

The Cost of Carbon - National Grid Creating a Climate for Change







2010 Advanced Energy Conference, New York, New York Nov. 8 & 9 Alexander ("Sandy") Taft, Director US Climate Change Policy



A 50:50 Company

UK





US

Transmission





Distribution

Electricity



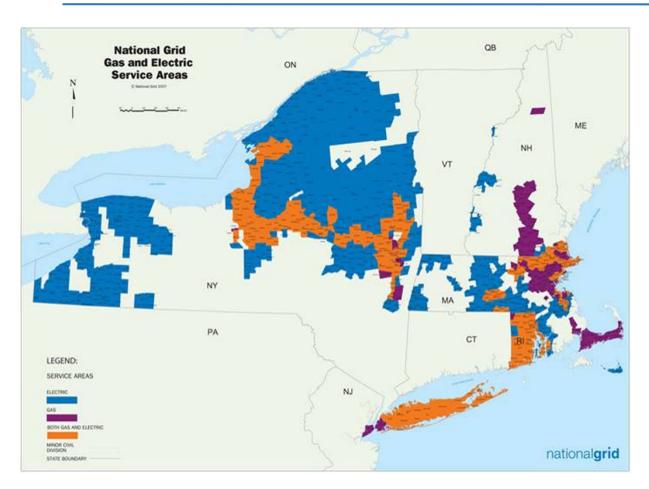


Gas



Electricity and Gas Service Areas - US

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- Northeast US
 - Distributes electricity to
 3.3 million customers
 - Services 1.1 million customers of Long Island Power Authority (LIPA)
 - Provides natural gas to 3.5 million customers
 - Currently owns over 4,000MW of generation
- Largest utility in UK; second largest in US*
 - ◆50% UK, 50% US
 - ◆50% Electricity, 50% Gas
 - ◆ 50% Transmission, 50% Distribution
 - Almost 18 million customers
 - ◆ 27,000-plus employees

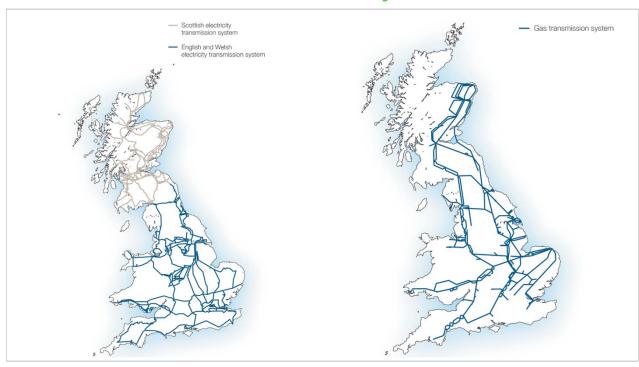
[•]Based on customer numbers; includes the servicing of LIPA's 1.1 million customers

National Grid: An international electricity and gas company

nationalgrid

Gas Distribution - UK Transmission – Electricity and Gas - UK



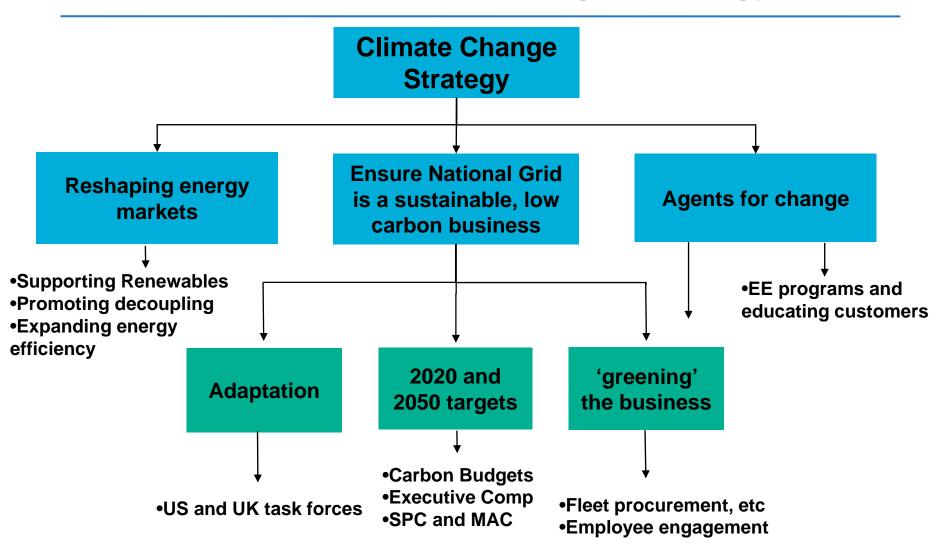


Operates the UK gas distribution system; distributes gas on behalf of shippers and suppliers to 11 million consumers.

Owns the high-voltage electricity transmission system in England and Wales and operates the system across Britain. Also owns and operates the high pressure gas transmission system in Britain.



Elements of the Climate Change Strategy

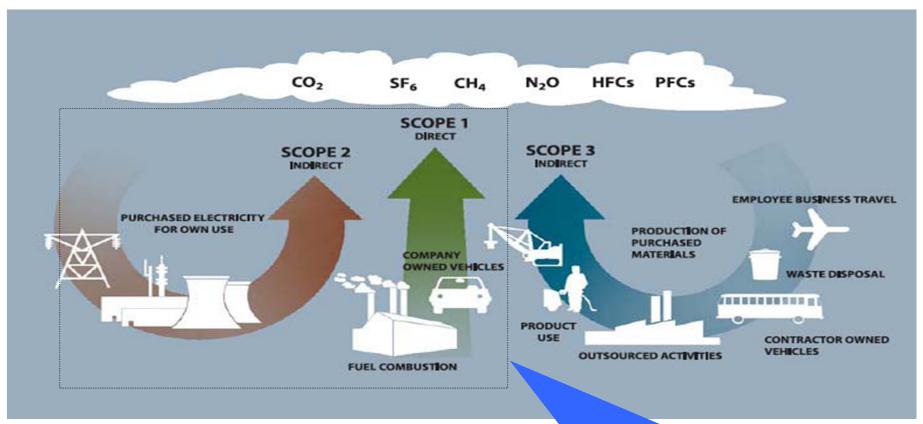


GHG emissions are classified into 6 types & 3 scopes



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Categories of Emissions – WRI/WBCSD GHG Corporate Standard



Scope 1 - All Direct GHG emissions

Scope 2 – Indirect GHG emissions

Only S1 & S2 emissions are considered initially

Scope 3 – All other indirect emissions not in Scope 2 (transmission and distribution losses, transport related)



Current National Grid Investment Guidelines – Market price and Shadow Price

REGULATORY & ENVIRONMENTAL

- UK Gas Distribution MRP
 - SF6 Reduction
- Mandated environmental standards

Shadow Price (SPC)

Used where no

other price signal

CAP AND TRADE

- US: RGGI
- UK: EU ETS
 - •UK CRC

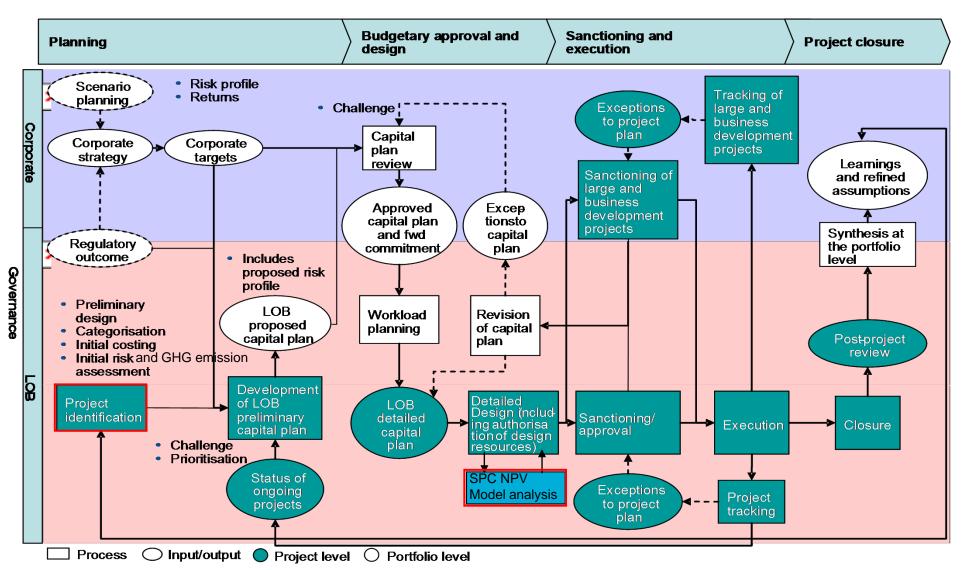
Carbon cost signals are already incorporated into our investment decisions for specific assets

Introduced April 2009 as a real price to complete the coverage

For a given investment appraisal, only one type of price signal is used

SPC will be considered at two stages in our existing investment management process national grid

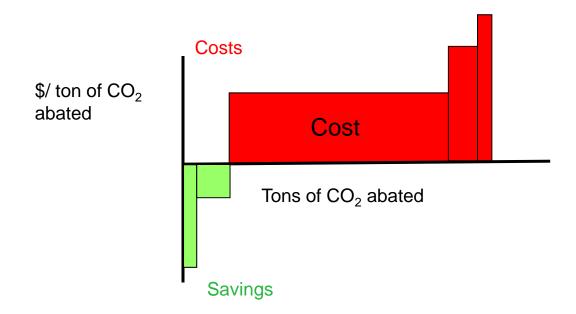
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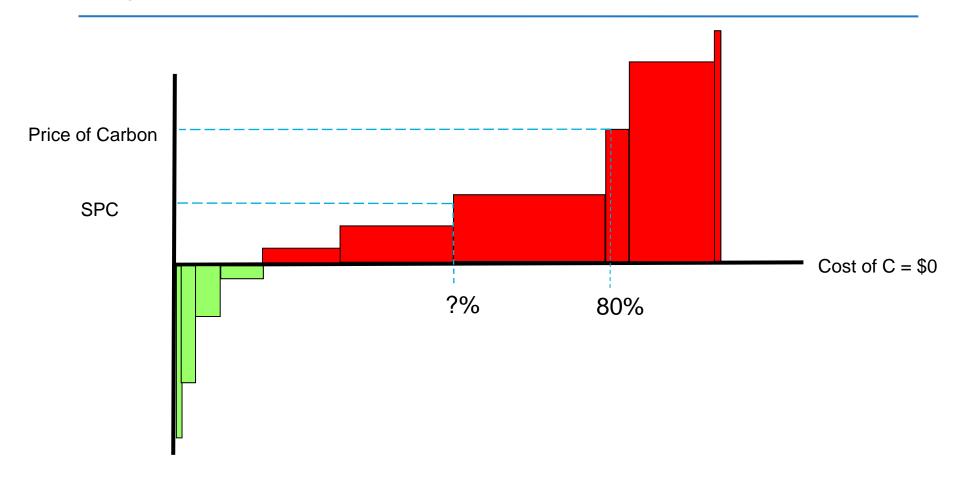
What is a MAC curve?

- Illustrates all currently known abatement options
- Illustrates the abatement potential of each option (width of box)
- Illustrates the lifecycle cost of each option (area of box)
- The Cost of Carbon is determined by dividing the cost by the abatement potential (height of box)





Why are MAC Curves Useful?





Progress to Date

- Completed full inventory of Carbon Emissions
 - Created Carbon budgets for each LOB
 - Connected Executive compensation
 - On target for 2020 goal
- Challenges
 - Multiple price signals
 - RGGI, EU ETS
- Long term goal success requires
 - Advancement of new technology
 - Conversion of price signals





Creating a Climate for Change



Begins with you!

www.thepowerofaction.com

www.ngridenergyworld.com

Sandy.taft@us.ngrid.com