

CCS Clusters

APGTF 20th - 21st February

2013

James Watt, Technical Manager - CCS



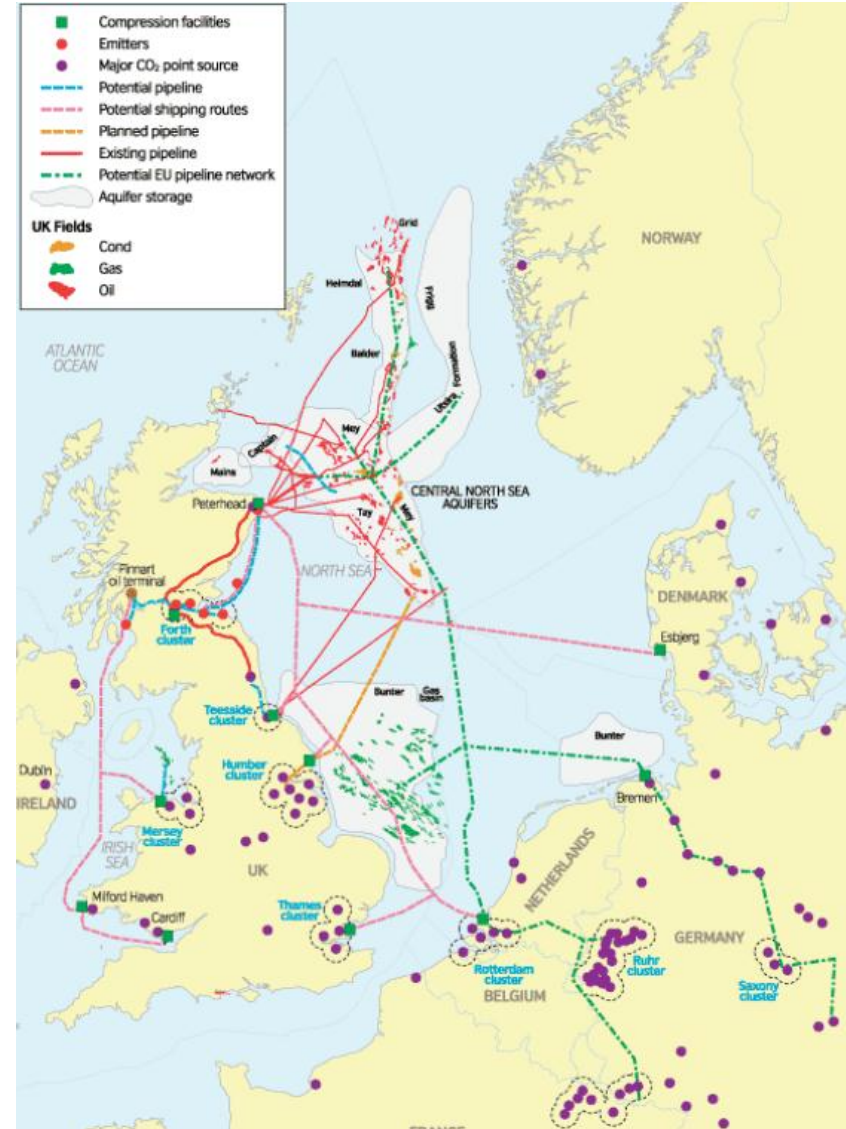
Humber Cluster

- So far,...
 - Large network up to 90MMtpa (2007)
 - Smaller network 50MMtpa (2009)
 - Economics studies
- Very large cluster
- Significant savings on CAPEX first shown ~ 66% saving
- The reality,...
 - Don Valley Power Project
 - White Rose
 - 7MMtpa initially
 - EOR and DSF (Deep Saline Formation) storage
- Next?
 - DVPP cancelled – main anchor point for region
 - White Rose, much smaller concept



Scotland

- So far,...
 - Considered storage and transport
 - Focus always on the storage cluster, not the emitter
 - BP/SSE DF1
 - Longannet/Goldeneye
- Very large geographic spread
- Huge storage potential
- The reality,...
 - Focusing now on creation of a CNS CO2 Cluster or Hub
 - Captain
 - SSE Peterhead
- What next,...
 - 2 entrants to DECC
 - Creation of storage cluster to enable EU
 - New issues emerging – politics?



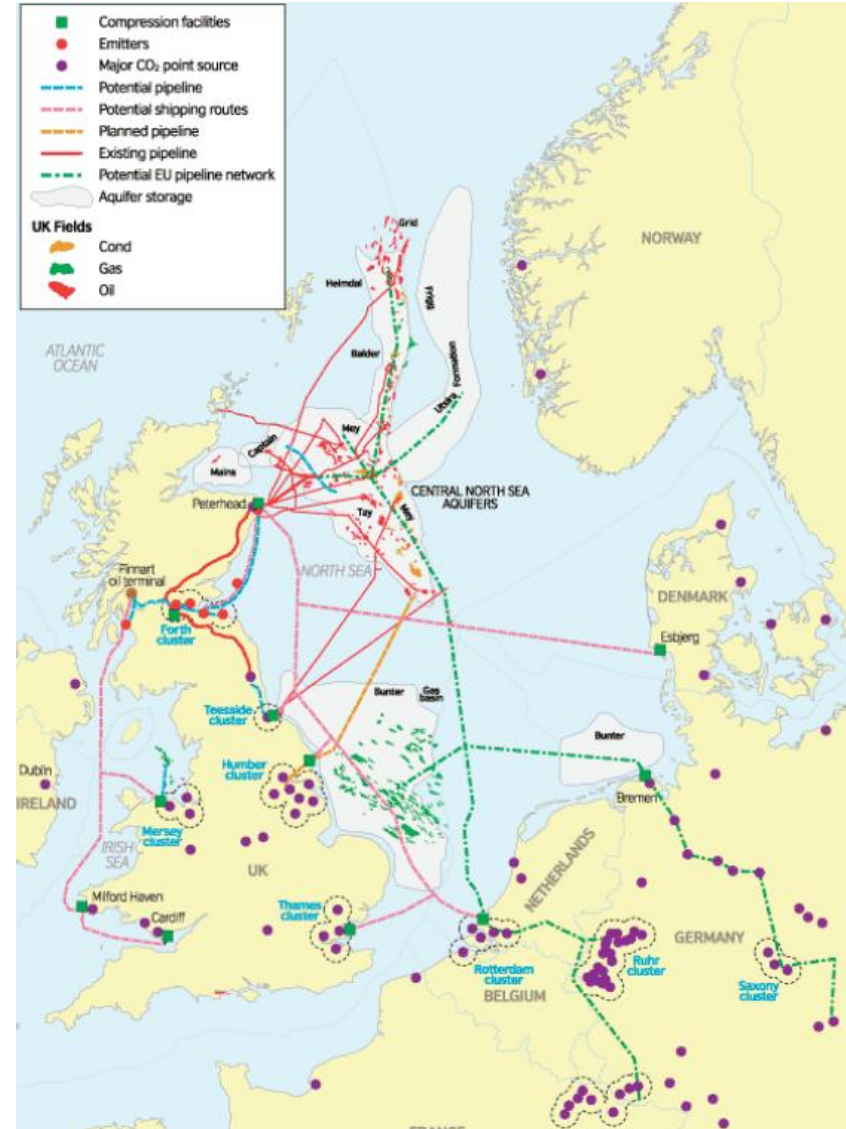
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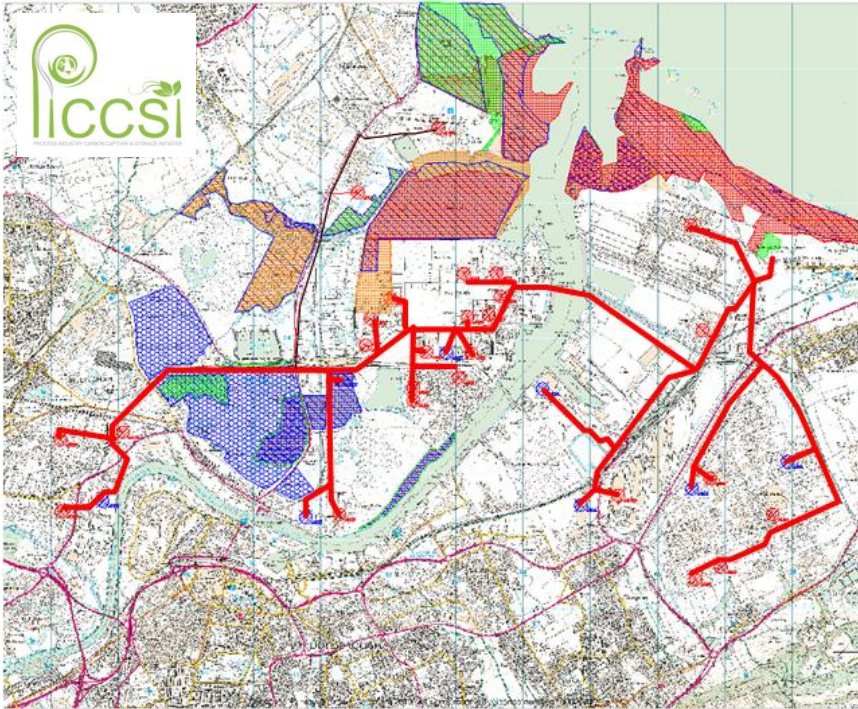


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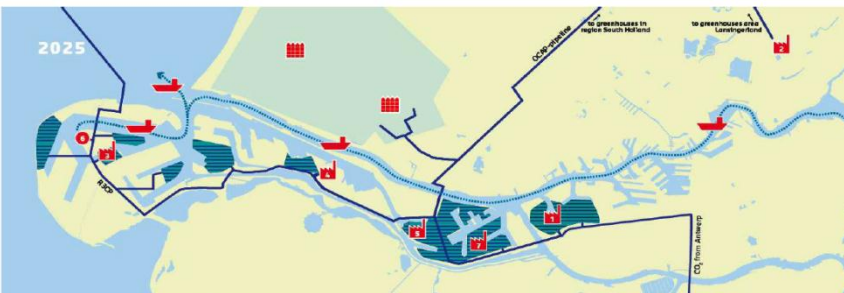
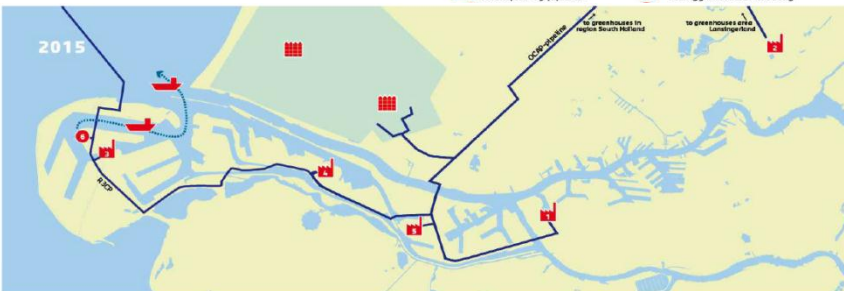
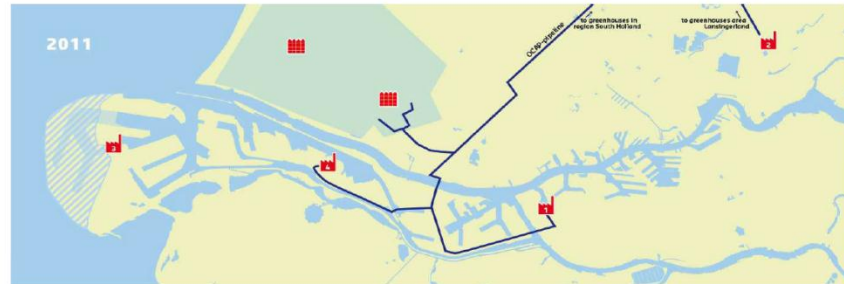


Tees Valley



- So far,...
 - Progressive Energy's Eston Grange IGCC
 - Network and economic studies
- Compact area
- Heavily industrialised
- Coastal access, inc shipping
- Storage access to CNS or SNS
- The reality,...
 - Teesside Low Carbon
 - Local industrial support and interest
- What next,...
 - Enabling industrial emitters
 - Major employment opportunity in low-employment area
 - Cluster focused

ROAD



- So far,...

- EON Maasvlakte
- Published learning
- Advanced plans

- The reality,...

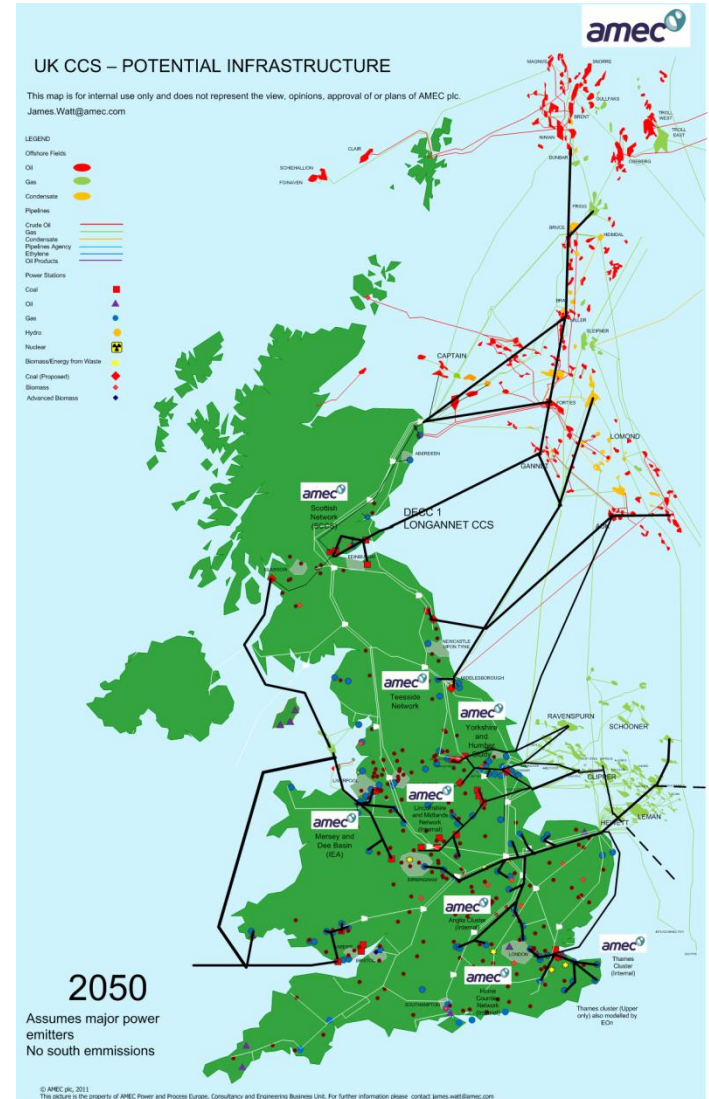
- EON Maasvlakte, 1.1MMtpa
- TAQA storage – depleted hydrocarbon
- Local industrial support
- Builds on current CO2 system

- What next,...

- Moving to c. 2015 start date
- Enabling industrial/local emitters
- Cluster focused

What else

- UK, other clusters
 - East Irish Sea
 - Thames
 - East Midlands
 - Storage cluster concept – focus needed
- Globally
 - GCCSI lists 8 CCS clusters
 - 3 are in the UK
 - There are more focused on EOR supply



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