

**QUESTIONS ON NOTICE FROM THE PUBLIC ACCOUNTS COMMITTEE INQUIRY INTO
COGENERATION AND TRIGENERATION IN NEW SOUTH WALES**

DOC13/78181

1. RESOURCE EFFICIENCY POLICY

City of Sydney have stated that it is unclear whether energy efficiency projects that reduce gas consumption are recognised under the Energy Savings Scheme. Can you clarify whether cogeneration systems that reduce gas consumption will be recognised under the ESS? Are the overall benefits of thermal energy network adequately recognised under the ESS?

Answer:

Gas savings are not currently recognised under the Energy Savings Scheme (ESS). The Energy Efficiency Action Plan commits the Government to investigate market-based mechanisms for promoting gas efficiency, one option being to include gas in the ESS.

2. COMMONWEALTH CBD PROGRAM

Has consideration been given to City of Sydney's recommendation that the Building Energy Efficiency Disclosure Act 2010 should recognise thermal energy outputs?

Answer:

The following response was provided by the Commercial Building Disclosure Program, Australian Government Department of Industry.

The views of City of Sydney, along with those of other stakeholders, were carefully considered prior to the NABERS National Steering Committee decision on the treatment of energy from cogeneration and trigeneration systems under the NABERS rules.

Building Energy Efficiency Disclosure Act

The Commercial Building Disclosure (CBD) Program, underpinned by the *Building Energy Efficiency Disclosure Act 2010* (the Act), is designed to provide clear and credible information about the energy performance of office buildings. The objective of providing this information is to allow the energy performance of office buildings to be compared on a like-for-like basis reflecting the inherent characteristics of buildings, not the method by which energy is purchased. The CBD Program, managed by the Australian Government Department of Industry, uses the NABERS Energy for Offices rating to provide this comparable assessment, noting it is the rating without Green Power purchases that is used. The requirements under the Act to disclose a NABERS Energy rating do not prohibit the advertising or promotion by building owners of other information including any other ratings received.

3. **ENERGY EFFICIENT BUSINESS**

The most common fuel for cogeneration systems is natural gas. Are you aware of and can you give us some detail on other feasible fuel options for cogeneration systems?

Answer:

Alternative fuels for cogeneration

Ninety five per cent of all cogeneration opportunities proposed by energy experts in the Energy Saver Program involved the use of natural gas fired engines.

There are some alternative fuels which have the potential to be used in cogeneration applications.

Biogas

Biogas is a renewable energy source produced when organic matter is processed in an anaerobic digester. This process involves biological processes in which biodegradable material is broken down by microorganisms in the absence of oxygen. The organic material can include animal manure, municipal wastes and waste water, industrial waste and other organic matter. The biogas produced can be used in a cogeneration system.

Sites with large volumes of organic waste can have good potential of producing biogas for electricity generation and heat generation. For example, Sydney Water has at least four biogas cogeneration units operating at their waste water treatment plants in NSW.

Combustion of solid biomass

Solid biomass waste materials such as wood, sawdust, bagasse and other biological material can be directly burnt in combustion equipment to produce steam and or hot water. The steam produced can be used to drive turbines for electricity generation. Direct burning technology is well established in Australia. For example, bagasse produced in sugar mills is burnt in boilers to produce steam which is used to produce electrical energy, drive the mills and pumps and meet process heat requirements.

Industrial facilities can utilise solid waste material generated in their operations and conduct feasibility studies to determine whether burning this will meet some of their energy demands.

Other liquid fuels

Liquid fuels, such as diesel, ethanol and LPG are generally too expensive to be viable for cogeneration applications.

The cost of these systems is generally higher than natural gas systems. However, if the fuel is cheap, free, or in the case of wastes has a negative cost, then even with the additional capital associated with installing such a system, projects may still be viable.

4. **BIOMASS FOR COGENERATION**

Regarding the use of biomass for cogeneration systems – what consideration is being given to the type of timber that is actually allowed to be used? For example, we were told that whilst there was a market for timber that could be sourced, the only approved market was out of the plantation timber market for woodchip to be added to the paper part of the biomass. Whilst there are a lot of facilities in Sydney and the rest of New South Wales where recycled timber is shredded into woodchip, that is unable to be used; it must come from plantation timber. Why is this the case when we have a market that could be recycled?

Answer:

The *Protection of the Environment Operations (General) Regulation* currently allows biomass from plantations, sawmill waste and waste from wood processing and manufacturing to be used to generate electricity.

Between 22 July and 20 August 2013, the Government consulted on proposed amendments to the *Protection of the Environment Operations (General) Regulation* that would also allow logging debris, pulpwood and invasive native species to be used to generate electricity.

The Government is currently considering the issues raised through public consultation and intends to finalise amendments to the Regulation in 2013.