

Senate Select Committee on Climate Policy

Submission by ExxonMobil Australia Pty Ltd

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ExxonMobil Australia Pty Ltd is a subsidiary of Exxon Mobil Corporation. ExxonMobil Australia Pty Ltd has a number of subsidiaries with assets and operations in Australia many with names that include ExxonMobil, Exxon, Esso and Mobil. For convenience and simplicity in this submission those terms and the terms corporation, company, our, we and its are sometimes used as abbreviated references to a specific subsidiary or groups of subsidiaries in the ExxonMobil Australia Group of companies.

Executive Summary

- ExxonMobil recognises that the risks of global climate change to society and ecosystems may prove to be significant. Our approach is to take sensible economic actions now to improve efficiency and reduce emissions while pursuing research designed to better understand scientific issues and to achieve technology breakthroughs that could dramatically reduce future emissions. ExxonMobil is also committed to working with policy makers as they develop responses to the risks posed.
- It is important to understand that mitigating global carbon dioxide (CO₂) emissions growth requires participation of the major developing economies in any policy response. The scope and scale of the emissions challenge can not be met by Australia acting alone given our small contribution to global emissions (i.e. Australia's CO₂ emissions from fossil fuel combustion were ~1.4% of the world's total in 2005 and this share is forecast to decline.)
- The Carbon Pollution Reduction Scheme (CPRS) proposed by the Australian Government is the most complex and broadest regulatory regime of its kind to be put forward by government anywhere in the world. The Australian CPRS would be the first scheme to cover all Kyoto Protocol defined greenhouse gases, include transport fuels, natural gas and fugitive emissions, and to move to a 'hard start up' with significant auctioning of permits in 2010. Moreover the schedule for implementation of an Australian CPRS represents one of the most aggressive timetables ever contemplated.
- It is widely recognised that trade exposed Australian industries will be placed at significant competitive disadvantage if they bear the cost of an ETS, while competing industries within the international market are left unconstrained to emit greenhouse gases. ExxonMobil's view is that the regulatory scheme must treat trade exposed industries in a manner that recognizes this fact and maintains competitiveness of Australian industry until our international competitors face similar carbon costs.
- ExxonMobil's view is that if adopted the EITE criteria will provide only limited transitional assistance for emissions-intensive trade-exposed industries such as petroleum refining and LNG, and ensure that both industries face significant disadvantage against international competition.
- An ETS should not be a goal in itself, but one of several alternative options for consideration to facilitate the achievement of a reduction in the global growth of greenhouse emissions. It is important to recognise that many companies in Australia advocating the adoption of an ETS are intending to pursue it as an active business in and of itself or have other significant commercial interests they wish to pursue in the development of such schemes. In contrast ExxonMobil uses emissions trading as a means to achieve its GHG obligations in an economically efficient fashion.

About ExxonMobil

ExxonMobil Australia and its subsidiaries (ExxonMobil) have had a significant role in the development of Australia's oil and gas resources and have a business history in this country stretching back over 110 years.

ExxonMobil is Australia's largest integrated petroleum company. Our activities cover exploration and production of oil and gas, petroleum refining and marketing of fuels (including natural gas), lubricants, bitumen and chemical products.

ExxonMobil is a substantial investor in the Australian economy and a major contributor to the wealth of the nation. Annually ExxonMobil pays around A\$800 million in taxes to local, State and Federal Governments. Our cumulative investment in Australia exceeds A\$13 billion and we provide direct employment for around 1700 people and indirect employment for many thousands more.

Exxon Mobil Corporation

Globally, Exxon Mobil Corporation — the parent company of ExxonMobil Australia — is the world's largest publicly quoted oil and gas company and the world's largest corporation in terms of market capitalisation. Worldwide the company and its subsidiaries produce more than 4.5 million oil-equivalent barrels of energy resources every day from some 1600 fields and operate in over 200 countries. Exxon Mobil Corporation is also the world's largest non-government marketer of natural gas and, in our global downstream business, the company has interests in 38 refineries in 21 countries and over 32,000 service stations world-wide.

ExxonMobil's approach to climate change

There is increasing evidence that the earth's climate has warmed on average about 0.7 degrees C in the last century. CO₂ emissions have increased during this same time period — and emissions from fossil fuels are one source of these emissions.

Climate remains today an extraordinarily complex area of scientific study. Nonetheless the risks to society and ecosystems from increases in CO₂ emissions could be significant, so it is prudent to develop and implement strategies that address the risks, keeping in mind the central importance of energy to the economies of the world. This includes putting policies in place that start us on a path to reduce emissions, while understanding the context of managing carbon emissions among other important world priorities, such as economic development, poverty eradication and public health.

While this long-term objective is pursued, near-term objectives should include pacing policy responses such as promoting energy efficiency, deploying existing technologies that reduce greenhouse gas emissions, supporting research and development of new, low-GHG technologies, and supporting climate research.

Policymakers in Australia and globally are currently considering a variety of proposed regulatory options to mitigate Greenhouse Gas (GHG) emissions. In our view, assessing these options requires an understanding of their likely effectiveness, scale and cost, as well as their implications for economic growth and quality of life.

Within ExxonMobil, we analyse and compare the various policy options by evaluating the degree to which they:

- ensure a uniform and predictable cost of GHG emissions across the economy;
- consider the priorities of the developing world;
- maximize the use of market forces;
- promote global participation;
- minimize complexity and administrative costs;
- maximize transparency to companies and consumers; and
- adjust in the future to new developments in climate science and the economic impacts of policies.

ExxonMobil scientists have undertaken climate change research and related policy analysis for 25 years and, through their work, have produced more than 40 papers in peer-reviewed literature. In addition, our scientists participate in the United Nations Intergovernmental Panel on Climate Change (IPCC) and numerous related scientific bodies.

Over the years the company has supported major climate research projects at such institutions as the Massachusetts Institute of Technology, Stanford University, the Australian Bureau of Agricultural and Resource Economics, the University of NSW through the Global Climate and Energy Program (GCEP), Princeton University, the Hadley Centre for Climate Prediction, the International Energy Agency Greenhouse Gas Research & Development Program, Yale University, and the Lamont Doherty Earth Observatory at Columbia University.

The proposed Carbon Pollution Reduction Scheme (CPRS)

Introduction

The Australian Government has released draft legislation, outlining the design of their proposed emissions trading scheme, titled the Carbon Pollution Reduction Scheme (CPRS).

ExxonMobil through its global affiliations has significant experience in climate change policy and is one of the few firms in Australia that have direct experience in the design, development and operation of a wide scale Emissions Trading System, namely the European ETS. ExxonMobil is therefore well positioned to draw on this experience, as well as its local professional expertise and experience, in making comments on the Government's proposed CPRS.

Market Efficiency

The most commonly canvassed 'market mechanisms' to address rising emissions fall into two broad areas – carbon trading (ETS) or a carbon tax. Such market mechanisms have been implemented in Europe in the case of an ETS and in British Columbia (Canada) in the case of a carbon tax. Similarly the US is considering a range

of different legislative proposals that encompass these categories. Each offers distinct advantages and difficulties depending on the design features incorporated.

In its simplest definition, an ETS involves rationing the economy's ability to emit carbon dioxide (and other greenhouse gases, calculated in tonnes of carbon dioxide equivalent, tCO₂e) usually under a targeted cap on overall emissions. However, an ETS can come in a variety of types, like those that apply at the point of actual emissions (i.e. downstream, such as the European Union's Emission Trading Scheme (EU-ETS)) and those that apply to fuels that will ultimately be combusted (upstream, such as several under consideration in the United States). In comparison a carbon tax seeks to place a levy on GHG emitters to pay a specific price on each tonne of emissions released and is usually designed to be applied to the fuels that eventually will be combusted. The carbon tax seeks to set the price of the environmental externality but does not guarantee the quantitative impact on emissions. The main benefit of a tax is that it offers certainty, stability and transparency about the price of an activity, and therefore provides clear and reliable signals for current and future behavioural and investment decisions that affect GHG emissions over time.

Importantly, a carbon tax should be made revenue neutral via tax offsets in other areas.

A Carbon Tax versus an ETS – Efficiency Implications

A 2008 research publication produced by the United States Congressional Budget Office (CBO) has examined the efficiency implications of a carbon tax versus an ETS. In short the CBO concludes any long-term emission-reduction target could be met by a tax at a fraction of the cost of a cap-and-trade program. A tax would provide firms with an incentive to undertake more emission reductions when the cost of doing so was relatively low and allow them to reduce emissions less when the cost of doing so was particularly high.

In fact significantly reducing GHG emissions requires large investment in long-lived capital stock. The more predictable the long-term cost of GHG emissions, the lower the risk of making these long term investments. A carbon tax provides a more predictable and thus lower risk investment climate than a cap-and-trade system. The "environmental certainty" of a cap and trade system may be illusory. If a carbon tax at an acceptable level will not generate the desired emissions reduction, then a cap-and-trade system set to produce the desired reduction could generate a much higher allowance price, ultimately resulting in the likelihood of political intervention.

Coverage and Timing

The Australian Government's proposed CPRS, as outlined in the draft legislation, is the most complex and broad based GHG regulatory regime of its kind to be put forward by government anywhere in the world. ExxonMobil notes that the Australian Government's proposed CPRS will be the first scheme to cover all Kyoto Protocol defined greenhouse gases; include transport fuels, natural gas, waste and fugitive emissions; and to move to auctioning of permits at scheme start up.

Moreover, the schedule for implementation of the Australian Government's proposed CPRS represents one of the most aggressive timetables ever contemplated - with all legislative and regulatory instruments to give effect to the scheme and its new regulators, as well as the required business upgrades in hardware and processes, to

be achieved within a 2 year timeframe. It should be noted that the EU commenced planning for an ETS in 2000 and continued planning for five years before then implementing a “trial” system that went for a further three years. Even with the lesser scope (CO2 emissions from large stationary sources only) compared to the Green Paper and the level of planning, the EU experienced significant difficulties in implementation.

Given the scope and scale of the challenge in implementing such a scheme ExxonMobil strongly recommends phasing in the implementation of the proposed CPRS as was done in Europe. A paced approach to implementation is also essential for the oil and gas industry. Implementation of an ETS will likely require significant changes to important hardware and systems (such as metering), some of which may require plant to be shutdown.

ExxonMobil retains concerns about the pace of scheme start up and strongly recommends the implementation of a phased approach as was done for the EU-ETS.

Monitoring, Reporting and Compliance

It is widely accepted that credible and reliable GHG emissions inventories are fundamental to the effective operation of an emissions trading system, yet, it is also apparent that such systems are complex and, as experienced in Europe, have been difficult to develop. Likewise, it is fundamental to the successful functioning of the petroleum industry that credible and reliable measurements are made of the materials that are handled by the industry (i.e. hydrocarbon fuels and associated products). Sophisticated systems in combination with complex measurement facilities have been implemented in the petroleum industry over many years to achieve the required measurement standards in the industry.

Significant work has been done to standardise greenhouse emissions estimation and reporting through the development of the National Greenhouse and Energy Reporting System (NGER). ExxonMobil supports the use of NGER as the starting framework for emissions monitoring and assurance under the emissions trading scheme, as its goal is to streamline reporting into a consistent framework and therefore overcome duplication between the state and federal levels. ExxonMobil is also broadly supportive of the use of the emissions estimating methodologies available under NGER and acknowledges the need for staged increases in accuracy and minimum standards for specific emissions sources.

However, NGER requires further detailed development and some modification to be used effectively, and to align with the CPRS. NGER will require modification to allow for the differentiation of direct emissions from combustion of fuels purchased with or without a permit.

Assurance measures are also required to ensure a fair system. Assurance should be undertaken only by qualified people and organisations, as such ExxonMobil suggests that the technical aspects of measurement and reporting (metering and calculations) should be undertaken by organisations with National Association of Testing Authorities (NATA) accreditation. NGER is not currently suitable for the collection of data relating to upstream acquittal of permits for the sale of fuels. Data collection of this nature should align with reporting under current excise and customs duty arrangements to ensure efficiency and consistency. It should be noted that with the inclusion of transport fuels in an ETS, it is important that sufficient lead time is allowed to

implement changes to volumetric and financial accounting systems. Legislation and regulations should be in place at least 12 months ahead of the implementation to allow sufficient time for system changes.

ExxonMobil supports the use of NGER under the ETS, but notes that NGER requires substantial modification to be effective and fair for determining carbon permit liability. NGER is not suitable for determining liability for upstream (sale of fuels) permits. Instead, existing excise and customs duty mechanisms should be used. Assurance should only be undertaken by organisations with specific expertise in measurement and calculations. (i.e. accredited by NATA).

Permit Auctioning

Auctioning will impose an immediate cost signal and price impact on firms. The most significant advantage offered by auctioning is that it is simpler to implement than the other options mentioned above and provides the most efficient mechanism to distribute permits. Consequently, ExxonMobil would prefer a system of auctioning of all permits except those for EITE industries, which would be allocated 100% free permits. Clear rules for the auction must be carefully established to ensure that appropriate governance requirements are met.

There are two broad categories of auctions for the simultaneous sale of identical items: single-round and multiple-round, each with subcategories concerning single-price (a.k.a. uniform price) and multiple-price (a.k.a. pay-as-bid). It is generally accepted that all such auctions are conducted via sealed bids. The auction system design for GHG emissions permits must be carefully considered to ensure economic efficiency and administrative simplicity.

Economists generally support single-pricing as more efficient than multiple-pricing, where efficiency is defined as getting the price closest to the bidders' internal value. Simplistically, bidders tend to be more cautious in a multiple-price auction for fear of paying too much for the initial increments of their bid. Single-round auctions are more easily administered than multiple-round auctions. For these reasons, U.S. Treasury bills are auctioned in a single-price, single-round auction with sealed bids. US SO₂ allowances are auctioned in a multiple-price single-round auction.

There is some support in the economics literature to suggest that ascending-clock multiple-round auctions may be more "efficient" than the single-price single-round auction. While such positions are acknowledged it is unclear that the possibly improved "efficiency" of this multi-round arrangement is sufficient to compensate for the certain additional complexity. If an ETS is to be implemented, ExxonMobil favours a single-price, sealed-bid, single-round auction based on its administrative simplicity. An ascending-clock multiple-round auction would be second choice. Multiple-price auctions should be avoided since they are believed to be less efficient and can expose companies to competitive disadvantage based on bidding. For auctioning systems covering carbon permits, ExxonMobil supports auctions being held as frequently as practicable (at a minimum monthly).

If auctioning were to commence ahead of the formal commencement of the Australian ETS, it should be acknowledged that such a measure may improve the adoption of the ETS. However, suitable arrangements would need to be established in respect of tax laws and other market regulations to ensure there are no unintended impediments to the market and related business activities such as product pricing and cost sharing

arrangements. Failure to have these arrangements in place has the potential to create significant cash flow and tax liability concerns.

ExxonMobil supports frequent (at least monthly), single-price, single-round auctions with sealed bids because of the administrative simplicity and efficiency of such arrangements.

Assistance to Emissions Intensive Trade Exposed (EITE) Industries ('Free' Permit Allocation)

Another consideration associated with the allocation of emission permits relates to the treatment of trade-exposed emission-intensive industries (EITE's). Such industries have little if any opportunity to recover additional costs imposed by the Australian Government's proposed CPRS. It is widely recognised that the competitive disadvantage associated with the unilateral (non-global) implementation of an ETS should not be borne by these industries. ExxonMobil supports this view and the stated position of the Government in their 2007 Policy that "EITE firms are not disadvantaged by emissions trading."

ExxonMobil reminds the Government of the Australian Labor Party's 2007 Election Policy, to:

"Ensure that Australia's international competitiveness is not compromised by Australia's response to climate change and that Australian operations of emission intensive trade exposed firms are not disadvantaged by emissions trading."

This is clearly not reflected in the current two-tiers (60% and 90%) of assistance.

The LNG sector is a strong example of how an emissions intensive trade exposed industry could be disadvantaged by the costs associated within an ETS. In brief, if the Australian LNG industry bears any cost associated with an ETS above those borne by its competitors, then this has the potential to effectively price Australian LNG out of the growing markets of the Asia Pacific, which are particularly sensitive to price movements given the intense level of international competition. Due to the long term nature of LNG supply contracts this could potentially mean that Australian LNG could be effectively excluded from certain markets for the next few decades, thus stalling the industry in this country. Recognising that the competitor fuel in many of these Asia-Pacific economies is coal, such an outcome could have the perverse impact of increasing global GHG emissions (so called carbon leakage).

Detrimental trade exposure is not limited to ventures that supply international markets such as LNG projects. Some facilities, such as oil refineries, are emissions intensive and face competition with imports to Australia from countries that do not have an ETS. In the specific case of an oil refinery, the imposition of additional emissions costs arising from direct and indirect emissions from the refining facilities creates a competitive disadvantage when compared to imports of refined product from countries without an emissions burden. Left unadjusted this reduces the long term viability of refining in Australia, which will be compounded by increasing capacity/competition from Asia-Pacific Refineries, with attendant energy supply implications. To expose these industries to this disadvantage would not only harm the economic prospects of Australia but could also undermine the very objective of the ETS which is to reduce emissions rather than shifting them offshore.

While the Government recognises the concept of EITE industries, the mechanism preferred by government is arbitrary and fails to recognise the financial and competitive impacts imposed by the scheme on industries such as LNG and petroleum refining, despite indicating that this was the goal of the scheme. In particular we would note that the decisions to cover only 25% of total emissions with free permits and the preference to only partially compensate such industries (i.e. between 60% or 90% of the liability) are not explained on any rigorous policy basis. Similarly, the concept of selecting high emissions activities within a business process for the purpose of calculating the revenue threshold seems ill-suited to processes undertaken in either the upstream or downstream oil and gas sector.

ExxonMobil is concerned that the Government's draft legislation does not include details of the rules and methodologies that apply to EITE eligibility or the quantum of assistance to be provided under the EITE scheme.

In the absence of details it is not possible for ExxonMobil to have clarity as to eligibility or levels of assistance included in the scheme. Therefore it is not possible for ExxonMobil to have any surety that the competitiveness of Australian-based industry will be maintained, relative to our international competitors.

Fuel Tax Adjustments:

In the White Paper the government proposes for the first 3 years of the CPRS to cut excise and excise-equivalent customs duty (fuel tax) on a "cent-for-cent" basis to offset the initial price on transport fuels associated with the introduction of the scheme.

Details of how these excise changes will be calculated and applied are not in the draft legislation package and are not yet available for review as regulations. Key concerns are:

- the concept of offsetting carbon costs for motorists does not support the government's behavioural change objectives. Overcompensation of petrol users in fact directly opposes this; and
- excise reductions will not be "cent-for-cent" - there will likely be significant price volatility due to fluctuations in market carbon price, which consumers will not be able to relate to excise offsets based on some historical period.

ExxonMobil recommends that the CPRS design be enhanced by use of a "linked fee" concept to periodically allocate permits to liable fuel suppliers, at a cost equal to that used as the basis for the fuel tax cut in the same period. This system would offer a number of benefits:

- Carbon permits are not removed from the Scheme - transport fuels remain "in";
- other than as a result of the 6 monthly assessments, there will be no fuel price volatility as a result of the Scheme, with its consequent public dissatisfaction;
- fuel suppliers will have the same cost of carbon, which will be the same as the fuel tax cut - the fuel tax cut will likely then truly represent cent-for cent compensation; and
- aids carbon cost transparency.

If the Government did not wish to continue indefinitely with permit allocation associated with the linked fee concept, it could be discontinued with the end of the periodic fuel tax changes and any public expectation of "cent-for-cent" compensation.

If the Scheme remains as proposed in the White Paper, the "cent-for-cent" terminology should be discontinued so as avoid misleading the public and generating unrealistic expectations.

Revenue recycling

Under an ETS with auctioning, the government will raise substantial revenue. Funds received should be returned to the economy preferably through a broad-based reduction of a current tax on labor or capital. This will be a critical aspect given the size of the potential economic distortion — probably more than A\$5 billion in the first year. Additionally, disbursement of funds should not be tied to energy use because this would defeat the desired effect of encouraging efficiency through higher energy cost. A portion of revenue could also be allocated for research and development of low emissions technology. If a portion of revenue is allocated to support technology deployment, such support should be limited in scope and phased out over a defined time period.

Linking to international markets

ExxonMobil supports the government's stated policy that the short-term priority must be promoting price stability and predictability in the early years and that international linkages should be pursued in the medium to longer term. As we have noted already there are significant integrity risks to the scheme design from Australia pursuing unilateral implementation of an ETS in the expectation that such a scheme will ultimately merge into a well constructed and agreed global trading regime.

Non-complementary policy settings

ExxonMobil urges policy makers to review existing policy settings when considering the development of a comprehensive climate change policy. Currently there is an array of energy and fiscal policies at the state and federal level. These policies would undermine the efficacy of any carbon price signal and are a 'dead-weight loss' on the Australian economy. In particular we would identify several areas that require specific review / rationalisation. These include mandated energy efficiency programs, mandated technological requirements to mitigate emissions, mandated quotas for different energy sources that compete in the energy supply market and fiscal disparities (taxes and/or subsidies) which create distortions between competing energy sources. This section discusses an example of each of these policy positions although it is by no means an exhaustive list.

Mandated Energy Efficiency Programs

While recent legislative initiatives from Federal and State Governments (i.e. EEO and Victoria's EREP) have sought to help industry identify energy efficiency opportunities, or in Victoria's case actually mandate energy efficiency investments, for the most part such initiatives only attempt to duplicate or crudely intervene in business processes that ExxonMobil (and many other companies) already undertake on a global basis. It is therefore critically important that governments recognize that producers, refiners, distributors, and end users in the chain are best placed to take responsibility for

managing and accounting for the emissions they generate. With the onset of an Australian ETS such mandated energy efficiency programs will not be necessary to provide an incentive for business to undertake cost savings measures through abatement activities. As a result we recommend their review and phasing out post ETS start up for all sectors included within the ETS.

Mandated Technology 'Solutions'

The practice of governments mandating specific technological solutions to achieve emissions abatement is antithetical to the goals of an ETS — which is premised on allowing firms to achieve the least cost outcome within a market framework. If governments choose to intervene within the emissions market by establishing and mandating specific technologies (such as carbon capture and storage (CCS)) they run the risk of undermining the scheme and producing sub-optimal outcomes. We note that while the Federal Government does not have in place any technology mandates, some state governments have exercised this practice. For example, the Western Australian Government has mandated the proponents of the Gorgon LNG Project to undertake CCS before the project can proceed.

Mandatory Renewable Energy Target

Intuitively the notion of government setting a mandated target for any particular source of energy is inconsistent with the underlying principle of an ETS — which is to allow the market to determine the appropriate energy mix under a carbon constraint. By extension of this point, a mandated renewable energy target is also counterproductive to the efficacy of an ETS.

In this context the Australian Petroleum Production and Exploration Association (APPEA) engaged Access Economics and Charles River Associates (CRA) to model and report on the efficiency implications of establishing a 20 per cent mandatory renewable energy target (MRET) in conjunction with an ETS as proposed by the current government. The analysis showed that the combination of both policy instruments results in less efficient outcomes than just the implementation of an ETS.

In summary to reach a nominal emissions abatement target of 67 Mt CO₂e in 2020, the modelling shows that a 20% MRET on top of an ETS:

- costs Australia \$1.8 billion more in 2020 than a pure ETS policy in terms of economic welfare (GNP) losses;
- costs Australia \$1.5 billion more in 2020 than the ETS output (GDP) losses;
- results in the loss of 3 600 full time equivalent jobs (FTE) in 2020;
- causes substantial switching away from gas fired generation compared with an ETS in the order of 12.6 TWh per year by 2020;
- results in electricity prices rising by 6 per cent more than would be the case than under an ETS alone — the price rises 24 per cent under the combined policy approach, and by 18 per cent under an ETS that delivers equivalent emissions abatement.

A mandated renewable energy target is less efficient at achieving a given environmental outcome because it forces higher cost renewable energy into the electricity generation mix at the expense of exploiting lower cost emissions abatement opportunities elsewhere in the economy. Contrary to the popularly held belief that such mandated targets generate jobs, the overall effect on the economy may be less jobs than otherwise would have occurred and a loss of output in the economy as a whole as compared to the outcome with a well designed emissions trading scheme. The Productivity Commission has reached a similar finding, stating that an MRET operating in conjunction with emissions trading "would be unlikely to achieve extra abatement, it would constrain the choice of abatement options (which could potentially cost billions of dollars) and reduce the incentive to use other new low-emission technologies".