Garnaut Climate Change Review

Submission by Qenos
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Qenos
Shaping Our Future

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Executive summary

Qenos appreciates the opportunity to respond to the Emissions Trading Scheme Discussion Paper released by the Garnaut Climate Change Review in March 2008 (**Garnaut Report**).

Qenos illustrates a number of particular challenges for the proposed national emissions trading scheme (**ETS**) because, as a polyethelene manufacturer, Qenos:

- is a carbon-intensive business;
- is a price-taker in a competitive globally traded sector; and
- utilises fuel as a feedstock.

Qenos supports transitional measures for traded sector

The proposed ETS must accommodate trade-exposed emissions-intensive businesses (**TEEI businesses**) to secure their substantial and continued contribution to the Australian economy. This is best achieved by implementing transitional measures for TEEI businesses until there is global carbon regulation.

The ETS should establish objective TEEI criteria

The firms that qualify as TEEI should be established at the outset based on objective criteria of trade exposure, exposure to cost increases due to the ETS, competition from non-capped competitors and emissions intensity. This approach meets the design principles of simplicity and credibility, provides regulatory certainty and is administratively cost and time effective.

TEEI methodology should be simple and transparent

Qenos is concerned that the “sustainable production” TEEI methodology outlined in the Garnaut Report is overly theoretical and cannot be justified given the current state of international progress, particularly given that the benefits of the ETS will be largely symbolic until the global economy adopts similar measures.

Until the advent of global carbon regulation, the TEEI measures should provide legal title to permits for 100% of the direct and indirect carbon impact. This approach has clear support within Australia and internationally.

This is necessary to:

- minimise regulatory costs and regulatory risks;
- ensure that Australia’s TEEI businesses remain on a level playing field internationally;
- avoid the irreversible foreclosure of Australian industries, which are internationally competitive in absence of additional carbon costs, prior to global agreement on carbon emissions; and
- avoid carbon leakage.

Background

ETS is a very significant reform

The ETS will play a pivotal role in Australia's efforts to mitigate domestic greenhouse gas emissions. A considered approach to the resulting economic and social impacts is vital and necessarily informs the ETS design.

As the Garnaut Report identifies, an ETS is a very significant reform which, amongst other things:

- will stimulate structural changes to the economy, including changes in income distribution; and
- has the potential to distort investment and production decisions by TEEI businesses.

Qenos and the polyethylene market

Qenos, the sole Australian producer of polyethylene (**PE**), operates two PE manufacturing facilities, at Botany (New South Wales) and Altona (Victoria).

PE is an importable and traded commodity used in the production of, amongst other things, film, pipe, packaging and moulded products (such as water tanks and milk bottles). Qenos presently supplies approximately 400,000 tonnes of PE annually, representing approximately 63% of domestic PE demand. Despite Qenos' domestic market share Qenos is a price taker in the domestic and international PE markets.

The PE market is cyclical, with demand driven by economic activity of the major economies. The PE market is currently at the upper part of a cycle, with capacity constraints and growing demand for polyolefins (including PE, polypropylene and PVC) in the Asian market. However, this growing demand has encouraged major investment in new PE manufacturing facilities, which will drive the next downturn in the cycle over the next 2 or 3 years.

The manufacture of PE is emissions intensive. Qenos emits approximately 900kt of direct emissions (scope 1) and approximately 400kt of indirect emissions (scope 2 and 3). Qenos also has exposure to carbon costs passed through from feedstock and energy suppliers, which at present are unascertained, but will be significant.

Qenos is also interested in how the ETS manages issues associated with the supply of gas and liquid fuels as feedstocks. Qenos uses ethane, LPG and Naphtha as feedstocks. Up to 80% of the carbon in those feedstocks is not burnt but included within products sold by Qenos. Over 60% of the carbon sold to Qenos is sequestered in the PE supplied for the manufacture of finished products. Qenos ensures that the balance of the feedstocks purchased is captured and that such "off gases" are used as Qenos' principal fuel source.

In this context, Qenos has a direct and material interest in the ETS. As a participant in the traded sector, Qenos considers that a TEEI scheme is fundamental to avoiding trade distortions and ensuring the ETS facilitates overall economic efficiency. This submission focuses on the TEEI transitional measures and sets out Qenos' views on:

- why TEEI transitional measures are important;
- the key regulatory considerations for the TEEI regime, including eligibility and assessment; and
- the relevant point of obligation for manufacturers who use fuel as feedstock, which is a significant issue to plastics and chemicals manufacturers.

TEEI transitional measures are vital to the ETS

TEEI transitional measures are necessary to keep the playing field as even as possible, and will ensure Australian TEEI businesses maintain their competitive standing in contestable markets. It is necessary to balance the considerable risks created by early ETS implementation and underwrites the continuous social and economic contributions from TEEI businesses.

Qenos strongly supports the calls for TEEI transitional measures in the Garnaut Report and previous Government reports. Qenos agrees that the proposed TEEI scheme is a vital part of the ETS.

As the Garnaut Report recognises, Australian trading firms face vigorous competition in most markets and, as price takers, are constrained from passing on cost increases. Following the implementation of the ETS, and in the absence of a global scheme, Australian firms must choose between passing on, or themselves absorbing, carbon costs. However, for many, such as Qenos, the choice is illusory, with little or no opportunity to pass through the additional costs.

The ETS will place TEEI businesses at a distinct competitive disadvantage to international competitors not subject to emissions regulation (**non-capped competitors**) until emissions regulation is globally embraced. Australian TEEI businesses already face intense rivalry from non-capped competitors, which an ETS could enhance. The competitive threat will endure over time, given the slow rate of evolution to global regulation. The greater the:

- number of non-capped competitors; and
- duration of non-capped competition,

the greater the threat to Australian firms' competitive standing and sustainability in contestable domestic and international markets.

At present, the location and timing of emissions regulation outside Australia is unclear. The global community faces many challenges in implementing a post Kyoto protocol if such a protocol is to include carbon restrictions on developing nations.

As Australian TEEI businesses will be amongst the first subject to emissions regulation, the ETS clearly creates an uneven playing field for Australian TEEI businesses. Without intervention, Australian TEEI businesses will become an unviable proposition in the short-term, with long-reaching ramifications for the Australian economy.

It is in the national interest that Australian TEEI businesses continue operating in the long term, given their contributions to Australia's economic and social fabric. These include:

- direct contributions, through job creation, export revenues, fixed capital investment and investment in research and development; and
- indirect contributions, including securing supply to closely integrated Australian industries and encouraging direct foreign investment through cross-border ownership of productive resources.

In the PE sector, Qenos employs about 800 people nationally, and even more indirectly in supplying services to Qenos. Its PE supply to approximately 63% of the Australian market indirectly contributes to about 10,000 jobs in downstream markets. Qenos' contribution to the Australian GDP was $728 million in 2003 (calculated on the basis of the cost to the economy if Qenos ceased supply).

The wider chemicals and plastics sector:

- employs 85,000 Australians directly;
- generated output of $9 billion in 2005-6, representing between 9 and 10% of Australia's total manufacturing output and 0.9% of GDP; and
- supplies 72% of its output to other industries (including the manufacturing, construction, agriculture, forestry and fishing industries) and 9% as exports.

More broadly, in 2006-07 the aluminium smelting, basic iron and steel manufacturing, oil and gas

refining and pulp, paper and paperboard manufacturing sectors (all of which have been identified as potential TEEI businesses):

- employed 42,688 Australians directly;
- generated revenues of $50.7 billion, representing 5.1% of Australia's GDP; and
- accounted for $23.1 billion in exports.

Without regulatory intervention through adequate transitional measures for Australian TEEI businesses:

- they will be unable to compete in their markets;
- investors will direct new capital investment offshore, seeking the security of returns from non-capped regimes; and
- production of traded goods will concentrate in developing countries with comparatively limp antitrust and environmental regulation and little incentive to reduce carbon emissions in the short term.

As an example, if Qenos was unable to viably compete it would be forced to close its operations, resulting in the loss of thousands of Australian jobs. Such production would be replaced by imported product. Most, if not all, of this product would be from South East Asia and the Middle East. It is unlikely that the production of such product would be subject to any form of carbon regulation in the short term. Therefore the importers would receive a windfall gain without the need to improve the carbon intensity of their operations. As mentioned elsewhere in this submission, there are no obvious technologies available to reduce the carbon intensity of PE manufacturing.

Inadequate regulatory intervention would also undermine one of the key strengths of the Australian economy - regulatory certainty - and would create a considerable disincentive to new investment in Australia. In this regard Qenos notes that it is a subsidiary of China National Chemical Corporation.

From an economic perspective, for TEEI businesses faced with an ETS, only uncertainty is certain. It is impossible for regulators to predict the impact of the ETS on TEEI businesses with any accuracy.

Therefore, intervention, through a scheme which compensates TEEI businesses for the full costs resulting from the ETS:

- is necessary to:
  - keep the playing field as even as possible between Australian firms and non-capped competitors; and
  - balance the considerable risks created by early ETS implementation; and
- represents a fiscally responsible investment in the continued contribution of TEEI businesses to the Australian economy.

Qenos proposal: TEEI qualification

The firms which qualify as TEEI should be established at the outset based on objective criteria on trade exposure, exposure to cost increases due to the ETS, competition from non-capped competitors and emissions intensity. This approach meets the design principles of simplicity and credibility, provides regulatory certainty and is administratively cost and time effective.

The Garnaut Report suggests that in order to qualify as TEEI, a firm must demonstrate that the impact of the ETS will be material to it (in relation to trade exposure and emissions intensity). However, the Garnaut Report does not explain the basis upon which those assessments will be made in any detail.

Qenos submits that the ETS should establish, at the outset, which firms qualify as TEEI by reference to objective criteria, such as those suggested by the National Emissions Trading Taskforce December 2007 report "Possible design for a national greenhouse gas emissions trading scheme: Final framework report on scheme design" (**NETT Report**).

Proposed criteria

The NETT Report articulates four identifying criteria for TEEI businesses:

- high emissions intensity;
- exposure to cost increases due to the ETS;
- trade exposure; and
- competition from non-capped competitors.

The NETT Report also recommends that assessments should be made on a product-by-product basis (eg PE as opposed to "plastics"). Qenos also believes that this is appropriate given that different products (even within an industry sector) will have different emissions intensities.

High emissions intensity

As set out in the NETT Report, further work will need to be conducted in order to determine the appropriate emissions intensity. The NETT Report proposes a measure of 1,200t CO_2-e per million dollars of revenue as a basis for further consideration (under which Qenos would qualify as emissions intensive). However, Qenos submits that a ratio based on earnings is more appropriate, because a ratio based on revenue alone would:

- penalise businesses with a high fixed cost base; and
- unduly advantage high margin businesses.

In order to deal with the potential for volatility in earnings from year to year, these should be measured over a period of time to take into account the cyclical nature of the relevant business.

Trade exposure

In order to determine whether a firm is trade exposed or is a "price taker", it would be inappropriate to simply assess whether the firm's prices are the same as the "international" price. An Australian firm can be a price taker notwithstanding that it may, for example, price above the international price on the basis that it offers additional "value added services" such as "just in time delivery" on a cost recovery basis. The relevant question is whether the firms in the industry could pass on the additional costs which would be incurred under the ETS or whether, once established, the prices are only adjusted in line with movements in international prices.

Another test could be whether the business is or has been subjected to proven dumping and whether protective measures have been implemented as a result.

Guiding principles support proposed criteria

Qenos agrees that the qualification thresholds for TEEI should meet the principles of simplicity and credibility identified in section 2.2 of the Garnaut Report, and believes that the principles advocated above meet these criteria.

The objective criteria proposed are simple and credible because they can be easily understood, explained, implemented and applied, and are reliable and transparent. The objective criteria will also provide greater regulatory certainty because:

- firms will be able to make a preliminary assessment of whether they are likely to meet the criteria; and
- they will reduce the scope for inconsistent assessments by the regulator and other regulatory errors.

Risks and costs of overly theoretical approach to TEEI

The methodology for the TEEI measures proposed in the Garnaut Report is too theoretical, complex and resource-intensive. As a result, the proposed regulation will impose substantial costs which are unlikely to be justified by the benefits. This approach cannot be justified when considered against the extreme risk of regulatory error, with the irreversible consequences of closure of Australian TEEI businesses and carbon leakage.

The Garnaut Report proposes that TEEI transitional measures should be designed to prevent a reduction in production which is beyond the level that would eventuate if competitor countries were subject to commensurate carbon constraints. To do so, the Garnaut Report proposes that compensation be provided to lower a firm's production costs to an appropriate level. The theoretical justification and explanation for this is to account for the global carbon price and the cost reductions resulting from lower carbon intensive technologies.

This assessment would require a comparison of:

- production costs and carbon intensity of individual firms internationally; and
- emission trading schemes of at least the major international competitors and resulting carbon costs in each of those jurisdictions.

In practice, it will be extremely complex (if not impossible) to determine the theoretical "sustainable" production level. Apart from the substantial administrative costs of doing so for all TEEI businesses, the principles, information and data to model the relevant inputs with any degree of accuracy are either not available or do not exist.

The Garnaut Report examines a "simpler" approach which approximates the theoretical sustainable production levels. In particular, it proposes to take into account:

- the difference between actual international prices and the price which would result if all major competitor countries introduced a similar ETS to Australia (**M**); and
- a reasonable expected rate of annual improvement in emissions efficiency for well managed firms in the relevant industry - to be calculated from time to time in light of experience (**e**).

Again, to estimate "M" and "e" would be a complex task, requiring the regulator to make many assumptions and judgments. For example, the regulator would have to assess the carbon intensity of international competitors and the global carbon price (even though it does not presently exist and is unlikely to develop in the short term) as part of "M". There is currently no basis to estimate the global carbon price given that:

- only the European Union and New Zealand have introduced mandatory carbon schemes and only a limited number of jurisdictions have advanced proposals to do so (eg the US Regional Greenhouse Gas Initiative);
- the European Union allocated most permits for free in phase 1 and 2 of its scheme; and
- it is not clear when (or if) any other jurisdictions will introduce carbon schemes, or what the nature of those schemes will be.

An allocation methodology which pre-emptively assumes that emissions trading regulation will be introduced in all jurisdictions cannot be justified. The timing and nature of other schemes cannot presently be predicted. It is imperative that the allocation methodology treat global action as a contingency to avoid regulatory error.

The Garnaut Report also fails to explain the basis on which "e" would be quantified. Experience in regulated industries such as telecommunications and energy demonstrates that this is a complex task with a wide range of potential outcomes. In addition to the dearth of data noted above, the development of principles to forecast the relevant parameters will be a substantial task and no doubt provoke heated debate and conflicting views.

Limited opportunity for further carbon efficiencies

The methodology also assumes that it will be possible for TEEI firms to switch from high to lower emission intensive production processes. From this assumption the Garnaut Report concludes that the need for TEEI measures will be transitional and diminish over time, and that it is appropriate to reduce a firm's allocation annually by the efficiency factor "e".

Such lower emission intensive production technologies do not currently exist for the manufacture of plastic resins (eg PE), and Qenos would expect that this to be the case for most TEEI businesses. The most carbon intensive aspect of the manufacture of PE resin is the steam cracking process required to produce ethylene. This process is inherently carbon intensive as it requires extreme heat and pressure, which can only be produced through the direct consumption of fossil fuels. More carbon efficient technologies (including carbon capture and storage) might be developed over time, but this is a contingency that cannot be reliably predicted. It may be that, despite extensive investment in research and development, innovative techniques are not developed for some time in the future. Firms should not be expected to show efficiency improvements until they exist.

For Qenos, the most significant potential for carbon efficiencies is through general production efficiencies. Given Qenos already has a financial incentive to achieve these, it is not surprising that significant efficiency improvements have already been captured. Direct evidence of this is the fact that Qenos has reduced emissions directly associated with its business by 40% since 1995 through the adoption of more energy efficient processes and feedstocks. TEEI businesses are price takers - they operate in highly competitive markets. This competition provides sufficient drivers for firms to make production efficiencies.

Accordingly, there is no reason for the ETS to mandate efficiency improvements. The efficiencies actually achieved (and consequent reduced need for carbon) can be taken into account during periodic reviews.

To ensure firms have an incentive to implement lower carbon intensive technology if it becomes available, the ETS may provide for the regulator to introduce a "step change" (with the appropriate consultation and notice) based on empirical evidence that a carbon reducing technology is available in the relevant manufacturing process. This is clearly more appropriate than an annual linear factor: investment in new technology is likely to be lumpy and may not provide any efficiency improvements.

Policy objectives must be balanced with costs of regulation

It is well accepted that governments, in determining whether to impose regulation and the form of regulation, must weigh the potential benefits, against the costs, of regulation. Regulatory costs include the costs of compliance and administration by both the regulator and regulated firms, and unintended consequences such as distortions or inefficiencies.[1]

However, the Garnaut Report proposes a complex, resource-intensive TEEI mechanism without considering the costs of regulation which, given the detailed theoretical regime proposed, will be substantial (for example, compliance, administration, as well as resulting distortions and inefficiencies). Qenos submits that the costs are unlikely to outweigh the potential benefits, particularly given that a simpler regime is likely to provide a more appropriate outcome and the benefits of the ETS will be largely symbolic unless and until the global economy adopts similar measures.

Qenos also doubts whether the TEEI mechanism proposed in the Garnaut Report could be introduced and administered before 2010. Again, the Garnaut Report fails to recognise the trade off between the theoretical ideal and timeliness in introducing an effective ETS. It also fails to meet:

- its own design principles of simplicity and low transaction costs; or
- the design requirements for best practice regulation identified by the predecessor to the Office of Best Practice Regulation. According to those requirements, regulation should be:

[1] Productivity Commission: Reviewing of the Gas Access Regime, 2004: p 84.

- the minimum necessary to achieve the objectives;
- not unduly prescriptive;
- accessible, transparent and accountable; and
- mindful of the compliance burden imposed.[2]

Likelihood of regulatory error

The requirements of the Garnaut Report approach will lead to a high risk of regulatory error. The Productivity Commission concluded that there is "high potential" for regulatory error in relation to the national gas access regime.[3] There is a similarly high risk in relation to the Garnaut Report's TEEI proposal because it:

- relates to complex issues; and
- will require the regulator to make subjective judgements with very limited information, experience or guidance from economic principles or international precedent.

There is a strong potential that the regulator's decisions will be (or appear to be) arbitrary considering the wide scope of its discretion necessarily involved in such a scheme.

Risk of regulatory error is asymmetric

Qenos believes that the risk of TEEI regulatory error is asymmetric.

If the allocation is marginally over-generous this will simply affect income distribution, and lead to excess income being allocated to TEEI businesses. The income distribution can be amended during periodic reviews as required. Significantly, over-allocation would not affect the integrity of the scheme.

In contrast, any marginal under-allocation for TEEI businesses can lead to significant unintended and irreversible consequences, such as closure and possible carbon leakage. If the measures are not sufficient for a firm to maintain its international competitiveness, this will eventually lead to closure and is likely to result in increased production in countries without emissions regulation. The adverse result for the Australian economy may well be without any corresponding reduction in carbon emissions globally.

[2] Provided to the Productivity Commission by the predecessor to the Office of Best Practice Regulation (Office of Regulation Review): see Productivity Commission: Reviewing of the Gas Access Regime, 2004: p 85.

[3] Productivity Commission: Reviewing of the Gas Access Regime, 2004: p 109.

Alternative proposal for TEEI measures

TEEI measures should be by way of an allocation of to permits representing 100% of carbon impact until there is global carbon regulation. There is substantial support for this approach, both in Australia and internationally. Given global uncertainty and infancy, the scheme must have an in-built review mechanism and the Australian Governments must give a firm policy commitment to ensure that TEEI businesses are not disadvantaged internationally.

Qenos submits that the focus of TEEI measures should be on a simple, credible solution that:

- does not disadvantage domestic suppliers in international markets,
- can be implemented in a timely manner;
- sets the right incentives from an emissions reduction perspective; and
- has an effective review mechanism to ensure no inappropriate and irreversible regulatory errors result.

Allocation for 100% of carbon impact until global carbon regulation

The initial allocation should cover 100% of a firm's direct and indirect carbon impact, based on 100% of the forecast of production capacity (which take into account average historical production levels) for a specified period, which must be long enough to provide the firm with sufficient certainty to operate in the short-term. This would involve coverage for both direct emissions and cost increases flowing from upstream carbon emissions (for example feedstock supply, electricity consumption or transport).

In the absence of a global consensus on emissions regulation and an international carbon price:

- this level of allocation is appropriate because it ensures that Australia's TEEI businesses remain on a level playing field; and
- it is too early to determine the level of allocation based on a "sustainable" level of production (or an alternative basis for allocation). To do so would involve a high risk of regulatory error and the adverse consequences outlined above.

This approach is consistent with that recommended by the NETT Report, which recommended:

> *"annual allocation of permits to TEEI businesses,* ***until such time as competing nations face commensurate emission constraints****".*[4] (emphasis added)

The Prime Ministerial Task Group on Emissions Trading "Report of the Task Group on Emissions Trading", which stated that "complete coverage and equal treatment across industries" for TEEI businesses is necessary.[5]

The European Union has recently adopted this approach. Although it is moving to phase out the free allocation of permits, the European Union has decided that it is appropriate to make an exception for sectors at risk of carbon leakage. However, it has delayed a determination of how sectors at risk of carbon leakage should be treated until June 2011 so it can consider international progress on global greenhouse gas emission reductions. It has also foreshadowed that its decision may involve 100% permit allocation or an "effective carbon equalisation" system which seeks to place firms in the relevant industries on a comparable footing with those from developing countries.

Qenos considers that an equally cautious strategy is appropriate in the ETS because:

- it would avoid the risk of TEEI businesses foreclosing (and resulting reliance on the Middle East and South East Asia for manufacturing products); and
- it would be improper to pursue a policy objective of obtaining a "sustainable" level of production without a similar commitment from other countries.

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4 p viii.
5 See page 96.

If Australia introduces an ETS ahead of other countries (particularly its south east Asian trading partners), it should ensure that it does do so in a manner which does not lead to the foreclosure of TEEI businesses, which is likely to be irreversible. A policy objective of obtaining a "sustainable" level of production should not be pursued until Australia is confident that other nations will make a similar commitment to introducing similar regulation.

Allocation of permits

The Garnaut Report suggests that the measures could be by way of cash or an allocation of permits. Qenos considers allocation by way of permits is preferable from a policy basis and to facilitate a straightforward implementation.

In principle, the measures should cover the increase in costs as a result of the ETS. If by way of cash, the amount would need to reflect the market price of the permits and the cost of acquiring those permits (eg working capital cost). Clearly, allocating the permits ahead of the acquittal date is simpler than calculating this cost.

Permits should be allocated on the basis of a "fixed allocation model". This would involve allocation on the basis of a number of permits per unit of production based on forecast production upfront. The firm would be given legal title to the permit and would be free to deal with the permit.

This approach preserves the integrity of the ETS scheme because it:

- avoids the potential distortion to the auction price caused by TEEI businesses who will subsequently receive cash matching the actual price;
- means that TEEI businesses, by being able to deal with the permit, are able to participate in the ETS in a similar manner to other firms. This also means that when transitional measures end or are scaled back, TEEI businesses will not face a substantial transition period;
- does not simply provide the TEEI businesses with an incentive to maximise production (which would occur if TEEI businesses were required to hand back permits if production was less than forecast/plant capacity), which will not necessarily be the most economically or environmentally efficient outcome. Instead, it ensures that TEEI businesses will use the permits in the most efficient manner taking into account the opportunity cost of the permits; and
- provides TEEI businesses with regulatory certainty for each allocation period.

Need for in-built review mechanism and certainty

Given the infancy of carbon schemes globally and in Australia, there is a need for both an in-built review mechanism within the ETS, and certainty. The Garnaut Report acknowledges that a general review is required for this reason. Qenos submits that this is equally important for the allocation of permits for TEEI businesses in order:

- to take account of international developments (ie progress of international carbon schemes), particularly given the likelihood of main competitors introducing (or not) similar measures; and
- for the scheme to evolve in light of practical experiences drawn from international emissions trading regulation.

At this preliminary stage of international developments it will simply not be possible to introduce a perfect ETS: in reality, review and amendment will be necessary (possibly soon after implementation). However, one of the aspects of a regulatory regime which is fundamental to minimise regulatory risk and adverse impacts on investment is certainty. A firm policy commitment that TEEI businesses will:

- not be disadvantaged compared to their international competitors; and
- be provided with sufficient notice of any changes to the method of allocation,

is required to provide certainty which would be lacking given the likelihood of short-term review and amendments to the ETS.

Proposed solution is simple, credible, fair and efficient

Qenos' proposed methodology for the TEEI measures is simple, fair, credible and meets the objectives of the ETS.

The proposal is simple and credible because it is based on forecasts of actual production and actual costs. It does not involve regulatory discretion or judgments about theoretical concepts such as "sustainable" production levels and the global price of carbon. The basis for a regulator's decision will therefore be transparent.

It is also equitable and economically and environmentally efficient given that it:

- minimises regulatory costs and regulatory risks;
- ensures that TEEI businesses remain on a level playing field internationally;
- does not foreclose otherwise competitive Australian industries prior to global agreement on carbon emissions; and
- avoids carbon leakage.

Point of obligation

Purchasers of gas and liquid feedstocks, which would otherwise be used as fuels, should be responsible for acquitting permits relating to the emissions associated with the use of such products.

The Garnaut Report indicates that in the case of the transport sector, an upstream point of obligation may be appropriate because of the large number of smaller entities. However, the Garnaut Report acknowledges that:

> "*A complication will arise where there is no constant relationship between fuel and emissions. For example, sometimes petroleum-based fuel is used as an input in manufacturing processes (for example, plastics), resulting in the release of few or no emissions. Where this is the case, such fuels sales would need to be netted out of an upstream party's obligation, or a credit system established so that producers could claim back the permit price passed-through to their liquid fuel purchase.*"[6]

This complication is equally applicable to certain gasses used in manufacturing, such as ethane (used in the manufacture of PE), LPG (used in the manufacture of polypropylene) and natural gas (methane, used in the manufacture of fertilizers).

Qenos suggests that this complication can be overcome relatively simply if the point of obligation is the source of the emissions. The purchaser of the relevant fuel/feedstock is in the best position to report on the emissions associated with the use of that product in its manufacturing or chemical process. It is therefore in the best position to acquit permits related to such emissions. Further, unlike the transport sector, there are a small number of customers which use a significant volume of these gasses, most of which will be reporting emissions under the NGERS.

[6] See page 31