

Minimum Service Standards End of Year Projection Report

April - June 2011

Submitted to QCA by
Ergon Energy Corporation Limited



everything in our power



Introduction

The Queensland Competition Authority's Warning Notice of 16 November 2010 requires Ergon Energy to provide the following additional information in addition to the quarterly service quality reporting that is provided accordance with clause 2.6.2 of the Electricity Industry Code:

- (i) Year-to-date and forecast (seasonally adjusted) 2010-11 financial year estimates for each of the measures provided in Schedule 1 of the Electricity Industry Code;
- (ii) A detailed explanation for any actual or estimated shortfalls against its 2010-11 MSS for each of the measures provided in Schedule 1 of the Electricity Industry Code;
- (iii) The measures or actions that Ergon Energy has implemented (including expenditure levels) in the preceding quarter in order to ensure that it meets its 2010-11 MSS;
- (iv) The measures or actions that Ergon Energy proposes to implement (including relevant expenditure) in the following quarter in order to ensure that it meets its 2010-11 MSS; and
- (v) With the exception of the first quarter's reporting, a detailed explanation for any measures or actions (and/or expenditure) proposed under (iv) that Ergon Energy did not implement in the relevant quarter.

Ergon Energy submits this report which addresses these additional reporting requirements. Specifically:

- Reporting requirement (i) is addressed in Figure 1 on page 6 and for each feeder category in detail in sections 6 through to 11 of this report;
- Reporting requirement (ii) is addressed in sections 6 through to 11 of this report where appropriate;
- Reporting requirement (iii) is addressed in sections 4 and 5 of this report;
- Reporting requirement (iv) is addressed in sections 4 and 5 of this report; and
- Reporting requirement (v) is addressed in section 4 of this report.

This is considered to be Ergon Energy's final report to the QCA on its MSS for 2010-11 under the Warning Notice.

INTRODUCTION	2
1. EXECUTIVE SUMMARY	4
2. WEATHER CONDITIONS ANALYSIS	7
3. PERFORMANCE AGAINST MSS	9
4. RELIABILITY AND QUALITY IMPROVEMENT INITIATIVES	11
4.1 ASSET RELATED INITIATIVES TO IMPROVE BOTH SAIDI AND SAIFI	12
4.2 ASSET RELATED INITIATIVES TO IMPROVE RESPONSE TIME AND SAIDI.....	16
4.3 OPERATIONAL RESPONSE INITIATIVES	17
4.3.1 <i>Unplanned Outage Response</i>	17
4.3.2 <i>Planned Outage Management</i>	19
5. RELIABILITY IMPROVEMENT INVESTMENT	22
6. URBAN SAIDI PERFORMANCE	23
7. URBAN SAIFI PERFORMANCE	24
8. SHORT RURAL SAIDI PERFORMANCE	25
9. SHORT RURAL SAIFI PERFORMANCE	26
10. LONG RURAL SAIDI PERFORMANCE	26
11. LONG RURAL SAIFI PERFORMANCE	27

1. Executive Summary

The final quarter of 2010-11 saw a return to relatively benign weather conditions across the Ergon Energy supply region and a corresponding favourable reliability performance for the period of April through June 2011. Generally, across the measures of the Minimum Service Standard (MSS) Ergon Energy reported better than the forecast performance and in the single measure that was forecasting significant underperformance against the MSS at the end of the third quarter the margin of exceedance reduced considerably.

Through the second and third quarters of 2010-11 Ergon Energy's distribution network was exposed to an extended period of severe weather in which it experienced a record level of flooding and three tropical cyclones. Despite the direct and indirect influence that these natural events have had on the overall reliability performance, Ergon Energy ended 2010-11 with performance favourable to five of the six Minimum Service Standards. The single measure that measured unfavourable to MSS only did so with a margin of 0.4 percent.

Though the impact of the most severe of the weather events have been excluded from the reported reliability statistics through the various mechanisms of the Electricity Industry Code (EIC), there remains a portion of events resulting from extreme natural events that adversely impacted the reliability performance. The slow moving flooding that passed through central and southern Queensland from December through to until the end of January is one such event. Supply interruptions occurring in the flooded areas suffered from extended restoration timeframes as a result of the condition of access routes. Ergon used its best endeavours to ensure the duration of these interruptions were minimised but they have undoubtedly had an impact on the reported reliability statistics for reasons beyond the control of a distribution entity.

Tropical cyclone Tasha along with a storm that impacted Mackay on the 1st March were two other natural events that had a substantial bearing on the reported reliability performance statistics for 2010-11. These two events combined to contribute 3.6 minutes to the Urban SAIDI and 14.7 minutes to the Short Rural SAIDI. The days upon which these events occurred did not achieve the threshold for exclusion as a Major Event Day and did not meet criteria of the other exclusion provision of the Electricity Industry Code (EIC).

Figure 1 on page 6 indicates that despite the adverse weather and consequential impacts associated with the severe weather events of the 2nd and 3rd quarters the reliability performance demonstrated in the 4th quarter has reduced the unfavourable margin for the Short Rural SAIDI to the MSS. Figure 7 on page 10, demonstrates that compared to the equivalent period in 2009-10, the unplanned performance across the six MSS measures have matched or improved on the preceding year.

Complimenting the improvement in unplanned performance observed in 2010-11, Ergon Energy's planned outage performance has significantly improved when compared to the equivalent time in the previous year. At the end of the June quarter, Ergon Energy's focus on planned outage management had achieved planned outage performance demonstrating significant improvement on the equivalent period from 2009-10 as shown in Figure 6 on page 10. The SAIDI improvement across the three feeder categories is between 54% for Long Rural feeders and 66% for Urban feeders. The SAIFI improvement across the three categories is between 50% for Long Rural and 58% for Urban feeders.

The improved planned outage performance in comparison to the previous year is a result of the reinstatement of live-line work which occurred in late 2009, the progressive replacement of defective Air Break Switches (ABS), and the implementation of a number of reliability-focussed initiatives which are discussed in further detail in this document. The influence of the live line working ban on the planned outage performance is clearly demonstrated in Figure 8 on page 20. The implementation of the ban was the predominate cause of the poor planned and overall reliability performance for the 2008-9 and 2009-10 years and is well supported by the demonstrated improved performance in this area since its reintroduction.

Ergon Energy places a high priority on achieving the MSS and continues to use its best endeavours to meet MSS. We continue to monitor, assess, analyse and undertake the necessary remedial action to ensure performance levels that will achieve the MSS in future years. In particular, Ergon Energy has put significant focus on its operational practices to improve the response time to unplanned outages and the management of planned outages.

In addition, Ergon Energy continues to implement many strategies for reliability improvement through its major capital works projects. Specifically, Ergon Energy has developed a whole-of-business plan to meet MSS and operate under the Australian Energy Regulator's (AER) Service Target Performance Incentive Scheme (STPIS).

The strategies in the STPIS/MSS Management Plan are structured around a three-tiered approach to address unplanned outages:

1. Reduce Events; (reduces SAIDI and SAIFI);
2. Reduce Impacts; (reduces SAIDI and SAIFI); and
3. Improve Response.(reduces SAIDI)

In addition, a four-tiered approach has also been developed to address planned outages:

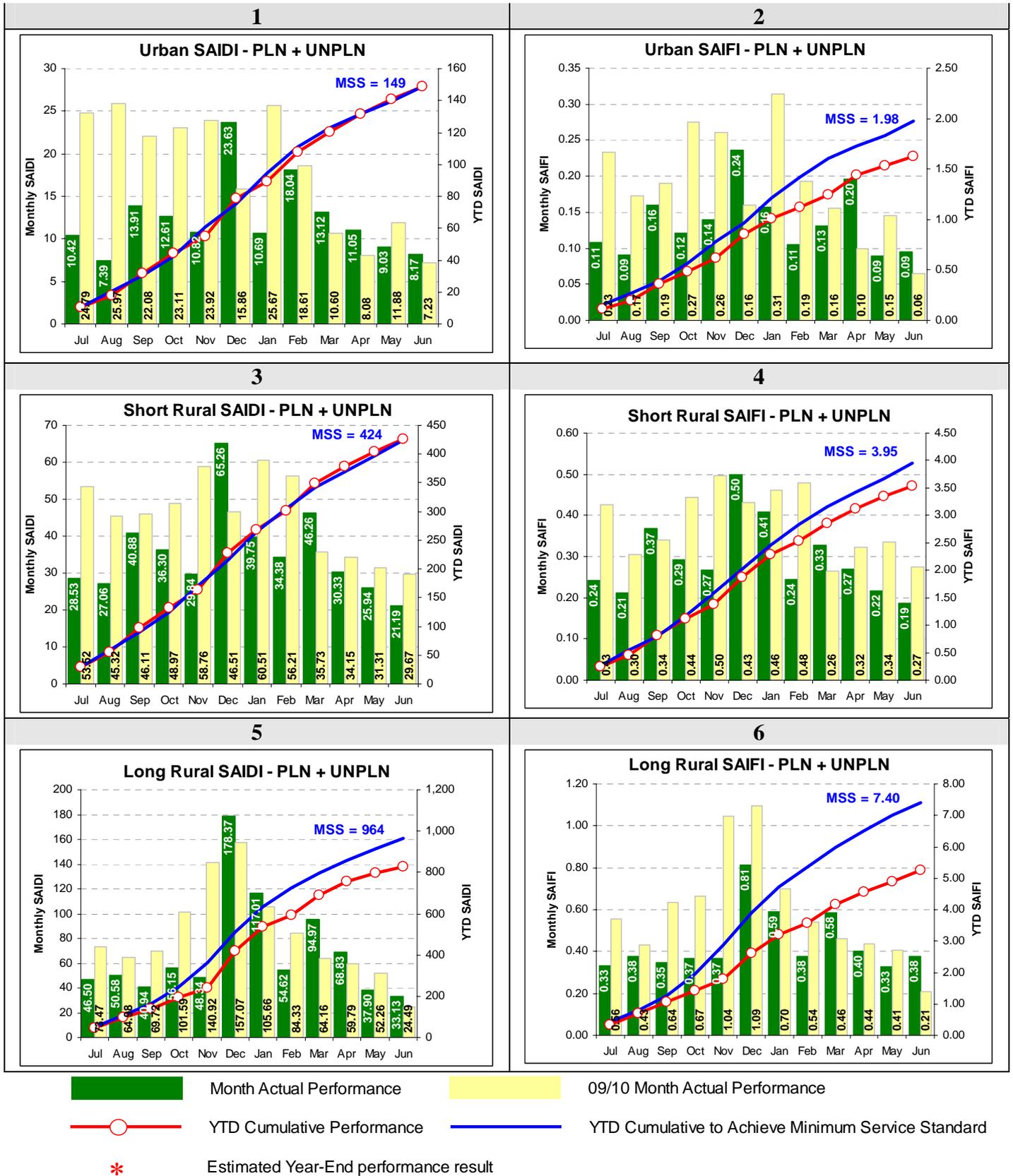
1. Reduce Events; (reduces SAIDI and SAIFI);
2. Reduce Impacts; (reduces SAIDI and SAIFI); and
3. Minimise Duration. (reduces SAIDI)
4. Meet the customer commitments

A comprehensive list of the 43 strategies and initiatives being undertaken are detailed in this document. (Refer to Section 4.1 Asset Related Initiatives to improve both SAIDI and SAIFI).

In the AER's recent Distribution Determination¹, Ergon Energy's capital expenditure allowance for Reliability and Quality Improvement investments for the 2010-15 regulatory control period was reduced by \$28 million to \$107 million (Nominal). To maximize the reliability outcomes in the early years of the regulatory control period, Ergon Energy had increased its 2010-11 Reliability Improvement budget (a subset of the overall Reliability and Quality Improvement program) to \$29.8 million, significantly higher than the \$18.5 million approved by the AER – see Table 1 on page 22. As a result of the slippage in delivery of the 2010-11 capital works program caused by the extended period of adverse weather across 2010-11 only \$18.7 million of the programmed \$29.8 million was able to be delivered. Ergon Energy however remains committed to the delivery of these programmed works and anticipates recovery over 2011-12.

¹ The AER's Distribution Determination relates only to the distribution network that is interconnected with the National Electricity Market and the Mount Isa-Cloncurry distribution network – it does not include Ergon Energy's Isolated Networks – whereas the MSS applies to all of Ergon Energy's distribution networks.

Figure 1 - Year-to-Date Performance as at 30th June 2011



2. Weather Conditions Analysis

The weather conditions during the April - June 2011 quarter featured fairly benign conditions and relatively moderate temperatures. The 18th and 19th of April saw flooding return to the supply area surrounding the township of Roma. Aside from this event the weather across the 4th quarter of 2010-11 was very mild.

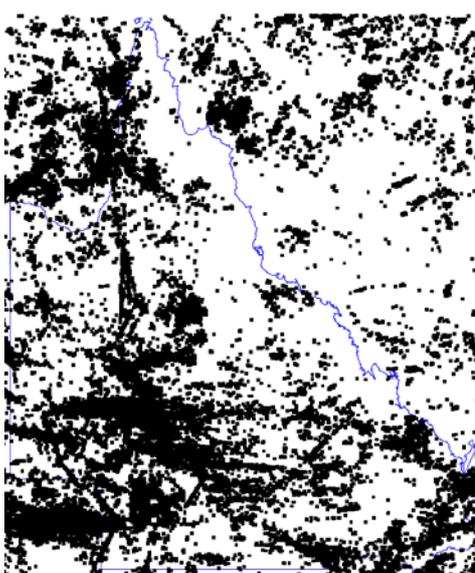
By comparison, the same quarter of the previous year recorded very similar conditions to this year. The mean daily maximum temperatures were below the long term average and rainfall across much of the state exceeded the long term historical averages. The Ergon supply region was also affected by three tropical cyclones in the January - March quarter of 2010.

Figure 2 below shows the number and location of lightning strikes in Queensland for the April - June quarter this year compared to the same quarter in 2010.

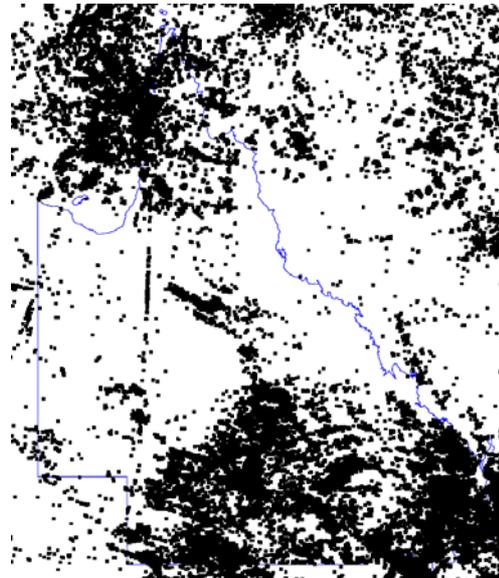
Figure 3 below shows the location and intensity of rainfall in Queensland for the April - June quarter this year compared to the same quarter in 2010.

The fourth quarter 2010-11 represented a period of low lightning strike frequency, which is consistent with the conditions experienced in the equivalent period of the previous year as shown in Figure 2.

Figure 2 – April - June Lightning Strike Maps for 2010 and 2011



April - June 2010

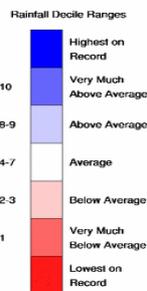


April - June 2011

Source: Ergon Energy Global Positioning and Tracking System (GPATS)

Figure 3 – Bureau of Meteorology Monthly Weather Review Reports

	April	May	June
2011	<p>Cooler month with more rainfall over the eastern half of the state.</p> <ul style="list-style-type: none"> • Wetter conditions over the eastern and tropical parts of the state • Dry in the west and southwest • Flooding in the Roma area on the 18th & 19th • Cooler day and night temperatures across most parts of the state 	<p>Drier Over the West and North, a Cooler Month</p> <ul style="list-style-type: none"> • Below average May rainfall across most parts of the tropical and the western districts • Cooler than average daily maximum means over most parts of the state, apart from the Cape York Peninsula • Cooler than average daily minimum means across the entire state, especially in north western parts 	<p>Low Rainfall & Cold Nights</p> <ul style="list-style-type: none"> • Very benign weather conditions for the month of June • State average minimum temperatures were the lowest since 1982 • Below average rainfall over southern parts and Cape York Peninsula • Cairns recorded the highest daily rainfall of June on the 29th • Quilpie recorded the lowest June temperature at -1.2°C
2010	<p>Unusually Mild Nights</p> <ul style="list-style-type: none"> • Ex Tropical Cyclone Paul deluge in the north west • Unusually mild overnight temperatures • Above average rainfall resulted from ex cyclone Paul and caused flooding in the South West, Gulf of Carpentaria and Daintree 	<p>Wet in the West and Dry in the East.</p> <ul style="list-style-type: none"> • Below average rainfall in parts of the Peninsula, east coast and southern interior • Above average rainfall over western districts • Close to average maximum temperatures across the state • Cooler than average overnight temperatures over central and southern districts 	<p>A Dry Month</p> <ul style="list-style-type: none"> • Below average rainfall • Minimum and maximum temperatures were slightly above average



3. Performance against MSS

Over 2010-11 Ergon Energy demonstrated significant improvement in reliability performance for all three feeder categories (Urban, Short Rural and Long Rural) when compared to the equivalent period in 2009-10 as shown in Figures 4 and 5 below.

At an aggregate level (i.e. before splitting into feeder categories), overall whole-of-network SAIDI and SAIFI have improved by almost 21 percent and 24 percent respectively compared to 2009-10.

Figure 4 – Overall SAIDI Comparison – 2009-10 vs. 2010-11

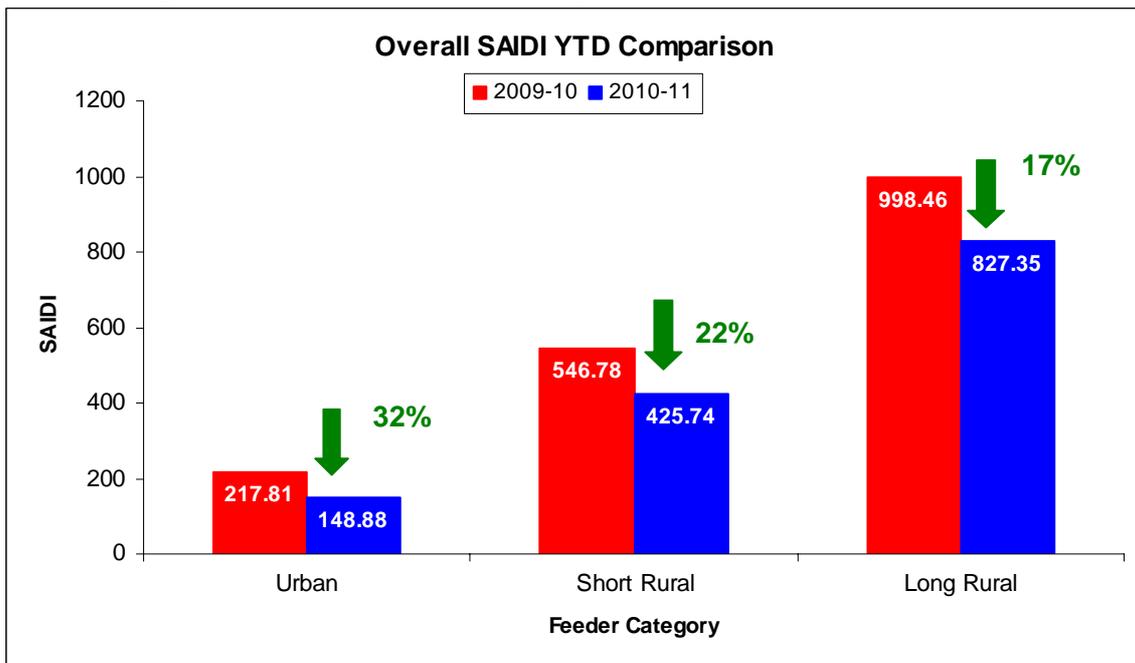
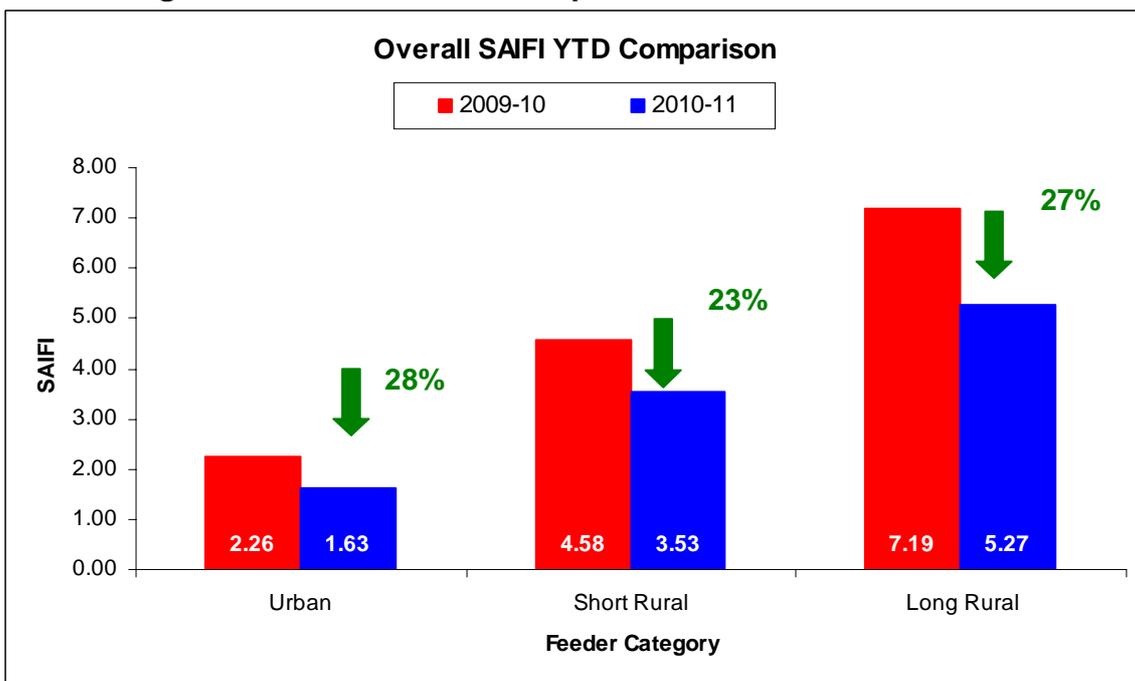


Figure 5 – Overall SAIFI Comparison – 2009-10 vs. 2010-11



The safety related suspension of live line working in February 2009, compounded by operating bans on a large portion of our Air Break Switch population led to a significant increase in planned outages and resulted in Ergon Energy not meeting five of six Minimum Service Standards (MSS) in 2008-09 and 2009-10. The reinstatement of live line working at the end of November 2009 has had a dramatic impact on planned outages in 2010-11. This combined with the progressive replacement of the defective Air Break Switches and improved management of planned outage events has resulted in significant planned SAIDI and SAIFI improvement in each feeder category as shown in Figure 6 below:

Figure 6 – Planned SAIDI / SAIFI Comparison – 2009-10 vs. 2010-11

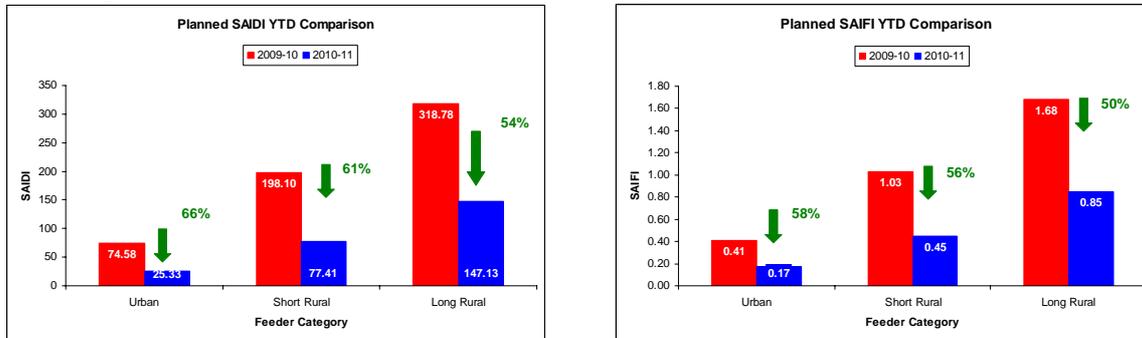
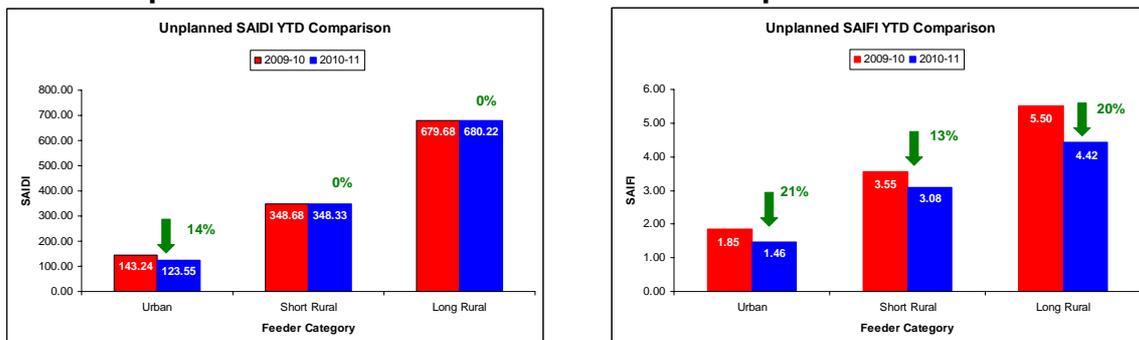


Figure 7 below shows that the unplanned outage frequency (SAIFI) for all three feeder categories in 2010-11 significantly improved on the previous year. The outage duration (SAIDI) for 2010-11 for all three feeder categories however did not demonstrate the same level of improvement when compared to last year. Though the Urban feeder SAIDI saw a significant improvement both Short Rural and Long Rural feeder SAIDI did not improve compared to the 2009-10 performance. The disproportional improvement in outage frequency compared to the outage duration is indicative of the impact that the widespread flooding had on the restoration timeframes. It demonstrates that the asset performance has generally improved however as a consequence of the flooding the time taken to remediate asset failures during flooding was longer.

Prior to the commencement of the 2010-11 summer storm season Ergon Energy's reliability performance was on track to outperform all six MSS measures. The summer storm season experienced across regional Queensland in 2010-11 is recognized as one of the worst on record. The final week of December 2010 saw the commencement of flooding through central Queensland and the beginning of the cyclone season with Tropical Cyclone Tasha making landfall south of Cairns. Ergon Energy was unable to make exclusions in performance for the effects of TC Tasha and this single weather related event contributed approximately 8 SAIDI to the Short Rural feeder category and is seen to be the majority contributor to performance in this measure not achieving the MSS.

Ergon Energy used its best endeavors over the fourth quarter of 2010-11 to recover from the cumulative reliability performance impact of a very active cyclone season and extended, widespread flooding across much of the supply region. An amended crew dispatch model and enhancements to the planned outage mitigating measures has allowed Ergon to recover to a position of reporting performance better than five of the six MSS limits with Short Rural SAIDI failing by a margin of approximately 2.6 SAIDI or 0.5%.

Figure 7 – Unplanned SAIDI / SAIFI Year To Date Comparison – 2009-10 vs. 2010-11



In order to measure monthly progress towards meeting the annual MSS, the MSS are “seasonalised” by converting the annual MSS into cumulative monthly values based on the average historical contribution of each month’s reliability performance to the annual total. The cumulative seasonalised MSS values are represented by the blue line on each of the charts presented in Figure 1 on page 6. If Ergon Energy’s actual year to date performance is equal to or better than the seasonalised MSS, **and** the reliability performance for the remainder of the financial year aligns with the seasonalised MSS monthly totals, then Ergon Energy will meet the MSS.

The 3rd Quarter of 2010-11 ended with Ergon Energy on target to achieve reliability performance favourable to five of six MSS targets following an extended period of extreme weather events. With the completion of the recovery work rebuilding the network sections damaged by cyclone Yasi and the flooding, Ergon Energy focussed on correcting the performance deviation caused by the period of severe weather. Over the fourth quarter Ergon Energy’s network reliability outperformed the seasonalised MSS target in the critical area of Short Rural SAIDI to reduce a forecast MSS exceedance to 2.4 SAIDI.

Generally Ergon Energy’s reliability performance for the months April to June 2011 were at, or better than the seasonalised MSS targets. At the end of the final quarter 2010-11 Ergon Energy had maintained a position of reliability performance better than five of the six MSS measures. The performance in the Short Rural SAIDI over this period had been successful in achieving a reduction of the unfavourable margin; however it remained the one measure not meeting the MSS limit in 2010-11. The margin to MSS observed in this measure for 2010-11 was 0.4 percent or 1.74 minutes;

4. Reliability and Quality Improvement Initiatives

Ergon Energy places a high priority on MSS and continues to use its best endeavors to meet its annual MSS obligations. We continue to monitor, assess, analyse and undertake the necessary remedial action to ensure performance levels that will achieve MSS in the future.

Ergon Energy placed significant focus on its operational practices to improve the response time to unplanned interruptions and the management of planned work in 2010-11. In addition, Ergon Energy is also implementing a number of reliability improvement strategies through its major capital works projects to build on the improvements demonstrated in 2010-11. Specifically, Ergon Energy has developed a whole of business plan for operating under the Australian Energy Regulator’s Service Target Performance Incentive Scheme (STPIS) and MSS Management Plan with the objective of meeting the MSS during the 2010-15 regulatory control period and to manage its operations in the context of the Australian Energy Regulator’s STPIS.

The strategies in the STPIS/MSS Management Plan are structured around a three-tiered approach to address unplanned outages:

1. Reduce Events; (reduces SAIDI and SAIFI)
2. Reduce Impacts; (reduces SAIDI and SAIFI) and
3. Improve Response; (reduces SAIDI)

In addition, a four-tiered approach has also been developed to address planned outages:

1. Reduce Events; (reduces SAIDI and SAIFI)
2. Reduce Impacts; (reduces SAIDI and SAIFI)
3. Minimise Duration. (reduces SAIDI)
4. Meet the Customer Commitments

A comprehensive list of the 43 strategies and initiatives being undertaken are set out in the sections below.

Further, Ergon Energy has put in place a number of governance mechanisms to review performance and monitor improvement initiatives:

- An Executive Steering Committee to oversee, monitor and manage reliability improvements meeting fortnightly;
- A Reliability Reference Group to oversee the implementation of the STPIS/MSS Management Plan meeting weekly;
- Full project management discipline to deliver the STPIS/MSS Management Plan including dedicated project management resources;
- Daily reporting of significant events to all levels in the business;
- Weekly monitoring of performance against targets;
- Investigation of all events over 500,000 customer minutes; and
- Provision of tools to Operations staff for monitoring and managing outage restoration (Outage Dashboard) and managing planned outages (Planned Outage Calculator).

Ergon Energy has also implemented a structured three tier communications plan designed to provide appropriate information through broad based communications (organisation wide), business unit specific and individual messages designed to lift the understanding and engagement of every employee within the business. Ergon Energy's response to the MSS challenges is being coupled with this communication strategy to support the change so that the message is pitched at the right level, and is delivered in terms that is most effective to the audience.

The benefits of the strategies and initiatives listed below will deliver reliability performance improvements over a number of years. However, it is difficult to quantify the reliability performance improvements realised by each initiative set out below. This is because reliability performance is influenced by a combination of a variety of factors, many of which (as outlined above) take a number of years to be fully realised. Asset related reliability improvements enhance the underlying performance, but not necessarily compared to last years performance. Actual annual reliability performance is statistically driven and varies around an underlying trend. Operational management of response to planned outages has a more direct short term impact on performance.

The nature of the expected reliability benefits likely to be realized upon the full execution and completion of the initiatives have been set out below. The initiatives have been further segregated based on the progress status as of June 2011.

4.1 Asset Related Initiatives to improve both SAIDI and SAIFI

Completed as of June 2011

Note: some of these initiatives are ongoing and/or will be progressed during future quarters. Initiatives with completed milestones in June 2011 have been listed below.

1. Ergon Energy has commissioned a number of new Zone Substations across its network to augment supply and ensure network security. These substations also increase the number of distribution feeders and reduce the number of customers per feeder (and per substation) in the area where they are implemented. This has an important consequence for the underlying reliability performance in those areas, in that the frequency and duration of outages is reduced, particularly for Urban and Short Rural feeders. New zone substations also deliver reliability improvements by:
 - Providing new injection points from the subtransmission network;
 - Reducing substation-related outages and improving substation performance through the installation new assets; and
 - Providing greater feeder transfer capacity to improve the time taken to restore supply following outages.

Recently commissioned substations that will start to deliver improved reliability performance from 2010-11 onwards include zone substations located at El Arish, Belgian Gardens, Oonoonba, Glenella, Jubilee Pocket, Berserker, Tanby, Bundaberg Central, Cawdor and Kearney Springs;

2. Works to **reinforce the subtransmission network** are being conducted in a number of areas to improve the security and reliability performance of the subtransmission network. Given that these works affect the subtransmission network, reliability performance improvements (both duration and frequency of outages and SAIDI and SAIFI) will be delivered to all feeder categories. New bulk supply substations either underway or recently commissioned include new substations at: Glenella/North Mackay (completed), Louisa Creek Bulk Supply (completed), Pandoin (under construction), Daandine (completed), Columboola Bulk Supply (completed) and Oakey Bulk Supply (completed);
3. Ergon Energy is continuing to **replace aged substation assets** which are in poor condition. The replacement of aged assets reduces the likelihood of asset failures, which in turn reduces the frequency of outages and SAIDI and SAIFI, predominantly for Short and Long Rural feeders, but also for Urban feeders. Substations recently completed include: Dalby Bulk Supply (completed), Clare Bulk Supply (completed) and Mundubbera Zone Substation (completed);
4. **Major augmentation works and the upgrade of substation assets** are continuing across Ergon Energy's network. These works, which also include the replacement of aged assets, will also deliver reliability improvements as set out above. Substations recently completed include: Black River zone substation (completed), Rasmussen zone substation (partially complete), Gayndah zone substation (completed), Point Vernon zone sub (underway) and Roma Bulk Supply (partially completed);
5. Ergon Energy has commenced producing **weekly performance reporting** against the MSS targets to keep track of performance against the monthly and year to date seasonalised MSS values to more readily identify reliability improvement opportunities; and
6. A **Reliability Investment Guideline and a Reliability Planning Guideline**, developed jointly with ENERGEX during 2009-10, have been rolled out across Ergon Energy. The Reliability Investment Guideline outlines the requirements for economically justifying a reliability improvement project and includes investment criteria for assessing the economic worth of a network reliability improvement project. The objective of the Reliability Planning Guideline is to provide reliability planning guidelines for the distribution networks of Ergon Energy for development and implementation of strategies for short to long term reduction of outage frequency and duration. This will cover 11kV, 22kV and 33kV distribution networks for Ergon Energy. These guidelines ensure that Ergon Energy's focus remains on constantly improving its reliability performance, leading to reductions in SAIFI and SAIDI for all feeder types over time and that sound investments are made.

Ongoing Programs

7. **##² Auto-reclose** is being progressively installed in the eight remaining zone substations in the Townsville area that presently do not have this functionality. The installation of auto-reclose will prevent transient outages (from which the network can automatically recover) becoming permanent outages (which require crews to manually rectify). The key reliability impact as a result of auto-reclose is a reduction in the duration and frequency of permanent outages primarily for Urban feeders, but also for Short Rural Feeders as well. The strategy being implemented is to establish auto-reclose functionality in Remote Terminal Units (RTUs) at the zone substations in-line with current Ergon Energy standards. Auto-reclose has already been temporarily enabled at three of the eight sites by utilising existing electromechanical auto-reclose relays until such time as the permanent projects are completed. 3 sites are currently in the design phase, 2 are being resourced by external service providers, 3 sites have progressed to the construction phase and 1 has been completed. It is planned to have the installation of auto-reclose capability completed at the remaining eight zone substations prior to the summer storm season 2011-12;
8. **##** An ongoing program to add **new distribution feeders to existing zone substations** continue to be implemented. In addition to augmenting the existing network capacity, the installation of new feeders provides greater transfer capacity and further sectionalise the network, leading to the reduction in

² Actions marked with ## are the Reliability and Quality Improvement capital expenditure that is set out in Table 1 on page 20.

outage impact and frequency and hence SAIDI and SAIFI primarily for Urban feeders, but also for Short Rural Feeders;

9. **##** A long term program to **replace small diameter aged copper conductor** commenced in 2009-10, with 110km replaced against a target of 40km. Conductor failures are a cause of a large number of outages and this long term program will improve SAIDI and SAIFI for all feeder types by reducing the instances of conductor failure. The first years of the program have targeted feeders with high numbers of conductor failures (such as in the Burdekin region). In 2010/11, 86km of conductor was targeted for replacement, with 125 km replaced to the end of 2010-11. Both HV and LV conductor were targeted, with HV conductor having the greatest impact on reliability;
10. The Condition Based Risk Management (CBRM) program for the assessment of **Subtransmission Line Refurbishment and Replacement** is 70% completed. Sample models have been developed and were reviewed in early February 2011. The models being developed will assist Ergon Energy in prioritising the refurbishment and replacement of Subtransmission Line feeders. This will ensure that the frequency of outages in SAIDI and SAIFI across all feeder types is minimised wherever possible;
11. **Cyclone Area Reliability Enhancement (CARE) program** commenced in 2003 with a twenty program to improve the resilience of the network to cyclones for customers from Mackay north to Far North Queensland. The program primarily targets the establishment of underground feeders in these areas;
12. The **replacement of aged subtransmission lines** is continuing. Even though work is progressing on the CBRM program for the Replacement of Aged Subtransmission Lines, five line projects have been recommended for the 2011/12 year and included in the works delivery program for the next 5 years. The rebuild of a 5km section of the Proserpine to Merinda 66kV feeder is targeted for completion in December 2012. The rebuild of a 9.6km section of the Farnsfield to Bundaberg and a 10.3km section from Farnsfield to Childers are both targeted for completion in August 2013. The rebuild of a 28.5km section of the Calliope to Littlemore feeder is targeted for completion by January 2014. The delivery timeframe for the final rebuild project, a 33km section of the Egans Hill to Raglan feeder, is targeted for completion in July 2013. These works will reduce the likelihood of asset failure on the subtransmission network supplying zone substations, and hence will reduce the frequency of outages and SAIDI and SAIFI, on Urban, Short Rural and Long Rural feeders;
13. Ergon Energy has placed a priority on the **replacement of defective Air Break Switches (ABS)** of particular brands on distribution lines and substations. These switches have limited Ergon Energy's ability to carry out normal switching for planned outages and unplanned outage restoration. The impact has been to increase the number of customer impacted by outages. Ergon Energy has also placed a priority on the ABS replacement program in its substations. This initiative will result in a reduction in planned SAIDI and SAIFI generally, and reduction in unplanned outage duration and SAIDI on all feeder types. At present, Ergon Energy is outworking its ABS replacement strategy, which is targeted at replacing 65 substations ABS during 2010-11, and 1,500 line ABS by 2013, 600 of which were targeted for replacement during 2010-11, a further 600 in 2011-12 and the remainder during 2012-13. 30 percent of the defective line ABSs targeted by the strategy are installed on Urban feeders, 60 percent on Short Rural feeders and the remaining 10 percent installed on Long Rural Feeders. ABS replacement is also being prioritised for other key switches. The substation ABS replacement is progressing well with 41 switches replaced at the year end. The line switch replacement program suffered some delays through the 2nd and 3rd quarters due to the impacts of weather and the collapse of a contracting firm engaged to deliver a portion of the work associated with this initiative. Some recovery was achieved over the final quarter and to date 158 switches have been replaced under this program. A recovery plan is expected to achieve delivery of the 400 switches that were not able to be installed in 2010-11 over 2011-12;
14. A three year program is underway to **maintain and replace aged Ring Main Units (RMU)**, which are isolating switches in the underground network. This program commenced in 2009-10 and will continue until 2011-12, and is expected to reduce planned SAIDI and SAIFI and unplanned outage duration and SAIDI for Urban feeders; A total of 210 units have been replaced YTD leaving 8 units outstanding for the completion of the program. The remaining units will be replaced in early 2011-12;
15. Ergon Energy continues to implement a **program of asset inspection and defect refurbishment** to identify and repair line defects that has been ongoing for many years. This program continues to reduce the number of asset failures, and therefore the frequency of outages and SAIDI and SAIFI on all feeder types;
16. **Faulty lightning arrestors** identified during asset inspections have been classified as "P2 defects" since 2010-11. This classification ensures that failed lightning arrestors are replaced within 26 weeks,

thereby minimising the failure of distribution transformers as a result of lightning strikes. This initiative will reduce the frequency of outages and SAIDI and SAIFI across all feeder types, particularly during the storm season; and

17. Focus continues to be placed on **considering the impact of planned outages during the construction and commissioning stages** of the project and designing mitigation measures at the concept and estimating phase for new works to ensure planned outages are minimised. This ensures that Ergon Energy's focus remains on reducing the duration and frequency of planned outages wherever possible, leading to a reductions in planned SAIFI and SAIDI for all feeder types over time.

Status of April - June quarter 2010-11 Initiatives

18. **## Additional Automatic Circuit Reclosers (ACRs)** have been installed on some of Ergon Energy's consistently poor performing feeders. This program has been underway for many years and has largely targeted poor performing Short Rural and Long Rural feeders. The key reliability outcome resulting from the installation of ACRs on distribution feeders is a significant improvement in feeder performance by limiting the impact of asset failures and improving response times, hence reducing both SAIFI and SAIDI. A strategy is being formalised with the aim of delivering an increased population of automatic circuit reclosers across the Ergon Energy distribution network. This strategy will deliver a proactive rather than reactive plan for the installation of reclosers across the network. The strategy identifies approximately 400 opportunities for the installation of an ACR to achieve improved reliability performance. Though this strategy has not yet been finalised, 95 projects have been raised for reclosers on Short Rural and Long Rural feeders and reclosers at an Urban to Rural boundary. 48 of these are in the scoping phase, 38 are in design, 4 are under construction, 3 have been designed and are awaiting construction and 2 have been completed;
19. **## One particular application of ACRs considered in the ACR Strategy is the installation of remotely controllable reclosers on the Urban-Rural boundary.** The installation of these devices at targeted locations will prevent failures and faults on the rural section of the feeder from resulting in supply interruptions to the traditionally higher reliability, urban network sections. This program is being incorporated into the ACR Strategy and will focus on an accelerated installation rate over the current regulatory period. This initiative will reduce the impact, duration and frequency of outages (SAIDI and SAIFI) particularly on Short Rural feeders and to lesser extent on Urban feeders. The strategy plans to deliver the installations of 2 reclosers on Urban feeders, 54 reclosers on Short Rural feeders and 8 reclosers on Long Rural feeders at the Urban-Rural boundary;
20. Another component of the ACR Strategy is the planned installation of 114 **reclosers on Urban feeders.** Delivery of this initiative will reduce the impact, duration and frequency of interruptions (SAIDI and SAIFI) to customers supplied on urban feeders;
21. Ergon Energy has undertaken **a review of vegetation management practices** to ensure that outages resulting from vegetation management activities are minimised. Current work practices identify opportunities to conduct vegetation management work in conjunction with outages planned for other work to minimise the interruption frequency. In addition, a review has been conducted of the vegetation program for opportunities to focus on poor performing feeders (particularly radial and non N-1 subtransmission lines). These reviews have maintained Ergon Energy's focus on minimising the duration and frequency of planned and unplanned vegetation-related outages on all feeder types; The "default" arrangement for all work within approach limits is for the use of Live Line and trials of Jarraf and remotely controlled equipment that allows operation within approach limits continues in an effort to minimise the need for outages associated with vegetation control;
22. Ergon Energy is currently undertaking **a review of the asset inspection process.** Improvement opportunities arising from this review will reduce the frequency and duration of planned outages required to repair defects, thereby reducing planned SAIDI and SAIFI for all feeder types. A trial on 3,000 poles in Wide Bay commenced in late 2010. Workshops were held to extend the trial to feeders in Far North region in 2011. Progress on the trial has been deferred to focus on asset inspection and defect remediation in the areas impacted by cyclone Yasi. The focus of this initiative has broadened to include all works planned for any given feeder with asset inspections (and subsequent defects) at the centre. Progressive implementation of this trial will occur across 2011-12;

23. A **pre-summer aerial inspection of radial and non N-1 subtransmission lines** is carried out each year to identify defects and to allow sufficient time to rectify any latent defects before the storm season. This initiative continues to reduce the frequency of outages and SAIDI and SAIFI across all feeder types. This action is now **complete** for 2010-11 and future plans are aligned with this strategy; and
24. A number of circuit breaker failures have resulted in large outages, and as a result, Ergon Energy has initiated a program of work to **replace circuit breakers in zone substations** based on a Condition Based Risk Management approach. In addition, a maintenance program for the old ASEA type HLC circuit breakers is also underway following the investigation of a major failure. This refurbishment program was completed in March 2011 and all these circuit breakers are now being monitored quarterly until they are replaced. These circuit breakers have been included in an approved program of works for the replacement of 147 circuit breakers within Ergon Energy's network over the next 5 years. Of these 147 circuit breakers, 53 have been approved for replacement in major substation Brownfield site rebuilds. The remaining 94 are programmed for replacement over the next five years. Approved projects for the replacement of 15 circuit breakers have been issued or have commenced work. All remaining circuit breaker replacements are planned for over the next three years. These programs will support the reduction of unplanned system and SAIDI and SAIFI on all feeder types.

To be progressed in 2011-12

25. Several large outages have been caused by false trips of Frame Leakage bus protection. This protection scheme exists in a 115 switchboard sections in 50 substations. A maintenance program is being established to **check all of these switchboards**. This program is expected to reduce SAIDI and SAIFI across all feeder types. An action plan has been developed involving testing of current sites and the installation of warning signs regarding the presence of frame leakage protection at the relevant substations. Delivery of this program is underway with 25 of 50 identified switchboards tested by the end of June, and the remaining 25 switchboards on track to be completed by the end of August 2011. Remedial works to minimise false trips is expected to follow the testing where required; and
26. Ergon Energy has identified that improved legacy subtransmission system design can reduce outages due to sub-transmission faults. As a result, a number of **subtransmission voltage switchyards are being upgraded** to improve reliability, resulting in a reduction in the impact and frequency of outages and SAIDI and SAIFI predominantly on Urban and Short Rural feeders, but also for Long Rural Feeders. Future upgraded sub-transmission voltage switchyards include Warwick 132kV bus (underway), Cannonvale 66kV bus and Charleville. Further targeted opportunities will be identified in 11/12 to establish a 5 year program of works.

4.2 Asset Related Initiatives to Improve Response Time and SAIDI

Completed as at June 2011

Note: some of these initiatives are ongoing in Ergon Energy and/or will be progressed during the future quarters. Initiatives with completed milestones up to June 2011 have been listed below.

27. Ergon Energy has developed appropriate additional measures, reporting and planned performance assessment/forecast tools (such as the Outage Dashboard and Planned Outage Calculator) and guidelines for the network operators to consider. These initiatives are intended to minimise the number of planned outages by assisting with better works planning and to better manage response to unplanned outages.

Ongoing Programs

28. A program of adding **remote control to line mounted ACRs** to improve response times has been underway for some years. A business case for the ACR Remote Communication Strategy – Phase 1 has been approved to provide a uniform, accelerated approach to implementing the remote control of existing ACRs across Ergon Energy's network and expand the remote control functionality on existing

reclosers on the distribution supply network. The improvement in response times will lead to reductions in SAIDI for both Short and Long Rural feeders. The program involves the installation of new remote communications to 167 distribution reclosers, with 155 on NextG modems and 12 on Satellite technology over the next 2 years (2010/11 -2011/12). Currently the projects identified and included in this program works are in design with materials being procured and is flagged to go to external contract for installation; and

29. ## A **SCADA Acceleration Strategy** is currently being implemented and is scheduled for completion by December 2011. This strategy will accelerate the existing SCADA implementation program from five years to two years, and will result in the progressive implementation of remote control facilities at 55 substations to reduce response time following outages. As at June 2011, 28 of the sites have completed construction, installation is underway for 19 and designs being finalised for 8. The expected delivery timeframe for this program of works suffered as a result of the resources committed to the recovery from cyclone Yasi. A recovery plan was formulated and resources redeployed to ensure completion of the program by the end of December 2011. The key reliability improvement will be reduction in SAIDI predominantly for Urban and Short Rural Feeders, but also for Long Rural Feeders.

Status of April – June quarter 2010-11 initiatives

30. ## Ergon Energy has made progress on the trial of a number of types of Line Fault Indicators (LFI) before the storm season to assist with locating faults. It is anticipated that this program would reduce SAIDI for all feeder types. The delivery of this trial has been significantly impacted by flooding in the targeted installation sites. The units will now be trialed over the 2011-12 storm season before progressing to full deployment of LFI's across the Ergon Energy network. To date ten units from one manufacturer have been installed and integrated into the SCADA system. These units are returning good data and are operating as expected. Additional units from two other manufacturers involved in the trial have not been installed due to manufacturer delivery and compliance issues. It is expected that these issues will be resolved and the units installed prior to the commencement of the summer 2011-12 storm season; and
31. ## Ergon Energy has identified opportunities for additional feeder ties on the distribution network to reduce restoration time following outages. 141 opportunities to establish additional feeder ties have been identified through this review, with 25 projects having been issued by the end of the fourth quarter 2010-11 and included in the works delivery programs of 2011-12 and 2012-13. This strategy will result in a five year program to reduce the duration of outages (and hence SAIDI) for Urban, Short Rural and Long Rural Feeders.

4.3 Operational Response Initiatives

4.3.1 Unplanned Outage Response

Completed as at June 2011

32. Ergon Energy has completed an initial **review of its resource levels for response** in preparation for the 2010/11 storm season. Further to the resource levels, Ergon Energy has implemented consistent escalation protocols for each area to ensure an escalation path exists designed to initiate early management involvement should assistance be required;
33. In 2010 Ergon Energy deployed a **real time outage monitoring database** called the "Outage Dashboard". This innovative tool is accessible to all employees in the company and represents the status of interruptions (planned and unplanned) across the entire Ergon Energy network. The benefit of the tool is twofold: the first is providing visibility of all events, broken into areas and regions, and the second is forecasted customer minutes associated with each outage, thereby ensuring the outage with the greatest customer impact receives attention first. Further enhancements to provide a Google Earth Geo-Spatial interface and representation to compliment the existing functionality provided by the Outage Dashboard is being scoped; and

34. **Communicating the impact that restoration decisions** have on company performance has been a focus for Ergon Energy over the past six months. Prior to the commencement of the 2010-11 financial year, a process of investigating and learning through the review of all unplanned outage events greater than 500,000 customer minutes was implemented. These reviews are undertaken to increase the business understanding of the 'cost' associated with unplanned outage management and the customer service benefits associated with improving decision-making during unplanned outages. Further improvements in this process will occur during 2011.

Ongoing

35. Ergon Energy continues to explore innovations that will have a positive influence on our ability to **find network faults and restore supply safely as soon as practically possible**. Through the use of Google mapping systems we are developing an approach that provides spatial representation with appropriate overlays of our network schematics to represent faulted sections of line, and overlay individual customer fault reports.

Status of April - June quarter 2010-11 initiatives

36. To minimise the impact on system security, **returning plant** that may be in a defective condition or in a condition yet to be assessed is an important element in ensuring the power system integrity is maintained. To aid the achievement of gaining visibility and control over this situation Ergon Energy will reviewing the trend of defective and Out Of Service plant (OOS) to ensure visibility and the appropriate focus is placed on dealing with system abnormalities. Business reporting is being streamlined and legacy data being cleansed to improve visibility of OOS plant and system conditions. In addition to formalising governance and oversight structures through the introduction of a new Defective Assets Management and Reporting Framework, Ergon Energy has commenced a review of the current OOS remediation processes and is developing a new process for the management of system conditions. This work includes the development of a new classification system and accountabilities, to deliver a remediation plan that positively influences SAIDI and SAIFI. The new process is designed to deliver more effective outage management, network security and rectification of system conditions through our formal works planning processes. This review will continue during 2011 and be implemented in 2012;
37. Ergon Energy has a robust management system that ensures the **high voltage network is accessed and worked on in a safe and efficient manner**. This system has been in place for almost 10 years and is now due for review. Consequently, Ergon Energy is embarking on a review of sections of the "Operate the Network" procedural documentation during 2011 to identify areas documentation that require updating to deliver improved safety and increased effectiveness and efficiencies when operating the HV Network. The first elements of the operating rules under review are the manual reclose and wires down policies. These policies have been in place for some years and driven by the increasing reliability challenges, Ergon Energy has recognised the benefits of reviewing these sections of the "Operate the Network" practices to ensure they are contemporary, safe, and drives appropriate risk based outcomes.

To be progressed in 2011-12

38. Ergon Energy is continually seeking ways to increase the efficiency and effectiveness of our business operations, one such area of opportunity is in **dispatch and scheduling** to field based employees. Dispatch for unplanned events (including single customer outages) is currently not managed in a consistent way across the organisation. Streamlining the dispatch processes would remove duplication of dispatch roles and implement a best practice approach for work crew dispatch. . This, combined with the implementation of Field Force Automation (FFA) and a Distribution Management System (DMS), a consistent dispatch model will allow Ergon Energy to streamline field staff workflows, eliminate paper based documentation and deliver more efficient and effective services to our customers. At this stage Ergon Energy will commence developing a business case to revise the dispatch model in 2012 with a view to implementing any changes in 2013.
39. A mobile field capability, enabled with a technology solution will allow Ergon Energy field staff to streamline workflows, eliminate paper based documents and deliver more efficient and effective services to investment to be delivered, including a positive influence on reliability improvement, during the our

customers. This is commonly known as **Field Force Automation (FFA)** and provides technology enabled processes, which automates the allocation of work, delivery of the work documentation to field crews, fast transfer of information, and capturing of work completion data at the source. At this stage Ergon Energy is seeking to commence building this capability in 2012, after which, we expect benefits associated with this 2013 to 2015 period.

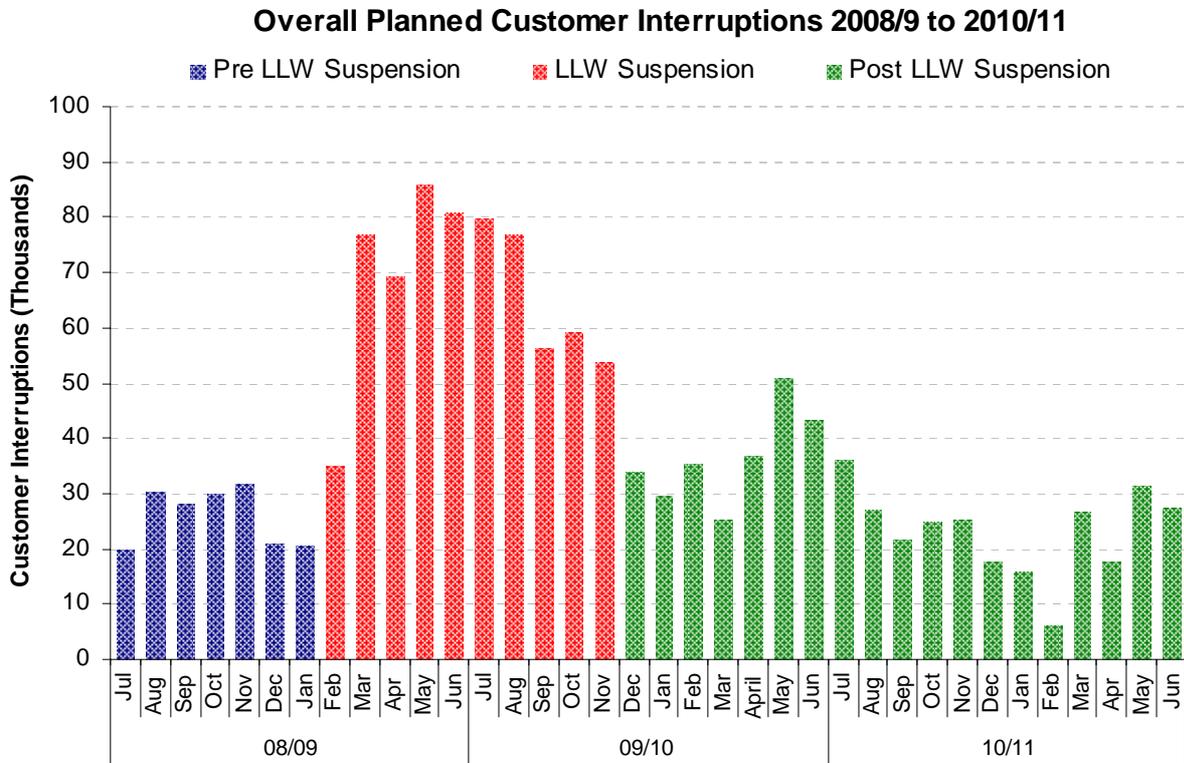
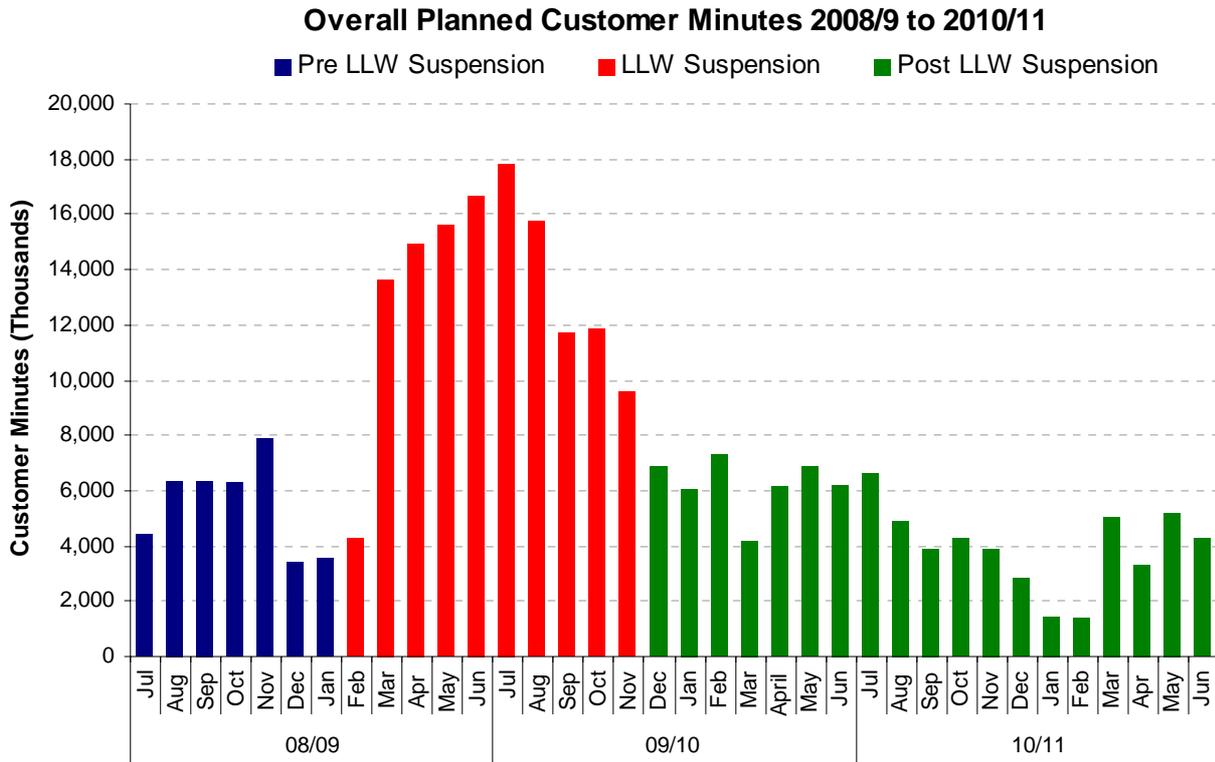
4.3.2 Planned Outage Management

Figure 6 on page 10 illustrates the improvement in the year to date planned SAIDI and SAIFI to the end of the June quarter 2010-11 compared to same period in 2009-10. The initiatives below have contributed to this improvement.

Completed as at June 2011

40. The 2009 ban on performing Live High Voltage work had an immediate impact on reliability measures requiring all work to be performed in a de-energized state. The graphs in Figure 8 on page 20 represent the impact of ceasing live line work on planned customer minutes and customer interruptions and the subsequent reduction as live work was re-instated in December 2009 by Ergon Energy. The use of limited Live Line working commenced in December 2009. Ergon Energy **has continued to reviewed and re-instate more of its Live Line Work safety procedures**. While some live line tasks practiced previously will not be reinstated due to the new standard, it is planned to increase both our combined capability and capacity to exceed that of pre-live line suspension progressively over the 2010 to 2015 regulatory control period.

Figure 8 – Impact of Live Line Suspension



41. As a strategy to improve performance in this area, Ergon Energy has designed and **implemented a Planned Outage Calculator (POC)** which has transformed the performance monitoring of planned outages beyond our previous capability. The purpose of the POC is to provide the lowest level of detail associated with approving planned outages on the network. The POC enables any person requiring access to the High Voltage network information to guide their decision making. The POC provides actual SAIDI and SAIFI month to date and a forecast against the end of month depot, area and region targets. This calculator is available online on the Ergon Energy intranet in a section dedicated to Reliability, which is accessible to all employees. Implementing the POC has provided the mechanism for Area and General Managers to make judgements when approving planned outages considering their individual planned SAIDI and SAIFI targets. The benefits of performance management being evidenced in the 2009-10 to 2010-11 year to date comparison of planned SAIDI and SAIFI graphs shown in Figure 6 on page 10.

Ongoing

42. An area that Ergon Energy has identified as an additional opportunity for further improvement is in the **use of Low Voltage (LV) and High Voltage (HV) injection generation sources** to maintain safe supply to customers while work is undertaken. Ergon Energy has purchased several generation units and has deployed them to the areas of greatest reliability benefit. In addition, Ergon Energy is undertaking a complete review of the generation deployment standards, and connection protocols in an effort to increase deployment flexibility and speed. Currently the configurations being reviewed are:
- Small isolated arrangements (max 1250 kVA), similar to the configuration used by ENERGEX. This configuration can be applied in short term unplanned, planned, and islanded mode;
 - Large arrangements used to manage planned and unplanned outage events, will be required to operate in parallel and isolated configuration from the network. This is the current Ergon Energy arrangement and most often used in planned load management situations; and
 - Large arrangements used for system normal peak load lopping designed to support the network paralleled with the energized network;

A HV Injection Connection Standard and associated guideline has been finalised and is awaiting implementation. Detailed designs are currently being developed for "step-up HV injection skids" which will provide the means to take 415v from generators and inject 11/22kV into the network, allowing planned maintenance and repair work to be undertaken with minimal disruption to the continuity of supply.

The construction of three Mobile HV Injection Skids have been included in the works delivery program and scheduled for delivery by January 2012. A review of the priority of existing projects included in the works program is underway to explore opportunities to accelerate the delivery of these three units prior to the 2011-12 summer storm season. Additional units are planned to be built later in 2012.

A business case for the procurement of additional LV generators is being developed. These additional units will be sized between 150kVA and 300kVA and when delivered will increase Ergon's existing generator holdings further enhancing our capability to respond and restore supply to customers for unplanned equipment failures and to minimise the supply interruptions to customers during periods of planned repair and maintenance work; and

43. Through the use of **Google mapping systems** we are also developing an approach that provides spatial representation with appropriate overlays of our network schematics to show planned work locations to facilitate more effective forward planning of outages. Further, we will be developing a process for achieving full visibility of all work at a feeder level to enable the efficient planning and packaging of works, thereby reducing the impact on planned SAIDI and SAIFI. These improvements will continue in 2011.

5. Reliability Improvement Investment

Ergon Energy's Reliability Improvement budget allocation was \$88,943,677 for the 2010-11 year.

Table 1 below shows the **2010-11 budget and expenditure** associated with Reliability and Quality Improvement works for 2010-11. Expenditure is shown not only for the specific reliability improvement program of works but also works associated with other programs in the 2010-11 plan that are considered to provide direct reliability benefits. There was significant slippage in works delivery associated with the program due to the impact of the extended wet season and prolonged flooding, compounded by a significant redeployment of resources from across the organization in the recovery from Cyclone Yasi and to assist ENERGEX with the flood recovery in January. In practical terms the capital works program across Ergon Energy did not progress for the entire month of February. All available operational and support staff within Ergon Energy along with 560 staff from various distribution organizations across the country were deployed as part of the cyclone recovery efforts. The cyclone recovery works continued at full deployment for 23 days, before significantly ramping down with concentrated efforts in the worst affected and most inaccessible areas.

As a result of the weather related delays to the works program Ergon Energy ended 2010-11 under spent on the Reliability and Quality Improvement Budget by \$11.2m. The SCADA Acceleration program contributed approximately \$6.5 million of this under spend. Through a modified resource plan it is anticipated that the slippage in this program will be recovered in early 2011/12 allowing the program to achieve its original completion at the end of December 2011.

The weather and resource deployments to the various disaster recovery efforts in 2011/12 have also had a bearing on the delivery of the Augmentation and the Other System Capex programs listed in Table 1. The major contributor to the under spend in the Augmentation budget was the \$11.2 million in new distribution feeder projects that were delayed in 2011/12. While the major contributor to the under spend in the Other System Capex budget was the \$5 million in new CARE program feeders that were delayed in 2011/12. Both the CARE and other new distribution feeders under the Augmentation budget that were planned to be delivered in 2011/12 suffered as a direct result of the duration and severity of the wet weather across the Ergon supply region over the summer of 2011/12.

Those programs that suffered slippage in 2011/12 will have their scheduling and under spend addressed through the continuation of the recovery plan in the first half of 2011-12.

Items marked with “##” in Section 4 above are part of the specific “Reliability Improvement” values in Table 1. Actions which target other drivers but also have a positive impact on reliability, have not been included in Table 1

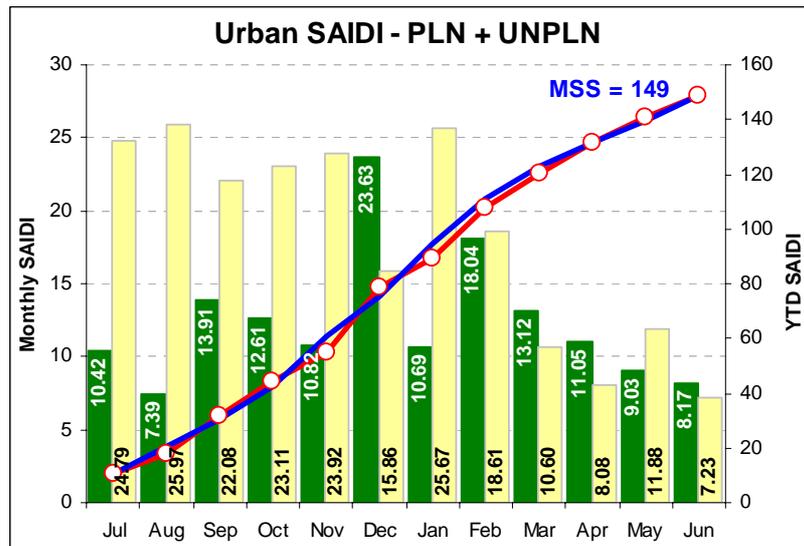
Table 1 - 2010-11 Reliability and Quality Improvement Capital Expenditure

RELIABILITY IMPROVEMENT WORKS			
Asset Replacement	Actual 10/11 Costs	\$	12,780,871
	Total 10/11 Budget	\$	12,438,385
Augmentation	Actual 10/11 Costs	\$	18,465,096
	Total 10/11 Budget	\$	33,977,612
Other System Capex	Actual 10/11 Costs	\$	6,981,449
	Total 10/11 Budget	\$	12,664,845
Reliability Improvement	Actual 10/11 Costs	\$	18,672,871
	Total 10/11 Budget	\$	29,862,835
Total Sum of Actual 10/11 Costs		\$	56,900,288
Total Sum of 10/11 Budget		\$	88,943,677

Note: The above expenditure does not include all the initiatives that are set out in Section 4, such as the new zone substation projects and associated subtransmission lines, but does include the associated works on distribution lines.

In addition to these direct reliability works, other network augmentation, asset replacement and refurbishment works, defect repair, protection and communication expenditure and virtually all corporation-initiated network capital have a positive impact on reliability performance outcome. Also, all the Corrective and Preventive Maintenance works (Operating Expenditure), which include the asset inspections, also contribute to network performance improvement.

6. Urban SAIDI Performance



The Urban SAIDI performance was favourable to the 2010-11 MSS limit by a margin of 0.1 SAIDI minutes.

Urban category feeders make up approximately 3 percent of Ergon Energy's distribution feeder network and supply about 33 percent of its customers.

The duration of supply interruptions in the Urban feeder category for the April – June quarter marginally exceeded the forecast. April experienced a higher than anticipated level of forced outage events, the majority of which were undertaken to remediate defective pole top equipment in the Northern region. Though it is not possible to confirm the reason for this, it is likely to have been contributed to by the stress and equipment fatigue suffered as a result of the network exposure to the destructive winds associated with cyclone Yasi. 80% of the forced outage events undertaken in April were in the Northern Region and contributed 1.9 SAIDI in that month.

The Urban SAIDI performance for 2010-11 has substantially improved on that reported for 2009-10 (32 percent improvement). In addition, planned Urban year to date SAIDI has improved by 66 percent compared to 2009-10.

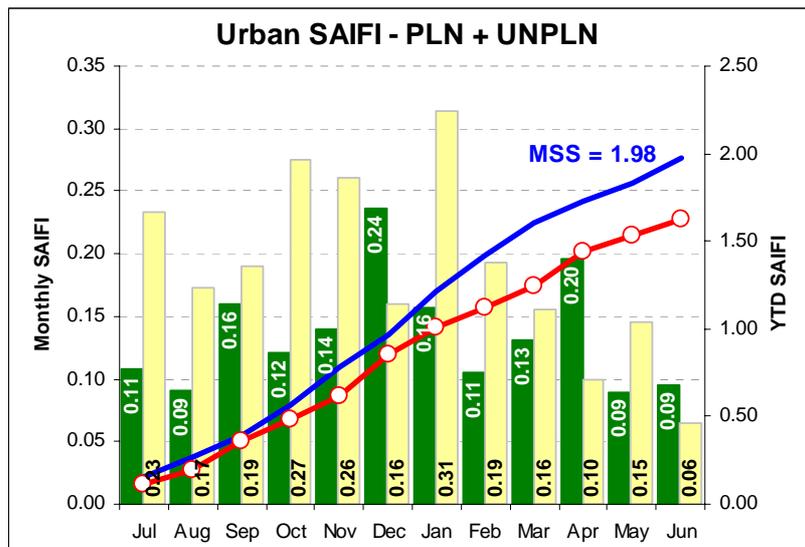
For comparison purposes, Figure 4 on page 9 demonstrates the improvement in overall SAIDI from 2009-10 to 2010-11.

The asset based Reliability Improvement Program initiatives that will deliver ongoing improvement in Urban feeder SAIDI include but are not limited to, the ACR Strategy, Townsville Auto Reclose program, the CARE program, the ABS Replacement Strategy, the RMU Replacement and Maintenance Program, enhancements to the Vegetation management practices, the Frame Leakage Protection review program, the Circuit Breaker Replacement program and the SCADA Acceleration program. Continued focus on reducing planned outages will also assist in meeting MSS. For a full list of the initiatives being undertaken by Ergon Energy to improve

Urban SAIDI reliability performance, please refer to Section 4 *Reliability and Quality Improvement Initiatives* section of this report.

Finally, it is important to note that the quarterly data presented in the June Quarter MSS and GSL report does not exactly equal the sum of the monthly data in the charts above. This is because the customer numbers upon which the SAIDI and SAIFI measures are calculated are different. Specifically, the monthly data in the charts above are based on customer numbers as at the end of the specific month, whereas the quarterly results in the MSS and GSL report are based on cumulative customer numbers as at the end of the quarter. Consequently, due to the different basis upon which the monthly and quarterly SAIDI and SAIFI measures are calculated, the monthly results cannot be added to reconcile with the equivalent quarterly results. This applies to the results for all feeder categories set out in this report.

7. Urban SAIFI Performance



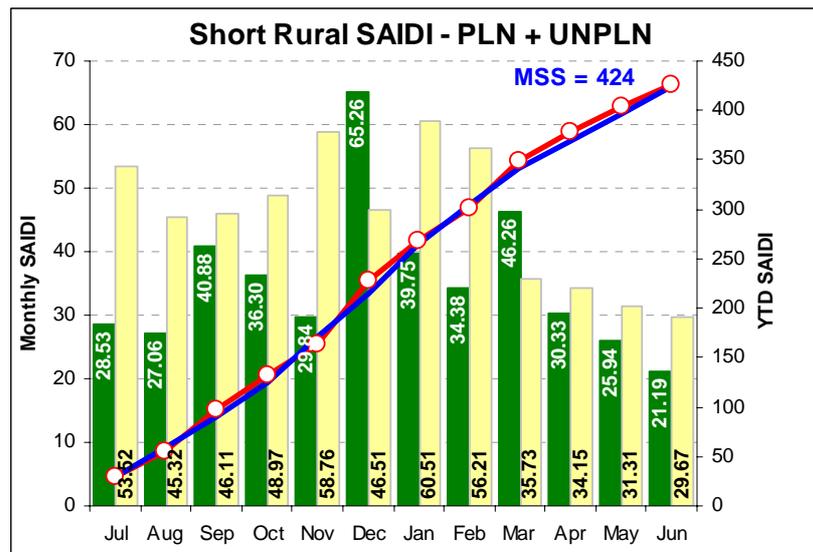
The 2010-11 Urban SAIFI of 1.63 was favourable to the 1.98 MSS limit.

The Urban SAIFI for 2010-11 has demonstrated a 28 percent improvement on the 2009-10 year end Urban SAIFI performance. In addition, the planned Urban SAIFI has improved by 59 percent compared to performance reported in 2009-10.

For comparison purposes, Figure 5 on page 9 demonstrates the improvement in SAIFI from that reported in 2009-10 to that reported in 2010-11.

For a full list of the initiatives being undertaken by Asset Management to improve Urban SAIFI reliability performance, please refer to Section 4 *Reliability and Quality Improvement Initiatives* section of this report.

8. Short Rural SAIDI Performance



The 2010-11 Short Rural SAIDI performance (425.8 minutes) was unfavourable to the MSS limit (424 minutes) by a margin of 1.8 minutes or 0.4 percent.

Currently, Short Rural feeders make up to 30 percent of Ergon Energy's distribution feeder network and supply about 55 percent of its customers.

The reliability performance for the April - June quarter 2010-11 was better than forecast and a considerable improvement on the performance from equivalent period of 2009-10. The SAIDI for the fourth quarter 2010-11 was 77.46 minutes against a forecast seasonalised MSS of 82.98 minutes and a 2009-10 performance of 95.13.

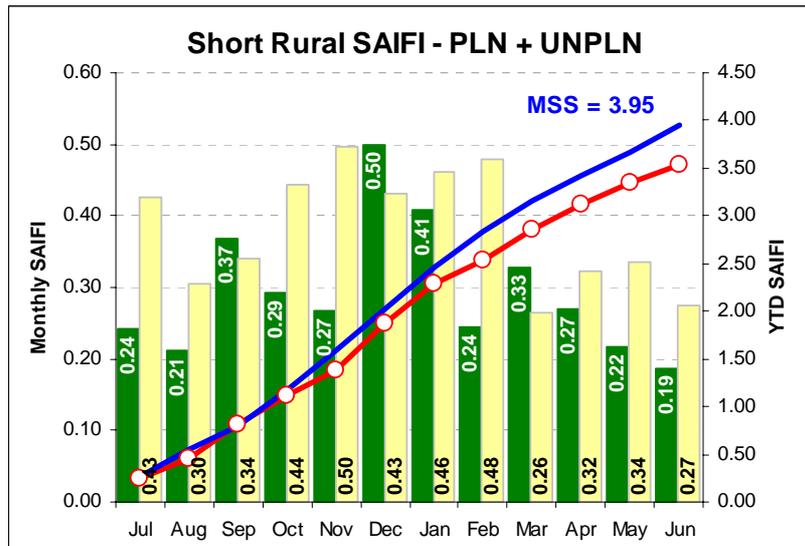
As a result of the early onset of the wet and storm season and influence of flooding and tropical cyclone Tasha Ergon Energy has struggled to achieve favorable performance to the MSS for the Short Rural feeder category. The performance demonstrated for the first two quarters of 2010-11 left a deficit to the Short Rural seasonalised MSS of 13.5 SAIDI. Despite two additional cyclones and the continuation of flooding through the 3rd quarter this deficit was reduced to 7.26 by the end of that period and further reduced to 1.75 SAIDI by the end of the fourth quarter. Ergon Energy efforts to correct the Short Rural SAIDI performance was hampered in the 3rd quarter 2010-11 by the widespread influence of flooding through January and the extent of the damage resulting from category 5 tropical cyclone Yasi in February.

Despite the pronounced impact that the severe weather had on the overall reliability performance, Ergon Energy has been able to demonstrate a vastly improved overall performance in 2010-11 compared to 2009-10. The overall Short Rural SAIDI in 2010-11 was a 22% improvement on the 2009-10 performance and the planned outage performance for 2010-11 a 61% improvement on the 2009-10 planned outage performance.

For comparison purposes, Figure 4 on page 9 demonstrates the improvement in SAIDI from that reported in 2009-10 to that reported in 2010-11.

The asset based Reliability Improvement Program initiatives that will deliver ongoing improvement in Short Rural feeder SAIDI include but are not limited to, the ACR Strategy, Townsville and NQ Auto Reclose program, The CARE program, the ABS Replacement Strategy, the RMU Replacement and Maintenance Program, Enhancements to the Vegetation management practices, Replacement of Aged Subtransmission Lines, the Replacement of small diameter copper conductor, the Circuit Breaker Replacement program, increased remote control of line reclosers, the Frame Leakage Protection review program and the SCADA Acceleration program. Continued focus on reducing planned outages will also assist in meeting MSS. For a full list of the initiatives being undertaken by Asset Management to improve Short Rural SAIDI reliability performance, please refer to Section 4 *Reliability and Quality Improvement Initiatives* section of this report.

9. Short Rural SAIFI Performance



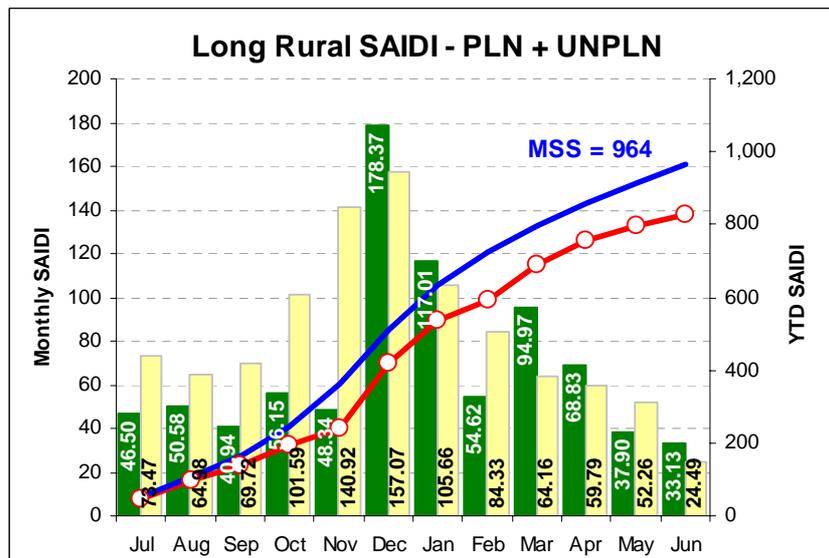
The 2010-11, Short Rural SAIFI of 3.53 was favourable to the 3.95 MSS limit.

The overall Short Rural SAIFI performance has improved by 23 percent compared to 2009-10. In addition, planned Short Rural year to date SAIFI has improved by 56 percent compared to the corresponding period in 2009-10.

For comparison purposes, Figure 5 on page 9 demonstrates the improvement on overall SAIFI from that reported in 2009-10 to that reported in 2010-11.

For a full list of the initiatives being undertaken by Asset Management to improve Short Rural SAIFI reliability performance, please refer to Section 4 *Reliability and Quality Improvement Initiatives* section of this report.

10. Long Rural SAIDI Performance



The 2010-11, Long Rural SAIDI performance (827.3 minutes) was favourable to the 2010-11 to the MSS limit (964 minutes) by a margin of 136.7 minutes or 14.2 percent.

Currently, Long Rural feeders make up to 67 percent of Ergon Energy's distribution feeder network and supply about 12 percent of its customers.

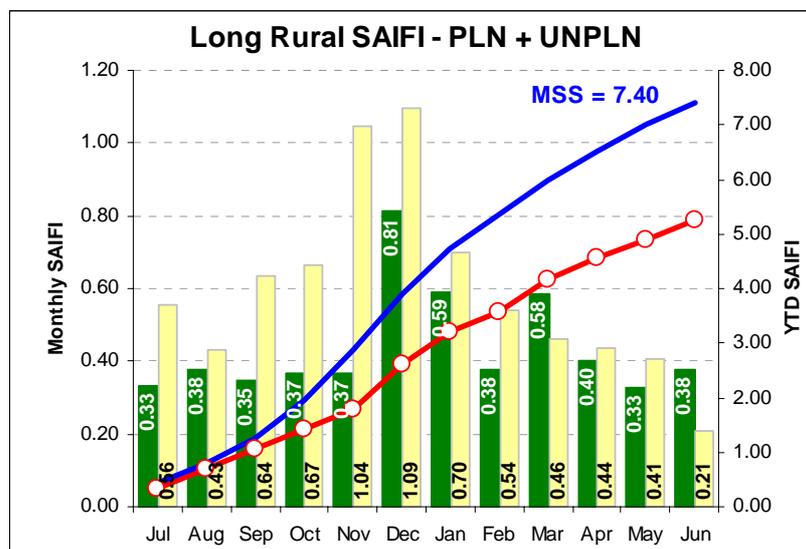
The reliability performance for the April – June quarter 2010-11 was better than forecast and comparable to performance demonstrated in the equivalent period of 2009-10. The SAIDI for the fourth quarter 2010-11 was 139.9 minutes against a forecast seasonalised MSS of 166.93 minutes and a 2009-10 performance of 136.5 minutes.

The overall Long Rural SAIDI performance for 2010-11 has substantially improved (17 percent improvement) in comparison to 2009-10. In addition, planned Long Rural SAIDI has improved by 49 percent compared to 2009-10.

For comparison purposes, Figure 4 on page 9 demonstrates the improvement on overall SAIDI from that reported in 2009-10 to that reported in 2010-11.

For a full list of the initiatives being undertaken by Asset Management to improve Long Rural SAIDI reliability performance, please refer to Section 4 *Reliability and Quality Improvement Initiatives* section of this report.

11. Long Rural SAIFI Performance



The 2010-11 reliability performance result for Long Rural SAIFI of 5.27 was favourable to the 7.40 MSS limit.

The overall Long Rural SAIFI performance has improved by 27 percent compared to 2009-10. In addition, planned Long Rural SAIFI for 2010-11 has improved by 49 percent compared to 2009-10.

For comparison purposes, Figure 5 on page 9 demonstrates the improvement on overall SAIFI from that reported in 2009-10 to that reported in 2010-11.

For a full list of the initiatives being undertaken by Asset Management to improve Long Rural SAIFI reliability performance, please refer to Section 4 *Reliability and Quality Improvement Initiatives* section of this report.

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Please direct queries or feedback on this report to:

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