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**Ergon Energy's  
Financial and Service Quality  
Performance 2003-04**

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*March 2005*

# TABLE OF CONTENTS

	PAGE
<b>1. INTRODUCTION AND SUMMARY</b>	<b>1</b>
1.1 General Operating Background	1
<i>Network Characteristics</i>	<i>1</i>
1.2 Ergon Energy Customer Profile	2
1.3 Summary of Ergon Energy Financial Performance	3
1.4 Summary of Ergon Energy Service Quality Performance	4
<b>2. FINANCIAL PERFORMANCE</b>	<b>6</b>
2.1 Revenue and Expenditure	6
<i>Revenue</i>	<i>6</i>
<i>Operating and Maintenance Expenditure</i>	<i>8</i>
<i>Capital Expenditure</i>	<i>8</i>
<b>3. SERVICE QUALITY PERFORMANCE</b>	<b>10</b>
<i>Reliability Measures</i>	<i>10</i>
<i>Reliability of Worst Performing Feeders</i>	<i>13</i>
<i>Quality of Supply Measures</i>	<i>13</i>
<i>Customer Service Measures</i>	<i>15</i>
<b>APPENDIX A</b>	<b>23</b>

## 1. INTRODUCTION AND SUMMARY

As part of the Authority's 2001 Determination on the Regulation of Electricity Distribution<sup>1</sup>, the Authority required the Queensland Distribution Network Service Providers (DNSPs) to provide annual information on their financial and service quality performance. The Authority has proposed to continue these requirements for the 2005-10 regulatory period, albeit with a number of refinements to the processes. That issue is still to be finally determined.

The financial information is required to be submitted in accordance with the Authority's *Electricity Distribution: Regulatory Accounting and Information Guidelines* and the DNSPs' approved Cost Allocation Guidelines.

This Report provides an assessment of the financial performance of Ergon Energy for 2003-04, including a comparison with the financial forecasts that were included in the Authority's 2001 Determination and comparisons with the past financial performance of Ergon.

The service quality information is required to be submitted in accordance with the Authority's *Electricity Distribution: Service Quality Reporting Guidelines*.

The Guidelines require DNSPs to provide data on specific service quality measures on a quarterly and annual basis. While the DNSPs commenced reporting with the December quarter 2001 reports, the Authority only commenced publicly releasing the reports with the September quarter 2002 reports due to concerns about the robustness of the data.

As a result, 2002-03 was the first year for which the Authority had annual service quality data.

This report draws on data from both the annual and quarterly service quality reports, primarily for 2003-04, but also 2002-03.

The structure and content of this Report will evolve as financial and service quality information is accumulated and, over time, the Authority will be able to provide more in-depth commentary and analysis of the information presented.

### 1.1 General Operating Background

There are currently two DNSPs operating in Queensland, Energex and Ergon Energy<sup>2</sup>. Both distribution entities are owned by the Queensland Government and have legally separate but wholly owned subsidiary retailing operations.

#### *Network Characteristics*

The distribution entities have considerably different network characteristics.

Energex operates a largely urban network with relatively high customer density in southeast Queensland, whereas Ergon Energy operates a geographically dispersed network with low customer density that covers much of the remainder of the State.

Table 1 identifies key network characteristics that illustrate how different the distributors' networks are. A key difference is customer density. Specifically, while there are

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<sup>1</sup> The cost of electricity distribution represents approximately 40 % of an average residential customer's final bill, with the remainder consisting of costs associated with generation, high-voltage transmission and retailing of electricity.

<sup>2</sup> Country Energy (NSW) operates a franchise network on the Queensland/New South Wales border extending into Queensland.

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25.5 customers per kilometre of line in Energex’s network, Ergon Energy has just 4.2 customers per kilometre of line in its network.

These differences in network characteristics are an important determinant of the service quality performance of each distributor, particularly the reliability of their respective networks.

As a result, the service quality measures collected by the Authority are not intended to provide a comparison of the two DNSPs one with the other. Additionally it is to be expected that the distributors’ performances will vary significantly on a number of service quality measures.

It is for these reasons that this Report deals separately with Ergon Energy.

**Table 1: Network characteristics - 2003-04**

Network descriptor	Energex	Ergon Energy
Network service area (sq km)	25,264	1,698,100
Number of customers <sup>1</sup>	1,160,112	584,717
Energy delivered (GWh) <sup>1</sup>	18,990	12,776
Energy delivered per customer (MWh)	16.4	21.8
Kilometres of line	45,437	138,330 <sup>2</sup>
Customers per km of line	25.5	4.2
Maximum demand of network (MVA)	4,037	2,231
Number of distribution transformers	38,332	79,495
Asset utilisation (%) <sup>3</sup>	37.1	26.0
Distribution losses (%)	5.6	5.8

<sup>1</sup> These values are reported in the distributors’ regulatory accounts and differ slightly to the values reported for the same measures in the distributors’ service quality reports due to technical differences in the way they are defined.

<sup>2</sup> For year ending 30 June 2002. Ergon Energy was unable to provide updated data for 2003-04.

<sup>3</sup> Sub-transmission transformer utilisation factor. Electricity throughput (MWh) expressed as a percentage of sub-transmission transformer capacity (MVA) multiplied by the number of hours per year.

## 1.2 Ergon Energy Customer Profile

All customers with an average consumption of more than 200MWh a year, approximately 5,000 customers, were eligible to become contestable. The contestable customer groups of Ergon Energy consist of:

- *individually calculated customers* - those customers whose electricity consumption is sufficiently large to warrant individually calculated prices;
- connection asset customers (those customers whose electricity consumption is sufficient to warrant individually calculated connection charges but their remaining charges are averaged); and
- standard asset customers (customers who pay averaged charges).

The non-contestable customer group incorporates all franchise customers (customers who access a franchise price). The number of customers in each category and the corresponding units of electricity sold to each is presented below for Ergon Energy.

**Table 2: Customer numbers and units sold – Ergon Energy 2003-04**

Customer type	Customers		Units sold		Units sold per customer	
	Number	Percentage change from previous year	MWh	Percentage change from previous year	MWh/customer	Percentage change from previous year
Contestable customers						
Individually calculated customers	45	(21.1)	3,748,261	(1.7)	83,294.7	24.5
Connection asset customers	49	8.9	538,211	10.3	10,983.9	1.3
Standard asset customers	384	23.5	318,170	23.0	828.6	(0.4)
Non-contestable customers						
Franchise customers <sup>1</sup>	583,966	0	8,102,640	2.6	13.9	2.8
Embedded generators	3	50.0	-	-	-	-
Public street lighting	270	-	68,674	-	254.3	-
Total	584,717	0	12,775,956	2.5	21.8	2.6

<sup>1</sup> This category includes some potentially contestable customers which have not elected to enter the market.

While the number of Standard Asset Customers and Connection Asset Customers increased by 23.5% and 8.9% respectively during the year, a decline in Individually Calculated Customers and no change in Franchise Customers meant that the total number of Ergon Energy customers remained relatively unchanged during 2003-04. Energy sales increased 2.5% during the year following a modest 1.0% increase in 2002-03. This compares with forecast average growth of 3% per annum over the regulatory period.

### 1.3 Summary of Ergon Energy Financial Performance

Overall, the financial performance of Ergon Energy for 2003-04 was mixed compared with the forecasts underlying the 2001 Final Determination (see Table 3). Ergon Energy's actual revenue was relatively close to that allowed by the Authority, with an over-recovery of \$5.4 million. As a result, only minor adjustments to Ergon Energy's allowable revenue will be required in 2005-06 to return this over-recovery to customers (the 2003-04 data was not available in time for adjustments to be made to 2004-05 allowable revenue).

**Table 3: Ergon Energy financial performance - 2003-04**

	Actual 2002-03 (\$ mill)	Actual 2003-04 (\$ mill)	Forecast 2003-04 (\$ mill)	Variance from forecast 2003-04	
				(\$ mill)	(%)
Allowable revenue					
Distribution use of system charges	475.5	505.8	500.4	5.4	1.1
Capital contributions	19.9	17.5	17.5	0	0
Operating and maintenance expenditure	159.0	189.5	159.8	29.7	18.6
Capital expenditure	312.8	358.2	194.6	163.6	84.1

As part of the 2001 Final Determination, the Authority estimates the level of operating costs and capital expenditure required to deliver prescribed distribution services for each year of the regulatory period for each DNSP. While estimates were provided for each year of the regulatory period, actual annual operating and capital expenditure are likely to vary from those estimates in response to a range of external circumstances and operational requirements not foreseen at the time the estimates were made.

Following marginally higher-than-forecast operating and maintenance expenditure in 2002-03 (of \$159.0m), Ergon Energy spent \$29.7 million more than originally forecast in 2003-04. Ergon indicated that all categories of operating expenditure were higher than forecast during the year and attributed the increase to its ageing asset base and the continued effects of its Asset Inspection and Defect Management (AIDM) program introduced in 2001-02 with the aim of identifying and addressing potential maintenance issues on the network.

Capital expenditure was substantially higher-than-forecast for Ergon Energy (\$163.6 million or 84.1%). Ergon Energy recorded significantly higher than forecast asset replacement expenditure reflecting the impact of its AIDM program. Ergon Energy also recorded higher-than-forecast demand related expenditure reflecting higher-than-forecast growth in customer demand and difficulties associated with forecasting augmentation work and customer requested works at the start of the regulatory period. “Other” capital expenditure also increased reflecting a general increase in expenditure on non-system assets (motor vehicles, moveable plant) used to support the increased system capital expenditure program.

#### 1.4 Summary of Ergon Energy Service Quality Performance

As shown in Table 4, Ergon Energy customers, on average, experienced 5.10 distribution-related interruptions during 2003-04. With each interruption lasting an average of 110.1 minutes, customers were left without power, on average, for a total of 561.2 minutes during the year. These figures compare to the 4.50 interruptions per customer recorded for June 2003. With each interruption lasting an average of 109.8 minutes, customers were, on average, without power for 494.8 minutes during 2002-03. This indicates that the reliability of electricity supply for 2003-04 deteriorated compared to 2002-03.

Ergon Energy did not have any exclusions from the distribution-related reliability data for weather-related events in either year. Nevertheless, Ergon’s network was affected by storms in the March quarter 2004 and this appears to have been primarily responsible for the deterioration in reliability performance.

**Table 4: Summary of Ergon Energy’s reliability of supply performance - 2003-04**

	JUN 2003	SEP 2003	DEC 2003	MAR 2004	JUN 2004
Average number of interruptions per customer per year – distribution-related (SAIFI)	4.50	4.46	4.16	5.04	5.10
Average duration of each interruption per year – distribution-related (CAIDI) - minutes	109.8	111.5	112.0	114.7	110.1
Duration of all interruptions per customer per year – distribution-related (SAIDI) – minutes	494.8	496.8	465.4	578.3	561.2

The total number of quality of supply complaints received by Ergon Energy increased from 2,694 in 2002-03 to 3,034 in 2003-04. The lowest number of complaints received was in the September quarter 2003 (557) while the highest number of complaints received was in the March quarter 2004 (1,155).

Ergon Energy's performance against a range of customer service measures was mixed over the course of 2003-04, with a number of indicators affected by the March quarter 2004 storms:

- the length of time that customers had to wait to speak to an operator when calling the call centre was between 30 and 40 seconds, on average, in all quarters except the March quarter 2004 when it reached 61 seconds;
- the percentage of calls that were abandoned by callers increased slightly during 2003-04, up from 3.8% in the September quarter 2003 to 4.6% in the June quarter 2004, after reaching 7.7% in the March quarter 2004;
- the length of time that customers had to wait for a new connection to the network decreased significantly, from 6.3 days in the September quarter 2003 to 2.7 days in the June quarter 2004. However, this decrease was less dramatic when compared to the 3.7 days recorded in the June quarter 2003; and
- the proportion of total new supply connections that Ergon Energy failed to make by the agreed date decreased from 6.3% to 4.9% over the course of 2003-04 after rising to 8.5% in the December quarter 2003.

**Table 5: Summary of Ergon Energy's other service quality measures - 2003-04**

	<b>JUN 2003</b>	<b>SEP 2003</b>	<b>DEC 2003</b>	<b>MAR 2004</b>	<b>JUN 2004</b>
Total number of quality of supply complaints	589	557	669	1,155	653
Average waiting time to speak to an operator – seconds	88	29	38	61	36
Percentage of calls abandoned by customers	7.1	3.8	4.9	7.7	4.6
Average time taken for new connections - days	3.7	6.3	2.8	2.9	2.7
Percentage of new connections not made by the agreed date	4.5	6.3	8.5	7.0	4.9

## 2. FINANCIAL PERFORMANCE

### 2.1 Revenue and Expenditure

This chapter summarises the financial performance of the revenue cap regulated business segment of Ergon Energy.<sup>3</sup> The information is for the year ended 30 June 2004. The data used in the analysis has been drawn mainly from Ergon Energy's audited Regulatory Accounting Statements. These accounts were submitted in accordance with the Authority's *Electricity Distribution: Regulatory Accounting and Information Guidelines*.

Areas of particular interest concerning Ergon Energy's overall financial performance are revenue, operating and maintenance expenditure, and capital expenditure. Ergon Energy's reported results on these components compared with the corresponding forecasts that were included in the 2001 Final Determination and the previous year's actual data are presented below. Detailed financial data tables for Ergon Energy are provided at Appendix A.

#### *Revenue*

##### **Under/Over Recovery of Distribution Revenue**

In the 2001 Final Determination, the Authority set a maximum revenue cap for each of the four years of the initial regulatory period for Ergon Energy. The maximum revenue cap allows Ergon Energy to earn a return on assets, plus an allowance for depreciation and operating and maintenance expenditure incurred in the delivery of prescribed distribution services. The 2001 Final Determination also acknowledged the possibility of within-period adjustment to revenue caps to allow for agreed cost pass-throughs or corrections to the underlying revenue cap calculations. A cost pass-through allows Ergon Energy to increase/decrease its revenue cap in response to an increase/decrease in a cost that was unforeseen at the time of the 2001 Final Determination, is typically beyond its control and is readily observable.

During 2003-04, cost pass-through was permitted for costs associated with the Electrical Safety Office and QCA levies. Under legislation introduced by the Queensland Government, a number of functions previously undertaken by Ergon Energy were transferred to the Electrical Safety Office within the Department of Industrial Relations. The Electrical Safety Office is funded via a levy on both distributors.

The Authority reviewed Ergon Energy's application for pass-through of costs associated with the Electrical Safety Office and approved that an additional \$0.70 million be raised by Ergon Energy in 2003-04.

Similarly, the *Queensland Competition Authority Regulation 1997* was amended by Subordinate Legislation No. 3 of 2003 to provide for the charging of fees by the Authority. The Authority approved the pass-through of \$0.68 million in recognition of the QCA levy in 2003-04.

As part of the 2001 Final Determination, the Authority stated its intention to use an "unders and overs" account for each DNSP to ensure compliance with the annual revenue caps set in the Determination. The unders and overs process compares actual revenue earned in the year against the annual revenue cap for that year as determined by the Authority.

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<sup>3</sup> In addition to the revenue cap regulated activities, there were also a small number of distribution services regulated by the Authority in 2003-04 on a cost plus 5 % margin basis. Revenue from these activities amounted to around \$3.0 million (0.6 % of total revenue).

**Table 6: Ergon Energy DUOS revenue – 2003-04**

	\$ million (nominal)
Revenue earned during 2003-04	
Revenue from distribution tariffs	505.8
Revenue from capital contributions	17.5
<b>Total revenue earned</b>	<b>523.3</b>
<i>less</i> Allowable annual revenue (updated where necessary)	517.9
<b><i>equals</i> Over/(under) recovery for 2003-04</b>	<b>5.4</b>

Table 6 indicates that Ergon Energy over-recovered their allowed revenue by \$5.4 million (1.0%). As per the Authority's 2001 Final Determination, an over-recovery balance of less than 2% requires the distributor to clear the balance of their unders and overs account during the subsequent pricing period (2005-06).<sup>4</sup> Accordingly, the revenue over-recovery by Ergon Energy during 2003-04 will be rolled-forward and reflected in its allowable revenue for 2005-06 to be returned to customers through 2005-06 distribution prices.

#### **Under/Over Recovery of Transmission Use of System (TUOS) Charges**

TUOS charges are calculated by DNSPs each year to pass-through to distribution customers the cost levied by Powerlink for the use of the transmission system.<sup>5</sup> Electricity transmission charges are regulated by the Australian Competition and Consumer Commission (ACCC) and paid to Powerlink by DNSPs on behalf of end-customers. The Authority approves TUOS charges to be levied by the distributors that are intended to allow them to recover the TUOS charges they have paid to Powerlink.

In approving the (DNSP's) TUOS charges, the Authority's main aim is to ensure that these charges should reflect, as closely as possible, the structure of Powerlink's charges. Any difference between TUOS revenue recovered by DNSPs from customers and the charges they pay to Powerlink is recouped from/returned to customers through future (DNSP) TUOS charges.

**Table 7: Ergon Energy TUOS unders and overs account – 2003-04**

	\$ million (nominal)
TUOS charged by Powerlink	150.5
<i>less</i> actual TUOS revenue earned during 2003-04	150.5
<b><i>equals</i> Over/(under) recovery for 2003-04</b>	<b>0.0</b>

Table 7 indicates that Ergon Energy's customers were charged the correct amount for transmission services during 2003-04 and no adjustment to future (DNSPs) TUOS charges is therefore required.

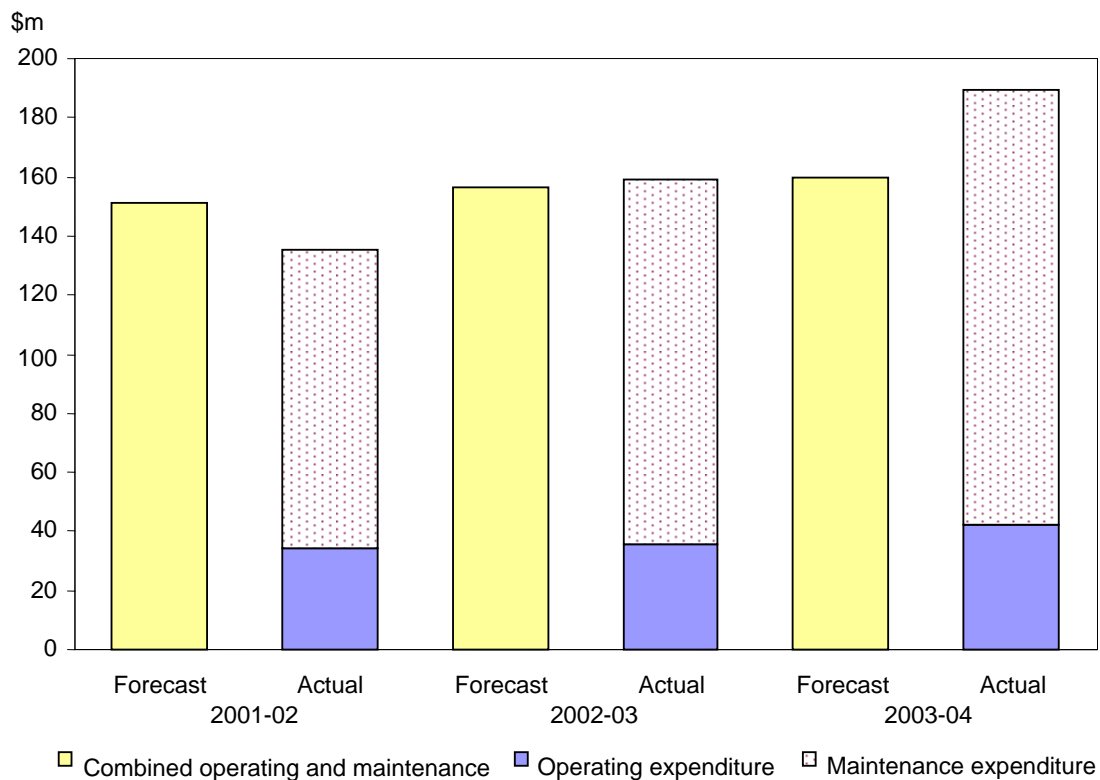
<sup>4</sup> Distribution prices for 2003-04 were required to be set in May 2003, before the receipt of the distributor's 2002-03 Regulatory Accounting Statements. This timing will always be the case meaning there will always be a 2 year lag between establishing an under/over recovery has occurred and its recoupment/return.

<sup>5</sup> TUOS charges are separately identified from DUOS charges under the Queensland electricity distribution pricing regime.

### Operating and Maintenance Expenditure

Figure 1 shows network operating and maintenance expenditure reported by Ergon Energy for 2001-02 to 2003-04, compared with the forecast operating and maintenance expenditure in the 2001 Final Determination. The Authority did not provide separate forecasts of operating and maintenance expenditure in the 2001 Final Determination.

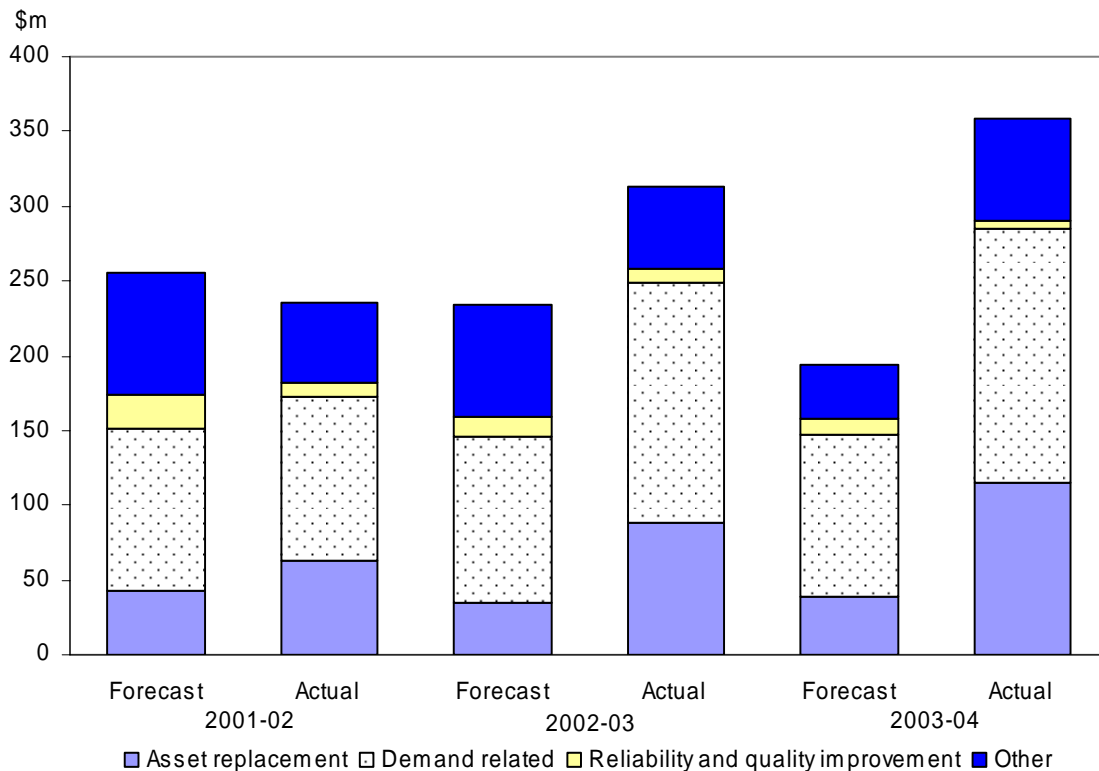
**Figure 1: Ergon Energy operating and maintenance expenditure – 2001-02 to 2003-04**



Following marginally higher-than-forecast operating and maintenance expenditure in 2002-03, Ergon Energy spent \$29.7 million more in 2003-04 than previously forecast. Ergon indicated that all categories of operating expenditure were higher-than-forecast during the year including pole inspections, substation maintenance and other preventative maintenance. Ergon attributed the increase to its ageing asset base and the continuing impact of Ergon's Asset Inspection and Defect Management program identifying a higher level of defects in the asset base requiring immediate maintenance expenditure.

### Capital Expenditure

Figure 2 shows network capital expenditure (in aggregate and by purpose) reported by Ergon Energy for 2001-02 to 2003-04, compared with the forecast capital expenditure. Capital expenditure was \$163.6 million (84.1%) higher than forecast during 2003-04. While Ergon Energy had been forecasting a declining capital expenditure requirement over the regulatory period at the time of the 2001 Final Determination, the reality has been the reverse.

**Figure 2: Ergon Energy capital expenditure – 2001-02 to 2003-04**

Asset replacement expenditure was 193.2% higher-than-forecast. Ergon attributed the increased expenditure to the continuing impact of its AIDM program (the inspection regime introduced in 2001-02 to establish the quality of poles, and associated equipment, as well as substation equipment). Ergon indicated that the program had identified the need for substantial increases in asset replacement expenditure.

Notwithstanding modest growth in energy sales, Ergon also recorded a significant increase in demand related expenditure (57.1%). Ergon attributed this increase to difficulties in forecasting expenditure requirements at the time of the 2001 Final Determination rather than any unusual growth in capital costs.

Ergon indicated that the significant increase in “other” capital expenditure (82.0%) reflected a general increase in expenditure on non-system assets (motor vehicles, moveable plant) used to support the increased system capital expenditure program. In addition, Ergon indicated that the original forecast of “other” capital expenditure was likely to have been conservative.

### 3. SERVICE QUALITY PERFORMANCE

This section summarises the service quality performance of the revenue cap regulated business segment of Ergon Energy. The information is for the year ended 30 June 2004 and is drawn from Ergon Energy's quarterly and annual service quality reports for 2003-04. These reports were submitted in accordance with the Authority's *Electricity Distribution: Service Quality Reporting Guidelines*. The Authority commenced posting service quality reports provided by the DNSPs on its website with the September quarter 2002 reports (released February 2003).

Historical information for 2002-03 has been included in this section as a guide to annual movements in the service quality measures. The 2002-03 information is based on Ergon Energy's June quarter 2003 report and its 2002-03 annual report. As data accumulates over time, the service quality performance of Ergon Energy will be able to be better assessed.

The service quality measures that the DNSPs are required to report against fall into three broad groups – reliability measures, quality of supply measures and customer service measures.

Reliability measures provide information about interruptions to electricity supply. Interruptions can occur because of problems with generation, transmission or distribution. Distribution interruptions may be planned or unplanned, and unplanned interruptions will at times be due to events that are beyond the control of the DNSPs, such as severe storms. A DNSP's performance is best indicated by the duration and frequency of planned and unplanned interruptions that are due to distribution network problems within the distributor's control (although lengthy and frequent interruptions due to other influences may indicate a need for improved risk management measures on the part of the distributors). Reliability data for worst performing feeders highlights pockets of the network where customers experience relatively poor service quality.

Quality of supply measures are intended to indicate problems with the nature of electricity supply, such as low or high voltage levels, based on customers reporting symptoms that are typically associated with such problems. For example, low supply voltage would be evidenced by complaints relating to light dimming or motor starting problems.

Customer service measures provide information about how customers' problems, enquiries and requests for services are handled.

#### *Reliability Measures*

Table 8 shows that, during 2003-04, Ergon Energy customers, on average, experienced 5.35 interruptions as a result of interruptions arising from all segments of the electricity supply chain, including generation, transmission and distribution. With each interruption lasting an average of 108.1 minutes, customers were left without power, on average, for a total of 578.4 minutes during the year.

These figures compare to the 5.18 interruptions experienced, on average, during 2002-03. With each of these interruptions lasting an average of 105.1 minutes, customers were left without power for an average 544.6 minutes during 2002-03. This indicates that the reliability of electricity supply for 2003-04 deteriorated compared to 2002-03.

**Table 8: Ergon Energy – average number and duration of total interruptions per customer**

	JUN 2003	SEP 2003	DEC 2003	MAR 2004	JUN 2004
Average number of interruptions per customer (SAIFI)	5.18	5.13	4.39	5.29	5.35
Average duration of each interruption (CAIDI) – minutes	105.1	106.6	110.2	112.7	108.1
Duration of all interruptions per customer (SAIDI) – minutes	544.6	546.6	484.0	596.0	578.4

As shown in Table 8, the number and duration of interruptions increased significantly in the March quarter 2004 which was the main contributing factor to the deteriorating reliability performance during 2003-04<sup>6</sup>. The March quarter 2004 performance was affected by storms, which had a significant impact on Ergon Energy's distribution network, the effect of which is shown in Table 9.

Reliability data can be affected by good and bad weather conditions, although interruptions within a distributor's network which affect at least 5% of total customers and are due to widespread storms or flooding, or other natural disaster, can be excluded from the data. For Ergon Energy, with its low customer density, it requires a fairly extreme event (such as a cyclone) to affect more than 5% of total customers. As a result, no events were excluded from Ergon Energy's reliability data in 2002-03 or 2003-04.

The Authority has foreshadowed in its Draft Determination on Electricity Distribution (December 2004) a move away from the current exclusion approach towards a statistically-based method for excluding the impact of severe weather-related events data.

Table 9 shows that the majority of interruptions on Ergon Energy's network were distribution-related. Specifically, the average number and duration of distribution-related interruptions increased from 4.50 interruptions and 494.8 minutes for 2002-03 to 5.10 interruptions and 561.2 minutes for 2003-04.

**Table 9: Ergon Energy – average number and duration of distribution-related interruptions per customer**

	JUN 2003	SEP 2003	DEC 2003	MAR 2004	JUN 2004
Average number of interruptions per customer (SAIFI)	4.50	4.46	4.16	5.04	5.10
Average duration of each interruption (CAIDI) - minutes	109.8	111.5	112.0	114.7	110.1
Duration of all interruptions per customer (SAIDI) – minutes	494.8	496.8	465.4	578.3	561.2

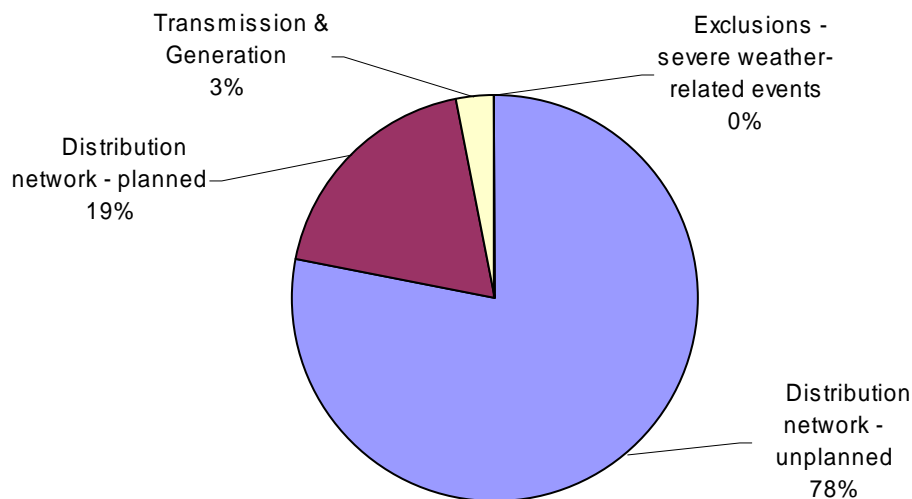
Unplanned interruptions arising in the distribution network accounted for the majority (78%) of the total 578.4 minutes that Ergon Energy customers were without electricity supply during 2003-04, as shown in Figure 3. Planned interruptions in the distribution network accounted for 19% of outages. Ergon Energy has indicated that this high proportion is partly explained by

<sup>6</sup> As quarterly reliability measures are based on 12 month rolling averages, comparison of reliability data for the December quarter 2003 and March quarter 2004 is effectively a comparison of reliability performance during the March 2003 and 2004 quarters.

increased asset replacement expenditure on the network due to the Asset Inspection and Defect Management program. Transmission and generation interruptions together made up the 3% balance.

In 2002-03, unplanned interruptions accounted for 72% of the total 544.6 minutes that Ergon Energy customers were without power, while planned interruptions on the distribution network accounted for 19% and transmission and generation interruptions together made up the 9% balance.

**Figure 3: Ergon Energy – duration of interruptions by source**



Total duration of interruptions - 578.4 minutes

Interruptions arising in the distribution network can be disaggregated according to geographic categories – that is, Urban, Short Rural and Long Rural.<sup>7</sup> As shown in Table 10, there were significant differences in the level of reliability across Ergon Energy's network during 2003-04. For example, customers in urban and short rural areas experienced increases in the duration of interruptions of 12 minutes and 31 minutes respectively from the June quarter 2003 to the June quarter 2004, while the period of time that customers in the long rural areas were without supply significantly increased by 423 minutes over the same period from an already very high level of 996 minutes.

**Table 10: Ergon Energy – duration of distribution-related interruptions by network type (minutes)**

	JUN 2003	SEP 2003	DEC 2003	MAR 2004	JUN 2004
Total distribution system	494.8	496.8	465.4	578.3	561.2
Urban	227.5	230.9	184.2	236.4	239.9
Short Rural	605.6	606.0	559.6	669.9	636.5
Long Rural	996.0	1,008.0	1,103.4	1,448.6	1,419.4

<sup>7</sup> Ergon Energy does not have any feeders that meet the definition of CBD.

### *Reliability of Worst Performing Feeders*

With the exception of Ergon's long rural feeders, the reliability of Ergon's worst performing feeders deteriorated in 2003-04 compared to 2002-03. It is likely that the storms in the March quarter 2004 were the primary reason for this result.

During 2003-04, Ergon Energy's 10 worst performing urban feeders supplied electricity to 3,188 customers (equivalent to 1.33% of Ergon Energy's urban customer base). On average, these customers experienced between 1.1 and 13.7 distribution-related interruptions, leaving them without power for between 18.2 hours and 43.8 hours.

In comparison, in 2002-03, Ergon Energy's 10 worst performing urban feeders supplied electricity to 4,285 customers (equivalent to 1.85% of Ergon Energy's urban customer base at June 2003). On average, these customers experienced between 2 and 13 distribution-related interruptions, leaving them without power for between 15.7 hours and 35.1 hours.

Only three worst performing feeders in 2002-03 were still among the 10 worst performing feeders for 2003-04.

In 2003-04, Ergon Energy's 10 worst performing short rural feeders supplied electricity to 1,694 customers (equivalent to 0.65% of Ergon Energy's short rural customer base). On average, these customers experienced between 5.2 and 36.6 distribution-related interruptions, leaving them without power for between 60.6 hours and 91.6 hours.

In comparison in 2002-03, Ergon Energy's 10 worst performing short rural feeders supplied electricity to 1,905 customers (equivalent to 0.75% of Ergon Energy's short rural base at June 2003). On average, these customers experienced between 11.2 and 24.0 distribution-related interruptions, leaving them without power for between 55.0 hours and 81.2 hours.

Only two of the worst performing feeders in 2002-03 were still among the 10 worst performing feeders for 2003-04.

In 2003-04, Ergon Energy's 10 worst performing long rural feeders supplied electricity to 4,056 customers (equivalent to 6.14% of Ergon Energy's long rural customer base). On average, these customers experienced between 11.1 and 34.2 distribution-related interruptions, leaving them without power for between 55.7 hours and 86.9 hours.

In comparison in 2002-03, Ergon Energy's 10 worst performing long rural feeders supplied electricity to 975 customers (equivalent to 1.51% of Ergon Energy's long rural customer base at June 2003). On average, these customers experienced between 10.8 and 36.1 distribution-related interruptions, leaving them without power for between 45.5 hours and 110.4 hours.

Only two worst performing feeders in 2002-03 were still among the 10 worst performing feeders for 2003-04.

### *Quality of Supply Measures*

The total number of technical quality of supply complaints received by Ergon Energy increased from 2,694 in 2002-03 to 3,034 in 2003-04. The fact that Ergon Energy was able to provide four previously unreported quality of supply measures (severe voltage dips, voltage spikes, waveform distortion or unbalances and noises from appliances or lights) beginning with the March quarter 2004 report could explain some of the increase in complaints from the previous year. Apart from these measures, the largest increases in complaints in 2003-04 were recorded for voltage swells (which can cause light bulbs to blow) and other non-categorised complaints.

**Table 11: Ergon Energy – quality of supply complaints – categorised according to symptoms**

	SEP 2003	DEC 2003	MAR 2004	JUN 2004	TOTAL
Total quality of supply complaints	557	669	1,155	653	3,034
Low supply voltage	183	229	417	194	1,023
Voltage dips –minor	267	331	154	89	841
Other complaints	0	0	274	144	418
Voltage swell	67	59	81	79	286
TV or radio interference	40	50	82	46	218
Voltage dips - severe	-	-	87	52	139
Waveform distortion or unbalance	-	-	27	27	54
Voltage spike	-	-	28	19	47
Noises from appliances or lights	-	-	5	3	8

*Note – Ergon Energy only started reporting voltage dips – severe, waveform distortion or unbalance, voltage spike and noises from appliances or lights from the March quarter 2004.*

While the total number of quality of supply complaints was similar at the beginning and end of 2003-04, the average time taken to investigate and resolve a quality of supply complaint decreased significantly over 2003-04, falling to 16 days in the June quarter 2004 (Table 12).

**Table 12: Ergon Energy – average time taken to fix a technical supply fault**

	SEP 2003	DEC 2003	MAR 2004	JUN 2004
Average time taken to fix a technical supply fault (days)	33	31	36	16

As shown in Table 13, most of the quality of supply complaints during 2003-04 that could be categorised were caused by network restrictions or events. All three categories of possible cause for the quality of supply complaints recorded higher numbers in 2003-04, although Ergon Energy was unable to identify a cause for a very large number of complaints. However, Ergon Energy has advised that it made improvements in collecting data on the possible causes of quality of supply complaints commencing in the March quarter 2004 and this partly explains the apparent increase in these numbers in 2003-04.

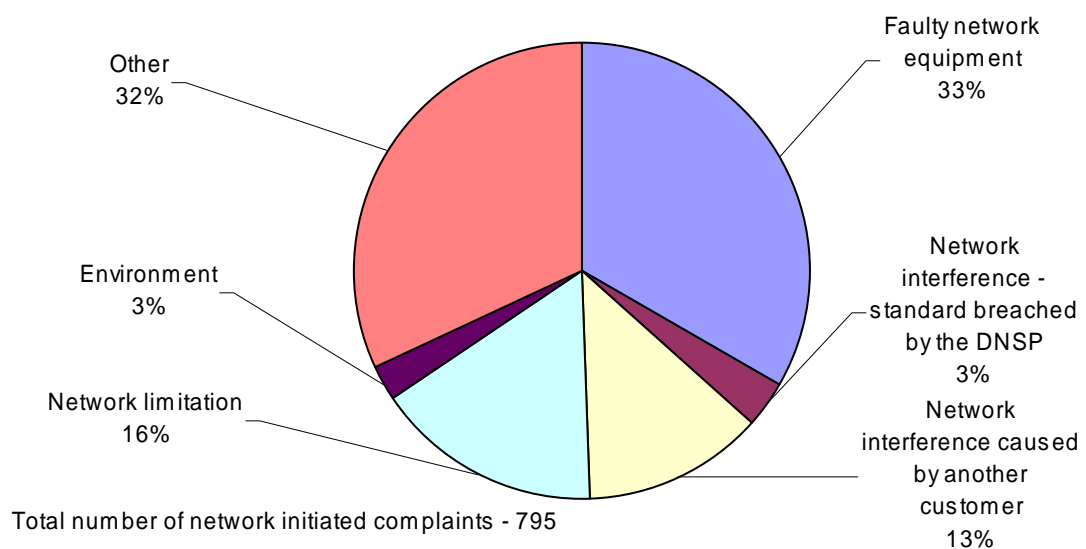
**Table 13: Ergon Energy – quality of supply complaints – possible causes**

	2002-03	2003-04
Network initiated quality of supply complaints	289	795
Quality of supply complaints initiated on the customer side of the meter	3	46
Quality of supply complaints for which no cause was found	51	187

*Note – the summation of the above categories of possible causes for quality of supply complaints do not equal the total of the four quarterly quality of supply complaints as listed in Table 11 and accompanying discussion, for both 2002-03 and 2003-04 by a large margin. This was due to data collection problems. Ergon Energy has advised that it will be reporting the number of complaints and associated causes for the complaints from one database system which should resolve these problems for the 2004-05 reporting year.*

As shown in Figure 4, network-initiated complaints are further broken down into sub-categories, of which faulty network equipment and ‘other’ network initiated complaints accounted for 33% and 32% respectively. Limitations on the distribution network and interference to the network arising from the operation of equipment by customers explained most of the remaining quality of supply complaints. With improvements in data collection, Ergon was able to provide a more useful break up of network initiated complaints for 2003-04 compared to 2002-03 when 94% of complaints were simply reported as ‘other’. It is hoped that further improvements will enable ‘other’ to be further reduced in future reports.

**Figure 4: Ergon Energy – causes of network initiated quality of supply complaints**

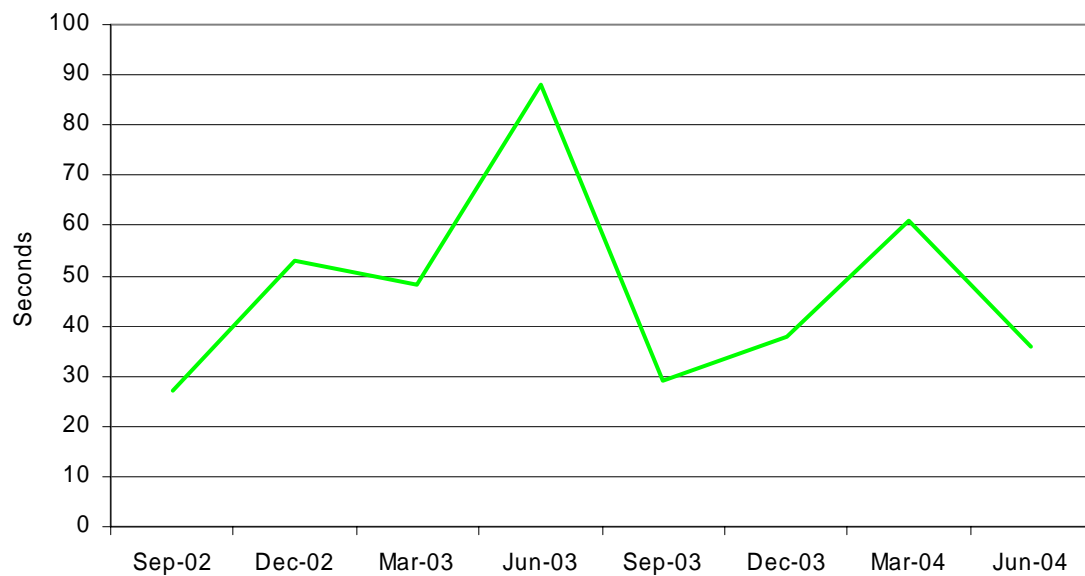


#### *Customer Service Measures*

Ergon Energy’s performance against a range of customer service measures was mixed over the course of 2003-04. The most important influence on the customer service measures was the storms in the March quarter 2004, which resulted in a worsening performance against a number of measures.

Ergon Energy’s call centre performance was mixed during 2003-04. As shown in Figure 5, the length of time that customers had to wait to speak to an operator when calling the call centre finished 2003-04 slightly higher than the start of the year, 36 seconds in the June quarter 2004 compared to 29 seconds in the September quarter 2003. However, the waiting time rose significantly in the March quarter 2004 to 61 seconds, most likely due to increased calls to the call centre in response to storm related outages.

Ergon Energy’s June quarter 2004 performance was still well below the time that customers had to wait to speak to an operator in the June quarter 2003 (88 seconds). In the June quarter 2004, 76.5% of calls were answered within 30 seconds compared to only 52.4% of calls at the end of 2002-03. However, during the March quarter 2004, only 59.9% of calls were answered within 30 seconds.

**Figure 5: Ergon Energy – average time waiting to speak to an operator**

As shown in Table 14, the percentage of calls abandoned deteriorated significantly in the March quarter 2004 to 7.7%, most likely reflecting the much higher than normal volume of calls to the call centre due to the storm activity in the quarter.

**Table 14: Ergon Energy – percentage of calls to the call centre that were abandoned by customers**

	SEP 2003	DEC 2003	MAR 2004	JUN 2004
Percentage of calls abandoned	3.8	4.9	7.7	4.6

The number of complaints that Ergon Energy received regarding the reliability of supply increased steadily over the first three quarters of 2003-04, reaching 539 in the March quarter 2004, before falling significantly to 200 in the June quarter 2004 (Table 15). The March quarter 2004 performance was the worst since the reporting of service quality performance began under the Authority's Guidelines, coinciding with the significant worsening of reliability performance as shown in Table 9. The total number of reliability of supply complaints for 2003-04 (1,290) was much higher than in 2002-03 (1,076).

**Table 15: Ergon Energy – number of reliability complaints**

	SEP 2003	DEC 2003	MAR 2004	JUN 2004	TOTAL
Number of reliability complaints	214	337	539	200	1,290

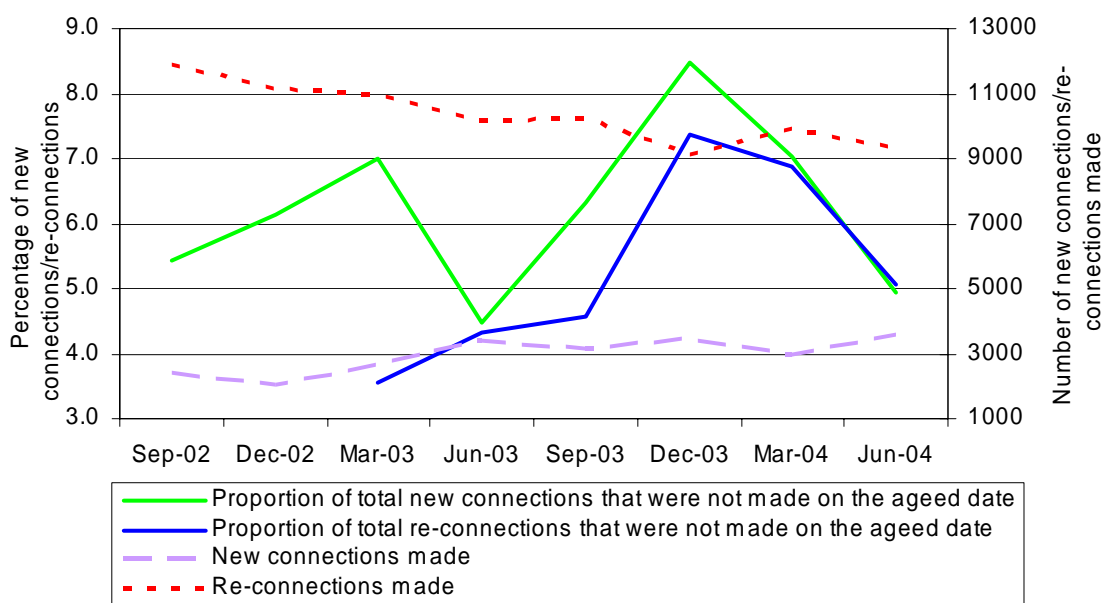
The proportion of total new supply connections that Ergon Energy failed to make by the agreed date peaked at 8.5% in the December quarter 2003, before falling to 4.9% in the June quarter 2004 (Figure 6). This figure was somewhat higher than in the June quarter 2003.

It may have been expected that the quarters recording a high proportion of new connections not made on the agreed date would correspond with quarters which had a higher than normal number of new connections required to be made. However, the historical information to date

does not show this, suggesting other variables are contributing to changes in the proportion of new connections not made on the agreed date.

The proportion of total re-connections of supply that were not made on the agreed date was variable, peaking at 7.4% in the December quarter 2003, before falling to 5.1% in the June quarter 2004. However, these results were still above the 3.6% recorded in the March quarter 2003 (the first quarter this measure was reported by Ergon Energy). The number of re-connections made has generally declined since the September quarter 2002.

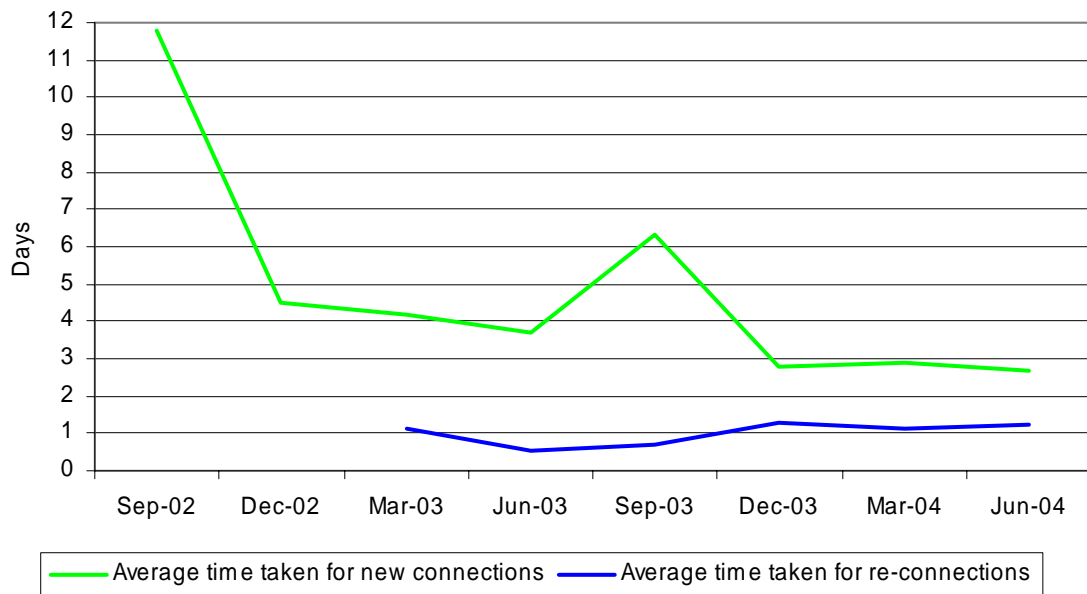
**Figure 6: Ergon Energy – number of new and re-connections made, proportion of new and re-connections not made on the agreed date**



As indicated in Figure 7, the average length of time that customers had to wait for a new connection to the network decreased from 3.7 days in the June quarter 2003 to 2.7 days in the June quarter 2004, after rising significantly to 6.3 days in the September quarter 2003. This was despite the number of new connections made increasing from the June quarter 2003 to 3,587 in the June quarter 2004.

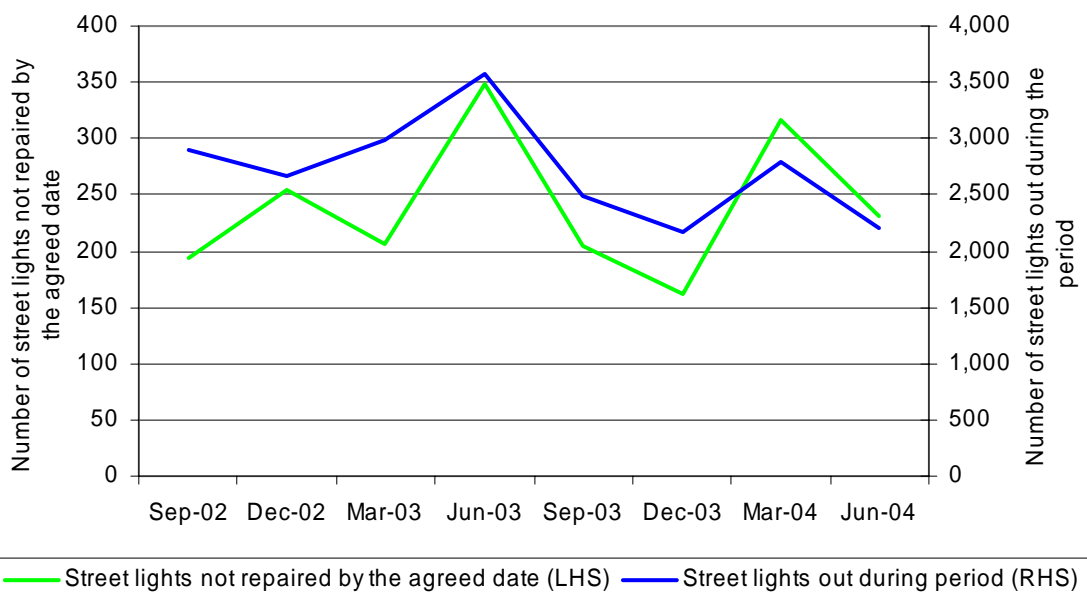
The June quarter 2004 recorded the shortest waiting time for a new connection since reporting of service quality data began under the Authority’s Guidelines, and represents a significant improvement from the 11.8 days that Ergon Energy’s customers had to wait during the September quarter 2002. Customers had to wait 29.5 hours, on average, in the June quarter 2004 to be re-connected compared to 13.4 hours, on average, in the June quarter 2003.

**Figure 7: Ergon Energy – average time taken for new connections and re-connections**



The number of street lights reported as being out was generally lower in 2003-04 than 2002-03, peaking at 2,783 in the March quarter 2004, probably due to the storms in that quarter (Figure 8). The number of street lights not repaired by the agreed date was also generally lower, with 232 reported in the June quarter 2004 compared to 349 in the June quarter 2003, reflecting the lower number of street lights requiring repair. The average time taken to repair faulty street lights in 2003-04 was comparable with that in 2002-03.

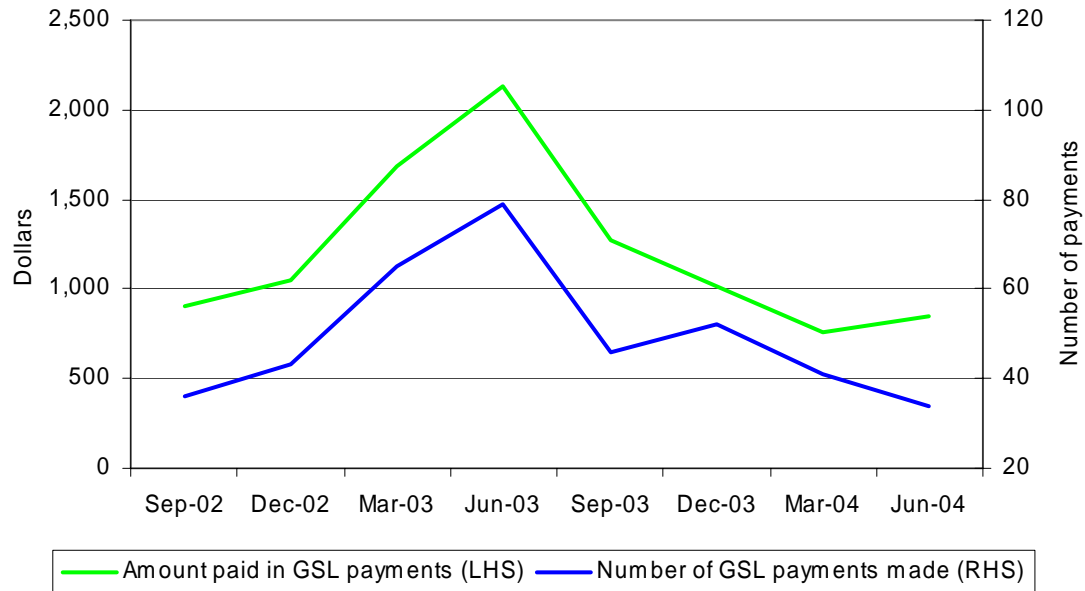
**Figure 8: Ergon Energy – street light maintenance**



The number of Guaranteed Service Level (GSL) payments and the amounts paid for GSLs both decreased in 2003-04 from the already very low levels recorded in the June quarter 2003 (Figure 9). The very low number of GSL payments and amounts paid could suggest that Ergon Energy’s customers were generally unaware of the GSL scheme. As discussed previously in

relation to Energex, the Queensland Government introduced a mandatory GSL scheme to apply from 1 January 2005.

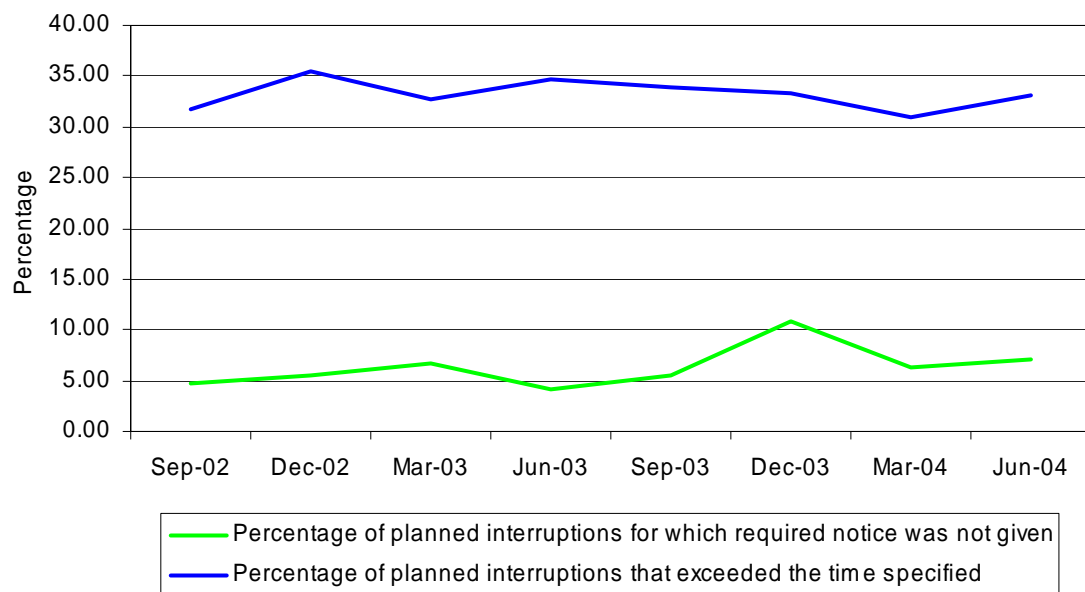
**Figure 9: Ergon Energy – Guaranteed service level payments**



Ergon Energy's performance in relation to notification of planned interruptions was mixed. For example, the proportion of occasions on which the required notice of a planned interruption to supply was not given (see Figure 10) peaked at 10.8% in the December quarter 2003 but ended the year at 7.2%. During 2002-03, the proportion of occasions on which the required notice of a planned interruption to supply was not given varied between about 4% and 7% suggesting a marginal worsening in performance in 2003-04.

In contrast, the proportion of occasions on which the duration of a planned interruption exceeded the time specified in the notification decreased slightly from an already high percentage in the September quarter 2003 of 33.9% to finish 2003-04 at 33.1%. During 2002-03, the proportion of occasions on which the duration of a planned interruption exceeded the time specified in the notification varied between 32% and 35%. This is an important measure of Ergon Energy's customer service performance given the large number of planned interruptions on its network (see Figure 3).

**Figure 10: Ergon Energy – notification of commencement and duration of planned interruptions**

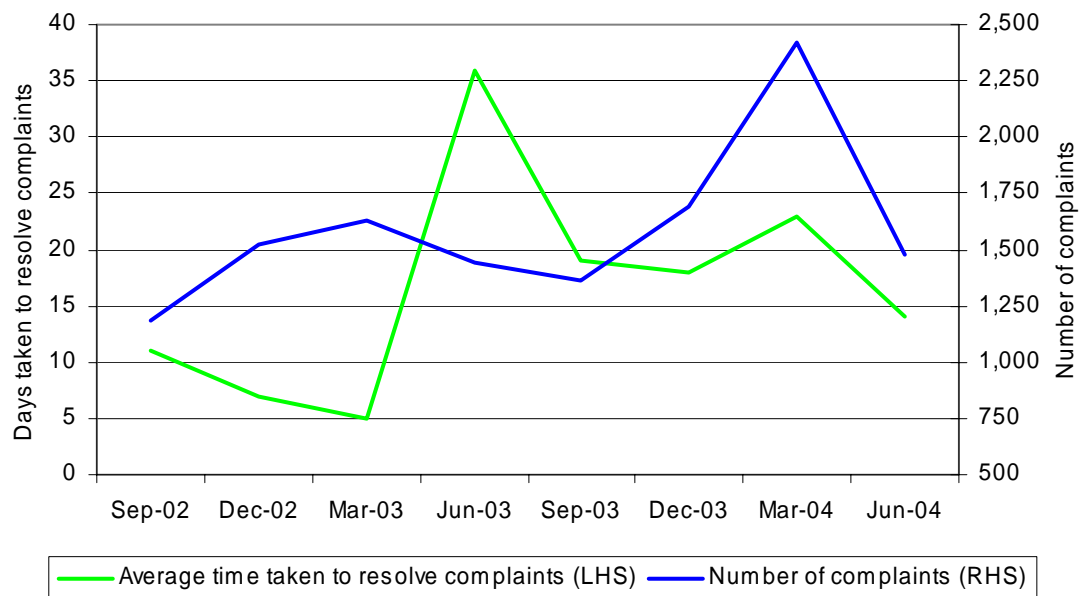


The total number of complaints received by Ergon Energy peaked in the March quarter 2004 at 2,419 (Figure 11). The sharp increase in complaints during the March quarter 2004 was predominantly due to a significantly higher number of technical quality of supply complaints most likely related to the storm activity in the quarter.

As mentioned previously, Ergon Energy was able to provide four previously unreported quality of supply measures beginning with the March quarter 2004 report. This explains some of the apparent increase in complaints for that quarter.

The total number of complaints received by Ergon Energy increased from 5,772 in 2002-03 to 6,950 in 2003-04. The largest increase in complaints in 2003-04 compared to 2002-03 was recorded for quality of supply and electrical interference.<sup>8</sup> However, the average time taken to resolve complaints decreased from 36 days in the June quarter 2003 to 14 days in the June quarter 2004.

<sup>8</sup> Customer service complaints did record the largest increase in complaints for 2003-04 but it was due to it being reported for only one quarter during 2002-03.

**Figure 11: Ergon Energy – complaint resolution**

*Note – includes reliability and quality of supply complaints. Ergon Energy made a change in the June quarter 2003 to improve its collection of data for complaint resolution, resulting in a discontinuity in the reported data and an inability to make a reliable comparison between the March quarter 2003 and June quarter 2003.*

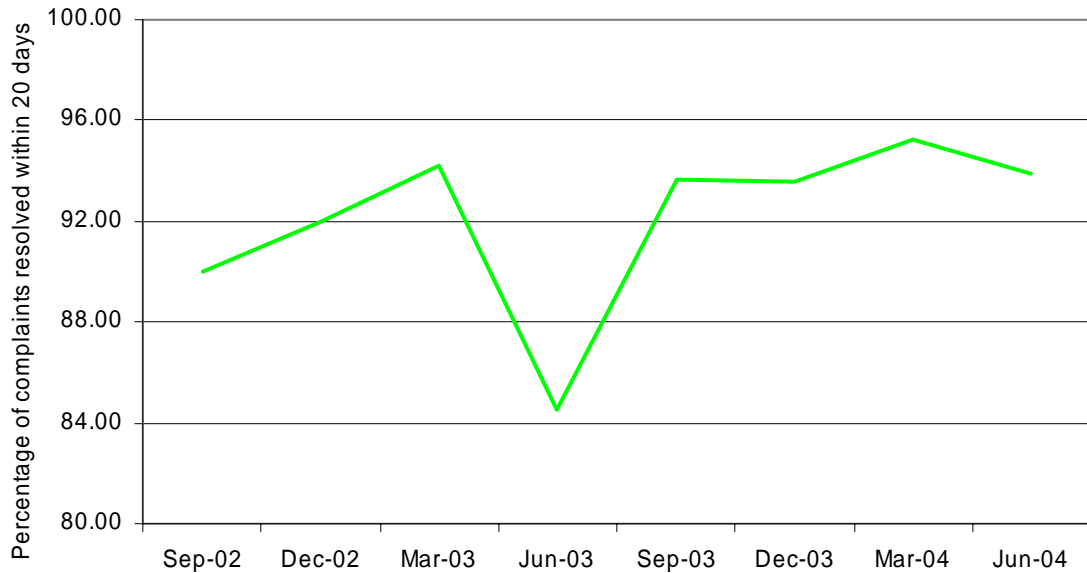
As shown in Table 16, quality of supply was the most significant cause of complaints during 2003-04.

**Table 16: Ergon Energy – complaint resolution – reasons for complaints**

	SEP 2003	DEC 2003	MAR 2004	JUN 2004	TOTAL
Total number of complaints	1,363	1,689	2,419	1,479	6,950
Quality of supply	476	669	1,155	653	2,953
Reliability	214	337	539	200	1,290
Field activity	167	168	197	141	673
Customer service	180	140	184	153	657
Trees	101	125	107	82	415
Meter reading	113	111	80	78	382
Other complaints	46	55	68	85	254
Supply – new extensions	22	39	37	46	144
Metering/Technical	10	22	13	12	57
Infrastructure	17	9	16	11	53
Streetlights	5	8	17	10	40
Environmental issues	11	5	5	6	27
Line Clearances	1	1	0	2	4
Suspected compliance failures	0	0	1	0	1

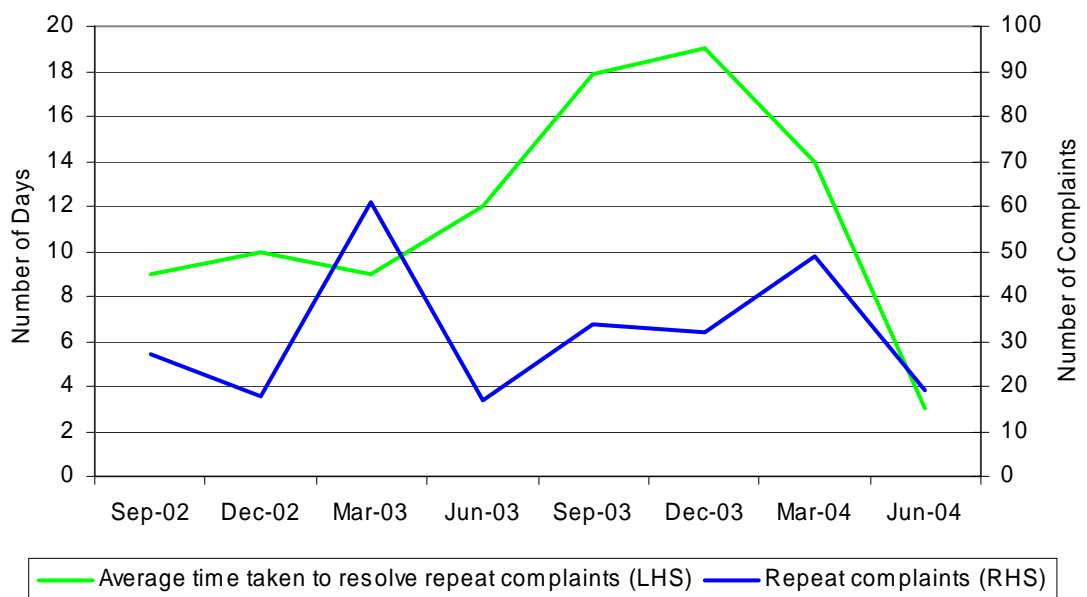
Ergon Energy resolved 93.9% of complaints within 20 days during the June quarter 2004, compared to 93.7% in the September quarter 2003 (Figure 12). The June quarter 2004 performance was a significant improvement on the 84.5% of complaints resolved within 20 days in the June quarter 2003.

**Figure 12: Ergon Energy – complaint resolution within 20 days**



The average time taken to resolve repeat complaints decreased from 18 days in the September quarter 2003 to 3 days in the June quarter 2004 (Figure 13). The June quarter 2004 performance was the lowest since reporting of service quality data began under the Authority’s Guidelines. Over 2003-04, the number of repeat complaints decreased from 34 to 19, which was low when compared to the historical data.

**Figure 13: Ergon Energy – repeat complaint resolution**



## APPENDIX A

## FINANCIAL DATA TABLES – 2001-02 to 2003-04

Table A1: Aggregate financial information – Ergon Energy (\$ million (nominal))

	2001-02	2002-03	2003-04
<b>Revenue</b>			
Forecast sales	447.5	476.05	500.4
Actual sales	443.9	475.5	505.8
<b>Expenditure</b>			
Forecast operating and maintenance expenditure	150.9	154.6	158.4
Actual operating and maintenance expenditure			
Operating expenditure	34.6	35.5	42.0
Maintenance expenditure	100.4	123.5	147.5
Total	135.0	159.0	189.5
Forecast depreciation	171.9	181.1	187.7
Actual depreciation	163.3	166.9	173.3
Total expenditure (forecast)	322.8	335.7	346.1
Total expenditure (actual)	298.3	325.9	362.8
<b>Customer contributions</b>			
Forecast	16.8	17.1	17.5
Actual	16.9	19.9	17.5
<b>Capital expenditure</b>			
Forecast	255.0	234.0	194.6
Actual	235.0	312.8	358.2
<b>Fixed assets</b>			
Forecast	2,707.6	2,817.4	2,882.8
Actual	2,640.7	2,801.7	3,078.1
<b>Energy Sales (million MWh)</b>			
Actual	12.3	12.5	12.8
<b>Number of customers</b>			
Actual	574,259	584,878	584,717

**Table A2: Revenue – Ergon Energy (\$ million (nominal))**

<b>Revenue source</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>
Sales			
Network services	443.9	475.5	495.3
Public lighting	Not separately identified		10.5
Other	131.9	145.7	142.7
Total	575.8	621.2	648.5
Capital contributions	16.9	19.9	17.5
Profit from sale of assets	(3.4)	0.8	(15.9)
Proceeds from sale of assets	1.5	4.8	5.2
Book value of assets sold	4.9	4.0	21.1
Other revenue	-	15.0	15.3

**FINANCIAL DATA – 2003-04****Table A3: Operating and maintenance expenditure – Ergon Energy (\$ million (nominal))**

<b>Expenditure</b>	<b>Ergon Energy*</b>
Operating expenditure	
Meter reading	7.0
Customer service	12.0
Advertising and marketing	0.1
Full retail contesability	0
Other	22.9
Total	42.0
Public street lighting	0
Total operating expenditure	42.0
Network maintenance expenditure	
Inspection	20.0
Maintenance and repair	95.7
Vegetation management	16.3
Emergency Response	13.7
Other	0.4
Total	146.1
Public street lighting	1.5
Total maintenance expenditure	147.5
<b>Total operating and maintenance expenditure</b>	<b>189.5</b>
Total corporate overheads included in O and M	8.7

\* May not sum due to rounding.

**Table A4: Depreciation - Ergon Energy (\$ million (nominal))**

<b>Asset</b>	<b>Ergon Energy</b>
System Assets:	
sub-transmission lines	21.1
distribution lines	38.2
substations	19.5
distribution transformers	20.1
low voltage supply	20.0
meters	11.6
communications	1.6
land & easements	-
buildings	1.0
other (balance)	0.5
Non-System Assets:	
building contents	3.5
motor vehicles	10.5
trailers	0.3
moveable plant	3.4
base stations	0.4
mobiles	0.2
office machines	0.6
computers	5.6
furniture and equipment	0.0
software	7.4
change programs	1.8
buildings	2.9
Public Street Lighting	3.2
Other	0.0
<b>Total</b>	<b>173.3</b>

**Table A5: Expected and remaining lives of assets – Ergon Energy**

<b>Asset</b>	<b>Expected weighted average economic life (weighted by ORC) (years)</b>	<b>Weighted average remaining economic life (weighted by ORC) (years)</b>
System Assets:		
sub-transmission lines	39	18.0
distribution lines	36	17.4
substations	40	18.6
distribution transformers	34	18.9
low voltage supply	43	22.2
meters	25	7.1
communications	15	6.4
land & easements	n/a	n/a
buildings	40	22.4
other (balance)	35	13.9
Non-System Assets:		
building contents	7	4.1
motor vehicles	8	4.4
trailers	10	2.0
moveable plant	7	2.7
base stations	7	0.9
mobiles	7	1.7
office machines	7	3.2
computers	4	1.8
furniture and equipment	7	6.5
software	6	3.6
change programs	5	0.9
buildings	40	18.8
Public Street Lighting	20	7.3
Other	7	3.0

**Table A6: Asset values - Ergon Energy (\$ million (nominal))**

<b>Asset</b>	<b>Ergon Energy</b>
System Assets:	
sub-transmission lines	469.8
distribution lines	780.8
substations	422.5
distribution transformers	421.7
low voltage supply	464.5
meters	86.7
communications	15.9
land & easements	35.7
buildings	23.8
other (balance)	6.7
work in progress	116.9
Non-System Assets:	
building contents	8.4
motor vehicles	57.4
trailers	1.2
moveable plant	11.7
base stations	0.8
mobiles	0.3
office machines	2.0
computers	10.7
furniture and equipment	0.6
software	43.7
change programs	1.5
buildings	58.2
Public Street Lighting	36.3
Other	0.1
<b>Total written down value</b>	<b>3,078.1</b>

**Table A7: Capital Expenditure and additions - Ergon Energy (\$ million (nominal))**

<b>Capital expenditure</b>	<b>Ergon Energy</b>
System Assets:	
sub-transmission lines	14.4
distribution lines	159.3
substations	31.0
distribution transformers	75.1
low voltage supply	13.1
meters	6.4
communications	2.0
land & easements	0.0
buildings	1.4
other (balance)	0.9
Non-System Assets:	
building contents	0.2
motor vehicles	18.2
trailers	-
moveable plant	3.8
base stations	-
mobiles	0.0
office machines	0.5
computers	5.6
furniture and equipment	0.1
software	0.7
change programs	16.0
buildings	6.2
Public Street Lighting	2.7
Other	0.4
<b>Total</b>	<b>358.2</b>

**Table A8: Capital expenditure by purpose - Ergon Energy (\$ million (nominal))**

<b>Capital expenditure</b>	<b>Ergon Energy</b>
Asset replacement	114.8
Demand related	170.2
Reliability and quality improvements	5.4
Other	67.9
<b>Total</b>	<b>358.2</b>

**Table A9: Related party transactions - Ergon Energy (\$ million (nominal))**

<b>Transaction</b>	<b>Ergon Energy</b>
Total value of related party transactions	Nil