

ADDRESS BY

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LNG – CHALLENGES OF SUPPLY

Thanks very much for your kind introduction and for the invitation to be part of this important forum.

I will speak today on supply-side challenges for the LNG industry in Australia – those that are immediate, and those ahead of us.

And, I want to remind us all that success – particularly as we prosper in the great commodity boom of our age – is not guaranteed.

As a company, Woodside anticipates playing a major role in keeping Western Australia on the LNG world-map, even though we face significant hurdles.

As a country, Australia plays in an internationally competitive market where other suppliers are intent on eating our lunch, so to speak.

In addition, the currently buoyant global energy market creates its own set of issues, with cost control and a shortage of skilled labour being two related issues that stand-out.

We have a groundswell of support for expanding the Asia-Pacific gas industry.

The list of Australian successes in contributing to the industry on the global stage is long – and we have the opportunity to grow that honour role even longer.

But significant challenges are emerging, particularly for new projects.

And for Woodside at least, those challenges could be considered company-makers or company-breakers.

So I'm passionate about dealing with them.

As I look forward, I am worried about signals that appear to reflect a view that we in Australia are somehow insulated from global competitive forces – not just the 'lucky country', but something even luckier than that: That the resources boom somehow will carry us through, regardless of the decisions we make now.

Such a perspective is a sure-fire way to fail, for Australia and for Woodside.

So that's another reason that we're here today – to be frank with each other in light of the facts.

Favourable resources markets only give us the opportunity – it is up to us to work together to deliver that opportunity.

My talk today is in two parts.

First, I have a brief review of LNG in Australia – and Western Australia in particular.

It's a good news story, but I am resisting the temptation to get carried away with platitudes and instead will focus on the facts.

I will do this because of the reality that our LNG colleagues in the Asia-Pacific have sometimes outperformed us.

We have key lessons in our past that we must contemplate when planning our future.

Second, I will detail key challenges facing the LNG supply industry.

In addition to cost and labour challenges, I will pose a few thoughts about what we must do to get new LNG production off the ground.

For example, we pride ourselves on our environmental stewardship; but even with best practice on our side, I'm not sure this will be enough to move forward with LNG site and project development.

First, our history.

I could tell you lots of rosy stuff at this point.

Australia is a lucky country when it comes to gas and we are well-placed to capture LNG opportunities and grow our industrial market at home.

The so-called greater north-west arc from Western Australia around to the Northern Territory alone has gas resources exceeding 100 trillion cubic feet.

That's a lot of gas by our measures.

If Australia produced 20 million tonnes of LNG a year at current rates, we'd still be at it in 100 years, even without any exploration success in the interim.

So you can begin to see the market opportunity.

Western Australia has the now long-established North West Shelf LNG facilities, on track to produce more than 16 million tonnes of LNG a year by 2008, up nearly 10 million tonnes from 2004.

In the Northern Territory, the new Darwin LNG plant has joined the club with production capacity of more than three million tonnes a year.

But should Australia have done more in the past?

And should we have done it faster?

As an industry observer over the years, I think so.

Here are some facts.

Let me tell you the story of Brunei LNG.

While Australia can justifiably take pride in having established a production track-record of LNG from the North West Shelf, we are not alone in achieving such a feat.

In fact, Brunei outpaced Western Australia in LNG development.

From its first gas discovery in 1963, Brunei produced its first LNG in 1972 – just nine years.

In Australia, we took about 17 years to bring the North West Shelf on stream and 21 years to reach six million tonnes a year across three production trains.

Brunei had five LNG trains working by 1974, after only 11 years, for total production of more than seven million tonnes a year.

Take Indonesia.

They took just seven years from the discovery of the Arun gas field in 1971 to deliver their first LNG.

Indonesia's Bontang project had a similar story – gas discovered between 1970 and 1972 with first LNG cargoes by 1977.

Malaysia outperformed Australia with their Sarawak LNG development.

Offshore gas discoveries between 1969 and 1975 became Malaysia LNG exports by 1983, six years ahead of our first LNG cargoes.

In an historical context, our performance – significant though it was – can be viewed internationally as under par.

I am interested in these performance metrics because getting to market quickly captures market opportunity.

At Woodside, this challenge applies to our Pluto and Browse developments.

Pluto was discovered in 2005 and we're targeting first LNG in 2010.

This is industry-record pace.

Browse, on the other hand, was discovered in 1971 and we are now aiming for first LNG from 2012.

That is not industry-record pace.

One supply-side challenge right now is to catch a favourable market – it won't last forever – and our modeling suggests that early market entry is far better than a late arrival halfway into the next decade.

Historical perspective is one thing.

Taking the lessons from history is another, and this brings me to the challenges the LNG supply industry faces.

But first, let me remind you of the high-level, positive forces at work for gas and for LNG and, in particular, for Australian LNG.

We are seeing an extended upturn in energy markets that I believe includes several issues that constitute a structural shift beyond those of a standard commodity cycle.

That said, however, the forces of supply and demand have not gone away – and if Woodside and our partners fail to get our gas to market as LNG, other suppliers across the Asia-Pacific will.

That's a key takeaway from the quick history lesson on the achievements of Brunei, Malaysia and Indonesia.

Accompanying this upturn are several other fundamental shifts in our industry that are wonderful opportunities.

One, we are seeing the shift from oil (and from coal, for that matter) to gas as a preferred energy source.

Two, we are also seeing a shift in the geography of energy supply from the US and Europe towards Africa, the Asia-Pacific and Latin America.

Three, we are seeing a customer shift from developed to developing nations, with Australia on the doorstep of Asia's growing economies.

But industry-wide shifts such as these result in challenges, too.

We will need state-of-the-art technology to cope with ever-more challenging environments such as greenhouse gas emissions and deeper water – albeit with an inevitable cost increase.

We are seeing customers locking-in security of energy supply through negotiating equity ownership in upstream assets.

All of this is manageable, of course – it's just a reminder that the business landscape continues to change.

Cost challenges have been highlighted across our industry by several commentators – everything from daily drilling-rates to unit labour costs has escalated significantly in the past two years.

To give you a quick example, Woodside and our partners are expanding the North West Shelf Venture.

I won't trouble with all eight different categories of labour rates that apply under our project labour agreement.

But I can tell you that the average hourly rate is now 50% above the 2004 best estimate – and that estimate had already factored in a forward-looking escalation.

The challenge to maintain capital efficiency on such projects is clear.

With project activity hot across Australia's booming mining sector, as well as the energy sector, competition for labour is acute.

We also estimate that contractor profit margins have escalated by around 50% in recent years.

We have flagged an increase in our North West Shelf costs over our original estimate, and find ourselves in the same territory as other big projects across the world where costs have risen.

It is clear that major projects such as ours are highly beneficial to the Australian economy through multiplier effects, even well before they turn a dollar for their owners.

But the challenges don't stop with cost.

The laws of supply and demand don't go away just because the market is favourable.

Our market projections suggest that the supply-demand balance may not be as good for suppliers in the longer-term.

Specifically, several new LNG projects could hit the market from 2012, including large volumes from the established producers such as Qatar.

The Asia-Pacific could become a buyer's market once again.

Faced with cost pressures, emissions and accessing deeper water environments, it is not difficult to see that the best economic outcome is to catch the 2010-2014 opportunity.

On the face of it, then, we simply need to manage our costs and develop our projects quickly.

But we have a "sleeper" in Australia.

It is hard to secure environmental and heritage approvals for new projects.

In Australia, our industry is facing a world where our future increasingly depends on the goodwill and agreement of our communities to allow us access to common resources – the air, the land and the water – to develop.

This is not a bad thing.

But it does require different approaches – shared approaches – to how we manage our environmental and social impact.

Best practice and adherence to regulation are often not enough.

Our shareholders are demanding more.

Our communities are demanding more.

Even the people we work with are demanding more.

We are tackling greenhouse gas emissions despite the irony that gas is good for mitigating global warming.

More is being asked of us.

We are tackling social impact, despite the irony that development is good for society.

More is being asked of us.

I am sure that government, LNG developers and communities share the belief that development of our gas resources is good for all of us.

How we do that to ensure there are no losers is the challenge that will transcend the boom times we have.

Nobody currently on watch across our governments, our industry or our communities seriously wants to see the biggest commodity boom in history pass us by without us getting another Australian LNG plant off the ground.

Thank you.