



**Energex's
Financial and Service Quality
Performance 2003-04**

March 2005

TABLE OF CONTENTS

	PAGE
1. INTRODUCTION AND SUMMARY	1
1.1 General Operating Background	1
<i>Network Characteristics</i>	<i>1</i>
1.2 Energex Customer Profile	2
1.3 Summary of Energex Financial Performance	3
1.4 Summary of Energex Service Quality Performance	4
2. FINANCIAL PERFORMANCE	7
2.1 Revenue and Expenditure	7
<i>Revenue</i>	<i>7</i>
<i>Operating and Maintenance Expenditure</i>	<i>9</i>
<i>Capital Expenditure</i>	<i>10</i>
3. SERVICE QUALITY PERFORMANCE	12
<i>Reliability Measures</i>	<i>12</i>
<i>Reliability of Worst Performing Feeders</i>	<i>15</i>
<i>Quality of Supply Measures</i>	<i>16</i>
<i>Customer Service Measures</i>	<i>18</i>
APPENDIX A	27

1. INTRODUCTION AND SUMMARY

As part of the Authority's 2001 Determination on the Regulation of Electricity Distribution¹, the Authority required the Queensland Distribution Network Service Providers (DNSPs) to provide annual information on their financial and service quality performance. The Authority indicated in its Draft Determination (December 2004) that it 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 Energex 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 Energex.

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 did not commence publicly releasing the reports until the issue of 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 two DNSPs operating in Queensland, Energex and Ergon Energy². 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 the key characteristics of each network which illustrates the differences in the networks.

¹ 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.

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

A key difference is customer density; specifically, while there are 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 Energex.

Table 1: Network characteristics - 2003-04

Characteristics	Energex	Ergon Energy
Network service area (sq km)	25,264	1,698,100
Number of customers ¹	1,160,112	584,717
Energy delivered (GWh) ¹	18,990	12,776
Energy delivered per customer (MWh)	16.4	21.8
Kilometres of line	45,437	138,330 ²
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 (%) ³	37.1	26.0
Distribution losses (%)	5.6	5.8

¹ 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.

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

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

1.2 Energex Customer Profile

All customers with an average consumption of more than 200MWh a year, approximately 7,000 customers, were eligible to become contestable. The contestable customer groups of Energex consist of:

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

The non-contestable customer group incorporates all franchise customers who access a franchise price. The number of customers in each category and the corresponding units of electricity sold to each in 2003-04 are presented in Table 2.

Table 2: Energex customer numbers and units sold - 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	22	0	1,370,000	1.7	62,272.7	1.6
Connection asset customers	334	5.4	3,360,000	5.5	10,059.9	0.2
Standard asset customers	3,754	32.9	2,660,000	19.7	708.6	(9.9)
Non-contestable customers						
Franchise customers ¹	1,155,813	2.6	11,474,236	3.6	9.9	1.3
Embedded generators	2	0	2,105	(29.7)	1,052.5	(29.7)
Public street lighting	187	-	123,659		661.3	
Total	1,160,112	2.7	18,990,000	6.5	16.4	3.6

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

The number of Energex customers increased by 2.7% from the previous year, while energy sales increased 6.5% during the year following a 3.6% increase in 2002-03.

This compares with forecast average growth in energy sales of 4.2% per annum over the regulatory period.

The Standard Asset Customer category experienced the strongest growth in 2003-04 with an increase in customers of 32.9% and an increase in energy sales of 19.7%. However, this translated to a decline of 9.9% in units sold per customer.

Energex was unable to identify any particular reason for this decline in average consumption.

1.3 Summary of Energex Financial Performance

Energex over-recovered 2003-04 allowable revenue including capital contributions by \$33.5 million. After adjustment to 2005-06 values, the over-recovery will result in \$39.1 million being returned to customers in the next regulatory period as the 2003-04 data was not available in time for adjustments to be made to 2004-05 allowable revenue. As forecast, Energex's revenue in 2003-04 was higher than for the previous year.

Table 3: Energex financial performance - 2003-04

	Actual	Actual	Forecast	Variance from forecast	
	2002-03	2003-04	2003-04	2003-04	
	(\$ mill)	(\$ mill)	(\$ mill)	(\$ mill)	(%)
Allowable revenue					
Distribution use of system charges	505.1	535.9	523.6	12.3	2.3
Capital contributions	24.8	45.8	24.6	21.2	86.2
Operating and maintenance expenditure	121.0	135.4	179.3	(43.9)	(24.5)
Capital expenditure	281.7	302.9	253.3	49.6	19.6

As part of the 2001 Final Determination, the Authority estimated 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 estimates are made.

During 2003-04, Energex recorded operating expenditure of \$135.4 million, \$43.9 million below the \$179.3 million forecast in the 2001 Final Determination. Energex attributed this under-spend to a number of factors including the capitalisation of \$9.4 million of previously expensed costs being pole replacements and wild-life proofing services. In addition, Energex indicated that \$19.0 million of the \$43.9 million under-spend during 2003-04 was due to efficiency savings. This follows reported efficiencies of \$31.5 million in 2001-02 and \$50.8 million in 2002-03.³

Energex recorded higher-than-forecast demand related capital expenditure reflecting higher-than-forecast growth in network peak demand. Conversely, Energex reduced expenditure on non-system assets as a result of a rationalisation of its IT function. The higher-than-forecast aggregate capital expenditure also reflected a number of accounting adjustments, including capitalisation of both previously expensed costs and non-system assets depreciation during the year.

1.4 Summary of Energex Service Quality Performance

As shown in Table 4, Energex customers, on average, experienced 2.40 distribution-related interruptions during 2003-04. With each interruption lasting an average of 151.2 minutes, customers, on average, were left without power for a total of 362.6 minutes during the year. These figures compare to the 2.16 interruptions during 2002-03, with each interruption lasting an average of 96.4 minutes, resulting in, on average, 207.9 minutes of time without power. This indicates that the reliability of electricity supply for 2003-04 deteriorated compared to 2002-03. This deterioration was primarily due to a series of storm-related outages which occurred in the March quarter 2004.

The Authority's Service Quality Reporting Guidelines allow the impact of weather-related events that affect more than 5% of a DNSP's customer base to be removed from the reliability

³ The Authority noted in its Regulation of Electricity Distribution – Draft Determination (December 2004) that while there probably were some real efficiency gains made by Energex, these are difficult to identify or value due to changes to Energex's accounting policies.

data to facilitate an assessment of underlying performance. Six weather-related events met this test during 2003-04.

On this adjusted basis, Energex data suggests customers, on average, experienced 1.79 distribution-related interruptions during 2003-04. With each interruption lasting an average of 89.9 minutes, customers were left without power, on average, for a total of 160.6 minutes during the year. On the same adjusted basis, these figures can be compared to the 2.09 interruptions recorded during 2002-03, with each interruption lasting an average of 90.0 minutes, resulting in 188.3 minutes of time without power, on average, during 2002-03.

By removing the impact of unusual weather-related events from both years the reliability of electricity supply in 2003-04 improved compared to 2002-03.

Table 4: Summary of Energex’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) before excluded events removed	2.16	2.01	1.92	2.51	2.40
Average number of interruptions per customer per year – distribution-related (SAIFI) after excluded events removed	2.09	1.94	1.92	1.90	1.79
Average duration of each interruption per year – distribution-related (CAIDI) before excluded events removed - minutes	96.4	95.8	82.1	149.1	151.2
Average duration of each interruption per year – distribution-related (CAIDI) after excluded events removed - minutes	90.0	88.6	82.1	90.3	89.9
Duration of all interruptions per customer per year – distribution-related (SAIDI) before excluded events removed – minutes	207.9	192.0	157.2	374.3	362.6
Duration of all interruptions per customer per year – distribution-related (SAIDI) after excluded events removed – minutes	188.3	171.8	157.2	171.1	160.6

* All estimates are 12 month rolling averages.

The total number of reported quality of supply complaints received by Energex decreased from 2,732 in 2002-03 to 2,336 in 2003-04. The lowest number of complaints received was in the December quarter 2003 (482), while the highest number of complaints received was in the March quarter 2004 (677), reflecting the impact of the storms during the quarter.

However, following receipt of Energex’s March quarter 2004 service quality report, the Authority noted it was difficult to reconcile the reported number of complaints with the apparent experience of customers and the volume of calls reported in the media.

Energex’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 customers had to wait to speak to an operator when calling the call centre finished 2003-04 slightly better than at the start of the period (59 seconds in the September quarter 2003 compared to 50 seconds in the June quarter 2004), after reaching 88 seconds in the March quarter 2004;

- the percentage of calls abandoned by callers was 7.1% in the June quarter 2004, following a peak of 13.3%⁴ in the March quarter 2004;
- the length of time customers had to wait for a new connection to the network varied little over 2003-04, at just over 4 days; and
- the proportion of total new supply connections Energex failed to make by the agreed date stayed fairly constant at just above 5% for the first three quarters of 2003-04, before falling to 4.4 percent in the June quarter 2004. However, this was still above the 3.7% recorded in the June quarter 2003.

Table 5: Summary of Energex’s other service quality measures - 2003-04

	JUN 2003	SEP 2003	DEC 2003	MAR 2004	JUN 2004
Total number of quality of supply complaints	596	630	482	677	547
Average waiting time to speak to an operator - seconds	59	59	62	88	50
Percentage of calls abandoned by customers	7.3	8.5	9.5	13.3	7.1
Average time taken for new connections - days	4.05	4.07	4.09	4.10	4.06
Percentage of new connections not made by the agreed date	3.7	5.2	5.0	5.3	4.4

⁴ Only includes calls abandoned while waiting for an operator, does not include calls abandoned while waiting for a response from the Interactive Voice Response system.

2. FINANCIAL PERFORMANCE

2.1 Revenue and Expenditure

This section summarises the financial performance of the revenue cap regulated business segment of Energex.⁵ The information is for the year ended 30 June 2004. The data used in the analysis has been drawn mainly from Energex'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 Energex's overall financial performance are revenue, operating and maintenance expenditure, and capital expenditure. Energex'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 for Energex is 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 Energex. The maximum revenue cap allows Energex 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 the distributor 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 Energex 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 Energex's application for pass-through of costs associated with the Electrical Safety Office and approved that an additional \$2.30 million be raised by Energex 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 \$0.49 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.

⁵ 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 \$14.2 million (2.7 % of total revenue).

Table 6: Energex DUOS revenue – 2003-04

	\$ million (nominal)
Revenue earned during 2003-04	
Revenue from distribution tariffs	535.9
Revenue from capital contributions	45.8
Total revenue earned	581.7
<i>less</i> Allowable annual revenue (updated where necessary)	548.2
<i>equals</i> Over/(under) recovery for 2003-04	33.5

Table 6 shows that Energex over-recovered its allowed revenue by \$33.5 million (6.1%). The Authority's 2001 Final Determination indicates that an over-recovery balance of more than 5% requires the DNSP to document and submit a plan to the Authority describing how the resultant unders and overs balance is to be reduced during the next and following financial years. However, given the upcoming regulatory reset, the Authority decided to incorporate Energex's revenue over-recovery in its determination of allowable revenue in the regulatory period commencing on 1 July 2005⁶. Accordingly, the revenue over-recovery by Energex during 2002-03 will be rolled-forward and reflected in its allowable revenue for the period commencing 2005-06 to be returned to all customers through 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.⁷ Electricity transmission charges are regulated by the Australian Competition and Consumer Commission (ACCC) and paid to Powerlink by DNSPs on behalf of 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 the charges 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: Energex TUOS unders and overs account – 2003-04

	\$ million (nominal)
TUOS charged by Powerlink	162.9
<i>less</i> actual TUOS revenue earned during 2003-04	166.0
<i>equals</i> Over/(under) recovery for 2003-04	3.1

Table 7 indicates that TUOS recoveries from customers exceeded TUOS payments to Powerlink by \$3.1 million during 2003-04. Accordingly, Energex will be required to return this over-recovery of TUOS charges to customers as part of its 2005-06 TUOS charges.

⁶ Distribution prices for 2004-05 were required to be set in May 2004, before the receipt of the distributor's 2003-04 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.

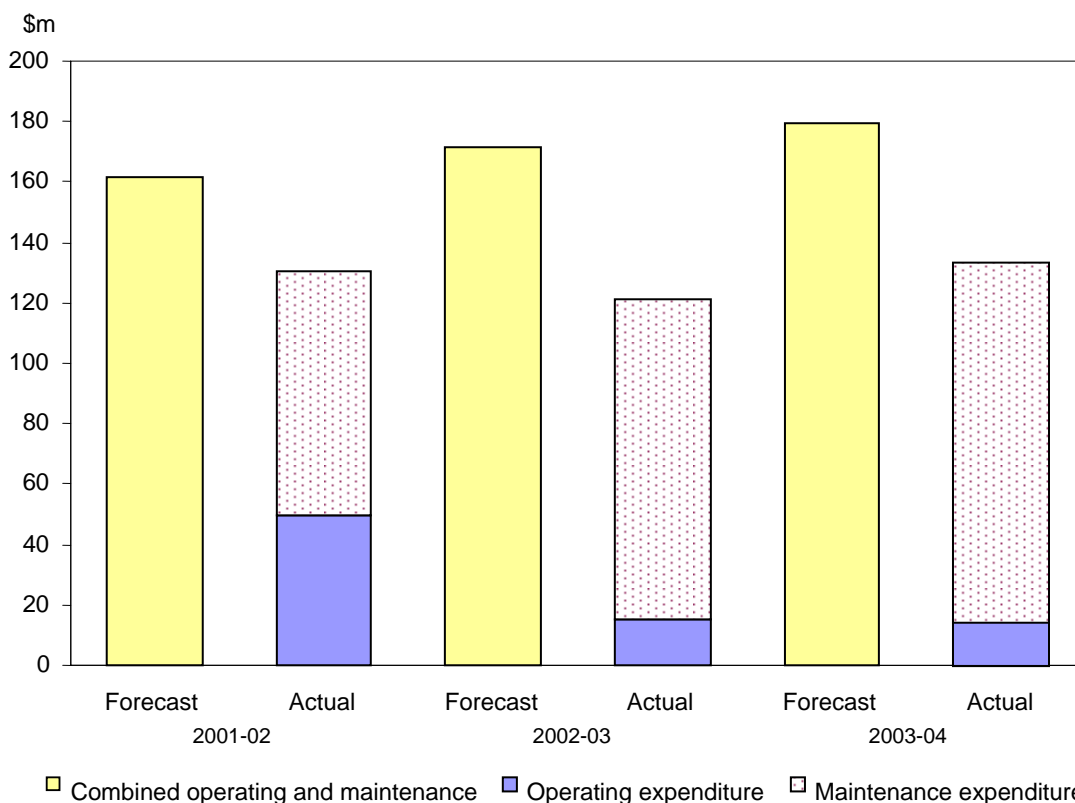
⁷ TUOS charges are separately identified from DUOS charges under the Queensland electricity distribution pricing regime.

Operating and Maintenance Expenditure

The regulatory framework is designed to give the distribution businesses an incentive to increase their forecast return by improving operating efficiency. To this end, the distributors retain the benefit of any efficiency gain for the remainder of the regulatory period or longer if provision were to be made for carry-over between regulatory periods.

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

Figure 1: Energex operating and maintenance expenditure – 2001-02 to 2003-04



Energex's operating and maintenance expenditure has been consistently below forecast during the regulatory period under review. Energex's operating and maintenance expenditure was \$43.9 million (24.5%) lower than forecast during 2003-04. Operating expenditure remained relatively stable, while maintenance expenditure increased moderately. This may be partially explained by the re-classification of costs previously attributed to operating activities to maintenance activities especially shared/common costs. However, changes made by Energex over the period to the individual cost categories make comparisons between the two periods difficult.

Energex indicated that changes to its organisational structure and accounting systems mean that "costing information presented for regulatory purposes prior to July 2001 is not comparable" with information presented subsequent to July 2001 and reflected in the 2003-04 accounts. However, Energex identified a number of explanations for the variance between forecast and actual operating and maintenance expenditure:

- capitalisation of pole replacements, previously expensed - \$9.3 million;

- capitalisation of wild-life proofing - \$0.1 million; and
- efficiency savings - \$19.0 million.

Energex has been unable to adequately explain the remaining \$15.5 million difference between forecast and actual operating and maintenance expenditure.

The first two of the above explanations relate to accounting adjustments. Importantly the capitalisation of pole replacements and wild-life proofing whilst lowering reported operating expenditure will result in a commensurate increase in reported capital expenditure.

Energex argued that the claimed \$19 million of efficiency savings were achieved through:

- shared service efficiency gains;
- greater network efficiency; and
- economies of scale.

Energex argued that efficiency gains were recorded mainly within shared services and to a lesser extent directly in the network businesses, while also arising from economies as a result of the increased scale of the Energex business. Energex has argued that shared services efficiency gains of \$11.1 million were achieved without any risk to network performance.

This under-spend on operating and maintenance costs follows similar outcomes in 2001-02 (\$31.5 million) and 2002-03 (\$50.8 million), making a total of \$126.2 million under-spent on operating and maintenance over the three years relative to the forecast at the time of the 2001 Final Determination⁸.

Given that previously expensed items such as pole replacement were capitalised in each of these years, and therefore now classified as capital expenditure, the effective under-spend was \$98.2 million over the three years.

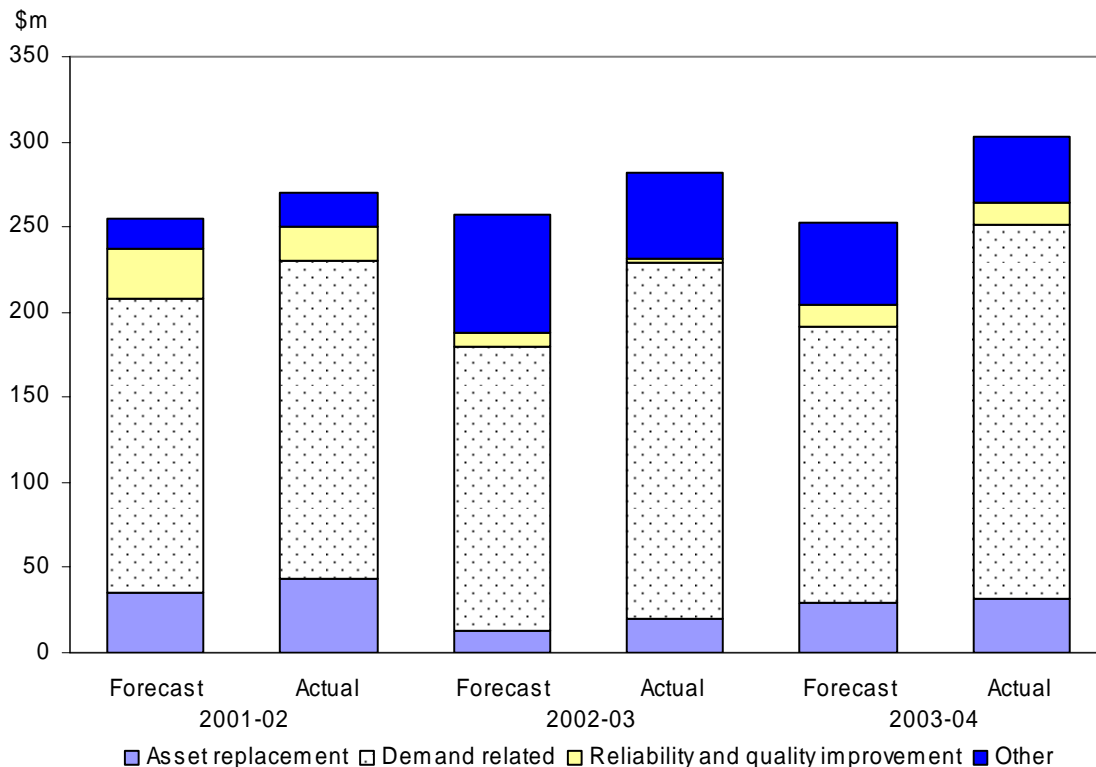
The Authority noted in its Regulation of Electricity Distribution – Draft Determination (December 2004) that, while there probably were some real efficiency gains made by Energex during the period, these are difficult to identify or value due to Energex's approach to preparing its regulatory accounts.

In light of the findings of the Electricity Distribution and Service Delivery Review critical of Energex's poor system maintenance, in its 2005 Draft Determination the Authority has indicated that it proposes to deduct the nominal value of this opex under-spend from Energex's future revenue in the next regulatory period.

Capital Expenditure

Figure 2 shows network capital expenditure in aggregate and by purpose reported by Energex for 2001-02 to 2003-04, compared with the forecast capital expenditure included in the 2001 Final Determination.

⁸ Includes an increased operating cost allowance due to the pass-through of Electrical Safety Office and QCA levies.

Figure 2: Energex capital expenditure – 2001-02 to 2003-04

Energex recorded capital expenditure of \$302.9 million during 2003-04, \$49.6 million (19.6%) higher than forecast. However, the higher-than-forecast aggregate capital expenditure reflects a number of accounting adjustments, including the capitalisation of \$9.4 million of previously expensed costs and the capitalisation of \$18.0 million worth of non-system asset depreciation (around 53% of the depreciation expense on shared assets) which Energex argued support both capital and operating activities.

The capitalisation of non-system/shared asset depreciation did not form part of Energex's capital expenditure forecasts provided as part of the 2001 Final Determination. This practice will increase the apparent size of the asset base and reported profits for statutory accounting purposes but has not been incorporated in the asset valuation prepared as part of the Authority's 2005 Draft Determination. Adjusted for these accounting changes, total capital expenditure was 8.8% higher than forecast.

Demand related expenditure dominated Energex's capital expenditure during 2003-04. Energex indicated that the significant increase in demand related capital expenditure (35.9%) reflected the adoption of an accelerated capital works program to address the rapid growth in network peak demand. This expenditure included:

- the installation of additional power transformers at zone and bulk supply substations;
- feeder upgrades; and
- distribution transformer upgrades.

Energex indicated that the major cause of the lower-than-forecast 'other' expenditure (17.7% down) was a reduction in spending on computer facilities due to a rationalisation of Energex's Information and Communications Technology function.

3. SERVICE QUALITY PERFORMANCE

This section summarises the service quality performance of the revenue cap regulated business segment of Energex. The information is for the year ended 30 June 2004 and is drawn from Energex'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 Energex's June quarter 2003 report⁹ and its 2002-03 annual report. As data accumulates over time, Energex's service quality performance will be able to be better assessed.

The service quality measures 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, Energex customers, on average, experienced 2.53 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 144.4 minutes, customers were left without power, on average, for a total of 365.0 minutes during the year. These figures compare to the 2.38 interruptions experienced on average during 2002-03. With each of those interruptions lasting an average of 95.5 minutes, customers were left without power for an average 227.8 minutes during 2002-03.

This indicates that the reliability of electricity supply for 2003-04 deteriorated compared to that provided in 2002-03. Interruptions resulted in an estimated 13,988 MWh of energy not being supplied to customers during the year, which was equivalent to 0.074% of total energy delivered to customers. These figures compare to 7,995 MWh of energy not supplied to customers in

⁹ The quarterly reliability measures are based on 12 month rolling averages. As a result, reliability data for the June quarter in 2004 reflects reliability performance during 2003-04.

2002-03, which was equivalent to 0.045% of total energy delivered to customers over that period.

Table 8: Energex – 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)	2.38	2.27	2.08	2.63	2.53
Average duration of each interruption (CAIDI) – minutes	95.5	93.9	79.2	142.9	144.4
Duration of all interruptions per customer (SAIDI) – minutes	227.8	213.4	164.5	376.5	365.0

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 deterioration in reliability performance during 2003-04¹⁰. The March quarter 2004 performance was affected by a number of storms which had a significant impact on Energex's distribution network.

Reliability data can be affected by good and bad weather conditions. Under the Authority's Guidelines, interruptions within a distributor's network which affect at least five per cent of customers and are due to widespread storms or flooding, or other natural disasters, are able to be excluded from the data. This is because such outages, which are beyond the control of the DNSPs, would otherwise distort the measurement of underlying reliability performance. Table 9 shows the distribution-related interruptions per customer during 2003-04, both before and after adjustment for severe weather-related events.

Table 9: Energex – 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) before excluded events	2.16	2.01	1.92	2.51	2.40
Average number of interruptions per customer (SAIFI) after excluded events	2.09	1.94	1.92	1.90	1.79
Average duration of each interruption (CAIDI) before excluded events - minutes	96.4	95.8	82.1	149.1	151.2
Average duration of each interruption (CAIDI) after excluded events - minutes	90.0	88.6	82.1	90.3	89.9
Duration of all interruptions per customer (SAIDI) before excluded events – minutes	207.9	192.0	157.2	374.3	362.6
Duration of all interruptions per customer (SAIDI) after excluded events – minutes	188.3	171.8	157.2	171.1	160.6

¹⁰ 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.

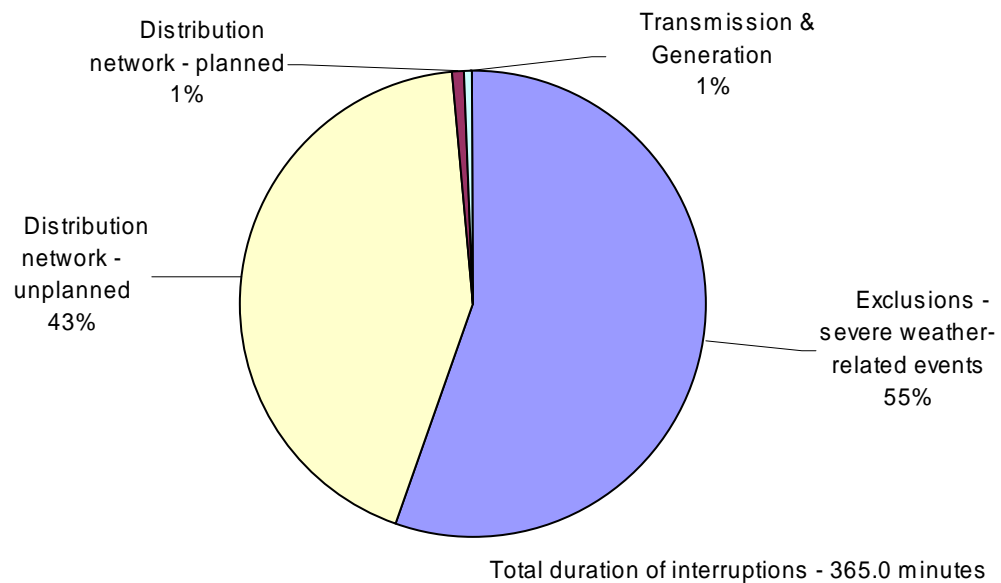
As shown in Table 9, Energex customers, on average, experienced 2.40 distribution-related interruptions during 2003-04. With each interruption lasting an average of 151.2 minutes, customers were left without power, on average, for a total of 362.6 minutes during the year. These figures compare to the 2.16 interruptions reported for 2002-03. With each interruption lasting an average of 96.4 minutes, customers were left without power for an average of 207.9 minutes during 2002-03. On this unadjusted basis, the data indicates that the reliability of electricity supply for 2003-04 deteriorated compared to 2002-03. This deterioration was primarily due to the impact of the storms in the March quarter 2004.

Six weather-related events met the test for exclusion during 2003-04. After adjusting the data to exclude these events, Energex customers, on average, experienced 1.79 distribution-related interruptions during 2003-04. With each interruption lasting an average of 89.9 minutes, customers were left without power, on average, for a total of 160.6 minutes during the year. These figures compare to the 2.09 interruptions reported for 2002-03. With each interruption lasting an average of 90.0 minutes, customers were left without power for an average 188.3 minutes during 2002-03. On this adjusted basis, the underlying reliability of electricity supply for 2003-04 improved compared to 2002-03.

The Authority has foreshadowed in its 2005 Draft Determination on Electricity Distribution (December 2004) a move away from the current exclusion approach towards a statistically-based 2.5 beta method for excluding the impact of severe weather-related events from reliability data on the grounds that it will provide a better measure of the DNSP's underlying performance.

Unplanned interruptions arising in the distribution network (of which excluded weather-related events are a sub-component) accounted for nearly all (98%) of the total 365 minutes that Energex customers were without electricity supply during 2003-04, as shown in Figure 3. Transmission and generation interruptions together accounted for only one per cent of outages, as did planned interruptions on the distribution network.

In contrast, in 2002-03, unplanned interruptions (including excluded events) accounted for 89% of the total 227.8 minutes that Energex customers were without power, while transmission and generation interruptions accounted for 9% and planned interruptions on the distribution network made up the 2% balance. Over half of the total time customers were without power during 2003-04 was as a result of the impact of the storm events in the March quarter 2004. In 2002-03, outages that met the exclusion test only contributed 9% of the outages.

Figure 3: Energex – duration of interruptions by source

Interruptions arising in the distribution network after the removal of excluded events can be disaggregated according to geographic categories – that is, Central Business District (CBD), Urban and Short Rural.¹¹ As shown in Table 10, there were significant differences in the level of reliability across Energex’s network over the course of 2003-04. Customers in urban and short rural areas experienced decreases in the duration of interruptions of 32 minutes and 26 minutes respectively, while the period of time that customers in the CBD were without supply decreased by 0.7 minutes from an already very low level of 1.3 minutes.

Table 10: Energex – duration of distribution-related interruptions by network type (minutes) after removal of exclusion events

	JUN 2003	SEP 2003	DEC 2003	MAR 2004	JUN 2004
Total distribution system	188.3	171.8	157.2	171.1	160.6
CBD	1.3	0.9	0.8	0.6	0.6
Urban	160.6	137.3	121.7	137.2	128.6
Short Rural	242.8	232.8	219.9	231.1	217.1

Reliability of Worst Performing Feeders

The reliability of Energex’s worst performing feeders worsened in 2003-04 compared to 2002-03. It is likely that the storms in the March quarter 2004 were the main reason for this result.

During 2003-04, Energex’s 10 worst performing urban feeders supplied electricity to 18,216 customers (equivalent to 2.42% of Energex’s urban customer base). On average, these customers experienced between 1.6 and 9.0 distribution-related interruptions (without adjusting the data for exclusions), leaving them without power for between 31.0 hours and 49.3 hours.

¹¹ Energex does not have any feeders that meet the definition of Long Rural.

In comparison, in 2002-03, Energex's 10 worst performing urban feeders supplied electricity to 8,518 customers (equivalent to 1.12% of Energex's urban customer base at June 2003). On average, these customers experienced between 3 and 9.8 distribution-related interruptions without adjusting the data for exclusions, leaving them without power for between 12.6 hours and 37.6 hours.

Only one worst performing feeder in 2002-03 was still one of the 10 worst performing feeders for 2003-04.

In 2003-04, Energex's 10 worst performing short rural feeders supplied electricity to 11,586 customers equivalent to 2.68% of Energex's short rural customer base. On average, these customers experienced between 3.7 and 13.6 distribution-related interruptions without adjusting the data for exclusions, leaving them without power for between 36.3 hours and 48.2 hours.

In comparison, in 2002-03, Energex's 10 worst performing short rural feeders supplied electricity to 6,641 customers equivalent to 1.68% of Energex's short rural customer base at June 2003). On average, these customers experienced between 4.0 and 12.5 distribution-related interruptions without adjusting the data for exclusions, leaving them without power for between 15 hours and 45.5 hours.

None of the worst performing feeders in 2002-03 were still in the 10 worst performing feeders group for 2003-04.

Quality of Supply Measures

The total number of technical quality of supply complaints received by Energex decreased from 2,732 in 2002-03 to 2,336 in 2003-04. The largest decreases in complaints in 2003-04 were recorded for voltage swells which can cause light bulbs to blow and waveform distortion or unbalance which may cause erratic performance of electrical equipment.

Table 11: Energex – quality of supply complaints – categorised according to symptoms

	SEP 2003	DEC 2003	MAR 2004	JUN 2004	TOTAL
Total quality of supply complaints	630	482	677	547	2,336
Low supply voltage	257	143	319	256	975
Voltage dips –minor	126	78	113	78	395
Voltage swell	90	78	73	89	330
Waveform distortion or unbalance	56	54	78	48	236
Other complaints	37	62	37	36	172
TV or radio interference	51	46	43	26	166
Noises from appliances or lights	4	12	9	6	31
Voltage dips –severe	7	7	4	5	23
Voltage spike	2	2	1	3	8

Apart from a small increase in the December quarter 2003, the average time taken to investigate and resolve a quality of supply complaint decreased over 2003-04 falling to 9 days in the June quarter 2004, despite the variability in the total number of quality of supply complaints over the same period (Table 12).

Table 12: Energex – 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)	10.1	10.4	9.6	9.0

As shown in Table 13, most of the quality of supply complaints in 2003-04 were caused by network restrictions or events. All three categories of possible causes for the quality of supply complaints recorded lower numbers in 2003-04 than in 2002-03.

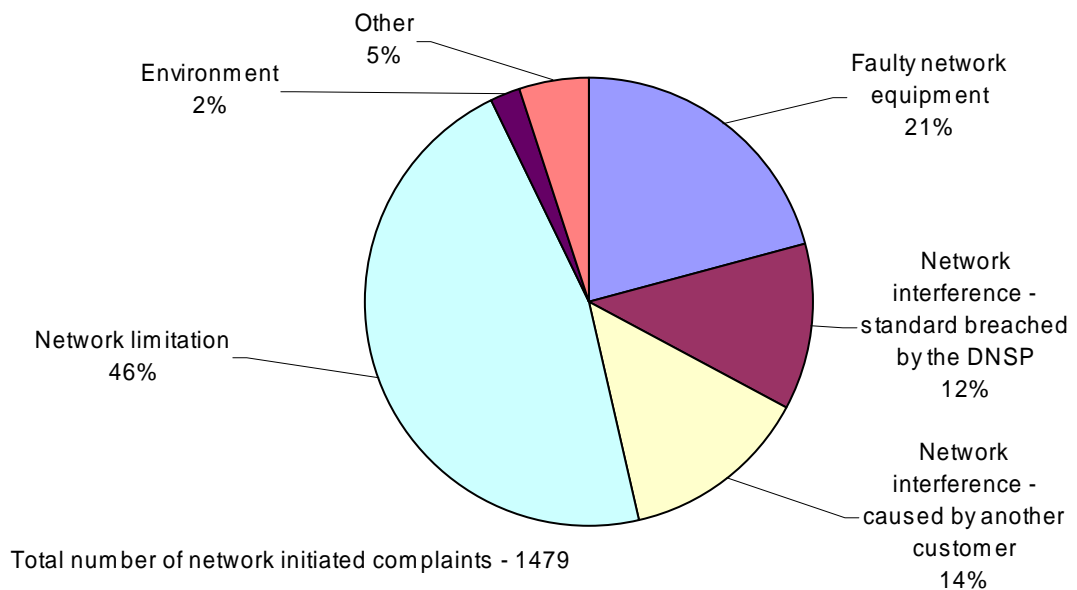
As shown in Figure 4, network-initiated complaints can be further broken down into sub-categories, of which limitations in the distribution network accounted for 46% of the total. These are defined as problems which required Energex to invest in its network to resolve. For example, by increasing network capacity, upgrading plant or altering control settings.

Faulty network equipment and interference to the network arising from the operation of equipment, by both customers and Energex, explained most of the remaining quality of supply complaints. There were no major changes in the composition of the network-initiated complaints in 2003-04.

Table 13: Energex – quality of supply complaints – possible causes

	2002-03	2003-04
Network initiated quality of supply complaints	1,692	1,479
Quality of supply complaints initiated on the customer side of the meter	264	243
Quality of supply complaints for which no cause was found	712	572

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. This is due to the removal of possible double entries and misclassified complaints. Energex intends to alleviate some of these problems in 2004-05 with a new database system.

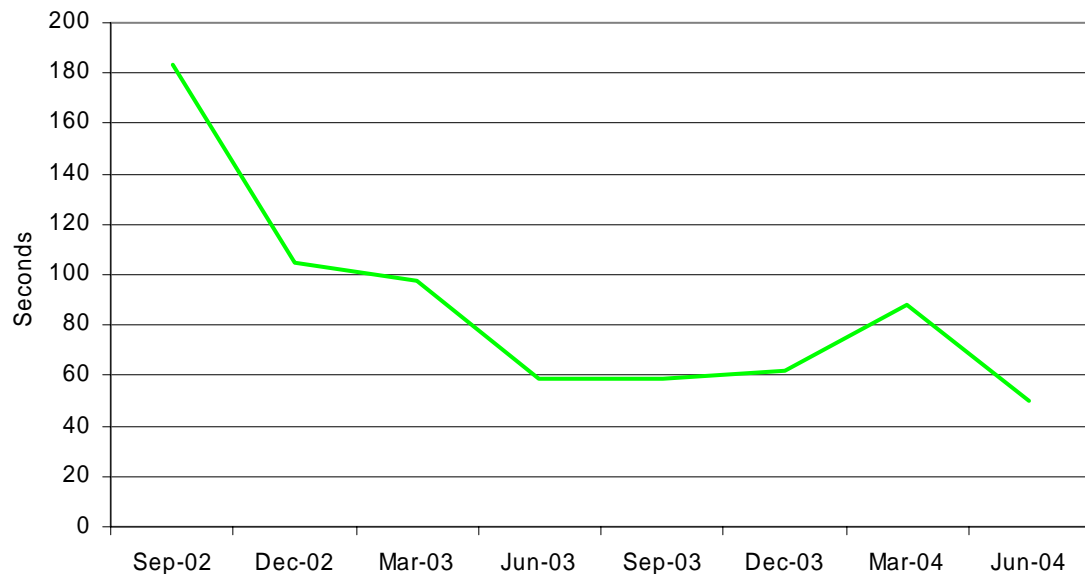
Figure 4: Energex – causes of network initiated quality of supply complaints

Customer Service Measures

Energex'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 in the quarter, although in certain cases this may have been less than expected. For example, the number of reliability complaints reported for the March quarter 2004 were quite low, given the large number of customers affected by storm-related outages and the high volume of calls received during these outages.

The Authority noted its concerns about this outcome at the time of releasing the DNSP's March quarter 2004 service quality reports. In its 2005 Draft Determination on Electricity Distribution (December 2004), the Authority proposed a number of amendments to its Service Quality Reporting Guidelines aimed at addressing these weaknesses.

Energex's call centre performance was mixed, although it did end 2003-04 with a slightly better performance than at the start of the year. As shown in Figure 5, the length of time that customers had to wait to speak to an operator when calling the call centre was 50 seconds in the June quarter 2004 compared to 59 seconds in the June quarter 2003. The June quarter 2004 was the lowest recorded result since reporting of service quality data began under the Authority's Guidelines and represents a significant improvement from the 3 minutes and 3 seconds that Energex's customers waited during the September quarter 2002. As a result, 70.3% of calls were answered within 30 seconds during the June quarter 2004 compared to 65.5% of calls in the June quarter 2003. The impact of the storms in the March quarter 2004 is apparent in Figure 5, with the average waiting time to speak to an operator rising to 88 seconds, resulting in only 56.4% of calls being answered within 30 seconds in the quarter.

Figure 5: Energex – average time waiting to speak to an operator

As shown in Table 14, the percentage of calls abandoned deteriorated in the March quarter 2004 to 13.3%, most likely reflecting the much higher than normal volume of calls to the call centre due to the storm-related events in the quarter. However, the June quarter 2004 figure of 7.1% was the best result since reporting of service quality data began under the Authority's Guidelines and represents a significant improvement from the peak of 17% of calls that were abandoned in the September quarter 2002. The improvement in the June quarter 2004 figure no doubt reflects measures taken by Energex to increase the capacity of its call centre following the March storms.

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

	SEP 2003	DEC 2003	MAR 2004	JUN 2004
Percentage of calls abandoned	8.5	9.5	13.3	7.1

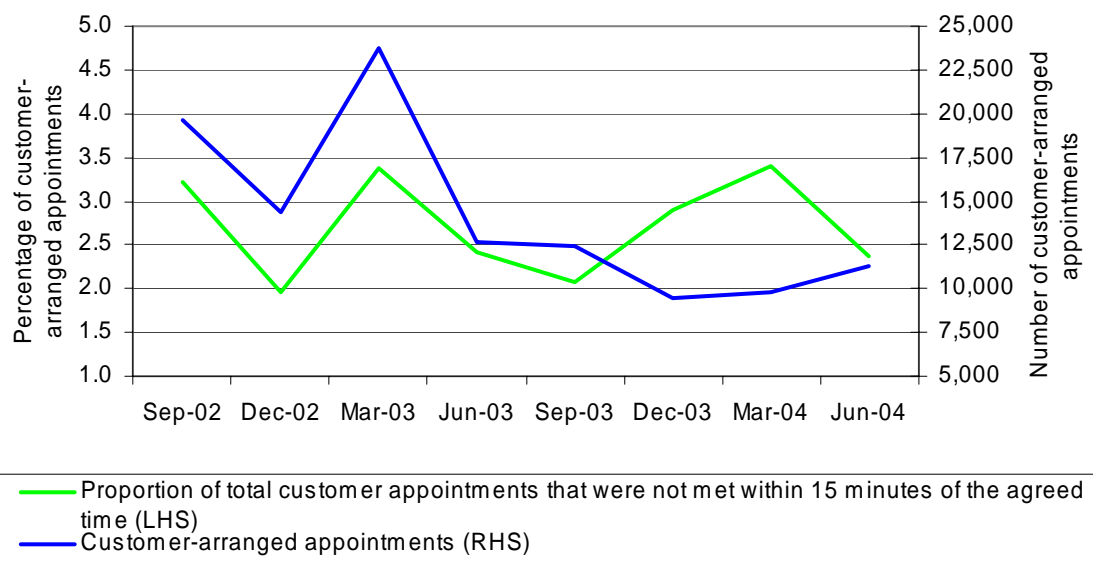
As shown in Table 15, the number of complaints that Energex received regarding the reliability of supply also spiked in the March quarter 2004, coinciding with the significant worsening of reliability performance as shown in Table 8. However, this result was better than the Authority would have expected given the large number of customers affected by the outages caused by the storms and the high volume of calls received during these outages.

The Authority has investigated this situation and found that the measurement of complaints under the Guidelines needs to be tightened, particularly how complaints are defined and recorded. At present, it appears that many calls from customers who may be without electricity are not recorded as complaints for reporting purposes, instead they are reported as a customer inquiry. The total number of reliability of supply complaints reported for 2003-04 (620) was much lower than in 2002-03 (866).

Table 15: Energex – number of reliability complaints

	SEP 2003	DEC 2003	MAR 2004	JUN 2004	TOTAL
Number of reliability complaints	87	93	366	74	620

The proportion of customer appointments that were not met by Energex within 15 minutes of the agreed time increased steadily over the first three quarters of 2003-04, before falling to 2.4% in the June quarter 2004 (Figure 6). This was probably helped by the total number of customer-arranged appointments falling from 12,392 in the September quarter 2003 to 11,278 in the June quarter 2004. Notwithstanding the total number of customer-arranged appointments for 2003-04 (42,990) was significantly lower than in 2002-03 (70,390), the proportion of customer appointments that were not met within 15 minutes of the agreed time showed no discernible improvement over the same period.

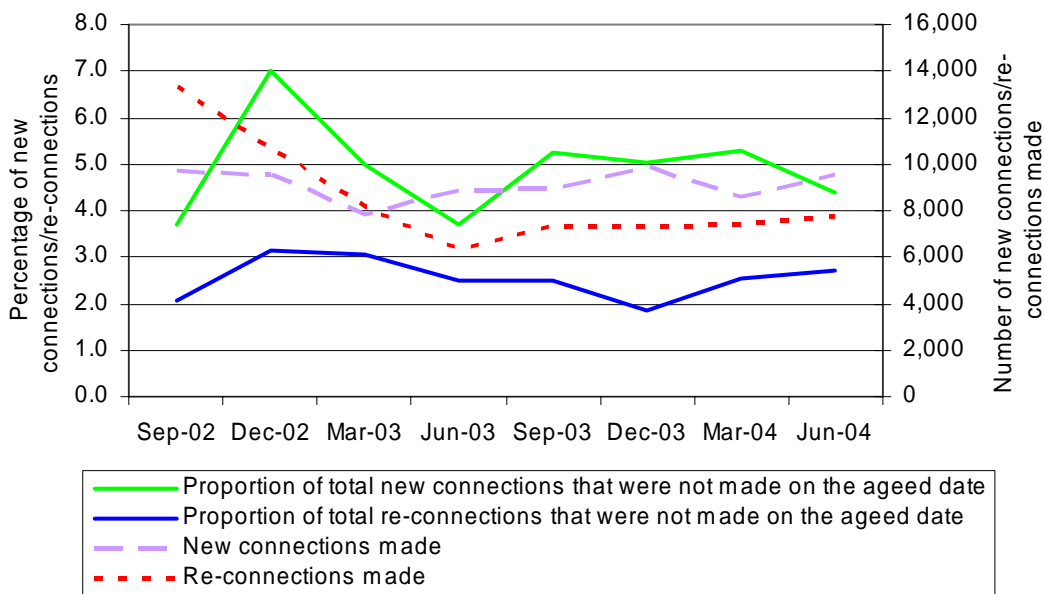
Figure 6: Energex – appointment punctuality

The proportion of total new supply connections that Energex failed to make by the agreed date stayed fairly constant at just above 5% for the first three quarters of 2003-04, before falling to 4.4% in the June quarter 2004, despite 941 more new connections being made compared to the March quarter 2004 (Figure 7).

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.

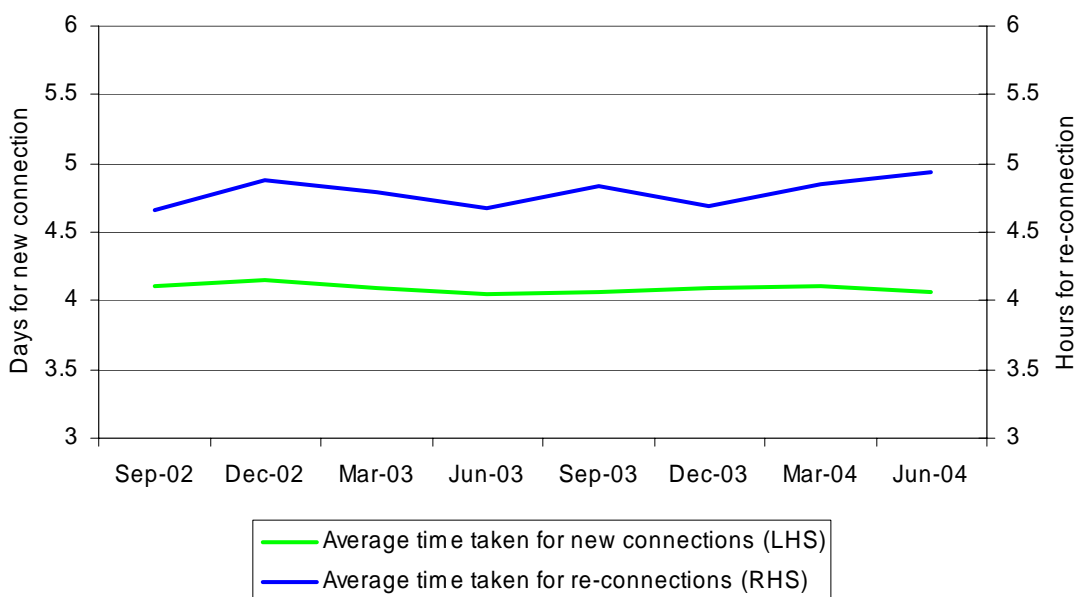
Figure 7 shows that, in general, the proportion of total re-connections of supply that were not made on the agreed date has remained between 2% and 3% over the last two years. The number of re-connections made was relatively steady in 2003-04 (reaching a peak of 7,732 in the June quarter 2004 and a low of 7,294 in the December quarter 2003). In contrast, the number of re-connections made varied significantly over 2002-03, reaching a peak of 13,349 in the September quarter 2002 and a low of 6,377 in the June quarter 2003.

Figure 7: Energex – number of new and re-connections made, proportion of new connections and re-connections not made on the agreed date



As indicated in Figure 8, the average length of time that customers had to wait for a new connection to the network has varied little over the last two years, at just over 4 days. However, the number of new connections made varied markedly over the same period reaching a high of 9,904 in the December quarter 2003 and a low of 7,830 in the March quarter 2003 (see Figure 7). Figure 8 shows that the average time that customers had to wait to be re-connected varied little over the last two years at between 4.5 and 5 hours, although the number of re-connections made varied significantly over the same period reaching a high of 13,449 in the September quarter 2002 and a low of 6,377 in the June quarter 2003.

Figure 8: Energex – average time taken for new connections and re-connections

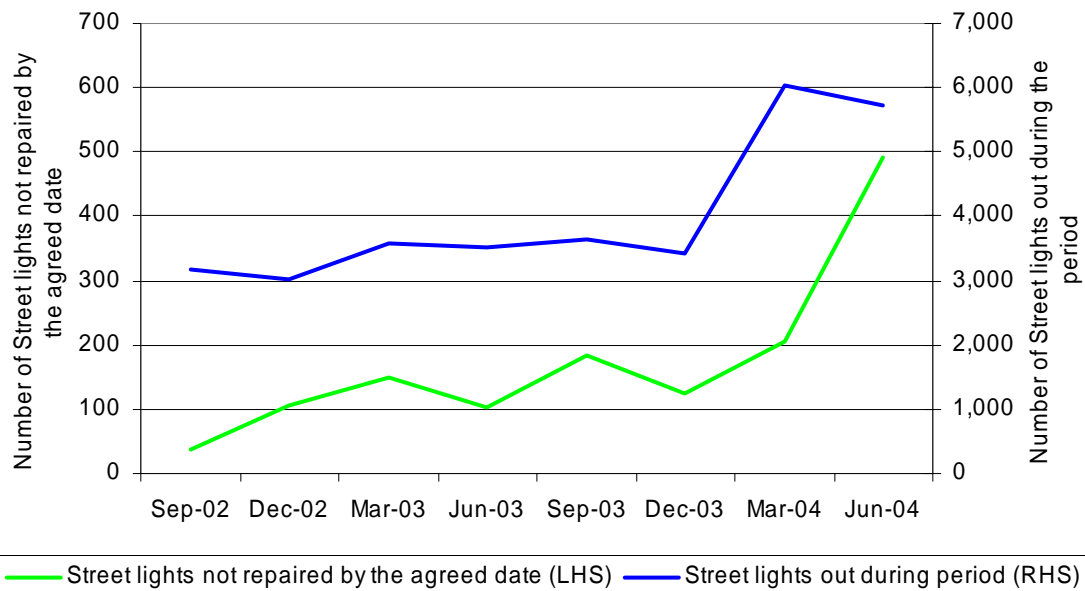


The number of street lights reported as being out was generally much higher during 2003-04 than 2002-03, peaking at 6,037 in the March quarter 2004, probably due to the storms in that quarter. As shown in Figure 9, the number of street lights not repaired by the agreed date was

also generally much higher in 2003-04 than 2002-03 reflecting the higher number of street lights requiring repair.

The average time taken to repair faulty street lights increased from 3.1 days in the September quarter 2003 to 3.7 days in the June quarter 2004, after peaking at 4.6 days in the March quarter 2004.

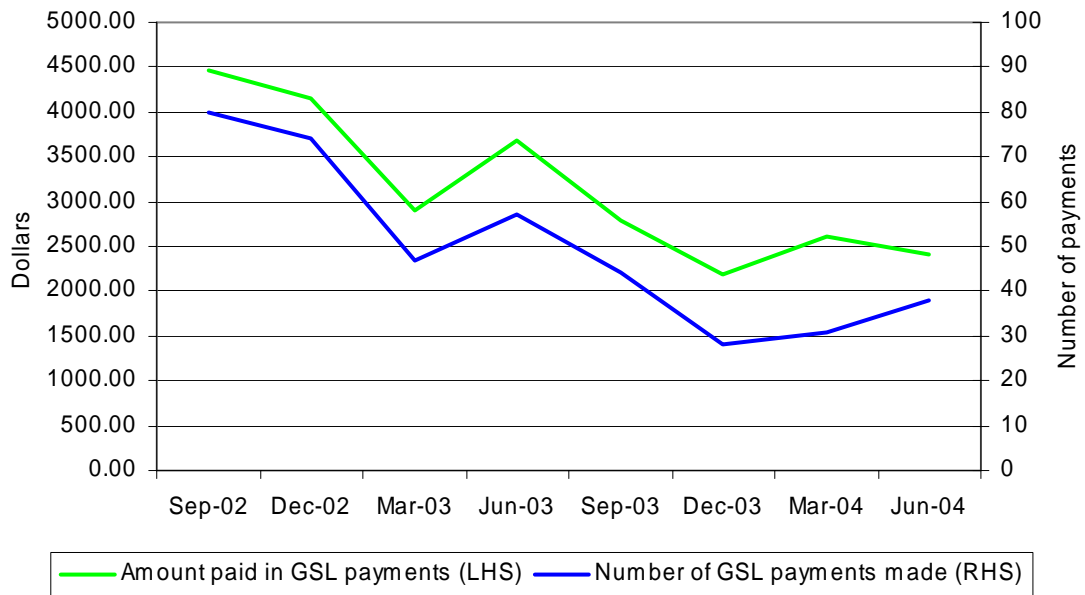
Figure 9: Energex – street light maintenance



The number of Guaranteed Service Level (GSL) payments and the amounts paid for GSLs both decreased further in 2003-04 from the very low levels recorded in the June quarter 2003 (Figure 10).¹² This downward trend in the figures has been evident in the data since the Authority began its collection of service quality data under the Guidelines in the September quarter 2002. The very low number of GSL payments and amounts paid suggest that Energex's customers were generally unaware of the GSL scheme.

¹² During 2003-04, GSLs were voluntary payments made by the distributors to customers that report instances where the distributors have not met self-imposed service quality standards. In December 2004, the Queensland Government announced a mandatory GSL scheme that would apply to the distributors from 1 January 2005. Prior to 30 June 2005, customers must make a claim to the relevant distributor for all GSL payments. After 30 June 2005, the distributors must use their best endeavours to automatically make most GSL payments to customers, although a few GSLs will still require the customer to make a claim. Information on the Government's GSL scheme is available at www.energy.qld.gov.au

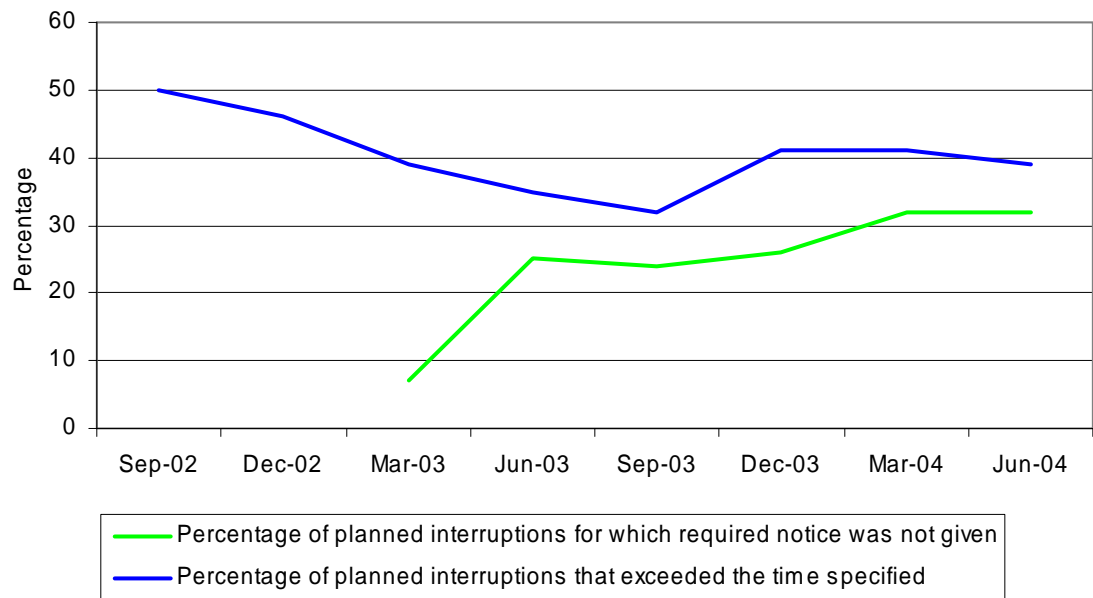
Figure 10: Energex – guaranteed service level payments



The proportion of occasions on which the required notice of a planned interruption to supply was not given (see Figure 11) increased from 24% in the September quarter 2003, an already high percentage, to 32% in the June quarter 2004. The June quarter 2004 performance is a significant deterioration from the 7% of occasions on which the required notice of a planned interruption to supply was not given in the March quarter 2003 (the first quarter this measure was reported).

The proportion of occasions on which the duration of a planned interruption exceeded the time specified in the notification also increased from an already high 32% in the September quarter 2003 to finish 2003-04 at 39% (Figure 11). However, the 2003-04 performance is an improvement on the 50% of occasions in the September quarter 2002 in which the duration of a planned interruption exceeded the time specified in the notification.

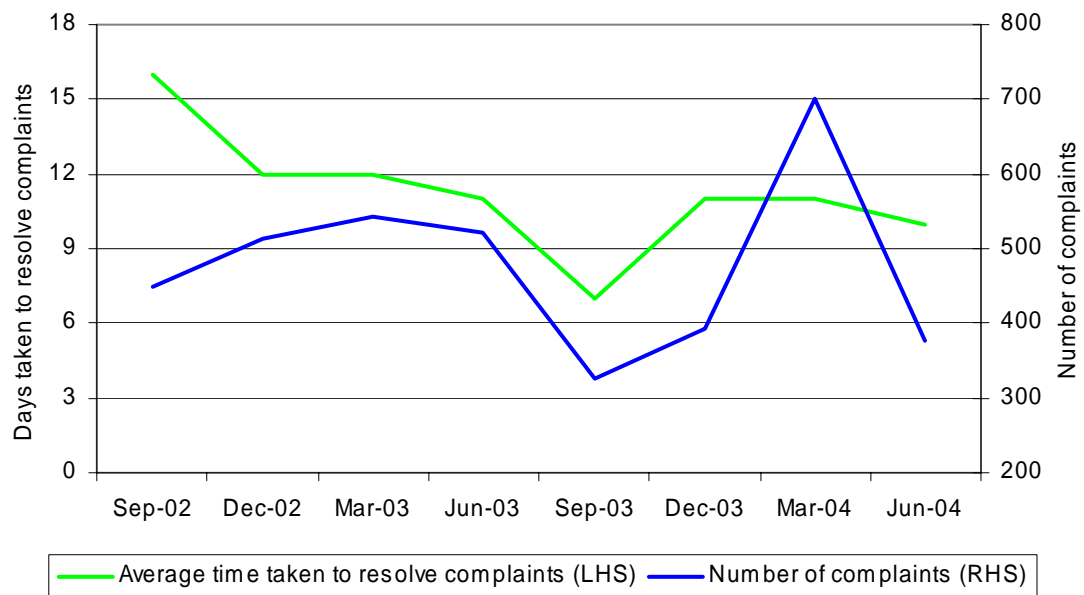
Figure 11: Energex – notification of commencement and duration of planned interruptions



The total number of complaints received by Energex peaked in the March quarter 2004 at 700 (Figure 12). The sharp increase in complaints during the March quarter 2004 was predominantly due to a significantly higher number of complaints about the reliability of the network, which would have been influenced by the impact of the storms during that quarter.

As mentioned previously, the worsening in reliability complaints was less than the Authority might have expected given the large number of customers affected by outages caused by the storms and the high volume of calls received during these outages.

The total number of complaints received by Energex decreased from 2,027 in 2002-03 to 1,794 in 2003-04. The largest decreases in complaints were recorded for outages and the condition of the worksite. The average time taken to resolve complaints was generally lower during 2003-04 compared to 2002-03.

Figure 12: Energex – complaint resolution

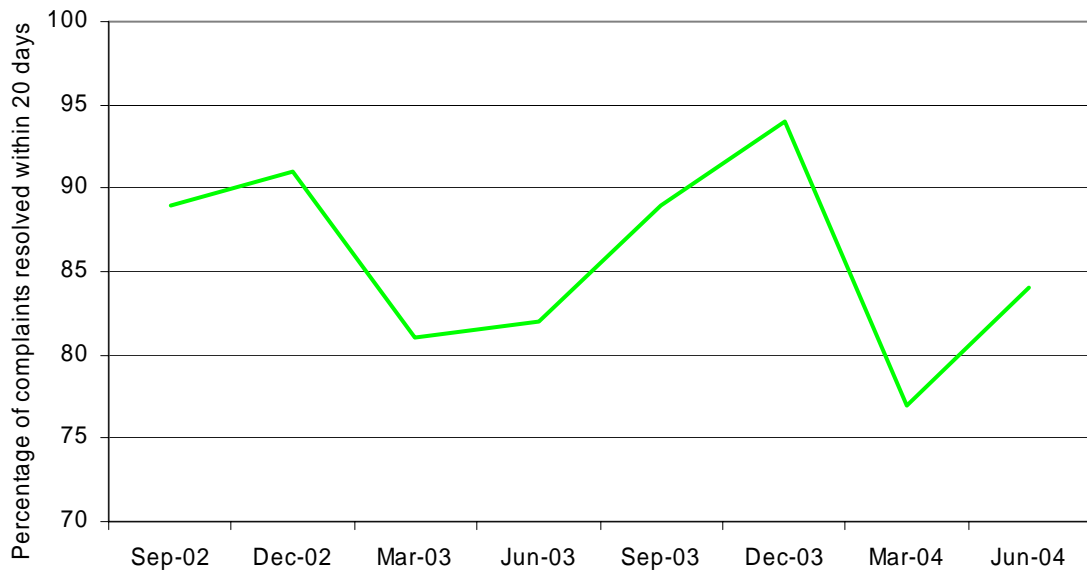
As shown in Table 16, outages were the single most important cause of complaints during 2003-04. The high number of ‘general’ complaints indicates that greater disaggregation of this complaint category may be warranted.

Table 16: Energex – complaint resolution – reasons for complaints

	SEP 2003	DEC 2003	MAR 2004	JUN 2004	TOTAL
Total number of complaints	325	392	700	377	1,794
Outages	87	93	366	74	620
General complaints	92	75	129	117	413
Timeliness of service delivery	72	56	74	55	257
Trees	30	62	54	55	201
Staff behaviour	21	44	22	28	115
Damage to property	12	32	30	20	94
Driving	9	11	8	12	40
Condition of worksite	0	12	7	6	25
Streetlights	0	5	4	8	17
Vehicles	0	2	4	2	8
Poles	2	0	2	0	4

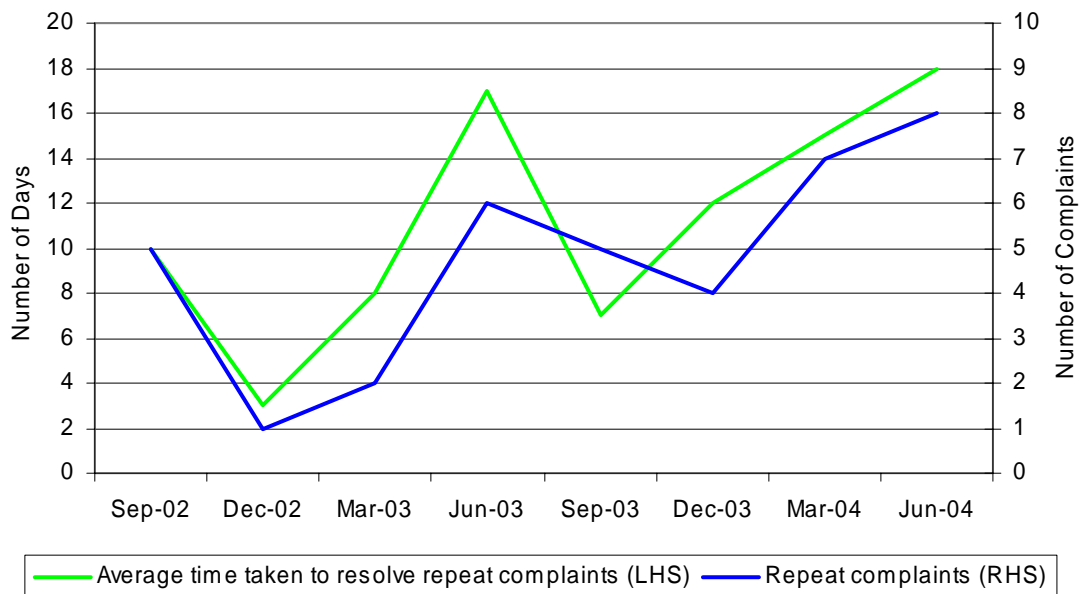
During 2003-04, Energex’s resolution of total complaints within 20 days was in excess of 80%, except for the March quarter 2004 (Figure 13). Energex’s performance was best in the December quarter 2003 when it resolved 94% of complaints within 20 days and was worst in the March quarter 2004 when only 77% of complaints were resolved within 20 days (probably due to the large number of complaints in that quarter). In 2002-03, the percentage of total complaints that Energex resolved within 20 days varied between 81% in the March quarter 2003 and 91% in the December quarter 2002.

Figure 13: Energex – complaint resolution within 20 days



The average time taken to resolve repeat complaints increased from 7 days in the September quarter 2003 to 18 days in the June quarter 2004, while the number of repeat complaints increased from 5 to 8 respectively (Figure 14). In general, the average time taken to resolve repeat complaints varied in line with movements in the number of repeat complaints made. In the June quarter 2004, both measures recorded their worst performance since reporting of service quality data began under the Authority’s Guidelines.

Figure 14: Energex – repeat complaint resolution



APPENDIX A

FINANCIAL DATA TABLES – 2001-02 to 2003-04

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

	2001-02	2002-03	2003-04
Revenue			
Forecast sales	467.3	497.0	523.6
Actual sales	468.4	505.1	535.9
Expenditure			
Forecast operating and maintenance expenditure	161.7	168.9	176.4
Actual operating and maintenance expenditure			
Operating expenditure	49.7	15.1	13.0
Maintenance expenditure	80.5	105.9	122.4
Total	130.2	121.0	135.4
Forecast depreciation	157.0	165.3	173.1
Actual depreciation	130.6	156.7	163.7
Total expenditure (forecast)	318.7	334.2	349.5
Total expenditure (actual)	260.8	277.7	299.1
Customer contributions			
Forecast	23.3	24.0	24.6
Actual	23.9	24.8	45.8
Capital expenditure			
Forecast	254.3	257.9	253.3
Actual	270.6	281.7	302.9
Fixed assets			
Forecast	3,020.4	3,176.7	3,323.8
Actual	2,977.6	3,169.9	3,313.3
Energy Sales (million MWh)			
Actual	17.2	17.8	19.0
Number of customers			
Actual	1,105,100	1,129,940	1,160,112

Table A2: Revenue – Energex (\$ million (nominal))

Revenue source	2001-02	2002-03	2003-04
Sales			
Network services	468.4	505.1	535.9
Public lighting		Not separately identified	
Other	126.0	160.0	166.0
Total	594.4	665.1	701.9
Capital contributions	23.9	24.8	45.8
Profit from sale of assets	1.1	1.2	1.2
Proceeds from sale of assets	6.3	12.9	6.5
Book value of assets sold	5.2	11.7	6.3
Other revenue	2.3	2.4	2.0

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

Expenditure	Energex
Operating expenditure	
Meter reading	11.8
Customer service	9.7
Advertising and marketing	0.8
Full retail contesability	0.0
Other – Network Operations	11.9
Total	34.2
Public street lighting	0.0
Total operating expenditure*	34.2
Network maintenance expenditure	
Inspection	8.1
Maintenance and repair	36.9
Vegetation management	36.3
Emergency Response	14.4
Other	0.0
Total	95.7
Public street lighting	5.5
Total maintenance expenditure*	101.2
Total operating and maintenance expenditure	135.4
Total corporate overheads included in O and M	4.4

* Differs to the total presented in the body of this document (\$13.0 million for operating and \$122.4 million for maintenance) since this table is provided to comply with National Regulatory Reporting Requirements (NRRR). Energex allocate a portion of meter reading and customer service expenditure to both the operating and maintenance function, whereas the NRRR classifies these items as operating cost alone.

Table A4: Depreciation – Energex (\$ million (nominal))

Asset	Energex
System Assets:	
sub-transmission lines	13.2
distribution lines	29.3
substations	25.1
distribution transformers	23.5
low voltage supply	14.9
meters	10.8
communications	1.0
land & easements	0
buildings	0
other (balance)	2.0
Non-System Assets:	
commercial land and buildings	0.7
ICT equipment	22.8
motor vehicles	6.3
other – non-system assets	4.4
Public Street Lighting	9.7
Total	163.7

Note - the depreciation reported in the table above is as per Energex's asset register and as such is gross of capitalisation and includes depreciation attributed to Non DUOS Services. The amount attributable to the distribution network was \$142.6 million.

Table A5: Expected and remaining lives of assets - Energex

Asset	Expected weighted average economic life (weighted by optimised replacement cost (ORC)) (years)	Weighted average remaining economic life (weighted by ORC) (years)
System Assets:		
sub-transmission lines	47	32
distribution lines	52	43
substations	41	31
distribution transformers	35	25
low voltage supply	35	24
meters	25	17
communications	25	17
land & easements	0	0
buildings	40	29
other (balance)	15	8
Non-System Assets		
commercial land and buildings	40	33
ICT equipment	5	4
motor vehicles	9	7
other	7	4
Public Street Lighting	20	14
Other	-	-

Table A6: Asset values – Energex (\$ million (nominal))

Asset	Energex
System Assets:	
sub-transmission lines	285.2
distribution lines	1,004.4
substations	599.6
distribution transformers	507.5
low voltage supply	286.9
meters	128.9
communications	14.4
land & easements	130.6
buildings	0.8
other (balance)	10.7
work in progress	102.8
Non-System Assets:	
by items >10% of total non-system assets	
commercial land and buildings	34.4
ICT equipment	46.1
motor vehicles	34.7
other non-system assets	15.0
Public Street Lighting	111.3
Other:	
by items >10% of total other	
Total	3,313.3

Table A7: Capital Expenditure and additions – Energex (\$ million (nominal))

Capital expenditure	Energex
System Assets:	
sub-transmission lines	61.0
distribution lines	98.4
substations	32.1
distribution transformers	28.2
low voltage supply	3.9
meters	35.9
communications	0.4
land & easements	3.4
buildings	0
other (balance)	0.8
Non-System Assets:	
commercial land and buildings	3.9
ICT equipment	7.5
motor vehicles	14.5
other	3.9
Public Street Lighting	8.9
Other	0
Total	302.9

Table A8: Capital expenditure by purpose – Energex (\$ million (nominal))

Capital expenditure	Energex
Capital expenditure	
Asset replacement	55.8
Demand related	219.8
Reliability and quality improvements	13.2
Other	14.0
Total	302.9

Table A9: Related party transactions – Energex (\$ million (nominal))

Transaction	Energex
Total value of related party transactions	Nil