4.7 EnergyAustralia

EnergyAustralia is the largest single electricity retailer in Australia.

Strategy documents

EnergyAustralia negotiated a Draft Retail Greenhouse Gas Reduction Strategy dated 20 August 1998. It has since submitted updated 1-, 3- and 5-year plan documents as follows:

Title	Date of issue
NSW Electricity Licence Greenhouse Gas Reduction 1-, 3- and 5-Year Plans, 2000–01 – 2004–05	February 2001

The EPA has audited for effectiveness against the plan that was in place on 30 June 2000, and hence this performance audit is performed against the plan inherent in the 1998 strategy document.

In a response to an EPA request for a PST showing additional data, in particular forecasts and actual performance, EnergyAustralia has provided a comprehensive list of measures undertaken and results achieved. EnergyAustralia is to be commended for the thoroughness of information supplied in response to the EPA request.

Independent verification report

Examination and assessment of EnergyAustralia's IVR

In assessing the IVRs for 1999–2000, the EPA has reviewed each IVR against the criteria listed in Figure 3.1 and ranked each criterion using the grading system given on page 18.

In respect of the reliability and accuracy of the GHG emission data reported by EnergyAustralia, the EPA is of the opinion that there was a **high quantity** *of appropriate information to provide the EPA with reasonable assurance that the GHG emission data reported by EnergyAustralia is reliable and accurate.*

The audit opinion is based on the following findings in the IVR:

- The verification methodology appeared to be reported in a **high level** of detail.
- There appeared to be a **medium level** of detail on what was verified (e.g. which assigned generation declarations were verified) with respect to low-emission generation.
- There appeared to be a **medium level** of detail on how and when GHG emissions, emission reductions and ESF were verified and assumptions made by the independent verifier.
- There appeared to be a **high level** of detail on records, documents or other information used as verification evidence.

- There appeared to be a **high level** of detail on the qualifications and experience of the independent verifier.

Provision of performance data

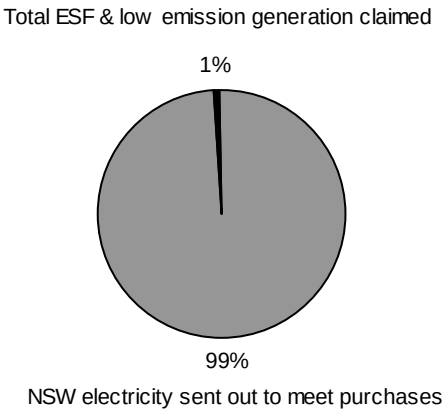
The EPA is of the opinion that the quantity and appropriateness of data provided by EnergyAustralia are generally **high***.*

EnergyAustralia has provided the EPA with additional data as required, and has generally provided reports and information to a **high standard** of data sufficiency and appropriateness. In general, the EPA commends EnergyAustralia on its standard of reporting.

Effectiveness of EnergyAustralia's GHG strategy

Comparison of pool purchases with low-emission options

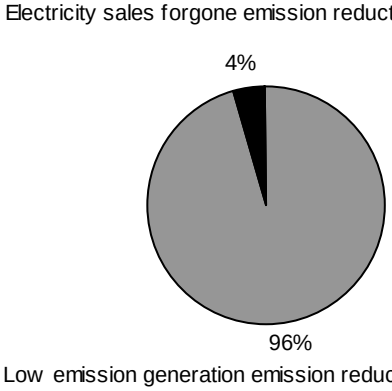
Figure 4.7.1 Low-emission options relative to pool purchases



In aggregate terms, low-emission actions undertaken by EnergyAustralia through this strategy represent approximately 1% of its total effective sales (Figure 4.7.1).

Comparison of contributions from supply-side (low-emission generation) and demand-side (ESF) measures

Figure 4.7.2 Proportion of ESF and low-emission generation activities claimed



Approximately 96% of EnergyAustralia's implemented activities under the GHG reduction strategy requirement are related to low-emission generation using assigned declaration agreements or under Greenpower accredited power purchases (Figure 4.7.2). The remaining 4% of implemented activities (by volume of GHG reductions claimed) related to ESF from energy efficiency (Figure 4.7.2).

Approximately 30% of the 4% of claims related to energy efficiency are made by using the SEDA deeming formula. The remaining ESF claim relates to 'customer-specific energy efficiency actions' undertaken by the EnergyFirst energy services company, and a variety of smaller energy efficiency actions.

Effectiveness of supply-side strategies (low-emission generation measures)

EnergyAustralia's plan for implementing its GHG reduction strategy for 1999–2000 comprised wind, hydro, biomass/biogas, solar, coal seam methane and large gas cogeneration.

A comparison of the forecast performance of measures in the revised strategy plan (August 1998) against the actual performance claimed by EnergyAustralia in its 1999–2000 greenhouse report is shown below:

	% of forecast achieved	Effectiveness	Proportion of total claim
Wind generation measures	+12.9%	Low	0%
Hydro generation measures	+12.7%	Low	2%
Biomass and biogas (including landfill) generation measures	+80.5%	High	98%
Solar generation measures	+64.2%	Medium	0%
Coal seam methane generation	+0.0%	Low	0%
Large gas cogeneration measures	+0.0%	Low	0%
Total	+29.1%	Low	100%

Note: Where cells record a 0% achievement, this means that the strategy included measures of those categories, but there were no successful implementations.

EPA's audit opinion on supply-side strategies

EnergyAustralia's supply-side GHG emission reduction strategy based on 'wind generation measures' achieved a **low level** *(< 35% of forecast) of effectiveness in reducing GHG emissions during 1999–2000.*

EnergyAustralia's supply-side GHG emission reduction strategy based on 'hydro generation measures' achieved a **low level** *(< 35% of forecast) of effectiveness in reducing GHG emissions during 1999–2000.*

EnergyAustralia's supply-side GHG emission reduction strategy based on 'biomass and biogas generation measures' achieved a **high level** *(> 70% of forecast) of effectiveness in reducing GHG emissions during 1999–2000.*

EnergyAustralia's supply-side GHG emission reduction strategy based on 'solar generation measures' achieved a **medium level** *(35%–70% of forecast) of effectiveness in reducing GHG emissions during 1999–2000.*

EnergyAustralia's supply-side GHG emission reduction strategy based on 'coal seam methane' achieved a **low level** *(< 35% of forecast) of effectiveness in reducing GHG emissions during 1999–2000.*

EnergyAustralia's supply-side GHG emission reduction strategy based on 'large gas cogeneration 'achieved a **low level** *(< 35% of forecast) of effectiveness in reducing GHG emissions during 1999–2000.*

Overall, against the planned implementation for 1999–2000 as outlined in the 1998 strategy document, EnergyAustralia has delivered only 29% of the planned measures (by CO_2-e emission reduction).

Overall the EPA is of the opinion that the sum total of low-emission generation measures undertaken by EnergyAustralia achieved a **low level** *(< 35% of forecast) of effectiveness in reducing GHG emissions during 1999–2000 against the plan forecasts as revised in January 2000.*

Effectiveness of demand-side strategies (ESF measures)

EnergyAustralia's demand-side strategies for 1999–2000 consisted of historical sales forgone—SEDA deeming formula, energy savings from energy audits—Sydney Electricity Energy Services (SEES) / Australian Energy Manager (AEM) activities, compact fluorescent lamp cash-back program and other historical programs, actions undertaken by the Energy First business, and energy efficiency programs to be delivered with SEDA.

Forecasts of energy efficiency improvements to be achieved on a commercial basis by EnergyFirst were significantly larger than were realised, and in 1998–99 EnergyAustralia decided to discontinue this business.

It is not clear from the documentation in the possession of the EPA what ESF activities will replace those originally planned.

Approximately 30% of the EnergyAustralia claim for ESF is claimed by using the SEDA deeming formula. As discussed elsewhere in this report, although such claims are legitimate under the current framework, the EPA is not confident in general of the reliability of claims made under a generic deeming formula.

The table below shows the performance of EnergyAustralia's ESF measures against forecast GHG emission reductions for 1999–2000:

ESF measures as outlined in 1998 strategy document	% of forecast achieved	Effectiveness	Proportion of total claim
ESF measure 1—Historical sales forgone—SEDA deeming formula. See Table 2 of additional information supplied by EnergyAustralia	+100.0%	High	32%
ESF measure 2—Energy savings from energy audits—SEES / AEM activities	+100.0%	High	39%
ESF measure 3—Compact fluorescent lamp cash-back program and other historical programs, pro-rated into current year using decay formula	+100.0%	High	6%
ESF measure 4—Actions undertaken by the EnergyFirst business	+8.5%	Low	23%
ESF measure 5—Energy efficiency programs to be delivered with SEDA	+0.0%	Low	0%
Total	+22.3%	Low	100%

Note: Where cells record a 0% achievement, this means that the strategy included measures of those categories, but there were no successful implementations.

Measures 1, 2 and 3 in the table are all historical in nature, having been fully implemented before the release of the 1998 strategy document. It is thus to be expected that there would be a 100% correlation between 'forecast' and 'actual' performance for these measures.

In 1999–2000 EnergyAustralia has implemented approximately 22% of ESF measures listed in the 1998 Strategy Document (measured by volume of CO_2-e).

EPA's audit opinion on demand-side strategies

EnergyAustralia's demand-side GHG emission reduction strategy based on the ESF measure 'historical sales forgone—SEDA deeming formula' achieved a **high level** *(> 70% of forecast) of effectiveness in reducing GHG emissions during 1999–2000.*

EnergyAustralia's demand-side GHG emission reduction strategy based on the ESF measure 'energy savings from energy audits—SEES / AEM' activities achieved a **high level** *(> 70% of forecast) of effectiveness in reducing GHG emissions during 1999–2000.*

EnergyAustralia's demand-side GHG emission reduction strategy based on the ESF measure 'compact fluorescent lamp cash-back program and other historical programs achieved a **high level** *(< 35% of forecast) of effectiveness in reducing GHG emissions during 1999–2000.*

EnergyAustralia's demand-side GHG emission reduction strategy based on the ESF measure 'actions undertaken by the EnergyFirst business' achieved a **low level** *(< 35% of forecast) of effectiveness in reducing GHG emissions during 1999–2000.*

EnergyAustralia's demand-side GHG emission reduction strategy based on the ESF measure 'energy efficiency programs to be delivered with SEDA' achieved a **low level** *(< 35% of forecast) of effectiveness in reducing GHG emissions during 1999–2000.*

Overall, the EPA is of the opinion that the sum total of demand-side strategy measures undertaken by EnergyAustralia has achieved a **low level** *(< 35% of forecast) of effectiveness in reducing GHG emissions during 1999–2000 against the plan forecasts as revised in January 2000.*

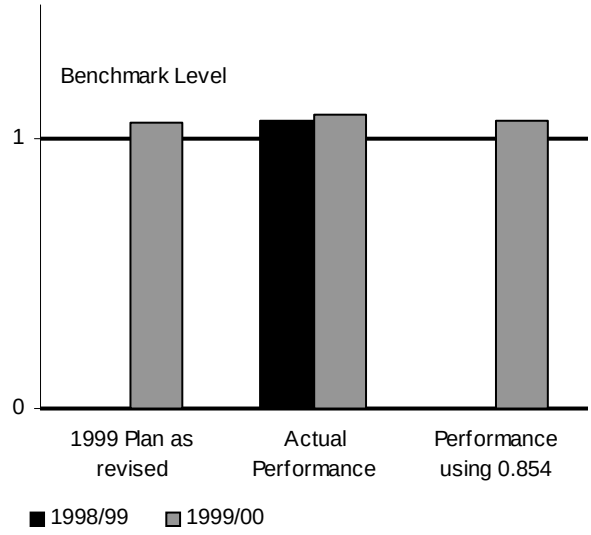
Assessment of overall effectiveness in reaching benchmark

EnergyAustralia has under-performed against the benchmark requirements (see below).

EnergyAustralia's performance against benchmark

Figure 4.7.3 shows EnergyAustralia's reported performance against its emission benchmark (the 1998–99 performance is included for comparison). A positive value implies that actual emissions exceeded the benchmark.

Figure 4.7.3 Performance against benchmark



See notes below Figure 4.1.3 on page 29.

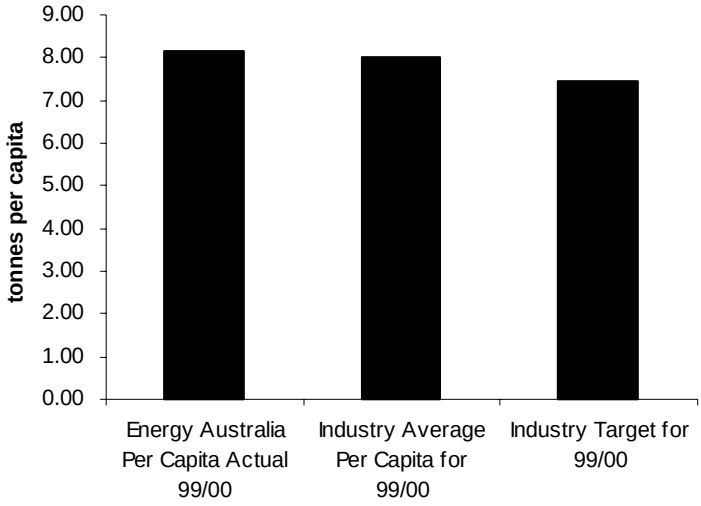
The EPA asked EnergyAustralia to provide a PST indicating the above data. EnergyAustralia complied, and the data presented in Figure 4.7.3 is derived against forecasts and planning figures provided in that additional information.

The EPA is of the opinion that EnergyAustralia's effectiveness in implementing its greenhouse reduction strategy is ***medium***.[27]

Per capita performance

Figure 4.7.4 shows EnergyAustralia's performance on a per capita basis (which is the manner of the target formulation).

Figure 4.7.4 Per capita performance



[27] The EPA gradings are as follows: high: retailer achieved benchmark emissions or lower; medium: retailer exceeded the benchmark emissions by < 10%; low: retailer exceeded the benchmark emissions by > 10%.