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Mr Gary Banks
Energy Efficiency Inquiry
Productivity Commission
LB2 Collins Street East
MELBOURNE VIC 8003

Dear Mr Banks

AGL welcomes the opportunity to make this submission and supports the inquiry into the economic and environmental potential of energy efficiency.

In AGL's view there are four key policy areas that need action to improve the efficiency of Australia's energy consumption:

- Continuation of the energy market reform process. This should include measures such as removing retail price caps that ensure that price signals to customers reflect the full cost of delivering electricity.
- Improving the energy performance of the built environment and energy using appliances through setting sensible national performance standards.
- Support for energy efficiency by improved information, analysis and demonstration.
- Support for energy efficiency innovation and commercialisation by building capacity and capability in the emerging energy services industry.

Please find enclosed AGL's submission that addresses these issues. Do not hesitate to contact me on (02) 9921 2631 if you have any queries.

Yours sincerely

Mary Darwell
Manager
Group Environment

The challenge of energy efficiency

AGL experience as Australia's leading energy retailer, points to three primary reasons why uptake of energy efficiency measures are slow:

- Energy costs are not a significant proportion of total expenditure by householders and many businesses, and the rational short term investment response has been to limit investment in this area.
- Energy efficiency incentives are split or poorly targeted.
- Lack of effective price signals resulting from retail price caps

Energy Costs

Anecdotally, commercial customers are typically looking to a two-year pay back on investments in energy efficiency. The high rates of return required can be explained because energy costs are generally not a significant portion of overall costs for businesses other than energy intensive industries. In addition, benefits to be derived from business investment in energy efficiency have traditionally not been well quantified and "sold" to business. AGL has worked through its energy performance contracts, to improve awareness and quantification of energy efficiency investments (see attached). However, it is notable, that to date these services are most positively regarded by Government agencies, which have a long-term horizon, and often have different decision and performance drivers to the rest of the commercial sector.

Energy costs represent less than 3% of average weekly household expenditure, a small proportion of total household expenditure. The majority of energy has traditionally been consumed by hot water and space heating/cooling. AGL's experience is that, under current market conditions, providing energy services, such as household energy audits, is a costly and inefficient way to reduce rates of energy consumption. However, the increased uptake of air conditioning is also changing the demand profile of houses. Even with the increased cost of the total electricity bill from installing air conditioning, householders are not implementing energy efficiency measures at any significant rate. This is notwithstanding retailers such as AGL providing practical, cost effective energy saving information both at the time of purchase of equipment and on an ongoing basis, through information campaigns, publications and web sites (see attached for AGL's work in this area).

Split Incentives

As noted in the Productivity Commissions paper the financial incentives to invest in energy efficiency measures are split. For example the benefits of implementing energy efficiency measures accrue to tenants and owner-occupiers but it may be the developer or a previous owner that decides to implement energy efficiency and bears the extra capital

cost. It would appear that there is little market incentive for developers to install more expensive, five-star appliances when they are in competition with other developers to keep overall costs down. Similarly landlords receive no immediate benefit from the installation of energy efficient equipment even though it may make their property more attractive to tenants in the longer term.

Even in the case of owner/occupiers the longer-term financial and environmental benefits of energy efficiency may not be fully understood or properly communicated at the time decisions about capital expenditure are being made, for example, during construction or major renovations.

Retail Price Caps

AGL considers that retail price controls constitute a significant impediment to the take up of energy efficiency opportunities. Regulated price controls, particularly price caps, can inhibit retailers from offering electricity at a price that includes an energy efficiency price signal that varies over time. For example, a higher price for electricity including network tariffs linked to demand during summer or daily peak demand can improve the price signal to operators of high consumption appliances. Voluntary curtailment can result in reducing peak demand and this can improve the reliability of the network and may reduce greenhouse emissions.

Policy Action

AGL believes that there are four key policy areas that need action to achieve improved energy efficiency outcomes:

- Continuation of the energy market reform process. This should include measures such as removing retail price caps that ensure that price signals to customers reflect the full cost of delivering electricity.
- Improving the energy performance of the built environment and energy using appliances through setting sensible national performance standards.
- Support for energy efficiency by improved information, analysis and demonstration.
- Support for energy efficiency innovation and commercialisation by building capacity and capability in the emerging energy services industry.

1. Market Reform

Market reform, retail price regulation and interval metering

AGL considers that the continuation of energy market reform, including the removal of regulated retail price caps, are important precursors to increased investment in energy efficiency.

Currently there is view among policy makers that energy efficiency price signals could be more finely tuned by the wide spread use of interval meters. AGL maintains that the cost/ benefit of a rollout of Type 5 interval meters to customers using less than 160MWh annually has not been proven and should not be mandated. The market place should be left to work out the most efficient metering solutions rather than have potentially

inefficient solutions mandated. Retailers are already researching new technical solutions, including two way communications, that could create better price signals and be cost effective.

Regulatory barriers to implementing efficient solutions should be removed. Such barriers include the monopoly position that network owners have over metering for mass-market customers and regulation that impedes price signals being passed through to customers, including recovery of costs associated with interval meters.

Distributed Generation

The greater uptake of distributed generation in the short to medium term using natural gas has the potential to significantly improve the efficiency of the electricity sector through better utilisation of existing natural gas infrastructure, by reducing transmission losses and improved security of supply. Distributed generation has the added advantage of potentially reducing greenhouse gas emissions because of the lower emission associated with using natural gas. However, the wide spread installation of small-scale generation plant in urban areas may adversely impact air quality by increasing emissions of oxides of nitrogen and sulphur in the urban air shed. That is not to say that distributed, gas-fired generation is not a desirable solution to energy efficiency and greenhouse problems but its wider environmental impacts must be considered.

In the longer term, photo-voltaic and fuel cell technology will also play an important role in improving efficiency of the networks and reducing demand for grid supplied electricity. AGL notes that the Commonwealth Government is investigating some of these issues through the Solar Cities Trial.

National regulatory approach to energy consumption and greenhouse emission reduction

Even though the Inquiry's terms of reference do not include comment on Australia's policy response to climate change, the issues posed by this inquiry go to the question of the appropriate level of energy consumption that is consistent with Australia's desired social, economic and environmental outcomes.

Policy settings that impact on energy consumption, through energy efficiency initiatives and greenhouse gas emissions policy settings are inextricably linked. It is important that Governments recognise that differing or competing state initiatives risk in both areas dilute the effectiveness of policy initiatives and impose additional compliance costs on business. National policy settings in both areas will provide clear signals to the market regarding supply and demand management and conservation investments.

In particular, AGL supports the Energy Supply Association of Australia's position that the Federal Government should set a single, greenhouse gas emission target for 2050 that

has milestones along the way and applies to the whole economy. The measures to achieve the 2050 target should be formulated to encompass the widest set of abatement options available to achieve those reductions. Existing state-based measures should be rolled into a national scheme to reduce the duplication, complexity and compliance costs that are emerging from multiple approaches.

AGL does not support the introduction of a National Energy Efficiency Target (NEET) without further details on its possible scope and operation.

2. Standards for appliances and the built environment

AGL recognises that the governments have taken steps to increase the minimum performance of appliances through the development and implementation of Mandatory Energy Performance Standards (MEPS). For example new MEPS have recently been introduced for single-phase air conditioners, fluorescent ballasts, linear fluorescent lamps, distribution transformers and commercial refrigeration.

AGL notes that Ministerial Council for Energy has committed to the introduction of MEPS for gas products, increased stringency of MEPS for residential, commercial and industrial products and to increase the number of regulated products, and State governments have also demonstrated commitment in this area. For example, the New South Government has recently introduced a requirement for developers of new housing to comply with a web-based planning tool designed to assess the water and energy efficiency of new residential developments, called BASIX. The Victorian government has recently introduced a similar requirement called “5 Star”.

AGL supports these initiatives. While AGL recognises that there are specific local or state environmental matters that are required to be addressed in the detailed design of these schemes, and more simplified or unified approach would assist in ensuring compliance costs are low. AGL supports moves to a uniform approach – for example, national default requirements for all new appliances and accelerate the replacement of old appliances through targeted incentives.

Development of a sustainable national approach to improving building stock performance will also be more efficient than the current state-by- state approach.

The development of MEPS and other policy measures such as price signals are not mutually exclusive. Price signals will deliver a range of outcomes. The imposition of MEPS will only determine the lowest point at which the price signal will operate.

3. Improved information, analysis and demonstration

The National Framework for Energy Efficiency consultation process has shown that both commercial and residential stakeholders perceive that low levels of awareness and understanding, the availability of information and lack of government commitment are key barriers to the increased uptake of energy efficiency.¹

¹ National Framework for Energy Efficiency - Stakeholder Consultation Report – August 2004.

Residential Sector

Final energy use in the residential sector was 393 PJ in 2001-02, representing approximately 13 per cent of total final energy consumption.² Notwithstanding the large number of wide spread and diverse points of consumption in this sector, AGL believes that there should continue to be a focus on achieving energy efficiency improvements in this sector. AGL has taken a leading role in this area through improving information available to customers and support for pilot community initiatives (see Appendix 1).

Commercial and Industrial Sectors

Even though the number of consumers is much less than the residential sector, the diversity of this sector presents its own challenges. Energy efficiency is very low on the agenda of industrial and commercial sector customers. From AGL's experience, one of the key factors that industry overlooks is that energy savings of as much as 15% could be achieved through simple good housekeeping measures such as scheduled maintenance.

In addition many customers are reluctant to invest money in energy efficiency improvement projects because they find it difficult to quantify savings achieved. AGL has developed expertise, tools and methodologies to make energy efficiency a business success. AGL has a unique approach in Australia by attempting to change the customer's perception of energy from a 'commodity' to a 'service'. However, AGL's experience is that the rate of uptake of energy efficiency in these sectors is a lot slower than would be expected.

4. Energy Services Industry

AGL believes that initiatives to build capacity and capability of the energy services industry can deliver increasing energy performance across all sectors. Governments have a central role to play in fostering improved capabilities and capacity through technical and higher tertiary training to fill the gaps that AGL has encountered in the energy efficiency knowledge base.

AGL, through its business Energy Services, is able to identify and implement significant energy savings in industrial situations without mandated intervention. AGL has been offering this service since 1999 and has assisted customers improve energy efficiency in their businesses, saving about \$3 million dollars and reducing greenhouse gas emissions by more than 50,000 tonnes of carbon dioxide equivalent (CO₂ –e). Examples of the achievements that can be made are contained in Appendix 2 attached.

² ABARE 2004. *Australian Energy – National and State Projections to 2019 – 2020*.

Appendix 1: Examples of AGL Energy Efficiency Initiatives in the Residential Sector

Interactive Energy Advice

Interactive capabilities have recently been introduced that enable householders to visit a virtual home on-line to see how simple energy housekeeping techniques will reduce energy bills and help save the environment. By clicking on the appliances in each room - ovens, air conditioners, washing machines etc - users can calculate the costs of running different appliances, and discover tips to realise cost savings for each appliance. The site provides advice on a broad range of environmental issues and offers energy saving tips and advice on energy star ratings for different appliances. The site also contains an interactive energy efficiency calculator that provides quick reference information about how much energy appliances typically consume around the home.

Cent-a-Meter

Another example of what has been done is AGL's support for the development of the Cent-a-Meter, an award-winning device that shows energy users how much it costs to run each household electrical appliance and calculates the amount of greenhouse gas emissions associated with electricity use in the home. Cent-a-Meter consists of a wireless transducer that transmits electricity consumption information for display on a portable LCD monitor. As each appliance in the home is switched on its contribution to consumption can be separately measured.

The Cent-a-Meter also displays the amount of greenhouse gas emissions associated with the electricity consumed. By reducing electricity consumption customers are able to directly reduce the amount of harmful greenhouse gas emissions released to the atmosphere.

Energy Matters Community Program Pilot

Under the banner of its Energy Matters community investment program, AGL is establishing a community partnership program promoting energy efficiency in homes and communities experiencing hardship. AGL has no first hand experience in the delivery of programs that directly promote and encourage energy efficiency into this community sector. Therefore, AGL is seeking to gain knowledge, guidance and expertise from experienced community partners who have a deeper understanding of the sector. AGL is working with two community partners on two 12 month programs to investigate these issues. The pilot outcomes will enable AGL to assess the merits and effectiveness of the different approaches taken by each group. From this information, AGL will be able to determine the best way to implement an ongoing community partnership program.

Appendix 2: Examples of AGL Energy Services Projects for Commercial customers

Co-generation

In cooperation with Cooper's Brewery in South Australia, AGL has installed a co-generation plant that has been recognised for its innovative design by winning an Engineering Excellence Award in the environmental category. The plant comprises a highly efficient 4.4 megawatt (MW) co-generation power plant at the Coopers Brewery in South Australia. The \$6.2 million natural gas fired plant is owned and operated by AGL and provides all electricity and steam necessary for the brewery's production process.

In addition to environmental benefits, the co-generation plant reduces energy costs and significantly improves the quality and reliability of electricity supply. Energy utilisation in the co-generation plant is close to 80 per cent, which is 2.5 times more efficient than a conventional power station, resulting in a reduction of carbon dioxide emissions by up to 15,000 tonnes per annum. This is equivalent to taking 3,200 standard vehicles off the road.

Approximately 6,000 megawatt hours (MWh) of generated electricity is used annually in the brewing process at Coopers, while the remaining 18,000 MWh is exported into South Australia's electricity grid. The exported electricity is enough to supply about 3,000 average households annually.

Demand Management

AGL has been engaged by Centrelink for 5 years to achieve a 3.5 Star Australian Building Greenhouse Rating (ABGR) for all of their leased office properties and to ensure they are below the Commonwealth energy intensity targets. In 2004, the program entered its second year of operation.

More than 100 sites have been reviewed. The review has identified savings of at least 20% over business as usual at each site. These savings will deliver (over the 100 sites) total savings of \$660,000 and a reduction of greenhouse gas emissions of 5,500 tCO₂e each year.

As the project progresses, further annual savings of greenhouse gas emissions in the order of 5,500 tCO₂e are expected. AGL expects the total annual emissions savings to reach 16,500 tCO₂e by year four of the project.

The following link is to AGL's Business Energy Efficiency website

<http://www.agl.com.au/AGLNew/Your+business/Energy+efficiency/default.htm>

NFEE recognises that not all that is technically feasible will be economically viable at present or that all the economic value may not be able to be captured. NFEE has so far concluded that there is a clear gap between what is both technically and economically viable and what has actually been achieved to date by the market and government programs.

For example, by using existing technology such as movement detectors and electronic dimming, AGL has reduced electricity consumption in its corporate headquarters by about 50%, saving about \$100,000 and 1,500 tonnes of greenhouse gas emissions each year. Benefits like this are available to most commercial buildings in Australia. Similar benefits are available in the residential sector where energy efficient houses enjoying even greater percentage energy reductions have been built and shown to work.