

PNG LNG Quarterly  
Environmental and Social Report

Fourth Quarter

2012



**PNG LNG**

*Energy for the World. Opportunity for Papua New Guinea.  
Eneji Bilong Wol. Luksave Bilong Papua Niugini.*



# Supporting Papua New Guinea's future

“Our aim is to provide training and opportunities that will positively change and enhance the lives of Papua New Guinean workers.”

Decie Autin, Project Executive, Esso Highlands Limited



As the Papua New Guinea Liquefied Natural Gas (PNG LNG) Project (the Project) ends its third year of construction, it continues to focus on building community benefits such as the creation of jobs, training, business opportunities and social advancement programs, with full consideration of the livelihoods and cultures of the local communities in the Project area.

During the past three years, the Project has worked diligently with all stakeholders to establish what might be termed a ‘social license to operate’ in Papua New Guinea and considers this a critical component to the business. This approach has enabled the Project to build relationships with communities within the Project area and, in particular, with Papua New Guinean citizens and Project workers residing in those communities.

While maintaining the Project schedule is a core commitment, so too is the process of how the Project achieves this commitment. The Project defines successful execution as ensuring the ongoing safety and security of the workforce and local communities, promoting environmental protection, and helping to build sustainable national capacity. The Project also aims to contribute to a stronger Papua New Guinean workforce, better equipped to approach the future because of their experience working with the Project.

This is the twelfth PNG LNG Quarterly Environmental and Social Report, which demonstrates how Esso Highlands Limited, as operator of the Project, is working in partnership with stakeholders to deliver on the Project's safety, health, environmental and social commitments. Esso Highlands Limited, a subsidiary of Exxon Mobil Corporation, is responsible for the Project's construction and operation and is developing the Project with co-venturers: Oil Search Limited, National Petroleum Company of PNG (Kroton) Limited, Santos Limited, JX Nippon Oil and Gas Exploration Corporation, Mineral Resources Development Company Limited and Petromin PNG Holdings Limited, and their affiliates.

## Construction

The Project and its contractors realized the safest quarter yet, recording 19.4 million work hours without a Lost Time Incident. During this quarter, the LNG Plant and Marine Facilities contractor completed welding on all 120 pipe rack modules for the LNG jetty. The inner tank rings on both LNG tanks were also completed.

Mechanical completion of the offshore pipeline marked a major milestone with the final weld achieved in December. At Komo Airfield, the first layer of asphalt was placed on 1.6 kilometres of the runway. The Material Logistics team finished the year strongly with a record number of 9,000 Project cargo loads moved from Lae to Tari during 2012.

**20+ million work hours  
at the LNG plant site without  
a Lost Time Incident**

Key construction highlights are outlined in Table 1.



Aerial view of the Hides Gas Conditioning Plant

**Table 1 – Contracts and construction highlights**

Contract	Contractor	Major activities during the fourth quarter 2012
Upstream Infrastructure (C1)	Clough and Curtain Brothers Joint Venture	Completed pioneering of the entire 22-kilometre Hides Wellpad Access Road including tree felling and brush clearing.
Offshore Pipeline (EPC2)	Saipem	Mechanical completion of the offshore pipeline achieved with the final weld in December.
LNG Plant and Marine Facilities (EPC3)	Chiyoda and JGC Joint Venture	The LNG Plant and Marine Facilities contractor has achieved over 20 million work hours to date without a Lost Time Incident. Welding on all 120 pipe rack modules and installation of the Marine Control Building completed on the LNG jetty. Completed inner tank rings on both LNG tanks.
Hides Gas Conditioning Plant and Hides Wellpads (EPC4)	CBI and Clough Joint Venture	Completed all camps. Completed foundations for the main pipe rack, compressors and power generators. Completed the installation and hydrotesting of the firewater system underground piping in the utilities area.
Onshore Pipeline (EPC5A)	SpieCapag	Over 215 kilometres of main line and spurline pipe welded, with 176 kilometres of pipeline hydrotested. Hydrotesting, dewatering and air-drying of piping at the Kopi Scraper Station completed.
Komo Airfield (EPC5B)	McConnell Dowell and Consolidated Contractor Group Joint Venture	Placed first layer of asphalt across half the length of the runway. Completed 800 metres of the final asphalt layer.
Associated Gas Development	Various	Start-up, testing and handover of the thermal oxidizer to the operations group.
Drilling	Nabors Drilling International Limited	Successfully drilled upper sections of first wells.

## Safety, health and security

A safety milestone was achieved this quarter, with over 800 workers graduating from the Project's Safety Champions initiative to date. The positive impact of the Safety Champions is generating additional interest from contractors who continue to nominate candidates for the initiative. For example, during this quarter both Project and contractor security teams began to participate in the initiative. The expansion of the Safety Champions into multiple languages and cultural groups is also proving successful.

In October, the Lender Group's Independent Environmental and Social Consultant conducted an independent review of the Health Management Program for both Project and community health initiatives. Results of this review show Program implementation has "exceeded good practice". The review also indicates the Project's occupational health program is leading the way with careful monitoring of leading and lagging indicators across: malaria control; tuberculosis control; food and water safety; vector control; hygiene and sanitation; clinical operations; and infectious disease outbreak management.

The Project progressed numerous community health initiatives, with the Prince of Wales and Duchess of Cornwall officially opening the renovated health clinic in Boera Village during this quarter. The clinic and a newly constructed medical staff house were the result of five months of work by a team of local volunteers supported by the Project and its contractors.

The National Infectious Disease Diagnostic and Research Laboratory was also officially opened during this quarter. The Laboratory is the culmination of an extensive effort by the Papua New Guinea Institute for Medical Research (IMR), the University of Papua New Guinea and the Project to develop high-quality laboratory facilities that provide a platform for young Papua New Guinean scientists to develop their skills in biomedical research and diagnostics.



**At the opening of the National Infectious Disease Diagnostic and Research Laboratory, from left to right: Professor Ken Sumbuk, Acting Vice Chancellor, University of Papua New Guinea; Pascoe Kase, Secretary of Health, Government of Papua New Guinea; Peter Graham, Managing Director, Esso Highlands Limited; Decie Autin, Project Executive, Esso Highlands Limited; and Professor Peter Siba, Director, IMR**

## Workforce development

The construction workforce continues to grow to meet the demands of construction activity, particularly at the Hides Gas Conditioning Plant and LNG plant site. By the end of 2012, the total Project workforce reached 21,220, which is a 47 percent increase compared to workforce numbers recorded at the end of 2011.

**21,220 people make up the total Project workforce**

The Project is maximizing construction phase employment opportunities for Papua New Guineans wherever possible, while also preparing workers for future opportunities both inside and outside of the Project.

To date, the Project has delivered more than 1.6 million hours of training, with over 678,500 hours delivered in 2012. Almost 140,000 hours of training was provided in this quarter alone. This has been achieved through over 6,800 courses offered across the Project since its inception. In 2012, the Project delivered over 3,650 courses, of which 828 were delivered during this quarter.

Among the trainees is the first intake of participants in the Operations and Maintenance training program, who returned to Papua New Guinea this quarter after successfully completing one year of Advanced Skills training in Nova Scotia, Canada. The group is now involved in on-the-job training to prepare for their future Project operations roles.



**Graduates from the Project's first intake of Operations and Maintenance trainees at the graduation ceremony in Papua New Guinea**

In 2013, the Project's workforce will start to decline as construction work is progressively completed, and the Project's demobilization activities are preparing people for this. The training and work experience that individuals have received through working on the Project will prove useful in finding other employment as well as developing their communities.

The Project is also working with the Papua New Guinean Government to find ways to mobilize skilled workers to Government projects as work scopes are completed for the Project.

## Growing Papua New Guinean businesses

Papua New Guinean businesses remain prominent in the provision of goods and services across all Project areas, with Landowner Companies (Lancos) being the primary focus of supplier development. The Project-related spend with Lancos this quarter was more than 220 million Kina (US\$104 million). Since the Project began, 1.47 billion Kina (US\$700 million) has been spent with Lancos. In addition to Lancos, other Papua New Guinean businesses in the Project area are engaged for support activities such as camp rental and equipment hire.

To date, the Project's total in-country spend has reached 6.65 billion Kina (US\$3.16 billion). Of this, the Project spent 813 million Kina (US\$387 million) in this quarter alone.

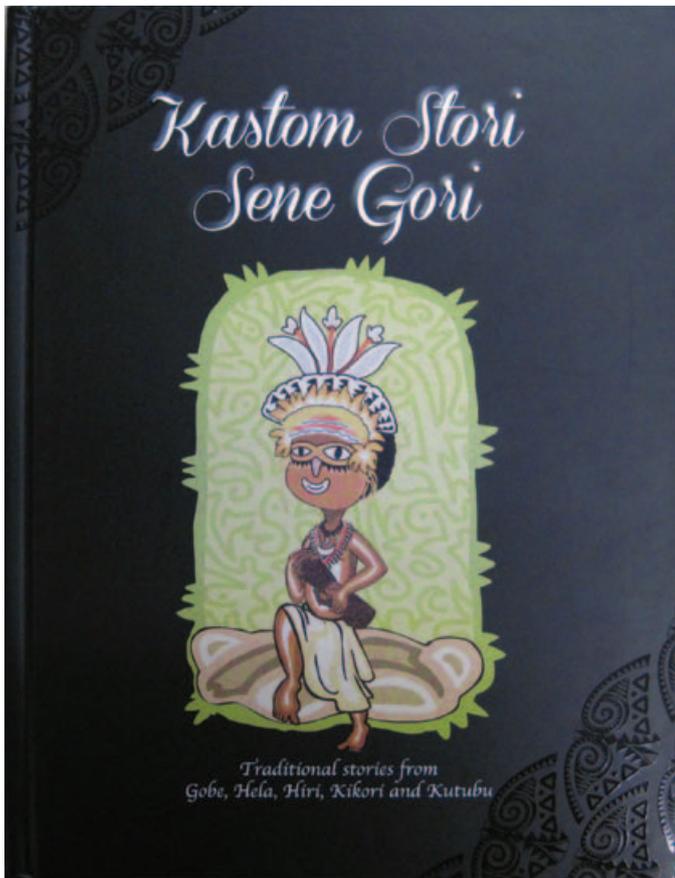
**6.65 billion Kina spent in Papua New Guinea to date**

The Enterprise Centre also continues to support the development of Papua New Guinean businesses. By the end of 2012, more than 14,600 Papua New Guinean entrepreneurs had been assisted through the Centre's workshops, use of workstations, business meetings and provision of information. The Centre had also delivered more than 6,700 training days and over 800 advisory and mentoring days to local businesses including Lancos.

## Social development

A key achievement this quarter was the release of a book titled *Kastom Stori Sene Gori* (traditional stories). The book represents a true partnership with communities, being the result of a story writing and drawing competition conducted with 26 schools in the Project impact area in 2011. The book features winning handwritten stories and illustrations by students that reflect the traditional tales of their villages.

Building from the success of the *Kastom Stori Sene Gori* competition and other initiatives for schools, including the popular Toea children's book series, the Project has developed a Support to Schools Plan for 2013. This includes identifying schools to work with and support in the areas of infrastructure development, improving the quality of education services, training for teachers and school boards, and enhancing extracurricular activities.



The *Kastom Stori Sene Gori* book

The Project and local communities have also celebrated the re-opening of the Lea Lea Bridge. The new bridge opened almost one year after the previous footbridge collapsed as a result of age combined with the structure being hit by general debris during king tides on Christmas Eve 2011. In addition, the first community retail store was opened outside of the LNG plant site construction fence. The store provides people from the four LNG plant site villages of Boera, Papa, Lea Lea and Porebada with employment and training opportunities and access to their first retail store located close to their villages.

Support programs continued this quarter for Papua New Guinean women. During the quarter, 127 women from the LNG plant site villages participated in a training program offered through the Women in Mining and Petroleum group. Training was conducted over four weeks and focused on nutrition, health and hygiene, sewing and basic business skills such as bookkeeping.

Personal Viability training continued in Komo, Habono (Hides) and the LNG plant site villages, bringing the total number of people trained-to-date to over 940.

Progress was also made on a community-led Agricultural Development Plan, which incorporates a support program to provide training on enhanced farming techniques, planting materials and tools. It also provides ongoing support to participants in the LNG plant site villages.



Project representatives, volunteers and members of the community at the Lea Lea Bridge opening ceremony

### Environmental performance

During this quarter, the Project recorded its lowest hydrocarbon spill rate since January 2010. The number of spills was nearly half that experienced in the fourth quarter 2011, with 58 spills occurring in this quarter compared to 102 last year.

The improvement in the spill rate is primarily the result of contractor diligence throughout 2012. For example, the Onshore Pipeline contractor held a successful unannounced spill drill in the Moro area where the communication chain of command, preparedness and response were commended. A Project-wide initiative was also employed to reduce the spill risk of stored hydrocarbon through bunding and lining of some container storage areas.

Another key achievement during this quarter was the completion of the waste process building at the Hides Waste Management Facility. By the end of this quarter, waste processing equipment including the weighbridge, tire debeader, industrial shredder and drum crusher were installed and prepared for mechanical completion and commissioning.

During this quarter, the Project began implementation of the Biodiversity Offset Delivery Plan by engaging with key stakeholders about protected area planning in the Kikori River Basin, progressing the implementation of Papua New Guinea's National Biodiversity Strategy and Action Plan, building the nation's conservation capacity, and enhancing the Lake Kutubu Wildlife Management Area.

### Stakeholder and community engagement

Papua New Guinea's National Road Safety Council has completed its Road Safety Awareness campaign for the Highlands Highway. Sponsored by the Project, the campaign was conducted from Goroka through to Hides and Komo in the Hela Province.

More than 50,000 people from communities along the Highway attended the Road Safety Awareness campaign, which was held at schools, community centers, market places and villages. Pedestrian and road safety awareness around construction sites was also the focus for many Project community engagement activities during this quarter.

Educational site tours continue at the LNG plant site, with around 290 visitors from schools, community organizations and Government participating in site tours during this quarter. These visits help educate school students and local communities about construction activities and reinforce health and safety messages. In addition to site tours, the Project supports school health and safety education programs.



**Redscar High School students receive an important lesson in safety at the LNG plant site**

Drama performances are also used in community meetings and worker toolbox talks to convey messages on topics including: money management; demobilization; the grievance process; hand safety; hygiene practices in the kitchen; and malaria awareness; as well as the repercussions of theft and possession of betelnut and other contraband items.

To date, the Project has conducted approximately 840 formal engagements with communities across Project areas. This is in addition to more than 1,260 people reached through informal engagements.

**~840 formal engagements  
conducted to date**

During 2012, more than 30 workshops were conducted with provincial and national government departments and foreign embassies as part of the Advocacy Workshop program. This included visiting dignitaries and foreign government leaders. Meetings were conducted in the provinces to provide an additional 455 national and provincial government representatives with an overview of the LNG plant site construction.

The Project's execution and rigorous, process-driven management approach, combined with input from co-venturers, and ongoing support of the Papua New Guinean Government and communities, will be a recipe for ongoing success for Papua New Guinea.

The PNG LNG Project demonstrates to the world – particularly the investment world – exactly what Papua New Guinea is capable of delivering. The joint success of this Project will be a strong foundation for a new era of development for this special, diverse and strategically located nation.





**PNG LNG**

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