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Findings and Conclusions

Santos Limited (Santos) and its joint venture partner PETRONAS are proposing to develop their Queensland coal seam gas (CSG) resources in the Bowen and Surat Basins in the area between Roma and Emerald as feed gas for a liquefied natural gas (LNG) liquefaction and export facility on Curtis Island, near Gladstone, Queensland. The project, which is called the Gladstone Liquefied Natural Gas Project (GLNG Project) has been determined to be a Significant Project in accordance with the requirements of the *State Development and Public Works Organisation Act 1971* (SDPWO Act). The EIS has been prepared in accordance with the requirements of the SDPWO Act as well as the *Environmental Protection and Biodiversity Conservation Act 1999*.

The GLNG Project has the following major components:

- Coal seam gas (CSG) fields to produce the gas;
- Gas transmission pipeline to transfer the gas from the field to the LNG facility; and
- LNG liquefaction and export facility (LNG facility) to liquefy the gas and load it onto ships for export.

The principal objective of this EIS has been to identify and assess the environmental and related impacts that could occur as a result of the construction and operation of the GLNG Project. Impacts have been considered for all relevant aspects of the natural, social and economic environments, and where appropriate, controls and safeguards to render potential impacts acceptable have been developed.

The principles of ecologically sustainable development (ESD) have played an integral role in Santos' decision making processes in respect of the planning and design of the GLNG Project. Santos is committed to continue to take into account the principles of ESD during the construction, operational, decommissioning and rehabilitation phases of the project. The EIS has adopted the sustainability assessment framework developed by Santos and summarises the sustainability objectives that have been identified for the GLNG Project under this framework. It outlines how these objectives have been integrated into the impact assessment and development of mitigation measures.

World energy demand continues to rise. Simultaneously, there is increased pressure to find less carbon-intensive energy solutions in an increasingly carbon-constrained world. The GLNG Project is a less carbon-intensive energy solution than other fossil fuel alternatives. As such the GLNG Project can be a global contributor to energy needs with reduced greenhouse gas outputs, and a key contributor to the Queensland Government's efforts for a low emissions economy.

The majority of the world's large importers of LNG are in the Asia Pacific region, giving Australia a natural advantage in terms of the relatively short distances to these key markets. ABARE (2008) predicts that the international demand from LNG importing countries is expected to be 120 million tonnes in 2010 and increasing to over 150 million tonnes by 2015. There is a clear opportunity for the GLNG Project to fill some of this need.

The potential economic benefits of the GLNG Project are at the regional, state and national level. The GLNG Project is expected to contribute substantial economic benefits to Queensland and Australia through export income generated by LNG sales, statutory royalties paid for petroleum produced, and increased employment and business activity. The GLNG Project is also likely to provide an incentive for accelerated exploration and reserve booking of the State's extensive CSG resources.

The regional economies in which the project is located are likely to benefit to a greater extent from the project on a per capita basis than the wider Queensland and Australian economies. Regional residents can be expected to benefit from increased employment opportunities and opportunities to supply the project with goods and services. Direct employment during construction will peak at 2,000 (assuming the use of pre-assembled modules) and the direct operational workforce will be 250 at full production. Given the relative size of the regional economies, project expenditures in the local region will be significant.

Environment, health and safety for the GLNG Project (as for any Santos project) will be managed in accordance with the requirements of Santos' Environment, Health and Safety Management System

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(EHSMS). The EHSMS provides a clear set of environment, health and safety (EHS) standards so that there is a consistent, efficient approach across the company.

As discussed in the EIS, the impacts from the project's development can be mitigated through appropriate design and the residual potential impacts can be largely managed through the implementation of suitable environmental management strategies outlined in the project's environmental management plans. The key residual impacts and management strategies include:

- Associated water from the CSG field development, which will be managed by adopting a risk management approach to water treatment and reuse;
- Land use disturbance from the CSG field development and gas transmission pipeline construction, which will be managed by minimising the area required for field development and progressive rehabilitation of disturbed areas at the completion of activities;
- Air, water and noise emissions from the LNG facility, which will be controlled so that regulatory limits and guidelines are complied with;
- Social and community impacts from the construction workforce for the LNG facility, which will be managed by accommodating the workforce on Curtis Island in a self-contained construction accommodation facility; and
- Dredging impacts, which will be limited to the immediate area of the dredging operation and will be conducted in a manner similar to that applicable to other dredging activities in Port Curtis.

The development of this EIS has been a staged process which incorporated a comprehensive hazard and risk assessment program. It was found that most of the hazards did not result in an off-site impact with the design parameters that are already set.

This EIS describes the technical studies and the community consultation undertaken. The project's environmental, social and economic impacts have been identified by assessing the project description against the existing environmental baseline and identified environmental values. Where possible, impacts have been expressed quantitatively and their acceptability has been assessed according to their conformance with relevant state or national guidelines and standards. Any likely environmental harm to the environmental values of the project area has been identified.

The assessment reported in this EIS did not identify any significant detrimental environmental impacts that could not be mitigated to acceptable levels.