

2 May 2003

Hon Grant Tambling
Chairman
Mandatory Renewable Energy Target Review
GPO Box 621
CANBERRA ACT 2601

Dear Mr Tambling

Mandatory Renewable Energy Target Review

AlintaGas (Alinta), as a significant gas distributor and retailer as well as potential electricity generator and retailer, welcomes the Government's review of the Mandatory Renewable Energy Target (MRET) scheme and wishes to make the following comments.

Alinta is a member of the Australian Gas Association (AGA). While making its own submission on the situation it faces in Western Australia, Alinta understands that the AGA will be making an industry wide submission on the MRET scheme and endorses that submission as a member organisation.

AlintaGas

Alinta is Western Australia's leading natural gas distributor, delivering gas to business and households through some 11,000 km of pipelines. Through its retail business it supplies more than 467,000 industrial, commercial and residential customers in the State. Alinta will also be entering the electricity supply industry via a co-generation project in conjunction with Alcoa's WA alumina refineries. This is likely to take the initial form of one 120-160 MW gas fired cogeneration plant but could eventually result in upwards of 1000 MW of capacity being installed.

Alinta therefore will have a potentially significant exposure to the MRET rules governing electricity generation and wishes to make a submission from that perspective.

Operation of MRET

Alinta believes the most pertinent recent commentary on MRET was provided in the final report of the *Energy Market Review* (the Parer Report) which stated:

Many of the current measures employed to reduce greenhouse gas emissions are poorly targeted. These measures target technologies or fuel types rather than greenhouse gas abatement. The use of policies and measures that mandate, or specify, the use of a particular fuel source, technology or production technique is problematic as it decreases the possibility of a liable party meeting the regulatory requirement at least cost.

The Commonwealth's Mandatory Renewable Energy Target (MRET), which is aimed at both developing the renewable energy industry and reducing greenhouse gas emissions, is a good example. The MRET is a more costly measure to reduce greenhouse gas emissions than it needs to be as it focuses exclusively on renewable energy sources rather than least cost greenhouse gas abatement, such as reducing energy consumption through improving energy efficiency.

The rationale for a scheme that focuses only on renewable energy, rather than on greenhouse benefits, is the perception of the need for the conservation of non-renewable resources. This is, however, not an issue for Australia. Consequently, any arbitrary diversion of investment away from more efficient carbon reducing options and towards renewables will burden the economy with unnecessary costs.

(Parer Report, p 230)

It was based on this assessment that the Parer Report made one of its key recommendations that the current raft of abatement schemes should be replaced with a single emissions trading system structured to deliver a given target at least cost.

Alinta's experience with developing its electricity project highlights the issues Parer referred to in the excerpt quoted above.

A key element of the terms of reference in the review is the extent to which the Renewable Energy (Electricity) Act has contributed to reducing greenhouse gas emissions. For the following reasons, Alinta believes that the Act has not been as effective as it might in this area.

Incorrect targeting

The MRET requirement is to source a deemed percentage of electricity consumption from "renewable" generation sources. While some of these sources, such as solar and wind, are zero carbon emitting, others such as biomass are decidedly not. In fact, according to the WA Office of Energy, a biomass fuel such as wood produces almost the same amount of CO₂ per GJ of energy from combustion as coal (91 as opposed to 93.8 for coal and 52.4 for gas). These figures are for combustion rather than electricity production and the amount of CO₂ resulting from electricity production will depend on a range of factors such as the technology used and the qualities of the fuel. What is clear though is that, assuming roughly equivalent energy efficiencies, wood has no particular advantage over coal (although this ignores possible carbon sequestration impacts from regrowth) while gas produces significantly lower emission levels.

The alternative mechanism of purchasing renewable energy certificates (RECs) rather than producing one's own is not necessarily any more greenhouse friendly. In addition to the possibility that RECs have been produced from the greenhouse gas intensive means described above, another common source of RECs is credits for solar hot water heating. As research carried out for the Australian Gas Association has revealed, electrically boosted solar hot water heating on average has no greenhouse advantage over 5 star rated gas storage heating, yet the former delivers a REC certificate while the latter does not (Australian Gas Association, *Research Paper No 16, passim*). Indeed, to the extent that solar hot water heating retards household gas usage (there is considerable evidence that choice of hot water energy source drives the gas versus electric consumption decision in heating and cooking)

solar hot water heating can actually lock households into a higher greenhouse gas production pattern.

As the Parer Report points out, the renewables target is actually motivated towards producing a proportion of energy from renewable rather than wasting sources, with any greenhouse mitigation an incidental effect. With ample supplies of fuel in Australia (WA alone has total estimate fossil fuel resources of 287,500 PJ – several hundred years of supplies at current consumption rates of 464.3 PJ per year) the public policy imperative for conservation is dubious.

Given the Commonwealth Government's policy of meeting its Kyoto target of 108% of 1990 emissions, there is, however, a real constraint on carbon emissions and Alinta believes this objective can be met more efficiently than by the current scheme, with its poorly targeted mixture of zero emitting and highly carbon intensive generation. Alinta therefore agrees with the Parer Report's recommendation that the emphasis on renewables be replaced with a scheme designed directly to address greenhouse gas emissions.

Technological bias

Just as the list of "acceptable" technologies for reduction fails to distinguish between zero emission and highly carbon intensive, so too there is no discrimination in terms of the type of generation to which MRET applies. All fossil fuel generation within major networks in Australia triggers the MRET scheme. But this fails to recognise that different fuels have very different greenhouse emissions results.

As previously noted, Collie coal, according to the Office of Energy, produces 93.8 kg of CO₂ per GJ of energy, compared with 52.4 for gas, with the impact on emissions from electricity generation depending on the technology used. Cogeneration for instance produces even fewer emissions than conventional generation – around half those per unit of energy produced compared to stand-alone production. Yet as far as the MRET scheme is concerned, these technologies face exactly the same renewables requirements as the most carbon intensive coal fired plant.

This violates a basic principle of market based environmental economics – that the policy instrument ought to try and capture the externalities imposed by the project. If this principle were to be applied, then a greenhouse mitigation scheme would impose different requirements on different plants, based on their greenhouse impact. This would mean that a plant with relatively low carbon emissions would face a smaller greenhouse mitigation burden than more intensive plants, efficiently encouraging the public policy objective of reduced carbon emissions. This was also a conclusion of the Parer Report, which found that there has been a growth in electricity greenhouse emissions since 1990 attributable "to an increase in the brown coal share of electricity generation and a corresponding reduction in the combined share of some of the less greenhouse intensive energy forms" (Parer Report, p 225). While there are other possibilities to reduce greenhouse emissions from electricity (reduced demand, improved efficiency and sequestration), it seems highly likely that a shift towards less greenhouse intensive generation techniques must be at least part of the solution.

Alinta therefore believes that any carbon emissions scheme should take account of the actual carbon emissions impact rather than a one size fits all approach which fails to make any distinction at all.

Failure to deliver least cost reductions

While there may have been some low cost greenhouse gas mitigation measures available in the early days of greenhouse as an issue, Alinta believes this “low hanging fruit” has by now been picked. Greenhouse gas mitigation measures will carry an increasing economic cost. And in an energy intensive economy such as Western Australia’s, this cost is likely to be significant.

In contrast with the rest of Australia, a large proportion of WA’s economy is directed towards energy intensive mineral commodity export markets, where WA producers are essentially price takers. This means that increases in the price of energy caused by greenhouse gas mitigation measures will not only be significant, they are also unlikely to be able to be passed on to customers.

This requires that, for any given emissions target, it is critical that it is delivered in a way that is least costly to the economy. There are a number of reasons why the MRET system does not do this:

- It is not directly focused on greenhouse gas emissions. As discussed above, the focus on “renewables” means that the MRET scheme includes high greenhouse gas emissions measures as well as zero emissions while arbitrarily excluding some low emitting technologies as solutions, such as gas fired cogeneration.
- It is prescriptive in nature, requiring that generators address their impact by choosing from a limited range of eligible technologies/fuel types. This excludes a number of alternative approaches, which may well be lower cost. Alternative possibilities include changing to a lower emissions generation technology, carbon sequestration or paying another party to reduce their emissions. Which is the lowest cost solution will vary from business to business and across industry sectors. But by giving the widest possible range of options and allowing businesses to choose which meets their requirements at the lowest cost, overall emissions cost is likely to be minimised.
- It does not recognise the differing emissions impact of various generation technologies, imposing an identical compliance burden, regardless of the actual impact. An economic cost minimisation strategy would ensure that emissions requirements were reflective of the greenhouse gas profile, creating a direct incentive to invest in more greenhouse friendly technologies, such as gas-fired cogeneration.

In summary, therefore, Alinta believes that the current MRET scheme has significant design flaws. It is poorly targeted, overly prescriptive and as a result most unlikely to be minimising overall economic cost. Alinta looks forward to the Review making recommendations which minimise the cost and maximise flexibility in responding to emissions targets imposed by the Commonwealth.

It is hoped that these comments are of assistance. If any further information is required, please contact Charles Crouch on 08 9486 3382.

Yours sincerely

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