AUSTRALIAN DOMESTIC GAS OUTLOOK CONFERENCE
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REMARKS BY MARK COLLETTE, ENERGYAUSTRALIA EXECUTIVE – ENERGY

1. Introduction

Good morning…

I'm Mark Collette. I'm responsible for EnergyAustralia's energy business; it comprises our gas and electricity trading operations as well as assets and investments in coal, wind, solar and, of course, gas.

EnergyAustralia is wholly-owned by CLP Group, one of the largest integrated energy businesses in the Asia-Pacific with 18,000 MW of equity generation capacity and more than 7,300 employees.

EnergyAustralia is the biggest contributor to CLP Group's earnings outside mainland China.

Our heritage dates back decades; that gives us deep experience in the Australian energy industry.

Our 4500-MW portfolio has a bit of everything.

- We own and operate the 1400-MW Yallourn power station in the Latrobe Valley. It supplies around a fifth of Victoria's energy demand.

- We are right in the middle of a $1.5 billion program to buy 500 MW from new wind and solar energy projects in eastern Australia.

- We're assessing the feasibility of innovative clean energy projects, including pumped hydro using seawater in South Australia and energy recovery in New South Wales.

- We own and operate a 400-MW, gas-fired power station at Tallawarra in New South Wales, one of the most thermally-efficient plants of its kind in Australia, and

- We own and operate the 200-MW Hallett gas-fired power station in South Australia.

We have a proud track record of bringing gas to market for our customers. EnergyAustralia underwrote development of the Casino and Otway fields, much as we're doing right now with the Sole field offshore Victoria.

And EnergyAustralia is also the country's third-largest energy retailer.

We have around 2.6 million customer accounts; each one represents a family, a business or a large commercial or industrial operation.

Right now, we're in the middle of a lot of conversations about gas.

And just lately they've been difficult conversations; a lot of them referencing the newspaper headlines and TV stories we've all seen lately.

Prices are up and supply is tight. That's tough because Australia depends on reliable and affordable supplies of gas to warm homes, power businesses and to sustain jobs.

It's perverse that in a country with abundant natural gas resources we are struggling to secure molecules on behalf of some customers.

Our customers tell us they are hurting.

Something's broken. But it's not enough to just call out a problem.

How do we fix it?

Today I'll look at the domestic gas market from EnergyAustralia's perspective – a retailer's perspective.

I'll talk about:

- The problem – what we think is wrong. Before a problem can be fixed we need to agree what we're solving for.
- I'll discuss the implications of addressing the problem late, or worse, letting it go unchecked, and
- I'll look at the critical role gas has to play in the electricity market.

I have three key points to make today:

1. Our national energy market is challenged – severely challenged – but is not broken.
2. Restoring confidence is integral to any fix. In fact, it's the single most important thing.
3. The energy world has fundamentally changed and our expectations for gas must change with it.

So, let's start at the beginning…where are we at?

2. Context

Today, our industrial customers are facing some of the toughest energy conditions we have ever seen.

We don't have to speculate about what the future holds. Look at the past 18 months:

- Wholesale gas prices have more than doubled from $4/GJ to $11/GJ.
- Wholesale electricity prices have tripled from $35 to more than $100 per MWh.
- Renewable energy prices have jumped from $35 to $90 per certificate.

At the same time, the national electricity grid seems less reliable.

There have been widespread blackouts in South Australia and load shedding (basically controlled blackouts) in South Australia and New South Wales.

And there's Hazelwood; the power station supplies 20% of Victoria's energy demand and exports electricity to South Australia and New South Wales.

Later this month that plant will close and it will put further pressure on our energy markets.

To round-out the challenges, Australia has committed to reduce national carbon emissions by 26-28% on 2005 levels by 2030. To meet this target, the transition to cleaner forms of energy must continue.

For a long time gas was cheap. We thought of it as part of the transition.

There was lots of gas from Longford, the Cooper Basin and the Otway Basin in Victoria and the Surat Basin in Queensland.

Then, about a decade ago the big fields which supplied residential and business markets in Australia began an inevitable decline…around the same time as an $80 billion new LNG industry began to take shape.

I imagine the LNG project proponents are as surprised as anyone at the current state of the market.

The basis for those projects was Australia's vast and untapped natural gas resources.

No one thought for a moment that state governments outside Queensland would put their respective feet on the hose and slow or block the development of new supply. It wasn't supposed to be like this.

We've never seen this intensity and breadth of change in our industry.

Now, it's possible we'll muddle through much as we have done; businesses will make tough decisions to absorb or pass-on the cost of more expensive energy.

Or we may see widespread business closures and some dire impacts on workers, families and industry.

It's hard to predict precisely what might happen but without doubt we are at the beginning of a very tough two years – at least.

3. The problem

But what precisely is the problem we need to address?

The main problem across the energy sector is confidence. Businesses are not confident enough about the energy sector to enter long-term contracts.

Investors are not confident enough to put capital at risk in new long life assets.

Policy instability, **market information gaps** and the **absence of a firm, durable trajectory on emissions** have eroded confidence.

In fact, confidence has been shot to bits.

And without confidence our energy system is on life support.

We are not where we need to be for our customers. We know what success looks like – success means business and industry investing in new supply and in long-term contracts.

And it means delivering three things: **reliable, affordable and cleaner energy** for everyone in Australia.

In other words, it means providing the outcomes families, business and industry alike want and value.

4. The role of gas in electricity

Before I explore how we rebuild confidence, I'm going to look at the role of gas in electricity generation.

As an electricity retailer we may see the role of gas a little differently to many of the people in this room.

Here's how we look at the wholesale electricity market: existing coal is cheaper than other forms of generation, but investors and financiers view it as a legacy technology, one which will be replaced – the only question is when.

Renewables are an obvious source of replacement energy for existing coal plants.

But we need solutions to deal with their intermittency. The challenge lies in dealing with cloudy and windless days when renewables are not producing power, or enough power.

We have a neutral view about the technology that will replace existing coal as a source of base-load supply, so long as it supports the delivery of reliable, affordable and cleaner energy.

That's where gas comes in… As we make the transition, there's a clear potential role for gas balancing increases in renewable energy.

Don't assume that's an easy role, either. At current price points, we see gas being used for intermediate or peak supply – not for base-load generation.

But using gas in that way requires big capacity – and big investment – for only relatively light use. Returns from that type of asset can be variable and volatile.

That's a tough investment case to put before a bank, board of directors or shareholders.

Our gas-fired Tallawarra power station in New South Wales is a state-of-the-art combined cycle plant.

Today it's a peaking plant; it switches on when it's really hot or when there are reliability problems with another power plants.

While Tallawarra entered service in 2009 it was originally designed and built as an intermediate plant.

It's not the same market in 2017; there's not much slack in gas supply and gas peakers are no longer cheap, particularly if a new facility also involves investing in lightly-used pipelines which are also more expensive than they were.

It's hard to say whether the investment case for Tallawarra would stack up today. Too many questions are unanswered, leaving little confidence.

For example, what emissions trajectory are we working to as a nation? When and over what timeframe will coal-fired plants close? Will government planning policies constrain fuel supply? Will batteries be cheaper than new gas generation?

5. Addressing the problem

Right now, the answer to whether to invest in new gas generation today is "no". It's too risky.

I said earlier success means delivering three things: **reliable, affordable and cleaner energy** for everyone in Australia.

When one of those things is given priority over the others you get our current situation: volatile markets, problems with the security of supply and rising prices.

No one pretends it's an easy fix.

The truth is politics are making it very hard for good politicians to do the right thing.

But the answer isn't rocket science.

It's this: it's giving business confidence to invest, whether that's backing new, cleaner generation to replace coal or developing major new gas fields or entering long-term energy contracts.

Confidence. That's it.

When we had stable policy the industry had confidence, and there was investment.

Given our starting point, we have a challenge to create those conditions.

But while the energy industry faces a stern test, it's not right to say the system is broken – I'm referring to the National Electricity Market.

The truth is for much of its existence the NEM has served customers well:

- Since it was established in 1998 the NEM has delivered investment in an additional 15,000 MW, a third of that renewable generation capacity.

- Over the same time, the emissions intensity of the NEM has fallen by 20% (from 1tCO2/MWh to 0.8tCO2/MWh).

- In the decade-and-a-half to 2015 wholesale electricity prices were relatively stable; businesses in particular benefited from prices that had fallen significantly in real terms since the late 1990s.

The NEM is doing what it's designed to do. It needs some enhancements, but not a radical overhaul.

Despite that, it seems a new fix is suggested every week by one side of politics or the other or one interest group or another.

But we don't need to throw the system out or patch it up with a hundred band-aid solutions.

Instead let's get the basics right – again – and restore confidence.

The basic problems to address are:

1. **Policy stability** – we need to know any decision we make today won't be undone next year; there is already enough risk in this industry from technology and intense competition. We think a stable, bi-partisan and national approach is critical.

2. **Transparency of planning information**– notice of closures and better market information describing the aggregate supply of fuels for electricity will build confidence for investment.

3. **A firm, durable emissions trajectory** – in other words, we need some clear signal to investors to reduce carbon intensive generation. An emissions intensity scheme is the commonly mentioned mechanism, but it doesn't have to be that. A lifetime emissions budget for large generators might be a good, simple place to start.

And there's something else: state governments simply must support gas developments.

If we're to move away from coal-fired power – and meet our Paris commitments – we'll need as many options available as possible to balance increases in intermittent renewable energy.

All our proposed measures go to restoring confidence: the confidence to invest and the confidence to contract for energy long-term.

I'll spend a moment on two of the enhancements we've proposed.

6. Filling information gaps

Decisions to do with planning and contracting and investment suffer when there are gaps in the information available to market participants.

It's tough to make decisions in the dark, especially when they involve big investment over decades.

That's true whether you're an investor or a large buyer of energy.

The NEM today does not provide enough information on fuel positions to encourage contracting and investment.

You see it in the unwillingness of some generators and large consumers to enter into supply contracts, when in hindsight, both parties could have been better off with one.

Many of the challenges in South Australia could have been avoided had large users understood the position of the Northern power station and what closing the plant would do to the market.

The announcement to close Hazelwood was another case of taking out generation at relatively short notice – certainly, not enough notice for the market to respond with replacement capacity.

The lack of sufficient planning information – otherwise known as a "surprise announcement" – appears to be behind the unnecessarily abrupt price rises we've seen.

Here's what we think should be done:

- Publish aggregate market fuel positions — generators should submit their fuel positions to AEMO. The market operator can then publish aggregate positions, helping both avoid unpleasant surprises and to inform new investment.

  And

- We'd like to see penalties for not giving notice of closure — both thermal generators and large users should provide a minimum period of notice before closing their operations or face a penalty. We're talking years of notice, not months.

7. Operating the NEM more conservatively

We think there's value, too, in taking a more conservative approach to operating the NEM.

We are not wedded to any particular approach. There are lots of ways to skin this cat and organisations like AEMO are well placed to comment on the details.

There is also good work being done by the AEMC in considering rule changes to improve system security.

For us, what we are seeking through more conservative market operations is greater system stability.

A lot of the technical parameters of the system, things like frequency, are more variable today than in the past. At times, this changes the system risk profile.

We'd like to see the dispatch process incorporate more risk management.

What will this mean? Likely, more focus on synchronous generation in the short term.

Controllable generation like gas helps make the system stable.

If we operate our market to address these risks then we should see more stable demand for synchronous generation when needed – which will then give generator owners more confidence to buy the fuel to operate when needed.

8. Summary

So, I've been up here talking for about 20 minutes now.

For anyone who's just walked in, here's the abridged version:

- Policy instability, market information gaps and the absence of a firm, durable trajectory on emissions have eroded confidence – both for investors and long-term purchasers of all forms of energy.

- With confidence shot to bits, we are not seeing investment in new energy assets that will take us towards reliable, affordable and cleaner energy.

- It is clear we face a tough couple of years as customers and industry confront some of the highest prices we've seen. The situation won't get better if we don't address the problems which are eroding confidence.

- The way forward, as we see it, is to get the basics right.

    - Integrate a carbon trajectory into the NEM, through an emissions intensity scheme or something similar.
    - Operate the NEM more conservatively.
    - Publish better planning information.
    - End the gas moratoriums.
    - Let gas, batteries and other energy technologies compete.

There's no rocket science here. You can fix most of what ails the market with a stable, bi-partisan and national approach to energy that gives equal weight to reliable, affordable and cleaner energy – that's the key to restoring confidence.

In the meantime, at EnergyAustralia we'll continue to help our customers navigate through the most challenging and dynamic time our industry has known.

Thank you.