4.13 Origin Energy Electricity Ltd

Origin Energy Electricity Ltd is the trading name of the former energy division of Boral, which was separated and listed as a separate corporate entity on the Australian Stock Exchange in February 2000. For the purposes of electricity retailing, Origin Energy is the same entity as Boral Energy.

Strategy documents

Origin Energy negotiated a Greenhouse Gas Emissions Strategy dated July 1998. It has since submitted updated 1-, 3- and 5-year plan documents as follows:

Title	Date of issue
Origin Energy, Environmental Plan	22 January 2001

The first document contains forecasts that are applicable for auditing effectiveness for 1999–2000. Origin Energy also responded to an EPA request for a PST, and has summarised forecast and actual values for each claimed measure. The clarity of this data is to be commended.

The EPA has audited for effectiveness against the plan that was in effect on 30 June 2000, and accordingly the EPA assessment has been made against the July 1998 and PST documents.

Independent verification report

Examination and assessment of Origin 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 Origin 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 Origin Energy is reliable and accurate.*

However, the independent verifier failed to highlight the unorthodox nature of ESF claims arising from actions undertaken by Origin Energy in its role as a PSM for SEDA. Since this comprised the great bulk of Origin Energy's ESF claims, this omission is significant. The IVR did note that SEDA had been requested to provide information about the audit process undertaken in respect of that program, but also noted that the independent verifier had seen no such information. The report also noted: 'While the report [the IVR] does not specifically address energy sales forgone we have been satisfied through discussions that the calculations are sound.' The EPA does not believe that this is an adequate level of verification, particularly given the nature of the claims.

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 were verified) with respect to low-emission generation.
- 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 in a separate section.
- The IVR needs to address claims for ESF in additional detail.

Provision of performance data

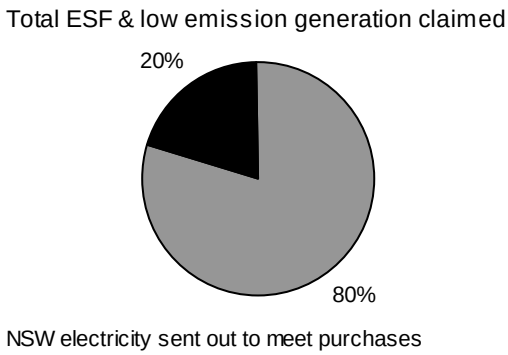
Origin Energy has cooperated with the EPA. Origin Energy's reports are among the most complete reports provided by any electricity retailer to the EPA, and the EPA is of the opinion that Origin Energy's reports have a **high level** of sufficiency and appropriateness of data.

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

Effectiveness of Origin Energy's GHG strategy

Comparison of pool purchases with low-emission options

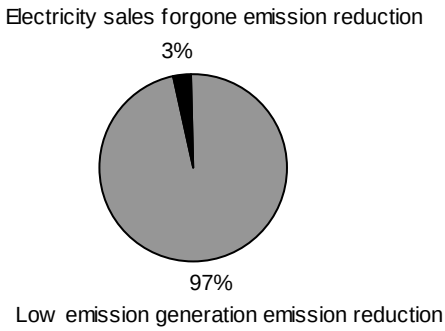
Figure 4.13.1 Low-emission options relative to pool purchases



Origin Energy's strategy for compliance contains a mix of large gas cogeneration projects and energy efficiency activities. In aggregate terms, low-emission actions undertaken through this strategy represent approximately 20% of total purchases (Figure 4.13.1).

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

Figure 4.13.2 Proportion of ESF and low-emission generation activities claimed



Approximately 97% of Origin Energy's implemented activities are related to low-emission generation purchased as Greenpower or using assigned declaration agreements (Figure 4.13.2). Approximately 3% of implemented activities (by volume of GHG reductions claimed) related to ESF from energy efficiency activities.

A significant proportion of the ESF claims relate to activities undertaken by Origin Energy as a PSM for the SEDA Energy Smart Business program. The Energy Smart Business program was not designed (in terms of audit, verification and recording of claims) in a manner that is directly consistent with the guidelines surrounding the current licence condition. Given that Origin Energy is paid by SEDA for delivering energy efficiency services to customers, the question arises of whether claiming these savings under the current scheme represents some form of double dipping between various NSW Government schemes.

On balance, the EPA feels that the claim for ESF from the PSM role is acceptable, and given the SEDA program verification requirements is probably a reasonably technically robust claim, although the IVR report is silent on this issue (see IVR assessment above).

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

Origin Energy's plan for implementing it GHG reduction strategy for 1999–2000 comprised cogeneration and gas generation.

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

	% of forecast achieved	Effectiveness	Proportion of total claim
Cogeneration measures	+109.8%	high	89%
Gas generation measures	+94.7%	high	11%
Total	+107.9%	high	

Origin Energy's claim for low-emission generation measures is dominated by gas generation and cogeneration plant. These plants exceeded the forecast performance for 1999–2000.

EPA's audit opinion on supply-side strategies

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

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

Overall the EPA is of the opinion that the sum total of low-emission generation measures undertaken by Origin Energy achieved a **high level** *(> 70% of forecast) of effectiveness in reducing GHG emissions during 1999–2000 against the plan forecasts provided in the PST.*

Effectiveness of demand-side strategies (ESF measures)

Origin Energy's demand-side strategies for 1999–2000 consisted of Boral Bricks, Boral Roofing, Blue Circle, PSM with SEDA and Boral Quarry.

The ESF activities claimed by Origin Energy (which are primarily under its PSM role with SEDA) appear to be reasonable. The independent verifier has not commented on the sufficiency or reliability of data supporting these claims.

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

	% of forecast achieved	Effectiveness	Proportion of total claim
ESF measure 1—Boral Bricks	No data		16%
ESF measure 2—Boral Roofing	No data		1%
ESF measure 3—Blue Circle	No data		33%
ESF measure 4—PSM with SEDA	No data		50%
ESF measure 5—Boral Quarry	No data		0%
Total	+100.0%[34]	High	

[34] Origin Energy has not provided forecasts of emission reductions for each measure. Hence, it is not possible to comment on the effectiveness at that level of detail. Origin Energy has, however, provided a forecast for ESF as a group, and has implemented activities to meet that forecast.

EPA's audit opinion on demand-side strategies

The effectiveness of Origin Energy's demand-side GHG emission reduction strategy based on the ESF measure 'Boral Bricks' could not be determined because no forecast of the impact of the measure was provided. Forecasts and actual performance data from such projects must be included in future PSTs and 1-, 3- and 5-year strategy plans.

The effectiveness of Origin Energy's demand-side GHG emission reduction strategy based on the ESF measure 'Boral Roofing' could not be determined because no forecast of the impact of the measure was provided. Forecasts and actual performance data from such projects must be included in future PSTs and 1-, 3- and 5-year strategy plans.

The effectiveness of Origin Energy's demand-side GHG emission reduction strategy based on the ESF measure 'Blue Circle' could not be determined because no forecast of the impact of the measure was provided. Forecasts and actual performance data from such projects must be included in future PSTs and 1-, 3- and 5-year strategy plans.

The effectiveness of Origin Energy's demand-side GHG emission reduction strategy based on the ESF measure 'PSM with SEDA' could not be determined because no forecast of the impact of the measure was provided. Forecasts and actual performance data from such projects must be included in future PSTs and 1-, 3- and 5-year strategy plans.

The effectiveness of Origin Energy's demand-side GHG emission reduction strategy based on the ESF measure 'Boral Quarry' could not be determined because no forecast of the impact of the measure was provided. Forecast and actual performance data from such projects must be included in future PSTs and 1-, 3- and 5-year strategy plans.

However, Origin Energy did provide aggregated forecasts and actual performance data on low-emission measures.

Using this data, overall the EPA is of the opinion that the sum total of low-emission generation measures undertaken by Origin Energy achieved a **high level** *(< 70% of forecast) of effectiveness in reducing GHG emissions during 1999–2000 against the plan forecasts as negotiated in July 1998.*

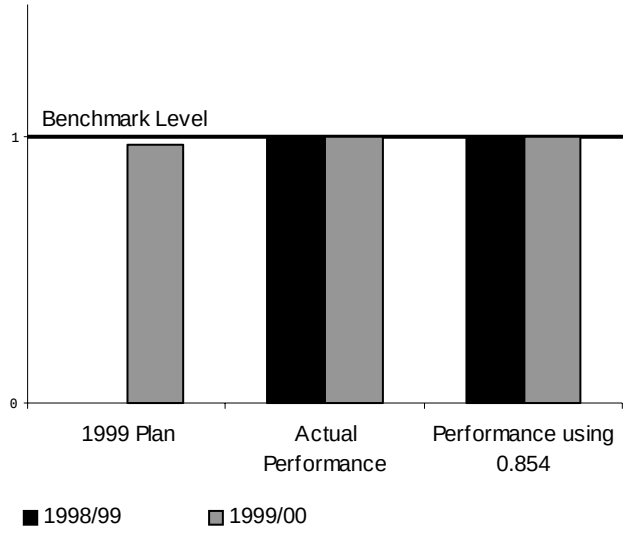
Assessment of overall effectiveness in reaching benchmark

Origin Energy achieved the benchmark requirements (see below). Origin Energy is one of only two NSW retailers to achieve the benchmark in 1999–2000.

Origin Energy's performance against benchmark

Figure 4.13.3 shows Origin 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 4.13.3 Performance against benchmark



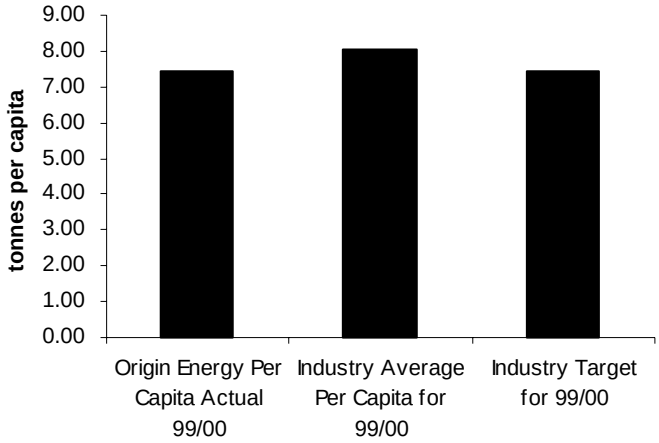
See notes below Figure 4.1.3 on page 29.

The EPA is of the opinion that Origin Energy's effectiveness in implementing its greenhouse reduction strategy is **high**.[35]

Per capita performance

Figure 4.13.4 shows Origin Energy's performance on a per capita basis (which is the manner of the target formulation).

Figure 4.13.4 Per capita performance



[35] 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%.