



## Australian Projects Face Labor Constraints

With Australia set to dominate the next wave of liquefaction projects, concerns have once again emerged about the ability of the country's strike-prone labor market to absorb such a large capacity expansion without cost escalation and delays. Evidence is already mounting that the next round of growth will not be without pain. Woodside recently raised the cost estimate for its 4.3 MMt/y Pluto project by A\$1.1 billion (\$989 million), citing a shortage of skilled labor as the main culprit (see LNGWM, Nov '09). Pluto also faced a two-day strike in December which saw about half of the 3,200 construction workers stop work. Rolling stoppages continued through January to protest a plan for rotating workers to change accommodations each month. Workers were also demanding to be paid for the two hours they spend travelling to work each day and for lunches on Saturdays. The unrest at Pluto does not appear to have fazed Chevron, the lead developer on the 15.45 MMt/y Gorgon project. A company representative cited good dialogue with the unions in ongoing negotiations, although he also warned that labor shortages could be a "challenge" as industry investment picks up.

Australian LNG projects have always been vulnerable to labor shortages. The rule of thumb in Western Australia is that the labor market can absorb just one or two trains at a time without strain. This rule was sorely tested during the mining boom that continued into 2008, the start of the global downturn. A vast expansion in the mining sector saw the region's limited skilled resources drawn away from oil and gas projects, creating an environment of high and escalating wages and near full employment. Now the labor market in Western Australia could be tested again. Pluto's first train is nearing completion and the massive A\$43 billion (\$37 billion) Gorgon venture has gotten underway. Several other projects in this part of Australia are striving to reach final sanction within the next year. These include two more trains at Pluto, Chevron's two-train

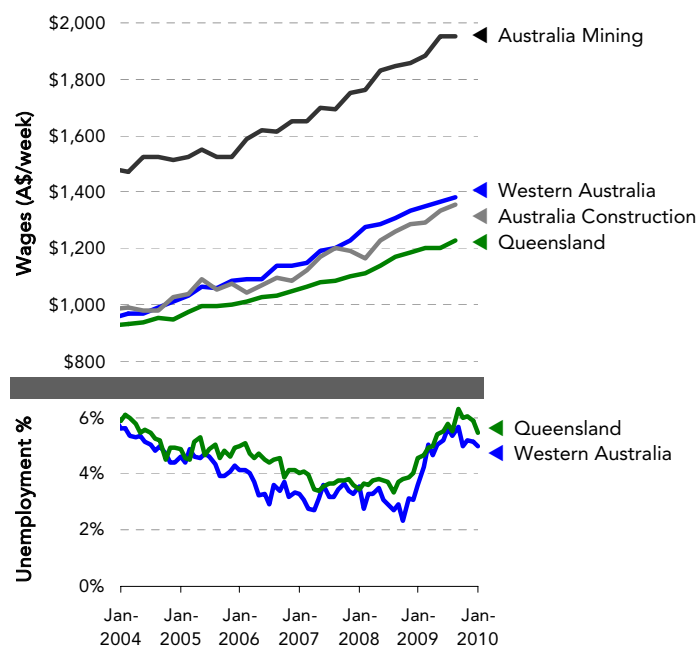
wheatstone project and the Inpex-led Ichthys project near Darwin in the Northern Territories. This could see as many as nine trains in some phase of construction by 2014.

Compounding this labor demand is a rapid resurgence among the region's other extractive industries, with mining companies already warning that they will need thousands more workers to support the next wave of growth. The Western Australia Chamber of Commerce is now forecasting growth rates for the state between 7% and 12% over the next three years as resource projects valued at up to \$90 billion are launched.

This surge in project activity leaves the state's labor market in a precarious position. While Western Australia has a long history of energy projects, it also has a smaller and more isolated workforce than regions in the eastern part of the country. A lack of skilled resources was largely responsible for the

decision to adopt modular construction techniques at North West Shelf's recent fifth train, Pluto train 1 and Gorgon. This strategy moves much of the fabrication work offshore to deeper, less expensive labor pools (See LNGWM, Nov '09). Yet contractors working on the Gorgon project have already been forced to look outside the country for welders, pipe fitters, project managers and engineers. Meanwhile, Woodside is trying to get expansion trains at Pluto off the ground without disbanding its train 1 construction team to avoid releasing these resources to rival projects.

**Australian Labor Markets  
Almost Unscathed by Recession**



Source: Australian Bureau of Statistics

Queensland's labor market will also be tested by the upcoming wave of coal bed methane-based LNG projects planned in this northeast state. Several projects could wind up jockeying for a limited pool of skilled resources, with the first one out the gate gaining a distinct advantage over its rivals. Two projects – BG's Queensland Curtis LNG and Gladstone LNG grouping Santos and Petronas – are currently running head to head in the race to win this distinction (see related story above). Other CBM ventures sponsored by ConocoPhillips with Origin, Arrow Energy and Shell are also hoping to get underway within the next 18 months. Altogether, these represent up to 15 trains worth of construction activity, although an initial load of six to eight trains is seen as the most likely scenario. With each project claiming to create 3,500 to 6,000 construction jobs at peak as well as up to 1,000 permanent positions, the required resource expansion appears staggering.

A study commissioned by the Queensland Department of Infrastructure and Planning estimated the labor requirement at almost 11,000 new jobs at the peak of construction, along with about 3,500 permanent operating positions. But the study also admitted this estimate could be modest, as it assumes eight trains will be built at a steady rate of one per year to smooth out the peak resource requirement – an unlikely outcome in the fiercely competitive project environment. Efforts to fill the upcoming need for skilled resources remain in their formative stages. Energy Skills Queensland – a taskforce set up by the project developers – currently anticipates needing around 5,000 new operating resources by 2020, with many of these positions in skilled engineering and technician roles. The taskforce expects to fill these positions through a combination of measures such as increased investment in training, attracting retired resources and workers from other industries, plus intra-state, inter-state and even international migration.

The last of these steps is potentially the most controversial, as Australian labor markets have traditionally resisted foreign workers even for large construction projects, despite the country's relatively small and widely-spread population base. Some of the projects have started to take matters into their own hands. Santos has

initiated a \$50 million program to establish up to 100 apprenticeship and trainee positions to support Gladstone LNG. Given the size of the resource gap, however, even this level of investment is a drop in the bucket. Because of the time it takes to develop skilled resources, a wide range of initiatives will be needed on both coasts to support the envisaged growth without a repeat of the project delays and cost escalation suffered in the last project round.