



## Investor Group on Climate Change Australia/New Zealand (IGCC)

7 February 2007

Ms Anthea Harris  
National Emissions Trading Taskforce Secretariat  
The Cabinet Office  
GPO Box 5342  
SYDNEY NSW 2001

Dear Anthea

The Investor Group on Climate Change (IGCC) Australia/New Zealand thanks the National Emissions Trading Taskforce for the opportunity to provide comment (attached) on the National Emissions Trading Scheme (NETS) as proposed in the "Possible Design for a National Greenhouse Gas Emissions Trading Scheme" discussion paper.

The IGCC represents Australian investors, with total funds under management of over **\$220 billion**, and others in the investment community interested in the impact of climate change on investments.

The IGCC aims to ensure that the risks and opportunities associated with climate change are incorporated into investment decisions for the ultimate benefit of individual investors through:

- Raising awareness of the potential positive and negative impacts, resulting from climate change, on the investment industry, corporate, government and community sectors;
- Encouraging best practice approaches to facilitate the inclusion of the impacts of climate change into investment analysis by the investment industry; and
- Providing information to assist the investment industry to understand and incorporate climate change into the investment decision.

More information on the IGCC can be found at [www.igcc.org.au](http://www.igcc.org.au).

### **Overview of IGCC's Comments**

The IGCC's comments focus on three areas of the proposed NETS:

1. Regulatory mechanism and scheme administration at the Federal level;
2. Emissions/Sector Coverage; and
3. Permit Allocation Scheme

The IGCC is of the view that any NETS should be administered and regulated at a Federal government level, so as to simplify the administration and associated costs of the scheme, facilitate the linkages with other international trading schemes and enable coverage of emissions from sectors which fall under federal jurisdiction.

The IGCC believe that, if the proposed NETS is to be an effective national policy instrument to reduce Australia's greenhouse gas emissions, the emissions/sectors covered by the scheme should be comprehensive. As emissions from industrial processes and fugitive emissions will have an increasingly important contribution to Australia's greenhouse gas inventory and their exclusion from the NETS creates potential investment distortions in a number of sectors, such as steel and power generation, the NETS should cover industrial process and fugitive emissions, in addition to combustion related emissions.



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The NETS could also be an effective and administratively efficient mechanism to drive the necessary emissions reductions associated with existing and future growth in diesel and LPG transport emissions, as well as aviation emissions. Therefore these emissions should also be included in the NETS. Inclusion of these emissions/sectors would result in the NETS covering nearly two thirds of Australia's greenhouse gas inventory. This would have the benefit of significantly increasing the NETS effectiveness as a government policy approach to climate change, sending an appropriate cost of carbon signal, and minimising the regulatory uncertainty to a significantly broader range of existing and future investments.

In addition, the efficient operation of the NETS may be significantly impacted if these emissions/sectors are not covered at the outset of the NETS, as the proposed limited coverage will lead to investment distortions within and between a number of sectors and latter inclusion would lead to a significant discontinuity to the permit market and permit price.

The IGCC is also of the view that the proposed method of permit allocation is neither efficient nor equitable, as:

1. the cost of the proposed NETS to the economy is expected to be significantly higher than that needed to achieved the emissions cap, i.e. the total cost of abatement;
2. it fails to recognise that climate change is an established investment risk that companies have already considered in their investment decisions. As a result investment decisions made by companies in the last 15 years will have considered climate change risk and therefore no compensation is required. In fact, the provision of compensation in the form of free permits will create distortions in the economy in excess of \$1.4 billion/year (70% of the estimated value of permits) and provide perverse incentives to those companies that have already considered climate change risks in decision making.
3. the proposed method for determining any compensation to both existing generators and trade exposed, energy intensive industry is both complex and uncertain and any compensation is highly unlikely to meet the stated objective of adequately compensating companies for supposed future profits forgone. The proposed method appears to be open to significant manipulation by players involved, leading to an inefficient and inequitable transfer of wealth, which will ultimately be paid for by the rest of the Australian economy; and
4. more efficient and equitable permit allocation methods exist, such as an emission intensity based allocation, which will have significantly less economic impact and the IGCC is of the view that one of these allocation schemes should be utilised instead of the proposed method.

More detailed comments on the specific issues raised in the Discussion paper are attached.

### **What is IGCC's Interest in the NETS Discussion Paper?**

The IGCC represents a range of interests in the investment community, including superannuation funds, large multi-asset managers and single asset managers. Therefore, the members of the IGCC are investors in both publicly listed and private companies, across all sectors of the Australian economy and internationally. In the course of their activities individual member organisations of the IGCC seek to obtain, or provide to others, advice on gaining acceptable risk adjusted returns for their investments. The size and mandate of the IGCC members means the focus is both on short-term and long-term returns.

The IGCC is of the view that climate change has the potential to result in significant negative economic, social and environmental impacts globally. As a result significant action is immediately required to reduce current and future emissions so as to minimise the potential adverse impacts. For investors that invest across all sectors of the economy, climate change risks cannot be easily mitigated through diversification, as all sectors and economies will be impacted. Therefore, climate change risks have the potential to significantly impact the mid to long-term returns of investors.

The IGCC believes that the introduction of a national emissions trading scheme is one of a number of appropriate government policy mechanisms urgently needed to address the economic, environmental and social risks of climate change. As IGCC members invest across the economy, the IGCC is concerned with the impact on both specific sectors and the broader Australian economy in the short-term and how the Australian economy adjusts to the new reality of a greenhouse gas emission constraint in the mid to long term. The IGCC members believe that the adjustments to the Australian, and other economies, may be significant and, while there may be political uncertainty at the international level, it is in the long-term interest of the broader Australian economy and investors that actions are undertaken with certainty sooner rather than later so a smoother transition can be made.



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However, the IGCC also recognises that the introduction of NETS has the potential to have a significant impact on the economy with the value of the permit market likely to be in excess of \$2 billion/year in the first year and growing to over \$6 billion/year with increases in the emissions/sector coverage and permit price. IGCC members are acutely aware that the scheme has the potential to bring about a significant wealth transfer within the economy, potentially increasing investment risk. The cost of addressing climate change will be felt economy wide and paid by companies in which we currently invest or may invest in future. Notwithstanding, the IGCC also recognise that there will also be significant opportunities as new sectors develop and companies display innovation and ability to adapt to changed market conditions.

As investors across the whole economy, we are concerned with both the distributional, i.e. equity, and total economic impact of the NETS. Therefore, IGCC members have an interest in ensuring the proposed NETS is efficient and equitable.

The IGCC would be happy to discuss the issues raised in this submission further. Please do not hesitate to contact Ms Joanne Saleeba, IGCC Secretariat on (03) 9415 7071, 0422 101 715 or by email [secretariat@igcc.org.au](mailto:secretariat@igcc.org.au).

Yours sincerely

Bob Welsh  
Chair  
Investor Group on Climate Change



### **Comments on Administrative and Regulatory Framework**

The IGCC believe that for the NETS to minimise administrative costs and minimise regulatory risk as a result of different regulatory approaches, the NETS scheme should be developed primarily through Federal government regulation and administered through a federal administrative body.

The linkages with an international emissions trading scheme (ETS), should one develop, regional ETSs such as the EU ETS, or with the Kyoto mechanisms will add to the efficiency of the NETS and potentially give access to lower cost abatement opportunities. As international trade and international treaties areas are within Commonwealth powers it would be appropriate that a Federal government body, with appropriate powers, administers the NETS.

In addition, there a number of sectors that are regulated by the Federal government, such offshore petroleum and aviation. Again to include these sectors, a NETS set up at the Federal level would be significantly administratively simpler and thereby minimise administrative costs of the system.

### **Comments on NETS Coverage**

The IGCC is of the view that, in principal, it is best that all emissions/sectors of the economy are covered by the proposed NETS.

However, due to potential administrative costs and current emission measurement uncertainty, other policy/regulatory measures and incentives are likely to be more appropriate/effective for the agricultural, waste, land use change and forestry sectors and fugitive emissions of sulphur hexafluoride and HCFCs. However, where emission reductions can be clearly and quantifiably established, IGCC would support abatement actions from these sectors being incorporated as offsets under the NETS.

The IGCC has significant concerns over the current proposed initial exclusion of industrial process emissions and fugitive emissions from the NETS. Under the Business as Usual scenario, emissions from both these sectors are predicted to increase significantly<sup>1</sup> reflecting the significant amount of investment in the sectors. Minimising regulatory uncertainty around the carbon price signal, by the inclusion of these emissions/sectors into the NETS at the outset, will be important to investors in what are, in many cases, long-life investments, where technology and location choices may have significant impacts on the cost of abatement and overall investment decisions.

In addition, there exists many relatively low cost emission abatement possibilities for these emissions/sectors, e.g. capture of underground coal mine methane emissions. These abatement opportunities may not necessarily be undertaken if they are considered as "offsets" under the proposed NETS, as the investment decision for the abatement action may not meet a company's investment criteria or there may be a better use of capital. If, on the other hand, these emissions/sectors are included in the NETS and the total project, including the abatement action, meets company investment criteria, then the abatement action will be undertaken. To minimise the costs of meeting the national greenhouse gas reduction targets, access to these abatement opportunities through the NETS will assist in ensuring a lower permit price for other sectors where there is less opportunity for emissions abatement. This aspect is particularly important, as one of the overall benefits of a market based mechanism such as an ETS is the potential to lead to a lower overall cost of abatement to the economy.

The IGCC also believes that there is reasonable justification for including all diesel and LPG related combustion emissions, including transport emissions, as well as aviation emissions into the NETS. The inclusion of diesel will make the system administratively easier for some facilities covered by the NETS as it will avoid the need to separate diesel use for transport from diesel used in other operations that may be covered. More importantly, it will also send a positive price signal for the switching of fuel to lower greenhouse gas intensive fuel varieties where fuel use is not currently subject to other taxes or excises due to rebates. The inclusion of aviation fuel would be an important signal to the industry and be consistent with the inclusion of aviation emissions in the EU ETS.

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<sup>1</sup> Australian Greenhouse Office Greenhouse Gas Sectoral Projections Reports, available at [www.greenhouse.gov.au](http://www.greenhouse.gov.au)



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Given the significant growth in emissions from sectors not covered by the proposed NETS (as indicated in Figure 6.14 of the discussion paper), the exclusion of these sectors will impact the effectiveness of the NETS as an equitable national greenhouse gas policy tool and will prevent efficient reductions in greenhouse gas reductions from occurring in various sectors. Inclusion of fugitive, industrial process, as well as diesel and aviation emissions will significantly increase the coverage of the NETS to approximately two thirds of emissions, based on 2004 data, compared to the 35% coverage in the first stage and 45% coverage in the second stage of the proposed NETS. The inclusion of these emissions/sectors in the emissions cap and the supply-demand dynamics for permits will therefore mean that the emission reductions achieved through the NETS will more appropriately reflect the national greenhouse gas emission reduction target and send an appropriate carbon signal to these fast growing sectors of the economy. For investors, a single comprehensive NETS scheme is preferable to numerous sector specific policies.

The potential inclusion of these emissions/sectors into the NETS at some later stage may also significantly impact the supply-demand dynamic, particularly the supply side, within the permit market. This would hamper the development of an efficient forward permit market or lead to discontinuities in the permit price when sectors are added to the NETS. The ultimate outcome being inefficiencies and almost inevitably higher permit prices than would otherwise have occurred in a broader permit market. The IGCC is therefore firmly of the view that the NETS should commence with all possible emissions and sectors covered by the NETS.

In addition to the broader issues identified above, the proposed exclusion of the industrial process and fugitive emissions will lead to specific investment distortions within and between sectors, as it:

- Disadvantages some steel producers over others;
- Does not send appropriate carbon cost signals for the life cycle emissions of different fuels used in electricity generation, e.g. natural gas and coal; and
- Does not send a consistent price signal to the building materials and hence property sector, due to different ETS coverage and exposure of building materials.

Some examples of where these distortions may occur are outlined in more detail below.

There are three main steel producers in Australia currently, one of which almost entirely utilises blast furnace technology (industrial process emissions) and thus would not be covered by the NETS. A second that produces approximately half its steel utilising blast furnace technology (again not covered by the proposed NETS) and half from electric arc furnace (EAF) technology (stationary combustion emissions) and so would be partially exposed through increased electricity prices. The third player uses entirely EAF technology and thus would be completely exposed through increased electricity prices resulting from the NETS. As potential investors in all three companies, the IGCC is of the view that the selective exposure to the NETS may significantly impact some steel companies over others and unfairly distort the impacts on company earnings. It is also likely to have a perverse environmental impact as it disadvantages the process (i.e. EAF technology) that involves steel recycling, resulting in lower greenhouse gas emissions per tonne of steel.

Similarly, the exclusion of certain industrial processes sends an inconsistent price signal to others in the building materials sector, as different building materials have different coverage in the NETS. For example, direct emissions from brick manufacture and cement kilns, and indirect emissions from aluminium and steel made by EAF technology will be captured by the proposed NETS. However, direct emissions from calcination of limestone, aluminium smelters and iron and steel, even though not all are as a result of the iron ore reduction chemistry, are not captured under the proposed NETS.



### Comments on Permit Allocation

The IGCC has significant concerns with the proposed method for the allocation of permits, i.e. the free allocation to existing electricity generators to compensate for supposed decreases in profitability; the free allocation to energy intensive, trade exposed industry to compensate for increases in energy costs; and the auctioning of the remainder of the permits.

The concerns with the proposed permit allocation scheme focus around four key areas:

1. the permit allocation method is not efficient in terms of the cost imposed on the economy;
2. the supposed need to compensate generators and energy intensive, trade exposed industry, given the informed risk adjusted investment decisions these industries will have already undertaken;
3. the complexity of the proposed approach, which is highly unlikely to meet the stated objectives of adequately compensating companies for supposed lost future profit, given the sensitivity to underlying assumptions and information asymmetry; and
4. the existence of other possible permit allocation options that would result in a reduced impact to the economy as a whole, specifically wholesale electricity prices, and consequently the need for any compensation to existing trade exposed, energy intensive industry.

These points are discussed in more detail below.

#### 1) Permit Allocation method is not efficient

The IGCC believes that a NETS has the potential to be economically efficient in terms of facilitating least cost abatement, expressed as dollars per tonne of greenhouse gas abated. However, the IGCC is of the view that another important measure of the economic efficiency of the NETS is the ratio of cost to the economy to the **cost of abating** the greenhouse emissions to meet the specified emissions cap. This ratio is a measure of the NETS economic efficiency in achieving the policy objective of meeting the emissions cap.

A ratio greater than one reflects one or a combination of possibilities, including:

- cost of compensating particular sectors;
- revenue raised by government through auctioning; and
- windfall profits obtained by some sectors, or individual companies.

Table 1 gives the measure of the proposed NETS efficiency, at 2010, 2020 and 2030 based on the electricity market modelling undertaken by MMA for Scenario 1. The total quantity of electricity generated was not provided in the MMA report and therefore has been estimated by the IGCC, based on likely average generator emission intensities (it is noted that even in 2010 this estimate is significantly lower than that predicted by ABARE, though similar overall conclusions are made if ABARE electricity generation estimates are used).

**Table 1: NETS Efficiency, based on MMA Electricity Market Modelling**

Year	Estimated Quantity of Electricity Generated (TW-hrs)	Increase in Wholesale Electricity Price above BAU (\$/MW-hrs)	Cost to the economy (\$m)	Cost of Abatement (\$m)	NETS Efficiency
2010	192	3	576	114	5.1
2020	258	9	2322	988	2.4
2030	334	9	3006	1606	1.9



The results in table 1 indicate that, based on the MMA modelling results, the proposed permit allocation would be inefficient with a cost to the economy more than double the cost actually needed to meet the emission cap. Well over half the cost to the economy is used to compensate generators and energy intensive, trade exposed industry.

The IGCC has difficulty reconciling the predicted increase in wholesale electricity prices in the MMA report with the IGCC's understanding of how the permits will be allocated and the assumed pricing behaviour of existing generators, i.e. using opportunity cost pricing. The IGCC understand that approximately 70% of the permits will be allocated to compensate existing generators with the remainder to be given either to energy intensive, trade exposed industry or auctioned by the government. The permits not given to existing generators will be bought by either new generators or existing generators that did not receive sufficient permits. This would suggest that the increase in wholesale electricity price should be equivalent to the permit cost to the marginal generator and therefore, at a minimum, reflect the permit price and emission intensity of the marginal generator. Based on the MMA report's predicted increase in wholesale electricity price in the National Energy Market (NEM), the emission intensity of the marginal producer is 0.25 tonne CO<sub>2</sub>-e/MW-hr in 2010, 0.35 tonnes CO<sub>2</sub>-e/MW-hr in 2020 and 0.31 tonnes CO<sub>2</sub>-e/MW-hr in 2030. All of these emission intensities are significantly lower than the likely emission intensity of the marginal generator, given the emission intensity of existing generation capacity and the emission intensity and costs of new generation. This suggests that either existing generators are not undertaking opportunity costs pricing or new generators are not passing through the cost of permits. Neither outcome would appear to be consistent with modelling assumptions.

It would also seem that if existing generators are compensated for predicted foregone future profits through opportunity cost pricing and the remainder of the permits have to be bought via the primary (auctioning) or secondary market, then the increase in wholesale electricity price should be at least the total cost of permits.

While the IGCC have not undertaken detailed modelling of the electricity market, these two observations on the MMA modelling result suggest that actual wholesale electricity prices may be significantly higher than that predicted in the MMA report. The table below gives the predicted increase in electricity price and the NETS economic efficiency, assuming the increase in wholesale electricity price reflects the total value of permits.

**Table 2: NETS Efficiency based on Total Permit Value**

Year	Cost of Permits (\$m)	Predicted increase in Wholesale Electricity Price (\$/MW-hr)	NETS Efficiency
2010	2208	11.5	19.4
2020	4940	19.1	5.0
2030	6220	18.6	3.9

Table 2 demonstrates that with higher wholesale electricity prices, the proposed NETS would be significantly less efficient than estimated using the increase in wholesale electricity price from the MMA report.

Therefore, the IGCC does not support the permit allocation scheme proposed as the resulting cost to the economy is likely to be significantly higher than the cost of emission abatement required to meet a given emissions cap.

## **2) Climate Change Risk already Factored into Investment Decisions made by Companies**

Climate change risk, including a potential future cost on carbon, is not a new risk to investors in electricity generation assets. This is evidenced by the fact that:

- the first International Convention on Climate Change was signed in 1992;
- the use of emissions trading was specifically identified by the Kyoto Protocol in 1997;
- emissions trading was discussed extensively in 1999-2000 by the Australian Greenhouse Office as a policy approach; and
- climate change risk has been specifically raised by institutional investors in various forms since 2001,

Therefore, recent investments, including acquisition of existing generating assets, will have incorporated climate change risk into investment decisions. As such the justification for the NETS providing compensation for predicted future forgone profits has not been established.



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Similarly, trade exposed, energy intensive companies will have considered climate change risk when making recent and planning future investments and again justification for the NETS providing compensation for predicted impacts of increased energy costs has not been established.

It should be noted that privatised Victorian and other State generators did not receive compensation for any impacts resulting from the introduction of the NEM and broader electricity market competition, arguably a more fundamental change to the electricity market than the introduction of a NETS.

As noted under point 1 above, the proposal to compensate existing generators and trade exposed, energy intensive companies in the form of a free allocation of permits with the value of in excess of \$1.4 billion/year (70% of the estimated value of permits) will ultimately be paid for by other electricity users. This will impact investors and will create significant distortions across the economy.

Therefore, given companies have considered climate change risk in investment decisions; the precedent set for not compensating generators for changes to the electricity market; and that other electricity users will have to bear the cost of the compensation to both existing generators and trade exposed, energy intensive industry, the IGCC is strongly of the view that the proposed permit allocation is not equitable and does not accurately reflect the informed investment decisions companies have made, which have already incorporated climate change risks.

### **3) Complexity and Uncertainty in Assessing Compensation**

The proposed means of determining compensation to both existing electricity generators and trade exposed, energy intensive industries is complex, has a high degree of uncertainty, and provides significant incentive for companies to overestimate future forgone profits. Therefore the proposed method is unlikely to meet the financial compensation objectives of the NETS.

The uncertainty and complexity arise as a result of the numerous assumptions or estimates that are required to determine the compensation including: data such as Australian and international economic growth rates; uptake of energy efficiency within the respective electricity markets; timing and cost of future electricity generation technological developments and investment; future costs of fuels, especially gas prices; and abatement costs, including those available outside the electricity generation sector. There are also definitional issues including: defining what are new or existing investments; how asset life extending investment are considered; in addition to what qualifies as a trade exposed, energy intensive industry. The difference between the short run marginal costs (SRMC) estimates used by MMA and those used by ACIL-Tasman in their work for NEMMCO reflects some of the problems with estimating/agreeing generator cost data.

In addition, for fully informed decision making, generator and operation specific information is required including: operating costs; appropriate assumption on the economic life of an asset; the nature of potential commercially sensitive electricity contracts; and generator future financing positions. For this latter information, there is significant information asymmetry that will (understandably) be used by generators and trade exposed, energy intensive industry to maximise compensation.

Therefore, the IGCC is of the view that the proposed permit allocation will not be either transparent or based on accurate information and is likely to lead to over compensation to various companies, an outcome that is neither equitable nor efficient.

The benefit of using a market mechanism such as the NETS is that the market can most efficiently allocate resources. Every attempt to override the market, for example through the free allocation of permits to particular sectors, introduces inefficiencies that will then be paid for by the entire economy. While such attempts to manipulate the market may be justified on equity grounds, the IGCC does not believe that equity will be achieved under the proposed free permit allocation to existing and trade exposed, energy intensive industries and is concerned that, in fact, the inequities will be heightened and there will be clear winners and losers as a result of the NETS.



#### **4) Consideration of More Efficient Permit Allocation Methods**

The IGCC believe that there are better permit allocation systems both in terms of equity and efficiency. Previous papers by AMP Capital Investors<sup>2</sup> outline a permit allocation scheme based on an emission intensity benchmarks. Permit allocation is made post emission, based on a measure reflecting economic activity, such as quantity of electricity generated. The IGCC believes this is a permit allocation method worthy of further, more detailed, consideration, as it overcomes many of the significant disadvantages of the permit allocation proposed in the NETS. In particular, this approach removes the potential for parties to overstate compensation and opportunity cost pricing by electricity generators. In addition, it will favour those companies who have undertaken early action with respect to decreasing their greenhouse gas emissions.

The IGCC has not undertaken detailed modelling of the electricity market to see the impacts of the emission intensity allocation approach. However, the expected impact on generator variable costs and, the change in an individual generators operating profit (expressed as \$/MW-hr) is expected to be similar to that under an emissions trading scheme where all permits are auctioned. At the same time, the wholesale electricity pool price will be less than that under an equivalent emissions trading scheme by approximately the permit price and the benchmark emission intensity. This may potentially lead to wholesale pool electricity prices lower than that which would be achieved under a Business As Usual scenario. This outcome has important positive distributional effects, especially to trade exposed, energy intensive industry and thus further negates the need to compensate these industries.

The proposed benchmark emission intensity permit allocation scheme can also be applied to other combustion related emission sources and other types of emissions, such as fugitive and industrial process emissions.

The proposed emission intensity allocation approach decreases the total impact of an emissions trading scheme on the economy and can be applied to both new and existing facilities that are covered by the scheme and provides a high level of certainty on future permit allocation.

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<sup>2</sup> "Emissions trading permit allocation and investment in the Australian electricity generation sector" July 2005. Available at [www.ampcapital.com](http://www.ampcapital.com); and "Lessons from the EU Emissions Trading Scheme and Emission Intensity Permit Allocation", March 2006, Copy attached to submission.