

Minimum Service Standards End of Year Projection Report

January - March 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.

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1. Executive Summary

During the January to March 2011 quarter, a large portion of the Ergon Energy supply area was inundated by flood waters that resulted from record rainfalls toward the end of 2010. In addition to the adverse affects of the widespread and prolonged flooding, the Ergon Energy network was impacted by two tropical cyclones, one of which Category 5 Tropical Cyclone Yasi caused severe network damage across the northern half of the state.

Despite the extreme weather conditions that the Ergon Energy distribution network has endured over an extended wet and active cyclone season, generally Ergon Energy's cumulative actual reliability performance for the 3rd quarter 2010-11 has outperformed the cumulative seasonalised Minimum Service Standards (MSS). Though the past quarter's performance has been favourable it has not allowed a return to favourable performance against all six MSS measures. Short Rural SAIDI continues to forecast marginally unfavourable performance at the year end and the Urban SAIDI performance is forecasting only marginally favourable performance at the year end.

Prior to the onset of the widespread flooding experienced across much of Queensland, Ergon Energy was on track to achieve performance better than MSS. The severe adverse influence on the reliability performance resulting from the flooding over the month of December had such a detrimental affect on the performance statistics that recovery to favourable performance will be difficult in all six measures of the MSS. The month of December saw the worst SAIDI performance for all three feeder categories observed in the past five years. This highlights the influence the flooding had on Ergon Energy's ability to meet normal restoration timeframes, the effects of which were most pronounced in the Urban and Short Rural category feeders and provides explanation of the year to date performance against the MSS in these two measures.

Ergon Energy's ability to recover from the reliability performance position at the end of the 2nd quarter 2010-11 has been hampered by the continuation of flooding through January in the Central and Southern regions and the influence of two tropical cyclones crossing the North Queensland coast. The destructive Category 5 Tropical Cyclone Yasi caused extensive damage to the Ergon Energy network and resulted in supply interruption to a third of Ergon's supplied customers across half of its supply region. Cyclone Yasi triggered the largest response to a natural disaster ever staged within Australia. Ergon Energy committed all available resources across its supply region to the recovery effort. This involved the deployment of approximately 800 Ergon Energy staff and contractors from across the supply region, complimented by approximately 560 staff from other electricity supply utilities across the country.

Figure 1 on page 6 indicates that despite the adverse weather and consequential impacts associated with the recovery from cyclone Yasi, the 3rd quarter reliability performance resulted in a return to favourable performance in the Urban feeder category SAIDI and a reducing unfavourable margin for the Short Rural SAIDI to the cumulative seasonalised MSS. As demonstrated in Figure 7 on page 10, compared to the equivalent period in 2009-10, of the six unplanned performance measures Short Rural SAIDI is the only area not achieving an improvement on the preceding year.

Complimenting the improvement in unplanned performance observed to date this year, Ergon Energy's planned outage performance significantly improved when compared to the equivalent time in the previous year. At the end of the March 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 59% for Long Rural feeders and 73% for Urban feeders. The SAIFI improvement across the three categories is 56% for Short and Long Rural feeders and 64% in 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 its annual MSS obligations. We continue to monitor, assess, analyse and undertake the necessary remedial action to ensure performance levels that will achieve the MSS in 2010-11 and 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 order to meet the MSS for 2010-11.

In addition, Ergon Energy is also implementing many strategies for reliability improvement through its major capital works projects. Specifically, Ergon Energy has developed a whole-of-business plan for operating under the Australian Energy Regulator's (AER) 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 managing our operations in the context of the AER'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 three-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)

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).

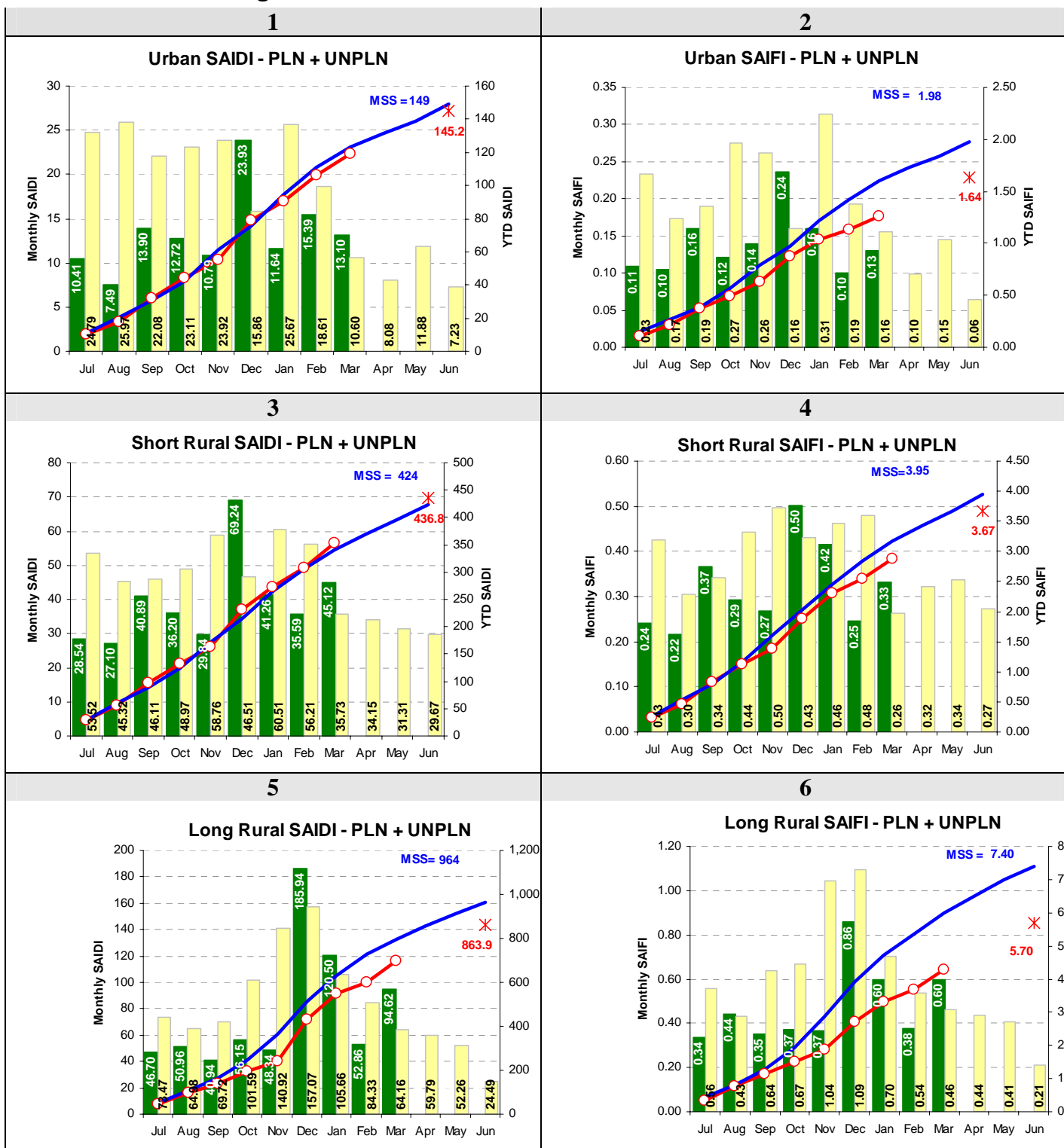
In the AER's recent Distribution Determination¹, Ergon Energy's capital expenditure allowance for Reliability and Quality Improvement investments for the 2010-15 regulatory control period was reduced by \$28 million to \$107 million (Nominal). To maximize the reliability outcomes in the early years of the regulatory control period, Ergon Energy has therefore 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.

Finally, it is important to note that despite heavy rain and widespread flooding across the majority of regional Queensland and the adverse influence of Cyclone Tasha, Cyclone Anthony and Cyclone Yasi, Ergon Energy's reliability performance modelling forecasts to meet five MSS at the year end. Recovering to a position of performance favourable to all 6 measures of the MSS is imperative to the business over the final quarter of 2010-11.

Short Rural SAIDI performance is the only measure forecast to not achieve MSS, while Urban SAIDI remains at risk of not achieving favourable performance to the MSS at the year end due to the relatively small margin to the Seasonalised Year to Date targets.

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 31 March 2011



Month Actual Performance
 09/10 Month Actual Performance
 YTD Cumulative Performance
 YTD Cumulative to Achieve Minimum Service Standard
* Estimated Year-End performance result

2. Weather Conditions Analysis

The weather conditions during the January - March 2011 quarter featured an extremely active cyclone period and widespread flooding resulting from the current La Nina conditions and compounded by an intense monsoonal influence. Two tropical cyclones affected the Queensland coast through the quarter. Category 2 tropical cyclone Anthony crossed the Whitsunday Coast near Bowen on 30th January with wind gusts of 128km/h before weakening to a rain depression causing flooding across the Central Coast and the Northern Coalfields. Category 5 tropical cyclone Yasi crossed the southern tropical coast near Mission Beach between midnight and 1am on 3rd February and had significant impact between Cairns and Townsville. Tropical cyclone Yasi maintained a strong core as it tracked through western Queensland to Mt Isa at which time it weakened to a rain depression. Tropical cyclone Yasi also caused significant coastal damage as a result of a 5m tidal surge.

Heavy rainfall and widespread flooding were other major weather influences observed over the quarter. The January total rainfall was very much above average over the southwest, far west, Cape York Peninsula, Upper Carpentaria and the Darling Downs and resulted in prolonged and widespread flooding across a large portion of the Ergon supply region.

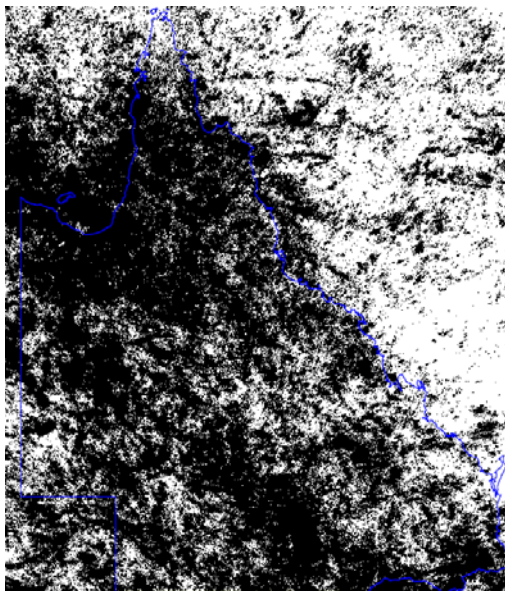
By comparison, the same quarter of the previous year recorded very similar conditions to this year. The mean daily maximum temperatures were below the long term average and rainfall across much of the state exceeded the long term historical averages. The Ergon supply region was also affected by three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

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

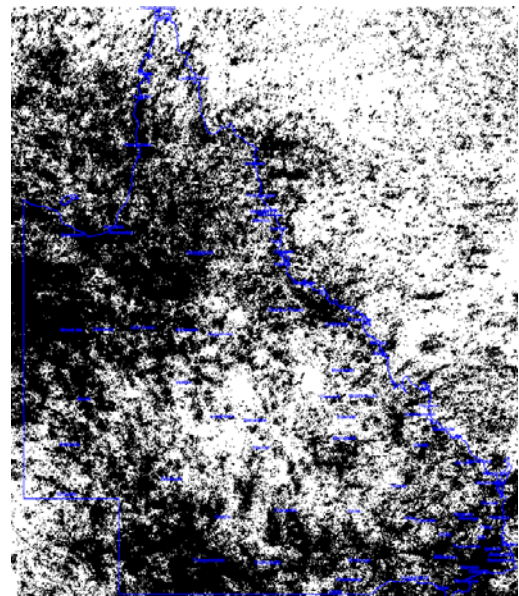
Figure 3 below shows the location and intensity of rainfall in Queensland for the January-March quarter this year compared to the same quarter in 2010.

2010 represented a more active storm season across much of the state as observed by the lightning strikes recorded in Figure 2. The rainfall and extensive flooding coupled with the direct and indirect impacts of the tropical cyclones has adversely affected Ergon Energy's unplanned outage performance.

Figure 2 – January - March Lightning Strike Maps for 2010 and 2011



January – March 2010

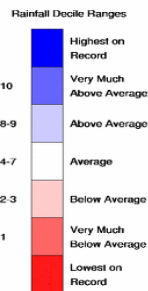


January – March 2011

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

Figure 3 – Bureau of Meteorology Monthly Weather Review Reports

	January	February	March
2011	<p>Widespread Flooding across the Ergon supply region.</p> <ul style="list-style-type: none"> Flooding across the Central and Southern supply regions High rainfall totals in the far west, Cape York Peninsula and the Upper Carpentaria Tropical Cyclone Anthony crossed the coast near Bowen on the 30th Thunderstorms occurred about the southern parts of the Wide Bay and Burnett and the north eastern parts of the Darling Downs and Granite Belt 	<p>Category 5 TC Yasi affected northern QLD</p> <ul style="list-style-type: none"> TC Yasi with wind speeds of 285km/h crossed the coast near Mission beach on the 3rd Major rainfall across the southwest district as a result of ex-Tropical Cyclone Anthony and again later in the month as a result of a deep trough Below average rainfall over most of the eastern parts of the state while above average over the north western 	<p>The wettest March on record for QLD</p> <ul style="list-style-type: none"> The highest daily rainfall for the Lower Carpentaria district Heavy rain and flooding along the tropical east coast Severe storms resulted in flash flooding in Townsville with rainfall of 100mm in 1 hour Mean Temperatures across the state were well below the long term March average
2010	<p>Wet in the North & West, dry & hot in the Southern and Central Highlands</p> <ul style="list-style-type: none"> Heavy rain and flooding across western areas in early January TC Neville and Olga brought flooding rain to north QLD 	<p>Wet & Cool in the Southern Regions.</p> <ul style="list-style-type: none"> Above average rainfall across the central and western districts Below average rainfall in the Far North region Maximum temperatures were cooler than average over the central and southern regions 	<p>Widespread rainfall & extensive flooding – TC Ului affected central QLD</p> <ul style="list-style-type: none"> Exceptional rainfall during the first week of March 17.1% of QLD had its wettest march on record on the 1st and 2nd Widespread flooding in western, southern and central QLD Severe TC Ului crossed the Whitsunday coast on 21st March



3. Current status of performance against MSS

In the nine month period to the end of March 2011, Ergon Energy has made significant progress in improving its 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 23 percent and 25 percent respectively compared to the same quarter last year.

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

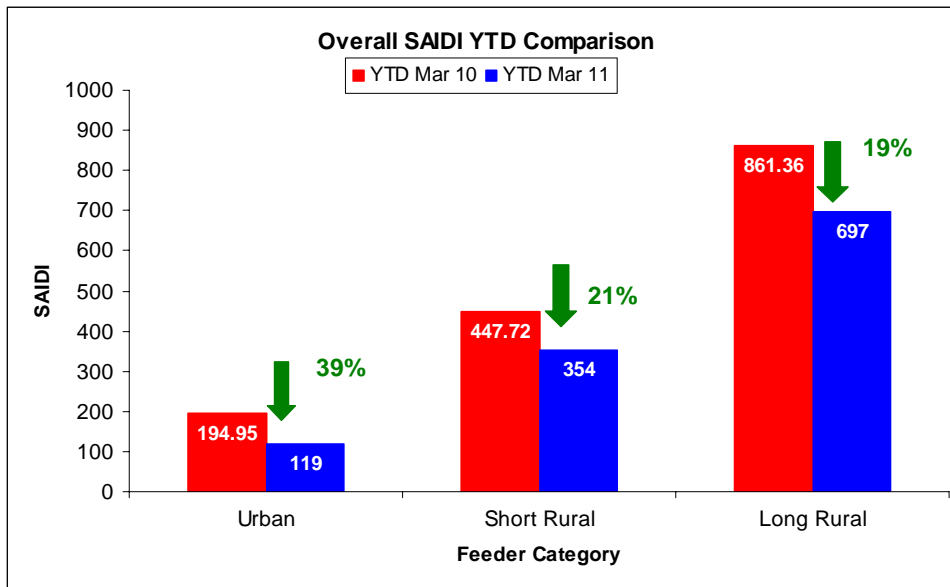
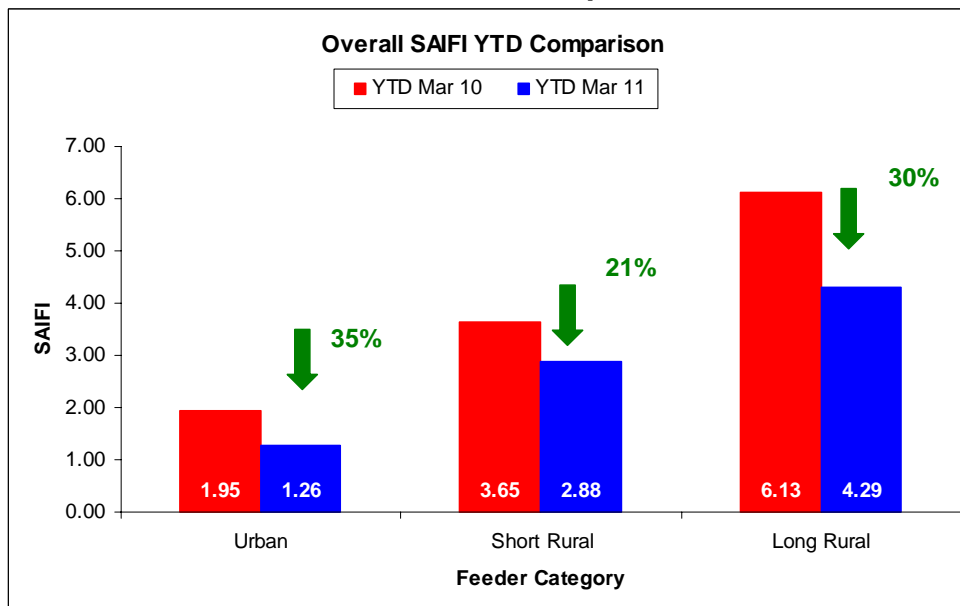


Figure 5 – Overall SAIFI Year to Date Comparison – 2009-10 vs. 2010-11



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 SAIIFI improvement in each feeder category as shown in Figure 6 below:

Figure 6 – Planned SADI / SAIIFI Year To Date Comparison – 2009-10 vs. 2010-11

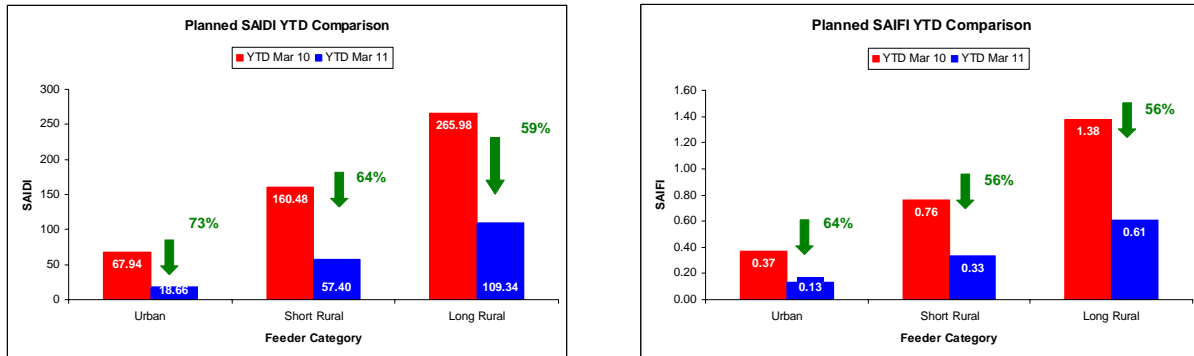
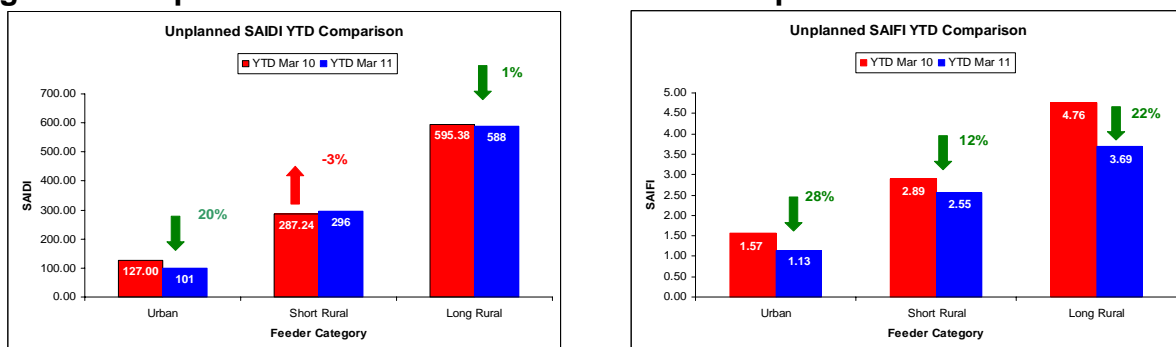


Figure 7 below shows that the year-to-date unplanned performance results have improved for all the measures with the exception of Short Rural SAIDI. Prior to the commencement of the 2010-11 summer storm season Ergon Energy's reliability performance was on track to outperform all six MSS measures. The severity of the extended duration of the 2010-11 wet season coupled with the impact associated with 3 tropical cyclones, one of which was the worst to ever make landfall in Queensland, has had significant bearing on Ergon Energy's ability to manage the duration and frequency of supply interruptions. The effects of extended response timeframes due to access issues resulting from flooding have been evident across the three feeder categories. In general terms, despite the extreme conditions that the Ergon Energy network has operated in over recent months the overall unplanned network performance continues to be an improvement on the previous year. Short Rural SAIDI for unplanned interruptions is the only measure of the MSS that has not demonstrated improvement on the equivalent period of the previous year. This is a result of very pronounced affect that the flooding across Queensland in December and January had in the outage duration of Short Rural feeders. The Short Rural SAIDI for December 2010 was highest of the past five years and 60% or 26.01 SAIDI above the seasonalised monthly MSS.

Figure 7 – Unplanned SADI / SAIIFI 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 2nd Quarter of 2010-11 ended with Ergon Energy on target to achieve reliability performance favourable to four of six MSS targets. Over December 2010 the Short Rural, Long Rural and Urban Feeder SAIDI recorded the worst performance compared to the equivalent month of the previous four years. This is indicative of the significant influence of the extended interruption duration resulting from the flooding through much of Queensland observed toward the end of the month. Since that time Ergon Energy has used its best endeavours to recover to favourable reliability performance against the MSS.

Generally Ergon Energy's reliability performance for the months January to March 2011 were at or better than the seasonalised MSS. The record rainfall and the subsequent flooding from January along with the network damage resulting from tropical cyclone Yasi has, however had a significant influence on the reliability performance observed over this period. The flooding of access routes adversely impacted Ergon's ability to respond to and affect repairs within normal restoration timeframes. The destructive winds that accompanied tropical cyclone Yasi has had a detrimental impact on the reliability performance that extends beyond the initial damage caused when the cyclone made landfall. The electrical infrastructure between the Whitsunday Coast and Cooktown has also suffered underlying fatigue as a result of being stressed by the extended exposure to severe winds. The result of this is likely to be an acceleration in the apparent aging of the electrical infrastructure and a consequential increase in frequency of fatigue related asset failures. The effects of which will become evident in future regulatory reporting periods.

At the end of the March quarter 2011 Ergon Energy had recovered in terms of its reportable reliability performance from that observed at the end of the 2nd quarter 2010-11. The Urban SAIDI returned to a position of reporting favourable performance to the cumulative seasonalised MSS and the SAIDI for the Short Rural feeder category had reduced its unfavourable margin. However it remained the only measure not on track to achieve performance favourable to the MSS targets for 2010-11. Based on performance equal to the seasonalised MSS values for the remainder of 2010-11 the Short Rural SAIDI measure is projected to achieve performance of 436.8 minutes, marginally exceeding the Short Rural SAIDI MSS for 2010-11 of 424.0 minutes i.e. exceed by 12.8 SAIDI minutes (2.9%);

Through the period January to March 2011 six additional Major Event Days have been identified. On the 3rd January a catastrophic failure of a 33kV circuit breaker at the T38 Mackay Substation resulted in an outage in the 132kV transmission network supplying the Mackay and Proserpine regions. On the 11th of January rising floodwaters in the area surrounding the township of Murgon resulted in a precautionary interruption of supply in the subtransmission network order to preserve public safety. On the 30th January Tropical Cyclone Anthony crossed the North Queensland coast between Bowen and the Whitsunday Islands causing significant localised damage to the electrical infrastructure in the area. The 2nd and 3rd of February 2011 were declared major event days following the coastal crossing of category 5 tropical cyclone Yasi which resulted in extensive electrical infrastructure damage between Cairns and Mackay. The 21st of February 2011 was declared a major event day due to the influence of severe storms in the South West Region in the vicinity of Toowoomba and Oakey on the Darling Downs.

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 the 2010-11 MSS and beyond.

Ergon Energy has placed significant focus on its operational practices to improve the response time to unplanned interruptions and the management of planned work in order to meet the MSS for 2010-11. In addition, Ergon Energy is also implementing a number of reliability improvement strategies through its major capital works projects. 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 three-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)

In the AER's recent Distribution Determination², 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 has therefore increased its 2010-11 Reliability and Quality budget to \$29.8 million, significantly higher than the \$18.5 million approved by the AER.

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.

² 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' distribution networks.

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 March 2011.

4.1 Asset Related Initiatives to improve both SAIDI and SAIFI

Completed as of March 2011

Note: some of these initiatives are ongoing and/or will be progressed during future quarters. Initiatives with completed milestones in March 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.

Ongoing Programs

7. **##³ 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. 2 sites are currently in the design phase, 2 are being resourced by external service providers and the remaining 4 sites have progressed to the construction phase. It is planned to have the installation of auto-reclose capability completed at the remain 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 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 are targeted for replacement, with 102 km replaced to the end of March 2011. Both HV and LV conductor is 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 21km section of the Egans Hill to Raglan feeder, is yet to be determined, but is expected to be delivered within the next 5 years. 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

³ Actions marked with ## are the Reliability and Quality Improvement capital expenditure that is set out in Table 1 on page 20.

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 will be replaced 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 27 switches replaced. The lines program has commenced slowly 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. To date 21 switches have been replaced under this program. A recovery plan is being developed;

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 73 units have been replaced YTD leaving 140 units outstanding for the completion of the program. This program had a significant ramp up in April with 144 units replaced YTD and 69 remaining to complete the program;
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 January-March 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, 101 projects have been raised for reclosers on Short Rural and Long Rural feeders and reclosers at a Urban to Rural boundary. 76 of these are in the scoping phase, 13 are in design and 12 are under construction;
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;
20. Another component of the ACR Strategy is the installation of **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 have been 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. This trial is now expected to recommence during the fourth quarter of 2010-11;
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 13 circuit breakers have been issued or have commenced work at the end of March. The remaining projects for all circuit breakers are to be issued by the end of June 2011 These programs will support the reduction of unplanned system and SAIDI and SAIFI on all feeder types.

To be progressed in the future quarter of 2010-11

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** which will be completed by 31st August 2011. 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. Testing procedures and a program of test has been finalised. 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 opportunities will identified by the fourth quarter to establish a 5 year program of works.

4.2 Asset Related Initiatives to Improve Response Time and SAIDI

Completed as at March 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 March 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 with a view for completion by the end of 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 59 substations to reduce response time following outages. As at March 2011, 19 of the sites have been commissioned with installation completed for 23 and designs completed for 34. The expected delivery timeframe for this program of works has suffered as a result of the resources committed to the recovery from cyclone Yasi. A plan to recover the deliver to key milestones is being formulated. The key reliability improvement will be reduction in SAIDI predominantly for Urban and Short Rural Feeders, but also for Long Rural Feeders.

Status of January - March 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. Trial units will be installed on poor performing feeders in Ergon Energy's southern regions in the first half of 2010-11. If the trial proves to be successful during the 2010-11 storm season, Ergon Energy will expand the LFI installation further into the distribution network within the next few years. 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 scheduled to be 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 Short Rural and Long Rural Feeders.

4.3 Operational Response Initiatives

4.3.1 Unplanned Outage Response

Completed as at March 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 January - March 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 streamlines 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 the future quarter of 2010-11

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 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 investment to be delivered, including a positive influence on reliability improvement, during the 2013 to 2015 period.

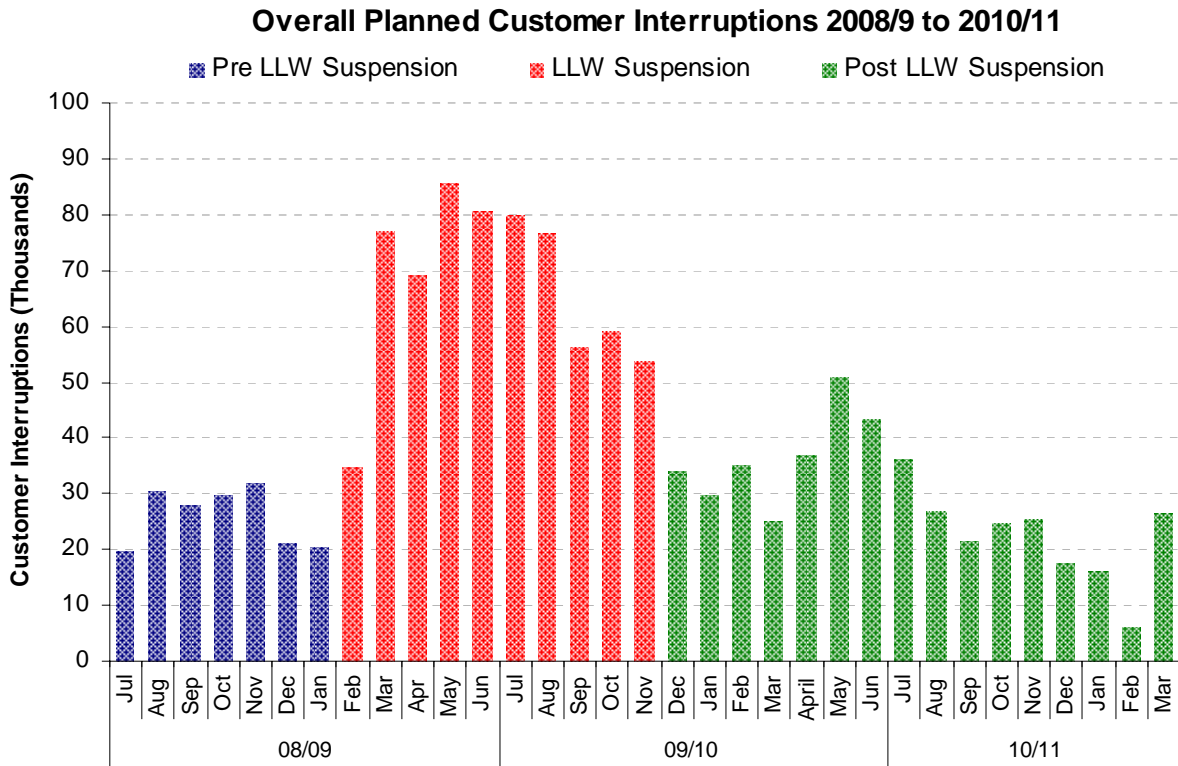
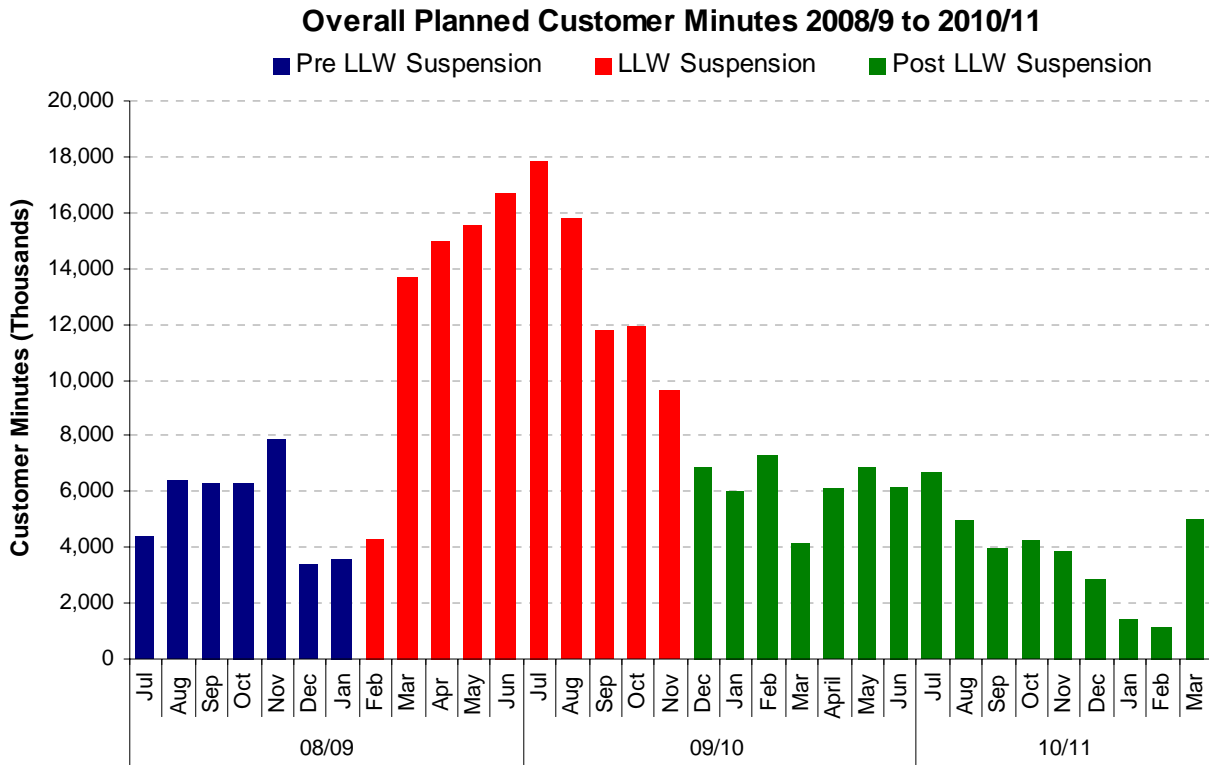
4.3.2 Planned Outage Management

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

Completed as at March 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), this configuration is similar to that used by ENERGEX. This configuration can be applied in short term unplanned, planned, and islanded mode;
- Large arrangements which will be required to operate in parallel and isolated configuration from the network. This is the current Ergon Energy and most often used in planned load management situations; and
- Large arrangements used for 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 has a Reliability Improvement budget allocation of \$88,943,677 for the 2010-11 year.

Table 1 below shows the **year-to-date (end of March 2011) expenditure** and **next quarter (April-June 2011 quarter) budget** associated with Reliability and Quality Improvement works for 2010-11 compared with the year-to-date budget. 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 has been 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. 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 the 3rd quarter 2010-11 under spent on the reliability and Quality Improvement Budget by \$14m. Recovery from this under spend will be unlikely due to the level of the 4th quarter budget of \$34.4m. Works Delivery Recovery plans have been formulated with the aim of making ground on the YTD under spend. The final picture of this recovery plan is not yet finalized but it expected to involved some carryover in to the 2011-12 financial year.

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

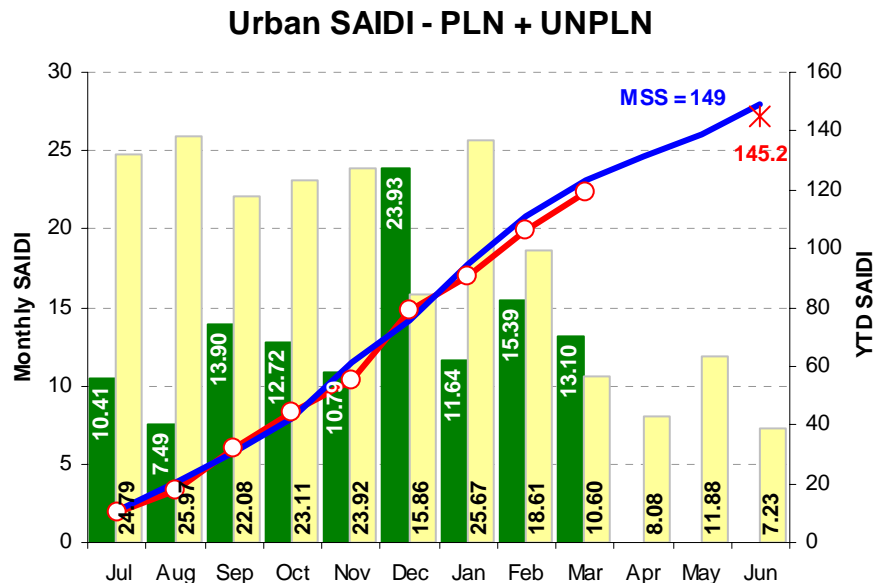
Table 1 - 2010-11 Reliability and Quality Improvement Capital Expenditure

RELIABILITY IMPROVEMENT WORKS		
Asset Replacement	YTD Actual Costs	\$ 9,947,459
	YTD POW Budget	\$ 10,345,658
	4th Qtr POW Budget	\$ 2,092,727
	Total 10/11 Budget	\$ 12,438,385
Augmentation	YTD Actual Costs	\$ 12,391,005
	YTD POW Budget	\$ 22,410,690
	4th Qtr POW Budget	\$ 11,566,922
	Total 10/11 Budget	\$ 33,977,612
Other System Capex	YTD Actual Costs	\$ 5,108,557
	YTD POW Budget	\$ 5,443,727
	4th Qtr POW Budget	\$ 7,221,118
	Total 10/11 Budget	\$ 12,664,845
Reliability Improvement	YTD Actual Costs	\$ 13,098,991
	YTD POW Budget	\$ 16,371,871
	4th Qtr POW Budget	\$ 13,490,964
	Total 10/11 Budget	\$ 29,862,835
Total Sum of YTD Actual Costs		\$ 40,546,012
Total Sum of YTD Budget		\$ 54,571,946
Total Sum of 4th Qtr POW Budget		\$ 34,371,731
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 year-to-date reliability performance result for Urban SAIDI is favourable to the 2010-11 seasonalised MSS target at the end of the March quarter 2011. The year-to-date March 2011 results plus the seasonalised target line projection year-end reliability performance for 2010-11 for Urban SAIDI (145.2 minutes) is favourable to the MSS (149 minutes) by a margin of 3.8 minutes.

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

The reliability performance for the January - March quarter 2011 was impacted by the abnormal weather conditions experienced throughout the first half of the period. Large areas of the state were inundated with floodwaters through January followed by the impacts of two tropical cyclones that crossed the coast. Tropical cyclone Yasi caused significant infrastructure damage to the Ergon Energy supply network between Cairns and Mackay and west to Mt Isa. Despite the conditions, for the 3rd quarter 2010-11, the network performance in the area of Urban SAIDI saw a return to slightly favorable performance against the cumulative seasonalised MSS, recovering from the unfavorable position reported at the end of the 2nd quarter.

The unfavorable Urban SAIDI reported in the 2nd quarter 2010-11 was a direct result of extended outage durations due to access issues associated with flooding experienced across much of the Ergon Energy supply region at the end of December. The Urban SAIDI observed in December 2010 exceeded the monthly seasonalised MSS by 9.44 SAIDI or 65% and was the worst December performance in this area for the past 5 years. In the 3rd quarter Ergon demonstrated the resilience of its networks and the benefits derived from an ongoing and concentrated focus on the management of both planned and unplanned outages to recover from the performance shown in December and to maintain favorable performance in spite of continued extreme weather over the duration of the 3rd quarter.

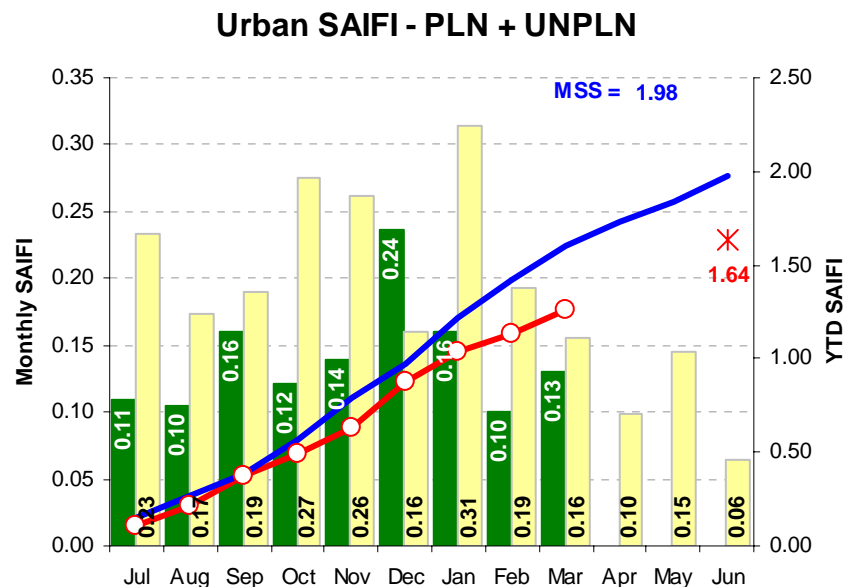
The overall Urban SAIDI year to date performance comparative to the end of the March quarter 2010 has substantially improved (39 percent improvement). In addition, planned Urban year to date SAIDI has improved by 73 percent compared to the corresponding period in 2009-10.

For comparison purposes, Figure 4 on page 9 demonstrates the improvement on overall SAIDI to the end of the March quarter for both 2009-10 and 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 year-to-date data presented in the March 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 March Quarter 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



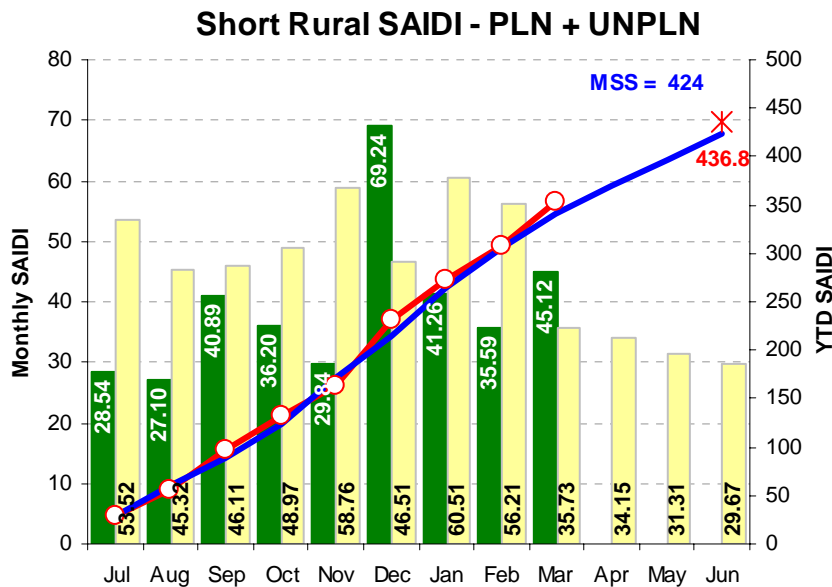
The year-to-date reliability performance result for Urban SAIFI is favourable to the 2010-11 seasonalised MSS target at the end of the March quarter 2011. Further, the projected year end reliability performance for 2010-11 for Short Rural SAIFI (1.64) is forecast to report favourably to the annual MSS (1.98) by a margin of 0.34.

The overall Urban SAIFI year to date performance at the end of the March quarter 2011 has substantially improved (35 percent improvement) in comparison to the corresponding period of 2009-10. In addition, planned Urban year to date SAIFI has improved by 64 percent compared to the same period in 2009-10.

For comparison purposes, Figure 5 on page 9 demonstrates the improvement on overall SAIFI at the end of the March quarter for both 2009-10 and 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 year-to-date reliability performance result for Short Rural SAIDI marginally exceeds the 2010-11 seasonalised MSS target for the period at the end of the March quarter 2011. The projected year-end reliability performance for 2010-11 for Short Rural SAIDI (436.8 minutes) marginally exceeds the MSS (424 minutes) by 12.8 minutes.

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 January - March quarter 2011 was impacted by the abnormal weather conditions experienced over the first half of the period. Large areas of the state were inundated with floodwaters through January followed by the influences of two tropical cyclones that crossed the coast. Tropical cyclone Yasi caused significant infrastructure damage to the Ergon Energy supply network between Cairns and Mackay and west to Mt Isa. Despite the conditions, for the 3rd quarter 2010-11, the network performance in the area of Short Rural SAIDI saw a reduction in the unfavorable margin of the year to date performance against the cumulative seasonalised MSS reported at the end of the 2nd quarter.

Prior to the onset of the record rainfalls observed over the latter half of December 2010 the Short Rural SAIDI performance had returned to a position favorable to the seasonalised year to date MSS. The unfavorable Short Rural SAIDI reported in the end of the 2nd quarter 2010-11 was a direct result of extended outage durations due to access issues associated with the flooding that occurred across much of the Ergon Energy supply region at the end of December. The Short Rural SAIDI performance observed in December 2010 exceeded the monthly seasonalised MSS by 26.01 SAIDI or 60% and was the worst December performance in this area for the past 5 years. In the 3rd quarter Ergon demonstrated the resilience of its networks and the benefits derived from an ongoing and concentrated focus on the management of both planned and unplanned outages to recover from the performance shown in December to reduce the unfavorable margin of the actual performance to the year to date seasonalised MSS. This performance improvement occurred despite of continued extreme weather over the duration of the 3rd quarter.

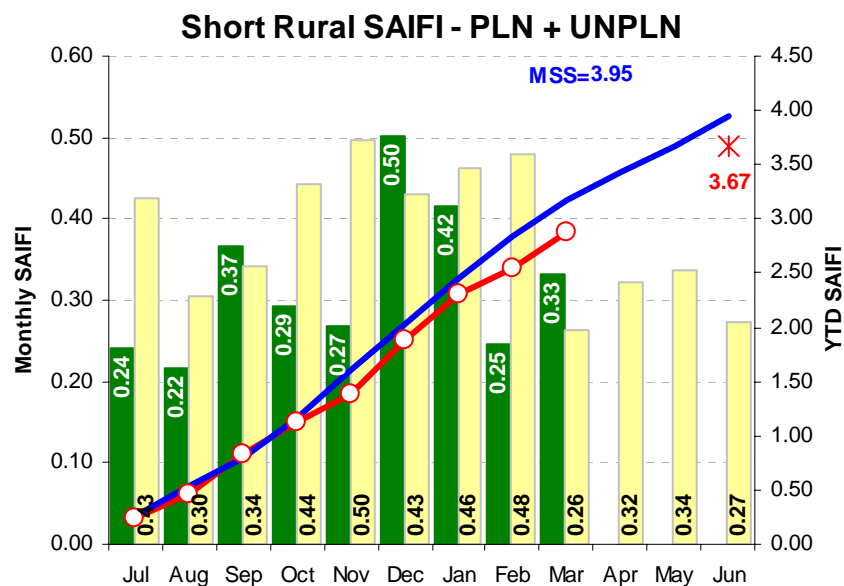
The Short Rural SAIDI is marginally unfavorable to the cumulative seasonalised MSS for the March quarter 2011 largely resulting from the influence of flood waters on the unplanned interruption restoration timeframes. However, it is important to note that Ergon Energy's annual Short Rural SAIDI performance, prior to the extreme weather conditions in mid December 2010, was projected to meet the annual MSS.

Further, the overall year to date Short Rural SAIDI at the end of the March quarter 2011, has improved by 21 percent compared to the corresponding period of 2009-10. In addition, planned year to date Short Rural SAIDI has improved by 64 percent compared to the corresponding period in 2009-10.

For comparison purposes, Figure 4 on page 9 demonstrates the improvement on overall SAIDI at the end of the March quarter for both 2009-10 and 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



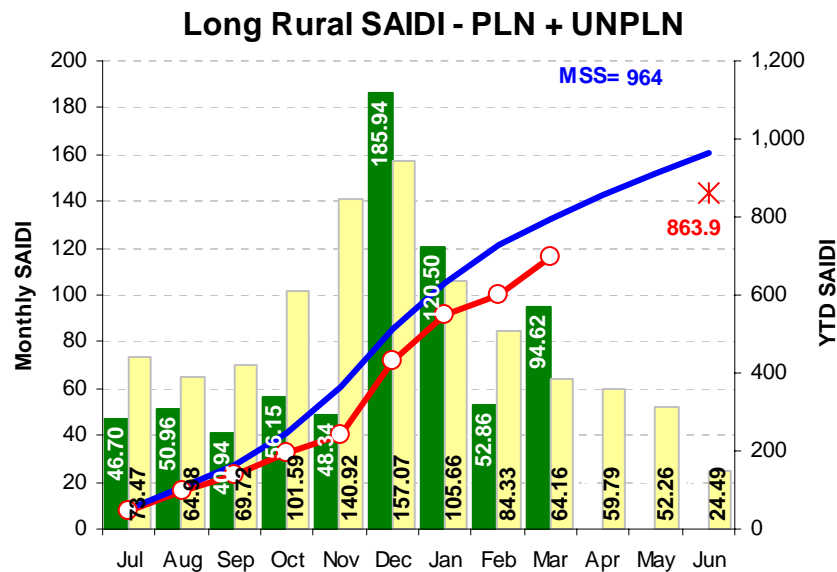
The year to date reliability performance result for Short Rural SAIFI is favourable to the 2010-11 seasonalised MSS target at the end of the March quarter 2011. Further, the projected year end reliability performance for 2010-11 for Short Rural SAIFI (3.67) is projected to remain favourable to the annual MSS (3.95) by a margin of 0.28.

The overall Short Rural year to date SAIFI performance at the end of the March quarter 2011, on average, has improved by 21 percent compared to the corresponding period in 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 at the end of the March quarter for both 2009-10 and 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 year-to-date reliability performance result for Long Rural SAIDI is favourable to the 2010-11 seasonalised MSS target at the end of the March quarter 2011. Further, the projected year-end reliability performance for 2010-11 for Long Rural SAIDI (863.9) continues to remain favourable to the annual MSS (964) by 100.1 minutes.

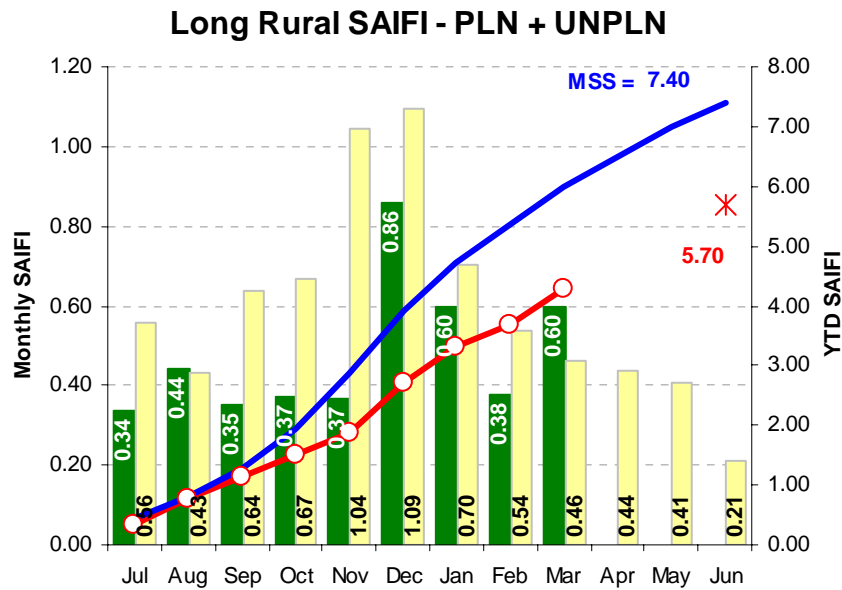
Currently, Long Rural feeders make up to 67 percent of Ergon Energy's distribution feeder network and supply about 12 percent of its customers.

The overall Long Rural year to date SAIDI performance at the end of the March quarter 2011 has substantially improved (19 percent improvement) in comparison to the corresponding period in 2009-10. In addition, planned Long Rural year to date SAIDI has improved by 59 percent compared to the corresponding period in 2009-10.

For comparison purposes, Figure 4 on page 9 demonstrates the improvement on overall SAIDI from the March quarter for both 2009-10 and 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 year to date reliability performance result for Long Rural SAIFI is favourable to the 2010-11 seasonalised MSS target at the end of the March quarter 2011. Further, the projected year end reliability performance for 2010-11 for Long Rural SAIFI (5.70) is favourable to the annual MSS (7.40) by 1.70.

The overall Long Rural year to date SAIFI performance at the end of the March quarter 2011, has improved by 30 percent compared to the corresponding period in 2009-10. In addition, planned Long 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 the March quarter for both 2009-10 and 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.

Please direct queries or feedback on this report to:

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