CAPRICE CO_2 CAPTURE	CO_2 Capture using Amine PRocesses: International Cooperation and Exchange

Project: Caprice	**Contract number:** 038974
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OVERALL INTEGRATION:

800MW BITUMINOUS COAL-FIRED POWER PLANT FITTED WITH POST COMBUSTION CO_2 CAPTURE PLANT

Reporting period:	From 1 January 2007 to 31 December 2008
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Author(s):	D. Peralta-Solorio, J. Alin and N. J. Booth (E.ON)

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3				
4				

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PUBLIC SUMMARY

This report evaluates the engineering consequences of integrating a post combustion capture (PCC) plant into an 800MW_e bituminous coal-fired power plant. The items covered in the study are:

- Simple PCC plant layout
- Civil engineering
- Gas path integration
- Steam extraction and heat integration
- PCC plant cooling
- Effluents and emissions
- Process and waste water
- Start-up and shutdown considerations
- Electrical, control and instrumentation issues

Engineering and technological challenges are identified and described in detail, offering where possible potential solutions. However, this is a generic study considering a coastal 800MWe coal-fired power plant located in the UK. Ultimately integration will have to be addressed in practice on a site specific basis.

In conclusion, the study found that the technological challenges to integrate the PCC plant into the power plant are not insurmountable. Nevertheless, several specific challenges and potential solutions are described in detail. Early consideration of integration issues as discussed in this report on a site specific basis will contribute to the successful deployment of PCC plants and their progressive improvement in the near future.

The rest of this document is project confidential.