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Senate Standing Committees on Economics  
PO Box 6100  
Parliament House  
Canberra ACT 2600

20 June 2014

To whom it may concern;

**Re: Inquiry into the Energy Efficiency Opportunities (Repeal) Bill 2014**

Brickworks welcomes the opportunity to provide a submission to the inquiry into the Energy Efficiency Opportunities (Repeal) Bill 2014.

*About Brickworks*

Brickworks Limited is an innovative group of Australian-owned companies and is one of the nation's largest manufacturers. Brickworks has in excess of 40 factories across Australia and more than 1400 employees. Its primary business is the manufacture and distribution of clay and concrete building products, particularly bricks, as well as roof tiles, masonry and pre-cast.

*Self-directed Energy Efficiency Measures*

Brickworks is an example of a successful Australian business improving environmental outcomes and meeting energy challenges without the need for regulation.

Reducing energy consumption and emissions, and lowering energy costs was a priority for Brickworks decades before the Energy Efficiency Opportunities (EEO) program was introduced in 2006. Starting in the 1970s in the face of high fuel oil costs, Brickworks moved to cleaner natural gas, and has since been systematically reducing the energy intensity of its operations through product and process innovations. The result has been a significant reduction in Brickworks' energy consumption and greenhouse gas emissions by more than 44 percent in the last 10 years around the country.

The majority of Brickworks facilities currently rely on natural gas as their primary source of energy for firing kilns, however rising domestic prices are making natural gas unviable as a future major energy source for the business. In the face of this challenge, Brickworks invests considerable effort into finding more cost effective and cleaner ways to operate.

Under its current sustainability program Build For Living, Brickworks has a pipeline of energy efficiency programs aimed at further reducing the environmental footprint of the company and cutting energy consumption and costs. Additionally, outside of its EEO program obligations, Brickworks is implementing energy efficiency initiatives such as kiln efficiency systems (combustion optimisation and high efficient burners), power factor correction and compressed air and lighting upgrades to name a few. Brickworks' business ethos is also focussed on producing building materials that improve the energy efficiency of Australia's buildings and homes.

More detailed information on selected Brickworks energy efficiency initiatives can be found at Appendix 1, and on its website [www.buildforliving.com.au](http://www.buildforliving.com.au)

Proudly supports



*Energy Efficiency Case Study – Austral Bricks Longford plant, Tasmania*

Brickworks group's Austral Bricks Longford plant in Tasmania is an industry leader in energy efficient manufacturing. The plant's kilns are powered completely from biomass waste products – in this case, sawdust – which has almost eliminated the use of fossil fuels in the manufacturing process and has the added benefit of recycling used forestry materials. The plant also produces Australia's first carbon neutral brick certified under the Australian Government's National Carbon Offset Standard (NCOS) Carbon Neutral Program, which was launched earlier this year.

*Compliance Burden of the Energy Efficiency Opportunities program*

The compliance burden of the second cycle of the Energy Efficiency Opportunities (EEO) program imposes high costs on Brickworks for minimal additional benefit. As Brickworks is already an energy efficiency-focussed business, the second cycle of the EEO program offers no new findings, but still requires an allocation of resources, including staff, time and funding.

In order to comply with the EEO program legislation, Brickworks must undertake expensive annual energy audits of all of its plants to identify energy efficiency opportunities. Brickworks must then report its findings publically, and include information on project costs, paybacks and the quantum of energy savings. The annual report must then be signed off by the Brickworks Board. There is no obligation to actually implement the energy efficiency opportunities identified in the audits. This process means Brickworks must retain a full time staff member, as well as spend time moulding its own energy efficiency monitoring – conducted by specialist staff at plant and kiln level – to ensure it complies.

For Brickworks these compliance burdens of the EEO represent high opportunity costs – the resources outlaid are detracting from Brickworks' own energy efficiency program. The time and resources Brickworks puts in to its EEO program obligations could deliver better outcomes if they were instead invested in Brickworks' energy efficiency research and development, and implementation efforts.

Despite Brickworks' efforts to bring its own solutions to energy efficiency and environmental challenges, it is consistently hampered by regulatory impediments; the EEO program is one such example of the counter-productive effects of green tape. Reducing the compliance burden of the EEO program will allow Brickworks to reallocate its resources into its own highly successful energy efficiency innovation program.

*Recommendation*

Brickworks strongly supports the repeal of the Energy Efficiency Opportunities (EEO) legislation.

If you require any further information about this submission or Brickworks' energy efficiency measures please do not hesitate to contact me.

Sincerely

Steven Mouzakis  
National Energy & Sustainability Manager  
Brickworks Limited

## Appendix 1

The breadth and depth of Brickworks' mission to reduce its energy consumption, environmental footprint and operating expenditure by moving away from carbon intensive fossil fuels and switching to cleaner, renewable sources reaches across Australia. Some key examples are:

### Plant 1 Horsley Park NSW

- Landfill Gas (LFG) has replaced approximately 40% of our Natural Gas requirements, reducing carbon emissions by approximately 7,000 tonnes per annum (the equivalent of taking 1,750 cars off the road).
- The LFG was previously flared or "wasted" by Veolia, the landfill operator.
- This project was awarded a Grant of \$500,000 under the Federal Government's (AusIndustry) Clean Technology Investment Program.

### Plant 3 Horsley Park NSW

- A Landfill Gas (LFG) Project is currently being implemented which will replace approximately 50% of our Natural Gas requirements, reducing carbon emissions by approximately 15,000 tonnes of carbon dioxide equivalent per annum (the equivalent of taking 3,750 cars off the road).
- The LFG was previously flared or "wasted" by Transpacific Industries, the landfill operator.
- This project was awarded a Grant of \$2,600,000 under the Federal Government's (AusIndustry) Clean Technology Investment Program.
- Approval has been awarded to incorporate biosolids into the brick making process, sourced from municipal waste. The biosolid will be blended into the raw brick mix, leading to a lighter brick.
- This will reduce energy consumption in the transportation process, but more importantly reduce direct energy consumption, resulting in reduced Greenhouse Gas emissions of approximately 6,000 tonnes of CO<sub>2</sub>e (the equivalent of taking 1,500 cars off the road).

### Bowral NSW

- Plans are underway to introduce an innovative process technology called "reduction by-pass" to improve efficiency during the reduction process, necessary for obtaining the unique colours of some of Bowral Bricks range of products - the current process is extremely energy intensive.
- The project will also involve the replacement of natural gas with biosolids sourced from Brickworks Timber division (Auswest Timber), a renewable waste stream from that industry.
- The project in total will reduce greenhouse gas emissions by approximately 13,000 tonnes of carbon dioxide equivalent per annum (the equivalent of taking 3,250 cars off the road).
- This project was awarded a Grant of \$1,800,000 under the Federal Government's (AusIndustry) Clean Technology Investment Program.

### Golden Grove SA

- Currently trialling the incorporation of commercial, industrial, demolition and green waste sources as a cleaner alternate fuel to natural gas.
- If successful, this project will reduce greenhouse gas emissions by approximately 4,000 tonnes of CO<sub>2</sub>e per annum (the equivalent of taking 1,000 cars off the road).

### **Rochedale QLD**

- In the process of introducing biosolids sourced from the waste of commercial, industrial and demolition industries and virgin sawdust. This will be combined with the replacement of the setting machine with a state-of-the-art energy efficient machine, enabling the inclusion of the biosolid into the brick mixture.
- This project will potentially reduce greenhouse gas emissions by 11,000 tonnes of carbon dioxide equivalent per annum (the equivalent of taking 2,750 cars off the road).
- This project was awarded a Grant of \$2,200,000 under the Federal Government's (AusIndustry) Clean Technology Investment Program.

### **Longford TAS**

- Austral Bricks Tasmania and the Daniel Robertson Range of bricks are the first bricks in Australia to be certified as carbon neutral under the Governments National Carbon Offset Standard (NCOS).
- The company fires its kiln utilising biomass as the main energy source. This biomass is a by-product from Tasmania's timber industry.
- Other efficiency improvements have been implemented to reduce energy consumption and green house gas emissions as far as possible, with the remaining emissions being offset via the purchase of accredited carbon offsets.
- A proportion of these offsets have been sourced from local (Tasmanian) projects, supporting the local Carbon Offset Programs

### **Manjimup WA**

- Surplus heat from a boiler fired from sawdust will be used to generate electricity utilising the Organic Rankine Cycle.
- The project is set to be commissioned in June 2014 and will reduce the site's greenhouse gas emissions by approximately 950 tonnes of carbon dioxide equivalent per annum (which is the equivalent of taking 240 cars off the road) and help drive down the excessive capacity charges.
- This project was awarded a Grant of \$300,000 under the Federal Government's (AusIndustry) Clean Technology Investment Program.

### **Definitions**

*Landfill Gas* – Gas derived from the decomposition of organic material in landfill

*Biosolid Solid* – material derived from previously living organisms such as plants or animals

*Reduction by-pass* – An advanced process for providing a “reduction” environment in a particular section of the brick kiln

*Organic Rankine Cycle* – A process to convert waste heat to electricity via a generator