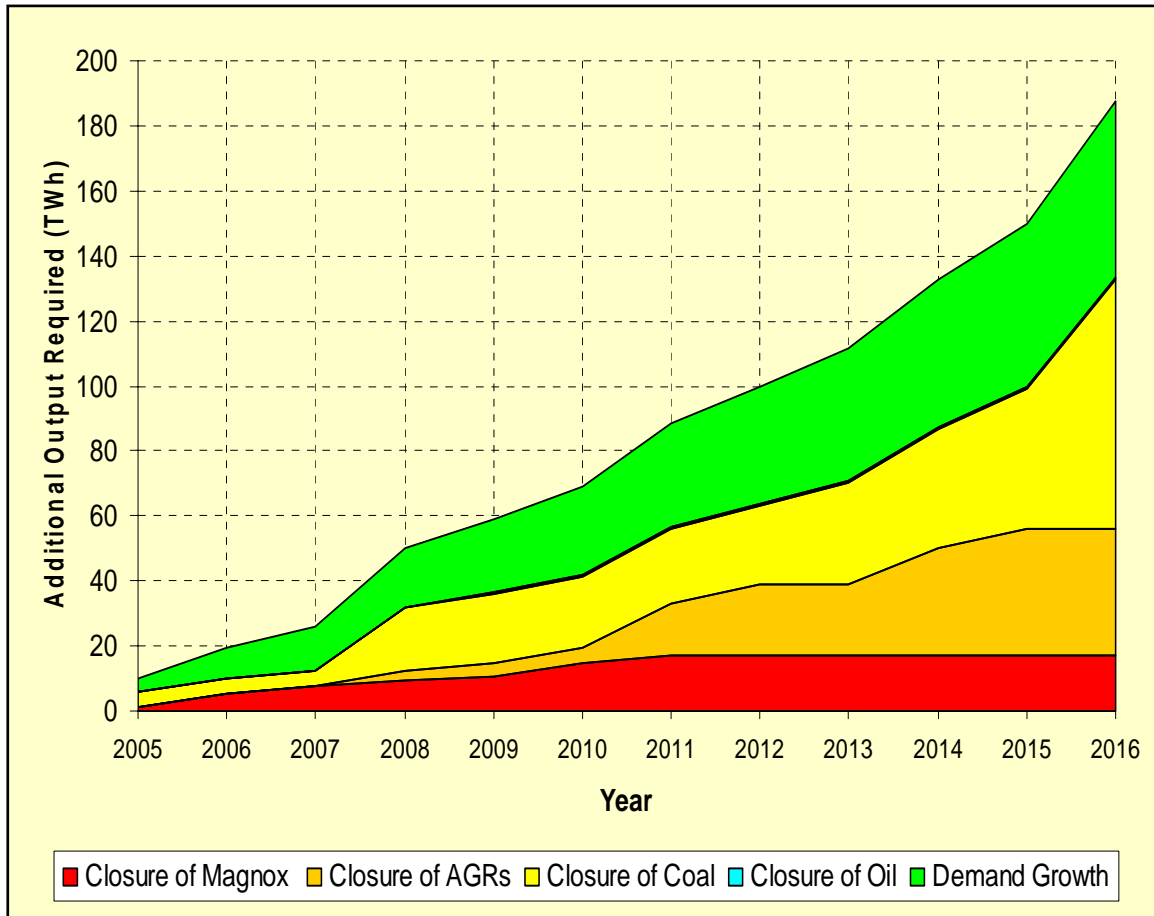




E.ON UK IGCC & CCS Demo

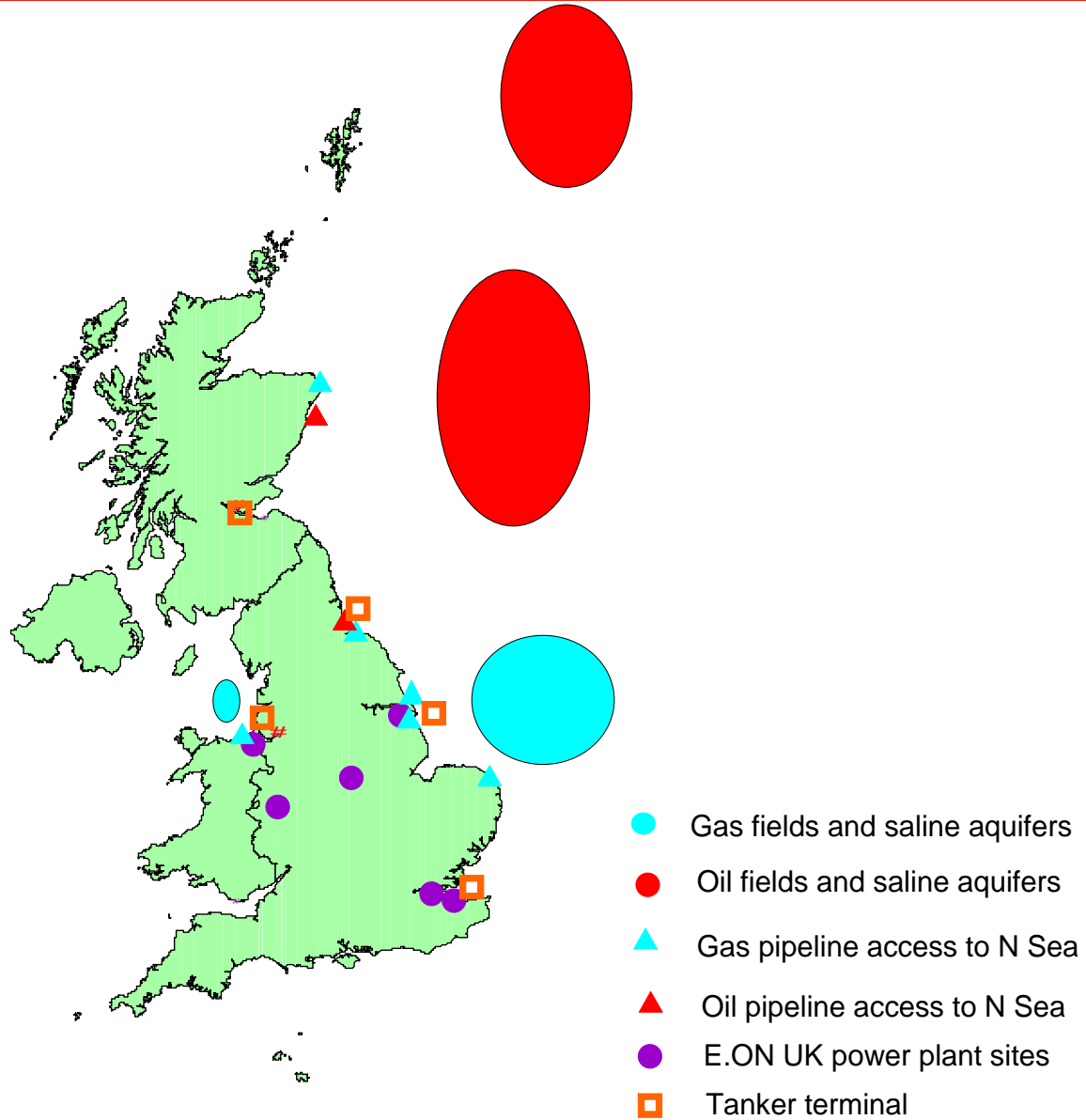
Robin Irons - E.ON UK
5 September 2006

The Need for New Capacity in the UK



Power

- Ageing Nuclear plant will close
- Load factors on coal plant will be reduced by LCPD
- ... some will close by 2015
- Renewables will grow, but relatively small impact
- 36 GW of new capacity needed by 2020 ~ 45% of UK generating capacity
- Initial new build likely to



How E.ON UK's CCS project might look at Killingholme

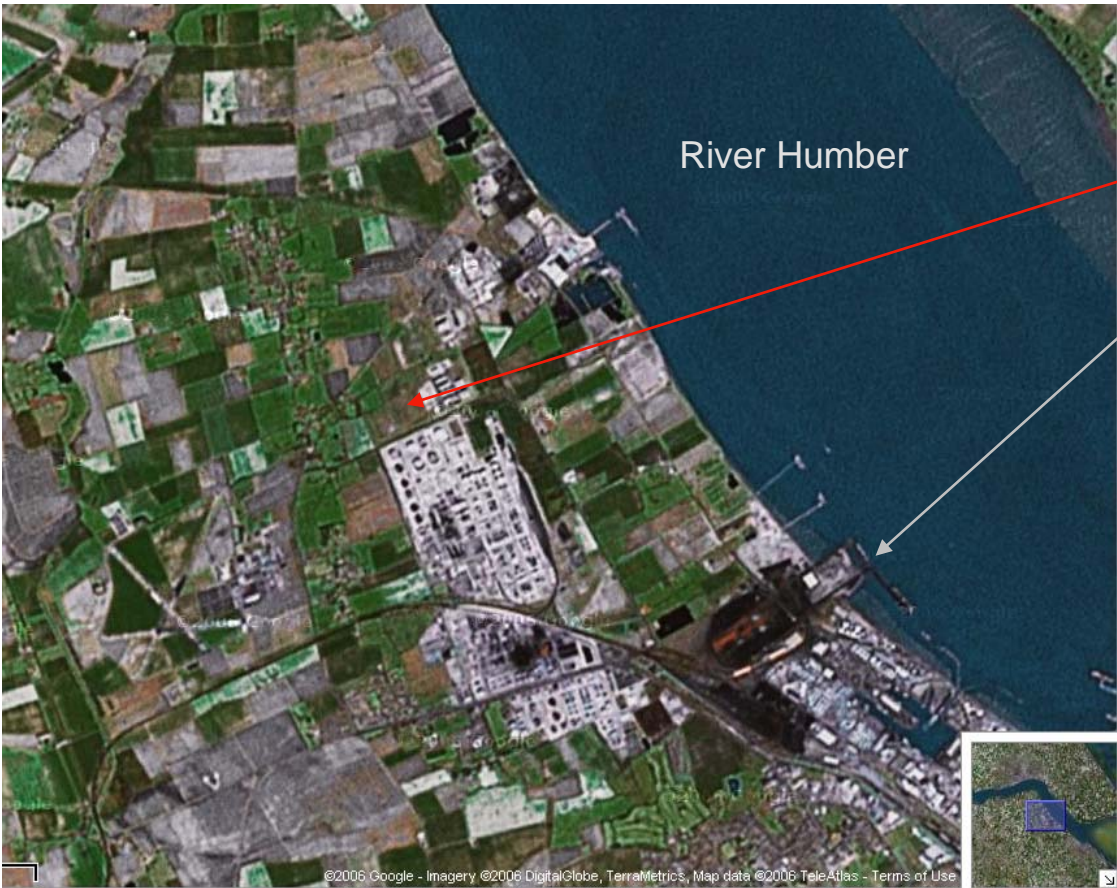
Overview

- Plant will nominally be a 450MW IGCC+CCS fuelled on coal
- Potentially built on or close to the existing Killingholme site
- Multiple CO₂ storage options identified in the Southern North Sea (SNS)



Plant could be operational by late 2011

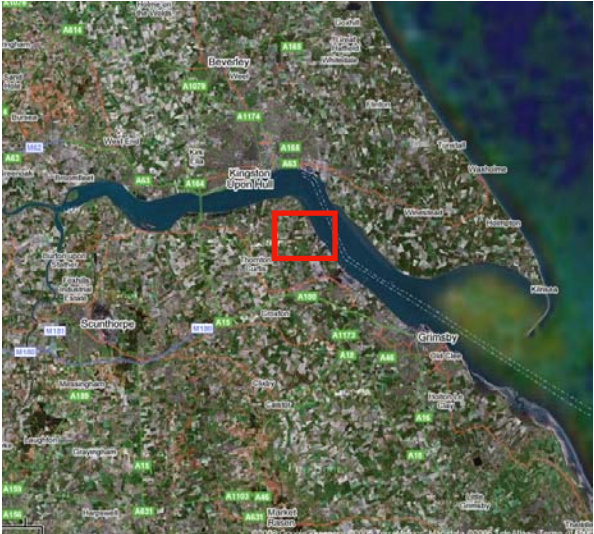
The existing E.ON site at Killingholme is a front running site on which to build E.ON's IGCC



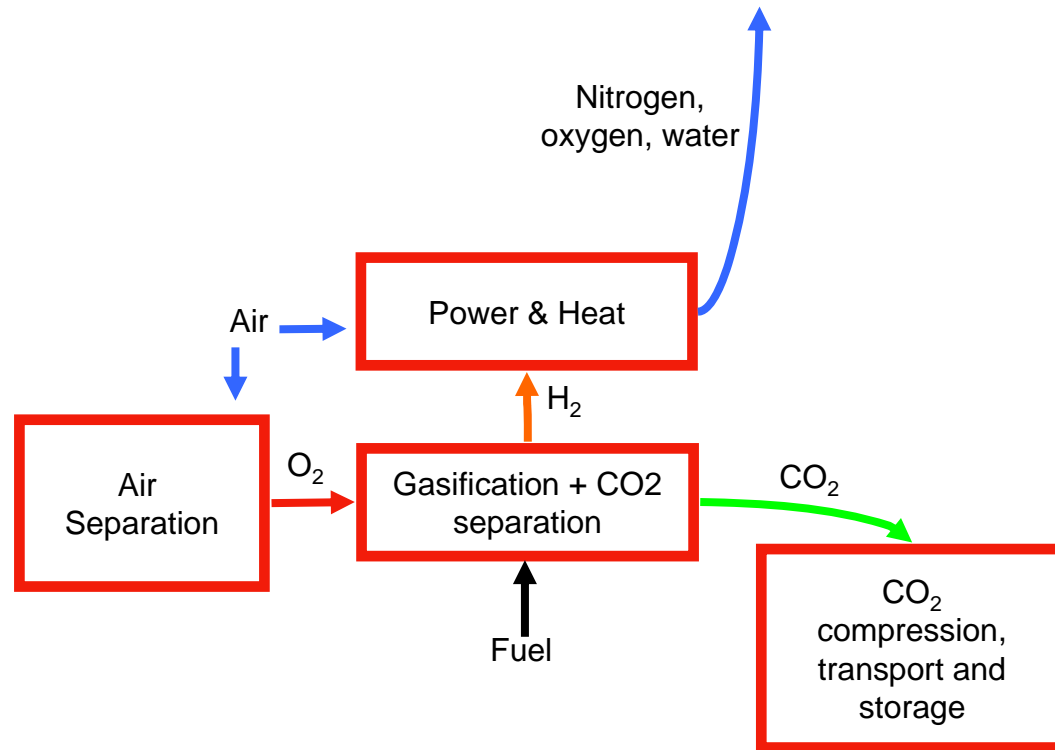
River Humber

E.ON site

Immingham dock

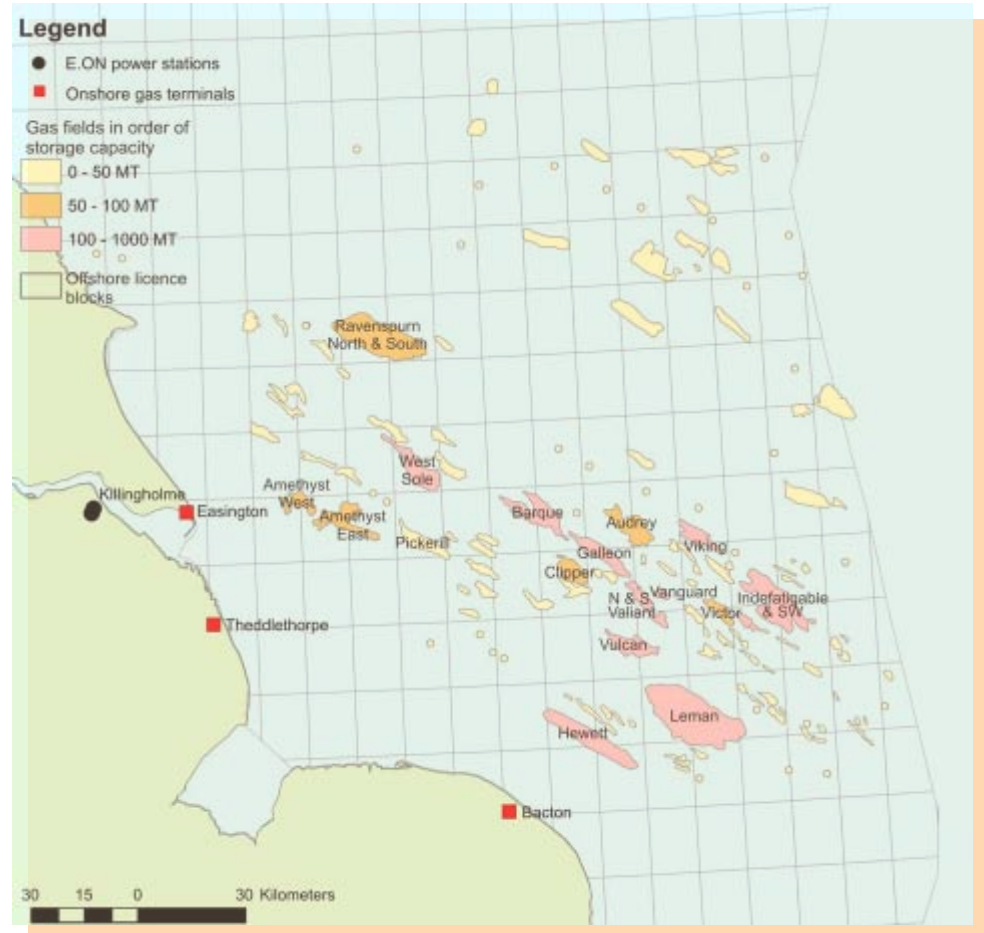


Plant will utilise pre combustion capture



Multiple CO₂ storage sites identified in the SNS

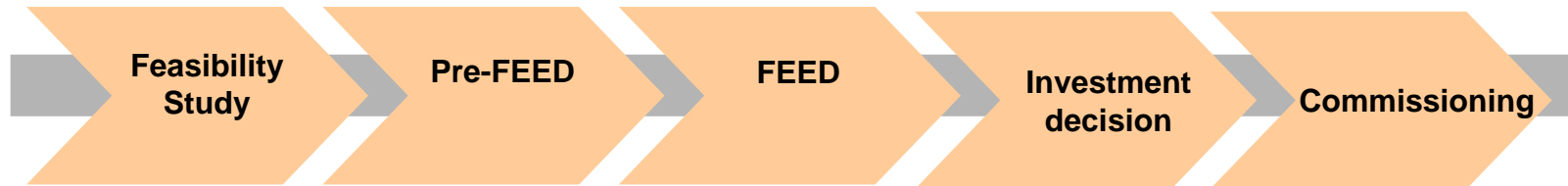
- Killingholme is well positioned for CO₂ evacuation from Easington and Theddlethorpe
- The vast majority of gas fields in the SNS are capable of storing CO₂
- The SNS is capable of storing 2.8BT of CO₂, Plant will produce 3MT of CO₂ pa.



Plant could be operational by 2011

Milestones

- Sept 2006 Feasibility study completes
- Jan 2007 - July 2007 Pre-FEED study
- Aug 2007 – May 2008 Full FEED study
- **June 2008 Investment decision**
- July 2008- Sept 2011 Construction
- **Dec 2011 Plant commissioning**



This timetable is ambitious but is designed to ensure E.ON remains front-running utility on coal based carbon capture. Clearly there are factors that could cause delay

What needs to be in place to make project happen?

- Resolution of storage issues in North Sea.
- Public acceptance
- Mechanism to underpin economics.
 - Economics need to be
 1. Pinned down
 2. Improved
 - Stakeholders need to understand issues and risks.
 - Government support required to underpin economics.
- Technology.
 - Available
 - Reliable
 - Cost-optimised

How can DYNAMIS help your initiative or vice versa to promote a concerted action in Europe towards CCS deployment?

- Realising Hypogen via pilots or full scale demo.

Project produces high H₂ fuel gas with option to supply H₂ for refinery or other downstream uses. It represents a significant opportunity to support Hypogen's long-term objectives.

- Timescales versus DYNAMIS

Project development phase significantly overlaps Dynamis timescale and overall goals.

- Hydrogen – key or pacing in a CCS context

Pacing in E.ON Project

- Structure of DYNAMIS outcome to ensure commercial up-take in your project

Good match of overall goals. Early results essential to maximise use to E.ON.