



## White Paper

August 2008

# Energy law and emissions trading

### Abstract

*Energy law in Australia is going through change to support the National Energy Market. The legal framework for electricity and gas has been enacted to establish a national market for electricity and gas overseen by a new Australian Energy Regulator. Laws are emerging to encourage renewable energy and for existing corporations to report on programs to implement renewable energy alternatives and measures to reduce carbon emissions.*

*Both sectors of the energy market are largely carbon based producers and suppliers of electricity and gas. They will be subject to the emerging emissions trading market that is planned to be implemented in 2010. In fact, energy will be significantly affected by significantly large costs until energy is predominantly produced by renewable energy sources. The legal drafting of the emissions trading scheme will be watched to ensure that the energy sector is not adversely affected as all governments in Australia are committed to energy security.*

*This paper gives background to the emerging energy market and the impact of the proposed emissions trading scheme.*

*Legal practitioners have business opportunities in the new National Energy Market. There are opportunities during the transitional period for a national energy market and the impact of the emissions trading market. In fact, legal practitioners need to be aware of the impact of the pending emissions trading market on current business dealings and arrangements to factor into agreements the potential impact on the businesses of clients. Practitioners need to know the legal implications of the emissions trading scheme. Opportunities in the national energy market apart from the transition of assets from government ownership to private ownership and related regulatory matters are apparent.*

*The Energy Law and Emissions Trading session of the NSW State Legal Conference will raise important issues for legal practitioners and identify areas where business opportunities might be found and identify areas for risk management.*

## Overview

Energy law is emerging as a national scheme law to provide the legal framework for the National Energy Market. The proposed emissions trading scheme will significantly impact on energy in Australia. The study of energy law is helped by knowledge of the history of the energy sector as traditionally government owned utilities into the current national scheme. Also, the affects of the proposed emissions trading scheme as information becomes available need to be studied.

## Energy sector

The energy sector is described in the former Commonwealth Government's White Paper, *Securing Australia's Energy Future* (2004), describes the energy sector as:

"Australia's energy sector spans the production and supply of stationary energy (such as electricity and gas), transport energy (mainly petroleum based fuels) and energy for export.

The sector encompasses the identification and development of primary energy sources such as coal, gas, oil and uranium, as well as renewables like hydroelectricity, wind, solar and biomass. It includes the conversion of the raw, primary energy sources into final energy sources such as electricity and refined petroleum fuels and their delivery and marketing to final consumers."

This is presently a reasonably comprehensive description of the energy sector.

## Background to energy in Australia

The energy sector referred to for purposes of this paper is essentially electricity with a growing gas sector. The electricity sector comprised government utilities that used brown and black coal to generate electricity. They were vertically integrated entities from generation through transmission and distribution to retail supply. They were government monopolies where price was determined by government and the market did not operate. The natural resources used in production were easily recoverable at low cost. The gas sector comprised separate and distinct region markets that had different characteristics where gas pipelines were not integrated. The gas sector consisted mainly of private enterprises, essentially monopolies, exploring for natural gas reserves, producing gas and constructing gas pipelines for the supply of gas.

Renewable energy is relatively small in economic terms compared with the production of electricity from coal and the supply of gas. Its contribution to energy is occurring with the supply of electricity by generators. The National Electricity Market Management Company says about alternative generation technologies:

"The range of technologies for the generation of electricity is expanding to accommodate alternative energy sources... The market is designed to allow intermittent generators to participate and share the same power system and the same consumers. The NEM's base-load generators are scheduled according to bids, and production from each generating unit is controlled by operators.

The integration of wind and other intermittent generators to the NEM must take account of NEMMCO's responsibility to maintain power system security, and be managed during each five-minute dispatch interval. The variation of output associated with wind generators may cause the flows on interconnectors to vary in a way that reduces the total supply capacity available to the market."

The changeability and unpredictability of alternative technology generators cannot be scheduled in the usual way as other existing power generators using carbon base fuels. Consequently, renewable energies are currently unable to generate base load power.

## National Electricity Market

The National Electricity Market (NEM) is a wholesale market to supply electricity in New South Wales, Queensland, Victoria, South Australia, Tasmania and the Australian Capital Territory<sup>1</sup>. It is described as<sup>2</sup>:

"The NEM delivers electricity to market customers on an interconnected power system that stretches more than 4000 km from Port Douglas in Queensland to Port Lincoln in South Australia, and includes a sea-bed cable between Victoria and Tasmania."

<sup>1</sup> The majority of electricity businesses in Australia were owned by State governments. In some situations the distribution and retail businesses were owned by local governments or municipalities. A very small number of relatively small electricity businesses that were located in remote areas were owned privately.

<sup>2</sup> National Electricity Market Management Company, *About the NEM: Overview*, [www.nemmco.com.au](http://www.nemmco.com.au).

The output from all generators (the supply or production of electricity) is aggregated into a pool and it is scheduled to meet demand for electricity (consumers). Western Australia and the Northern Territory are not directly part of the NEM. Western Australia and the Northern Territory will always be excluded from the NEM due to the lack of electrical interconnections as well as the vast distances between their load centres and the interconnected<sup>3</sup> electricity network in the southern and eastern States. Western Australia has a wholesale electricity market that only operates there.

The NEM began on 13 December 1998 operating under detailed rules, the [National Electricity Rules](#). The NEM has six regions as described by the National Energy Market Management Company<sup>4</sup>:

“The NEM comprises 5 regions based on the State boundaries (NSW and the ACT form a single region), with the Snowy Hydro Scheme being classified as a region in its own right (called Snowy) making up the 6th region.”

The physical characteristics of the NEM are a physical spot market with energy traded through a commodities-type pool and a spot price set every five minutes. The spot price is averaged over half hour periods based on the most expensive generator selected to operate. All electricity sold at the wholesale level is accounted for through the “gross pool” or “energy-only pool”. With the six geographical regions in the NEM there are constraints on interconnectors. This can cause marginal spot prices to separate between the six regions.

A separate over-the-counter short term forward trading market for electricity operates in addition to physical spot trading through the NEM. In the over-the-counter market purchasers lock in energy prices through financial futures contracts for hedging purposes called “contracts for differences”. Using a standard bilateral hedging contract the purchaser who is usually an electricity retailer agrees to purchase a specified physical quantity of energy from the spot market at a set price called the “strike price”. Where the actual price paid in the spot market by the purchaser is higher than the strike price the counterparty to the contract who tend to be electricity generators or financial institutions, pays the purchaser the difference in cost. In the alternative, the purchaser pays the counterparty the difference where the price paid is lower than the strike price.

The administrator and operator of the NEM for wholesale exchange of electricity is the National Electricity Market Management Company (NEMMCO)<sup>5</sup>. The broad functions of NEMMCO are to<sup>6</sup>:

- operate Australia’s National Electricity Market
- maintain the security of the interconnected power system
- coordinate planning for the interconnected power system.

NEMMCO’s website says:

“Within the NEM, NEMMCO is responsible for the registration of participants, the scheduling and dispatch of generators, the management of transmission constraints, and the financial settlement of trades in the market. In 2006-07, approximately 195,000 gigawatts of electricity – valued at more than \$11.6 billion – was traded in the NEM.”

NEMMCO is owned by the governments of the participating States and Territory. The administration of NEM includes billing and collection of funds for all trades in the NEM. NEMMCO settles payments due to market participants. These are mainly generators of electricity. Payments are made using funds received from other market participants such as retailers.

The spot price has a maximum limit of \$10,000 per MWh and it is volatile. The volatility is managed by retailers who may use financial contracts, usually swaps and caps. These are derivative financial products available to retailers outside the activities of NEMCO.

The role of NEMMCO has changed as shown in its booklet, *An Introduction to Australia’s National Energy Market*:

“Since the commencement of the NEM, electricity consumers have progressively gained the right to choose their own supplier. This has meant that NEMMCO’s responsibilities have extended from managing the

---

<sup>3</sup> Interconnectors are high-voltage transmission lines used to transport electricity between adjacent regions of the National Electricity Market.

<sup>4</sup> National Electricity Market Management Company, *Researchers: Researching the NEM*, [www.nemmco.com.au](http://www.nemmco.com.au).

<sup>5</sup> More information on the National Electricity Market Management Company can be viewed [www.nemmco.com.au](http://www.nemmco.com.au).

<sup>6</sup> National Electricity Market Management Company, *About the NEM: Overview*, [www.nemmco.com.au](http://www.nemmco.com.au).

wholesale market to providing the systems and processes to support competition and choice for all end users in the retail electricity market. Delivering full retail competition (FRC), or contestability, has required new information technology systems to process transfers of customers between registered retailers in the NEM. The systems that facilitate this function contain one of the largest metering databases in the world. They accept data from a variety of electricity meter types and have the capacity to process information from up to 10 million meters.”

NEMMCO will be replaced next year (1 July 2009) by the Australian Energy Market Operator (AEMO). AEMO will have functions including those currently performed by:

- Gas Market Company (GMC) in New South Wales
- National Electricity Market Management Company (NEMMCO)
- Victorian Energy Networks Corporation (VENCorp) including as Bulletin Board Operator
- Gas Retail Market Operator in Queensland (GRMO)
- Retail Energy Market Company (REMCO) in South Australia.

AEMO’s chair and board members have been selected<sup>7</sup>. The constitution of AEMO and members’ agreement are being finalised<sup>8</sup>.

### National market for gas

The national market for natural gas is developing. A description of the source of natural gas in Australia is given in A Proposed Design for the Natural Gas Short Term Trading Market for Australia prepared for the Gas Market Leaders Group by ICF International<sup>9</sup>:

“The principal sources of natural gas in eastern Australia are the offshore basins of Bass, Otway, and Gippsland, off the southern coast; the Cooper/Eromanga basin in South Australia and southwest Queensland; and the Bowen/Surat/Clarence-Moreton basins straddling Queensland and New South Wales. Five producers (Exxon, BHP Billiton, Santos, Origin, Beach) account for about 90 percent of the production and four (all of the above except Beach) own about 78% of the proven and probable reserves.”

The Final Report<sup>10</sup> (September 2007) of the Ministerial Council on Mineral and Petroleum Resources / Ministerial Council on Energy Joint Working Group on Natural Gas Supply describes the gas supply potential:

“Total Australian gas resources (proved, probable and contingent), including the Timor Sea, were approximately 173,000 PJ as of August 2007, of which approximately 35,000 PJ are now contracted. Maximum future committed production rates, including North West Shelf (NWS) Train 5, are approximately 2,500 PJ/year, at which rate the resources have a life of 66 years (excluding any future discoveries). With the recent development of Coal Seam Methane (CSM) as an additional source of gas, and the likelihood that further exploration will lead to additional discoveries and verification of reserves, Australia appears to have an abundant supply of gas for the foreseeable future. However, it should be noted that there are barriers to easily accessing and commercialising a significant proportion of such reserves.”

The Final Report also notes that “there is no national gas market. Rather there are a number of distinct regional markets with very different characteristics.” It also notes that the largely decentralised gas resources and the “not wholly integrated” transmission pipeline network across all jurisdictions. Consequently, gas is not deliverable to consumers through a single national network. The Final Report describes the Australian gas market as comprising three distinct regional markets:

---

<sup>7</sup> Ministerial Council on Energy, *Communiqué*, Melbourne July 2008. A statement of the proposed approach for AEMO’s legal framework is available at:

[www.mce.gov.au/assets/documents/mceinternet/Australian\\_Energy\\_Market\\_Operator\\_Establishment20080807101151.pdf](http://www.mce.gov.au/assets/documents/mceinternet/Australian_Energy_Market_Operator_Establishment20080807101151.pdf).

The Ministerial Council on Energy also released the AEMO Implementation Steering Committee’s Statement of Proposed Approach for AEMO’s legislative establishment which says:

“At its meeting on 13 April 2007, the Council of Australian Governments (COAG) agreed to establish a single, industry-funded national energy market operator, to be called the Australian Energy Market Operator (AEMO), for both electricity and gas to strengthen the national character of energy market governance.”

<sup>8</sup> Ministerial Council on Energy, *Communiqué*, Melbourne July 2008.

<sup>9</sup> December 24, 2007. The report can be viewed at:

[http://www.mce.gov.au/assets/documents/mceinternet/Proposed\\_Design\\_for\\_The\\_Natural\\_Gas\\_Market20080121144120.pdf](http://www.mce.gov.au/assets/documents/mceinternet/Proposed_Design_for_The_Natural_Gas_Market20080121144120.pdf).

<sup>10</sup> The Final Report can be viewed at:

[www.mce.gov.au/assets/documents/mceinternet/Final\\_Report\\_of\\_the\\_Joint\\_Working\\_Group\\_on\\_Natural\\_Gas\\_Supply%28September\\_2007\\_20071008162055.pdf](http://www.mce.gov.au/assets/documents/mceinternet/Final_Report_of_the_Joint_Working_Group_on_Natural_Gas_Supply%28September_2007_20071008162055.pdf).

1. **Eastern market** comprising Queensland, New South Wales, the Australian Capital Territory, Victoria, South Australia and Tasmania
2. **Western market** comprising Western Australia
3. **Northern market** comprising the Northern Territory.

The Final Report notes that the “Western and Northern markets also support LNG facilities, thus these regions supply foreign gas markets.”

The wholesale market for natural gas is described in the ICF International report as:

“Wholesale gas supply is dominated by long-term, highly customized bilateral gas supply contracts between producers and retailers, large industrial end users, and power generators.”

The contracts are confidential. They are not subject to public scrutiny. The key governing characteristics of contracts are:

- terms of the supply including the number of years
- firmness of the supply such as “firm” or “reasonable endeavours”
- take-or-pay obligations
- annual and daily contract quantities
- price.

The price terms usually comprise set prices with limited periodic price reopeners. The period can be five years. Alternatively, price terms may have escalation factors reflecting values and costs in the market as viewed by the parties. The ICF International report notes:

“The key factor here is that prices are not indexed to any current market factors that would reflect transitory conditions in the market that may render gas more or less dear at any given point in time.”

The ICF International report also describes the role of retailers in the national gas market:

“Retailers sell gas to the smaller end users who are connected to the pipeline grid through the distribution companies that operate the low pressure reticulated pipeline systems. The major high pressure transportation pipelines connect the producing regions to the distribution companies and to some of the large end users....Retailers and large end users hold capacity on these pipelines to transport their gas supplies. Pipeline service contracts are long term, usually firm, and have fixed point-to-point transport paths. Even as-available pipeline transport contracts have specific point-to-point transport paths.”

The policy for reform of the natural gas market is to implement a short term trading market (STTM) as describe by the ICF International report:

“Reform of the Australian gas markets began in the 1990s. The goal of the market reform envisioned for the STTM is to promote a transparent and competitive gas market wherein gas prices are set by the interaction of supply and demand. The objective of this reform is to provide appropriate signals to the market participants for making appropriate investments in production, transmission pipe, distribution, and end use and to promote the efficient management and use of system resources.”

The ICF International report succinctly describes the natural gas market as “highly concentrated”. The report notes that “a single retailer accounts for 90 percent or more of the local sales. These retailers are also major shippers on the pipeline systems.” The report also says:

“The pipeline markets are also highly concentrated, where only two lines serve each market, and regulatory oversight beyond traditional antitrust regulation is limited.”

The concentration of the natural gas market and the pipeline market albeit in private ownership presents trade practices problems as well as conduct issues. Regulation of these issues within a national market for energy needs to carefully monitor activities to prevent improper conduct in the concentrated markets. The right approach to restrain improper conduct is to ensure that competitors are able to enter the markets for natural gas and for pipelines.

The way forward for gas is seen to be in replacing coal in the generation of energy and for domestic firm and household use. In addition, the development of export markets is seen as a crucial aspect of developing a

national market for gas<sup>11</sup>. However, the gas market in Australia is not yet sufficiently developed to achieve these goals. The Final Report of the Ministerial Council on Mineral and Petroleum Resources / Ministerial Council on Energy Joint Working Group on Natural Gas Supply says:

“The functioning of markets for natural gas, at both the international and domestic levels, remains somewhat immature. This is a result of a number of factors including:

- the remoteness of many major gas resources and the significant costs involved in developing them;
- the geographical separation of major sources of gas supply from gas markets and the associated costs of transporting gas over large distances; and
- the relative immaturity and illiquidity of gas distribution and trading systems, particularly in Australia. The functioning of markets for natural gas, at both the international and domestic levels, remains somewhat immature. “

These observations point to significant economic costs in the market for gas. The processes and timing for exploiting gas resources, constructing gas pipelines and making retail supply more efficient contribute to costs. Compared with electricity supply, gas supply needs significant development to be competitive in the national energy market. However, the price of carbon will alter initially the benefits and costs ratio of gas to coal as a resource for electricity generation. Despite rises in electricity prices to consumers the relative costs in the supply of gas as an alternative fuel for households does not make gas competitive. Households will continue to use electricity subject to improved efficiencies being implemented to reduce electricity use.

### Energy sector reform

The brief overview of the electricity and gas sectors indicates that reform is progressing. These sectors are evolving from jurisdiction based approach to a national approach to the supply of energy within a regulatory framework that is nationally focused. A useful economic analysis of the progress of change to a national framework for energy can be seen in *Energy Reform: The way forward for Australia* (A report to the Council of Australian Governments by the Energy Reform Implementation Group) January 2007<sup>12</sup>. Reform of the electricity and gas sectors has been guided by the Council of Australian Governments<sup>13</sup> as advised by its Ministerial Council on Energy<sup>14</sup>.

### Describing the reform

A description of the reform is given by Mr Willett<sup>15</sup> who is a member of AER as well as a commissioner of the Australian Competition and Consumer Commission:

“There has been substantial transformation across the Australian energy sector since the mid 1990s. The sector has been significantly restructured. Where a single government-owned business used to generate, transport and sell electricity, there are now competing generators and retailers, with specialist businesses running the transmission and distribution networks. The gas industry has undergone similar structural changes. Whilst there is a degree of government ownership in the electricity sector, competitive energy markets with a more national focus have developed, most notably with the establishment of the National Electricity Market (NEM). Access regulation has been introduced for the transmission and distribution sectors along with a range of regulatory institutions.”

Mr Willett also describes the economic benefits so far of the energy reform process:

“It is widely recognised that as a result of these changes that the electricity and gas industries perform far better now that they did previously. There has been significant investment in the energy sector, combined with improved productivity and stable reliability. Major new energy resources have been developed and new energy technologies employed.”

In an earlier speech<sup>16</sup> Mr Willett gave a value description of the reforms:

---

<sup>11</sup> Ministerial Council on Mineral and Petroleum Resources / Ministerial Council on Energy Joint Working Group on Natural Gas Supply, *Final Report* September 2007 at p 30.

<sup>12</sup> The report can be viewed at <http://www.erig.gov.au>.

<sup>13</sup> Council of Australian Governments website is <http://www.coag.gov.au>.

<sup>14</sup> The website for the Ministerial Council on Energy is <http://www.mce.gov.au>.

<sup>15</sup> Willet E, “Country Information Presentation – The Australian Experience”, APP Energy Regulatory and Market Development Forum APP Energy Regulatory and Market Development Forum 27 June 2008, viewed at: <http://www.aer.gov.au/content/item.phtml?itemId=720669&nodeId=b1771e815993ec01112487fc833ada5&fn=Australian%20Energy%20Reform.pdf>.

Mr Willett’s paper gives a useful brief of the reform of the energy sector and expectations of new developments that will impact the sector.

“The liberalisation of energy markets has been led to substantial new investment. Annual investment is running at around \$700 million in electricity transmission infrastructure and three billion dollars in the local distribution networks that move electricity to customers. Overall, real network investment will rise by around 40 per cent in the five years to 2007–08, driven largely by transmission expansions and upgrades. Over the long term the market has delivered stable reliability, improved productivity and — until very recently — significantly lower energy costs.

I say ‘until recently’ because recent events have caused the AER to express concerns about the exercise of market power in electricity generation.”

The liberalisation of energy markets has been complemented with reform of the regulatory framework. Effective regulatory supervision is needed to ensure the former utilities move towards the market system for the generation and supply of energy. The government owned electricity utilities and the concentrated privately owned gas suppliers need to operate their businesses within a competitive national market. This is not easy as shown in Mr Willett’s speech. The issue identified by Mr Willett concerning market power is also a matter of conduct. It is possible to use market power without misusing it. However, overseeing conduct by the regulator is also important.

The Ministerial Council on Energy has issued a Statement of Policy Principles<sup>17</sup> under the Australian Energy Market Agreement) “to establish a framework for further reforms to strengthen the quality, timeliness and national character of governance of the energy markets to improve the climate of investment”. The principles are:

1. To promote competitive retail markets and maximise the benefits of a large scale accelerated roll-out of smart meters to residential and other small customers, there should be a national minimum functionality supported by a national regulatory framework for smart meters.
2. To maximise the net benefits of a mandated roll-out of smart meters in a timely manner and capture the operational benefits for distribution network service providers, distribution network service providers will be legislatively obliged to roll out smart meters to some or all residential and other small customers in those jurisdictions where a mandated roll-out will take place.
3. A distribution network service provider who is obliged to roll out smart meters should have exclusivity over meter provision and responsibility for related metering data provision in respect of the customers covered by the mandate during the period in which the distribution network service provider must complete that mandate.
4. The regulatory framework for distribution network tariffs, consistent with the revenue and pricing principles, should ensure that distribution network service providers:
  - a. are able to recover in a transparent manner the costs directly resulting from meeting the mandated service standards for smart meters and the costs of their existing investment which has been stranded by any mandatory roll out; and
  - b. promptly pass on cost efficiencies resulting from the installation of smart meters to tariff classes affected by the costs of a smart meter roll-out.

These policy principles give the focus for ongoing reform of energy. They cover important issues of investment and consumer focus for the delivery of energy.

### **Regulatory framework reform**

A major reform of the energy sector is the regulatory framework. The jurisdiction based regulators are being replaced by national regulators. The Australian Energy Regulator<sup>18</sup> and the Australian Energy Market Commission<sup>19</sup> are national based organisations to oversee the energy market and market participants. At this

---

<sup>16</sup> Willett E, “Energy Reform & the Australian Energy Regulator”, Energy 21C Conference 13 November 2007, Sydney viewed at:

<http://www.aer.gov.au/content/item.phtml?itemId=716002&nodeId=ea114d9011d0eb8c2163aeb90bb4819e&fn=Energy%20Reform%20and%20the%20Australian%20Energy%20Regulator.pdf>.

<sup>17</sup> Ministerial Council on Energy, *Statement of Policy Principles*, at [http://www.mce.gov.au/assets/documents/mceinternet/MCE\\_Statement\\_of\\_Policy\\_Principles20080613154127.pdf](http://www.mce.gov.au/assets/documents/mceinternet/MCE_Statement_of_Policy_Principles20080613154127.pdf).

<sup>18</sup> Information on the Australian Energy Regulator can be viewed at:

<http://www.aer.gov.au/content/index.phtml/tag/aerAboutUs>.

<sup>19</sup> The Australian Energy Market Commission’s website is <http://www.aemc.gov.au>.

stage these regulators focus on the eastern States and the Australian Capital Territory. Western Australia and the Northern Territory have separate regulators.

The role of the Australian Energy Regulator (AER) is described by Mr Willett<sup>20</sup>:

“The AER is assuming responsibility for the economic regulation of the national energy sector on a staged basis. We have been the regulator of the wholesale market and transmission networks in the NEM since July 2005. The transfer of regulation of electricity distribution networks, gas pipelines and some retail functions from the states to the AER is scheduled to be completed by January 2010.”

The Australian Energy Market Commission (AEMC) is responsible for rule making, market development and policy advice for the electricity and gas sectors. This includes the bulletin board for the gas sector. AEMC has responsibility to review the effective performance of competition in the gas and electricity retail markets. However, AEMC does not currently include energy retail regulation. AEC has been conducting retail competition reviews starting in Victoria and South Australia. Their purpose is “to provide advice to each jurisdiction on the appropriateness of retaining, removing or reintroducing retail energy price controls in the electricity and gas retail markets in that jurisdiction.”<sup>21</sup>

The regulatory reform is underpinned by new legislation in the electricity and gas sectors. The legislation provides a framework for the national electricity and gas markets with similar approaches under a national scheme law.

## Regulation of the energy sector

The regulation of the energy sector is still divided between electricity and gas. There is no similar regulatory framework for renewable energy sources. The regulatory framework so far comprises:

- National Electricity (South Australia) Act 1996<sup>22</sup>
- National Electricity (South Australia) Regulations<sup>23</sup>
- National Gas (South Australia) Act 2008<sup>24</sup>
- National Gas (South Australia) Regulations<sup>25</sup> .

Also, there are rules that are very detailed:

- National Electricity Rules<sup>26</sup>
- National Gas Rules 2008<sup>27</sup> .

The application of these laws is made by the Commonwealth, the States and Territories. The New South Wales application legislation is *National Electricity (New South Wales) Act 1997*<sup>28</sup>. The Commonwealth legislation is *Australian Energy Market Act 2004*<sup>29</sup> .

The legislation for the Australian Energy Regulator is:

<sup>20</sup> Willet E, “Country Information Presentation – The Australian Experience”, APP Energy Regulatory and Market Development Forum APP Energy Regulatory and Market Development Forum 27 June 2008, viewed at: <http://www.aer.gov.au/content/item.phtml?itemId=720669&nodeId=b1771e815993ec01112487fc833ada5&fn=Australian%20Energy%20Reform.pdf>.

<sup>21</sup> Australian Energy Market Commission website at <http://www.aemc.gov.au/electricity.php?r=20070315.165531>.

<sup>22</sup> View at:

[http://www.legislation.sa.gov.au/LZ/C/A/NATIONAL%20ELECTRICITY%20\(SOUTH%20AUSTRALIA\)%20ACT%201996.aspx](http://www.legislation.sa.gov.au/LZ/C/A/NATIONAL%20ELECTRICITY%20(SOUTH%20AUSTRALIA)%20ACT%201996.aspx).

<sup>23</sup> View at:

[http://www.legislation.sa.gov.au/LZ/C/R/NATIONAL%20ELECTRICITY%20\(SOUTH%20AUSTRALIA\)%20REGULATIONS.aspx](http://www.legislation.sa.gov.au/LZ/C/R/NATIONAL%20ELECTRICITY%20(SOUTH%20AUSTRALIA)%20REGULATIONS.aspx)

<sup>24</sup> View at: [http://www.legislation.sa.gov.au/LZ/C/A/NATIONAL%20GAS%20\(SOUTH%20AUSTRALIA\)%20ACT%202008.aspx](http://www.legislation.sa.gov.au/LZ/C/A/NATIONAL%20GAS%20(SOUTH%20AUSTRALIA)%20ACT%202008.aspx).

<sup>25</sup> View at: [http://www.legislation.sa.gov.au/LZ/C/R/NATIONAL%20GAS%20\(SOUTH%20AUSTRALIA\)%20REGULATIONS.aspx](http://www.legislation.sa.gov.au/LZ/C/R/NATIONAL%20GAS%20(SOUTH%20AUSTRALIA)%20REGULATIONS.aspx).

<sup>26</sup> View at: <http://www.aemc.gov.au/pdfs/rules/rulesv21.pdf>.

<sup>27</sup> View at: <http://www.aemc.gov.au/pdfs/rules/gasrulesv01.pdf>.

<sup>28</sup> View at:

[http://www.legislation.nsw.gov.au/viewtop/inforce/act+20+1997+FIRST+0+N/?autoquery=\(FragmentSGML%3D\(\(%22national%20electricity%22\)\)\)%20AND%20\(\(RecordType%3D%22ACTFRAG%22%20and%20Repealed%3D%22N%22\)%20OR%20\(RecordType%3D%22SRFRAG%22%20and%20Repealed%3D%22N%22\)\)&dq=Document%20Types%3D%22Acts,%20Regs%22,%20Exact%20Phrase%3D%22national%20electricity%22,%20Search%20In%3D%22Text%22&fullquery=\(\(\(\(%22national%20electricity%22\)\)\)](http://www.legislation.nsw.gov.au/viewtop/inforce/act+20+1997+FIRST+0+N/?autoquery=(FragmentSGML%3D((%22national%20electricity%22)))%20AND%20((RecordType%3D%22ACTFRAG%22%20and%20Repealed%3D%22N%22)%20OR%20(RecordType%3D%22SRFRAG%22%20and%20Repealed%3D%22N%22))&dq=Document%20Types%3D%22Acts,%20Regs%22,%20Exact%20Phrase%3D%22national%20electricity%22,%20Search%20In%3D%22Text%22&fullquery=((((%22national%20electricity%22))))

<sup>29</sup> View at:

[http://www.comlaw.gov.au/ComLaw/Legislation/ActCompilation1.nsf/0/23531AFCBEAC447ACA2572BF0020CC79/\\$file/AusEnergyMarketAct2004.pdf](http://www.comlaw.gov.au/ComLaw/Legislation/ActCompilation1.nsf/0/23531AFCBEAC447ACA2572BF0020CC79/$file/AusEnergyMarketAct2004.pdf).

- *Trade Practices Act 1974 s 44AE.*

The legislation for the Australian Energy Market Commission is:

- Australian Energy Market Commission Establishment Act 2004 (South Australia)<sup>30</sup>
- Australian Energy Market Commission Establishment Regulations 2005 (South Australia)<sup>31</sup>

The legislation for electricity and gas confer powers on the Australian Energy Regulator and the Australian Energy Market Commission.

The complete legislative framework for energy includes the Western Australian law and the Northern Territory law:

- Electricity Industry Act 2004 (WA)<sup>32</sup>
- Gas Pipelines Access (Western Australia) Act 1998<sup>33</sup>
- Electricity Reform Act (NT)<sup>34</sup>
- Gas Pipelines Access Northern Territory Act 1998<sup>35</sup>.

These are the basic laws. Other legislation should be viewed to look at issues impacting the regulation of the energy markets in Western Australia and the Northern Territory. These jurisdictions have regulatory organisations.

### **National Energy Market regulatory framework**

The discussion in the paper addresses the national energy market legislative framework. That is, the national scheme for the eastern States and the Australian Capital Territory.

The legislative framework for the National Energy Market is the National Electricity Law and the National Gas Law. These laws are contained in the relevant national scheme laws for electricity and gas.

### **National Electricity Law**

Part 2 of the *National Electricity (South Australia) Act 1996* provides for the National Electricity (South Australia) Law, the National Electricity (South Australia) Regulations and the National Electricity Rules. The National Electricity Law is a Schedule to the Act. Similar provisions apply for other States except Western Australia, and the Australian Capital Territory.

The regulatory provisions under the National Electricity Law for the sector are shown in Annexure 1.

### **National Gas Law**

Part 2 of the *National Gas (South Australia) Act 2008* provides for the National Gas (South Australia) Law, the National Gas (South Australia) Regulations and the National Gas Rules. The National Gas Law is a Schedule to the Act. Similar provisions apply for other States except Western Australia, and the Australian Capital Territory.

The regulatory provisions under the National Gas Law for the sector are shown in Annexure 2.

---

<sup>30</sup> View at:

<http://www.legislation.sa.gov.au/LZ/C/A/AUSTRALIAN%20ENERGY%20MARKET%20COMMISSION%20ESTABLISHMENT%20ACT%202004.aspx>.

<sup>31</sup> View at:

<http://www.legislation.sa.gov.au/LZ/C/R/AUSTRALIAN%20ENERGY%20MARKET%20COMMISSION%20ESTABLISHMENT%20REGULATIONS%202005.aspx>.

<sup>32</sup> View at: [http://www.slp.wa.gov.au/legislation/statutes.nsf/main\\_mrtitle\\_285\\_homepage.html](http://www.slp.wa.gov.au/legislation/statutes.nsf/main_mrtitle_285_homepage.html).

<sup>33</sup> View at: [http://www.slp.wa.gov.au/legislation/statutes.nsf/main\\_mrtitle\\_377\\_homepage.html](http://www.slp.wa.gov.au/legislation/statutes.nsf/main_mrtitle_377_homepage.html).

<sup>34</sup> View at:

<http://notes.nt.gov.au/dcm/legislat/legislat.nsf/d989974724db65b1482561cf0017cbd2/519227dccc61e41a692570eb001db164?OpenDocument>.

<sup>35</sup> View at:

<http://notes.nt.gov.au/dcm/legislat/legislat.nsf/d989974724db65b1482561cf0017cbd2/403335007a3b855a6925667300810427?OpenDocument>.

## ***Common elements of the National Electricity Law and the National Gas Law***

The first matter to note is the difference between the subject matter being regulated. The regulatory framework for electricity differs from the regulatory framework for gas. However, the framework contains similar provisions to make the task of regulatory oversight more consistent.

### **NATIONAL ELECTRICITY LAW**

#### **Part 3—Functions and powers of the Australian Energy Regulator**

Division 1—General

Division 2—Search warrants

Division 3—General information gathering powers

Division 4—Regulatory information notices and general regulatory information orders

Division 5—Network service provider performance reports

Division 6—Disclosure of confidential information held by AER

Division 7—Miscellaneous matters

#### **Part 4—Functions and powers of the Australian Energy Market Commission**

Division 1—General

Division 2—Rule making functions and powers of the AEMC

Division 3—Committees, panels and working groups of the AEMC

Division 4—MCE directed reviews

Division 5—Other reviews

Division 6—Miscellaneous

#### **Part 5A—Functions and powers of Minister of this participating jurisdiction**

#### **Part 5B—Functions and powers of Tribunal**

#### **Part 6—Proceedings under the National Electricity Law**

Division 1—General

Division 2—Proceedings by the AER in respect of this Law, the Regulations and the Rules

Division 2A—Proceedings before, and awards etc of, Dispute resolution panels

Division 3—Judicial review of decisions and determinations under this Law, the

Division 3A—Merits review and other non-judicial review

Division 3B—Enforcement of access determinations

Division 4—Other civil proceedings

Division 5—Infringement notices

Division 6—Miscellaneous

### **NATIONAL GAS LAW**

#### **Chapter 2—Functions and powers of gas market regulatory entities**

##### **Part 1—Functions and powers of the Australian Energy Regulator**

Division 1—General

Division 2—Search warrants

Division 3—General information gathering powers

Division 4—Regulatory information notices and general regulatory information orders

Division 5—Service provider performance reports

Division 6—Miscellaneous matters

#### **Chapter 2—Functions and powers of gas market regulatory entities**

##### **Part 2—Functions and powers of the Australian Energy Market Commission**

Division 1—General

Division 2—Rule making functions and powers of the AEMC

Division 3—Committees, panels and working groups of the AEMC

Division 4—MCE directed reviews

Division 5—Other reviews

Division 6—Miscellaneous matters

#### **Chapter 2—Functions and powers of gas market regulatory entities**

##### **Part 3—Functions and powers of Ministers of participating jurisdictions**

#### **Chapter 2—Functions and powers of gas market regulatory entities**

##### **Part 5—Functions and powers of Tribunal**

#### **Chapter 8—Proceedings under the National Gas Law**

##### **Part 1—Proceedings generally**

##### **Part 2—Proceedings for breaches of this Law, Regulations or the Rules**

##### **Part 3—Matters relating to breaches of this Law, the Regulations or the Rules**

##### **Part 4—Judicial review of decisions under this Law, the Regulations and the Rules**

##### **Part 5—Merits review and other non-judicial review**

Division 1—Interpretation

Division 2—Merits review for reviewable regulatory decisions

Division 3—Tribunal review of AER information disclosure decisions under section 329

Division 4—General

##### **Part 6—Enforcement of access determinations**

##### **Part 7—Infringement notices**

##### **Part 8—Further provision for corporate liability for breaches of this Law etc**

**Part 7—The making of the National Electricity Rules**

Division 1—General  
 Division 2—Minister initiated National Electricity Rules  
 Division 3—Procedure for the making of a Rule by the AEMC  
 Division 4—Miscellaneous provisions relating to Rule making by the AEMC

**Part 10—Access Disputes**

Division 1—Interpretation and application  
 Division 2—Notification of access dispute  
 Division 3—Access determinations  
 Division 4—Variation of access determinations  
 Division 5—Compliance with access determinations  
 Division 6—Access dispute hearing procedure  
 Division 7—Joint access dispute hearings  
 Division 8—Miscellaneous matters

**Chapter 9—The making of the National Gas Rules****Part 1—General**

Division 1—Interpretation  
 Division 2—Rule making tests

**Part 2—Initial National Gas Rules****Part 3—Procedure for the making of a Rule by the AEMC****Part 4—Miscellaneous provisions relating to rule making by the AEMC****Chapter 6—Access disputes****Part 1—Interpretation and application****Part 2—Notification of access dispute****Part 3—Access determinations****Part 4—Variation of access determinations****Part 5—Compliance with access determinations****Part 6—Access dispute hearing procedure****Part 7—Joint access dispute hearings****Part 8—Miscellaneous matters**

The National Electricity Law had a different beginning and path from the National Gas Law. The National Gas Law followed the making of the National Electricity Law. The law reflects the difference in the makeup of both sectors and the accompanying Rules for each Law show the complexity of both sectors. Despite these differences the regulatory supervision tends to be consistent. The regulatory supervision and developing regulatory framework are given a reasonably similar treatment in both Laws. This can be seen from the above table. The making of both Laws was premised on a consistent regulatory framework to ensure consistency in the sectors and to encourage private investment.

***Accompanying Rules***

A further similarity and departure is the rules for each Law. They are similar in that both the National Electricity Law and the National Gas Law contain provisions for the making of rules by the Australian Energy Market Commission. This is a single, national (eastern States and ACT) regulatory body charged with this responsibility. Its operation overcomes the array of rule making in each of the jurisdiction that formerly occurred.

An examination of the National Electricity Rules and the National Gas Rules will show that they are technically detailed and prescriptive.

The presence of the Rules in the regulatory framework for electricity and gas must be interpreted and administered with a reasonable degree of consistency to promote a competitive market. The overall approach to consistency was envisaged by the Ministerial Council on Energy as expressed in its report to the Council of Australian Governments in December 2003<sup>36</sup>:

“Effective economic regulation is a key to successful market reform. The regulation of network access (prices and standards) seeks to balance energy users’ short-term interests in price benefits with their long-term interests in a reliable supply, service enhancements and timely investment in new capacity. The making of market and regulatory rules aims to provide reasonable stability to market participants, while ensuring that the rules can evolve to meet challenges that will inevitably arise. The enforcement of those rules maintains an important discipline on market conduct.

Sound economic regulation requires expertise, independence from commercial interests, and close consultation with affected parties. The processes must be made more efficient and streamlined, responsive to market developments, and occur within a clear framework of government policy. Regulation should be nationally uniform or consistent, as appropriate, to maximise competition and reduce the cost to business of operating across the markets.”

So far the makers of the Rules appear to have viewed comprehensive and prescriptive provisions as providing for stability in the market for both electricity and gas. To some extent this approach has been used in the National Electricity Law and the National Gas Law. There is a tendency towards prescription rather than more principled based provisions.

<sup>36</sup> View at:

<http://www.mce.gov.au/assets/documents/mceinternet/MCE-Dec03-RpttoCOAG2003121117144320040729131023.pdf>.

### **The future for the regulatory framework for electricity and gas**

These are early days for the operation of the National Electricity Law and the National Gas Law. It can be expected that as the gas sector matures and competition is the basis for the supply of gas the regulatory framework should tend to merge more fully than at present. A major element of the competitive market will be price, that is, the price of the commodity relative to other commodities and the price of carbon set in the emissions trading market after 2010. The price of carbon will impact on the price of gas as it will impact the use of coal in the current generation of electricity. Also, other commodities such as renewable energies producing energy will eventually compete with gas.

The National Electricity Law and the National Gas Law with their respective Rules will need to keep pace with the economic changes occurring in the energy sector. The approach is to free up regulation rather than impose more regulation. As other sources of energy come online that are not part of the current regulatory framework the regulatory approach should be to relax the current regulatory framework for electricity and gas to bring them into line with hopefully a less regulated market for other commodities produced by renewable energies.

A warning has been made recently about the problems of over prescription. The High Court decision in *East Australian Pipeline Pty Limited v Australian Competition and Consumer Commission* shows the problems of interpretation of regulatory provisions by market participants and regulators. A relevant comment on this decision is at Annexure 3.

Until a more liberal approach to regulation is present the regulatory framework for electricity and gas will require careful interpretation, administration and application. Wrong interpretation and application of the Laws and Rules will inhibit investment in energy and deter development.

The future of the regulatory framework needs to converge with other energy sources and be less prescriptive.

### **Regulation of renewable energy**

Renewable energy is not part of the regulatory framework for energy. There has been no national or coordinated approach to regulating renewable energy. Rather, the approach has been to impose requirements to incorporate renewable energy as part of the generation process for electricity. Also, imposition of practices and processes to tackle greenhouse gas emissions has been a focus. Other government initiatives involve the provision of funds to support renewable energy such as the Victorian Renewable Energy Support Fund<sup>37</sup>.

The New South Wales Government amended the *Electricity Supply Act 1995* to incorporate the Greenhouse Gas Reduction Scheme (GGRS)<sup>38</sup>. The scheme commenced 1 January 2003. The website for GGRS says:

“GGAS establishes annual statewide greenhouse gas reduction targets, and then requires individual electricity retailers and certain other parties who buy or sell electricity in NSW to meet mandatory benchmarks based on the size of their share of the electricity market. If these parties, known as benchmark participants, fail to meet their benchmarks, then a penalty is assigned. Monitoring the performance of benchmark participants is undertaken by the Independent Pricing and Regulatory Tribunal of NSW (IPART) in its role as Compliance Regulator.”

New targets for energy efficiency under GGAS will be introduced from 1 January 2009. The New South Wales Government also announced “a major new energy efficiency package to reduce power use and cut the state’s greenhouse gas emissions. A key initiative in the package is that the NSW Government will revitalise the energy efficiency component of the groundbreaking Greenhouse Gas Reduction Scheme (GGAS), to provide an enhanced market-based incentive for energy efficiency. The new scheme will be called the NSW Energy Efficiency Trading (NEET) Scheme.” A Discussion Paper is also available on NEET<sup>39</sup>.

The Government of Western Australia has introduced the Greenhouse Gas Emission Reduction (Power Stations) Bill 2008 that establishes “a greenhouse gas emissions standard for new power stations in Western Australia”<sup>40</sup>. The Second Reading speech says:

“The purpose of this bill is to address the gap between statements and action on climate change by introducing a minimum greenhouse gas emission standard for new power stations. The standard is based

<sup>37</sup> View at: <http://www.sustainability.vic.gov.au/www/html/1476-renewable-energy-support-fund.asp?intSiteID=4>.

<sup>38</sup> The legislative framework can be viewed at: [http://www.greenhousegas.nsw.gov.au/overview/legislative\\_framework.asp](http://www.greenhousegas.nsw.gov.au/overview/legislative_framework.asp).

<sup>39</sup> View at: [http://www.dwe.nsw.gov.au/energy/pdf/sustain\\_neet\\_discussion\\_paper.pdf](http://www.dwe.nsw.gov.au/energy/pdf/sustain_neet_discussion_paper.pdf).

<sup>40</sup> The Bill can be viewed at:

[http://www.parliament.wa.gov.au/parliament/bills.nsf/CFA3C04E401F1FDCC825745F002AE302/\\$File/Bill291-1.pdf](http://www.parliament.wa.gov.au/parliament/bills.nsf/CFA3C04E401F1FDCC825745F002AE302/$File/Bill291-1.pdf); the Explanatory Memorandum at <http://www.parliament.wa.gov.au/web/newwebparl.nsf/iframewebpages/Bills++Current>; and the Second Reading Speech at: <http://www.parliament.wa.gov.au/web/newwebparl.nsf/iframewebpages/Members++Current>.

on emissions intensity and expressed in terms of the quantity of greenhouse gases emitted for each unit of electricity. If this bill is passed, it would prevent the construction of any new power station that emits more than 500 kilograms of carbon dioxide equivalent per megawatt hour of electricity sent out. The only exceptions to this requirement are power stations with a capacity of 50 megawatts and for peaking plant that operates for a short time each year. The bill provides that regulations may set minimum emission standards for these classes of power stations.

... The greenhouse gas emission standard would allow renewable energy, combined cycle gas, cogeneration and genuine clean coal projects to go ahead. However, it would prevent any further conventional coal-fired power stations from being built in Western Australia. Conventional coal-fired power stations emit approximately 920 kilograms of carbon dioxide per megawatt hour of electricity, almost double the minimum standard. This bill complements proposals for an Australian emissions trading scheme, which is due to commence in 2010."

The Commonwealth Government has focused on mandatory renewable energy target mechanisms and providing a basis to fund research and development of renewable energy.

### **Mandatory Renewable Energy Target**

The mandatory renewable energy target scheme is administered by the Office of the Renewable Energy Regulator<sup>41</sup>. The legislation, *Renewable Energy (Electricity) Act 2000* and *Renewable Energy (Electricity) (Charge) Act 2000* are available by using the left side panel of the website's home page. The February 2008 issue of the Fact Sheet<sup>42</sup> states the current administration:

"The Office of the Renewable Energy Regulator (ORER), which is a statutory agency in the Department of Climate Change which is part of the Prime Minister and Cabinet portfolio, administers the *Renewable Energy (Electricity) Act 2000* (the Act), the *Renewable Energy (Electricity) Charge 2000* and the *Renewable Energy (Electricity) Regulations 2001* (the Regulations) to increase renewable electricity generation from Australia's renewable energy sources by encouraging the generation of an additional 9,500 GWh of renewable energy per year by 2010."

The scheme for renewable energy under the Renewable Energy (Electricity) Act is part of the [Mandatory Renewable Energy Target](#) program. It is a statutory national renewable energy market that is based on a system of tradeable certificates. The program began on 1 April 2001. The target is 9,500 gigawatt hours of extra renewable electricity generated each year by 2010. The operation of the Mandatory Renewable Energy Target is explained in the Fact Sheet

"MRET operates by imposing a legal liability to support renewable energy electricity generation on, generally, large wholesale purchasers of electricity. An example of a liable party under the legislation would be an electricity retailer acquiring wholesale electricity to meet retail sale obligations to customers (acquisition of electricity). The liable parties are directly responsible for supporting an increase in the amount of electricity generated from renewable energy sources, which is implemented through the surrender of renewable energy certificates (RECs) in proportion to their acquisitions of electricity. Each REC represents one megawatt hour (MWh) of eligible renewable electricity."

*Renewable Energy (Electricity) Act 2000* s 7(1) expresses the eligible renewable energy sources:

- hydro
- wave
- tide
- ocean
- wind
- solar
- geothermal-aquifer
- hot dry rock
- energy crops
- wood waste
- agricultural waste
- waste from processing of agricultural products
- food waste
- food processing waste

---

<sup>41</sup> The website for the Office of the Renewable Energy Regulator is <http://www.orer.gov.au>.

<sup>42</sup> The Fact Sheet can be viewed at: <http://www.orer.gov.au/publications/pubs/mret-overview-feb08.pdf>.

- bagasse
- black liquor
- biomass-based components of municipal solid waste
- landfill gas
- sewage gas and biomass-based components of sewage
- any other energy source prescribed by the regulations.

Energy sources that are not eligible renewable energy sources (s 7(2)) are:

- fossil fuels
- materials or waste products derived from fossil fuels.

### ***Certificates for additional renewable energy***

The Renewable Energy (Electricity) Act provides for the creation of certificates (s 18(1)) for electricity generation. A certificate may be created for each whole megawatt hour of electricity generated during a year. The generation of electricity must exceed the 1997 eligible renewable power baseline that is determined by the Renewable Energy Regulator (RER) (ss 5(1), 14(3)(a)). This occurs when the power station making application is accredited by RER.

A power station is eligible for accreditation where some or all of the power generated by the power station is generated from an eligible renewable energy source and any prescribed requirements are satisfied. The prescribed requirements ([Renewable Energy \(Electricity\) Regulations 2001](#) for a power station (reg 4(1)) are:

- in the national electricity market must use metering that meets the performance standard required by the National Electricity Code
- not in the national electricity market must use metering that enables RER to determine the amount of electricity generated by the power station
- must operate according to any relevant Commonwealth, State, Territory or local government planning and approval requirements.

A certificate may be created usually after the solar water heater is installed and within 12 months of the installation (s 21(2)). However, the regulations provide for when a solar water heater displaces non-renewable electricity (reg 19(1)):

- first installation of a hot water system in an existing building
- replaces an electric hot water system
- replaces, and uses less electricity than, an electric-boosted solar water heater
- installed in a new building.

The owner of the solar water heater may create certificates (s 23(1)). But the owner can assign the right to create certificated to another person. The assignment must be written (s 23(2)). The owner or the assignee must be registered to create certificates (s 23(3)).

Certificates can be made for small generation units. A certificate may be created usually after the small generation unit is installed and within 12 months of the installation (s 23A(2)). The regulations specify when certificates may be created for a small generation unit (reg 20(6)(a)). They may be created annually or 5 years after it is installed and at the beginning of each subsequent 5 year period. In the latter situation RER must be satisfied that the unit remains installed and functional for the 5 years.

Alternatively, certificates may be created provided it is a solar panel (photovoltaic) system and the unit is installed after 31 July 2005. No certificates have been created for the unit (reg 20(6)(b)). Certificates may be created on installation or within one year after the unit is installed for a period of 15 years after installation (reg 20(7)). The certificates may be assigned.

## Reporting and dissemination of information for greenhouse gas emissions

The *National Greenhouse and Energy Reporting Act 2007*<sup>43</sup> is a Commonwealth Act providing for “the reporting and dissemination of information related to greenhouse gas emissions, greenhouse gas projects, energy production and energy consumption, and for other purposes”. The objects of the Act are expressed as:

“to introduce a single national reporting framework for the reporting and dissemination of information related to greenhouse gas emissions, greenhouse gas projects, energy consumption and energy production of corporations to:

- (a) underpin the introduction of an emissions trading scheme in the future; and
- (b) inform government policy formulation and the Australian public; and
- (c) meet Australia’s international reporting obligations; and
- (d) assist Commonwealth, State and Territory government programs and activities; and
- (e) avoid the duplication of similar reporting requirements in the States and Territories.”

The Act is administered by the Department of Climate Change<sup>44</sup>. The reporting requirements under the Act commenced on 1 July 2008. The Department’s website says:

“Data reported under the Act will underpin the Australian Emissions Trading Scheme. Monitoring, reporting and auditing of businesses’ greenhouse gas emissions data will be essential to maintain the environmental and financial integrity of a trading scheme.”

The Act requires corporations to submit a report for the 2008-2009 financial year where they emit 125 kilotonnes or more of greenhouse gases or produce or use 500 terajoules or more of energy each year. The greenhouse gases are measured in CO<sub>2</sub> equivalent. Alternatively, corporations will need to report where they have operational control of facilities that emit the measure greenhouse gases or use or produce the measured energy per year.

A National Greenhouse and Energy Register (s 16) is kept. The Register will contain only the following information:

- name of each registered corporation
- any other matters required by the regulations relating to particular matters.

The matters that the regulations may address are:

- identity of the controlling corporation and members of the corporation’s group
- whether the corporation is required to be registered under section 12 or has applied for registration under section 14
- whether the corporation has complied with provisions of the Act
- information that is published under section 24.

The section 24 information are reports on greenhouse gas emissions, energy production and energy consumption, greenhouse gas projects. There are some limitations on the information that can be reported by the Greenhouse and Energy Data Officer.

Part 3 of the Act deals with the obligations of registered corporations including liability of persons in relation to meeting the obligations. Part 5 deals with enforcement matters including civil penalties, infringement notices, enforceable undertakings, and the liability of chief executive officers where the corporation contravenes a civil penalty provision (s 47).

## Emissions trading impact on energy

The earliest form of emissions trading, the Greenhouse Gas Reduction Scheme, was introduced by the New South Wales Government that started 1 January 2003.

---

<sup>43</sup> View at:

<http://www.comlaw.gov.au/ComLaw/Legislation/Act1.nsf/0/8BFE5E5B013EF8A3CA25736A00128DE9?OpenDocument>.

<sup>44</sup> A summary of the *National Greenhouse and Energy Reporting Act 2007* can be viewed at: <http://www.climatechange.gov.au/reporting/legislation/act.html>.

The Commonwealth Government issued a Green Paper<sup>45</sup>, *Carbon Pollution Reduction Scheme* (July 2008), to introduce an emissions trading scheme by 2010. Its release followed quickly after the release of the Garnaut Climate Change Review Draft Report<sup>46</sup>. These are the latest discussion in Australia that have followed the Final Report of the Prime Ministerial Task Group on Emissions Trading (May 2007)<sup>47</sup> which said:

“The key greenhouse gases are: carbon dioxide (CO<sub>2</sub>); methane (CH<sub>4</sub>); nitrous oxide (N<sub>2</sub>O); sulphur hexafluoride (SF<sub>6</sub>); hydrofluorocarbons (HFCs); and perfluorocarbons (PFCs). Each of these gases has a different capacity to heat the atmosphere, called their global warming potential. Their impact is represented as the index of the global warming contribution due to atmospheric emission of a kilogram of a particular greenhouse gas compared to a kilogram of carbon dioxide (CO<sub>2</sub>) .... Although CO<sub>2</sub> is the least potent of the greenhouse gases, it is the most significant in terms of global warming because it is produced in such large quantities.”

The Green Paper advances the pronouncements of scientists about climate change including the reports of the Inter-Governmental Panel on Climate Change<sup>48</sup>. The Carbon Pollution Reduction Scheme Green Paper Summary says:

“The science of climate change presented in the IPCC Fourth Assessment Report in 2007 paints a clear picture. Warming of the climate system is unequivocal, as evident from a wide range of measurements. Numerous other changes have been observed in changes to wind patterns, rainfall, sea ice, ice sheets, and in aspects of extreme weather. It is very likely that greenhouse gas increases related to human activity have caused most of the rise in global mean temperature since the mid-20th century.

...

The Garnaut Review's Draft Report of June 2008 suggests that emissions are tracking at the upper bounds of the scenarios modelled by the IPCC. Recent research suggests that the rate and magnitude of climate change over the next century may be at the high end of the range estimated by the IPCC.”

The Garnaut Climate Change Review Draft Report refers to the Inter-Governmental Panel on Climate Change saying<sup>49</sup>:

“The IPCC states that ‘warming of the climate system is unequivocal’, and that this is evident in the measured increase in global average air and surface temperatures, and also in the widespread melting of snow and ice and the rising global sea level (IPCC 2007: 5).”

In an answer to the question posed in the Draft Report<sup>50</sup>, “Is there a warming trend in global temperature data?” the Draft Reports says:

“Observations show that global temperatures have increased over the last 150 years (Figure 5.1). The data also suggests that the warming was relatively steep over the last 30–50 years. A comparison of three datasets shows that they differ slightly on the highest recorded temperatures—data from the Hadley Centre in the United Kingdom shows 1998 as the highest year, while data from the National Aeronautics and Space Administration and the National Climatic Data Centre in the United States show 2005 as the highest year.\* All three datasets show that seven of the hottest 10 years on record have been in the last nine years between 1999 and 2007. There has been considerable debate in recent months on the interpretation of the global temperatures over the past decade. Questions have been raised about whether the warming trend ended in about 1998.”

In announcing the release of the Green Paper the Minister referred to a number of issues that are due to climate change caused by carbon pollution. These are “higher temperatures, more droughts, rising sea levels and more extreme weather.”<sup>51</sup>

These issues are now part of the political debate that has taken over from the scientific debate. By referring to carbon pollution as the source of climate change makes it an issue that can be dealt with in the context of

---

<sup>45</sup> View the Green Paper at: <http://www.climatechange.gov.au/greenpaper/index.html>.

<sup>46</sup> View at: [http://www.garnautreview.org.au/domino/Web\\_Notes/Garnaut/garnautweb.nsf](http://www.garnautreview.org.au/domino/Web_Notes/Garnaut/garnautweb.nsf).

<sup>47</sup> The Prime Ministerial Task Group consisted of Dr Peter Shergold (Chair), Mr David Borthwick, Mr Peter Coates, Mr Tony Concannon, Dr Ken Henry, Mr Russell Higgins, Ms Margaret Jackson, Mr Michael L'Estrange, Mr Chris Lynch, Mr John Marlay, Mr Mark Paterson and Mr John Stewart. View report at <http://pandora.nla.gov.au/pan/79623/20071127-1411/www.dpmc.gov.au/publications/emissions/index.html>.

<sup>48</sup> The website of the Inter-Governmental Panel on Climate Change is <http://www.ipcc.ch>.

<sup>49</sup> *Garnaut Climate Change Review Draft Report* p 112.

<sup>50</sup> *Garnaut Climate Change Review Draft Report* p 113.

<sup>51</sup> Senator the Hon Penny Wong, “A Carbon Pollution Reduction Scheme for Australia”, National Press Club Address, Wednesday 16 July 2008. View at: <http://www.environment.gov.au/minister/wong/2008/pubs/sp20080716a.pdf>.

pollution control that has been part of the political and legal landscape for some time in other jurisdictions. The Green Paper expresses the purpose of stimulating informed public debate on the issue of dealing with climate change<sup>52</sup>. The approach to tackle climate change is through the market system and not by imposing a carbon tax directly.

### ***Structural economic reform needed***

A major issue of the Green Paper is the identification of the proposed emissions trading scheme as requiring structural reform of the Australian economy. This task is enormous. The Ministers address says:

“The effect of putting a price on carbon will be profound. Indeed, in its ability to change the economy over time, the Carbon Pollution Reduction Scheme is likely to be on par with past economic reforms such as the reduction in tariffs or deregulation of the financial system.

Placing a limit and a price on pollution will change the things we produce, the way we produce them, and the things we buy. It will open new doors to a cleaner energy future.

It affects relative prices in the economy, so that those goods and services which are carbon intensive cost relatively more over time than those that are low carbon.

The market will reward companies and industries that find ways to produce their goods in a way that contributes less carbon pollution to the atmosphere.

And with a market based approach, consumers still get to choose what they consume.”

### ***Next stage in emissions trading***

The next stage is the release of Commonwealth Treasury’s modeling in October 2008. This information together with the Garnaut Climate Change Review Final Report (30 September 2008) will be used in the White Paper.

The White Paper is expected to release the medium-term emissions trajectories to aid understanding of how the cap on national emissions will evolve. It should also describe the legal framework for an emissions’ trading scheme and ancillary processes if the intended commencement date of 2010 is to be met.

Submissions on the Green Paper are due to be lodged by 10 September 2008<sup>53</sup>.

The Carbon Pollution Reduction Scheme Green Paper Summary notes one important transitional arrangement s in working towards a national emissions trading scheme. The Summary notes at 12.2:

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

Establishing an appropriate market is critical for the new emissions trading scheme. The Australian Securities Exchange (ASX) recently announced its readiness to operate the market<sup>54</sup>. The announcement says:

“AS record high prices for coal, gas and oil - together with speculation as to the impact of the forthcoming emissions trading scheme on the Australian economy - dominate the headlines, the existing infrastructure of the Australian Securities Exchange remains a conduit to help firms raise and allocate capital as well as manage the risks associated with fluctuating energy and environmental product prices.”

The ASX website at [http://www.asx.com.au/products/emissions\\_trading/index.htm](http://www.asx.com.au/products/emissions_trading/index.htm) should be watched for developments.

### **What practitioners should do in this area of law**

This paper gives an overview of energy law as it is developing for the National Energy Market, an overview of renewable energy law and the impact of emissions trading on the energy sector. These developments identify existing and emerging opportunities for practitioners and current and potential risks for clients in the energy sector or outside it.

---

<sup>52</sup> Earlier work on the debate for an emissions’ trading scheme and alternatives can be viewed in the Final Report of the Prime Ministerial Task Group on Emissions Trading at <http://pandora.nla.gov.au/pan/79623/20071127-1411/www.dpmc.gov.au/publications/emissions/index.html>.

<sup>53</sup> Submissions can be made online. See website at <http://www.climatechange.gov.au/greenpaper/consultation/index.html>.

<sup>54</sup> ASX, “ASX poised for role in greener world” July 14, 2008. View at: [http://www.asx.com.au/products/pdf/asx\\_poised\\_for\\_role\\_in\\_greener\\_world.pdf](http://www.asx.com.au/products/pdf/asx_poised_for_role_in_greener_world.pdf).

Where clients are exposed to energy generation and production, transmission and use as customers of retailers or in direct supply from a power station, there are risks that need to be covered in agreements and other legal instruments. Practitioners need to consider laws in all jurisdictions in which a client operates.

The National Energy Market is new and the emissions trading scheme is emerging. The legal risks need to be monitored together with new and emerging compliance requirements.

## Annexure 1: Schedule—National Electricity Law

### **Part 1—Preliminary**

### **Part 2—Participation in the National Electricity Market**

Division 1—Registration

Division 2—Regulated network service providers

### **Part 3—Functions and powers of the Australian Energy Regulator**

Division 1—General

Division 2—Search warrants

Division 3—General information gathering powers

Division 4—Regulatory information notices and general regulatory information orders

Division 5—Network service provider performance reports

Division 6—Disclosure of confidential information held by AER

Division 7—Miscellaneous matters

### **Part 4—Functions and powers of the Australian Energy Market Commission**

Division 1—General

Division 2—Rule making functions and powers of the AEMC

Division 3—Committees, panels and working groups of the AEMC

Division 4—MCE directed reviews

Division 5—Other reviews

Division 6—Miscellaneous

### **Part 5—Role of NEMMCO under the National Electricity Law**

Division 1—Conferral of certain functions

Division 2—Statutory funds of NEMMCO

### **Part 5A—Functions and powers of Minister of this participating jurisdiction**

### **Part 5B—Functions and powers of Tribunal**

### **Part 6—Proceedings under the National Electricity Law**

Division 1—General

Division 2—Proceedings by the AER in respect of this Law, the Regulations and the Rules

Division 2A—Proceedings before, and awards etc of, Dispute resolution panels

Division 3—Judicial review of decisions and determinations under this Law, the

Division 3A—Merits review and other non-judicial review

Division 3B—Enforcement of access determinations

Division 4—Other civil proceedings

Division 5—Infringement notices

Division 6—Miscellaneous

### **Part 7—The making of the National Electricity Rules**

Division 1—General

Division 2—Minister initiated National Electricity Rules

Division 3—Procedure for the making of a Rule by the AEMC

Division 4—Miscellaneous provisions relating to Rule making by the AEMC

### **Part 8—Safety and security of the National Electricity System**

### **Part 9—Immunities**

### **Part 10—Access Disputes**

Division 1—Interpretation and application

Division 2—Notification of access dispute

Division 3—Access determinations

Division 4—Variation of access determinations

Division 5—Compliance with access determinations

Division 6—Access dispute hearing procedure

Division 7—Joint access dispute hearings

Division 8—Miscellaneous matters

### **Part 11—General**

## Annexure 2: Schedule—National Gas Law

### **Chapter 1—Preliminary**

#### **Part 1—Citation and interpretation**

#### **Part 2—Participating jurisdictions**

#### **Part 3—National gas objective and principles**

Division 1—National gas objective

Division 2—Revenue and pricing principles

Division 3—MCE policy principles

#### **Part 4—Operation and effect of National Gas Rules**

### **Chapter 2—Functions and powers of gas market regulatory entities**

#### **Part 1—Functions and powers of the Australian Energy Regulator**

Division 1—General

Division 2—Search warrants

Division 3—General information gathering powers

Division 4—Regulatory information notices and general regulatory information orders

Division 5—Service provider performance reports

Division 6—Miscellaneous matters

#### **Part 2—Functions and powers of the Australian Energy Market Commission**

Division 1—General

Division 2—Rule making functions and powers of the AEMC

Division 3—Committees, panels and working groups of the AEMC

Division 4—MCE directed reviews

Division 5—Other reviews

Division 6—Miscellaneous matters

#### **Part 3—Functions and powers of Ministers of participating jurisdictions**

#### **Part 4—Functions and powers of the NCC**

#### **Part 5—Functions and powers of Tribunal**

### **Chapter 3—Coverage and classification of pipelines**

#### **Part 1—Coverage of pipelines**

Division 1—Coverage determinations

Division 2—Coverage revocation determinations

#### **Part 2—Light regulation of covered pipeline services**

Division 1—Making of light regulation determinations

Division 2—Revocation of light regulation determinations

Division 3—Principles governing light regulation determinations

Division 4—Revocation if coverage determination not made

Division 5—Effect of pipeline ceasing to be covered pipeline

Division 6—AER reviews into designated pipelines

#### **Part 3—Coverage of pipelines the subject of tender process**

#### **Part 4—Coverage following approval of voluntary access arrangement**

#### **Part 5—Reclassification of pipelines**

### **Chapter 4—General requirements for provision of covered pipeline services**

#### **Part 1—General duties for provision of pipeline services by covered pipelines**

#### **Part 2—Structural and operational separation requirements (ring fencing)**

Division 1—Interpretation

Division 2—Minimum ring fencing requirements

Division 3—Additional ring fencing requirements

Division 4—AER ring fencing exemptions

Division 5—Associate contracts

### **Chapter 5—Greenfields pipeline incentives**

#### **Part 1—Interpretation**

#### **Part 2—15-year no-coverage determinations**

#### **Part 3—Price regulation exemptions**

Division 1—Application for price regulation exemption

Division 2—Recommendations by NCC

Division 3—Making and effect of price regulation exemption

Division 4—Limited access arrangements

Division 5—Other matters

- Part 4—Extended or modified application of greenfields pipeline incentive**
- Part 5—Early termination of greenfields pipeline incentive**
- Chapter 6—Access disputes**
  - Part 1—Interpretation and application**
  - Part 2—Notification of access dispute**
  - Part 3—Access determinations**
  - Part 4—Variation of access determinations**
  - Part 5—Compliance with access determinations**
  - Part 6—Access dispute hearing procedure**
  - Part 7—Joint access dispute hearings**
  - Part 8—Miscellaneous matters**
- Chapter 7—The Natural Gas Services Bulletin Board**
  - Part 1—The Bulletin Board Operator**
  - Part 2—Bulletin Board information**
  - Part 3—Protection of information**
- Chapter 8—Proceedings under the National Gas Law**
  - Part 1—Proceedings generally**
  - Part 2—Proceedings for breaches of this Law, Regulations or the Rules**
  - Part 3—Matters relating to breaches of this Law, the Regulations or the Rules**
  - Part 4—Judicial review of decisions under this Law, the Regulations and the Rules**
  - Part 5—Merits review and other non-judicial review**
    - Division 1—Interpretation
    - Division 2—Merits review for reviewable regulatory decisions
    - Division 3—Tribunal review of AER information disclosure decisions under section 329
    - Division 4—General
  - Part 6—Enforcement of access determinations**
  - Part 7—Infringement notices**
  - Part 8—Further provision for corporate liability for breaches of this Law etc**
- Chapter 9—The making of the National Gas Rules**
  - Part 1—General**
    - Division 1—Interpretation
    - Division 2—Rule making tests
  - Part 2—Initial National Gas Rules**
  - Part 3—Procedure for the making of a Rule by the AEMC**
  - Part 4—Miscellaneous provisions relating to rule making by the AEMC**
- Chapter 10—General**
  - Part 1—Provisions relating to applicable access arrangements**
  - Part 2—Handling of confidential information**
    - Division 1—Disclosure of confidential information held by AER
    - Division 2—Disclosure of confidential information held by relevant Ministers, NCC and AEMC
  - Part 3—Miscellaneous**
- Schedule 1—Subject matter for the National Gas Rules**
- Schedule 2—Miscellaneous provisions relating to interpretation**
  - Part 1—Preliminary**
  - Part 2—General**
  - Part 3—Terms and references**
  - Part 4—Functions and powers**
  - Part 5—Distance and time**
  - Part 6—Service of documents**
  - Part 7—Evidentiary matters**
    - Division 1—Publication on websites
    - Division 2—Evidentiary certificates
  - Part 8—Commencement of this Law and statutory instruments**
  - Part 9—Effect of repeal, amendment or expiration**
  - Part 10—Offences under this Law**
  - Part 11—Instruments under this Law**
- Schedule 3—Savings and transitionals**
  - Part 1—General**
  - Part 2—General savings provision**

- Part 3—Classification and coverage of pipelines**
- Part 4—Access arrangements**
- Part 5—Price regulation exemptions**
- Part 6—Structural and operational separation (ring fencing)**
- Part 7—Access disputes**
- Part 8—Investigations and proceedings**
- Part 9—Associate contracts**
- Part 10—Other**



### **About Ian Tunstall**

Ian Tunstall is a lawyer practising as a solicitor in New South Wales, Australia. He is also an economist and practises through TUNSTALL Consulting Pty Limited.

Ian writes on legal and regulatory issues, involving both law and economics. He is known for expressing law and economics clearly to help readers irrespective of their experience of the subject matter. A catalogue of publications written by Ian Tunstall can be viewed on his website.

#### **Address**

16 Orient Street  
PO Box 91 Lawson NSW 2783  
Australia

**Telephone** +61 (02) 4759 2641

**Fax** +61 (02) 4759 3013

**Mobile** + 61 (0) 414 481 555

**Email** [tunstall@pnc.com.au](mailto:tunstall@pnc.com.au)

**Web** [www.iantunstall.com](http://www.iantunstall.com)

Copyright © 2008  
Tunstall Consulting Pty Ltd.  
All Rights Reserved