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Green Paper Submission
Department of Climate Change
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Dear Sir/Madam

SUBMISSION TO CARBON POLLUTION REDUCTION SCHEME GREEN PAPER

Introduction

ERM Power is Australia's leading energy planning and solution specialist, having operated in the energy market for more than 25 years and evolving from a specialist consulting firm in the 1980s, to an exclusive greenhouse-abating gas-fired generation developer in the 1990s and 2000s, and in 2008 to a fully integrated energy company, incorporating the most successful "new-start" retail company in the NEM.

ERM Power is privately owned and has over 120 employees operating across Queensland, New South Wales, Tasmania and Western Australia, with its head office in Brisbane and offices in Sydney and Perth.

To date ERM Power has led the development of 6 gas-fired power stations, representing 2,500 MW of new generation capacity, 900MW (~\$1 billion) of which is presently being commissioned in WA and NSW, and 780MW (~\$1 billion) of which is currently under construction in QLD and WA with commercial operation in 2009. This represents over 50% of new generation commenced in Australia over the last 3 years, and 4.5 Mt CO₂e reductions in GHG emissions compared to black coal fired generation.

ERM is presently finalising the commitment to its next gas-fired power stations in NSW and Queensland, for which it already has development approvals, planned for commercial operation in 2010/11 in response to urgent demand. These new developments will provide 2.5Mt CO₂e per annum carbon pollution reduction compared to black coal-fired generation. ERM has plans for the further development of these facilities to achieve up to 10Mt CO₂e per annum carbon abatement in place of retiring black coal-fired power stations.

ERM appreciates the opportunity to respond to the important matters raised in the Government's Green Paper of July 2008 on the proposed Carbon Pollution Reduction Scheme. ERM has prepared this response primarily in the context of how the electricity generation sector, being a major contributor to greenhouse gas emissions in Australia, can best contribute to an overall reduction in greenhouse gas (GHG) emissions.



It is imperative that a well designed CPRS be introduced nationally in Australia to regulate and to reduce greenhouse gas emissions in the electricity generation sector in Australia. In addition to achieving greenhouse emissions targets, a key goal of any CPRS must be to ensure electricity supply reliability by providing investment certainty for new and replacement generation in the medium term, as well as supporting research into potentially zero-emitting power generation facilities. It is imperative that timely investments are made in key infrastructure industries, such as the electricity industry, which contribute to and support the on-going growth of the Australian economy and have the capacity to deliver the majority of emission reductions, in new facilities to provide for that growth as well as in new facilities to replace aged “high emitting” facilities.

This paper outlines the shortcomings of a cap and trade scheme and proposes an alternative structure to the Carbon Pollution Reduction Scheme (CPRS) with supporting arguments. It also provides ERM’s comments on the Government’s preferred positions on the design of the CPRS which are most relevant to ERM.

In essence a successful CPRS must incentivate the necessary new investments in low carbon polluting generation facilities to provide for electricity demand growth as well as to replace existing high carbon pollution facilities, and this should be an adaptation of the “tried and proven” renewable and gas and GHG abatement schemes operating Australia-wide (for renewables) and in NSW and Queensland in respect of the NGAC and GEC schemes respectively.

The Landscape

The Garnaut draft reports have quite properly endorsed worldwide consensus that urgent action is necessary to stem rising atmospheric greenhouse gas levels resulting from human activity because of potential adverse world climate change consequences. The Kyoto Accord sought to stem GHG emissions in developed countries to limit the growth of world GHG levels by an average 5% between 2008 and 2012, from 1990 levels of 550ppm CO₂e to between 445-490ppm beyond 2012. However, the Kyoto worst case projection for GHG levels is still being exceeded, because of failures of many developed countries to achieve committed abatement targets and the mass transfer of industrial activity from developed countries to developing countries.

There will be virtual universal concurrence with the latest Garnaut conclusion that there should be the strongest possible efforts to secure global agreements to limit GHG emissions sufficiently to stabilise global GHG levels to no more than 550ppm CO₂e, and that Australia should be prepared to play its full proportionate part in achieving that goal, given that international agreement is urgent and essential.

There will not be universal agreement, however, with the Garnaut recommendation “that in the absence of comprehensive agreement on global GHG emissions reductions, Australia should (still) commit to reducing emissions from 2000 levels consistent with the Government’s policy of reducing emissions by 60% by



2050,” and “that Australia should accordingly commit to reducing emissions from 2000 levels by 25% per capita by 2020”.

The subordination by Professor Garnaut of objective policy advice to a newly elected Government seeking advice as to how to best meet election promises made in the ignorance of the Opposition is astonishing, especially when it is supported by immature and arguable analysis and assumptions and self fulfilling conclusions.

The setting of a CPRS of at least 25% per capita below 2000 levels from 2020, in the event that “comprehensive agreement on global gas emission reductions is not reached”, is totally contradictory to Professor Garnaut’s express conclusions that Australia acting alone will have no effect on the world climate challenge.

The Garnaut conclusion “that Australia can afford to make unconditional policy commitments of reducing emissions by 5% in 2020 from 2000 levels” cannot be accepted on the basis of the Garnaut draft report.

The Garnaut claim that the proposed targets for Australia have been selected because they involve comparable abatement effort to other developed and developing countries, calculated within an internally consistent framework comparable with global agreement around specified emissions concentrations objectives, is empty and meaningless rhetoric.

The Garnaut concessions to political aspirations and media-driven expectations flies in the face of the press release by Prof. Garnaut on 5 September 2008 that “it’s important that any proposal under consideration for the international allocation of emissions reductions ‘add-up’ to the desired global outcome – there would be no point in global action which was not geared to avoiding the substantial climate change impacts”.

Shortcomings of a Cap & Trade Scheme

The presumption by the Garnaut and Federal bureaucracy that a Cap and Trade (emission permit auction) scheme, as attempted to be implemented in the European Union (EU), should be adopted as the basis of a CPRS for the Australian electricity power and energy systems is totally misinformed.

The assumption that a single market-based tax on carbon pollution emissions across all GHG-emitting sectors would achieve optimum minimum cost to the nation of reducing emissions and increasing sinks of carbon pollution to meet variously regulated carbon pollution reduction trajectories is not only not proven, but actually not demonstrated to be so effective in any regional administration. Furthermore, it is totally undermined in Australia because of the political concessions already made for the agricultural and transport sectors.



Assumptions that new taxes on carbon pollution, if returned by governments one way or another to the community, do not represent a cost, but rather only a wealth transfer, ignores inefficiencies as will occur in a highly capital-intensive sector such as the electrical power and energy sector.

Furthermore, a quite erroneous assumption is that a market-based carbon pollution emission tax or auction and trading of permits capped by volume to produce a projected reduction in absolute carbon pollution, as has been introduced, with two failed starts prior to the current market in the European Union countries, which have a totally different “Net-Pool” electricity market and virtually zero growth, will successfully “work” in the quite different “Gross-Pool” Australian NEM with its 3% to 4% growth in some State Regions.

This will be compounded by the replacement of all State GHG-abatement rewarding schemes in individual States, which offer clear evidence on which to mount a successful national market-based GHG-abatement Reward Scheme, with an auction Cap and Trade Scheme which has no evidence nor prospect of successful operation in the “Gross-Pool” electricity market.

Consequences of Investment Uncertainty

Change of law stranding of properly made infrastructure investment in electricity generation will naturally jeopardise the availability of new capital to expand generating capability in high growth states, as well as the availability of capital to replace generating plant forced to close prior to an orderly investment cycle.

Uncertainty as to the pass-through of carbon taxes (or emission permit costs) to the NEM pool price will seriously affect the investment return for capital intensive generation plant, and this is grossly exacerbated for a “Gross Pool” electricity market, in which both long run investment returns and short run fuel costs can only be recovered from the pool price when a plant is dispatched, such as the NEM, compared to the EU “Net Pool” electricity markets and as for most regions trialling Cap and Trade (emission permit auction) schemes.

It is impossible to model with any certainty what pass-through to NEM pool prices of emission permit costs, or even of carbon taxes, will occur for this gross pool model, and accordingly even existing gas-fired generators are likely to have finance credit reviews triggered upon the introduction of such ETS.

In contrast to these pool price uncertainties and credit exposures for generators with market-based emission penalising schemes, the NSW, Queensland and Mandatory Renewable Energy Target, gas and GHG abatement schemes offer sounder guidance for a national abatement rewarding scheme which would not have the investment and credit uncertainties of emission charging schemes, as long as cross-sectoral offsets are not permitted.



Cross-sectoral offsets have been demonstrated by the NSW GGA Scheme to expose an abatement market-price to gross uncertainty as to the supply from time to time of carbon emission reduction in a different sector. They have the potential to distort availability of permits which would result in less efficient pricing of permits while delivering little, if any, emissions reductions.

Proposed Alternative Structure for the Carbon Pollution Reduction Scheme.

ERM believes the best framework for achieving cost effective reductions of emissions is with a two part initiative directed at generators.

The first part is an abatement permit (certificate) trading scheme which rewards low emissions intensive generators, such as gas fired generators, and penalises high emissions intensive generators, such as coal fired generators, based on their overall emissions intensity relative to an annual target greenhouse gas intensity trajectory for the electricity market. Electricity retailers would be required to purchase abatement permits from generators for a prescribed proportion of their sales to non trade-exposed industries. There would be a penalty or cap price for permits which should be set annually at a level which would promote increased generation for low emissions intensive generators relative to high emission intensive generators and assist with achieving the targeted emission reduction from the electricity industry. This is a structure similar to the NSW Greenhouse Abatement Certificate (NGAC) scheme.

The second part is a small carbon tax for registered CPRS participants which would be used exclusively to support clean coal research and demonstration.

A carbon abatement scheme of this structure has a number of benefits when compared to a cap and trade structure.

1. The proposed structure will provide a clear forward signal of the price of permits received or paid by generators and give greater certainty of future revenue streams for low emissions intensive generators.
2. There would be no requirement for compensation as CPRS participants only require permits based on their emissions relative to the target emissions trajectory rather than requiring permits for all emissions.
3. The electricity cost impact to consumers will be potentially far less severe due to marginal nature of costs of this scheme.
4. There would be no requirement for a complex permit auctioning process.



Comment on Government Positions

Framework – Section 1

Government Position 1.1

“The objective of the Carbon Pollution Reduction Scheme is to meet Australia’s emissions reduction targets in the most flexible and cost-effective way; to support an effective global response to climate change; and to provide for transitional assistance for the most affected households and firms”.

ERM Position

ERM believes the best framework for achieving cost effective reductions of emissions is with a two part initiative directed at generators, as discussed above.

Coverage – Section 2

Government Position 2.3

“Stationary energy emissions would be covered from scheme commencement by applying scheme obligations both to facilities with direct emissions of 25,000 tonnes of carbon dioxide equivalent a year or more and to suppliers of fuel to small energy users”.

ERM Position

ERM believes the design of any effective carbon abatement scheme needs to ensure that the electricity industry does not unnecessarily carry the burden for other sectors such as agriculture, transport and forestry in the long term. This would best be achieved through a separate scheme for the electricity generation sector, being a major contributor to greenhouse emissions in Australia. Demand-side measures would be complementary to this scheme.

Carbon Markets – Section 3

Government Position 3.4

“Unlimited banking of permits would be allowed under the scheme”.

ERM Position



ERM supports unlimited banking of permits because this will provide flexibility and help to eliminate the ability of opportunistic parties to distort permit availability which has the potential to pervert a clear forward price for permit prices and impact investor confidence.

Government Position 3.5

“The scheme would permit a limited amount of short-term borrowing by allowing liable entities to discharge up to a certain percentage (less than 5 per cent) of their obligations by surrendering carbon pollution permits dated from the following year”.

ERM Position

ERM supports short-term borrowing as it will provide additional flexibility to liable parties.

Government Position 3.7

“The scheme would have a price cap for the period 2010–11 to 2014–15.

The price cap would be set high enough above the expected permit price to ensure a very low probability of use. The precise level would be set taking into account all information about scheme design and the expected abatement costs in the economy”.

ERM Position

ERM supports having price caps or a penalty price under the alternative CPRS structure outlined above. This will not only assist in removing the scope for opportunistic parties to distort permit availability but also provide a clear price signal for new low emission intensive generators on which they can be banked. The price cap or penalty level should be set high enough in the early years to incentivise additional generation by existing low emissions intensity while also providing a clear price signal which demonstrates the benefits of low emission intensive generators relative to more emission intensive incumbent generators and provides a bankable revenue stream for new projects.

Emissions Targets and Scheme Caps – Section 4

ERM Overall Position

ERM believes the setting of the emissions targets is of the utmost importance. Emissions targets need to be set as early as possible to provide certainty to investors and impacted parties. ERM is supportive of establishing firm targets for the first 10 years of the scheme. This will create greater certainty about the benefits under the CPRS for new low emissions intensive generators and support the required new investments in the Australian electricity industry.



Government Position 4.1

“At the end of 2008, in the context of the white paper, the Government would announce a medium-term national target range for 2020 that provides upper and lower bounds to give investors and market participant’s information on directions and retains sufficient flexibility for the Government”.

ERM Position

ERM is supportive of establishing a firm target for the first 10 years of the scheme.

Government Position 4.13

“At the end of 2008, in the context of the white paper, the Government would announce the indicative national emissions trajectory for the period 2010–11 to 2012–13, and in 2010 the Government would announce a further two years of the trajectory up to and including 2014–15, or to the end of any international commitment period, whichever is longer”.

ERM Position

ERM notes that certainty is required to support future investment and an indicative emission trajectory does little to provide certainty in the short to medium term. While ERM supports the setting of an indicative trajectory, this needs to be firmed up as soon as possible to provide the right signals to the market and give the certainty required to support investment in critical electricity infrastructure.

Linking the Scheme to International Markets – Section 6

ERM Overall Position

ERM believes that during the first 10 years of the ETS, Australia should aim to achieve targeted reductions without international offsets. Beyond this the ETS could allow an extremely limited amount of reductions, for example, 1 to 2 percent, from international offsets.

Government Position 6.10

“International non-Kyoto units would not be accepted for compliance in the scheme. This position would be reviewed for the post-2012–13 period in the light of future developments in international negotiations”.

ERM Position

ERM is supportive of this.



Government Position 6.11

“In order to facilitate a smooth start to the scheme and to minimise implementation risks, the Government would not allow Australian permits to be converted into Kyoto units for sale in and transfer to international markets in the early years of the scheme”.

ERM Position

ERM is supportive of this.

Auctioning of Australian Carbon Pollution Permits – Section 7

ERM Overall Position

The carbon abatement scheme should account for the risk of opportunistic parties unreasonably distorting permit availability which will have the potential to distort a clear forward price for carbon price and further impact investor confidence. There is no requirement for auctioning of permits under the structure proposed by ERM. However, if auctioning is required, there should be licensing for participation in auctions to prevent opportunistic parties with no liability under the CPRS distorting permit availability which could result in less efficient pricing of permits. Non-liable parties should only be allowed to participate in secondary markets.

Government Position 7.1

“Allocations would, over the longer term, progressively move towards 100 per cent auctioning as the scheme matures, subject to the provision of transitional assistance for emissions intensive trade- exposed industries and strongly affected industries”.

ERM Position

ERM does not support the allocation of free permits. It will adversely impact the liquidity of permit markets, as evidenced by the outcomes of the European Unions Emissions Trading Scheme. ERM supports 100 per cent auctioning from the outset of the ETS.

Government Position 7.4

“Four auctions would be held each financial year, one in each quarter. The Government seeks stakeholder feedback on the relative risks of alternative models, such as annual or weekly auctions”.

ERM Position



Auction and settlement arrangements should have regard to the credit and working capital requirements the scheme will impose on market participants. ERM believes auctions should be carried out on a monthly or quarterly basis to reduce the capital requirements for the process. Settlement should be deferred and occur on a smaller window, such as on a weekly basis, with participants providing credit for total auction proceeds for each month or quarter rather than providing capital upfront.

Assistance for Strongly Affected Industries – Section 10

ERM Overall Position

There should be no free allocation of permits for Australian electricity generators. At low to moderate carbon prices, there is unlikely to be a change in the generation dispatch merit order, and coal generators will most likely be able to pass through the full cost of scheme participation to electricity customers with or without free allocation of permits. Any compensation to coal generators would transfer the impact of a CPRS to the highest non-compensated emitter and the effect of dis-incentivising gas-fired generators would have a highly negative effect on achievable GHG abatement in the immediate future.

If heavily disadvantaged parties are to be compensated, it should be once-off and in a form that does not potentially reduce liquidity in the carbon permit market or have perverse market impact on lower emitting generators.

Government Position 10.2

“Coal-fired electricity generators are likely to be strongly affected by the scheme, based on the characteristics proposed in Section 10.1”.

ERM Position

Compensation only shifts the burden to the next emission intensive generator, such as open cycle gas fired generators, which are well below the average electricity industry emission intensity and will contribute significantly to reducing emissions from the electricity industry, as well as being the initial investments for the greater GHG-abating combined-cycle conversions.

Government Position 10.5

“To ameliorate the risk of adversely affecting the investment environment, the Government proposes to provide a limited amount of direct assistance to existing coal-fired electricity generators”.

Government Position 10.5.5



“The Government seeks stakeholder feedback on the relative merits of providing direct assistance to coal-fired electricity generators through allocations of carbon pollution permits or cash payments”.

“The Government seeks stakeholder feedback on possible options for conditional support that would be consistent with the economic and environmental objectives of the scheme, and that would further the Electricity Sector Adjustment Scheme objective of ensuring security of energy supply”.

ERM Position

As mentioned in the overall position above, ERM believes the most effective form of compensation is a one off payment. Heavily disadvantaged parties could receive compensation which protects them in a similar fashion to providing free permits without destroying the liquidity required in the carbon permit market to eliminate perverse market outcomes and achieve efficient pricing of permits.

Government Position 10.10

“The quantum of the proposed direct assistance for coal-fired electricity generators would be determined ‘up front’—that is, before the scheme begins. However potential recipients will need to submit to a review process to minimise any prospect of windfall gains”.

ERM Position

It is clear that the most emission intensive generators will need to significantly reduce production of emissions and/or decommission if significant emission reductions are to be achieved. Brown coal in particular will become marginalised over the next ten years.

Compensation should only be considered in this circumstance and be tied to a commitment to significantly reduce emissions via CCS for plant with reasonably useful economic lives, or to de-commission plant at the end of its 30-year reasonable investment cycle. Compensation is only appropriate to address significant loss-of-value in properly made investments and to avoid the significant implications of sovereign risk for future investments.

Government Position 10.11

“The proposed direct assistance for coal-fired electricity generators would be provided on a ‘once and for all’ basis—that is, further allocations of assistance would not be provided after the scheme begins”.

ERM Position

ERM supports compensation on a ‘once and for all’ basis, subject to the comments above.



Transitional Issues – Section 12

Government Position 12.2

“State and territory governments are encouraged to discontinue their market-based programs once the Carbon Pollution Reduction Scheme commences, as this is consistent with the Council of Australian Governments’ complementary measures and streamlining agenda. The Government will continue to work cooperatively with the New South Wales, Australian Capital Territory and Queensland governments to assist them in their development of appropriate transitional arrangements”.

ERM Position

ERM opposes the discontinuation of the existing market-based programs, particularly the Queensland Gas Electricity Certificate (GEC) Scheme. ERM has been the dominant developer of gas fired generation in Australia since 2005 and these investments are banked and commercial off the back of the benefits derived from the existing market based programs. These programs provide a greater degree of certainty, in terms of revenue, than the Government’s proposed CPRS structure, and without this support ERM would not have been able to deliver the significant greenhouse emissions reduction achieved over the past 3 years.

The Queensland Gas Electricity Certificate (GEC) scheme has facilitated the development of new gas fired generation projects in Queensland and provided significant carbon abatement by offsetting the requirement for more emission intensive coal fired power stations in the region. For example, the GEC scheme has contributed to the QLD average carbon intensity being 7% lower than NSW. Removal of these schemes without an appropriate replacement structure which provides similar investment certainty will place significant pressure on existing projects which contribute to achieving emission reductions and only jeopardise the future investment required in new low emission intensive generation across Australia to achieve emissions reductions.

It is integral that GECs should remain in place to facilitate investment until such time that the carbon price is at a level which drives the investment required in new generation. As the price of carbon increases and provides greater support for low emission technologies, such as gas, GECs will lose value and thus the GEC scheme will naturally transition in the CPRS through market efficiencies.

Issues relevant to the GEC scheme are addressed in greater detail in the submission from the Queensland Gas Generators Forum, of which ERM Power is a member.



Conclusion

ERM Power broadly supports a well designed program for reducing the Greenhouse Gas Emissions (GHG) of Australia. ERM believes a Cap and Trade scheme is not the best approach for achieving emissions reductions at the lowest cost in the electricity generation sector. ERM believes this can only be achieved through the proposed structure discussed above. In particular, there is no evidence that a Cap and Trade has any prospect of operating effectively in the NEM “Gross” electricity pool.

Investment certainty is paramount to future supply reliability. Any scheme must therefore address material issues of sovereign risk for properly made investments. This applies to measures which result in de-commissioning of existing plant prior to reaching its economic life, and to termination of current legislated schemes such as the Queensland Gas scheme which has underpinned substantial gas generation investment and consequent greenhouse emissions reductions.



APPENDIX A:

Carbon Pollution Abatement Potential of ERM-Developed Power Stations (Relative to Black Coal-Fired Generation)

A. Existing Developments, including Under-Construction

Oakey	$300\text{MW} \times 8760 \times 33\% \times 0.4 \text{ CO}_2/\text{a}$	= 0.35 Mt/a
Braemar	$450\text{MW} \times 8760 \times 50\% \times 0.4 \text{ CO}_2/\text{a}$	= 0.79 Mt/a
Kwinana	$320\text{MW} \times 8760 \times 96\% \times 0.6 \text{ CO}_2/\text{a}$	= 1.43 Mt/a
Uranquinty	$625\text{MW} \times 8760 \times 25\% \times 0.4 \text{ CO}_2/\text{a}$	= 0.55 Mt/a
Braemar 2	$450\text{MW} \times 8760 \times 50\% \times 0.4 \text{ CO}_2/\text{a}$	= 0.79 Mt/a
Neerabup	$330\text{MW} \times 8760 \times 30\% \times 0.4 \text{ CO}_2/\text{a}$	= 0.35 Mt/a
Total Existing Plant		= 4.26 Mt/a

B. Approved and In-Planning for Commercial Load 2010/11

Wellington	$625\text{MW} \times 8760 \times 50\% \times 0.4 \text{ CO}_2/\text{a}$	= 1.10 Mt/a
Braemar 3	$450\text{MW} \times 8760 \times 85\% \times 0.4 \text{ CO}_2/\text{a}$	= 1.34 Mt/a
Total Approved for 2010/11 CLD		= 2.44 Mt/a

C. Post CPRS Developments Planned

Braemar (to a total abatement of)	4.26 Mt/a
Wellington (to a total abatement of)	5.76Mt/a
Total	= 10.00 Mt/a