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COGENERATION AND TRIGENERATION IN NEW SOUTH WALES

Organisation: Energy Supply Association of Australia

Name: Mr Kieran Donoghue

Position: General Manager Policy

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Energy Supply Association of Australia
www.esaa.com.au

ABN 98 052 416 083

Level 2
451 Little Bourke St
Melbourne

GPO Box 1823
Melbourne
Victoria 3001

P [redacted]
F [redacted]
E [redacted]

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Jonathan O'Dea MP
Chair
Public Accounts Committee
Parliament House, Macquarie Street
Sydney NSW 2000

Lodged (by email): pac@parliament.nsw.gov.au

Cogeneration and trigeneration in New South Wales

The Energy Supply Association of Australia (esaa) welcomes the opportunity to make a submission to the NSW Public Accounts Committee (the Committee) on the cogeneration and trigeneration inquiry.

The esaa is the peak industry body for the stationary energy sector in Australia and represents the policy positions of the Chief Executives of 36 electricity and downstream natural gas businesses. These businesses own and operate some $120 billion in assets, employ more than 51,000 people and contribute $16.5 billion directly to the nation's Gross Domestic Product.

esaa supports a technology neutral approach for generation investment. Co-generation and tri-generation are two of the numerous types of embedded or distributed generation (DG) currently available. As such, the Committee's examination of cogeneration and trigeneration is likely to benefit from examining the efficient use of DG more broadly in NSW. A holistic approach is important in light of the fact that technology subsidies have to date driven DG investment in Australia. In considering the role of DG in NSW, esaa supports the use of efficient market signals to facilitate the economic take up of these emerging technologies. The decision to invest in generation assets whether they are large scale centralised generation or DG should be driven by commercial outcomes. It is therefore important to identify and remove any barriers impeding legitimate commercial decisions. esaa suggests this should be the primary focus of this review. We would not support an objective that focuses on encouraging DG simply as an end in of itself. In that context, there is already a substantial body of work available on the regulatory settings for DG that the esaa recommends the Committee draw on. These include:

- the Australian Energy Market Commission (AEMC) rule change process - *Connecting embedded generators*: the rule change request is in its final stages. The AEMC has released its draft rule change and stakeholders have provided feedback. The AEMC has proposed changes to the rules governing connection of distributed generation to make it easier for DG to connect and to reduce connection times;
- The Standing Council on Energy and Resources (SCER) review - *Mid-Scale Embedded Generation Connection Standards:* SCER recently received a

report examining the feasibility of developing technical standards for the connection of mid-scale embedded generation (generally 30 kW to 5 MW). Officials are currently considering the report;

- AEMC rule change process - *Publication of zone substation data*: this process is in the early stages. While the rule change was initiated for another purpose, greater access to zone sub-station data would provide potential DG investors better information on the relative value of investing in DG in different parts of the distribution network; and
- AEMC rule change process - *Small Generation Aggregator Framework*: this rule change was complete late last year. The rules were changed to create a new category of Market Participant which will be able to sell the output of multiple small generating units without the expense of individually registering every generating unit.

Given these inquires cover the key areas affecting DG, including connection rights, costs and timing; technical standards and access to demand data, it is unlikely that any substantive barriers in the energy market will remain unaddressed. To the extent that co-generation and tri-generation projects are not being developed, there are two commercial challenges that may be relevant: obtaining off-take agreements for the sale of surplus electricity and obtaining fuel supply (typically natural gas). Neither of these factors represent market barriers to this technology per se, but rather are representative of broader trends in the energy sector. They are discussed in more detail below.

Off-take agreements

As it is unlikely that a demand profile for a possible investor in cogeneration and trigeneration plant is going to match the output of the plant, selling the surplus electricity through an off-take agreement is likely to form part of the business case. To the extent that proponents of cogeneration and trigeneration are currently finding it difficult to obtain an off-take agreement, this may simply reflect the excess capacity in the wholesale market, which is currently depressing wholesale prices. While the market remains oversupplied it will reduce the relative attractiveness of taking DG output.

Gas prices and availability

As cogeneration and trigeneration plant is normally runs on natural gas the future of the gas market has a significant impact on the economics of these two technologies. The most influential factor over the short to medium term availability and cost of natural gas supply in NSW will be the development of indigenous coal seam gas (CSG) reserves and resources.

While it is anticipated there is sufficient gas to support domestic and export demand over the next 40 years based on current reserves and resource estimates, this assessment is predicated on continued development of gas resources, including in NSW. Having historically imported around 95 per cent of its natural gas requirements from neighbouring states, the absence of developed CSG reserves leaves NSW acutely exposed to any tightening of the supply/demand balance over the short to medium term.

With the expiration of long-term NSW gas supply contracts over the next 3-4 years, the same period during which LNG exports are set to ramp up, NSW customers will be reliant on their suppliers being able to continue to access gas from resources developed in other states. As identified by the Grattan Institute, continued uncertainty over the development of CSG could potentially expose NSW consumers to supply shortfalls during future periods of peak gas demand[1]. Further, gas contracted for import into NSW is also likely to be priced at a premium to indigenous CSG, given higher production and transportation costs. Relative to a scenario where CSG production expands steadily, recent estimates suggest wholesale gas prices in NSW, Victoria, South Australia and Tasmania will be 25-32 per cent higher by 2030 should NSW CSG development be materially constrained[2].

esaa encourages the Committee to support options that promote the economic development of gas supply side options in NSW.

Any questions about our submission should be addressed to Fergus Pope, by email to [redacted] or by telephone on [redacted]

Yours sincerely

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Kieran Donoghue
General Manager Policy

[1] Grattan Institute, Australia's energy challenge, June 2013 - http://grattan.edu.au/static/files/assets/ba24a4e0/189_getting_gas_right_report.pdf.
[2] ACIL ALLEN CONSULTING – Report to the Australian Petroleum Production and Exploration Association, Potential Economic Significance of NSW Coal Seam Gas, May 2013.