



Major Energy Users Inc.

Department of Resources Energy and Tourism

**Comments on the
Proposed Energy White Paper**

Discussion Papers

by

The Major Energy Users Inc

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EXECUTIVE SUMMARY

The Major Energy Users Inc (MEU) welcomes the opportunity to provide comments in relation to the proposed Energy White Paper.

The Energy White Paper would need to articulate an objective or series of objectives. For the perspective of MEU, two priorities would be ;

- The development of a competitive mix of lower carbon energy resources by 2030, and
- The importance of maximising energy efficiency in a lower carbon Australian economy

The Energy White Paper must recognise and address as appropriate that:

- Australia is an open and competitive economy
- Australia's competitively priced and low cost energy resources must be used to promote Australia's energy intensive industrial activities
- Australia's energy intensive industrial activities tend to be located in regional, rural and remote centres and the importance of these industries in these centres is great as they generate a significant economic and social benefit
- Governments have an important role to play, especially where there is market failure
- The NEM is becoming increasingly concentrated and market structures are under stress and are not producing competitive outcomes. Persistent exercise of market power is resulting in massive wealth transfers from consumers
- NEM Rules are ineffective in producing competitive outcomes and regulatory regimes have been inadequate to promote competitive market structures and outcomes
- Governance arrangements of key institutions require urgent attention – there is much unfinished business

The MEU provides its responses to most of the specific questions raised in the Discussion Papers, and provides explanation for the reasoning behind its responses.

1. INTRODUCTION

The Major Energy Users Inc (MEU) welcomes the opportunity to provide comments relating to the proposed Energy White Paper.

The MEU has provided some context for the comments it makes into each of the specific questions raised in relation to each of the discussion papers. The MEU considers that DRET should understand the context in which MEU has developed its views on the way forward for the way Australia should develop the use of its energy resources into the future.

This submission includes comments covering the following:

- The Strategic Directions Paper, and
- The Discussion Papers on:
 - Governance, Institutional, Legal And Regulatory Frameworks And Community Engagement
 - Investment, Competitive Markets And Structural Reform
 - International Energy
 - Realising Australia's Energy Resource Potential
 - Maximising The Value Of Technology In The Energy Sector
 - Our People: Demographics, Workforce And Indigenous Participation

2. ABOUT THE MAJOR ENERGY USERS INC

The Major Energy Users Inc (MEU) represents large energy consumers operating in the NEM and in other jurisdictions. The MEU comprises some 30 major energy using companies in NSW, Victoria, SA, WA, NT, Tasmania and Queensland. MEU member companies – from the steel, aluminium, cement paper and pulp, auto and tourism and the mining explosives industries – are major manufacturers in the NEM and in other jurisdictions and are significant employers, and are located in many regional centres.

Analysis of the electricity usage by the members of MEU shows that in aggregate they consume a significant proportion of the gas produced and electricity generated in Australia. As such, they are highly dependent on the transport networks to deliver efficiently the energy so essential to their operations. Many of the members, being regionally based, are heavily dependent on local suppliers of hardware and services, and have an obligation to represent the views of these local suppliers. With this in mind, the members of the MEU require their views to not only represent the views of large energy users, but also those of smaller power and gas using facilities, and even at the residences used by their workforces.

The companies represented by the MEU (and their suppliers) have identified that they have an interest in the **cost** of the energy networks services as this comprises a large cost element in their electricity and gas bills.

Although electricity and gas are essential sources of energy required by each member company in order to maintain operations, a failure in the supply of electricity or gas effectively will cause every business affected to cease production, and MEU members' experiences are no different. Thus the **reliable supply** of electricity and gas is an essential element of each member's business operations.

With the introduction of highly sensitive equipment required to maintain operations at the highest level of productivity, the **quality** of energy supplies has become increasingly important with the focus on the performance of the distribution businesses, because they control the quality of electricity and gas delivered. Variation of electricity voltage (especially voltage sags, momentary interruptions, and transients) and gas pressure, by even small amounts, now has the ability to shut down critical elements of many production processes. Thus member companies have become increasingly more dependent on the quality of electricity and gas services supplied.

Each of the businesses represented by MEU has invested considerable capital in establishing their operations and in order that they can recover the capital costs invested, long-term **sustainability** of energy supplies is required. If sustainable supplies of energy are not available into the future, these investments will have little value.

Accordingly, MEU members are keen to address the issues that impact on the **cost, reliability, quality** and the long term **sustainability** of their gas and electricity supplies.

The members of MEU have identified that energy transport plays a pivotal role in the energy markets. This role encompasses the ability of consumers to identify the optimum location for investment of its facilities, and providing the facility for generators and gas producers to also locate where they can provide the lowest cost for energy supply. Equally, consumers recognise that the cost of providing the transport systems are not an insignificant element of the total cost of delivered energy, and due consideration must be given to ensure there is a balance between the two competing elements.

3. SOME OVERARCHING CONCERNS

In preparing its response to this series of discussion papers, the MEU and its members identified some key over-arching concerns that should be reflected in the development of the Energy White Paper. Whilst a number of these concerns have been identified within the Strategic Directions Paper and the sector discussion papers, the MEU notes that some conclusions could be better developed.

Investment incentives

There is a generally held view that under the current approach to the provision of many parts of the supply chain for development and delivery of essential and common services, investment is expected to be made by the private sector (notwithstanding government ownership of some electricity assets), although in times past similar infrastructure was initially developed by governments and in some cases, later sold to private entities. The most obvious of these has been the sale of coal export facilities and gas and electricity infrastructure.

Under a private regime (especially in the case of gas pipeline infrastructure), the drivers for investment revolve almost entirely around the immediate needs for infrastructure, and in many cases, this immediate need determines the sizing of the infrastructure. This results in new assets being sized to meet current needs, as the added investment needed to provide surplus capacity does not get the immediate cash return required by the investors¹. Unless there is included a significant element of surplus capacity in essential infrastructure, a less than economically efficient outcome will result.

In addition to this aspect, a private firm is unlikely to invest until it has firm commitments for a significant element of the capacity to be provided. The impact of this approach is, that because a firm commitment for capacity has to be lodged before a project will proceed, there is a delay in the decision to proceed with the investment, and that the bulk of the return on the investment is "locked in" before the investment proceeds.

In contrast, a government can take a longer term view of an infrastructure investment. It does not have the same commercial imperative to generate an immediate cash return and therefore can take a longer term view of the worth of an investment. An example of an infrastructure project that most likely would have not occurred without government involvement is the Dampier Bunbury gas pipeline,

¹ It is important to note that firms where their shareholding is publicly held, suffer the need to deliver returns measured in terms of a few quarters as investing Funds (such as superannuation funds) assess the market returns of their investments on a quarterly basis, and have a limited preparedness to accept lower returns over more than 2-3 years.

yet the importance of this asset took some 10-15 years before its full value has been realised both in terms of return on investment and its importance to the value adding element it provides.

In addition to the commercial return, governments have the ability to include into their assessment of an infrastructure project, the *social return* an investment has and to include this social return along with the cash return such an investment might generate. A private investor cannot include in its assessment any value for the social return the investment might provide.

Thus it is important that in assessing the directions for the Energy White Paper, the impact of the drivers behind the decision to invest are fully appreciated. This means that governments still have an essential role to play in the development of the infrastructure essential to maximise the potential of Australia's energy resources – whether that role is as an infrastructure developer, or as a provider of some degree of guarantee of return on an investment through a form of cash guarantee or a foundation user of the asset.

It is clearly insufficient for government to assume that private investment in essential infrastructure will occur, and that adequate surplus capacity will be provided to match future needs. There will always be market gaps in the short term.

The benefits of value adding (or “The Nauru Experience”)

The suite of papers prepared to inform the development of the Energy White Paper, has an underlying assumption that the development of Australia's energy resources will provide the best outcome based on their being sold at the highest prices for the resources themselves ie sold effectively in a raw or, non-valued-added form.

It is becoming more and more obvious that in an energy hungry world the highest prices for raw energy resources (such as coal, oil, gas and uranium) are available from overseas buyers, and that the domestic purchasers of this locally produced raw energy are evincing views that at international prices for energy, they are uncompetitive in their value adding process. Should this occur then downstream processing of, and value adding to, Australia's resources would reduce.

Should the raw energy be exported in preference to using it domestically and downstream industry does reduce, the impact in the short term might be quite modest. It is the long term impact that should be of concern to government.

Probably the most obvious example of taking a short term view is the experience of the island of Nauru. Nauru used to be the lowest cost

provider of phosphate rock in the Pacific region. While it had supplies of this, the island prospered. The Nauruans did not use their natural resources in a way that provided for the long term needs of the island and for the future generations, and when the phosphate rock was all exported, they had little ability to provide for the current population and Nauru now has a major problem.

Australia has more resources than Nauru, and it has the opportunity to utilise its resources to get both a benefit from the needs of other countries (by export) and to value add so that it maintains and develops its secondary industries. It is the secondary industries (as the data provided in the discussion papers show) that provide the bulk of the employment opportunities for all Australians, especially those of future generations.

The Energy White Paper should recognise how Australia's abundant raw energy resources can be best utilised to also provide for the long term needs of the country, rather than what can be done in the short term to maximise the ability to export raw energy for the maximum revenue it can generate.

The supply of skilled labour

In an allied issue to that of the long term future and the needs of future generations of Australians, is that of ensuring there is adequately trained labour available for the resources sector, including energy resources. The discussion papers highlight that a major issue for the resources sector (which operates predominantly in remote parts of the country) is access to labour sufficiently skilled to develop and operate the facilities used for winning Australia's resources.

History shows that immigration has been the mainstay of Australia's labour pool. As well as immigration, Australian governments (directly and indirectly) provided a significant proportion of the training for trades skills, through their electricity, gas, water and transport industries. It is over the last 10-15 years that Australian governments either sold or corporatized these industries and the new owners of the businesses have elected to seek commercial returns at the expense of the combined commercial and social returns that governments have the ability to achieve, but as private enterprise can quantify only a commercial return, it is not able to provide for any social returns.

An example of this *social return* in relation to skills training is the way the Latrobe Valley in Victoria was developed. The government recognised the value of the vast brown coal deposits and developed these into one of the largest power generation centres in the country. As part of this process there was a decision made to provide extensive technical training for many young people that lived in the area. These

became the core of the skilled labour used to develop the Bass Strait oil and gas fields, and further afield.

Similarly, the various government owned electricity, gas, water and transport (trains, trams and aircraft) provided secure and very competent technical training programs for many young people.

It is interesting to note that since deregulation of the electricity and gas markets, the quantity of training provided by the new businesses has reduced. In the regulated sectors of these businesses (eg transmission and distribution of gas and electricity) the businesses actively seek funding for technical training of employees to replace their ageing workforces. Their view (even of the government owned businesses in Queensland, NSW and Tasmania) is that it is not their responsibility to provide technical training for young people. An outcome of this approach is that they seek higher operating expenses to pay higher wages to attract employees from a diminishing skilled workforce. In this they are replicating the same approach used by employers in the private sector and by government owned businesses in competitive areas of the electricity market (such as power generation).

It is essential that the longer term skill needs of the energy sector are appropriately recognised in the Energy White Paper

4. THE AUSTRALIAN ENERGY CONTEXT

Economic Contribution

The MEU considers that Australia's energy resource endowments have not only contributed to the development of a range of energy-intensive industries, but also stemming from the use of products from some of these industries (e.g. fertilisers and explosives), have also contributed to fostering our internationally competitive mining, minerals, agricultural and processed foods industries. These linkages are particularly important, as are the linkages to the economic and social benefits arising from the location of these industries in regional, rural and remote areas.

Resource Endowment

The MEU believes there should be attention drawn to the vast reserves of coal seam gas (CSG) that have been proven recently in the Surat Basin in southern Queensland and likely to be proven the Gloucester Basin in northern New South Wales.

Already four potential LNG projects have been identified based on the coal seam gas finds in Queensland:

- Origin Energy and Conoco Phillips plan to build a 7 million tonnes p.a. LNG plant, with plans to increase export to 16 million tonnes, with first shipments starting in 2014.
- Santos and Petronas are proposing to develop a 3 – 4 mmtpa LNG plant costing around \$7 billion and commencing operation in 2014, eventually increasing to 8 million tonnes.
- BG and Queensland Gas Company are proposing a 3 – 4 mmtpa LNG plant, eventually increasing to 12 million tonnes. The first shipment is expected in 2013.
- Arrow and Shell together with LNG Ltd have a proposed 1.3 mmtpa LNG plant. Arrow Energy plans to build a pipeline (Central Queensland Gas Pipeline) from Moranbah to transport the gas.

The outcomes for this export of CSG from Queensland has the potential to increase the price of gas used in the eastern states to world parity levels, and there are significant impacts arising from this to the gas and electricity markets in the eastern and southern states.

The reserves in the Gloucester Basin have the potential to provide a high security of gas supplies to the New South Wales and Southern Australian markets, but if the proposals to export this CSG from Newcastle eventuate,

then there is a real risk of high gas prices and potential gas shortages for domestic use

But the required gas transport infrastructure to bring gas to market is currently inadequate. Private enterprise has commercial pressures on it that make it difficult to provide a social return on their investments without some government facilitation.

Such government facilitation can be wide ranging where there is market failure in the short term – from reservation of energy for domestic use, through underwriting surplus capacity on infrastructure assets, to determining that government owned and regulated businesses have to provide some social return as part of the dividends they provide, and to providing assistance through underwriting of foundation customer contracts.

The MEU considers that unless the Energy White Paper addresses the aspect of ability of governments to require a social return as part of the privilege of using Australia's natural energy resources to generate profits, then there is a strong risk that future generations will face a less attractive future than we can provide.

5. THE STRATEGIC DIRECTIONS PAPER

The MEU agrees with the proposed principles that will guide the government's Energy White paper, viz:

- a) Economic development is sustainable and efficient.
- b) Effective operation of competitive energy markets is promoted.
- c) The need and scope for government intervention on the basis of market failure is identified.
- d) International and national interests and obligations are met.

However, the MEU considers that two overarching key principles should be adopted:

1. That Australia operates an open and competitive economy.

This means that the Australian economy operates in an internationally competitive environment and is exposed to international challenges, such as export competition and import competition from overseas economies and firms. It is also exposed to competition from overseas for human resources and investment capital. Thus, for example, it would be foolish for Australia to adopt strict emissions requirements ahead of international commitments, as all it would do would be to disadvantage Australian industry relative to its competitors.

2. That there is a need for government intervention when there is market failure in the short term.

This issue is more fully addressed in both a preceding section and a later section.

The MEU notes that the "...Energy White Paper will focus on the advancement of Australia's interests as an energy exporter and importer and the protection and enhancement of our energy security. It will encompass energy demand and use in Australia and globally; the utilisation of our energy resource endowment; and the exercise of strategic international leadership in collaboration with our energy partners, particularly in our region, in advancing our interests. Our interests include our capacity to achieve prosperity through:

- Exports of competitively-marketed energy resources
- Meeting our domestic energy requirements costs effectively and securely while meeting environmental objectives." (Strategic Directions page 3).

The MEU agrees with the focus of the Energy White Paper as described above. However, we also consider that there is an important requirement for focus on the linkages between our resource endowments and our industrial activities and prosperity.

In past decades, Australian governments have linked the importance of our rich and competitively-priced resource endowments to the development of value-added industrial activities, in enhancing employment opportunities and in raising Australia's standards of living. Indeed, as stated by the Energy Reform Implementation Group (ERIG) in its report² to the Council of Australian Governments:

“Access to competitively priced and reliable energy underpins the competitiveness of Australia's export industries, is a crucial input to the domestic economy and a key enabler for almost every economic activity”. (ERIG page 3).

The importance of competitively priced energy in enhancing the competitiveness of Australia's energy intensive industries, both as an energy source as well as a feedstock (in the case of gas) cannot be over-emphasised.

For example, gas is used as a feedstock (as well as an energy source) in a number of world class Australian industries, producing fertilizers and ammonium nitrate. These industries' outputs, in turn, are used by other internationally competitive industries, such as agriculture and mining, construction, and quarrying. These linkages are very important and reflect the historical desire by State and Federal governments to ensure that industrial development was facilitated by the availability of ample, reliable and low cost electricity and gas.

There were also important **governmental objectives** associated with the fostering of industrial development and the development of regional, rural and remote areas. For example, in announcing a national energy policy framework on 8 June 2001, COAG stated its first objective as:

“Encouraging efficient provision of reliable, competitively priced energy services to Australians, underpinning wealth and job creation and improved quality of life, taking into account the needs of regional, rural and remote areas;”.

COAG further stated amongst its **agreed principles** guiding the national energy policy framework:

“Carefully consider the social and economic impacts on regional and remote areas, with particular regard to businesses, industries and communities;”.

² Energy Reform - The way forward for Australia

The above principle reflects the importance of the location of major industrial activities in regional, rural and remote areas³, and the MEU members recognise the importance of such a principle, first hand. .

The importance of **national** approaches to energy policy cannot be overstated. Whilst it is recognised by the MEU that the current Energy White Paper is a Federal initiative, it is critical that in developing the **national energy policy framework**, there is buy-in from the States and Territories. In fact, this approach was undertaken in 2001 under the COAG auspices whereby all Australian governments were stated to have subscribed to the National Energy Policy Framework including its objectives and principles. It is instructive that an agreed principle was stated as:

“Facilitate constructive, effective inter-jurisdictional co-operation and productive international collaboration on energy matters”. (page 15).

Against the above comments, the MEU considers that:

- There is a need for an over-arching principle that recognises that Australia is an open economy and for government intervention where there is market failure
- Recognise (as all previous governments have done) the continuing importance of competitively-priced energy in contributing to value-adding industrial activities and in enhancing Australia’s internationally competitive industries
- The economic and social importance of maintaining the long term viability of regional, rural and remote areas
- The national energy policy framework truly reflects a national approach and clearly has ownership by all Australian governments.

³ MEU member companies are the largest employers in a number of regional centres, such as Wollongong, Newcastle, Whyalla, Port Pirie and Mt Gambier

6. DISCUSSION PAPER: GOVERNANCE, INSTITUTIONAL, LEGAL AND REGULATORY FRAMEWORKS AND COMMUNITY ENGAGEMENT

The MEU believes that much progress has been achieved in developing better governance, institution, legal and regulatory frameworks over the past decade or so. These arrangements are well described in the Discussion Paper.

The Discussion Paper refers to the Report of the Energy Reform Implementation Group and to its finding that there was still scope to further improve the governance in the energy market sector (page 10). The MEU strongly supports this finding. There are, however, two key areas that continue to give concern with respect to governance arrangements in the key institutional structures created.

The first concerns the AEMC. It is instructive to refer to ERIG's findings (ERIG page 22), viz:

”2.3 AEMC

Of all the governance recommendations made by ERIG, those relating to the AEMC are amongst the most urgent.

ERIG recommends that the AEMC's funding, autonomy, accountability and board structure be improved as a matter of urgency. More specifically, in the interests of a national market approach, ERIG recommends that:

- (i) the AEMC's funding be made transparent and adequate for its role, and, preferably, be the responsibility of the Commonwealth Government;
- (ii) the AEMC have more control over its own work programme, subject only to being fully accountable to governments for its performance in delivering against government policy objectives for Australia's energy markets (eg, efficiency and reliability); and
- (iii) AEMC's resources should allow it independently to appoint a full-time Board, comprising members with appropriate experience and, consistent with good governance, free from perceptions of (actual or perceived) conflicts of interest.”

As far as the MEU is aware, this “urgent” ERIG recommendation has not been fully acted upon.

The AEMC is yet to have “more control over its own work programme” and the recommendation to free the Board from perceptions of (actual or perceived) conflicts of interest, has yet to be acted on.

The second concerns the Ministerial Council on Energy. ERIG's finding stated (ERIG page 22):

“2.1. Ministerial Council on Energy

To support its own 2003 agreement to strengthen the national character of energy market governance, and to sharpen its own broad policymaking function, ERIG recommends that the MCE’s role should be reviewed by COAG. The focus of the review should be

- (i) to ensure the MCE concentrates solely on broad policy-making for the energy market;
- (ii) to eliminate more detailed intervention by the MCE and its officials in detailed rule-making; and (iii) to evaluate the merits of an increased policy oversight by the Commonwealth Government or COAG to support a more ‘national character of governance of the energy markets’.

As far as the MEU is aware, the MCE (which has government representation only but includes government asset owners who can make decisions in their own interests) has deliberation processes that are not transparent. Despite this, the forum continues to set detail policy measures and Rules (e.g. the Electricity Distribution Revenue and Pricing Rules). Like the recommendation relating to the AEMC, this finding has yet to be acted upon.

Bearing in mind the foregoing observations the MEU responds to the specific questions that have been raised for consultation:

1. Could institutional arrangements be further developed to assist in the transformational task to 2030?

Yes.

See the above comments relating to the AEMC, MCE and COAG which highlight that a number of the recommendations made by ERIG still have to be implemented.

In particular governments which own assets should be excluded from decision making where those decisions will impact on the dividend the government would receive from its owned entity

2. What regulatory, governance and rules frameworks best ensure an efficient investment mix across a range of technology types, consistent with the needs of the energy market?

There are a number of concerning trends that have been identified within the energy markets and these include:

- convergence of gas and electricity markets but with the ability of a very few businesses to utilise the benefits of this convergence,

- Increasing concentration of the retail energy supply industry with a few dominant firms (for example AGL and Origin Energy have acquired a dominant position in the Victorian, SA and Queensland energy retail markets and have been identified as the two retailers most likely to acquire the retail businesses in NSW),
- Increasing concentration of the power generation element of the electricity supply chain, especially in the aspect of combining generation with the retail function. The emergence of “gentailers” (retailers with significant power generation) indicates the need of retailers to move into the generation element due to a lack of liquidity in the secondary markets. Second tier retailers are vacating markets due to an inability to secure adequate hedging for their customers.
- The achievement of dominant firms in controlling multi-fuel energy sources such as electricity, gas, wind and solar.

Competition and competitive market structures are obviously first best policy options, but trends and developments in the energy markets demonstrate that competition is either not being allowed to blossom or governments are too concerned with maximising sale prices for assets in what are effectively an essential services. Second best options need to be adopted if a “competitive” model is not able to achieve the best outcomes for consumers.

Existing Rules and regulatory regimes are currently under stress. For example, the reintegration of electricity retailers with electricity generation in Victoria and South Australia has undoubtedly led to prices rising to levels higher than in a more competitive market structure. In South Australia, the dominant generator is also the dominant electricity retailer. This has allowed it to be able to set wholesale spot prices whenever demand exceeds 2500 MW without breaching the NEL. This suggests that the exercise of market power is permitted under the NEL and NER, and results in large wealth transfers from consumers.

- That a merger between the dominant generator and the dominant retailer was approved by the ACCC under the mergers test is an example of institutional failure.
- That the AER took more than 14 months to complete its investigation into certain bidding activities by a generator in South Australia speaks volumes about the robustness let alone the credibility of the regulatory regime (with consumers signing electricity contracts during this period paying significantly higher prices reflecting a higher risk premium).
- That the AER report into its investigations was released the day after the Commonwealth Government Budget was released

must have created some perceptions (actual or perceived) of guile.

There is no doubt that the gas market is dominated by a very few gas producers. Whilst it is accepted that the costs for oil and gas exploration does require the combined financial resources of the exploration firms, it does not necessarily flow that once developed new gas or oil field need to be operated as a “joint marketing exercise”. In fact the decisions of government and the regulatory bodies to allow the continuation of this practice of joint marketing, has been a major cause of the lack of competition in the gas market.

That governments and the regulatory bodies have determined that a duopoly constitutes adequate competition is very concerning. This has been the case in the gas industry where Santos/APA is seen as sufficient competition to ESSO/Jemena in delivery of gas to the Sydney market and Santos/Epic is seen as adequate competition to Woodside/BHP/SEAGas in the SA gas market. In other industries local duopolies have been tolerated only because of the competition from overseas firms. Unfortunately the gas and electricity markets do not have competition from overseas.

It has been stated in a number of assessments by parties within the regulatory regime that the electricity market is competitive and efficient, and the increase in generation capacity is cited as an outcome. In fact a review of the ownership of this new generation shows that it is the dominant firms in the electricity and gas markets that are the overwhelming proportion of this new development, and as a result the incumbent firms are becoming even stronger.

There is no doubt that the existing structure has not achieved the needed degree of competition to ensure the “... long term interests of consumers...” can be achieved. A better market structure is required. The first best solution (ie strong competition) is not being achieved, so a second best solution (ie one with more intervention but still underpinned by competition) is needed, if divestment is not considered.

In this regard the MEU considers that intervention is needed to reduce the increasing degree of market power held by a reducing number of dominant players, and governments need to implement a process where increased competition is required, even if this results in lower asset sales.

<p>3. To what extent is further deregulation needed to optimise outcomes for Australian energy by 2030? What might the priorities be?</p>

The continuation of government ownership of certain energy assets and their continued involvement in policy making forums is a source of

governance discomfort and consumers have real concerns that such control can be used to provide a form of indirect taxation.

Further deregulation implies that the current structures are too constraining to allow the firms involved in the energy supply chain require less oversight and control than currently exists.

There is no doubt that there is increasing domination by a reducing number of firms of the Australian energy markets. This can only result in a detriment to consumers and increasing prices for the supply of energy. If further deregulation of the energy markets is contemplated then there must be a compensating increase in the controls to enhance competition.

With the energy supply industry continuing to be more concentrated, there is probably a greater need for powers of divestment in order to create more competitive market structures. Competition policies need strengthening.

Many of the aspects in the energy supply chains relate to the use of monopoly assets (eg power lines, gas pipelines, export loaders) and the owners of these assets have the ability to extract monopoly rents for their use. Further deregulation has the potential to allow the increased extraction of rents.

It is alleged that there needs to be some degree of incentive on a monopoly asset owner to provide for the future needs of consumers. Such incentives tend to be associated with the increase in assets provided by the monopoly asset owner. Whilst the principle has some basis for continuation, it is essential that this ability is limited. A review of the current Rules for the provision of the monopoly aspect of the energy supply chains shows that this incentive has reached a level where there is significant concern that the balance point (between sufficient incentive and excess incentive) has been passed, and unnecessary monopoly rents are being permitted within the Rules as written.

4. Is there scope for further convergence of governance for electricity, gas, offshore and onshore energy resources?
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Yes.

Yet to bring greater convergence of governance has the potential to result in the “lowest common denominator” element to the outcome. Great care must be taken to ensure that the best overall outcomes are achieved when bringing greater convergence.

5. What is the future role for government ownership of assets?

The provision of essential services cannot be left purely to the private sector. Equally governments have shown that they do not have the ability to operate large service enterprises as well as the private sector. This view has been readily identified in that many of the previously government owned power generators were quite inefficient both commercially and technically when operated by government but have shown remarkable increases in financial and technical efficiency since being operated by corporations, especially private corporations.

This indicates that in general, government should get out of ownership of assets, but should retain a strong regulatory control of the market for the provision of essential services that are given to the private sector to provide.

6. How can the community become more fully engaged in energy policy development?

It is always difficult for the community at large to be “engaged” let alone “more fully engaged” in energy policy development. There are severe gaps in knowledge, skills and resources that prevent engagement at all, let alone more fully engaged.

Despite this reservation, the community at large does have the right to be engaged in decisions impacting the future of its country and how the future is to be guided by policies developed now.

Consumers have seen the energy supply side firms actively work to maximise their returns from the industry. This is to be expected of firms in a market environment. What is concerning to energy consumers is the degree which government policies are influenced by the energy supply side entities, in their processes to increase their profitability. Governments, regulatory bodies and their officers should be aware that this is the main focus of the supply side entities and accept that this is occurring. One way of providing balance to the vested interests is to ensure that equal time and weight is given to the consumer side of any debate.

The consumer side of the energy market is quite diverse and has various agendas in its input to debates as to the way the energy markets are developing and are structured. It is therefore essential that governments, regulatory bodies and their officials ensure that they seek informed advice from consumers. Yet it is clear that firms in the energy supply chain have a need to devote extensive resources to issues that affect their profitability, as this is the focus of their business.

In contrast consumers, whether large manufacturing concerns or at a residential level, have many supply issues to contend with, of which energy is but one. Therefore governments, regulatory bodies and their officials need to devote more time to identifying what are the key concerns consumers have in relation to issues regarding the supply of their energy needs.

7. How can the Australian Government respond to these challenges?

The MEU considers that the first step for the Australian Government is to act on all outstanding expert report recommendations, such as the ERIG findings on governance.

The second step is for the Australian Government to act on areas to strengthen competitive market structures. In particular the Rules in relation to using market power to increase revenue and profitability need to recognise that the energy markets are extremely concentrated and allow supply side participants to use their market power to the detriment of consumers. A massive transfer of wealth from consumers is occurring, especially in the electricity industry.

7. DISCUSSION PAPER: INVESTMENT, COMPETITIVE MARKETS AND STRUCTURAL REFORM

7.1 Climate Change Policies

The MEU has consistently supported the creation of efficient energy market structures as competition and competitive markets generally deliver efficient outcomes, whether in terms of prices or service performance, or in terms of timely investment.

The Federal Government's proposed introduction of the Carbon Pollution Reduction Scheme (CPRS) and the expanded Renewable Energy Target (xRET), however, represent a massive intervention in energy markets.

There has been extensive dialogue and reports developed regarding the CPRS and xRET policies and their implication for the electricity market. These have tended to concentrate on the headline costs (ie the cost of carbon emissions) and the cost of phasing out the coal fired generation. What has not received as much attention are the secondary costs associated with these policies.

One of the most contentious views that have been presented is that the implementation of CPRS will not increase the amount of gas fired generation, as there is an expectation that the amount of electricity demanded will significantly decrease, equivalent to the amount of coal fired generation currently used.

What this assumption is based on is that as the price of electricity rises to accommodate the implementation of CPRS and xRET, consumers will use less electricity. This assumption is based on untested economic assumptions. It is quite clear that consumers do not consider the supply of an essential service (such as electricity) to be subject to normal economic assumptions of price and demand. It is already clear that even where the cost of electricity is high relative to income (such as many of the poorer sections of our community) demand for electricity does not follow pure economic theory trends. In fact it has been observed that even where there is a low likelihood of payment, there is still a decision made to use electricity and seek government compensation if possible.

With these observations in mind the MEU points out in order to achieve the outcomes of these government policy interventions there will be significant costs to implement:

CPRS

- A switch to more gas fired base and intermediate ranked generation
- A requirement for additional investment in electricity networks and gas pipelines to manage the higher peak supply delivered by intermittent generation.
- A more accelerated phasing out of the low cost brown coal-fired generating capacity
- An increase in redundant electricity assets caused by the premature phasing out of existing coal fired generation.

xRET

- A requirement to provide additional fast-start gas fired generation to support intermittent energy plants, such as wind and solar
- Additional network augmentations to connect remote renewable energy plants to transmission nodes
- Increased transmission losses arising from generation at the remote locations of renewable energy plants.

The above implications are expected to raise costs very substantially for energy consumers. However, there are also deep concerns over the likelihood of increased reliability.

CRA, consultants to the AEMC on its review of the impact of climate change policies on energy market frameworks, points out that black outs in South Australia could increase, citing one scenario where four times the current level of outages could occur for the next eight years. Another AEMC consultant, Roam, makes the point that increased reliance on gas will expose the electricity and gas markets to catastrophic failures in the event of gas supply interruptions or incidences, in view of the increased harmonisation of gas and electricity which has been spurred on by the CPRS and RET interventions.

Moreover, CRA In its report on the implications of CPRS and xRET, assesses that price volatility in gas and electricity will increase, and therefore the costs of power will increase due to an increase in premium to manage the attendant increase in risk.

Consumers have noted that as risk increases, there is a reduction in retailers prepared to be part of the market. As these retailers exit the market, there has been seen an increase in retailer margins as a result of the lower competition.

All these raise serious concerns about risks and supply reliability in the NEM, and again the issue of whether the energy-only market is able to provide adequate signals for new investments. The NEM market is still very illiquid (especially in some regions such as SA), and the increased risks will reduce liquidity further, in addition to providing the drivers for increased supply side industry concentration.

The above raise very significant and pertinent questions about the NEM, its ability to provide competitive outcomes and efficient signals for investments. In earlier comments, we have remarked on the ability of competition rules to promote competitive outcomes and of the efficacy of the NEL and NER in providing a credible regulatory regime.

The MEU notes that the MCE has commissioned AEMC to review whether the current market is able to accommodate the introduction of the CPRS and xRET policies. Unfortunately the AEMC has taken the view that the current gas and electricity markets are probably sufficiently robust to absorb the implementation of CPRS and xRET, with a little “tweaking”. What AEMC has failed to do is to assess whether a modified or different structure would more greatly enhance the outcomes of the policies, and this is a great failure of the current review process.

The MEU considers that it is timely to consider changing the design of the NEM, with reference to the WEM and to the gas Short Term Trading Market. The NEM’s operations would appear to deliver inefficient outcomes in terms of carbon minimisation.

Firstly, the design of the bidding and rebidding rules has disincentivised the building of base-load and intermediate-load generation capacity. Gas peaking plants, especially using Open Cycle gas turbine technology power generators (which are less thermodynamically efficient than Combined Cycle gas turbine technology) have been incentivised. The result is that the NEM has become thermodynamically more inefficient.

Secondly, the AEMC-inspired electricity transmission rules (and the MCE electricity distribution rules which are based on these) have greatly incentivised network businesses to build networks (as they represent the firms’ profits) rather than incentivising demand management or energy efficiency options. The result has been limited demand management in the NEM with very large expansions in distribution networks.

Thirdly, AER guidelines on electricity transmission pricing allow less restraint on generator location which increases transport losses.

Overall the structure of the electricity market is not designed to reduce greenhouse gas emissions which are the entire purpose of the CPRS and xRET policies, but effectively encourage less efficient power and gas supply arrangements.

Finally, the MEU believes that given the size of the investments needed to meet the CPRS and xRET government interventions and in light of the global financial crisis, the investment financing tasks are likely to be too great for the market to provide and in the time frames required. This is clearly an area where government intervention is needed.

7.2 Market Integration

The NEM is serviced by a relatively concentrated electricity supply sector, with a few dominant firms that are becoming increasingly dominant in multi-fuels.

In recent years, developments that have resulted in reintegration of retail to generation, especially in Victoria and South Australia, have raised concerns about the easy ability of firms to exercise market power. Parer (2002) and ERIG both roundly condemned the NSW ETEF and Queensland BPA schemes which created a relationship between generators and retailers. When the ETEF and BPA schemes are examined, they are clearly models which create a “gentailer” arrangement between generators and retailers. The ETEF and BPA were consistently derided for creating an impediment in the development in the electricity market, but they achieve exactly the same outcome as does the formation of “gentailers” by the private sector. Yet those same critics of ETEF and BPA support the emergence of gentailers as being an expected outcome of the market structure, in order to reduce the risks faced by generators and retailers, and in theory at least to reduce the costs to consumers. In fact gentailers are able to retain the risk premiums that individual generation and retailing need to manage the reciprocal risks each faces.

The AER’s investigation into AGL/TIPS rebidding activities in summer 2008 clearly states that beyond a certain demand level (2500 MW) AGL/TIPS is able to set the SA regional wholesale price. AGL/TIPS is a vertically integrated business in South Australia and has dominance in both generation and retail in that region. Clearly, with planned electricity privatisation in NSW, it can be expected that the key dominant firms will become even more dominant in NSW, operating vertically-integrated businesses.

Overseas experience, especially in the UK, has shown the non-competitive outcomes from vertical integration. Yet the Competition

Policy rules and the NEL/NER have not prevented consumer interests from being undermined.

7.3 Energy Efficiency

The Federal Government has devoted considerable effort into requiring large energy consumers to be more efficiency conscious, and this is the focus of the EEO program.

In the context of energy efficiency, there are a number of core aspects that need to be recognised.

1. The production of electricity is a small element in the total delivered cost of power – in fact to the vast bulk of consumers by number (ie residential consumers) the bulk of the cost paid is for the provision of network services and retail management and risk premiums.
2. The structure of the electricity market is such that regardless of the amount of electricity demand reduced, the networks are permitted to retain a return on the assets they provide. This any reduction in electricity usage will have a modest impact on the cost consumers face for the provision of power.
3. There is a view that the introduction of “smart metering” will reduce electricity usage and move some demand away from high price periods. Consumers using >160 MWh pa (ie larger than residential demand) have demonstrated that they are not large users of the so-called benefits granted by smart meters. Evidence from overseas programs to encourage time-of-use metering show that price drivers alone are not sufficient drivers to cause usage modification.

Many reports and analyses carried out overseas highlight that energy efficiency is probably the single greatest potential to cause an immediate reduction in greenhouse gas emissions, yet the structure of the electricity and gas markets clearly militate against improving energy efficiency. To assume that smart metering will result in improving energy efficiency has so far not been supported by the facts.

Even if energy efficiency is determined as a worthwhile exercise, because of the structure of the electricity (and to a lesser extent gas) markets, a reduction in energy usage will not translate into significantly lower energy costs for consumers due to the structure of the network costs. Put in another way, the price drivers for reduced energy demand will be significantly muted by the fixed costs locked into the supply chain price structure and even large movements in the price of the raw energy will be muted by these fixed costs.

7.4 Supplies of gas for domestic use

With an increasing world wide demand for natural gas, there is an incentive for gas explorers to increase the export of Australia’s natural

and coal seam gas. The direct outcome of this policy is to cause the price for domestically used gas to world parity pricing.

As noted earlier, the risk is that Australian gas will be exported in an essentially raw state with little value adding. Already it is being seen in WA that gas is being exported in preference to domestic use, primarily because of price (although availability is also an issue for the SW of WA).

What is therefore occurring is that as gas prices are too high and availability and reliability is also an issue, many erstwhile gas consumers are reverting to using coal. Thus the policy of allowing unfettered gas export (without a specific requirement to retain some of Australia's gas for domestic use) has the potential to counter the effect of other national policies such as CPRS and xRET.

Efficient combustion of gas has the potential to significantly reduce the need for carbon emissions programs, but if gas is redirected to export (or priced at export parity levels) then Australia's ability to achieve carbon reductions in the most economical way, will be severely constrained.

To put this concept in another way, if Australia's domestic gas is priced at world parity prices then one of the few benefits available to secondary industry to counter the ability of overseas entities to undercut Australian domestic industry with a resultant increase imports and so reduce the balance of trade.

7.5 Specific Questions Raised in Discussion Paper on Investment, Competitive Markets and Structural Reform

8. What are the key factors likely to affect domestic energy sector (for electricity, gas, transport) development to 2030? Consideration should be given to:
- Energy security implications
 - Supply and demand growth
 - Direct and indirect impacts for the energy sector from carbon pollution reduction response
 - The role of financial markets
 - What are the implications for energy investors, operators and end-users of varying regulatory, governance arrangements across states and integrated energy supply chains, such as electricity and gas?

Significant cost increases for supply and a reduction in reliability are the two key factors of greatest fears and concerns to the MEU and its members, primarily arising from the impact of CPRS and RET on

existing energy market frameworks but also from the unfettered export of energy resources.

There are severe concerns about the ability of the NEM to signal what are very significant investment needs in generation, networks and reliability. In addition, the whole approach in the NEM, whereby consumers largely pay for network costs (as opposed to generators which pay very little in network costs) and loss factors, imposes inefficient costs on consumers, as consumers are not able to influence the decisions of the locations for generators. The electricity Rules impose little pressure on generators to build in a location which results in an overall reduction of costs to consumers.

The orthodox way of attempting to signal new investments, largely in gas peaking generation, is via raising the level of VoLL. Already, the VoLL in the NEM is one of the highest in the world and any further increase will continue to penalise consumers. Yet under the current Energy-only market structure and Rules, VoLL is the only tool available to signal new generator investment. It is clear that VoLL is a very blunt instrument and there are considerable concerns that it is not achieving the intent of its use. In contrast, the WEM (which provides a capacity payment for new generation) is seeing a high level of competition in the wholesale electricity market.

The NEM design needs urgent review, especially with the advent of CPRS and xRET. The energy-only market has failed to signal new base-load generation. Reliability is seriously at risk, whilst the Reliability Panel of the AEMC continues to reject exploring options, such as capacity markets, and appears to favour VoLL increases despite increasing overseas trends towards alternative market designs and continual changes (such as in the UK) to the energy-only market concept.

The CPRS and RET are massive government interventions into energy markets. The expectation appears to be for consumers to pay the costs of these interventions – not only for the headline costs but to absorb all of the many incidental costs (which in aggregate add to a large impost) which these policy interventions impose.

9. What would most assist the long-term efficient provision of energy infrastructure and investment? Consideration should be given to:
- Ownership and operation
 - Regulation of infrastructure
 - Infrastructure charging
 - Timing of infrastructure upgrades
 - Operation of infrastructure
 - Pipeline, rail, storage and port infrastructure.

Investments that are required as a result of massive government interventions in energy markets, such as the CPRS and xRET, should be funded either by government and/or via private public partnerships, but not simply funded by imposts on consumers. Such costs are very large and reduce the competitiveness of large energy users' industrial activities (which are already facing the direct costs arising from the CPRS).

Governments have a role in nations-building, particularly in the development of strategic infrastructure including energy infrastructure. Market failure normally occurs in the short term and there is a clear role for government intervention

Most of the energy infrastructure in Australia was either developed or underwritten by governments, or underpinned by them in the form of foundation contracts. In the past governments saw that the growth of the nation was reliant on government as the private sector does not have the ability to recognise both the financial and the *social* return that these projects deliver.

For example the high penetration of gas usage in Victoria was caused by the government of the day agreeing to pay a fixed price for gas from Bass Strait gas and oil fields and integrating a large number of towns' gas producers with the government's own gas reticulator. Natural gas was reticulated universally at a price marginally higher than the cost of towns' gas, although this gas price was fixed prior to the massive inflation seen in the 1970s. In hindsight the decision was the correct one and provided Victorian gas users large amounts of energy at a low cost for a number of decades. The Victorian government was able to profitably sell the gas supply chain at a later time after also providing a significant social return as well. Similar examples apply to the gas markets in SA and WA.

As noted in an earlier section, it is seen that government still has a role in ensuring that new investments are timely and deliver a social return as well as a financial one.

Whilst the concept of the Electricity Code was to allow governments to control the ambitions of a freed up electricity transport market, we have seen regulation of electricity network infrastructure changed dramatically in recent years. The changes by the AEMC to the transmission revenue rules, have unleashed ambit claims by network businesses for network investments. Incentive regulation has failed to balance the interests of consumers against network businesses. Worse still, it has actually worked against demand side participation options and energy efficiency management.

In this regard, governance arrangements involving the AEMC should be substantially strengthened, as urgently recommended by ERIG in 2007.

10. What are the main impediments to long term investment in energy generation? Consideration should be given to:
- Measures which might encourage generation investment in the future
 - Management of the costs and risks associated with intermittent generation
 - Technology neutrality

The NEM design has largely signalled gas peaking generation and failed to signal a competitive mix of generating capacity. The AEMC Reliability Panel's continued reliance on raising VoLL as the sole signal for investment perpetuates such outcomes.

There has been a consistent call for a review as to the effectiveness of the energy-only electricity market but there has been no serious attempt to assess the benefits of change. What work has been done, revolves around assessing in qualitative terms the economic principles behind the concepts. With the introduction of CPRS and xRET, it is appropriate to carryout a detailed assessment as to whether an energy-only market or a capacity market will deliver a better overall outcome from the implementation of the CPRS and xRET policies

Intermittent generation is likely to be costly (both of itself and its need for backup generation for when it fails), is located in remote areas (requiring extensive network support to allow remote development), lacking in economies of scale and requiring connection investments much greater than its fuel fired competitors to allow for the short periods of high generation output.

In other words, this form of generation is more costly both in regard to its headline cost than existing fossil fuel generation, but also requires significant additional network support much greater than its coal fired competition. The cost for providing this additional network investment is a hidden cost that has not been fully identified, let alone costed as a result of CPRS and xRET policies.

11. Are the market frameworks robust enough to resolve a change in investment incentives?

The MEU considers that the markets are sufficiently robust to tolerate change. However, such agreement does not recognise that an overall better outcome may result if there was a change to the markets to accommodate change.

The concern the MEU has is that there is a tacit assumption in such a question, that the current market frameworks are the best that can be implemented regardless. The MEU considers that there must be a continuing assessment of the market frameworks to ensure that the best outcome can be achieved at all times, rather than just using a framework that can tolerate change.

12. What international and domestic factors will influence the competitiveness of the downstream petroleum industry to 2030?

Consideration should be given to:

- The ongoing viability of the domestic refining industry
- Competition in the wholesale market
- Any barriers to investment in alternative transport fuels?
- Energy security implications.

The MEU does not consider it appropriate to comment on this question.

13. What factors are likely to impact on investment and competition in the wholesale market for electricity, gas to 2030? Consideration should be given to:

On the basis of current trends, we would see the wholesale market for electricity to be even less competitive because of the concentration of the supply industry and the current inadequate market design and rules. Large consumers have consistently argued since the beginning of the NEM for the ability to directly contract with generators, in order to provide liquidity for investments, and for certainty and reliability of supply. Since the beginning of the NEM, large consumers have also argued for a capacity market, in order to reduce volatility in the wholesale market, reduce risk premiums, reduce gaining by generators spiking prices, and improving reliability.

One of the key concerns MEU has with the NEM (as distinct to the WEM) is that the market framework is predicated on a concept that sale of energy only will provide adequate incentive for long term investment in new generation to match the most economic generation mix. The concept of the energy-only market has been challenged by eminent overseas economists such as Jaskow⁴ and Tirole⁵ and observations in the NEM would seem to support their views that the energy only market does not provide either adequate signals or certainty of return on investment to encourage investment in new generation.

⁴Massachusetts Institute of Technology

⁵ University of Toulouse

The NEM has seen modest investment in new generation other than new generation directly attributed to government intervention such as SA's Pelican Point and Queensland's Milmerran and Kogan Creek power stations. The large proportion of all other generation has been low capital cost open cycle peaking plant, primarily to provide a physical hedge against high spot prices. In contrast we have seen significant investment in new generation in the WEM and this is a result of the implementation of a capacity style market.

The reasons for this lack of new generation investment in the NEM are not difficult to identify. Under an energy-only market structure, the only signal for new investment is the market price. A review of the market spot prices in each region, shows that a significant proportion of the average price for power is attributable to a very few very high prices.

For example in SA in 2008 the average volume weighted spot price for power in SA for 2008 was \$92.70/MWh indicating there is a need for new generation. Deeper analysis of the pricing shows that just 78 half hour price periods in the year (ie less than 0.5% of the time) were above \$300/MWh but these contributed some 57% of the average annual volume weighted spot price for 2008. That is in the absence of these 78 periods, the average price would be \$40/MWh, implying new generation is not required. Thus the market signalling in the NEM does not supply an accurate indicator of need. Thus needed investment might not be signalled from the outcomes of the NEM.

It is pointed out that the NEM is more transparent than the WEM, yet the trend for new markets is away from gross pool arrangements such as the NEM, towards net pool arrangements such as the WEM and in the UK – indeed, the newly developing STTM in gas is a net pool arrangement too. The reasoning behind such changes is that these provide better signals for new investment than does the NEM structure.

This then raises the question that does the greater transparency in the NEM offset the increased competition created by a structure such the WEM. It is competition that drives outcomes to the most efficient level rather than transparency. MEU members have seen first hand in the SA region of the NEM where there is clear transparency of the exercise of permitted market power! This market power would not occur if there was greater competition.

The NEM design does not allow (except when reserve trader is initiated) a demand side response to be called by NEMMCo when demand exceeds supply. In contrast the WEM does allow this and even pays for demand side participants to register to provide voluntary load shedding.

The lack of an ability to do this in the NEM was clearly demonstrated in Q1 of 2009 when load shedding was required in SA and Victoria. If end users of electricity (and gas) are prepared to offer their entitlements into the market to avert involuntary load shedding, then the market Rules should be modified to encourage such actions. It is clearly insufficient to expect end users to be monitoring the energy markets to identify when they might best provide a service to the market. It is important to recognise that end users of energy have only a small proportion of their costs related to the supply of energy. It is far better for the market operator to know when a circumstance is likely to arise where demand exceeds supply and market failure is likely, than to rely on end users to carry out this function.

Thus the markets need to have a facility where end users can make an offer to the market operator to voluntarily reduce demand at times when the MO calls for this support. If the end user offers this service then they should be compensated appropriately for doing so.

The gas markets to 2030 are likely to see greater competition as a result of the introduction of the new market based approaches such as the STTM currently under development. The MEU is fully supportive of the STTM development and sees that it will result in greater transparency than is currently the case, and therefore allow a clearer picture for the provision of gas than exists currently.

One of the key concerns MEU has is in relation to the drive to increase export of gas. The direct outcome of this trend is that gas prices will increase in Australia. The Discussion paper points out that domestic users of gas have benefitted from low gas prices on a world comparative basis. In part this is true, but there are a number of countries that compete with Australian production that also have lower gas prices.

This issue raises the concept of where do Australia's best interests lie in relation to its natural resources, and this issue is addressed in earlier sections. Suffice here to restate that the MEU considers that some of Australia's gas resources need to be reserved for use in Australia at prices reflecting the costs of production for electricity generation (to assist in reducing the carbon footprint) and to allow for value adding in the long term and so secure employment for future generations.

14. What are the benefits of common market arrangements across connected and non-connected systems to 2030? Consideration should be given to:

- Market design over the long term?
- Barriers to entry created by further integration and aggregation?
- Integrated gas and electricity investment and operation?

- Competition arrangements
- Risks to competition, transparency and the consequential price effects associated with the changing market structure?

Wherever there is a difference in treatment between competing energy sources, there is the potential for key players to utilise arbitrage opportunities to increase profitability. For this reason alone there needs to be a detailed assessment of whether allowing a divergence will result in a detriment.

In earlier sections the MEU has pointed out that the electricity and gas markets are becoming more concentrated and competition is reducing as a result. This integration is occurring across fuels and there is increasing dominance by a few market participants across the entire gas and electricity sectors.

Due to the retention of significant elements of the WA and NT energy markets by government there has been little cross ownership of energy assets between the NEM states and the two other regions. The expectation is that over time, unless action is taken, the dominant parties in the NEM states will acquire energy asset interests in the remaining regions

The question is posed that would there be risks to competition, transparency and price should the market structure change. There is no doubt that changing a market structure does bring attendant risks and costs. At the same time, retaining a structure that is not delivering the best outcomes will, in the longer term, cost more and increase risks to all concerned but perhaps the incumbents.

For example the UK electricity market was developed in the 1980s along the lines eventually used to structure the NEM. Since its inception the UK electricity market has undergone some significant changes, ranging from the introduction of price controls, through forced divestments, to a significant market structure change (NETA).

This clearly shows that there should be a preparedness to make change when change will deliver improved outcomes. To retain inefficient market structures purely because of a fear of change does not provide consumers with the outcomes implied by the objectives of the national gas and electricity Laws.

15. What is the role of smart networks to 2030?
- What is the right model for gas networks and gas pricing?

Growing energy consumption and the xRET will increase the demand on electricity networks and will require major investment in

transmission and distribution networks. These can cost as much as installing new generating capacity over the next 21 years.

Unlike in overseas countries, the Federal Government's massive intervention in energy markets has not been supported with funding for network improvements and there must be real concerns whether the renewable generation target can be realised.

As wind and solar energy is intermittent and cannot be scheduled with precision, and as the proportion of power drawn from these sources increases, we understand that the market operator would need to substantially reconfigure the despatch system and face other unique challenges.

In the United State, the electricity supply industry is developing dynamic demand control (DCC) systems, which allow the grid to "defer" less sensitive loads – particularly refrigeration, air-conditioning and heating) by switching them off for a few seconds or even minutes at a time until more standing reserves can be brought online.

DCC would be triggered either by fitting appliances with their own frequency – sensitive governors or installing some two-way communications system.

Similar systems have been trialled in SA where the local distribution company (ETSA) has been given funds through the regulatory framework, to assess the benefits of network controlled load cycling. The results show some promise.

If load as well as generation is scheduled via "smart networks" and other control techniques, proponents say that the amount of generating capacity held in reserve could be reduced.

However the MEU considers that introduction by the networks at the expense of consumers is not necessarily a sound financial proposition. This was recognised by the SA regulator when allowing ETSA funds to trail various load management techniques. The regulator retained close control over the expenditure by ETSA in the program.

What concerns MEU is that for proposals such as those made by ENA regarding "smart networks" there needs to be a competent and independent assessment of the costs and benefits such new techniques deliver.

For example (as mentioned in an earlier section) the introduction of smart meters has been touted by some as being a major part of managing demand in the electricity market. In economic theory such metering should deliver a benefit but in practice the outcomes are not

as clear or supportive. In fact it has been identified in various studies overseas that unless there is a clear significant financial benefit from taking action to modify demand, metering of itself, will not deliver the expected demand modification.

This can be seen in the Australian environment by the high take up of standard retail contracts (peak and off peak supply) which insulate end users from the impact of their time-of-usage of electricity. In this regard it must be noted that almost every power consumer using >160 MWh pa is connected by a “smart meter”. That these have not delivered the expected outcomes of demand management raises the concern that mandated roll out will not provide the result expected.

Shedding electricity load (the ultimate demand management tool) the shedding of load is socialized in that load shed is allocated to all electricity consumers in a geographic area. The market operator attempts share the loss of supply over as many geographic regions as possible to minimise the “pain” to individual consumers. In contrast in gas system load shedding is devoted to the same large gas users each time, in order to maintain the integrity of the wider network.

Thus in a smart gas network, alternative mechanisms are required so the those gas users more exposed to load shedding need some method of either sharing the pain or to receive compensation for always being first to lose their gas supply in an emergency. The alternative is to provide a market based solution.

The current development of the gas STTM has the potential to reintroduce some equity into always targeting the same gas users who fundamentally provide the ultimate security to the network. The risk faced is that the final structure implemented for the STTM might not provide the sufficient incentives for the achievement of the goal of encouraging voluntary load shedding to maintain integrity of the network.

16. What factors are likely to impact on the efficient operation of the electricity, gas and transport retail sectors? Consideration should be given to:
- Current arrangements and how to adapt to challenges to 2030
 - Those factors which might enhance or reduce competition
 - Impact of gas and electricity market arrangements which may limit the emergence of demand-side participation
 - The factors likely to shape the liquid transport fuel retail market in the period to 2030? What are they and will they enhance or reduce competition?
 - The role of end use.

Many of these issues are addressed in other sections and are not repeated here except by reference

The key factors that need to be addressed in relation to electricity are:

- Concentration of ownership of the supply industry elements
- Vertical reintegration of retail and generation
- Harmonisation of gas and electricity markets and arbitrage potential
- Energy-only market and its inability to encourage new generation investment or adequate demand side participation. For example in the WEM demand side participation is incentivised by the payment for capacity that is offered back into the market when demand exceeds supply
- There is an over-reliance on a high VoLL to signal new investments. At the same time a high VoLL results in excessive price spikes, encourages economic withdrawal of capacity, increases volatility to a level that is inefficient, and results in retailers having to apply large risk premiums.

In relation to gas, the key factors are:

- Concentration of ownership of the supply industry elements
- Too little competition at the point of gas production
- Harmonisation of gas and electricity markets and arbitrage potential
- The adequacy of investment of future gas pipeline infrastructure and capacity in a timely fashion with deliberate inclusion of spare capacity
- A need to develop a market structure that encourages voluntary demand side load shedding and reimburses those that provide this service.

19. How can the Australian Government respond to these challenges?

The MEU views on what is required is detailed in foregoing sections, but the following are provided as headline issues

- Strengthen competition policy and require divestment to ensure competitive market structure
- Modify the NEM structure to achieve greater investment and increased demand side involvement perhaps by introducing a capacity market and contracting for demand side responsiveness in load shedding
- Changes in the NEL and NER to achieve the changes suggested in the foregoing sections

- Modify the VENCORP gas market rules to allow a process similar to contingency gas as detailed in the gas STTM
- Reform of AEMC governance arrangements
- Direct government investment in nation-building infrastructure such as gas and electricity networks where the market mechanism fails to ensure capacity building

8. DISCUSSION PAPER: REALISING AUSTRALIA'S ENERGY RESOURCE POTENTIAL

LNG Exports and Domestic Gas Security

Already the supply of gas to the SW of WA is being curtailed, by two key factors – insufficient transport capacity on the pipeline between Dampier and Bunbury (DBNGP) and the preference to export gas from Dampier at world parity prices. The result of these two factors has resulted in end users in the SW converting to the lower carbon emission fuel of gas into the higher emission fuel, coal in order to provide for their thermal energy and process needs.

With expectations that demand for gas in the Eastern Gas Market will rise as more gas peaking electricity generating capacity is built in response to CPRS, the question of gas availability for industrial and residential users has emerged. At the same time there is a serious concern that LNG exports, based on the vast CSG reserves in Queensland and Northern NSW, may divert gas used for domestic use to export and/or substantially drive up gas prices.

The adequacy of gas pipeline infrastructure will be a key in making CSG available for domestic use, especially in the Eastern Gas Market. Experience in overseas countries, such as Indonesia and Malaysia, shows that inadequate gas pipeline infrastructure has hampered government policies to utilise gas resources for value-adding industrial activities, even despite policies and regulations relating to reservation of gas for domestic use.

The building of the Queensland Hunter Gas pipeline could provide the necessary infrastructure to link the large Queensland CSG reserves to the NSW market, where demand for gas is expected to rise strongly stemming from:

- the State's need for new gas base or intermediate load generating capacity by 2012/13,
- NSW's need to transition to a lower carbon economy (NSW's current primary energy use is predominantly coal-based) and
- Rising industrial demand (NSW is host to a number of major industrial concerns that use gas for energy and feedstock).

The presence of such a pipeline is needed to allow the proving up and development of the significant Gunnedah coal seam gas reserves, as a Queensland Hunter pipeline would transit these potential CSG fields.

In this regard it is important to appreciate the mere presence of a transiting pipeline over potential gas and CSG fields provides. Without the Wallumbilla to Gladstone pipeline built by the Queensland government the development of the Surat Basin CSG reserves would have been severely constrained. This is because to be able to prove the reliability of a new resource such as CSG, a

method of delivery is essential. At the same time unless there is certainty of delivery, investment in resources such as CSG is not viable. This is a “Catch 22” issue.

Historically governments have provided either investment or underwriting to overcome such situations where there is a strong downstream benefit that will accrue to the government should its involvement eventuate. There are many examples where government involvement was pivotal to achieve the best outcome for Australia – such as the WA government building of the DBNGP and the federal government building of MSP.

The importance of government involvement cannot be overstated. In addition to the commercial reasons described in earlier sections, it is in the national interest that Australian resources are developed, whether for the export potential or for allowing value-adding to downstream manufacturing. The societal benefits from developing resources are sufficiently significant as to warrant government involvement. This point is clearly made in section 5 of the Discussion Paper.

In return for Australia providing the market structure and the stability for exploitation of its reserves, the nation is entitled to retain some of the benefit of the resource for future generations, over and above royalty payments on exports. The MEU considers that reservation of some of the resource reserves for domestic use is an essential and equitable approach to developing the resource.

Large proportions of Australia’s energy resources are in the northern and relatively undeveloped part of the country. Allowing the unconstrained export of resources will not allow the development of the northern parts of the country, such as the Northern Territory or NW of WA. Reservation of some of the resources will provide an impetus to development in these more remote regions of the country.

It is a government role to ensure that the introduction of resource exploitation in the remote regions allows for the sensible development of these regions. In particular development in the Northern Territory is essential for strategic reasons, and the exploitation of the energy resources in the Bonaparte Basin provides a sound basis for this development.

Specific Questions Raised in Discussion Paper on Realising Australia’s Energy Resource Potential

20. What are the key factors likely to affect the international competitiveness of Australia’s energy resources sector?

The rapid growth in proving the CSG reserves in Queensland is, in part, due to the Queensland Governments policy in requiring a

proportion of electricity generation to be gas-based. In addition, good governance arrangements and a stable environment – compared to some other overseas countries – have encouraged the rapid and substantial involvement of major overseas concerns, such as Shell, Petronas, British Gas and Conoco Phillips into developing Australia's extensive energy resources.

In the case in Queensland, the facilitating role of the Queensland government has been a distinct advantage to the Queensland economy. In WA, the role of government in securing reservation of gas for domestic use has created an industrial climate where secondary processing using gas has been significantly increased.

In contrast, the failure to access gas by the NT government owned Power and Water Corporation from the Conoco Philips LNG facility in Darwin for use in power generation (or even to connect the C-P power generation into the Darwin grid) has created a significant detriment to the NT residents and local industries. Because of this failure Power and Water now accesses gas from a more remote facility (Blacktip) at considerably greater expense which it passes onto NT power users.

The secondary use of gas by domestic use has and can continue to significantly increase Australia's overall competitiveness. Whilst the resources development firms would want to maximise their profitability by seeking world parity pricing for developing Australia's natural wealth of resources, from a national point of view, the benefits of value adding through secondary processing can create even greater wealth for the nation.

There is no doubt that the development of gas resources in Australia has the potential to increase the nation's overall energy security, whether as a direct input for secondary processing, as a carbon emissions friendly fuel or as a replacement (either directly or indirectly) for some oil imports.

For Australia to depend on energy imports (such as oil) exposes the nation to the risks inherent in the world's geo-political environment, as many oil exporting countries are not as politically stable as Australia.

Equally for governments to leave the development of Australia's energy resources purely in the hands of energy exporters (many of whom are owned overseas) has the potential to leave the nation at the risk of losing controls of its own assets.

Domestic industry and residential gas users have now developed an energy supply structure based on readily won and low priced gas. To relinquish control and reservation of gas for domestic use could lead to

significant detriment to the nation as a whole, and to future generations.

21. What are the key exploration and development challenges facing Australia's emerging energy technologies – for example, solar, wind, biomass, geothermal, marine (wave and tidal)?

The main risk for ensuring the optimum outcome is achieved is that there is an attempt to “pick winners”. What is required is the creation of an environment that allows every technology the opportunity to be developed, tested, trialled and brought into the market.

Financial support and encouragement needs to be focussed on the class of technology (eg renewable energy or carbon emission reduction) rather than on specific technologies (eg solar or carbon capture and storage).

Australia does have large reserves of carbon based fuels and every attempt should be made to use these as this allows for continuing Australia's natural energy advantage. Thus the ability to use of coal for supplying useable energy should be a focus of research.

The issue with using coal is that it creates carbon emissions, and so the focus of the technology should be to reduce the resultant carbon emissions rather than deciding that one technology (eg carbon capture and storage) is to be funded to the detriment of alternatives.

The MEU considers that avoiding use of natural energy resources is not in the interests of consumers, and that technology should be directed both at encouraging commercially feasible renewable technologies and at the same time developing ways to capture carbon emissions from coal and gas combustion.

There has been considerable debate as to whether Australia should use its uranium reserves to generate nuclear power. It appears to be a dichotomy in attitude to accept that we can export uranium to be used for power generation in another country but to decide that nuclear power is not acceptable in this country.

If nuclear power is commercially viable in Australia it has the ability to reduce our carbon emissions significantly. On this basis nuclear power should be considered as an option and be allowed to be developed. What prevents its implementation is a government policy that it is not acceptable.

The introduction of CPRS and xRET are massive interventions aimed at achieving the specific goal of carbon emission reduction. These

policies are going to introduce significant costs into the economy. It seems iniquitous that another policy prevents the use of technology that could commercially achieve the fundamental reason for implementing these new policy interventions

22. What pre-competitive data is required to contribute to better energy resources exploration and development outcomes for renewable resources and non-renewable resources and carbon storage in the period to 2030?

The MEU considers that it is inappropriate to attempt to “pick winners” and that all technologies should be given equal opportunity to demonstrate their ability to achieve the targeted outcome.

Therefore any data provided should be applicable to all technologies and capable of being used by all emerging technologies.

23. What new investment challenges are likely for energy resources to 2030?

The MEU does not consider it appropriate to comment on this question.

24. What regulatory frameworks will be required for Australia's energy resources sector through to 2030?

The regulatory frameworks should reflect the needs of the time. They must conform to the basic principles of:

- Stimulating competition,
- Being neutral between competing technologies and assets,
- Minimising intervention
- Being equitable to investors, asset owners and consumers
- Achieving, on a holistic basis, the optimum outcome for the nation as a whole all the competing expectations. For example the aim of the NEM – to achieve the most economically efficient outcome – tends to run counter to the aim of CPRS in that the NEM design allows for less efficient generation to be dispatched (and therefore release more carbon per unit of fuel)

25. How can the Australian Government respond to these challenges?

The MEU observations are included in the foregoing sections.

9. DISCUSSION PAPER: INTERNATIONAL ENERGY

The White Paper should address the issue of whether unfettered export of Australian resources should be permitted or whether there is a need to ensure that its resources provide both an economic benefit in the short term but also allow the resources to provide for the needs of future generations.

The MEU considers that both can be achieved by a government policy that requires a proportion of Australia's resources to be reserved for domestic use where there is market failure.

Specific Questions Raised in Discussion Paper on International Energy

26. What are the key factors likely to affect global energy sector development to 2030? Consideration could be given to:

- Demand growth, including the growing role of developing economies in our region. such as China and India
- Supply growth, including access to oil reserves and the growing concentration of oil reserves among less stable nations and regions
- Uncertainty, including policy uncertainty associated with global responses to reduce carbon pollution -what will be the direct and indirect impacts?
- Regulatory barriers to trade and investment
- The role of financial markets, especially their ability to fund energy investments in the wake of the current global financial crisis and economic slowdown
- Geopolitical issues.

The implementation of CPRS and xRET will reduce the competitive position of Australia's exporting and import replacement industries. The negative effect of CPRS will be reduced if those countries exporting to Australia have similar cost pressures caused by equivalent carbon mitigation requirements. To enforce a unilateral decision on Australia's carbon emissions will lead to a loss of secondary processing in this country and a resultant loss of employment.

27. What opportunities and challenges are these developments likely to present for the Australian energy sector and economy? Consider this from:

- An energy export perspective
- An import perspective (including liquid fuels and technology).

The MEU does not consider it appropriate to comment on this question.

28. How should the Australian Government respond to these challenges? For example, what strategies and policies should the government adopt to maximise the effectiveness of its international energy engagement to:

- Promote transparent and open access to overseas export markets, especially in the Asia-Pacific region, to maximise the return from resources development for the Australian community
- Encourage adequate and efficient investment to help maintain our energy exporters' international competitiveness and grow our share of energy export markets
- Manage the risks and realise the opportunities associated with global responses to address climate change
- Promote the development and capital investment in clean fossil fuel and other low-emissions energy technologies, especially among our major energy trading partners in the Asia-Pacific region
- Ensure access to global oil markets on fair and reasonable terms
- Promote energy security by encouraging global investment in energy infrastructure
- Help manage geopolitical exposure and risk associated with greater integration with regional and global energy markets, including those for liquid fuels.

See the MEU comments above.

29. To what extent will the 2008 economic downturn affect Australia's levels of energy security? Will these have a temporary or structural impact?

The MEU does not consider it appropriate to comment on this question.

30. Which international institutions are effective, and where should Australia focus its efforts in order to maximise the benefits of its international energy engagement?

The MEU does not consider it appropriate to comment on this question.

31. How can the Australian Government respond to these challenges?

See earlier MEU comments.

10. DISCUSSION PAPER: MAXIMISING THE VALUE OF TECHNOLOGY IN THE ENERGY SECTOR

The MEU considers there three core approaches to reducing carbon emissions:

- Generate electricity using means that use less or emit no carbon emissions per unit of generation
- Develop an environment where less energy is needed for each energy use process (ie increasing the efficiency of energy use)
- Capture carbon emissions and secure these in a way that reduces the atmospheric carbon concentration.

As noted in sections above, the MEU does not consider it appropriate for governments to attempt to “pick winners”. Nor should government decide that one technology or approach will achieve a better outcome than another.

One of the largest emitters of atmospheric carbon is the generation of electricity and as such this area needs to receive significant attention, but even by concentrating on this single aspect there is a clear way forward as to what is the most cost effective method for reducing the amount of atmospheric carbon.

Because of this the government role should be to provide the correct environment for development of the most cost effective outcomes. One of the aspects that is currently causing concern, is that the electricity market structure has embedded within it a process which provides for competitive neutrality between different forms of power generation. It would be inappropriate for the government to decide that (say) a remote geothermal generator in one region should get preferential treatment over a wind farm in another region. Yet this is potentially an outcome that has been indicated as being appropriate in order to encourage renewable generation.

In a similar vein, it is inappropriate for government to be a supporter say of underground carbon storage over algal carbon capture and storage.

In regard to energy efficiency, it is important to recognise that energy efficiency is not just an issue related to usage but also it is an issue for generation and transmission. Ensuring that generation is the most thermal efficient is just as effective as improving the efficiency of usage. Reducing the power losses in transmission systems also improves the efficiency of energy use. Thus using generation which is more efficient (eg a combine cycle gas turbine rather than an open cycle gas turbine or conventional steam turbine) and having generation close to where it is used, provide large steps in improving the overall thermal efficiency. It is appropriate for government to require that market structures deliver electricity in the most thermally efficient manner.

What government needs to do is to advise the parameters of what are acceptable forms of renewable generation, efficiency enhancements and emission capture and allow the market to develop the most effective solutions to the overall requirement to reduce carbon emissions.

Specific Questions Raised in Discussion Paper on Maximising the value of technology in the energy sector

37 What does the Australian community want the energy technology mix to deliver in 2030? Consideration could be given to how the following might help to deliver these objectives:

- Conventional technologies
- New and emerging technologies
- Synergies between different technologies
- Energy storage systems
- Cost and timing of technology maturation
- Demand reduction and energy efficiency
- The extent to which there are there barriers in the innovation chain for the various energy technologies? ie research, development, demonstration and deployment

The MEU considers that these are basically technical issues which are best responded to by consultant engineers.

38 What key global energy technology initiatives strategically fit Australia's interests and what part will Australia need to play in these (if any) to ensure an appropriate rate of development of these technologies and access to emerging technologies?

Government should not attempt to “pick winners” and should just provide an environment which allows the best technologies to develop and prove their commerciality. At most government should provide enhanced tax incentives to those developments which will deliver the targeted outcomes of reducing the release of atmospheric carbon.

39. What is the right model to promote Austria's energy technology interests of international collaboration for each energy sub-sector and major global initiative? Are additional international and domestic collaborative arrangements needed to accelerate the development and deployment of technologies?

The MEU does not consider it appropriate to comment on this question.

40 Is there a need for investment of public funds in RD&D, including industrial scale deployment, and support for commercial deployment to generate learning by doing cost reductions?

The government should maintain competitive neutrality in relation to differing solutions to achieving carbon emission reductions. As noted above it is the environment (taxation, etc) in which the targeted development is allowed to prosper that governments should provide.

41 How should this support be allocated strategically along the innovation chain, i.e what the appropriate balance between the support for R&D, industrial scale demonstrations and initial/early commercial deployment.

See comments above.

42. How can the Australian Government respond to these challenges?

See comments above

11. DISCUSSION PAPER: OUR PEOPLE: DEMOGRAPHICS, WORKFORCE AND INDIGENOUS PARTICIPATION

A fundamental issue in relation to employment is that there is a need to ensure Australia has:

- Work sufficient for its current population, and
- Sufficient work will be provided for future generations.

To provide employment requires both work to be carried out and the skills needed for the tasks required. To attempt to address this aspect in relation to the energy sector in isolation of the wider economy is blinkered in the extreme.

As an initial observation, the amount of employment provided by the energy resource sector is quite modest and little more when employment in the energy delivery industry is included. By far the greatest employment opportunity is provided in the areas downstream of the production and delivery of energy. This is where the energy resource is value added.

If Australia's energy resources are exported, effectively these exports provide work in other countries. This does not mean Australia should not export some of its energy resources, but it needs to recognise that some of these resources need to be reserved for generating employment now and into the future.

This clearly provides a view that Australia should use its energy resources strategically to provide adequately for the national needs, and not be allowed an unfettered ability to export. While such an approach might provide a short term boost to the nation, it will constrain its development and ability to support its population in the future.

As noted earlier Australia should reserve sufficient of its energy resources for use at prices that allows viable long term secondary processing so that there is an ability to maintain adequate exports and import replacement at which prices internationally competitive.

These secondary value adding industrial users of energy are also the employers that provide skills training for use by the energy producers because they provide such a large proportion of employment. Attempting to provide the skills enhancement needs purely by the energy developers themselves is unlikely to solve their long term needs due to the relatively high turnover they currently experience, and this trend is unlikely to change.

Skills development needs employment stability while the skills are being acquired. This stability is provided by secondary, value adding industry which

provides an environment where the skills can be learned. Large industrial energy users (who are often located in regional and rural areas) provide the foundation for a stable local workforce which, in turn, allows development of skills which can be used by the energy resource developers when needed.

If there is a concentration on the energy resource sector and downstream value adding is not encouraged by policy, there is a large risk that over time the skills needed by the energy resource developers will not be provided.

Thus the long term viability of the energy resource sector in relation to its need for skilled labour, needs a commitment that some of the energy resource developed will be reserved for domestic use at prices that allow the long term viability of secondary value adding industry which will provide the ability to train the skilled labour need for the energy resource development.

Specific Questions Raised in Discussion Paper on Our People: Demographics, workforce and indigenous participation

32. How can the energy sector ensure that it has the human resource capacity needed to enable the transition to a lower-carbon economy?

As noted above, unless there is skilled labour available, any energy resource development will not occur. It is therefore imperative that we maintain sufficient commercially viable secondary industry to provide the pool of skilled labour required.

33. How can the energy sector and community best contribute to Australia's workforce development efforts?

See comments above

34. What will be the impact if requirements for new demands for skills and labour due to the energy transformation are not met?

The skills needed for energy resource development and implementation of CPRS and xRET range from low skills through to very high technical and conceptual skills. If these skills are not provided, then the aims of CPRS and xRET will not be achieved.

The implementation of CPRS and xRET has the ability to increase costs incurred by secondary industry and as noted these industries are the ones which provide the basis for development of skilled labour. It is

therefore critical that the policies implemented by government ensure the ongoing viability of secondary industry and that the process does not result in Australia being a pure resource development country like many other in the world and having to import labour to provide the skills needed to exploit its natural resources.

35 What should governments, industry and community be doing to support greater Indigenous participation in the energy sector along the entire supply chain?

The MEU does not consider it appropriate to comment on this question.

36. How can the Australian Government respond to these challenges?

See comments above