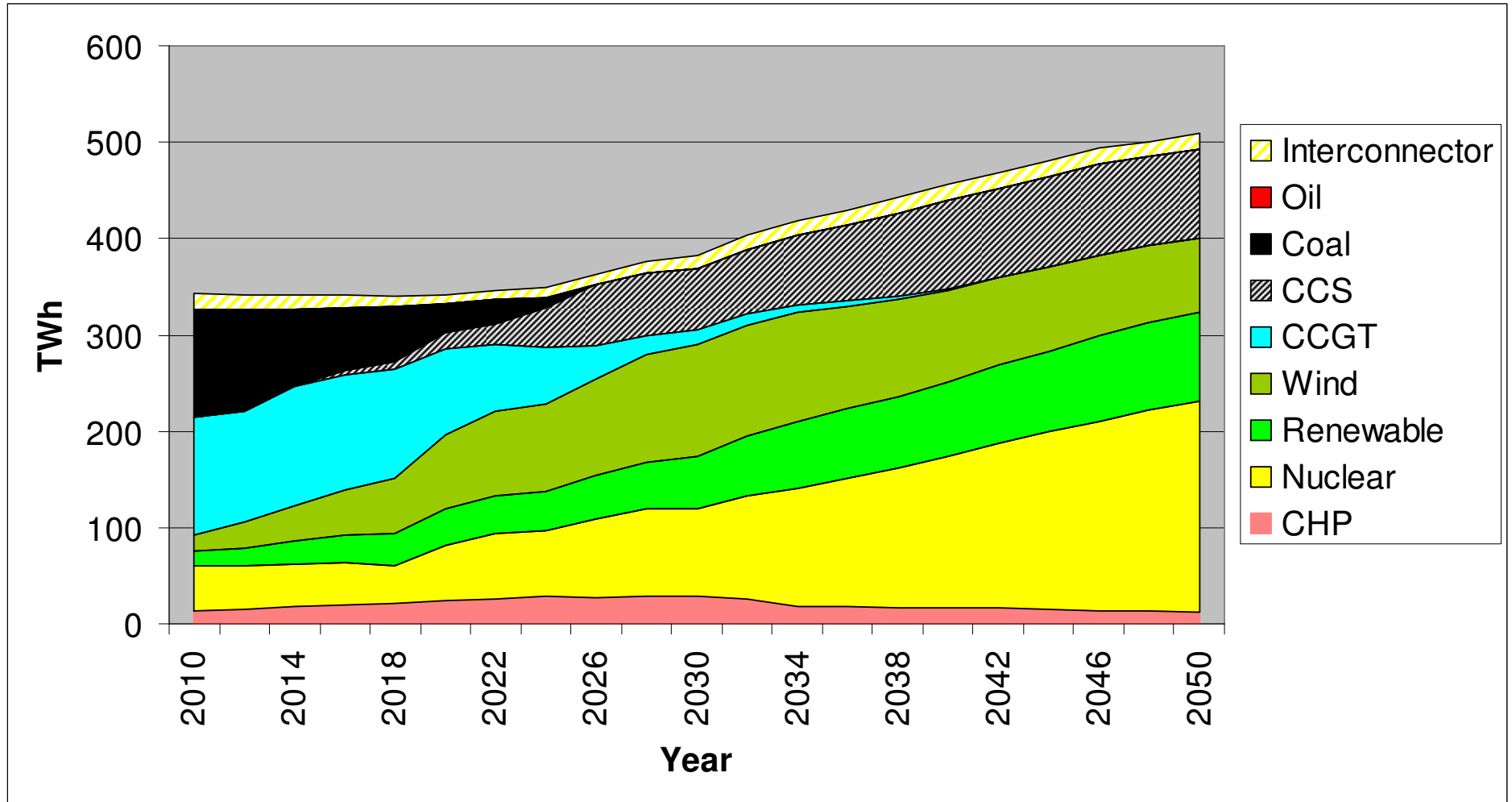
CNG

Energy Consumption - Electricity

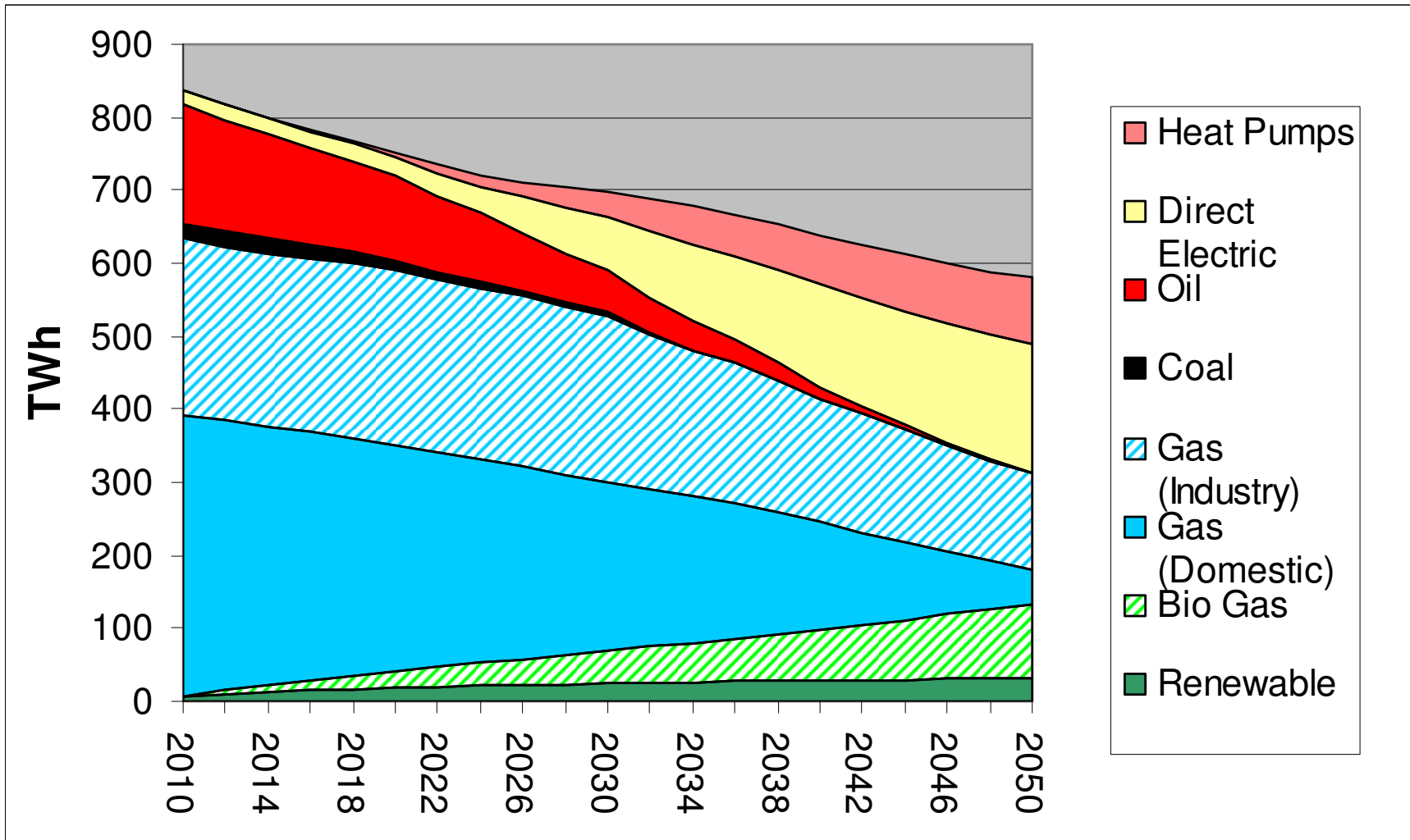


- ◆ Decline (25%) in uses for traditional electric appliances from
 - ◆ Use of low energy/LED lighting
 - ◆ Improve appliance efficiency
- ◆ Full roll-out of electric transport from late 2020s as
 - ◆ Spare low-carbon electricity is available
 - ◆ Electric car battery issues/costs are resolved
- ◆ Spare Low-Carbon electricity used for both heat and electric purposes for future planning despite electrification of transport giving larger emissions reductions

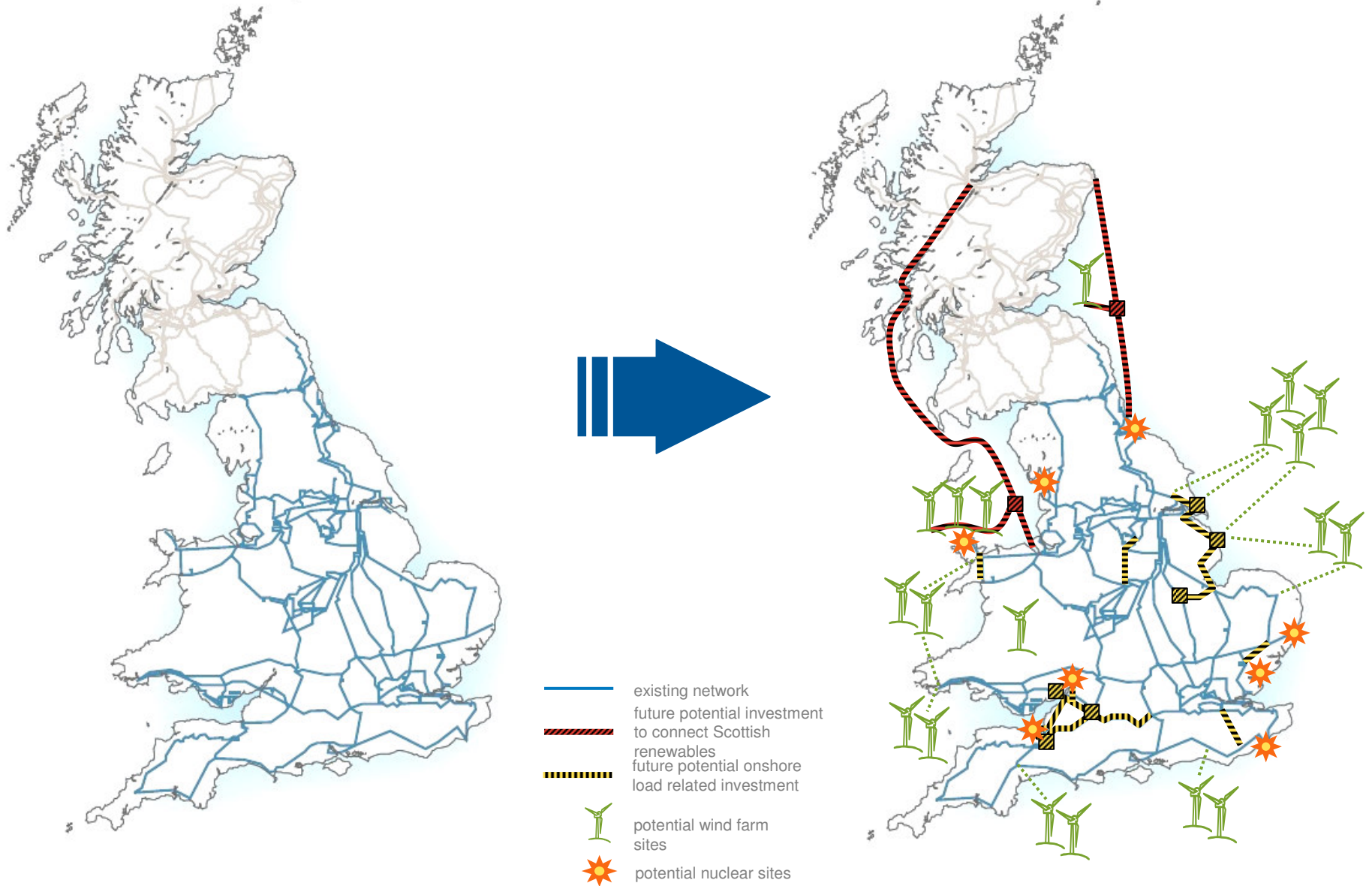
Electricity Generation Mix 2010-2050



Heat Annual supply 2010-2050



The network challenge: electricity transmission



Coordinated approach...

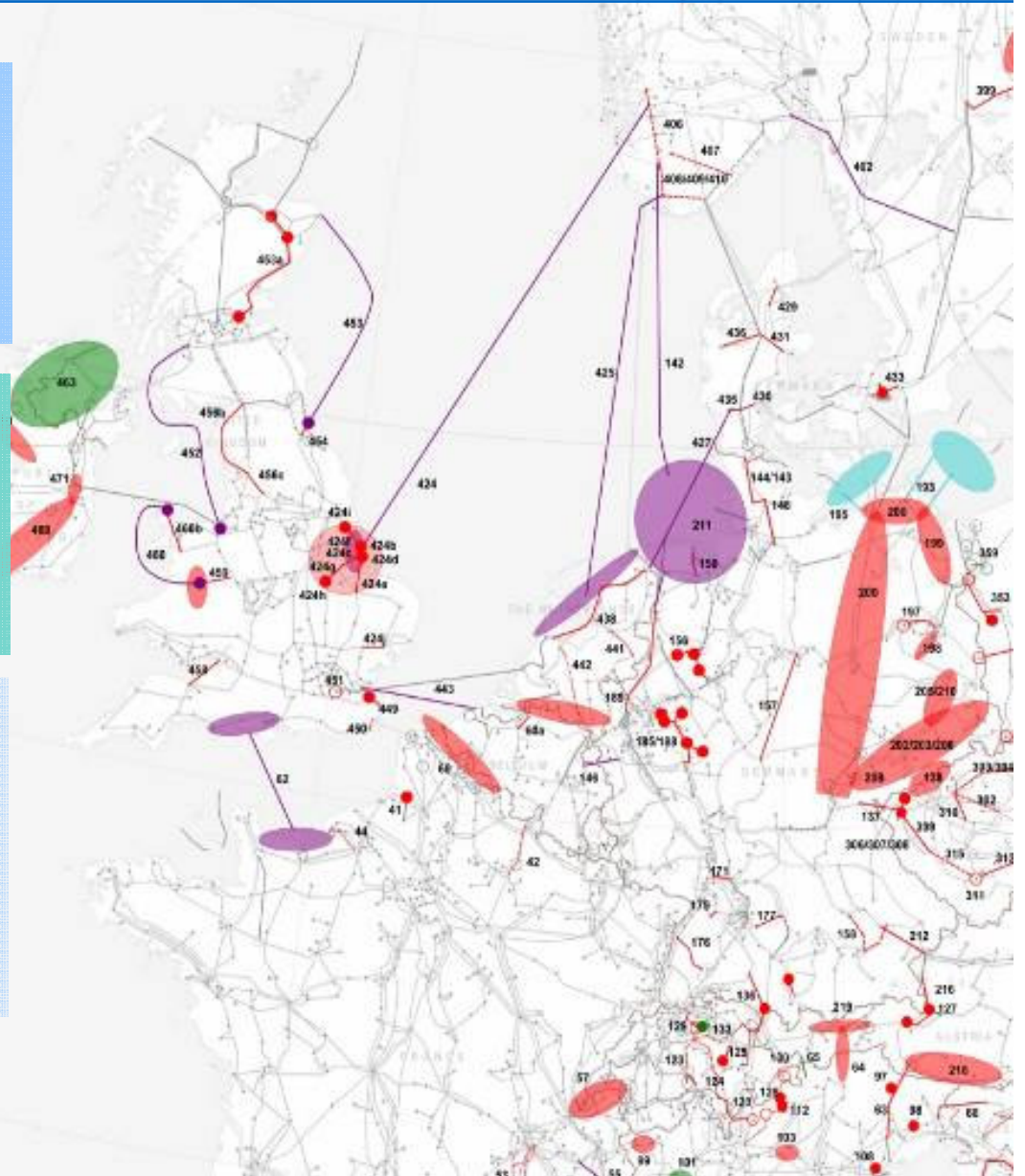
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Reliable Sustainable Connected

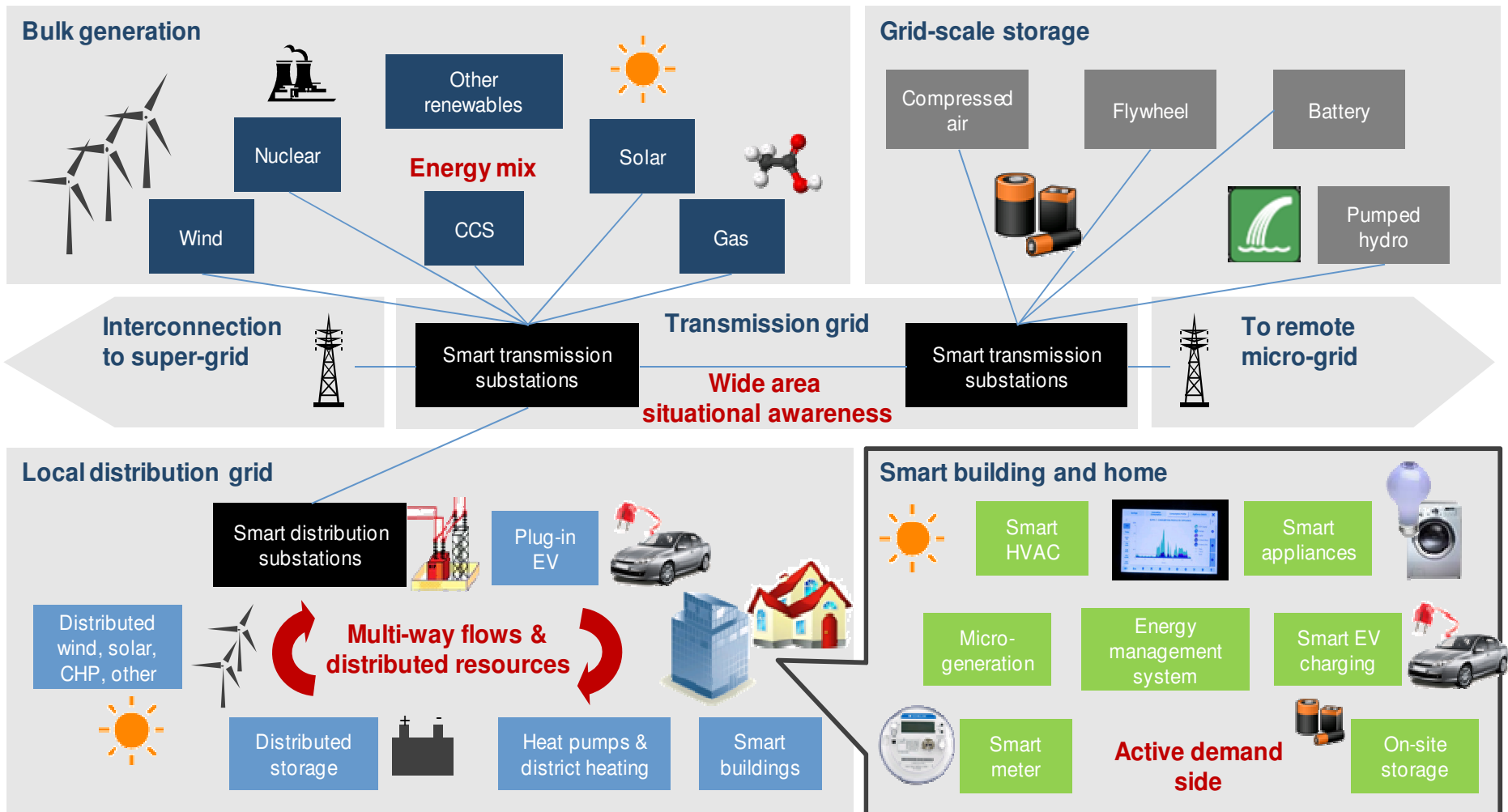
Pilot 10-year
development plan

entsog

european network
of transmission system operators
for gas



Smart(er) grids...



To succeed, we must:

**Inform and partner with
customers and communities**

**Work and lead with our
regulators and policy makers**

**Attract and retain a skilled
workforce**

Seize the opportunity

