

Papua New Guinea is geographically and culturally diverse, with over 700 separate cultural groups, many in very remote areas. Service delivery is expensive and logistically challenging, and many communities have difficulty accessing quality health care, education and adequate transport.

Around 40 per cent of Papua New Guinea's population lives in poverty. However, in recent years, the economic climate in the country has improved, driven mainly by the mineral resource sector and accompanied by improved economic management and budgetary performance.

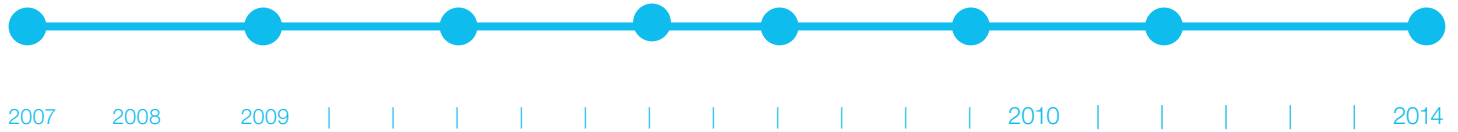
A new gas project, which Coffey Environments has been intimately involved with since the initial studies commenced in 1996, is expected to more than double the country's annual domestic product.

Turn the page to read about this landmark project.

Gas project set to **double** PNG's economy



PNG LNG Development Status



Papua New Guinea's natural resources hold the key to future broad-based growth in the country's income, and a new A\$18 billion gas project is expected to more than double the country's annual gross domestic product.

The Papua New Guinea Liquefied Natural Gas Project, the largest private investment ever seen in the country, involves the development of a number of gas fields and facilities to produce liquefied natural gas (LNG) for export. Piped from the highlands to LNG facilities on the coast near Port Moresby, 6.3 million tonnes of LNG will be produced per year.

On behalf of client Esso Highlands Limited, a subsidiary of the Exxon Mobil Corporation, Coffey Environments developed an environmental and social impact assessment of the project, the most comprehensive and definitive study of its kind ever undertaken in Papua New Guinea. The wide-ranging analysis – which covered community needs, sensitive environmental habitats and biodiversity – enabled the overall environmental and social credential of the project to be judged.

Coffey Environments senior principal Carmel Coyne said the project's remote area, spanning 23,000km² of land and sea, made the study not only a technical challenge, but a significant logistical exercise.

"The project's location is one of rugged and swampy terrains, with a tropical climate and high rainfall. This necessitated extensive planning and required access by chopper, vehicle and boat.

"To deliver an assessment of this complexity, we drew on our staff from a broad range of specialist fields, as well as support from a wonderful team of medics, cooks, drivers and camp managers provided by our client."

The Government of Papua New Guinea, Department of Environment and Conservation, has subsequently approved the project with 109 conditions.

Based on the report, a detailed environment and social management plan has been developed to guide the implementation of the construction works.

A 50-strong team of Coffey Environments experts incorporating consultants, archaeologists, zoologists and botanists is now conducting preconstruction field studies of all project facilities and infrastructure sites, ranging from the pipeline route to laydown and plant sites. The studies will ensure effective management of site-specific impacts and implementation of the plan, including biodiversity and cultural heritage.

Carmel explained the preconstruction surveys were a fulfilment of Esso Highlands Limited's commitment in the project EIS to minimise project impacts to the environment and local cultural heritage.



- **2007:** Environmental and social studies and stakeholder engagement for the environment impact statement
- **January 2009:** PNG LNG Environmental Impact Statement (EIS) submitted
- **April 2009:** Public review
- **July 2009:** Approved by PNG Government
- **September 2009:** Environment permit issued
- **December 2009:** Project sanctioned by Exxon Mobil Corporation
- **March 2010:** Financial arrangements completed

- **Current:** Early works construction execution
- **Current:** Site specific preconstruction surveys, covering:
 - biodiversity
 - cultural heritage
 - ecology and weeds/pests
 - marine
- **Current:** Archaeological salvage.

As part of a specialist team, Coffey Environments' involvement is also contributing to the protection of Papua New Guinea's heritage by managing comprehensive archaeological surveys, excavation and preservation of artefacts.

As the area around Port Moresby has a long history of pottery making and trade, subsurface archaeological salvage works were required at the LNG facilities site prior to construction works.

"We have conducted the largest archaeological salvage program in the South Hemisphere, which included surface collection, sieving and sort, excavations and laboratory analysis.

"One of the most pleasing aspects of the salvage is that it has renewed the community's interest in their own culture. It has also built capacity of the community to conduct archaeological work for a world-class project," Carmel added.

Financing arrangements for the Papua New Guinea Liquefied Natural Gas Project were completed in March 2010, and the project is now in the early stage of a four-year construction period. First LNG deliveries are scheduled to begin in 2014.

For more information:

Carmel Coyne
61 3 9473 1400
carmel_coyne@coffey.com

LNG FACTS

Liquefied natural gas (LNG) is an extremely cold, non-toxic, non-corrosive substance that is transferred and stored at atmospheric pressure.

The market for LNG is based on the fact that some customers for natural gas are too far from the gas resource for producers to supply the gas by pipeline. Cooling natural gas to -161°C liquefies it, which reduces its volume by a factor of 600. This reduced volume makes LNG an economical method of transporting large volumes of natural gas over long distances by ocean-going carriers.

Commercial LNG has been produced for more than 65 years and has been safely delivered across the oceans for nearly 50 years.

