



Premier of Queensland

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Dear Professor Garnaut

I am writing to provide you with the Queensland Government's Submission to the Garnaut Climate Change Review discussion paper on the design of a national emissions trading scheme.

I welcome this discussion paper as a timely input into the national debate on long term climate change policy in Australia. It raises many important and emerging issues on the effective implementation of a national emissions trading scheme from both an environmental and economic perspective.

In regards to the issues raised in the Submission, I urge you to consider them further in your analysis and final report. Specifically these include:

- That there is a case to be made for transitional assistance, including for electricity generators, for the disproportionate burden suffered under an ETS;
- That interim emission reduction targets should strike a balance between setting ambitious targets and the realistic capacity of technology, infrastructure and the economy to respond to those targets and to minimise negative impacts on the economy and welfare; and
- The international competitiveness of trade-exposed emission-intensive industries should be preserved.

It will be important that the final scheme provides for both an effective transitioning of Australia's energy sector as well as an adequate level of assistance to those most impacted by the inevitable increase in investment uncertainty and energy prices that will follow the introduction of emissions trading.

Yours sincerely

ANNA BLIGH MP
PREMIER OF QUEENSLAND



Queensland
Government



**SUBMISSION TO THE GARNAUT CLIMATE
CHANGE REVIEW**

**Response to the Emissions Trading Scheme
Discussion Paper**

April 2008

Overview

The Queensland Government welcomes the opportunity to provide comments on the Garnaut Review *Emissions Trading Scheme Discussion Paper* (the Discussion Paper), 20 March 2008.

The Garnaut Review (the Review) is considering issues that are central to the future of Queensland, Australia, and the world. The Queensland Government is pleased to continue its active engagement with the Review. We reiterate our commitment to providing full assistance to the Review.

Queensland has committed to contribute to a national greenhouse gas emissions target of 60 per cent below 2000 levels by 2050, and supports a suite of abatement measures, including the implementation of an emissions trading scheme.

The Queensland Government's decision to end broadscale clearing of native vegetation in Queensland at the end of 2006 is the single largest emissions reduction measure in Australia to date and is instrumental in assisting the Australian Government meet its Kyoto commitment of limiting emissions to 108 percent of 1990 levels.

The Government also launched *ClimateSmart 2050*, Queensland's climate change strategy in June 2007.

ClimateSmart 2050 outlines a broad suite of initiatives covering the community, energy, transport, primary industries, industry, planning and building sectors. It represents a total initial investment of \$1.4 billion, including \$844 million by the Government.

The strategy includes *ClimateSmart Adaptation 2007-12*, an action plan of 62 initiatives to prepare the State for the physical impacts of climate change.

The Queensland Government has commenced a Review of *ClimateSmart 2050*, which will update and consolidate Queensland's climate change strategy in light of the latest scientific assessments as well as national and international developments in climate change. The Review will build upon the mitigation and adaptation measures in *ClimateSmart 2050* and *ClimateSmart Adaptation 2007-12*.

The Queensland Government considers that a well designed emissions trading scheme is crucially important to providing certainty for government, industry and the community about the emissions reductions required. Targets and increased certainty about future carbon prices are crucial to provide investment confidence, particularly in new energy generation capacity.

The Queensland Government is broadly supportive of the general scheme design principles outlined in the Discussion Paper. There are a number of issues of particular importance to Queensland which require further consideration, and for which further discussion is warranted. These issues are:

- The challenges facing the Queensland economy and the need for climate change policy arrangements to address these;

- The balance in setting an emissions reduction target to achieve the required emissions abatement outcome while promoting an optimal adjustment path from a community and economic perspective;
- Transitional assistance for key impacted sectors such as coal-fired electricity generators and ensuring long term energy security for Australia and Queensland;
- The treatment of trade-exposed emissions-intensive industries;
- The distribution of auction revenues following the implementation of an emissions trading scheme, including recognising the potentially disproportionate impacts on low-income households and adversely affected communities;
- The central importance of research and development;
- The need for effective complementary measures, whether through regulation or other incentives; and
- The need to ensure the model is robust and as certain as possible given that uncertainty as to future variations to the scheme may discourage investment in electricity generation.

1. The Queensland context

In absolute and per capita terms, Queensland has the highest emissions profile in Australia and an economic structure which is more heavily reliant on energy and emissions-intensive industries than other States and Territories. Queensland's economic structure has large resource-based and traded good sectors with a strong mining and minerals processing sector, a large agricultural base, extended transport sector and a large tourism sector.

For almost two decades, the Queensland population has grown at almost twice the national average, representing about 41 per cent of the total Australian population growth. The population movement to Queensland is projected to continue into the foreseeable future, with increasing demand for energy as a result.

Since 1998, \$4.7 billion, or 75 per cent, of new generation investment in the National Electricity Market has occurred in Queensland. Additionally, by 2015 approximately \$12 billion more is expected to be invested in more than 10,000 megawatts (MW) of new generation capacity across the National Electricity Market to meet growing demand, much of which will occur in Queensland, in the absence of significant energy efficient measures.

Queensland also faces the challenge of dispersion. Queensland's land area is larger than the combined land area of France, Spain, Germany and Italy, and outside of the south-east corner has a lower average population density than the Sahara. In this context, road, rail and air transport are integral to Queensland's economy and present a significant challenge in a carbon constrained environment.

Scientific modelling indicates that Queensland is particularly vulnerable to the physical impacts of climate change, with two of the six IPCC 'hot spots' being Queensland's wet tropics (including the Great Barrier Reef) and south-east Queensland. Major vulnerabilities include extinction of species, deterioration of coral reefs, loss of buildings from increased flooding and storm surges and reduced availability of surface water. Queensland faces direct economic impacts from climate change on its agricultural, built environment and tourism sectors, as well as additional challenges in providing infrastructure for its rapidly growing population.

Economic modelling of the impacts of implementing an Australian emissions trading scheme shows that Queensland is the most heavily affected of the States compared to a business as usual scenario.

Queensland faces a real economic challenge in contributing to national emissions reductions targets. The Queensland Government considers the design of an emissions trading scheme, and associated equity considerations, must adequately account for the disproportionate impacts facing the Queensland economy.

As Queensland has such a high per capita emissions profile and accounts for approximately 30 per cent of national emissions, it must make a significant abatement contribution to the national 60 per cent reduction target and any interim targets adopted by Australia.

These issues are discussed in greater detail through the submission.

2. Scheme coverage and setting emissions reductions targets

The Queensland Government welcomes the clear commitment of the Rudd Government to announce an emissions reduction target by the end of 2008.

Queensland itself is vulnerable to climate change, with potential adverse impacts on tourism, agriculture, water supply and the marine sector. Climate change also has implications for the State with the potential for more frequent adverse weather events, and rising sea levels with implications for coastal communities.

The Queensland Government supports the Review's position that an effective trading scheme should ideally have as broad coverage as is practicable. Queensland supports in principle the proposed inclusion of stationary energy, transport, waste, fugitive emissions and industrial processes in the scheme from its commencement, noting that the details of measurement, liability and verification for each of these sectors require further consideration.

The Queensland Government would also support the inclusion of other sectors in the scheme, when their inclusion clearly adds to the scheme's operational efficiency and effectiveness in achieving emissions reductions and when practical implementation issues are fully resolved. The Queensland Government notes that the Review has not yet identified practical options in this regard, and that a detailed analysis of the various options has not yet been undertaken.

If sectors are not covered by the scheme – or their inclusion is deferred – this should not exempt them from making a fair contribution to the total carbon emissions reduction task.

The Queensland Government also supports the Review's strong emphasis on developing a scheme which can operate credibly in an international market. Queensland generally supports broad access to domestic offsets under the scheme and will further consider the most appropriate linkages to international trading schemes.

The setting of Australia's emissions reduction targets will need to be based on the best available scientific evidence, Australia's economic circumstances and international agreements.

The challenge for Australia and Queensland is setting an emissions trajectory that takes into account the need to achieve short, medium and long term emissions reductions, while allowing markets and industry the time to effectively adapt.

However, it is acknowledged that the weight of scientific evidence on global warming points to the need for urgent and significant action.

A well defined emissions trajectory is essential to provide the community and industry with greater certainty around emissions reductions targets. A carbon price will provide incentives for energy efficiency and innovation. A clear signal about future carbon prices is also essential to support future investment in low-emission and renewable technologies.

One of the key challenges for Australia is to develop viable sources of new innovative forms of energy generation. Commercially viable, low carbon intensity generating plants using gasification and combined cycle technology with carbon capture and storage are not likely to be available until at least 2020.

Queensland has considerable potential for electricity generation from renewable energy sources. Good wind resources exist in the north of the state and these have been partially utilised. Solar thermal systems are being trialled and show promise, but are yet to be proven on a large scale. Although there is potential, some renewable energy sources present significant challenges. For example, there are considerable geothermal resources, yet these are typically located long distances from load centres and require significant investment in transmission infrastructure to be viable. Queensland has several programs in place to promote the development of renewable energy technologies and will continue to move forward in this important area.

The Queensland Government supports Australia setting strong interim targets consistent with the national goal of achieving a 60 per cent reduction in emissions by 2050. Queensland's capacity to contribute to targets will need to take account of the capacity of the economy and industry to meet the abatement challenge. There will need to be significant structural adjustment during the critical period of 2020 to 2030 when Australia will be heavily reliant on technological breakthroughs in the provision of low and zero-emissions base load energy generation capacity. Queensland is particularly impacted in this regard.

Further, for a population which is so heavily dependent on transport services, the Queensland Government is also concerned about the lead time required to develop potential alternative fuels such as hydrogen, syngas and ethanol. It will also take time in urban areas to change urban densities and public transport networks to provide a reliable alternative option to car usage. This same issue also applies to some agricultural emissions – cost-effective emissions-reducing technologies (e.g. for methane emissions from ruminant animals) are still some years off.

The Queensland Government remains strongly committed to the national goal of reducing Australia's carbon emissions to 60 per cent below the 2000 level by 2050.

3. Impacts on the electricity generation sector

Australia is heavily dependent on stationary energy. Cost competitive electricity generation has provided the nation with a competitive economic advantage. This is particularly relevant for Queensland which has significant reserves of high quality thermal coal.

Australia's stationary generation sector will be one of the key sources of national abatement requiring transformational change to the way energy is currently generated.

The Queensland Government owns substantial shareholdings in generation capacity in the State. Coal-fired base load generators contribute approximately 78 per cent (8,760MW) to Queensland's total NEM-connected electricity generation capacity (11,267MW) of electricity.

Nearly 62 per cent (5,392MW) of the total coal-fired capacity is state owned. While this concentration of low-cost coal-fired generation currently offers an advantage to Queensland with respect to competitively priced electricity, it also represents high risk to Government and the State in a future carbon-constrained environment.

With the weighted average age of Queensland's coal-fired generation assets (against capacity) being around 17 years, commissioning dates of some of Queensland's existing coal-fired plants goes as far back as the 1970s. Many of the investment decisions in these plants were made prior to a carbon aware environment and were based on the cost competitiveness and ongoing availability of coal.

As indicated earlier, Queensland is also in the position of requiring additional electricity generation capacity to meet the demands of a growing population and economy, with NEMMCO forecasting that from 2007-08, total annual energy demand in Queensland will grow on average by four per cent per annum until 2016-17, with total demand growing by 18,855GWh over this period; in the absence of significant energy efficiency savings.

Going forward, the Queensland Government is very aware of the need to ensure longer term energy security for the State. Energy security will need to be managed through the transitional period for the energy sector, where substantial investment in alternative low/zero-emission base load generation will be required to compensate for reductions in traditional coal-fired base load capacity.

The Queensland Government believes there is a need to explore options for recognising the disproportionate financial impacts faced by existing electricity generators, but in a way that ensures Australia still achieves its emissions reductions targets. There are two main considerations, equity and investment confidence, as discussed below.

From an equity perspective, the implementation of an effective emissions trading scheme will see the reductions in coal-fired generations and early retirement of plant compared to a business as usual scenario. This will clearly impact generators – to the extent that carbon costs are unrecoverable, either through an inability to pass

through the price of carbon in a competitive market or insufficient electricity sales volume to recover costs.

The Queensland Government considers there is a case for some form of assistance to energy generators, on equity grounds. This recognises that owners of existing coal-fired generation assets will bear a disproportionate financial burden in the transition to a low carbon future, when other groups (including electricity customers, trade-exposed emission-intensive businesses, and regions facing structural adjustment needs) are proposed to receive some form of assistance.

The owners of electricity generation assets have, in the past, made investment decisions in 'good faith' relating to very costly and long lived energy capital assets, based on an institutional and policy environment that did not include an explicit carbon price. As stated earlier, carbon risks have only begun to be factored into economic decision making in the last few years (post the Kyoto Protocol in 2007), well after the bulk of the existing coal-fired generation fleet was already in existence or committed with key investment decisions already made.

Indeed, until 2007 there was a clear Australian Government signal not to introduce emissions trading in Australia - and consensus calculations of carbon risk would have placed the probability of carbon pricing being introduced in the near term as being quite low. Businesses may have judged carbon risk wrongly but few would have got it right and in these circumstances it is not reasonable to make arguments that businesses should be ineligible for compensation because they should have been aware of existing carbon risks.

From a future investment perspective, if the abatement task is to be achieved, the combined resources of both public and private sectors will need to be fully engaged to achieve innovation and investment. The challenge for governments is to set the caps and associated market conditions, to encourage abatement effort.

The provision of some form of financial assistance to the disproportionately impacted generation sector would provide a clear signal to incumbent generator owners and potential future investors in long lived energy assets that their interests will be taken into account, such that they will not face a continuing risk of a fall in asset value whenever modifications to government policies on carbon abatement are made. Without such confidence, investment risk premiums for such generation assets will increase, resulting in additional economic costs from the introduction of emissions trading in Australia.

4. Trade-Exposed, Emissions-Intensive Industries (TEEIs)

The growth of exporting industries has been a core driver of Queensland's economic prosperity, particularly in the mining, minerals processing, transport and agricultural sectors. The Queensland Government is concerned about the impact an emissions trading scheme will have on the competitiveness of these export industries in the global market.

There is a strong economic case for protecting TEEIs in an international environment until such time as international competitors face a similar carbon charge to Australian firms. There is also a strong environmental case – simply transferring emissions-intensive activities from Australia to other countries will achieve nothing in mitigating the effects of climate change. The Review proposes that transitional assistance, possibly in the form of free permits should be considered for a period of time.

The Queensland Government supports assistance for at-risk TEEIs and considers industries which should be captured under any definition of TEEIs (for the purpose of providing assistance) include, but are not limited to:

- alumina refining;
- aluminium manufacturing;
- other non-ferrous metal manufacturing;
- LNG production;
- mineral processing; and
- potentially some primary industries (in the event that agriculture is eventually covered).

The development of any criteria for the identification of TEEIs will need to be able to accommodate these industries, although only to the extent that their emissions are based on best practice operations. This will provide an incentive for emissions reductions if firms fall short of best practice.

The criteria for identification of the TEEIs may need to be sufficiently flexible to accommodate new TEEIs, and potentially exclude some initially supported TEEIs as market conditions change.

The Queensland Government supports the proposal that assistance to TEEIs be phased out when industries are able to compete in their international markets on a level playing field.

5. The significance of technology

The Discussion Paper highlights the key role that new technology will play in meeting Australia's emissions reductions targets. A carbon price which stimulates innovation and investment in low and zero-emissions technologies is a crucial part of this agenda.

Economic modelling of the potential cost impacts on the Australian economy demonstrates the critical importance of new low-emissions technologies to achieving substantial reductions in greenhouse gas emissions.

Australia's economic growth in a carbon constrained future will also be strongly dependant upon its capacity to implement step-change technologies. This is particularly so in the energy sector, which accounts for well over half of Australia's greenhouse gas emissions, but is also the case in other emitting sectors such as agriculture and transport.

The critical importance of technological advancements to achieving emission reductions demands private and public sector support for research and development, particularly in areas of strategic interest to Australia. Those strategic interests include our energy-based industries as well as other significant emitting industries such as agriculture. Meeting the unparalleled challenge of climate change will require unprecedented cooperation on strategic innovation and investment projects.

Given Australia's resource endowments and heavy reliance on coal-fired electricity generation, the development of commercially viable carbon capture and storage and other clean coal technologies provides a potential opportunity for considerable reductions in Australia's emissions. Similarly, other areas in the energy sector where Australia could potentially gain a strategic advantage are geothermal and solar technology.

While the Queensland Government supports the allocation of funding to research and development efforts in these areas of strategic interest, it recognises that technological potential may evolve in other areas over time and may require additional government support.

Delayed action in research and development increases the risk that the development and uptake of low-emissions technology will be deferred, resulting in lost opportunities for abatement and greater difficulty in achieving the necessary emissions reductions in the future when carbon costs are expected to be higher. The Queensland Government therefore supports ongoing investment in research and development activities.

Such investment must be a national priority and involve all sectors of industry and levels of government. Queensland understands the Review's Draft and Final Reports will give a mapping of the optimum roles and responsibilities of governments and the private sector. But it is clear that the Commonwealth Government – given the national nature of the task and the Commonwealth's access to emissions permit revenues and superior fiscal capacity – will need to take prime funding responsibility among the public sector.

6. Allocation of auction revenues from an emissions trading scheme

The Discussion Paper highlights that the auctioning of permits is likely to raise substantial revenues which will be available for distribution. Specifically, the auction revenue distribution is proposed for the following:

- TEEIs;
- Payments to households;
- Structural adjustment to declining communities;
- Payments to firms to correct market failures in areas of new technologies;
- Support for public infrastructure; and
- Cash reserves to purchase international permits/offsets to reconcile domestic emissions with international commitments.

The Queensland Government agrees strongly with the suggestion in the Review's Interim Report that the auctioning of permits should not be used as a 'de facto' revenue raising arrangement for the Commonwealth Government, and should not unnecessarily increase the overall 'tax' burden on business and the community.

The Queensland Government supports the returning of revenues to industry and the community to provide transitional assistance where appropriate and assist in meeting the additional costs of adapting to the carbon constraint.

As indicated above, the Queensland Government considers that there is a strong case for providing transitional assistance to the electricity generation sector and for assistance to be provided for Australia's TEEIs.

Queensland is concerned about the income distribution effects that an emissions trading scheme could have on households, particularly those on low-incomes. The Queensland Government supports the Discussion Paper's analysis of there being a strong equity and environmental rationale for reducing the impact of the emissions trading scheme on the living standards of low-income households.

The Queensland Government recognises that the household expenditure effects of a carbon price will be felt Australia-wide, although potentially, the impacts may be more evident in some States than in others. In this regard, national measures such as adjustments to the social security and income tax systems provide for the efficient and equitable provision of compensation to households nationally. There may also be a case for special consideration to be given to the more heavily impacted States through other support measures, if required.

The Queensland Government agrees with the Review's assessment that support for the structural adjustment of particular regions or communities should be provided, where necessary, following the introduction of an emissions trading scheme. At this stage, it seems early to identify the regions or industries that will require assistance, or the level of assistance that may be needed. In this regard, the Queensland Government considers that measures such as a carbon fund could be considered to provide future structural assistance where the need arises, with criteria for allocation to be developed by COAG.

The Queensland Government supports further consideration of the funding which may be provided to develop new infrastructure to support States in the transition to a low-emissions environment. New infrastructure investment, most likely in the areas of carbon capture and storage, will be critical to Australia meeting its emissions reductions targets. This is of special economic importance to Queensland because of the State's coal industry and coal-fired generation sector.

Queensland considers that if the emissions reductions trajectories are set optimally, the need for a 'carbon bank' to retain reserves to purchase international offsets would be minimised. Queensland would be concerned about substantial reserves being retained on this premise rather than being directed to areas of greater need in the economy in order to support domestic reductions.

7. Importance of complementary measures

An emissions trading scheme will establish a carbon price and provide a market for the trading of carbon emissions among energy producers and users. However, not all aspects of the economy are likely to respond effectively to the carbon price, especially in the short term. Additional complementary measures are necessary to assist a timely and smooth transition towards a low-emissions society. Complementary measures will be necessary to assist with delivery of the emissions trading scheme, and to compensate for factors that fall outside the design of the scheme.

Energy efficiency is of decisive importance. A key finding of a recent McKinsey and Company report titled *An Australian Cost Curve for Greenhouse Gas Reduction* indicates a significant opportunity for energy efficiency to deliver no-regret abatement by 2020.

Modelling convincingly demonstrates that the presence of 'easy and early gains' in energy efficiency makes achieving emissions reductions much less costly to the community. These 'easy and early' energy efficiency measures have not been adopted despite their apparent economic benefits. Therefore, it is unlikely that marginal increases in economic benefits arising from the scheme will be adequate to significantly increase the uptake of energy efficiency, at least in the early stages. Energy efficiency and demand management initiatives as complementary measures to an ETS have the potential to provide significant benefits in terms of achieving early abatement and easing the transition to a low carbon-economy.

Depending on the chosen emissions reduction trajectory, it may be several years before the emissions trading scheme results in significant energy cost increases, and in the meanwhile investment decisions in relation to design and equipment will continue to be made, based upon prevailing energy prices. Given the long life span of many of these decisions (e.g. building design) it is appropriate (to achieve emissions reductions and cost savings) to encourage energy efficiency earlier rather than later.

There needs to be a cultural shift in the community's mindset regarding energy consumption and efficiency. It is generally considered that the scheme alone will not facilitate the change to the degree required.

Analysis has shown that there are market failures which inhibit the take up of energy efficiency measures even where there is already a clear economic benefit. These failures may result in a reduction in the effectiveness of price signals provided by the emissions trading scheme.

National consideration of energy efficiency programs beyond existing measures is warranted. While this work is being progressed through the COAGs' Climate Change and Water Working Group, Queensland would support the allocation of funding from permits to support the uptake of energy efficiency measures.