4.4 Australian Inland Energy

Australian Inland Energy holds a small proportion of the NSW electricity market, with a customer base of approximately 0.3% of the NSW population. By contrast, it has a franchise area of 155,100 square kilometres, covering 18.8% of the NSW land mass. Large parts of Australian Inland Energy's franchise area are non-economic, and are directly subsidised by the NSW State Government. There are few significant-sized customers located within Australian Inland Energy's franchise area, the largest of which is the Pasminco Zinc Mine.

Strategy documents

Australian Inland Energy's initial Greenhouse Gas Reduction Strategy is dated 20 July 1998, and has been accepted by the NSW Minister for Energy. The EPA has taken the position of auditing for effectiveness against the strategy plan that was in effect on 30 June 2000. Not having received any subsequent strategy document, the EPA has examined Australian Inland Energy against the plan inherent in the original strategy document.

Where quantitative assessment for implementation against a strategy is required, the EPA has made the assessment against the initial strategy document.

Independent verification report

Examination and assessment of Australian Inland Energy'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 Australian Inland Energy, 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 Australian Inland Energy 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 **high level** of detail on what was verified (e.g. which assigned generation declarations and attribution declarations for sales forgone were verified).
- There appeared to be a **high 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.

Recommendations for future IVRs

- Each of the mandatory reporting requirements could be addressed as separate sections.
- The EPA has some concern about the level of verification surrounding the ESF claim related to the energy audit at the Pasminco Mine in 1993–94. The IVR could explain further the manner of this verification.

Provision of performance data

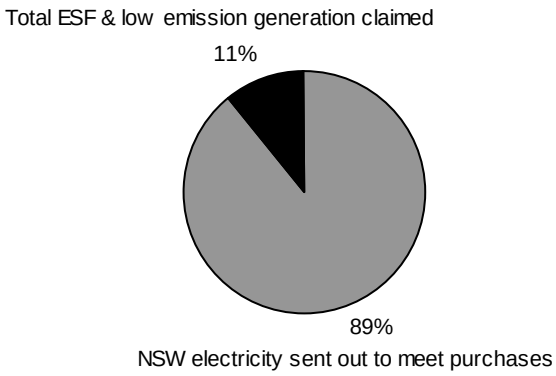
The EPA asked Australian Inland Energy to provide a PST, and Australian Inland Energy complied.

The EPA is of the opinion that the quantity and appropriateness of data provided by Australian Inland Energy are generally **medium***, given the relatively small number of activities undertaken.*

Effectiveness of Australian Inland Energy's GHG strategy

Comparison of pool purchases with low-emission options

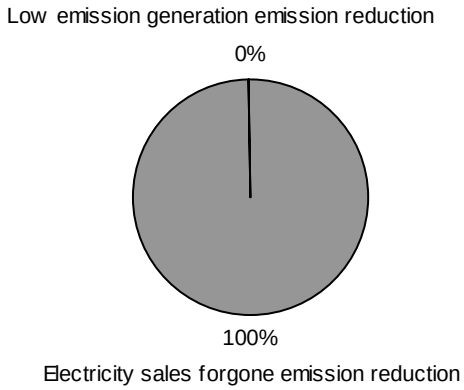
Figure 4.4.1 Low-emission options relative to pool purchases



Australian Inland Energy claims to have achieved significant energy efficiency savings, leading to approximately 11% of its 'effective' sales (that is electricity sales + ESF) being electricity sales forgone (Figure 4.4.1).

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

Figure 4.4.2 Proportion of ESF and low-emission generation activities claimed



One hundred per cent of Australian Inland Energy's claims for greenhouse abatement activities relate to energy efficiency claims with a small number of industrial clients (Figure 4.4.2). The great majority of this claim relates to an energy audit program undertaken with Pasminco in 1993–94.

Australian Inland Energy indicated in its *Greenhouse Gas Emissions Report 1999–2000* that Pasminco had put a halt on further investments in energy efficiency. This would appear to cast doubt on the maintenance of previous energy efficiency actions.

The IVR states only that this claim for ESF was verified in June 1998, and provides no additional information about the likelihood of this claim still being valid. The EPA is concerned about the reliability of this claim for ESF.

As discussed in the following sections, the EPA has reservations regarding the reliability of the claims for ESF, arising from the lack of demonstrated measurement and verification in the current period.

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

Australian Inland Energy's plan for implementing its GHG reduction strategy for 1999–2000 comprised only solar. The only low-emission generation measure claimed in the current period by Australian Inland Energy relates to the White Cliffs solar dish generation station. This unit is primarily a research and development (R&D) tool, rather than a commercial renewable energy generator. The low performance against projection is substantially due to changes and refurbishment being undertaken as part of an R&D program. As stated by Australian Inland Energy, generation was negligible during 1999–2000 for the following reasons:

- software upgrades and re-development
- upgrade of receivers

- most of the power generated being used to supply loads internal to the solar station itself.[24]

A comparison of the forecast performance of measures in the 1998 strategy plan (July 1998) against the actual performance claimed by Australian Inland Energy in its 1999–2000 greenhouse report is shown below.

	% of forecast achieved	Effectiveness	Proportion of total claim
Solar generation measures	+8.0%	Low	100%
Total	+8.0%	Low	100%

EPA's audit opinion on supply-side strategies

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

The EPA is of the opinion that overall the low-emission generation measures undertaken by Australian Inland Energy achieved a **low level** *(35% of forecast) of effectiveness against the forecast strategy as provided in 1998.*

Effectiveness of demand-side strategies (ESF measures)

Australian Inland Energy's demand-side strategies for 1999–2000 consisted of Pasminco Energy Conservation Projects 1998–99, customer energy efficiency audits and Pasminco energy audit 1993–94.

Australian Inland Energy claims to have been largely effective in the ESF strategy against projection. However, the ESF claims are dominated by claims related to an energy audit performed at the Pasminco Zinc Mine in 1993–94.

Australian Inland Energy's Greenhouse Gas Emissions Report does not adequately explain how the ESF savings relating to that work are quantified, and the IVR states only that these savings have previously been verified.

The 1998 1-, 3- and 5-year plans for Australian Inland Energy indicated that additional ESF would be obtained from another round of energy efficiency works at the mine, commencing in 1999–2000. However, Australian Inland Energy has reported that Pasminco is making no further investments in energy efficiency.

Given that Pasminco had decided to put a halt on further investment into energy efficiency, the maintenance of previous energy efficiency gains also seems subject to uncertainty. Without additional verification on these claims, the EPA is of the opinion that the reliability of the reported claims is low.

Australian Inland Energy's strategy also projected savings from 'customer energy efficiency programs'. Australian Inland Energy states that energy efficiency

[24] Australian Inland Energy's licence compliance report and greenhouse report 1999–2000.

activities have been undertaken with a number of customers, but it has not made any claims on the basis that the impacts could not be separated from other impacts on electricity consumption patterns, such as declining population.

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

	% of forecast achieved	Effectiveness	Proportion of total claim
ESF measure 1—Pasminco energy conservation projects 1998–99	+0.0%	Low	0%
	Project cancelled owing to mine closure		
ESF measure 2—Customer energy efficiency audits	+0.0%	Low	0%
	Not quantified, and no claim made against forecast		
ESF measure 3—Pasminco energy audit 1993–94	+101.9%	High	100%
	Claim based on historical audit in 1993–94		
Total	+76.0%	High	

EPA's audit opinion on demand-side strategies

Australian Inland Energy's demand-side GHG emission reduction strategy based on the ESF measure 'Pasminco energy conservation projects 1998–99' achieved a **low level** *(< 35% of forecast) of effectiveness in reducing GHG emissions during 1999–2000.*

Australian Inland Energy's demand-side GHG emission reduction strategy based on the ESF measure 'customer energy efficiency audits' achieved a **low level** *(< 35% of forecast) of effectiveness in reducing GHG emissions during 1999–2000.*

Australian Inland Energy's demand-side GHG emission reduction strategy based on the ESF measure 'Pasminco energy audit 1993–94' achieved a **high level** *(> 70% of forecast) of effectiveness in reducing GHG emissions during 1999–2000.*

Overall, if the ESF claim for the 1993–94 energy efficiency improvements is allowed at full value, then Australian Inland Energy has achieved a **high level** *(> 70% of forecast) of effectiveness in delivering its ESF program compared with the strategy forecast in 1998.*

However the EPA has reservations about the reliability of the above claim.

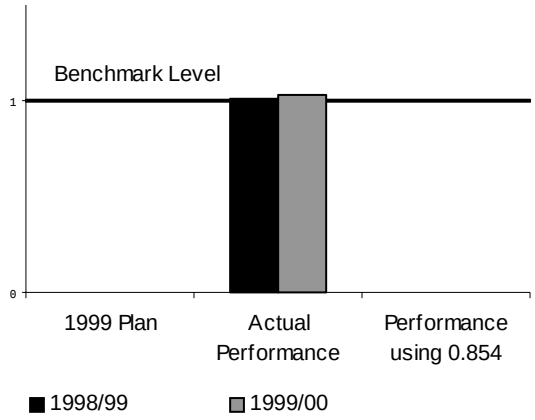
Assessment of overall effectiveness in reaching benchmark

Australian Inland Energy has under-performed against the benchmark requirements (see below).

Australian Inland Energy's performance against benchmark

Figure 4.4.3 shows Australian Inland Energy'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 4.4.3 Performance against benchmark



See notes below Figure 4.1.3 on page 29.

The EPA asked Australian Inland Energy to provide a PST indicating the above data. However, the PST supplied does not assess the performance targeted under the 1-, 3- and 5-year plans or performance using the benchmark pool coefficient of 0.854 kg/kWh. This information is not in any of the documents supplied to the EPA. Accordingly, the EPA is unable to quote Australian Inland Energy's planned performance against the benchmark.

However, the EPA is of the opinion that the overall effectiveness of the Australian Inland Energy strategy implementation is **medium**.[25]

Per capita performance

Figure 4.4.4 shows Australian Inland Energy's performance in per-capita terms (which is the manner of the target formulation).

[25] 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%.

Figure 4.4.4 Per capita performance