

HYDROGEN POWER ABU DHABI (HPAD) DECARBONISED FUEL PROJECT

MASDAR & HYDROGEN ENERGY
Abu Dhabi



**COMPLETION
DATE June
2009**

PROJECT DESCRIPTION

The HPAD Project is developed by using the design work and strategy that were implemented in the previous DF1 Project at Peterhead, Scotland (UK), for BP Alternative Energy International Ltd. and Scottish & Southern Energy plc.

This project will take natural gas from the grid and convert it to hydrogen and CO₂. The hydrogen power plant will generate approximately 400 MW of low-carbon electricity – this project alone would provide more than 5% of all Abu Dhabi's current power generation capacity.

The H₂ rich fuel production facilities include a air blown Auto Thermal Reforming (ATR) of natural gas, syngas cooling and treatment units. CO₂ is separated from syngas and compressed for Enhanced Oil Recovery. The Combined Cycle includes two GT's, two HRSG's and one condensing type ST.

FOSTER WHEELER ITALIANA SCOPE OF WORK

The contract is a joint effort of Foster Wheeler Italiana and Foster Wheeler Energy Limited (UK). The integration of the two offices exploits the strength of Foster Wheeler Energy Limited in the general management and coordination of projects and the excellence of Foster Wheeler Italiana in power plants design.

The scope includes SELECT (pre-FEED) and DEFINE (FEED) activities.

FWI SELECT activities mainly consists in several studies to choose the optimum configuration of the plant. FWI scope for the DEFINE is:

- Power Plant (Combined Cycle) design;
- Integration of the power plant with process units;
- Conditioning of Steam Turbines bids;
- Coordination of Gas Turbine Vendor activities.