





Maximising Economic Recovery by Maximising Emissions Reduction (MER)²

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Consistent modelling results: 2 degrees Emissions Reduction costs less than half with CCS

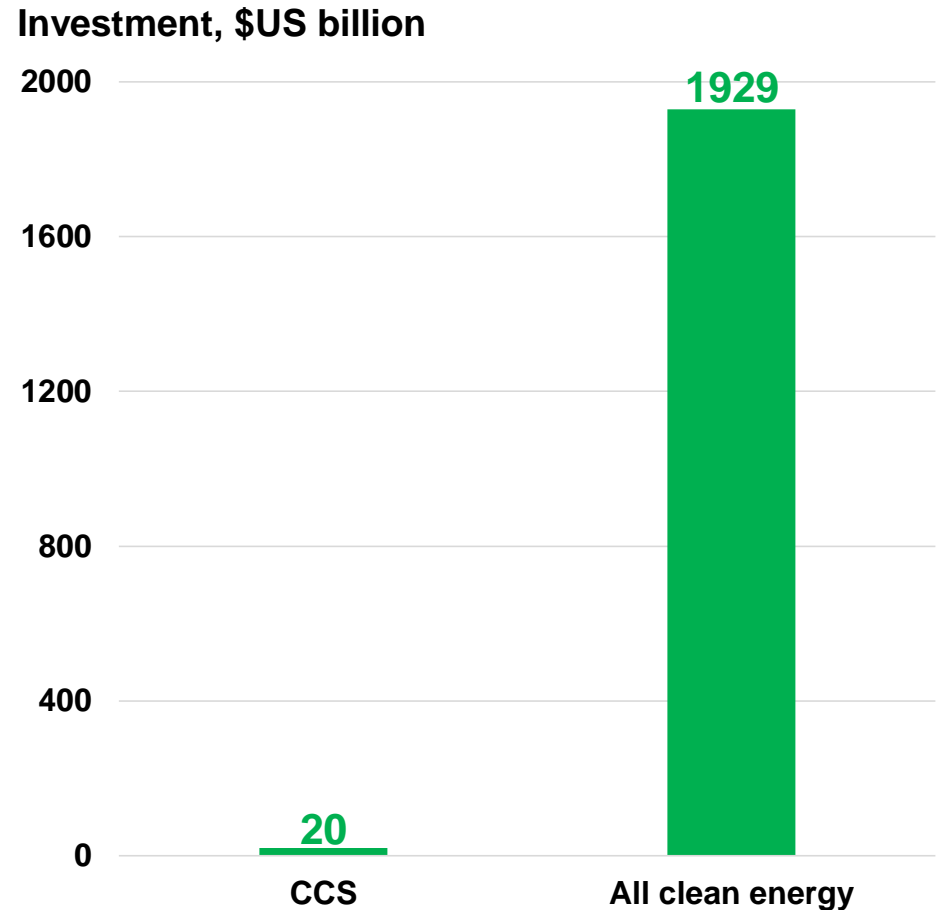
2100 concentrations (ppm CO ₂ eq)	no CCS	nuclear phase out	limited solar/wind	limited bioenergy
450 ppm 2 degree scenario	138% 	7% 	6% 	64% 

% increases in mitigation costs (2015-2100 total discounted) relative to default technology assumptions – median estimate

Source: IPCC Fifth Assessment Synthesis Report, Summary for Policymakers, November 2014. Similar findings by International Energy Authority (IEA) and UK's Energy Technology Institute (ETI)

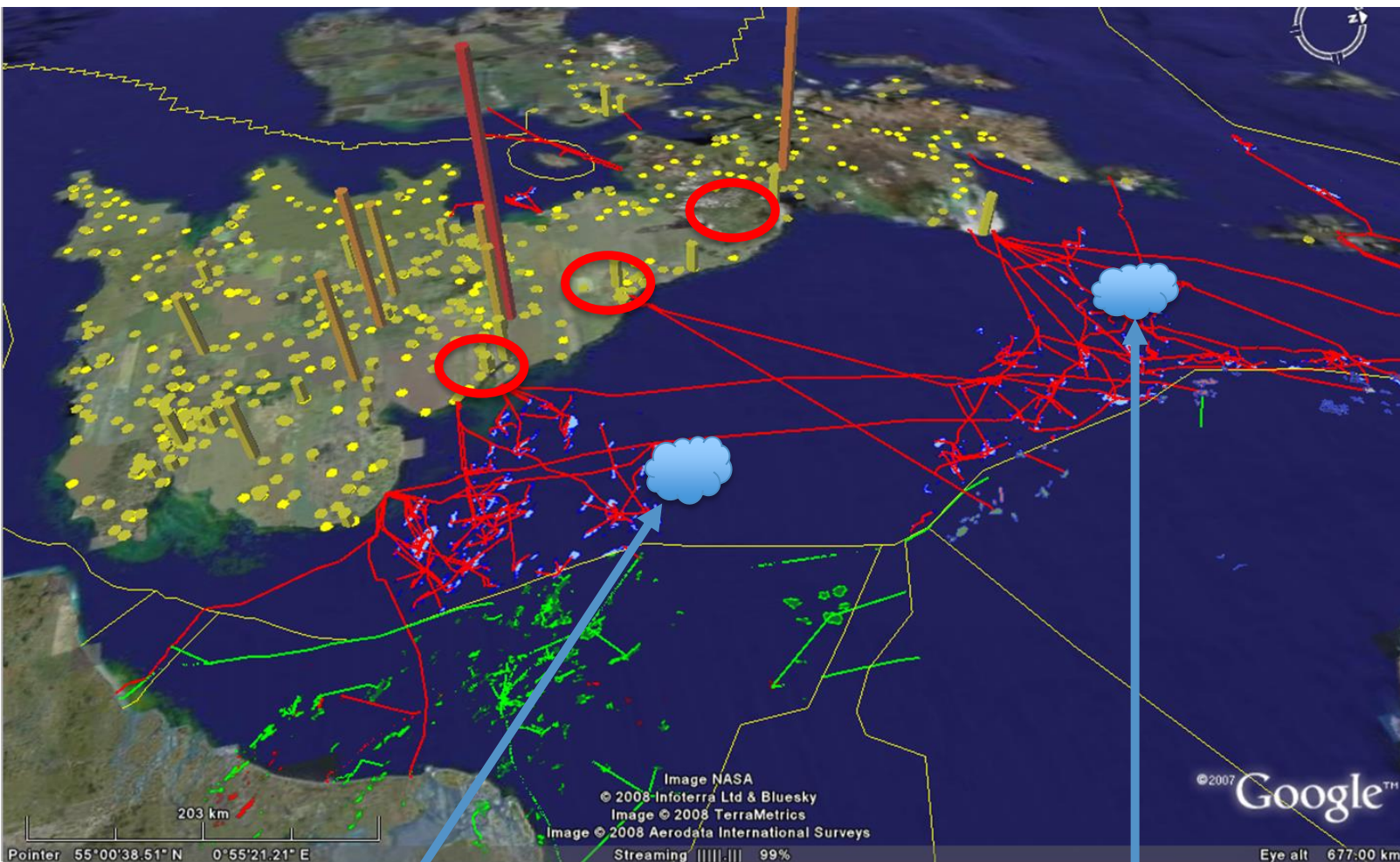
Strong government policy drives investment

- Renewables have been supported by strong government policies; projects followed
- CCS has not enjoyed much policy support; approx 15 full scale projects
- EOR (CCUS) provides income in North America & Canada
- CCUS is cheaper for the UK than pure storage
- Why CCUS in the UK sooner than later? O&G skills & assets



Data source: Bloomberg New Energy Finance as shown in IEA presentation “*Carbon Capture and Storage: Perspectives from the International Energy Agency*”, presented at National CCS week in Australia, September 2014.

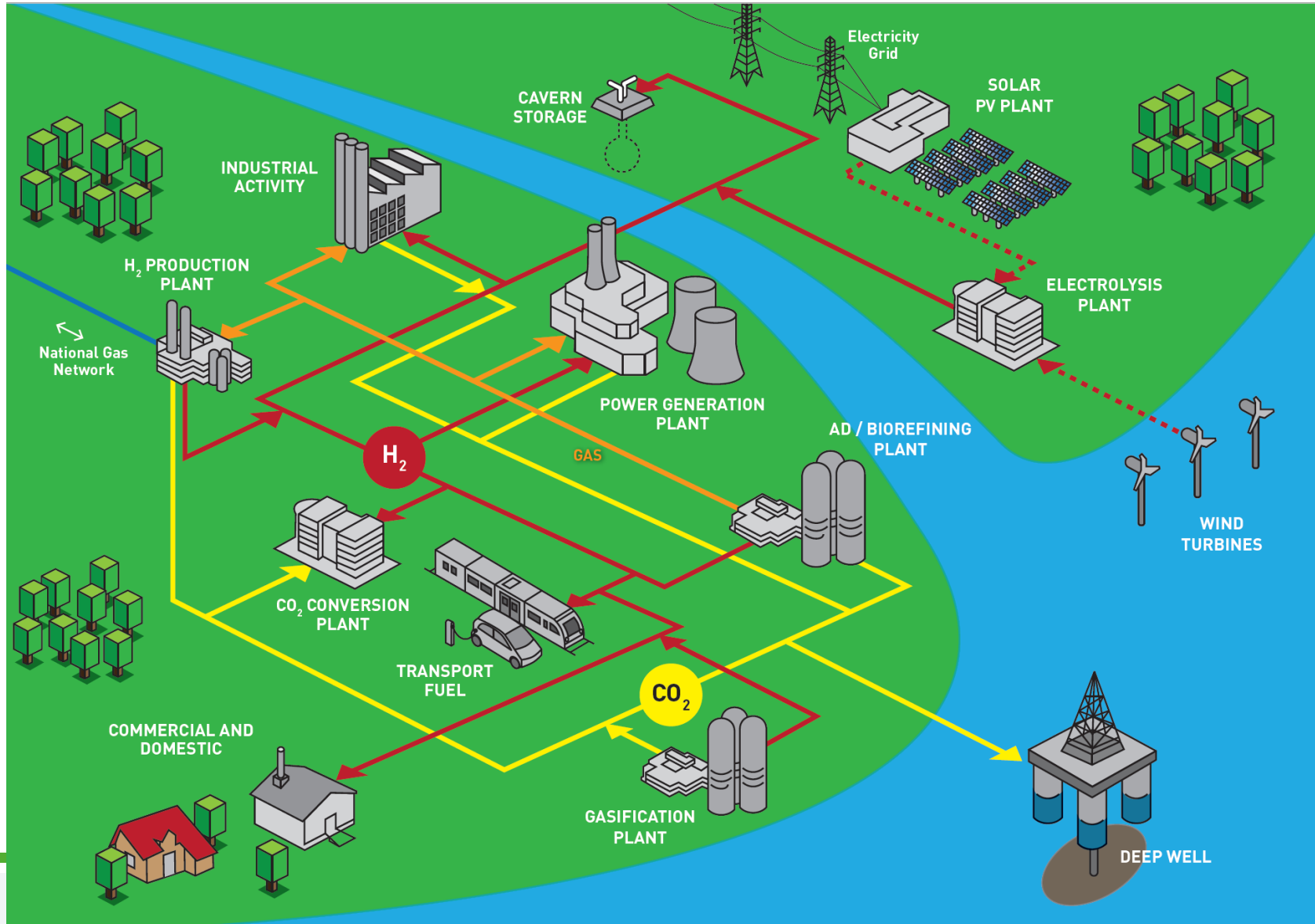
A new future for UK O&G: Decarbonising the East Coast through CCS and Enhanced Oil & Gas Recovery



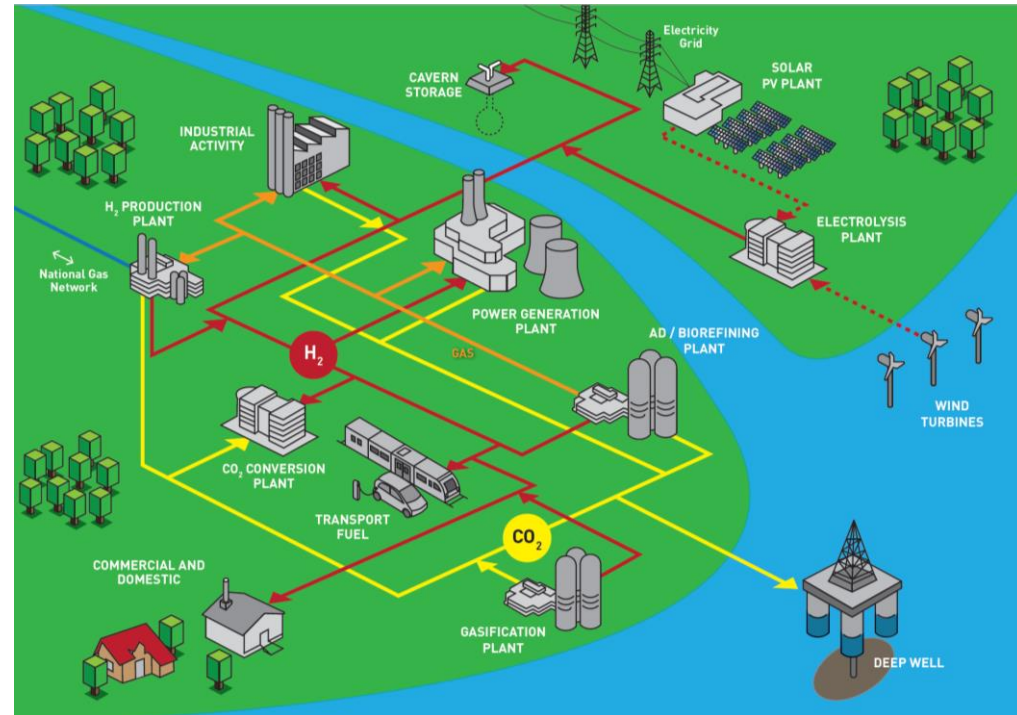
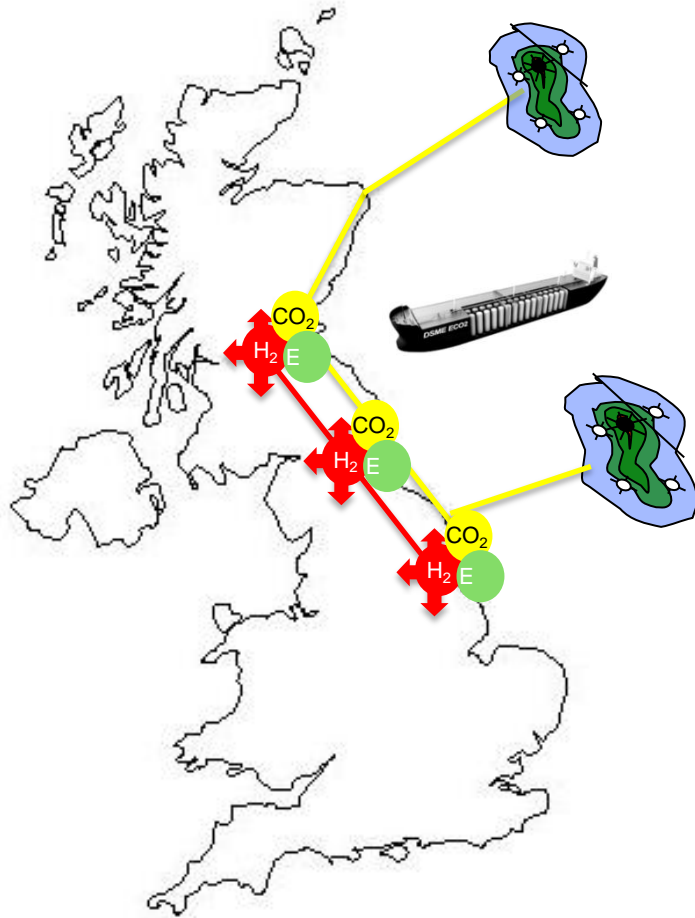
Bunter Aquifer: 5/42 Endeavour

Captain Aquifer: Goldeneye area

A new Industrial Future for the UK

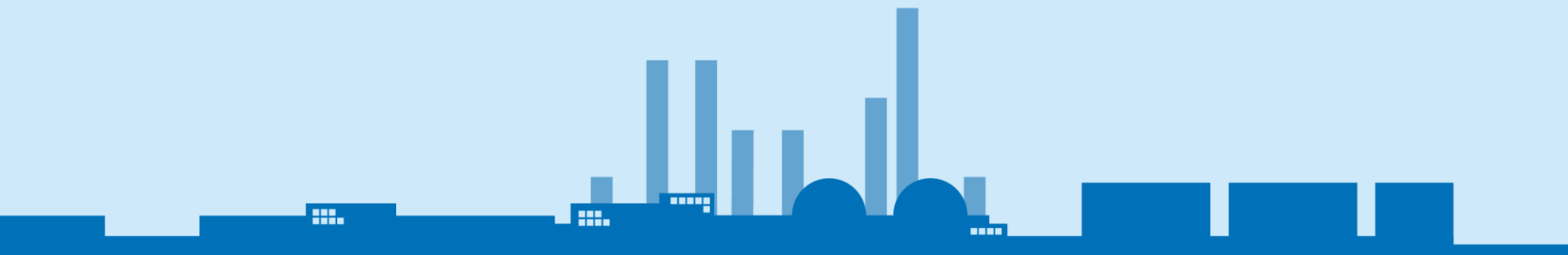


Transforming & Connecting Regions: Maximising Economic Recovery by Maximising Emissions Reduction





A NEW INDUSTRIAL FUTURE FOR THE UK



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