



**PNG LNG Quarterly  
Environmental and Social Report**

**First Quarter  
2011**



**PNG LNG**

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



## First foundation poured for the PNG LNG Plant

“Following site preparations and road and infrastructure development over the past year, pouring the first foundation for the LNG Plant represents a significant milestone in the PNG LNG Project’s partnership with Papua New Guinea.”

**Decie Autin, Project Executive, Esso Highlands Limited**

The Papua New Guinea Liquefied Natural Gas (PNG LNG) Project (Project) celebrated two key milestones in the first quarter of 2011 with a ground-breaking ceremony for the construction of the process trains and the first concrete foundation poured for the LNG Plant, which will be a key Project facility.



**Process area ground-breaking ceremony**

Esso Highlands Limited, a subsidiary of Exxon Mobil Corporation, is constructing and will operate the Project on behalf of co-venturers: Oil Search Limited, National Petroleum Company PNG Limited, Santos Limited, JX Nippon Oil and Gas Exploration Corporation, Mineral Resources Development Company Limited and Eda Oil Limited, and their affiliates.

This is the fifth PNG LNG Quarterly Environmental and Social Report demonstrating how Esso Highlands Limited, as operator of the Project, is delivering on commitments in the areas of safety, health, environment and social management.

### Pre-construction activities

Pre-construction survey work along the onshore pipeline Right of Way continues, with approximately 67 percent of the 292-kilometre main pipeline route surveyed so far. By mid-February, onshore pipeline pre-construction surveys identified 68 cultural heritage sites requiring avoidance or protection.

The Project’s Management team is working with social and cultural specialists to avoid or mitigate construction impacts in these areas.

**67%** of the 292-kilometre main pipeline route has been surveyed

### Construction

As the LNG Plant and other key Project sites move into the heavy construction phase, contractors are scaling up their mobilization into Papua New Guinea. Infrastructure improvements and upgrades, including road and bridge works and the installation of construction camps continued. Meanwhile, the Upstream Infrastructure contractor achieved a safety milestone with five million hours worked without a Lost Time Incident. In recognition, they received the Annual Project Executive Safety, Security, Health and Environment (SSHE) Award for excellence in worker involvement in safety, effective subcontractor management and collaboration and teamwork.



**Decie Autin, Project Executive, Esso Highlands Limited, presenting the Annual Project Executive SSHE Award to the Upstream Infrastructure contractor**

**Table 1 – Contracts and construction highlights**

Contract	Contractor	Major Activities During the First Quarter 2011
Upstream Infrastructure (C1)	Clough Curtain Brothers Joint Venture	Bridge repair and strengthening works completed. Bulk earthworks for the Hides Gas Conditioning Plant diesel refueling area completed. Completion and opening to traffic of the Kikori River Bridge. Completion of the new section of road from Kantobo to the Mubi River.
LNG Plant Early Works (C2)	Curtain Brothers Papua New Guinea Limited	Bulk earthworks and culvert extensions completed for the road that connects Motukea Island and the LNG plant site.
Offshore Pipeline (EPC2)	Saipem	The subcontract for line pipe transportation from the coating facility to site awarded. Fishery and community engagement reports finalized for submission to the Papua New Guinean Department of Environment and Conservation.
LNG Plant and Marine Facilities (EPC3)	Chiyoda and JGC Corporation	Ground-breaking ceremony marking handover of the process area to the subcontractor for construction of the process trains. First concrete foundation poured for the pipe rack in Process Train 1. Completion of jetty pile testing. The LNG tanks model review completed. Manufacture of the nine percent nickel steel plate required for the inner membrane of the LNG tanks completed. Factory acceptance testing for the first Gas Turbine Generator successfully completed.
Hides Gas Conditioning Plant and Hides Wellpads (EPC4)	CBI Clough Joint Venture	Factory acceptance testing of mainline gas compression packages and gas turbine power generation packages completed.
Onshore Pipeline (EPC5A)	SpieCapag	Factory acceptance testing of all mainline manual and actuated valves completed. The main construction camp at Kopi became operational.
Komo Airfield (EPC5B)	McConnell Dowell and Consolidated Contractor Group Offshore	Phases 1 and 2 of the Main Camp completed, providing an additional 140 beds. Agreement reached with a local Landowner Company to construct a footpath around the airfield perimeter improving community travel and access.
Associated Gas Development	Various	Fabrication of the replacement offloading buoy progressed. The labor and construction management contract awarded for the refurbishment of the Kumul Marine Terminal.
Drilling (new wells and workovers)	Nabors Drilling International Limited	The contracts for directional drilling, measurement while drilling, logging while drilling, formation evaluation, perforating, liner hangers and communications awarded.

## Safety, health and security

There are risks associated with any project involving multiple worksites and heavy machinery. These risks are greater in areas of rugged and remote terrain. The Project had a fatality this quarter when an Onshore Pipeline contractor crew member, who was clearing the pipeline Right of Way, died from injuries sustained in a tree felling accident near Gobe. We extend our deepest sympathies to the family and friends of the crew member. Relevant authorities were immediately notified and an investigation into this incident was undertaken by the Project.

In a separate event in the Southern Highlands Province, several subcontractors were injured while traveling in a contractor's helicopter. They received appropriate medical care and Papua New Guinean authorities are investigating the incident.

During this quarter, in support of worker health, the Project launched a 'Stay Fit and Well, Prevent Tuberculosis' campaign involving workforce awareness and monitoring and a treatment referral program in support of World Tuberculosis Day on March 24.

Another Health team initiative involved stop work meetings, known as health stand-downs, across the Project to emphasize malaria risks and prevention in response to new malaria cases being reported.

In addition, the Project is implementing integrated vector control programs and improving tuberculosis pre-employment medical screening procedures to enable better detection of latent tuberculosis cases.

The safety and security of the Project workforce and surrounding communities remains a priority. The Project's security strategy is directed towards developing lasting, constructive relationships with communities impacted by Project operations, and encouraging landowners and communities to use the formal process established for addressing any grievances. The Project welcomes steps taken by local community leaders and the Papua New Guinean Government to improve law and order through an increased police presence and promoting the development of local business associated with the Project.

There was an incursion during the quarter involving approximately 150 people at the Wellpad A Camp. It resulted in non-life threatening injuries to three Project workers, the relocation of non-essential personnel and operations being suspended for worker safety reasons. The cause of the incursion is subject to an investigation. Early findings indicate that the cause is not Project related. The Project's Security team has reviewed and refined facility and camp designs and related security programs.

## Social development

The Project continues to invest heavily in promoting economic growth and creating positive impacts for communities within the Project Impact Area. For example, this quarter, 24 health education scholarships were awarded to students from the Southern Highlands, Gulf Province and Central Province through a partnership with Divine Word University and the non-government organization, Population Services International.

In addition, school packs containing much needed materials for the school year were distributed to more than 22,500 children. This coincided with the launch of the Kastom Stori/ Sene Gori Competition, which encourages school-aged children to learn from their elders about Papua New Guinea's traditions and culture.

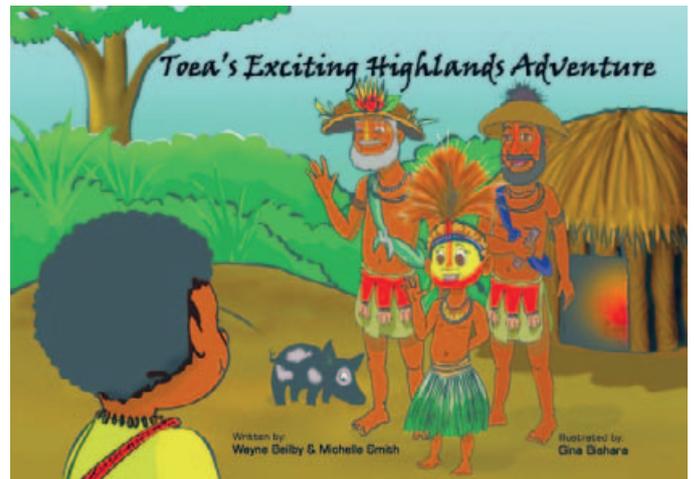
**22,500**  
school packs distributed to children

Distribution of the first two books in the 'Toea' children's book series to all 82 elementary schools in the Project Impact Area also continued. The books follow the adventures of a young character who travels to different areas within Papua New Guinea and develops a cultural understanding of the people. The books are endorsed by the National Education Department and aim to provide quality reading materials to elementary school-aged children.

Recognizing that agriculture is a major component of the livelihoods of Papua New Guinea's rural communities, the Project is supporting the development of agriculture-based ventures, with projects underway in Hides, Omati and at the LNG plant site. These ventures seek to promote economic development in rural areas by supporting communities in producing fresh produce, establishing cashew orchards and helping women in the Kikori area form a company to supply goods such as seedlings.



Preparing school packs for distribution



The second book in the 'Toea' series

Large construction projects can directly lead to an influx of people who perceive that there may be economic and employment opportunities and access to improved community services or family security. There has been a rise in speculative developments, including houses and gardens, appearing after the completion of a census in a Project Impact Area. In its community communications, the Socioeconomic team is continuing to highlight the cut-off dates after which new structures are ineligible for compensation.

Another important initiative involves supporting villages in the LNG plant site area to develop their own community based in-migration plans to help manage the migration of people who may be attracted to the area.

## Developing Papua New Guinean businesses

Through a focus on local skills development, empowerment and ownership, the Project can leave a lasting legacy that benefits future generations.

The Enterprise Centre continues working with local business in a range of practical ways to help them identify and compete for Project-related opportunities and develop their business skills. Demand for Enterprise Centre training is growing rapidly with more than 600 days of training provided to approximately 250 participants from Papua New Guinean businesses during this quarter. This is an increase of 275 days over the previous quarter's total. The Centre's capability is growing in line with the needs of local businesses, with business advisory services expanded to the four LNG plant site villages during this quarter.

Purchasing local goods and services is also helping increase local suppliers' capability to meet global standards. During this quarter, over 475 million Kina (US\$185 million) was spent on Papua New Guinean goods and services, bringing the in-country Project spend-to-date to more than two billion Kina (US\$779 million). This investment largely relates to the early infrastructure development program, the onshore pipeline and infrastructure activities, construction of the Komo Airfield, early works at the LNG plant site, and ongoing logistics and aviation spend.

Project contractors are also supporting Landowner Companies with Project-related spend on these companies exceeding 280 million Kina (US\$110 million) to date.

## Workforce development

More than **5,300** Papua New Guinean citizens employed representing 75% of the Project workforce

The Project is scaling up workforce development, training and health initiatives in line with its rapidly growing workforce. By the end of March, more than 7,000 people were employed on Project activities. More than 5,300 Project workers are Papua New Guinean citizens, representing 75 percent of the Project workforce.



Graduate engineers undertaking an 18-month development program

The Project is meeting the need for qualified construction workers and maximizing employment opportunities for Papua New Guinean citizens by providing training facilities at several in-country locations. So far, the Project and its contractors have provided more than 80 courses comprising over 1,500 sessions, attended by more than 5,000 Papua New Guineans.

## Environmental performance

By carefully managing natural resources such as water, timber, quarry materials and soils, the Project is demonstrating its environmental commitments. Topsoil management is important, because it preserves the bank of seeds and enables natural regeneration from plant material contained within soil, which is critical to successful reinstatement. Quarry 266, near Omati, which was a pre-existing borrow pit used to supply fill material for the Kopi Scraper Station Camp, was reinstated during the quarter using topsoil that had been appropriately stored and managed.

Papua New Guinea's terrain, climatic conditions and the inherent nature of its soil combine to make erosion and sediment control a significant challenge for the Project, requiring ongoing monitoring and vigilance. The inspection and assessment of erosion and sediment control devices is incorporated into contractors' verification assessments and forms part of toolbox talks and environmental awareness training. Lessons learned by a designated team who reviewed and maintained erosion and sediment control measures on the Gobe to Mubi River Road were also extended to other Project areas and the Onshore Pipeline contractor.

In addition, a Project-wide waste management review identified key waste generation and management activities and their corresponding challenges. A greater focus on waste is reducing reliance on other organizations for waste support and increasing self-sufficiency at Project worksites.

Substantial quantities of materials are being imported for the construction of the LNG Plant, pipelines and other facilities. By reporting cargo movements to Papua New Guinea's National Agriculture Quarantine and Inspection Authority (NAQIA) ahead of the required 90-day notice period, the Project is helping identify any higher risk shipments and any specific NAQIA directions before cargo leaves its port of origin.

To facilitate a consistent approach, and assist the NAQIA wherever possible, contractors are also sharing information about meeting compliance requirements, particularly in unique situations such as clearance of coated pipe while at sea.



Photograph © C.B. Frith

Grey Goshawk *Accipiter novaehollandiae* found in the Project Impact Area

## Stakeholder and community engagement

The Project's community engagement focus has shifted from providing general information about the Project to assessing the information needs of communities and providing more tailored programs for individual villages. Communities continue to express appreciation for Project teams who visit remote villages to consult with them, share information or work together towards community development objectives.

A Safety Awareness Program focused primarily on traffic and road safety and construction site safety has been deployed across the full Project Impact Area. This quarter was the first time the Program targeted schools and communities along the pipeline.

In addition, a PNG LNG Plant Site newsletter was launched covering local interests, concerns raised in community meetings and upcoming contractor schedules. A total of 1,600 newsletters were distributed to churches, schools and community organizations across the four LNG plant site villages. Due to community interest, the print run will be increased to 2,500 for the April 2011 edition.

## 1,600 copies of the first PNG LNG Plant Site newsletter distributed

Addressing community concerns remains a high priority for Project and contractor teams. During the quarter, a review of the Community Grievance Procedure was conducted as part of the Project's continuous improvement process. A grievance coordinator position was also established to ensure that the Project grievance process reflects best practice, including the timely close-out of grievances. By the end of March a concerted effort reduced the number of open grievances by almost 75 percent.

The Project continues working with Government agencies such as the Department of Works, so materials and equipment for construction activities are efficiently mobilized. For example, the Highlands Highway is vital for the movement of people and goods between the Highlands region and the coast including materials and people for the Project.

This quarter the Project presented a detailed engineering study of the Highlands Highway to the Papua New Guinean Government's Department of Works. The resulting report will help the Government implement short- and long-term maintenance and upgrading to meet forecast needs.

Land access is also critical for Project activities. Resettlement and land access compensation activities continued during this quarter with particular emphasis on the Heavy Haul Road, Kopeanda Landfill site, Wellpad Access Road, Komo Airfield, Hides Gas Conditioning Plant, Hides Quarry 1 and Hides Quarry 3 and the southern portions of the pipeline. The Project has negotiated and executed most of the In-Principle Compensation Agreements, which are a step in the process for obtaining land access, with 82 In-Principle Compensation Agreements signed by clan representatives and Project management.



Official presentation of the Highlands Highway repair and maintenance upgrade report

The Project aims to minimize the need for resettlement where possible and to conduct necessary resettlement activities in accordance with international best practice as defined by the International Finance Corporation social safeguard policies and Papua New Guinean laws.

The Project is entering an exciting and challenging period of activity in 2011 as both the complexity of construction activity and the number of workers involved rapidly increase. Regardless of this, protecting worker and community health and safety, preserving Papua New Guinea's environment and cultural heritage and working constructively with communities will remain fundamental to all Project activities.





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