



**Queensland Government**

**Carbon Pollution Reduction Scheme  
Green Paper Submission**

**September 2008**

## Overview

The Queensland Government welcomes the opportunity to provide a submission on the Australian Government's proposal for a *Carbon Pollution Reduction Scheme (CPRS)*.

Reducing greenhouse gas emissions is central to the environmental, social and economic future of Queensland, Australia, and the world. 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 to meet its Kyoto commitment of limiting emissions to 108 per cent of 1990 levels over the period 2008 to 2012.

A well designed emissions trading scheme is crucially important to providing certainty for government, industry and the community about the emissions reductions that need to be achieved by Australia and the timeframe needed for emissions abatement. Emissions reduction targets and a framework for future carbon prices are essential to providing investment confidence, particularly in new energy generation technologies.

The Queensland Government is generally supportive of the CPRS as described in the Green Paper. In summary, the Queensland Government:

- supports a commencement date of 2010, with market rules to be available ideally by the end of the first quarter of 2009, and potentially a 'soft start' for the period 2010 to 2012;
- supports broad coverage of the CPRS including transport, agriculture (from 2015 onwards) and fugitive emissions (including waste and open cut mining);
- would support the Australian Government assisting to help the coal industry to rapidly develop more accurate measurement techniques for open cut mining, for implementation in the CPRS within two years;
- supports the need to preserve the international competitiveness of emissions-intensive trade-exposed industries (EITEs), as proposed by the Australian Government but with a three year review of eligibility rather than the single, upfront assessment proposed in the Green Paper, and using a rolling average of revenues to allow for smoothing of revenue peaks and troughs as opposed to a two year period as proposed in the Green Paper;
- requests the Australian Government reserve a tranche of permits for new EITE investments operating world best practice production processes, which could be sourced in addition to, or from within, the existing 30% reserve of EITE permits;
- support the provision of one-off and up-front direct assistance in the form of free permits to coal fired generators, for at least 50% of the loss in value over the economic life of energy assets;
- does not support conditions being attached to direct assistance for coal-fired generators on economic grounds, but considers that, should conditionality be pursued by the Australian Government, it should be provided in a manner which does not create poor market incentives (including higher electricity prices);
- would like further consideration be given to compensation for generators to take account of commitments under existing contracts;

- supports the Australian Government's international negotiations for the recognition of carbon stored in harvested wood products in Kyoto eligible plantation forests;
- strongly supports the need for household assistance through welfare and tax measures to minimise regressive income distribution effects which may arise for low income households and rural and remote communities;
- would strongly encourage the Australian Government to clearly and explicitly identify to households that assistance provided is to address the increases in energy prices;
- advocates for the continued need for the Australian Government to invest in research and development in low and zero-emissions technologies and the potential need for a contribution in addition to permit revenues;
- supports funding of complementary measures in the agriculture sector from a portion of the permits reserved by the Australian Government to acquit on the sectors behalf;
- supports transitioning out of the Gas Scheme to the CPRS at a time when the benefits of the CPRS are broadly equivalent to that of the 18% Gas Scheme;
- supports arrangements that encourage greater use of rail in managing Australia's freight task; and
- intends sending the Australian Government a supplementary submission in October on the quantum of additional permits needed for new investments in emission-intensive trade-exposed sectors and other significant issues following further analysis.

## 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, extensive transport sector and a large tourism sector.

For almost two decades, the Queensland population has grown at nearly twice the national average, representing about 41 per cent of the total Australian population growth. Migration 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 (NEM) 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 NEM to meet growing demand. A large proportion of this additional energy generation investment will need to occur in Queensland, in the absence of significant demand management measures.

Queensland also faces the challenge of dispersion. 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 Intergovernmental Panel on Climate Change (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 and Territories 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 2006 national emissions, it must make a significant abatement contribution to the national 60 per cent reduction target and any interim targets adopted by Australia.

## **2. Design of the Australian Carbon Pollution Reduction Scheme**

The Queensland Government generally supports the proposed architecture for the CPRS.

A well-designed emissions trading scheme which has the capacity to provide appropriate price signals over the short and medium term is important to creating investment confidence and sending the necessary price signals for business and industry.

### **2.1 A 2010 commencement date**

The Queensland Government acknowledges the Australian Government's proposed 2010 commencement date for the CPRS. This date is ambitious and provides a strong signal about Australia's commitment to make genuine emissions reductions in the short, medium and longer term.

The Queensland Government also appreciates that achieving a 2010 commencement date will be challenging for both Government and industry, albeit in an environment where there is strong commitment from all sectors to the implementation of the scheme.

However, a key consideration in setting the start date will be the ability to provide business and industry with scheme rules as early as possible before the commencement date for the scheme. Ideally, this would occur at least 18 months prior to the start of the CPRS.

The Queensland Government would support a 'soft start' giving the market the opportunity to become familiar with the trading rules and for secondary markets to develop. This could be achieved through either a low carbon price to 2012 (or potentially longer), or by setting a cautious interim target which reflects the capacity of the economy to respond to technology and abatement opportunities in the short term.

### **2.2 An initial price cap**

In this context, the Queensland Government supports the Australian Government's consideration of an initial price cap, acknowledging the need to set this price cap in a manner which limits short term volatility in permit prices, especially very high, or very low, prices. Such volatility leads to uncertainty and can subsequently reduce investment.

In theory, such volatility can be managed efficiently through forward markets for carbon. However, in the first few years of the scheme's operation, these markets are likely to be immature and only able to provide a less-than-perfect mechanism for risk management.

This creates an argument for limiting risk through the operation of price caps, at least in the early years of the scheme or, as Professor Garnaut proposed, fixed carbon prices for 2010-2012.

### **2.3 Medium term targets**

The Queensland Government supports setting medium-term emissions reduction targets consistent with the national goal of achieving a 60 per cent reduction of 2000 emissions levels by 2050. The Queensland Government also supports the Green Paper position that in setting a medium-term national target range, the Australian Government will be mindful of the speed with which the economy, including the electricity generation industry, can adjust.

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. There is a need for continued research and development investment by both the Australian and State Governments and the private sector to manage the transition to the low carbon economy.

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 transport fuels such as hydrogen, syngas and ethanol. It will also take time in urban areas to change urban densities and further enhance public transport networks. This same issue also applies to some agricultural emissions – cost-effective emissions-reducing technologies (e.g. methane emissions from ruminant animals) are still some years off.

### **2.4 CPRS regulator**

The Queensland Government supports the establishment of an independent scheme regulator as soon as practicable after the commencement of the CPRS. The Government acknowledges the challenges facing the Australian Government in implementing the CPRS by 2010, and the need to be more flexible in the early years of the scheme design.

The Green Paper's preferred position is for the Australian Government to be making both high-level decisions (international agreements, interim and longer term targets, compensation agreements) and operational decisions about scheme management (gateways, purchasing of international offsets, setting of price caps etc), at least in the initial years of the scheme.

The Queensland Government notes that an independent carbon regulator (Commonwealth body) would be established; but it would have a limited role focussed on technical market supervision as opposed to more active regulatory management.

The Queensland Government believes further consideration should be given to the Garnaut model of an independent carbon bank. In this approach, the Australian Government would still set high level objectives, but the carbon bank would take a more active role in managing the market and determining how best to achieve these targets. This would essentially include market operations (eg carbon price smoothing).

The main benefit of this approach would be to increase the perception of independence in decision-making while still allowing the Australian Government to set key policy objectives.

### **3. Coverage of Australia's Carbon Pollution Reduction Scheme**

The Queensland Government supports the Green Paper's position that an effective emissions trading scheme should have as broad coverage as is practicable. Queensland supports 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 also supports, in principle, the inclusion of agriculture and the Australian Government's proposal that agriculture be considered for inclusion in 2015, subject to measurement issues being satisfactorily resolved.

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.

#### **3.1 Transport**

Population dispersion and strong agricultural and mining sectors make Queensland heavily reliant on road, rail and air transport. In 2006, the transport sector contributed 13.7 per cent of Australia's net emissions; with Queensland responsible for emitting 23% of total transport emissions.

The Queensland Government supports the Australian Government's preferred position to include transport in the CPRS from 2010.

The Queensland Government is also very aware of the particular implications that emissions abatement has on the transport sector, of all sectors proposed for inclusion in the CPRS, in terms of costs for households and industry. In this context, the Queensland Government considers there to be a strong role for both the Australian Government and state governments to continue to provide support for related measures including:

- regulatory approaches to reducing vehicle emissions;
- increasing investment in public transport;
- more aggressive approaches to congestion management in urban areas; and
- review of other taxation measures for fuel.

The Queensland Government supports the Green Paper's proposal to cut fuel taxes for the first three years of the CPRS, giving motorists time to plan and adjust for the impacts of higher fuel costs. The Queensland Government also supports the proposed rebate system for agricultural and fishing industries in the first three years.

It is also important to note that inclusion of the transport sector in the CPRS will have more pronounced impacts for communities in rural and regional Queensland, as well as for agricultural production (agricultural production is discussed in more detail below) than for other communities and sectors. The Queensland Government strongly encourages the Australian Government to consider more targeted fuel cost adjustment measures for rural and remote areas after the initial three year fuel tax adjustment period.

The Queensland Government also supports the Green Paper's proposed fuel tax offsets for heavy vehicle road users, noting the proposal to review the measure after one year. While it is expected that heavy transport will be able to pass through some or all of the additional costs, these impacts will be felt more heavily in rural and remote areas.

The Queensland Government is concerned however that the proposed diesel rebate for road transport will reduce the existing price differential between road and rail transport. Given the relatively lower emissions profile of rail compared to road transport, it is important that the CPRS design not create a situation where road transport is comparatively more cost competitive than under current arrangements. The Queensland Government is supportive of arrangements that encourage greater use of rail in managing the freight task.

### **3.2 Agriculture**

Primary industries have an important role to play in meeting national emissions reductions targets. Agriculture is a significant source of greenhouse gas emissions – accounting directly for some 16 per cent of Australia's emissions in 2006. With more than 40 per cent of the national cattle herd, Queensland was responsible for 29 per cent of agricultural emissions in 2006.

Agricultural emissions are amenable to reduction through changed management practices, patterns of production and land use. In addition, the sector has significant potential for biosequestration of carbon dioxide in vegetation and soils. However, minimising net emissions involves a large number of management practices, not all of which are fully understood (particularly biosequestration in soil).

Most of the agricultural sector is trade exposed. Approximately 60 per cent of production is exported, and primary industry products account for some 15 per cent of Queensland's exports.

The Queensland Government believes that the agricultural sector should be included in the CPRS if supported by a clear cost benefit assessment. Coverage of the agricultural sector could significantly reduce greenhouse gas emissions if appropriate price signals are transmitted to producers and opportunities for emissions-reducing changes in technologies and management practices are identified. There will, however, be higher transaction costs than in other sectors because of the diffuse nature of agricultural emissions, and the way in which the sector is covered may create additional economic costs.

The Queensland Government agrees with the Green Paper proposition that it should be possible to resolve these issues in time for coverage of the sector in 2015. However, delay will cause uncertainty in the sector, with a need for the Australian Government's intentions in this area to be expressed as soon and as clearly as possible, and that transitional arrangements should be considered.

The Queensland Government's position for the coverage of agriculture in the CPRS, is that the policy framework should be around:

- ensuring producers have a clear incentive to identify and adopt management practices to reduce emissions;

- taking account of the wide variation in emissions factors across soil, climate and industry, with circumstances largely beyond the control of individual producers. For example, the emission factors used by Australia in its greenhouse gas accounting vary by a factor of five for nitrous oxide emissions across just five commodities/regions – the true variability would be much greater. In greenhouse gas accounting terms, the accounting needs to be at least at “Tier 2”, if not “Tier 3”; and
- minimising costs to ensure they do not exceed the value of emissions reductions. This includes not only transaction costs but also other economic costs.

Direct coverage clearly offers the best option in relation to the first two criteria as direct coverage provides an immediate incentive for emissions reduction and can be developed in a way that fully recognises the relevant circumstances of individual properties. It is accepted that direct coverage may have higher transaction costs, as it requires sufficiently robust estimates of net farm emissions on a property basis. However, the current Commonwealth/State work on emissions intensity benchmarking provides a vehicle for developing such a system. Moreover, other economic costs are likely to be lower.

Direct coverage raises the question of a threshold to be applied. The 25ktCO<sub>2</sub>-e threshold proposed for industrial processes would catch only a small proportion of agricultural emissions. While a lower threshold would raise concerns about inequitable treatment, these could be addressed by ensuring that the total proportion of agricultural emissions caught by the scheme does not exceed those of other covered sectors. A threshold that caught 80 per cent of emissions would involve fewer than half of all producers, while a threshold that caught 60 per cent of emissions would involve only around 20 per cent of producers. It is recognised that there would be distortions around any threshold, but given the wide diversity in the sector and the availability of EITE assistance, such distortions are unlikely to have a significant impact.

On the other hand, it would be difficult to devise a system of indirect coverage to provide full recognition of the divergence in producer circumstances and management practices. In the absence of such recognition, it would operate as a food tax – with adverse economic (and social) consequences well in excess of potential transactions costs benefits. The Green Paper suggests a system of accreditation of low emissions management practices. Such a system should certainly be investigated and would be an essential companion to indirect coverage. However, it would be necessary for such a system to provide adequate recognition of the wide range of circumstances and management practices in the sector, with capacity to recognise continuous improvement in practices and hence emissions. It is likely that such a system would therefore replicate the transaction costs of a direct obligation approach.

The Green Paper also suggests consideration of a hybrid system, with larger producers who are in a position to estimate their emissions given the opportunity to do so, and smaller producers covered through an indirect obligation. This option is worth exploring and may provide a transition path to broader direct coverage. However, it is unclear how such a system would work given the complexities of supply chains, and it would remain important for the indirect obligation component to recognise the circumstances and management practices of the producers it relates to.

The Green Paper also recommends that domestic offsets from agricultural emissions not be available in the period prior to coverage of those emissions. This means that agriculture has no incentive to reduce emissions prior to 2015. In the interim period prior to 2015, complementary measures should provide comparable incentives for the

uptake of commercially attractive abatement opportunities to adequately prepare for the sector for coverage in 2015.

A tranche of the permit pool retained by the Australian Government on the agricultural sectors behalf prior to 2015 could be used for this purpose. This includes activities such as research and development for emissions reducing technologies and practices and soil carbon management to enhance carbon retention.

### 3.3 Waste

The Queensland Government notes that the preferred position in the Green Paper is for emissions from the waste sector to be covered from scheme commencement, with the precise scope of coverage, thresholds and other detailed design issues to be determined.

Given the lack of information provided by the Australian Government regarding the details of coverage for the waste sector, the Queensland Government is unable to form a definitive position on the issue of what the appropriate liability thresholds may be for this sector. However, the Queensland Government supports in-principle the Australian Government's preference to cover emissions from the waste sector from the start of the scheme.

Accordingly, the Queensland Government requests more detailed information on the following issues:

- Availability of credible emissions estimation techniques and implications for the timing of inclusion, with concerns there may be perverse incentives for the waste industry to delay the development of estimation techniques in order to defer coverage;
- The percentage and numbers of waste facilities that will be covered at various thresholds, possible perverse outcomes at each threshold, and the administrative and compliance requirements of each threshold;
  - preliminary calculations undertaken by the Queensland Government indicate that at least 84 facilities in Queensland would be covered under the higher 25kt CO<sub>2</sub>-e/year threshold. This would result in considerable adjustment for the waste industry in Queensland, and indicates that the Australian Government's coverage calculation of 100 sites *nationally* (at 25kt per year) could be a significant underestimation;
  - the Queensland Government notes that a higher threshold may encourage the establishment of a greater number of smaller waste disposal facilities to avoid triggering the threshold, while a lower or differentiated threshold would increase the administrative burden;
- Accessibility to economically viable abatement opportunities, and the effect of different types of waste management ownership structures. Private sector waste management companies are likely to be in a good position to access economically viable emissions abatement measures. However, in Queensland, the majority of landfills are run by local governments, who may not have the same opportunities to access and apply economically viable abatement measures, or to pass-through costs;

- The adjustment implications of the age of the waste management facility given the potential for perverse incentives to close older sites to avoid inclusion; and
- Interrelationships with other complementary emissions abatement measures designed to send economic signals to the waste sector (such as current state government policies including landfill levies).

### **3.4 Offsets**

The Queensland Government supports the Australian Government's preferred approach to the recognition of offsets including:

- the Australian Government's preference for broad coverage of sectors effectively limiting the potential for offsets from uncovered sectors;
- not recognising offsets from the agriculture sector until the practical constraints associated with cost effective measuring and monitoring of agricultural emissions are resolved and a decision is made on coverage of the agriculture sector in 2013; and
- supporting consultation with Indigenous Australians on the potential for offsets from reduction in emissions from savanna burning and forestry opportunities and the need for further R&D into the methodologies to aid the participation of indigenous land managers in the CPRS.

The Queensland Government also supports, in-principle, the Australian Government's intention to place short term constraints on the import of international offset credits that liable firms will be able to purchase and surrender for compliance. However, in the longer term, the Queensland Government supports unlimited and unfettered trading in the international market.

The Queensland Government strongly supports the Australian Government's international negotiations for the recognition of carbon stored in harvested wood products in Kyoto eligible plantation forests, noting that international negotiations on the Kyoto Protocol's second commitment period opens the way for possible inclusion of wood products post 2012.

The Queensland Government supports further investigation by the Australian Government into developing national accreditation standards for the voluntary carbon in Australia. For example, continuing accreditation of offsets from avoided deforestation within the voluntary market could deliver positive regrowth vegetation outcomes.

### **3.5 Deforestation**

The Queensland Government notes that the Australian Government does not propose to include deforestation in the CPRS but, given the potential for low-cost abatement in the sector, it will investigate options for incentive-based mechanisms to further reduce deforestation.

The Green Paper attributes State-based restrictions on clearing as the key driver for markedly reducing rates of deforestation of mature and remnant forests in Australia. Australian deforestation emissions have reduced markedly since 1990, largely due to increased protections against land clearing. Problems of coverage include setting thresholds for coverage, exemptions from coverage, prediction of emissions and monitoring, reporting and compliance issues. It suggests that if emissions from

deforestation were to be included in the scheme it would create a powerful incentive for pre-emptive land clearing to avoid future obligations.

However, the Queensland Government is concerned that, without some incentive to reduce deforestation, the proposal as it stands may encourage the clearing of unprotected and regrowth vegetation, particularly in Queensland to make way for other land uses including plantations. Regrowth vegetation in Queensland is on average about 19 years old. If the regrowth vegetation does not meet the definition of a Kyoto forest and the value of carbon sequestered in regrowth vegetation cannot be recognised in the market; landholders may be encouraged to clear tracts of regrowth vegetation to establish new plantations (reforestation) in its place then voluntarily 'opt-in' to the scheme to receive permits for the sequestration generated by the plantation. The clearing of regrowth vegetation will lead to a release of stored carbon and could also impact on local biodiversity and land management conditions.

Incentives directed to reducing deforestation emissions provide an alternative mechanism to recognise and reduce deforestation outside the coverage of the CPRS. Incentives of a sufficient magnitude will encourage the retention of, for example, regrowth vegetation which is legally able to be cleared. Actions at the property level would need to be taken to appropriately manage and protect such areas of eligible vegetation.

The Queensland Government encourages consideration of a competitive approach to any allocation of incentive funds. A market based approach to the allocation of incentive funds would enable the emission reduction outcomes from the funds invested to be maximised. Auction approaches to the allocation of funds for the supply of environmental services have been increasingly applied across Australia and landholders are increasingly accepting of such mechanisms.

It is recognised that methodology and metrics to underpin the quantification of carbon benefits may need to be developed further. Options for the delivery of such a program could be at the national level or devolved appropriately down.

### **3.6 Open cut mining**

The Queensland Government notes concerns about the measurement issues associated with the Australian Government's preference to cover fugitive emissions from open cut coal mines from the start of the scheme, and the strong need to improve estimation techniques. However, the Queensland Government supports the Australian Government's preference to cover fugitive emissions from open cut coal mines from the start of the scheme.

While Queensland's fugitive emissions from open cut coal mining is relatively small within the context of state emissions (accounting for 3.1MtCO<sub>2</sub>-e in 2006, or around 1.8% of Queensland's total net emissions), there are potentially substantial cost imposts for this sector outside of their direct control.

Currently, fugitive emissions from open cut coal mines are estimated using indirect proxy methods (emissions factors averaged at a State level) derived by the CSIRO and applied to the volume of gas released per tonne of coal produced (m<sup>3</sup>/tonne). The CSIRO emissions factor for Queensland is 1.2m<sup>3</sup>/tonne, but the underpinning CSIRO research shows that site specificity can deliver confidence ranges of between 0.1 to 4.5m<sup>3</sup>/tonne across open cut mines in Queensland.

Given the measurement uncertainties which exist for fugitive emissions, the Queensland Government would support special priority and provision of Australian

Government assistance in the rapid development of more accurate measurement techniques over the next two years.

## **4. Emissions-Intensive Trade – Exposed Industries**

The Queensland Government supports the provision of assistance to Australia's emissions-intensive trade-exposed industries (EITEs) on economic and environmental grounds.

Queensland's agricultural, mining and minerals processing industries will be significantly affected by the introduction of the CPRS. The Queensland Government supports the consideration of EITEs in the international context within which they operate to retain competitiveness and avoid carbon leakage to countries which have not yet implemented emissions reductions arrangements in the relevant sectors.

The Queensland Government supports the proposal that assistance to EITEs be phased out beyond 2020, if a comprehensive global emissions reduction agreement comes into force.

### **4.1 Amount of assistance to EITEs**

While supporting assistance to EITEs, the Queensland Government recognises that a well-designed CPRS needs to ensure that all sectors of the economy contribute to national greenhouse gas reduction targets and strike an appropriate balance between support for the EITEs and the additional costs borne by the domestic economy to meet the national targets.

The CPRS therefore needs to ensure a sufficient but not excessive level of support is provided to EITEs. The Queensland Government considers that the proposed capped level of assistance for EITEs of around 30 per cent of total permits (including about 10 per cent set aside for agriculture) is a reasonable starting point. . It should ensure that adequate resources are available to assist other sectors of the economy, including households and strongly affected industries.

### **4.2 EITE Thresholds**

On balance, while the Queensland Government could consider supporting the revenue based EITE formula, it recommends the Australian Government uses a rolling average of revenues to allow for smoothing of revenue peaks and troughs as opposed to a two year period as proposed in the Green Paper. However, the Queensland Government also acknowledges that the revenue based formula may not be as robust as a value added methodology, and suggests the Australian Government further explore the practicality and feasibility of using a value added formula to determine whether it makes a material difference to the allocation of sectoral assistance.

It is important that the eligibility formula be a transparent and comparable indicator of the materiality of the carbon cost impacts, and the capacity of industries to absorb or pass through such costs, across different traded industries.

The Queensland Government notes that while an alternative value-added approach may provide a more comprehensive alternative for measuring impacts, it acknowledges that this approach may be more subjective, information intensive and administratively complex. The UK Government has been using a value added scorecard approach for several years to assess 800 of its top companies.

The Queensland Government broadly supports the proposed 'two-tier scheme' relating to emissions intensity based on emissions per unit of revenues specifically:

- above 2,000 tonnes of carbon dioxide (tCO<sub>2</sub>-e) per \$1 million revenue to receive assistance to offset about 90 per cent of the impact of the carbon cost; and
- between 1,500 tCO<sub>2</sub>-e per \$1 million revenue and 2,000 tCO<sub>2</sub>-e per \$1 million revenue to receive assistance to offset about 60 per cent of the impact of the carbon cost.

However, the Queensland Government is concerned that the proposed lower threshold may not take adequate account of EITEs which will be impacted by the CPRS. In this context, the Queensland Government suggests the Australian Government gives further careful consideration to the EITE assistance threshold cut off (eg. for those less than 1,500tCO<sub>2</sub>-e per \$1M revenue).

The establishment of such a third tier should not, however, mean that the 30 per cent overall cap on EITE assistance is increased. It is recognised that this could reduce the amount of assistance available per competing claim than might otherwise have been the case under the higher thresholds.

#### **4.3 Review of industries within EITE thresholds**

The Queensland Government supports the Green Paper proposal to target assistance to those activities facing the largest material impact from the introduction of the CPRS.

To ensure this intent is maintained over time, the Queensland Government considers that eligibility for assistance should not be determined on a “once and for all” basis, as is proposed for domestic significantly affected industries.

The Queensland Government proposes a three year review process of EITE eligibility, to take account of fluctuations in key parameters including commodity prices. This would provide a mechanism to direct EITE assistance to those industries at greatest risk in the competitive international market and provide a mechanism to ensure activities significantly exceeding the revenue thresholds do not continue to receive assistance at the expense of industries which may have experienced significant price falls and whose competitiveness is significantly disadvantaged by the imposition of a carbon price. The Queensland Government notes that the EU ETS is considering a three year review process for its equivalent EITEs, although the thresholds for identification of these industries are still being considered.

In addition, incumbent firms could continue to be assessed against industry average baseline production processes to maintain incentives for eligible activities to reduce the emissions intensity of their production process.

#### **4.4 New entrants and industry expansion**

The policy intent of providing assistance to EITEs is to minimise carbon leakage to other countries where no comparable emissions reduction policy is in place. On this basis, the Queensland Government supports EITE assistance being available for new entrants to EITE sectors and for incumbent industry expansion, and suggests the Australian Government further consider how to avoid discriminating against these interests.

The Queensland Government acknowledges two approaches are possible under the existing treatment of EITEs:

- (i) a permit reserve from the EITE permits be 'earmarked' for new entrants and industry expansion, with the annual permit pool being maintained at a constant 30 per cent of total permits; or
- (ii) expanding the existing tranche of permits available to EITEs, however, this will reduce the total amount of assistance available to non EITE interests.

To promote both environmentally and economically efficient investment, the eligibility of new entrants for EITE assistance should be based on world's best practice production processes, rather than historical industry average baselines.

#### **4.5 Treatment of indirect emissions**

Given the significant information and measurement complexities associated with measurement of indirect emissions, the Queensland Government supports the Australian Government's preferred position that indirect emissions (except for electricity related) be excluded from the thresholds for EITEs.

However, the Queensland Government notes that the exclusion of indirect transport emissions from EITE assistance arrangements is potentially an important issue for Queensland given the significant transport task associated with many of the State's trade-exposed sectors, particularly primary industries. While there should be minimal costs associated with transport emissions in the initial stages due to equivalent fuel excise offsets, the issue may be of concern post 2013 when offset arrangements may cease.

As a result, the potential additional costs of indirect emissions for EITEs in sectors such as agriculture need to be taken into consideration in developing future support measures, whether through the Climate Change Action Fund or alternative fuel taxation measures.

## **5. Impacts on the electricity generation sector**

Queensland is heavily dependent on stationary energy. Low cost electricity generation has provided the State with a competitive economic advantage. Reliable, cost-effective energy is critical to Queensland's continued economic growth and competitiveness.

The Queensland Government is very aware that the stationary generation sector will be one of the key sources of national abatement requiring significant changes to the way, and where energy is generated and potentially transmitted.

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. 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.

There is also direct risk to the Queensland Government which owns substantial shareholdings in generation capacity in the State. Nearly 62 per cent (5,392MW) of the total coal-fired capacity is state owned.

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 go 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. NEMMCO forecasts 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.

While Queensland has access to natural gas supplies as a transitional fuel in the short to medium term, its longer term energy demands will make the impacts of a CPRS more pronounced than in other states. For this reason the Queensland Government has made, and continues to make, a strong commitment to research and development efforts which can potentially secure cost-effective options for low emissions generation.

### **5.1 Energy supply security**

The Queensland Government supports the Green Paper's analysis that the setting of the national medium term target will have the greatest bearing on energy security. The Queensland Government considers that energy supply security issues are manageable in the short, medium and longer term but the technical capacity of transitioning to alternative low or zero emissions technologies will need to be one of the key considerations for setting future national emissions reduction targets.

Integrated gasification and combined cycle (IGCC) technology with carbon dioxide capture and storage (CCS) may not be commercially attractive in the medium term, so this option is not available to meet medium term investment requirements. Other technologies, such as solar-thermal and geo-thermal generation also cannot be factored into an emissions reduction scenario at this stage.

Energy security will need to be efficiently 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 supports the analysis undertaken by Professor Garnaut in respect of the potential impacts on transmission networks. Again, while these challenges are manageable, they will not come without some additional cost. The Climate Change Action Fund should include potential consideration of the additional costs for network infrastructure into the longer term which may need to be offset partly, or fully, to manage potential price jumps for energy consumers. This is particularly relevant for Queensland given the size and distribution of the State's network which extends for 1,700km, approximately half of Australia's eastern seaboard.

## **5.2 The Electricity Sector Adjustment Scheme**

The Queensland Government strongly supports the Green Paper proposal for an Electricity Sector Adjustment Scheme, including the provision of direct assistance to coal-fired generators to ameliorate the impacts of a CPRS on investment premiums.

The Queensland Government's analysis for its own coal-fired generators indicates that over the medium to longer term generator companies face difficulties recovering the full costs associated with a CPRS, with a resultant loss in asset values, disproportionate to other sectors of the economy.

From a future investment perspective, if the Australian emissions 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 develop effective caps and associated market conditions, to encourage abatement effort while still ensuring the security of a supply of energy in a clean, cost efficient manner.

Much of the initial investment in significant emissions abatement will occur from the electricity generation sector. In this respect, maintaining investor confidence, whether for retrofitting/refurbishment of existing plant or investment in new, potentially unproven technologies, is an important part of achieving emissions abatement.

Once-off, upfront assistance will not alter abatement outcomes, as there is a finite number of permits available within the CPRS – as determined by the emission cap. Assistance to generators will not increase the number of permits required to meet abatement targets.

## **5.3 The allocation of direct assistance**

In respect of the specific permit allocation proposals in the Green Paper, the Queensland Government supports:

- a cut-off date of 3 June 2007 for eligibility;
- the separation of direct assistance to separate black and brown coal pools, based on an emissions profile by plant. The Queensland Government considers that a 65:35 black:brown coal split is reasonable, however, further details will be provided in its supplementary submission in October;
- an asset-by asset allocation of direct assistance rather than a portfolio assessment of emissions; and

- providing up-front direct assistance. While acknowledging the policy concern for a potential windfall gain, the Queensland Government is concerned that a windfall gain review process will not achieve the investment confidence which is the purpose of the provision of direct assistance in the first instance. In addition, the Queensland Government agrees that a bottom up approach to determining the amount of allocation and to undertake any windfall gains review will be complex and that inherent uncertainty required for such modelling may make results inadequate on a stand-alone basis for Government decision making.

#### **5.4 The provision of direct assistance - cash or free permits?**

The Queensland Government supports the use of free permits rather than cash as the preferred position for the allocation of direct assistance to coal-fired generators.

In theory (and with perfect information), electricity generators should be indifferent between free permits and cash as a form of direct assistance. Neither option will increase the level of carbon emissions if provided on an up-front, once-off basis.

Free permits have the advantage of removing some of the uncertainty associated with estimating the cash value impacts of direct assistance up-front before the scheme commences and is a medium with a value which can fluctuate with the market.

The allocation of free permits rather than cash also has the advantage of limiting the amount of cash needed to be raised by the Australian Government in making direct assistance available in the initial year of the CPRS for the Electricity Sector Adjustment Scheme.

#### **5.5 Attaching conditions to direct assistance**

On economic grounds, the Queensland Government does not support the imposition of conditions on direct assistance provided to energy generators. Placing conditions on direct assistance, particularly if direct assistance is provided via free permits may limit permits moving to their 'highest and best valued' use, and potentially encourage investment in higher cost abatement options making emissions reductions and energy comparatively more expensive. Conditions on direct assistance could also give incumbent energy generators a competitive advantaged over new entrants, particularly smaller renewable options.

A particular concern is that conditional assistance could lead to less assistance from a commercial perspective than direct assistance of a similar amount. This would be the case where assistance is provided for research and development or technology uptake whose cost is well above the commercial return that such research and development or technology uptake will result in. For example, \$500 million of assistance to a generator on the condition that it be used for CCS would be unlikely to lead to a commercial return of the same amount.

However, in the event that conditions of some form are imposed on direct assistance, the conditions should be designed in a way which does not:

- present a barrier to exit for incumbent generators; and
- provide competitive advantage for incumbent generators.

Any proposals to attach conditions to direct assistance should be subject to adequate consultation with all affected parties to ensure that any conditions enhance carbon reduction strategies at least cost.

## **5.6 Amount of direct assistance to be provided for coal-fired generators**

The Green Paper does not nominate a specific amount of funds for direct assistance to coal generators. Instead, the Green Paper indicates that the quantum of assistance will be considered after the medium term target is set.

Many generators necessarily have to enter into long term contracts (power purchase agreements) with retailers and other large customers to support the financing of investments. This tends to lock them into long dated price paths (typically 10 years and beyond) and constrains their ability to pass on material changes to the costs of generation (such as carbon costs). The Queensland Government would like further consideration be given to compensation for generators to take account of commitments under existing contracts.

The Queensland Government considers reasonable the provision of one-off and up-front direct assistance in the form of free permits to coal fired generators, for at least 50% of the loss in value over the economic life of energy assets.

## **5.7 Queensland Gas Scheme**

The Queensland Government will be seeking to transition the Queensland Gas Scheme into the CPRS as soon as practicable. The Queensland Government will work closely with the Australian Government to develop appropriate transitional arrangements once the interim and medium-term national emissions reduction targets are announced, and once it is satisfied that the objective of the gas scheme will be efficiently serviced through the CPRS.

It is likely that when the benefits of the CPRS are broadly equivalent to that of the 18% Gas Scheme, the CPRS will be the main mechanism driving new investment in gas fired generation in Queensland. At this time, the Queensland Government will consider transitioning out of the Gas Scheme to the CPRS.

## **6. Household and business assistance measures**

### **6.1 Impacts on households**

The Green Paper estimates that, given an indicative carbon price of \$20 per tonne, electricity prices by would increase by 16 per cent, gas and other natural fuels by nine per cent and the CPI by 0.9 per cent in 2010-11.

The Queensland Government 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 Green Paper's position that there are strong equity and environmental reasons for reducing the impact of the CPRS 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 can 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.

It is appropriate to provide household assistance primarily through the national tax and payment system as this will maintain price increases in energy, fuel and other carbon intensive products. Key to the achievement of emissions reductions targets are price signals which are not muted by direct price subsidies. The Queensland Government also considers essential that the Australian Government clearly and explicitly identifies to households that the assistance provided in this way is specifically aimed at addressing the increases in energy prices due to the impact of the CPRS.

The Green Paper proposes that assistance will be provided to low income households through the tax and payment system to meet the overall cost of living increase and that tax concessions to middle income households would be increased to help meet the cost of living increase. More specific measures are to be considered as part of the inquiry into *Australia's Future Tax System*. This should include a mechanism for periodic review of CPRS and offsetting taxation measures following the implementation of the scheme.

The Queensland Government also notes the important related review of the pension system currently being undertaken by the Australian Government. Increasing energy and fuel costs, along with the flow-on costs of living associated with the introduction of the CPRS will need to be a key consideration for the Australian Government in making decisions about future pension rates.

In addition, the Queensland Government notes the proposed energy efficiency measures supported by the Australian Government including the provision of low interest loans to households, subsidised insulation for rental properties, and solar hot water rebates.

### **6.2 Impacts on small and medium enterprises**

The Queensland Government supports options for making assistance available to small and medium enterprises (SMEs) through the Climate Change Action Fund,

including measures to support energy efficiency and specific industry awareness measures.

The Queensland Government considers SMEs will likely to be among some of the most unprepared for the indirect impacts of the CPRS, and so potentially face substantial carbon risks. It will be important that the Australian Government assist the capacity of these firms to operate under future carbon constraints.

SMEs comprise about 99 per cent of Queensland business. Most of these businesses will not be captured directly by the CPRS and are unlikely to trade permits but will still be affected by increased input costs across their supply chains. This impact will be especially high in regional areas as a result of high fuel costs and a concentration of often unique-to-region energy-intensive industries. This may exacerbate effects on local business and across communities.

The impact of the CPRS will be particularly pronounced on Queensland firms that are expanding into offshore markets. While they may be below the threshold for assistance as EITEs, their competitiveness will still be challenged. The changing behaviour of customers and supply chains as a result of higher prices could also substantially impact on their business.

The manufacturing sector, for example will face significant challenges in adjusting to the CPRS. The Green Paper identified 28 manufacturing sectors in the top 60 emissions intensive industry sectors. These sectors employ over 68,000 people or over one-third of the Queensland manufacturing industry's total number of employees (192,600). Many Queensland manufacturers, while not classified as emissions-intensive are trade exposed and will benefit from assistance.

The tourism sector will also be impacted. Tourism is one of the State's fastest growing export industries, now the second largest export earner, behind coal. Tourism accounts for \$8.1 billion or 5.6 percent per cent of the State's economic activity as measured by gross state product, generates domestic and international visitor expenditure of over \$19.4 billion<sup>1</sup> and employs 103,500 Queenslanders<sup>2</sup>.

In Queensland, the tourism industry is comprised largely of SMEs, with a significant proportion of operators located in regional areas where they are often central to local economies with the social and environmental benefits derived from visitor expenditure.

While the tourism industry is not emissions-intensive, it does operate in a global market. The industry's competitiveness is dependent on Queensland's and Australia's attractiveness to international and domestic visitors. The introduction of the CPRS will impose budgetary constraints across the sector resulting in the increased price of tourism products and services. This decreases the appeal for both domestic and international tourists which ultimately results in a loss of market share and profitability.

The Queensland Government is currently taking steps to engage with business and industry throughout Queensland in an effort to provide SME businesses with information on climate change impacts and the tools necessary to adjust. The Australian Government will need to be a key partner in this process.

The Australian Government has stated that it will establish the Climate Change Action Fund to support businesses to prepare for and minimise threats to business viability

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<sup>1</sup> Tourism Research Australia, Year ended March 2008

<sup>2</sup> STCRC, Year to June 2004

while maximising commercial opportunities. It is critical that this fund recognise the impact that a carbon price will have on the profitability of SMEs and provide appropriate compensation to those that will not be eligible for assistance through other mechanisms.

### **6.3 Climate Change Action Fund**

The Queensland Government strongly support the Australian Government's establishment of the Climate Change Action Fund, noting that its quantum and source of funding is still be determined.

The Queensland Government supports the role of the CCAF in providing assistance to workers and communities and firm-specific support. The Government also considers the CCAF, or other Australian Government funding, should support research and development activities to support emissions-reduction in sectors that do not receive free permits,.

The Queensland Government believes there is also role for the CCAF to provide support for the following initiatives:

- there is a continued need for the Australian Government to substantially invest in research and development in low and zero emission technologies, as well as transmission infrastructure to facilitate the siting of generation power that is a long way from the national grid. Given the importance of this, the Commonwealth Government may need to allocate additional funds on top of permit revenues.
- funding for energy network infrastructure. Additional investment is likely to be needed for transmission infrastructure to provide sufficient capacity to realise the generation potential low emissions and renewable energy.
- dissemination of information and provision of incentives to promote uptake of, emissions reduction technologies and practices. This includes for SMEs and the primary industries and land sector have significant but largely unknown abatement opportunities including carbon sequestration in soil and vegetation.

## 7. Complementary measures

### 7.1 Complementary measures

It is not the purpose of the Green Paper to propose a suite of measures complementary to the CPRS. However, a CPRS remains only one part of the overall suite of measures required to respond to climate change.

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. Typically, 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 introduction of the CPRS 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 the CPRS 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 CPRS results in significant energy cost increases, and in the meanwhile investment decisions in relation to building and equipment design and equipment purchases 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, if necessary by regulatory means.

There needs to be a cultural shift in businesses' and 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 COAG Climate Change and Water Working Group, Queensland would support the allocation of funding from permits to the Climate Change Action Fund to support the uptake of energy efficiency measures.

## 7.2 The critical role of technology improvement

New technology will play a vital role in meeting Australia's emissions reduction 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 CCS 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 strongly 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. The Australian Government – given the national nature of the task and its access to emissions permit revenues – will need to take prime funding responsibility within the public sector.

The Queensland Government encourages the Australian Government to supplement funding for additional research and development for key climate change technologies, such as carbon dioxide capture and storage, solar thermal and geothermal.