



CONCEPTUAL AND FEASIBILITY STUDIES

OSL acknowledges that some of our clients do not have the resources to enable them to undertake detailed conceptual and feasibility studies. Instead, we provide skilled personnel to complement the in-house team, working very much as part of the client's organisation.

Some typical examples are shown below.



CARBON CAPTURE AND STORAGE ASSESSMENT

OSL was requested by a major energy company to identify and develop a number of viable technical solutions for the storage element of a Carbon Capture and Storage business.

The overall business was linked to new power station technology producing Carbon Dioxide as a by-product of the fuel generation and in a form readily transportable for subsequent storage.

The technical solutions focused on a number of the existing client assets and potential reservoirs. Initially, the study identified key parameters for consideration - the ability of the reservoir to store CO₂, the potential injection rates and the volume of CO₂ able to be stored were all important factors in assessing the business potential.

Having selected a number of reservoirs, we reviewed their availability against current CoP (Cessation of Production) date and the infrastructure to enable the CO₂ to be transported. The number of available wells, completion types, pipeline condition, pipeline capacity and pipeline operating envelope were all taken into account when developing the business case and the study also included a review of CO₂ equipment suitable for transporting the CO₂ in the dense phase to allow transportation at a number of operating regimes.

Our study presented a number of technical solutions to be taken into a more detailed analysis while the business case was supported by a description of each technical scheme and the associated costs.

ONSHORE GAS TERMINAL EXPANSION

OSL provided the design and cost estimate of an onshore gas terminal expansion being developed to enable a third party gas field to enter the client system. The gas had high water content and the process design required a revision to the onshore produced water treatment and disposal strategy.



The client had other proposals on the table and OSL screened these in relation to our own design. We were able to mobilise quickly and provide a rapid assessment of the required modifications and provide the client with a better strategic option with associated costs and time table.



OFFSHORE GAS COMPRESSION

OSL was recently tasked with helping a client to reduce offshore wellhead pressure to increase Life of Field and Reserves Recovery.

We carried out a feasibility study for a new offshore compression system and provided fully costed options for modifying the existing platform, a new bridge linked compression platform and the provision of a Self Installing Platform.



GAS DEHYDRATION

As part of a gas caverns storage project, OSL carried out another study to determine the most suitable Gas Dehydration process. As the gas is wet on discharge from the caverns, it must be dried prior to compression and passing into the National Grid.

The extent of our responsibilities included:

- Modelling the gas/water loading levels from system start up until the saturation levels become stable
- Reviewing available technologies
 - By absorption in a TEG (Tri Ethylene Glycol) contactor
 - By adsorption in a molecular sieve
- Preparing process flow diagrams and equipment lists
- Carrying out cost estimates, using vendor data.
- Determining the best technical, operational and financial choice, balancing the requirements of OPEX (Operating Expenditure) and CAPEX (Capital Expenditure).

Through these activities the client was been able to choose the appropriate technology and move into a FEED contract.

