



If the politics is key... then present uncertainties very high







News 👻 Business 👻 Sport 👻 Entertainment 👻 Lifestyle 👻 Travel 👻 Realestate 👻 Money 🤊

More: news.com.au » News » Breaking news

Tussle over Qld power, ports sell-off

Recommend < 1 Tweet < 0 2 +1 < 0 in Share

BY KYM AGIUS AAP March 01, 2013 4:32PM

A+ A- 🖨 🖂

BIG business has welcomed a report calling for mass asset sales and outsourcing of services in Queensland, but critics are outraged and the opposition says the state is up for sale.

💿 reddit this!

The executive summary of the Commission of Audit, headed by former federal treasurer Peter Costello, was released on Friday.

The full 1200-page document will be released, with the government's response, within two months.

The executive summary advises the government to consider outsourcing bus and rail services, child safety, corrective services and public housing services.

Energy generators and distributors should also be sold, as well as the Gladstone and Townsville ports and the Queensland Investment Corporation.

Opposition Leader Annastacia Palaszczuk says the fundamental role of governments is to deliver core services, but the Liberal National Party (LNP) will shirk its responsibilities.

"Today the LNP has put Queensland up for sale," she said.

"Nothing is sacred. We don't know what is going to be left."

She urged the government to release the full report on Friday and says the devil will be in the detail.

Renewables in Australia





Mkt message – investment on hold, falling futures prices

Figure 5: Quarterly base future prices Q1 2013 – Q4 2016



Source: d-cyphaTrade/ASX www.d-cyphatrade.com.au

Figure 3: \$300 cap contract prices (\$/MWh)

	Q	LD	NS	SW	V	С	ę	SA
Q1 2013	21	0%	0 (25)	-40%	4 (56)	-49%	5	-43%
2013	8	-1%	2	-3%	3	-27%	4	-18%

Source: d-cyphaTrade/ASX www.d-cyphatrade.com.au

* a number in brackets denotes the number of trades in the product.



...or, instead, focus on policy directions

National Energy Advocacy

Following COAG's endorsement on 7 December 2012 of SCER's measures to enhance energy consumer engagement in the energy market, SCER has agreed to explore options for a national energy consumer advocacy body. To progress this, an expert advisor will be engaged to consult with consumer groups and other stakeholders in the development of an implementation model for a national energy consumer advocacy body, with a written report to be provided to SCER for consideration by May 2013.

AEMC Approach of Reviews of Competition in Retail Energy Markets

Following COAG's endorsement on 7 December 2012, SCER agreed to progress improvements to the current mechanism of retail competition reviews by the AEMC, to provide a more market-wide and ongoing review of the state of competition. To support this revised approach, SCER will progress amendments to the AEMC's current approach to its reviews. The revised approach, which aims to better inform the transition to more competitive retail energy markets, is due to be developed and approved by SCER by the end of 2013 and applied annually thereafter.

any mereaner.

Demand Side Participation

(Standing Committee on Energy and Resources (SCER), 2012)

SCER agreed to progress work on the recommendations in the AEMC Power of Choice review, which will lead to new work streams in its demand side participation work plan. This includes inprinciple support for a range of reforms, and agreement that officials should prepare Rule change proposals for consideration by the AEMC addressing the following areas:

- Expansion of competition in metering and related services to all customers, consistent with a business-led, optional approach to adoption of more advanced metering in states where a widespread roll-out is not underway;
- Reform of the distribution pricing principles to provide better guidance for setting cost reflective distribution network charges;
- Reform of the demand management and embedded generation connection incentive scheme available to distribution businesses;
- Defining customer rights to access their own energy consumption data;
- Formal incorporation of a minimum functionality specification for smart meters into the Rules; and
- Clarifying AEMO's role in demand forecasting for its market operational functions, in particular to improve forecasting of demand side responses in the market.

SCER also provided in-principle support for, and agreed that officials should develop terms of reference for:

- AEMO to manage the transition to any new metering arrangements delivered through the Rule change proposal to expand competition in metering and related services;
- AEMC to develop advice on open access and common communication standards to support competition in demand side participation end user services enabled by smart meters; and
- AEMO to establish an advisory stakeholder working group to assist in developing a
 potential Rule change proposal for a new wholesale market demand side participation
 option, and a new category of market participant, for the AEMC's consideration and
 final decision.

SCER agreed to develop the market settings to allow for jurisdictions to provide consumers with the option to move to time-varying pricing and, in states without an existing widespread roll-out, an opt-in policy for the supporting metering infrastructure.

Renewables in Australia





Australia's energy (+climate) policies

- One of the world's major energy exporters
 - #1 Coal
 - #2 Uranium
 - #5 LNG

Renewables in Australia

 Exports approaching 2 X consumption



Australian energy production (ABARE, Australian Energy, 2011)







Focus on key challenges of climate change







Two 'worlds' for renewables integration







The NEM... and current wind







Wind impacts on NEM: Merit Order Effect

- Merit order ranking available sources of energy, especially electrical generation, in ascending order of their short-run marginal costs of production to efficiently prioritise dispatch
- Merit order effect Impact of bringing new generation into existing merit order: impacts on dispatch, costs (and prices)
 - Strong theoretical basis
 - Measurable impacts in electricity industries around the world
 - Not just an issue for renewables or electricity; eg. Nuclear, Demand, Hydro Merit Order Effects have all occurred in electricity industries around the world
 - Complex shorter and longer term complexities and dynamics





Current NEM Supply Curve



36





Merit order impacts part of the policy debate

- In 2007, the time frame for increasing the share of Victoria's electricity consumption from renewable sources to 10 per cent was extended from 2010 to 2016. A range of factors, such as the interests of existing generators, the renewable energy industry and Victorian electricity consumers, were considered in extending the target. However, the extension occurred primarily to alleviate the concerns of brown coal generators that the 10 per cent target would deliver too much renewable energy generation too quickly, which would reduce wholesale electricity prices and adversely affect existing generators. (Victorian Auditor General, 2011)
- MOE role in policy process not necessarily transparent, recent work including MEI, CEEM relevant in highlighting these issues





More general framework – economic value of highly variable, partially unpredictable renewables

- Energy value of renewables in an Electricity Industry depends largely on its match with underlying cost drivers such as time and location varying demand, availability of other generators
- Marginal energy value of RE declines as penetrations increase
 - An issue with virtually all generation technologies
 - generation without inherent energy storage has lower value than conventional gen with storable energy sources (coal, gas, hydro)
- Variability + unpredictability significant but complex implications
 - Significant 'complementary resources' competition in wholesale market that can assist in managing this variability + unpredictability
- Of course, Environmental, energy security and other values of RE increase with greater deployment





Value – nature of underlying RE resource

Figure 5-9 — Wind generation and total South Australian demand from 20 January 2011 to 2 February 2011







South Australia a world leading wind jurisdiction for empirical analysis

Wind generation share of total generation, by region



Renewables in *i*



Commercial value in wholesale market

Wind, as with any other gen investment shifts mkt outcomes, & hence revenue of all market participants. In a restructured electricity industry, such impacts an intended outcome.

Wind clearly appears to be impacting wholesale spot prices (but note complexities of such analysis wrt overall impacts, particularly in longer-term, also wrt ancillary, derivative prices)









Wind energy 'value' in NEM?

At high penetrations wind generation earns less than more dispatchable generation – appropriate outcome as technology without primary energy storage has lower value in electricity industry than generation that does

Financial year 2009-10	SA	VIC	NSW				
Min/Max demand (MW)	814/3121	4082/10047	5692/13885				
Installed wind generation (MW)	868	439	170				
Wind penetration (% annual energy)	17.8	2.1	0.5				
Volume weighted price for all wind farms	47.4	32.2	66.7				
Volume weighted price for all other	90.1	42.1	52.4				
generators							
Absolute price difference	42.7	9.9	-14.3				
% Difference for wind below VWP _d	51.8%	23.7%	-27.3%				
(Cutler, Boerema, MacGill and Outhred, <i>Energy Policy J</i> ., 2011)							





Q: Does wind in NEM increase electricity prices?

- Wind clearly impacts wholesale electricity mkt prices
 - SA and VIC analysis suggests spot price reductions at high wind times
 - Depends on evolving behaviour of wind and other market participants
 - Many further uncertainties eg. potential impacts of rapid wind changes, market power, longer-term investment dynamics on prices
- Wind impacts retail prices both through wholesale price impacts but also REC obligations on retailers
 - Complex relationship between wholesale electricity and REC prices
 - Seems highly likely that all of our supply-side options to reduce emissions will increase 'direct' electricity costs, *but prices*?

Key question – which prices for whom?

- Wind is reducing wholesale market prices received by all generators
- Some large industries receiving major exemptions from RET, likely also seeing lower wholesale prices
- Retail customers may not receive falling wholesale market prices
- A 'safe' climate is worth paying for











Retail markets and 'prices'

- NEM wholesale market has prices
- Predetermined retail electricity tariff (schedule of charges) is not a price in 'economic efficiency' sense of term
 - That requires locational and temporally varying and uncertain spot and future prices for both energy and network services (Outhred and MacGill, 2006)
 - Major reform of interface b/n supply and demand sides of electricity industry and NSPs required before genuine 'price discovery' can occur
 - Little apparent interest or willingness to do this to date by key players
- Electricity industries
 - traditionally 'charge' 'schedule of fees' sufficient to deliver essential current & future access to 'reliable' electricity supply 'service' s.t. underlying customer 'class' costs, wider considerations (eg. equity).
 - In restructured industries, an unresolved question, often only limited moves towards 'economically efficient' pricing wrt earlier arrangements



NEM retail markets and competition

- Little focus on energy services
 - "... an important reason there is effective competition in Victoria is .. because the provision of energy is viewed as a homogenous, low engagement service" (AEMC, 2008)
- Current measures of competition might miss key issues
 - Yes, NEM high switching rates but real customer choice or just churn?
 - Yes, NEM price spreads but reflect competition, stickiness, or govt policy?
 - "The thing about the energy retail market is it's effectively an oligopoly.. There are a small number of large players—three—who are effectively providing a commodity." *Jim Myatt, founder of Australian Power and Gas*<sup>High switching markets - consumer switching rates of 15 percent or higher Medium switching markets - consumer switching rates of 5 to 15 percent
 </sup>

Renewables in Australia AGL (crikey.com.au, 2013)Low switching markets - consumer switching rates of 1 to 5 percent



Source: World Energy Retail Market Rankings 2012, VaasaETT, www.vaasaett.com

Centre for Energy and Environmental Markets FIGURE 14: EXISTING & PROPOSED TRIGENERATION SITES IN SYDNEY LGA

Some real competition?

- Distributed generation
 - Photovoltaics
 - Trigeneration
 - Others to come...
- Distributed energy management
- End-use energy efficiency

(Solar Citizens, 2013)

The Solar Revolution in New South Wales

This publication provides a snapshot of the current progress of solar PV installations in our state, its rapid uptake around Australia, and gives an insight into the opportunities ind the challenges for the future of clean energy.



^{\$12}4,195,120

on power bills

EXISTING TRIGENERATION
 PROPOSED TRIGENERATION

(City of Sydney, 20132

Renewables in Australia