Marubeni
Power Development
Australia Pty Limited

25 May 2010

Mr Steven Graham
Chief Executive
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Re: ERC 0098 Publication of Carbon Dioxide Equivalent (CO_2-e) Intensity Index for the National Electricity Market.

Dear Steven,

Marubeni Power Development Australia Pty Ltd (Marubeni) is the owner of a Combined Cycle Gas Turbine Cogeneration Facility known as the Smithfield Energy Facility (Smithfield) in Sydney. Marubeni Australia Power Services Pty Ltd is 100% owned by Marubeni and is the operator of Smithfield and the Registered Generator under the NER.

Smithfield uses natural gas as it primary fuel source and supplies electricity to Integral Energy and steam to Visy Paper on an adjoining site.

Marubeni is making this submission to AEMC to ensure that any emissions reported from cogeneration facilities continue to recognise the fact that cogeneration facilities generally offset alternate and inefficient fuel combustion processes within the hosts' facilities.

Under the National Greenhouse and Energy Reporting Regulations 2008 (NGER), Smithfield is obligated to register and report its emissions from 1 July 2008 to the Greenhouse and Energy Data Officer as Smithfield will exceed the nominated threshold of 25,000 Tonnes of CO_2-e per year.

The NGER requires measurement of CO_2-e emissions to be calculated from total gas consumption and does not take into account any efficiency benefits derived from cogeneration. The NGER method provides important information regarding the total CO_2-e emissions a cogeneration plant produces. It does not however consider the Emission Intensity of the facility with respect to the total energy consumed to the total energy produced.

The Technical Guidelines of the Generator Efficiency Standards recognise the higher levels of thermal efficiency of a cogeneration facility (say 60%) compared to an equivalent combined cycle plant (say 50%) with the same electrical output. This is because the thermal energy and electrical energy produced are both taken into account in the cogeneration facility when determining the plant's overall thermal

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efficiency. Thus the Technical Guidelines provide allowance for additional fuel consumed that is producing thermal energy other than electrical energy. In a cogeneration facility for every additional GJ of fuel energy input there can be an increase of approximately 4GJ of thermal energy output.

Combined Cycle Gas Turbine facility can have an Emission Intensity of say 500kg CO_2-e / MWh and a Combined Cycle Gas Turbine Cogeneration facility with exactly the same gas turbines could have an Emission Intensity of say 550kg CO_2-e / MWh. If the Emission Intensity was calculated taking into consideration the additional thermal energy produced (other than electrical energy) the Emission Intensity could be say 450kg CO_2-e / MWh.

It is critical to maintain the position of recognising the thermal efficiency benefits of cogeneration to the public and to encourage the efficient use of the limited energy resources. Should AEMC determine to publish the Emission Intensity of Generators in kg CO_2-e / MWh only, it must ensure that credit is given for the additional fuel energy consumed to produce energy other than electrical energy from the facility.

Marubeni does not have any objection to publishing Generator Emission Intensity data but does strongly object to any Emission Intensity being published with respect to Smithfield that does not consider the benefits of cogeneration.

Please contact me should you require further information regarding this submission.

Yours sincerely,

Mal Mors
General Manager

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