

**Submission
No 33**

COGENERATION AND TRIGENERATION IN NEW SOUTH WALES

Organisation: Jemena Gas Networks (NSW) Ltd
Name: Mr Scott Martin
Position: Manager Commercial Operations
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Jemena Gas Networks (NSW) Ltd
ABN 87 003 004 322

The Committee Manager
Public Accounts Committee
Parliament House
Macquarie Street
Sydney NSW 2000

Level 20
111 Pacific Highway
North Sydney NSW 2060
PO Box 1220
North Sydney NSW 2059
T +61 2 9455 1500
F +61 2 9455 1589
www.jemena.com.au

By email: pac@parliament.nsw.gov.au

Dear Sir

Inquiry into Cogeneration and Trigenation in New South Wales

Jemena Gas Networks (NSW) Ltd (**JGN**) is pleased to make this initial submission to the Public Accounts Committee's inquiry into Cogeneration and Trigenation in New South Wales. As the owner and operator of the principal gas network in NSW, JGN has a direct interest in any application of co/trigenation technologies.

JGN accepts the environmental and energy efficiency benefits that co/trigenation can deliver and supports co/trigenation in principle for that reason. However, from JGN's point of view, there are significant policy, regulatory and commercial issues that need to be resolved before we could support wide-spread implementation of co/trigenation.

Conventional single customer cogeneration and trigenation installations (for example, in hospitals, industrial sites and common plant for large buildings) are now quite common on JGN's gas network. From our observation of the gas loads taken by those installations, there appears to have been mixed success in achieving design levels of gas demand and plant utilisation. This range of experience suggests that application of the technology in real-world situations still presents some basic technical challenges.

More recently JGN is seeing co/trigenation proponents developing more complex commercial propositions involving the establishment of local thermal and electrical distribution systems to supply energy within a building or a precinct to many separate end customers. These propositions do not fit well with current energy market frameworks. Each one raises questions as to how the standard market framework needs to be adapted to accommodate the technical and commercial configuration proposed by the co/trigenation proponent and to allocate responsibility for maintaining energy market standards and end customer rights.

Co/trigeneration operations also give rise to economic, reliability of supply, and customer choice issues:

Economic considerations – building or precinct level operations will potentially take many individual customers currently connected to existing gas and electricity networks as customers of that operation which will become a single large customer for the existing gas network. While this may result in some cost savings for existing networks e.g. because of the reduction in meter reading, billing and customer management activities, there are also potential added costs. The gas network may have to be augmented to meet the additional demand and there may or may not be savings in the electricity network depending on whether the co/trigeneration operation relies on access to it for distribution and/or as back-up for when the co/trigeneration plant is not operating.

While energy efficiency savings will have greater value as energy prices increase, the co/trigeneration operation also introduces a significant additional capital investment into the energy delivery chain that the customers of that operation must pay for.

Reliability and quality of supply – if co/tri-generation systems are to deliver the same reliability as current distribution systems (gas and electricity) then they must be engineered accordingly. If that is not done then customers on the co/trigeneration system will suffer a poorer quality of service than customers supplied through the existing network. Alternatively if the co/tri-generation operator intends to rely on existing networks as back-up, and only as back-up, then that will require potentially significant redundancy in the those networks. That redundancy will have to be funded.

Customer choice – customer choice has been at the heart of energy market reform in Australia for more than a decade. If customers of a co/trigeneration operation are tied to that operation then they will be denied choice and the operator potentially has monopoly power which could require regulatory intervention. Alternatively arrangements that maintain the right of choice are likely to be complex and costly and will potentially increase risk for the co/tri-generation operation.

If you wish to discuss this submission please contact me by phone on [REDACTED] or by email at [REDACTED]

Yours sincerely

[REDACTED]
Scott Martin
Manager Commercial Operations