

# Offshore LNG Production, Timor Sea

## LNG Production and Storage Facility

Customer: Worley, Australia

### Services Provided

- Process design
- Preparation of input data for an environmental impact statement
- Weight estimate for the LNG process module
- Capital cost estimate

### Benefits to Customer

- Plant design based on the most cost-effective process technology for offshore LNG

### Project Description

- Costain provided engineering services for a 3 million tonnes per annum offshore LNG production and storage facility (located on a concrete Gravity Base Structure (GBS)).
- Based on Costain's previous experience with offshore LNG facilities, a nitrogen based expander cycle was selected for liquefaction as it offers a compact and inherently safe design.
- Worley used Costain's documentation to define the gas treatment and utilities systems, produce preliminary layouts and an overall weight estimate.
- The LNG plant consisted of two parallel trains with each train having two parallel liquefaction trains to ensure equipment sizes within acceptable and proven limits.
- All major compressor drives were electric motor to ensure high overall availability, efficiency and turndown.
- Mechanical refrigeration was used to improve LNG plant efficiency by providing chilling to the gas turbine generator air intakes and the treated feed gas prior to dehydration.