



4 January 2011

The Manager
ACRE Strategy Section
Australian Centre for Renewable Energy
GPO Box 1564
Canberra City ACT 2601
Via email: acre@ret.gov.au

Dear Sir/Madam

The Australian Pipeline Industry Association (APIA) welcomes the opportunity to offer some comments on the draft strategic directions for the Australian Centre for Renewable Energy (ACRE).

APIA is the peak national body representing the interests of Australia's transmission pipeline sector. APIA's current membership is predominantly involved in high-pressure gas transmission. APIA's members include contractors, owners, operators, advisers and engineering companies and suppliers of products and services.

APIA's members build, own, operate and service the gas transmission infrastructure that supply the gas market and will be the key investors in new pipelines and capacity expansions of existing pipelines that will be required over the next 20 years and beyond. This investment in transmission pipeline infrastructure will be essential to Australia's economic growth and is an important element in Australia's approach to reducing greenhouse gas emissions.

APIA considers it to Australia's advantage if ACRE's strategy is developed with a full recognition of the wider context of national energy supply, including the need to advance projects that contribute to Australia's energy security.

Future energy supply context of renewables

As efforts are made to lower the carbon intensity of Australia's electricity supply, all forecasts predict that future generation capacity will be comprised of an increasing mixture of natural gas fired electricity and renewable electricity and a decreasing reliance on coal fired electricity. The details of each forecast may vary, but there is substantial agreement that natural gas fired generation and renewable generation will co-exist in Australian electricity sector for many decades to come. It is highly likely that natural gas will provide more than half of Australia's electricity generation capacity by 2030, and many of the investments that will provide that capacity will occur in the next ten years. This trend is already apparent, with ABARE reporting that gas fired capacity accounted for 73% of all new electricity generation installed in the 18 months to April 2010 and over 50% of the advanced electricity projects at that time.

Natural gas will play an important role as:

1. **Natural gas allows immediate reductions in carbon emissions at a cost which is affordable.** At this time, the capacity of renewables to provide reliable, affordable emission free energy is limited.

Wind energy, when assisted by the REC scheme, provides affordable energy, but its capacity is limited and intermittent. Other renewable options are technologically viable but not cost competitive.

Gas fired generation presents a long term option to the energy industry that is cost competitive today and delivers significant emissions reductions over existing coal infrastructure.

2. **Renewable energy options will require stand-by/load following generation to support their viability.** The majority of renewable energy technologies are intermittent in nature, being reliant on an incoming energy source (wind, sun, wave etc) to generate electricity. There will be a long standing need for supporting options for these technologies, and natural gas provides an excellent fit.

Combined-cycle gas turbine technology provides base load generation that compliments renewable generation in many ways. It is a mature, well understood and utilised technology, commercially competitive in the current electricity market. It has rapid response times and can readily power up and down to account for the intermittent nature of many renewable technologies.

Open-cycle gas turbines are already the generation option of choice to provide peaking power and APIA is not aware of any renewable technologies that can replace it in the future. It is expected that gas peaking generation will continue to fulfil this critical role in Australia's electricity supply.

As a consequence ACRE's Strategy should reflect the wider context within which renewables will have to operate by recognition of the essential role of existing, cost effective 'complimentary' energy sources, primarily natural gas.

APIA would welcome the opportunity to discuss how to optimise the development of renewables in this context; in particular, how to integrate renewable energy development with natural gas fired electricity for Australia's future electricity generation. For the purpose of this submission, APIA has two recommendations:

1. **ACRE should prioritise the development of technologies that deliver the lowest long run cost for electricity by understanding the interactions between natural gas and renewable technology.**

This would include prioritising technologies that will be most complimentary with natural gas. Gas-boosted solar Fresnel technology has excellent opportunities for to account for significant capacity in Australia's electricity generation. Such technology both encourages investment in the natural gas network and progresses the development of solar thermal technology.

Projects such as Transfield's Collinsvale proposal (shortlisted for the Solar Flagships program), have the added benefit of utilising existing generation and network infrastructure through conversion of an existing coal fired power station, thus lowering the cost of this renewable energy technology and providing a real conversion opportunity for operating coal fired power stations.

Encouraging investments that demonstrate the compatibility of natural gas and renewables will in turn encourage investment in the natural gas network. This will ensure the availability of complimentary natural gas generation options, particularly peaking power, as the presence of renewables in the generation mix increases. Conversely, failure to invest in the natural gas network could lead to supply issues and higher gas prices, further increasing energy prices.

Renewable energy generation that leverages the advantages of natural gas has the potential to deliver relatively low cost renewable energy. This can assist in making renewable energy more palatable to the Australian public, increase its uptake and accelerate its development. Such technologies should form a key part of ACRE's strategy.

2. ACRE should take into account the ability of non-renewable, low-emission energy sources to provide energy solutions when prioritising renewable energy demonstration projects.

It is important that the resources allocated to renewable energy development are used most efficiently. When making recommendations about renewable energy projects, it will be essential that ACRE takes into account existing energy options. For example, when considering the development of grid connections to assist renewable energy developments it is appropriate to give priority to regions that have no alternative (non-renewable) energy options.

APIA is aware of several gas infrastructure projects that are on hold due to the perceived risk that an otherwise uncompetitive renewable energy project or related grid connection will receive government funding and impact the viability of the gas project. If a project proponent is willing to invest in a region without government assistance, government assistance should be directed to other regions where no such projects are present.

APIA would appreciate the opportunity to expand on these important issues with ACRE, to assist it in delivering the best value for government investment in the development of renewables. For further information please contact Cheryl Cartwright on 02 6273 0755.

Yours sincerely



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on behalf of CHERYL CARTWRIGHT
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