

# Environment Policy Considerations

- 5.1 MRET's main environmental impact is on greenhouse gas abatement, although the MRET legislation also requires that generation be derived from ecologically sustainable sources. The Australian Government has declined to ratify the Kyoto Protocol, but has committed to continue to invest in domestic policies and programs to meet Australia's greenhouse target agreed to in Kyoto.<sup>163</sup>
- 5.2 This target aims to have Australia limit its greenhouse gas emissions by 2008 to 2012 to 108 per cent of 1990 emissions. Internationally, the Government has advised that Australia will continue to pursue a more comprehensive global response to climate change.<sup>164</sup>
- 5.3 In its domestic response to climate change, Australian governments have introduced a range of policies and programs, specifically aimed at addressing Australia's greenhouse emissions profile. Because of its relatively high contribution to greenhouse gas emissions in the Australian context, the stationary energy sector has been an important focus in achieving emissions abatement.
- 5.4 MRET is a key program of the Australian Government that directly targets the stationary energy sector and interacts to varying degrees with other government policies and programs.
- 5.5 This chapter discusses the role of MRET as a greenhouse abatement measure and its interaction with other greenhouse policies and programs, both at the Australian Government and State and Territory governments' level. The chapter also discusses international experiences and the need for any alternative approach.

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<sup>163</sup> The Prime Minister, The Hon. John Howard MP 20 November 2002. 'Strategic Leadership For Australia—Policy Directions In A Complex World' Address to the Committee For Economic Development Of Australia, Sydney

<sup>164</sup> Minister for the Environment and Heritage, the Hon. Dr David Kemp MP 28 February 2003. *Australia's Approach to Climate Change*. Beyond Kyoto: Economic Impacts and Alternative Mitigation Strategies Conference, IPA, Melbourne

## Australian government policies and programs

- 5.6 In 1998, the Australian Government established a whole-of-government agency—the Australian Greenhouse Office—to lead Australia’s climate change policy implementation and the delivery of the nearly \$1 billion of Australian Government policies and measures for greenhouse gas abatement, including the *Safeguarding the Future* package (1997) and programs under *Measures for a Better Environment* (1999).
- 5.7 In collaboration with State, Territory and Local governments, the Australian Government has contributed to the development of a national framework of policies and measures for advancing domestic greenhouse action across all sectors of the economy—the National Greenhouse Strategy.<sup>165</sup> The range of measures within the strategy broadly aim to foster knowledge and understanding of greenhouse issues, to limit greenhouse emissions and to lay the foundations for adaptation to climate change.
- 5.8 Given the substantial contribution of energy to Australia’s greenhouse gas emissions (around 50 per cent in 2000), Australia’s greenhouse response involves efforts to help limit emissions in the sector. These efforts are directed at both energy production and supply (including MRET), as well as, energy demand and use.
- 5.9 For example, the Australian Government has introduced Generator Efficiency Standards to help fossil fuel electricity generators move towards best practice in generation efficiency. The Government is also implementing the Energy Efficiency Best Practice Program to encourage wise energy use in key sectors.
- 5.10 In addition, through the Greenhouse Gas Abatement Program, the Australian Government has provided direct financial support for improved efficiency in fossil fuel power generation, as well as, an increase in cogeneration.
- 5.11 A number of broader initiatives also contribute to greenhouse abatement in the stationary energy sector. These include:
  - Greenhouse Challenge which is a joint voluntary initiative between the Australian Government and industry with over 800 members who measure their greenhouse emissions and develop and report on action plans to reduce those emissions.
  - The Cities for Climate Protection™ Program that encourages abatement measures at the Local government level.
  - The Greenhouse Friendly Program that is a voluntary certification and labelling initiative.

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<sup>165</sup> The National Greenhouse Strategy, Strategic Framework for Advancing Australia’s Greenhouse Response. Australian Greenhouse Office, 1998

- The Photovoltaic Rebate Program, that provides cash rebates for the installation of photovoltaic systems.
- The Renewable Remote Power Generation Program, that provides financial support to increase the uptake of renewables in areas which traditionally rely on diesel to fuel electricity generation.

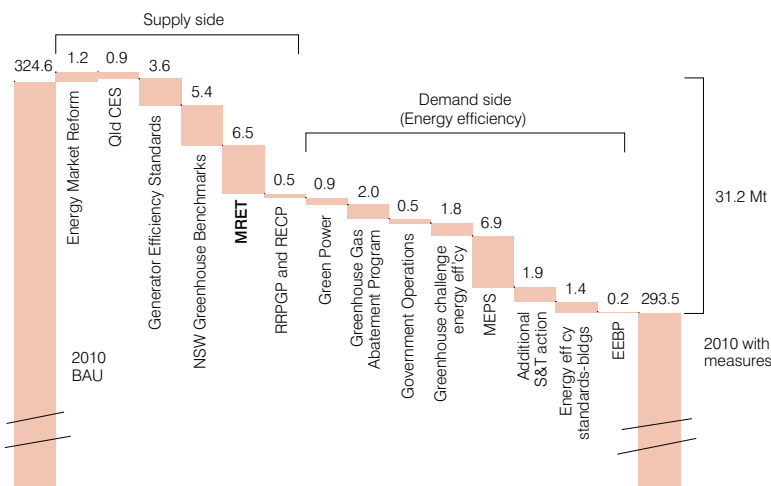
5.12 These programs generally complement MRET as an abatement measure, recognising that initiatives generally directed to energy efficiency and use, or improved performance within the fossil fuel sector are quite different to MRET's focus which is targeted directly at growth in the renewable energy sector.

5.13 Given that MRET is at a relatively early stage of its operation, its contribution to greenhouse abatement in absolute terms has not been significant to date, as discussed in Chapter 2.

5.14 However, as an abatement measure, MRET is expected to grow in importance over the years ahead. In 2010, MRET is expected to achieve 6.5 Mt of CO<sub>2</sub>-e abatement annually through to 2020.<sup>166</sup> On this basis, the estimated abatement over the life of the measure is expected to be around 100 Mt CO<sub>2</sub>-e.

5.15 Figure 19 below shows the AGO's estimated relative contribution of various abatement measures within the stationary energy sector in 2010. Based on this analysis, MRET is expected to deliver around 20 per cent of the projected abatement from all current measures targeting the stationary energy sector.

**Figure 19**—MRET's contribution to greenhouse abatement in Australia's stationary energy sector<sup>167</sup>



<sup>166</sup> Stationary Energy Sector Greenhouse Gas Emissions Projections 2003, Australian Government Interdepartmental Greenhouse Projections Group, August 2003.

<sup>167</sup> Figure 19 source; Stationary Energy Sector Greenhouse Gas Emissions Projections 2003, Australian Government Interdepartmental Greenhouse Projections Group, August 2003. Acronyms BAU-Business as usual; CES Cleaner Energy Strategy; EEBP Energy Efficiency Best Practice; MEPS Minimum Energy Performance Standards; S&T State and Territories.

- 5.16 The Australian Government along with State, Territory and Local governments have implemented a range of policies and programs, which are expected to cut emissions by around 67 Mt CO<sub>2</sub>-e per year by 2008 to 2012.<sup>168</sup> On this basis MRET is expected to contribute around 10 per cent of total current national abatement.
- 5.17 Looking ahead, Australian Government Ministers<sup>169</sup> have indicated that Australia will develop a 20 to 30 year forward strategy on climate change, with the following characteristics:
- Australia would strive for a more comprehensive global response to climate change
  - Australia will position itself to maintain a strong and internationally competitive economy with a lower greenhouse signature
  - Domestic policy settings will balance flexibility with sufficient certainty to allow key decisions on investment and technology development while also emphasising cost effectiveness.
  - Australia will implement policies and programs that assist adaptation to the consequences of climate change that are already unavoidable.
- 5.18 The role of renewable energy in the proposed climate change forward strategy is yet to be determined but this Review will no doubt provide an input to its development.

## State and territory government programs

- 5.19 The Australian Government works closely with State, Territory and Local governments, as well as with industry, to implement the actions arising from the National Greenhouse Strategy.
- 5.20 Joint initiatives include the introduction of energy efficiency standards for residential and commercial buildings into the Building Code of Australia, as well as comparative energy labelling and minimum energy performance standards for domestic appliances, commercial products and industrial equipment.
- 5.21 State and Territory governments are also moving to improve energy efficiency in government operations. The Victorian Government, for example, has committed to a 15 per cent target for reduction in energy consumption by government agencies. The Northern Territory Government has also introduced energy reduction targets for its agencies.
- 5.22 The most notable examples of programs introduced by States and Territories are the New South Wales Greenhouse Gas Abatement Scheme and the Queensland 13 per cent gas scheme. In addition, the Victorian Government is currently developing a Renewable Energy Strategy with an aspirational target of 10 per cent renewables in 2010.

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<sup>168</sup> *Tracking to the Kyoto Target 2003, Australia's Greenhouse Emissions Trends 1990 to 2008–2012 and 2020*, Australian Government, September 2003

<sup>169</sup> Joint Media Release, Minister for Foreign Affairs and Trade, the Hon. Alexander Downer and Minister for the Environment and Heritage, the Hon. Dr David Kemp. 15 August 2002. *Global Greenhouse Challenge: The Way Ahead for Australia*. Canberra

- 5.23 During the course of the Review a number of interested parties expressed concern about a potential proliferation of government programs and pointed to compliance costs, which can escalate if a company participates in a number of these schemes. The Parer Report made a similar statement:

*The number of measures to address stationary energy emissions at the federal, state and territory levels has increased regulatory complexity and, as a result, has increased the regulatory cost borne by liable parties*<sup>170</sup>

- 5.24 This report will specifically address the New South Wales Greenhouse Gas Abatement Scheme and the Queensland 13 per cent gas scheme to determine whether there are significant overlaps with MRET or whether any alternative approaches may be warranted.

### **The New South Wales greenhouse gas abatement scheme**<sup>171</sup>

- 5.25 This scheme, commonly known as the New South Wales Benchmark Scheme, was implemented in accordance with the *Electricity Supply Amendment (Greenhouse Gas Emission Reduction) Act 2002 (NSW)* and associated regulations. It commenced operation on 1 January 2003.
- 5.26 Under the scheme, the State has a series of per-capita emission benchmarks, established from 2003 to 2012. This year, the benchmark will be 8.65 tonnes of CO<sub>2</sub>-e emissions per capita, falling to 7.27 tonnes of CO<sub>2</sub>-e per capita from 2007 to 2012. This statewide benchmark is to be met in part by benchmark participants.
- 5.27 Benchmark participants are typically energy retailers, although some other types of organisations (principally large energy users) may also participate. Each participant is set an annual benchmark to meet under the scheme. The benchmarks represent a proportional share of the abatement required to meet the overall State target.
- 5.28 Liable parties meet their obligations through the surrender of one of three types of instrument: New South Wales Greenhouse Abatement Certificates (NGACs), Large User Abatement Certificates (LUACs), or MRET RECs.

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<sup>170</sup> *Towards a Truly National and Efficient Energy Market* (Council of Australian Governments Energy Market Review Final Report) p231

<sup>171</sup> The NSW government did not make a submission to the review and would not agree to a formal consultation. Accordingly, this section draws substantially on the NSW Greenhouse Gas Abatement Scheme website at <http://www.greenhousegas.nsw.gov.au/> and upon the *Overview of the NSW Greenhouse Gas Abatement Scheme*, prepared for the Independent Pricing and Regulatory Tribunal (IPART) by Acuiti Legal, and available on the same internet site.

### *NSW greenhouse abatement certificates*

5.29 NGACs are the primary certificates to be used under the scheme. They are transferable certificates which can be created by 'accredited abatement certificate providers' in one of three ways:

- By generating electricity in a way which reduces the greenhouse emissions from the energy generation (therefore including renewables, but also the more efficient use of fossil fuels).
- By demand side activities to improve energy efficiency, such as changes to processes or appliances on commercial sites.
- By undertaking carbon sequestration, where the sequestration will result in the storage of carbon for at least 100 years.

5.30 An NGAC is equal to one tonne of CO<sub>2</sub>-e emissions.

### *Large user abatement certificates*

5.31 LUACs are available to large users (those who use more than 100 GWh per annum in total, with at least 50 GWh consumed at a single site) who reduce on-site emissions not directly related to their acquisition of energy. LUACs are not transferable, so they may only be surrendered against the benchmark of the company undertaking the emission reduction activity.

5.32 Like NGACs, LUACs are equal to one tonne of CO<sub>2</sub>-e emissions.

### *Renewable Energy Certificates*

5.33 RECs surrendered under MRET with respect to electricity sold in New South Wales, may count towards an organisation's benchmark obligation. An immediate difficulty emerges here: NGACs and LUACs are denominated in tonnes of CO<sub>2</sub>-e, while RECs are denominated in MWh. As will be noted in the discussion of energy intensity below, energy generated by different renewable sources may result in the abatement of different levels of CO<sub>2</sub>-e. As a result, it may not be accurate to suggest that one REC should have the same value as one NGAC.

5.34 Under the New South Wales scheme, this difficulty is addressed by applying a conversion factor, known as a 'NSW Pool Coefficient'<sup>172</sup> that is based on assumptions about the average amount of abatement achieved by renewable generation. The coefficient in 2003 is 0.897, meaning that one REC is equal to 0.897 NGACs in 2003. The coefficient in 2004 will be 0.906 and coefficients for following years will be determined annually.

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<sup>172</sup> The NSW Pool Coefficient is described in clause 9.1 of the Greenhouse Gas Benchmark Rule (Compliance) No. 1 of 2003 (NSW). Its application is described in clause 5, equation 2 of the same rule. The full text of the rule is available by following the 'rules' link at <http://www.greenhousegas.nsw.gov.au>

### *Non-compliance penalties*

- 5.35 The New South Wales Independent Pricing and Regulatory Tribunal (IPART) assesses compliance with the scheme. Benchmark participants who do not meet their obligations in any year are required to pay a shortfall charge of \$10.50 per tonne of CO<sub>2</sub>-e. However, where the shortfall is less than ten per cent of their liability, the shortfall may be carried forward to the following year.

### *Interaction with MRET*

- 5.36 There are two similar schemes operating in parallel in New South Wales that broadly impact on energy retailers with attendant compliance costs.
- 5.37 While one scheme would be preferable, the New South Wales scheme constitutes a broader greenhouse abatement measure that also takes in energy efficiency and carbon sequestration measure whereas MRET is specifically targeted at abatement arising from the uptake of renewable energy. MRET also has other objectives related to industry development.
- 5.38 Although there is overlap between the two schemes, RECs generated under the MRET measure also qualify for the discharge of liabilities under the New South Wales scheme. In this way, while there are additional compliance costs associated with the two schemes, energy retailers can discharge their liability under both schemes by virtue of meeting their MRET obligation.

## **The Queensland 13 per cent gas scheme**

- 5.39 In May 2000, the Queensland Government released a new energy policy entitled *Queensland Energy Policy—A Cleaner Energy Strategy*.<sup>173</sup> The first key initiative of the new policy is a license scheme to require Queensland retailers to source 15 per cent of electricity sold in Queensland from gas-fired or renewable generation. It is estimated that 13 per cent of electricity sold in Queensland will come from gas-fired generation.
- 5.40 The scheme is to commence on 1 January 2005 and will remain in force for 15 years, or until an emissions trading scheme is introduced. The scheme is expected to save one million tonnes of CO<sub>2</sub>-e in its first year of operation.
- 5.41 As currently proposed<sup>174</sup> the liable parties under the scheme will principally be electricity retailers although they may include any other organisation that sells energy from a major grid to end users. There are two major grids in Queensland—the national grid and a grid servicing Mt Isa. The liability for each party amounts to 13 per cent of their liable load, that is, their full load less any exempt amounts.
- 5.42 Liable parties acquit their liabilities by obtaining and surrendering Gas Electricity Certificates (GECs). GECs are tradeable certificates which can be created by accredited parties, which are eligible gas fired generators. Each GEC will represent one MWh of gas-fired electricity.

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<sup>173</sup> Available at <http://www.energy.qld.gov.au/pdfs/qldenergypolicy.pdf>

<sup>174</sup> Based on the *Final Position Paper* released by Queensland Treasury in September 2002 and available at: [http://www.energy.qld.gov.au/pdfs/13percent\\_final\\_position\\_paper.pdf](http://www.energy.qld.gov.au/pdfs/13percent_final_position_paper.pdf)

- 5.43 Any liable party who does not meet their obligation under the scheme will be required to pay a penalty of \$11 per GEC not surrendered in 2005 dollars. After 2005, the penalty will be indexed according to the CPI.

#### *Overlap with MRET*

- 5.44 As is the case in New South Wales, energy retailers in Queensland are also subject to compliance costs associated with two schemes, one requiring renewable energy take-up and another requiring gas or renewables up to 15 per cent, of which gas must be 13 per cent.
- 5.45 However, as is the case with MRET's interaction with the New South Wales scheme, the two schemes have different objectives and MRET obligations can also count towards the discharge of obligations associated with the Queensland scheme. In this respect, energy retailers can discharge their liability under both schemes by virtue of meeting their MRET obligation.

### **Economy-wide emissions trading schemes**

- 5.46 The Report to the Council of Australian Governments, *Towards a Truly National and Efficient Energy Market* (the Parer Report) preferred, as a model for dealing with greenhouse gas abatement, an economy-wide emissions trading scheme. Such a scheme would represent a broad-based policy approach for managing Australia's greenhouse gas emissions profile. A trading scheme would control greenhouse gases by requiring participating sectors to acquit permits to cover their emissions. Permits would be issued by the Government and could be traded among participants.
- 5.47 Holders of emissions permits could either acquit them against their emissions liability or take action to reduce their emissions and sell the permits to a company with higher abatement costs. A trading scheme is not prescriptive about where in the economy the abatement should occur and allows permits to be allocated to their most valuable uses. As such, it has the potential to deliver an emissions target at least cost to the economy.

#### *MRET and emissions trading*

- 5.48 Currently, there is no commitment to the introduction of an emissions trading scheme, although the Parer Report is currently under consideration. If an emissions trading scheme were implemented, there would be a number of impacts on MRET.
- 5.49 The most important impact is that, in effect, any scheme which penalises CO<sub>2</sub>-e emissions will increase the cost of fossil fuel power and so will narrow the margin needed to justify renewable energy investments, perhaps implying a reduction in the shortfall charge required under the MRET scheme.

- 5.50 It would be possible for an emissions trading scheme to operate alongside MRET. At the least it would be necessary to allow existing investments to continue to accrue RECs during their eligibility period. Only in this way can concerns about the sovereign risk that arose in response to the Parer Report be addressed.
- 5.51 The New South Wales Greenhouse Gas Abatement Scheme may provide some guidance on this point. Many benchmark participants under the New South Wales scheme are also liable parties under MRET. However, as noted above, benchmark participants may use RECs, surrendered against their MRET liabilities, to also discharge their liabilities under the Benchmark Scheme. There is no reason why a similar arrangement could not take place at the national level, either during a transitional period or on an ongoing basis.
- 5.52 The Review Panel has canvassed a range of Australian government designed to support the development of the renewable energy industry and reduce greenhouse gas emissions.
- 5.53 While overlaps are to a certain extent inevitable, the range of government programs, including MRET, reflect the renewable energy or greenhouse policy requirements of the various governments.

## International experiences

- 5.54 Many submissions drew attention to international target schemes in order to compare the outcomes achieved by MRET with the outcomes proposed or achieved by those overseas programs. Greenpeace, for example, provided a comparative table of percentage targets from overseas, and stated:

*A number of other national governments have set much higher targets than the present Australian MRET. Denmark provides an excellent example of the effectiveness of government support. Over the past 15 years, changing government coalitions have maintained a target of 10% wind energy for the year 2005, a target which was subsequently adjusted to 16% by 2003. In reality wind will supply some 21% of Danish electricity consumption by the end of 2003, and by 2030 is expected to provide 40 to 50% of electricity consumption.<sup>175</sup>*

- 5.55 Appendix 6 provides a comparative study by the Australian Greenhouse Office illustrating some international approaches to renewable energy targets. Broadly, the study shows that Australia's target is slightly lower than the European targets, though Australia's target is mandatory, and the European ones are aspirational. Australia's target is comparable with the United Kingdom (UK) target (which is also mandatory) and the Japanese target. The United States of America (USA) target of ten per cent non-hydro renewables is higher, but is largely dependent on the success of State schemes.

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<sup>175</sup> Greenpeace Australia, submission 194, p23

- 5.56 Overall, there is little in Appendix 6 to support criticism that Australia's target is inadequate compared to overseas targets. Rather, the MRET target is comparable with other schemes, especially those which have mandatory rather than aspirational targets. Aspirational targets in themselves mean little until means are set in place to achieve them—only time will tell how close different countries come to actually achieving those targets.
- 5.57 While Appendix 6 provides a basis for broad observations, comparisons between different national schemes must be made very carefully. Often these comparisons are quite simplistic<sup>176</sup> and do not reflect a number of factors:
- many national targets are aspirational only. Only a handful of countries have introduced mandatory requirements. In general, aspirational targets are more ambitious than mandatory targets
  - countries start from different bases. At 10.5 per cent, Australia has a reasonably high share of existing renewables (mostly large hydro)
  - percentages can hide different growth rates in electricity
  - eligible renewable energy sources may differ
  - comparisons of percentages do not indicate likely success in reaching targets
  - countries have different price structures for electricity. Typical European electricity prices are generally 50 to 100 per cent higher than in Australia, making the marginal cost of moving to renewable generation smaller.
- 5.58 A number of overseas schemes operate on a similar basis to the MRET, and are worthy of further consideration. The two most prominent such schemes are the UK's Renewables Obligation, and the US State of Texas' Renewable Portfolio Standard.

#### *The UK renewables obligation*

- 5.59 The Renewables Obligation came into effect on 1 April 2002 and requires all licensed electricity suppliers in England and Wales to supply a specific proportion of their electricity from renewables.<sup>177</sup> National obligations each year rise from 9.4 terawatt hours (TWh) (i.e. 9400 GWh) in 2002–03 to 33.6 TWh in 2010 to 2011. This final target would mean 10 percent of all electricity would be supplied by renewables (a percentage which Australia already meets). As a result, in percentage terms, it would take until 2010 to 2011 for the UK to reach the target Australia has already reached. Annual targets are as follows:

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<sup>176</sup> For clarity, this is a reflection on the general use of percentage comparisons, not a reflection on the Greenpeace submission quoted immediately above.

<sup>177</sup> A similar but separate order is in place for Scotland.

**Table 4**—UK renewables obligation<sup>178</sup>

Period	Electricity Sales TWh	Total Obligation TWh	Obligation as % of sales
2001/2002	310.9		
2002/2003	313.9	9.4	3.0
2003/2004	316.2	13.5	4.3
2004/2005	318.7	15.6	4.9
2005/2006	320.6	17.7	5.5
2006/2007	321.4	21.5	6.7
2007/2008	322.2	25.4	7.9
2008/2009	323.0	29.4	9.1
2009/2010	323.8	31.5	9.7
2010/2011	324.3	33.6	10.4

- 5.60 Liable parties in the UK scheme must discharge their obligation by surrendering Renewable Obligation Certificates (ROCs) to the Register held by the Office of Gas and Electricity Markets. ROCs currently trade at roughly £47, which equates to about \$A110.<sup>179</sup>
- 5.61 Alternatively, liable parties can buy out their obligation, in a process which amounts to paying a shortfall charge. The buy out price, which is indexed to the Retail Prices Index<sup>180</sup>, is currently set at £30.51 per MWh. This money is then recycled to those liable parties who have chosen to meet their obligations using ROCs. In Australia, the shortfall charge is not indexed, and shortfall charges are returned to consolidated revenue.
- 5.62 During the course of the Review, the Review Panel has become aware of widespread expectations that many liable parties in the UK scheme will buy out their obligations rather than surrendering ROCs. This is not surprising since the £47 Renewable Obligation Certificate price represents more than 150 per cent of the buy out price.
- 5.63 Compliance reports for the 2002 to 2003 compliance period will not be submitted until 1 October 2003, at which time the level of compliance by surrendering ROCs can be determined.

<sup>178</sup> Table 4 source; UK Department of Trade and Industry: [www.dti.go.uk](http://www.dti.go.uk)

<sup>179</sup> Assuming \$A1 = £0.40

<sup>180</sup> Similar to the Consumer Price Index in Australia

- 5.64 A major difference between the UK and the Australian schemes is that in the UK scheme liabilities accrue to generators, not retailers or wholesalers. Another difference is the limited application of banking in the UK scheme. Liable parties, when meeting their obligation in the UK, may only meet 25 per cent of their obligation with ROCs which were created with respect to electricity generated in the immediately previous year. In other words, 75 per cent of the obligation must be met by ROCs created in the current year.<sup>181</sup>
- 5.65 A number of interested parties expressed the view that Australia should enhance the MRET measure by adopting similar features to those operating in the UK scheme, for example, by adopting higher targets or higher shortfall charges.
- 5.66 However, again it should be noted that straightforward comparisons on a partial basis are not appropriate in this instance, bearing in mind the fundamental differences between the two countries in the disposition of energy resources and fundamental renewable energy take-up.

*Texas renewable portfolio standard (RPS)*

5.67 Texas was an early mover in the adoption of renewable energy targets, and developed its scheme alongside the MRET scheme. The RPS scheme began operation on 1 January 2002, although the REC market had been open since July 2001.<sup>182</sup> Under the scheme, targets are set in terms of installed capacity (as opposed to the Australian and UK systems where the targets are set in terms of generation). The targets under the Texan scheme are as follows:

**Table 5**—Texas renewable portfolio standard targets<sup>183</sup>

Year	Target (MW)
2003	400
2005	850
2007	1400
2009	2000

<sup>181</sup> More information on this scheme, including a link to the relevant statutory instrument, is available at [http://www.dti.gov.uk/energy/renewables/policy/renewables\\_obligation.shtml](http://www.dti.gov.uk/energy/renewables/policy/renewables_obligation.shtml).

<sup>182</sup> Like Australia, the Texas RPS has renewable energy credits called 'RECs'

<sup>183</sup> Table 5 source; These figures, and much of the information in this section, were taken from Wisner and Langniss (2001) *The Renewables Portfolio Standard in Texas: An Early Assessment*. <http://www-library.lbl.gov/docs/LBNL/491/07/PDF/LBNL-49107.pdf>

- 5.68 Liable parties under the scheme are electricity retailers in the competitive portion of the Texan electricity market (approximately 80 per cent of the market), who share liabilities in proportion to the amount of electricity they supply. While the targets are set in MW, the purchase liabilities are set in MWh, so capacity conversion factors are used to determine the liable parties' purchase liabilities.
- 5.69 Liabilities must be met by the surrender of RECs which are equal to one MWh each. A three month grace period is available following each liability period, for the discharge of liabilities. RECs may be banked for up to two years.
- 5.70 If a liable party fails to meet its renewable electricity certificate obligation, a shortfall charge applies. The shortfall charge is US5c per missing kilowatt hour (kWh), (i.e. US\$50 per MWh) or 200 per cent of the mean renewable electricity certificate trade value in the compliance period, whichever is lesser.
- 5.71 The Texas RPS scheme has had some initial success, with wind farms totaling 930 MW capacity already installed, along with over 40 MW of landfill gas sites. A further 2650 MW of wind projects are in various stages of the approval process and, if half of these are successful, the target of 2000 MW will be assured.
- 5.72 Like the UK scheme, the Texan scheme is clearly of significant interest as a scheme with parallels to MRET. As is the case in comparing MRET with the UK scheme, there is no basis for a straightforward comparison that should favour one element over another in the Australian context. In fact, there may be good reasons for differences in schemes, taking into consideration the relative disposition of energy resources and fundamental renewable energy take-up.
- 5.73 The Review Panel does not consider that either the UK or the Texan scheme exhibit features or raise issues that warrant any change to MRET. The features of the MRET scheme are best viewed in the Australian context, having regard to the policy objectives set for it.
- 5.74 MRET's features in the Australian context are addressed in Chapters 7 and 8.