Ref: BN/TF/JD

Date: 14 August 2013

97 – 99 Adelaide Street
Maryborough QLD 4650
PO Box 163
Maryborough QLD 4650
Ph: 131046
Website: www.ergon.com.au

Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Dear Mr Pierce

SUBMISSION ON THE REVIEW OF NATIONAL FRAMEWORKS FOR TRANSMISSION AND DISTRIBUTION RELIABILITY– ERP0028 & ERP0033

Ergon Energy Corporation Limited, in its capacity as a Distribution Network Service Provider in Queensland, welcomes the opportunity to provide comment to the Australian Energy Market Commission on its *Review of National Frameworks for Transmission and Distribution Reliability Consultation Paper*.

Specific comments in relation to each of the questions raised in the Consultation Paper are included in the attached submission.

Should you require additional information or wish to discuss any aspect of this submission, please do not hesitate to contact either myself on (07) 4092 9813 or Trudy Fraser on (07) 3851 6787.

Yours sincerely

Jenny Doyle
Group Manager Regulatory Affairs

Telephone: (07) 4092 9813
Email: jenny.doyle@ergon.com.au

Enc: Ergon Energy's submission

Ergon Energy Corporation Limited

Submission on the *Review of the National Frameworks for Transmission and Distribution Reliability*

Australian Energy Market Commission

14 August 2013

Submission on the *Review of National Frameworks for Transmission and Distribution Reliability*

Australian Energy Market Commission

14 August 2013

This submission, which is available for publication, is made by:

Ergon Energy Corporation Limited
PO Box 15107
City East
BRISBANE QLD 4002

Enquiries or further communications should be directed to:

Jenny Doyle
Group Manager Regulatory Affairs
Ergon Energy Corporation Limited
Email: jenny.doyle@ergon.com.au
Ph: (07) 4092 9813
Mobile: 0427 156 897

1. INTRODUCTION

Ergon Energy Corporation Limited (Ergon Energy), in its capacity as a Distribution Network Service Provider (DNSP) in Queensland, welcomes the opportunity to provide comment to the Australian Energy Market Commission (AEMC) on its *Review of National Frameworks for Transmission and Distribution Reliability* (the Review).

Ergon Energy is generally supportive of the key principles of the Review, and has provided a response to the AEMC's specific questions raised in the Consultation Paper.

Ergon Energy is a member of the Energy Networks Association (ENA), the peak national body for Australia's energy networks. The ENA has prepared a comprehensive submission addressing the AEMC's Consultation Paper, and Ergon Energy is supportive of the arguments contained in their submission.

Ergon Energy is available to discuss this submission or provide further detail regarding the issues raised, should the AEMC require.

2. TABLE OF DETAILED COMMENTS

Question(s)	Ergon Energy Response
1. Expression of distribution reliability targets	
a) Does the proposed removal of input planning standards for distribution networks compromise the ability to deal with high impact low probability events such as city wide supply interruptions?	The removal of input planning standards will be problematic for those DNSPs, such as Ergon Energy, with transmission and sub-transmission systems[1], and in particular, radial single circuit lines with low customer numbers over large areas. In this case, there is a crossover point between the transmission proposal and the distribution proposal, and trying to manage transmission or sub-transmission augmentation based on reliability targets only may not be practical. However, there are examples such as very long sub-transmission feeders (for example, Charleville, St George, etc.) where the cost to invest is less than managing the outages due to a single 66kV feeder. In these cases it is due to the robustness of the line design but in other cases, such as where there is an aged wood pole line, investment in replacement or duplication (due to poor performance) would not give a positive Net Present Value (NPV) based on the Service Target Performance Incentive Scheme (STPIS) alone. Therefore, it is likely that community outages would result in greater community outrage than investment funded by STPIS. Furthermore, for substation planning criteria, the risk of outages is based on probability of failure. As this is generally low, probability-based planning may not drive large expenditure. However, when outages do occur the impact is large. Therefore, Ergon Energy would likely need to operate in both distribution and transmission frameworks as currently proposed by the AEMC.
b) Does the expression of distribution reliability measures by feeder type accommodate the specific locational characteristics of individual jurisdictions while achieving the benefits of national consistency?	Reliability performance by feeder category appears to be the most common basis of reliability measures amongst most of the DNSPs. Therefore, continuing this practise might seem reasonable. However, it should be noted that national consistency cannot guarantee networks can be benchmarked due the distinct characteristics of individual distribution networks, such as: • the extent of sub-transmission network owned / managed by a DNSP as part of their distribution supply chain; • the extent of Single Wire Earth Return (SWER) networks. For example, Ergon Energy has SWER networks constituting most of its long rural feeders;

[1] While Ergon Energy owns transmission assets, by virtue of clause 9.32.1(b) of the National Electricity Rules they are considered to be distribution assets and therefore subject to the regulatory arrangements applicable to distribution networks.

	• the extent of low voltage connectivity; • the extent of meshed and radial sub-transmission network; • the proportion of DNSP distribution feeders that have very limited or no ties to adjacent feeders due to low capacity (e.g. SWERs) or geographical factors, therefore preventing partial restoration during outages; and • customer density, etc. Prominent adverse weather patterns and geographic factors of a DNSP have an equally significant impact on the distribution feeder performance outcome and the seasonal variation of such. All of the above would have a direct impact on reliability outcomes. Hence comparing the reliability outcomes just because they are based on the same feeder category is not practical. In accordance with IEEE 1366, distribution reliability is defined as the System Average Interruption Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI) etc. arising from outage interruptions originating in the distribution lines / feeders beyond the zone substation. However, as noted in our response to Question 1 a., there is a jurisdictional derogation in place in Queensland by virtue of which the entire assets of a DNSP like Ergon Energy are considered 'distribution'. Therefore, all outage interruption impacts originating in Ergon Energy's sub-transmission (132kV, 110kV, 66kV, 33 kV and the zone substations) network are settled into the 'distribution' feeder SAIDI and SAIFI. These SAIDI/SAIFI values are therefore not comparable with those DNSPs with a different extent of sub-transmission network and impact of such on their distribution reliability measure outcomes.
c) Is it possible to achieve consistency in the definitions of distribution reliability measures across the NEM, including consistency in exclusion criteria?	While the standardisation of definitions of reliability measures and exclusion criteria should be plausible in theory, the framework should not seek to implement 'numerically' consistent targets across DNSPs for similar feeder categories. The standard definitions of reliability measures should also be clear and consistent on the definition of the customers considered for distribution performance measurements (e.g. metered vs. unmetered etc.). However, national consistency cannot be warranted due to the distinct characteristics of individual network configurations, as discussed above. For example, Ergon Energy has a higher percentage of its outage duration and frequency attributable to the sub-transmission network compared to most of the DNSPs in Australia. Ergon Energy also has one of the highest numbers of spans of SWER networks in the world as part of its distribution network. Further, Northern Queensland is more prone to tropical cyclones

	compared to some other parts of Australia. All of these factors would have a direct impact on reliability outcome. Hence comparison of the reliability indices just because they are based on the same standard definition and exclusion criteria is not feasible. In addition to the difficulty in benchmarking based on standard definitions and exclusion criteria, adjustment of historical performance data to suit the new definitions / exclusions may be problematic. Impacts on performance trends and forecasts based on changed reporting criteria are also unknown. Furthermore, Ergon Energy does not benefit from Major Event Day (MED) exclusions as much as DNSPs with more compact distribution areas. Extreme weather events that may impact a metropolitan area may only impact a regional city or town in Ergon Energy's distribution area. Ergon Energy's performance is highly correlated to the number of days that are just below the MED threshold. Moreover, Ergon Energy recommends measures of reliability also consider the variation of the network performance due to configuration and weather. If the variation around the mean is high then subsequent impacts on STPIS will be high.
d) Is the AER the appropriate body to be responsible for developing the national reference standard template for distribution? If not, which body should be responsible for this task?	Ergon Energy agrees that the Australian Energy Regulator (AER) would be the appropriate body to be responsible for developing the national reference standard template. However, Ergon Energy believes that state jurisdictions should have the option to set targets to protect the interests of their customers. This may include setting more onerous targets (and hence regulatory funding would be required) that cannot be met by improvements funded by STPIS, or alternatively allowing the DNSPs to reduce augmentation funding with a higher risk profile and hence have higher targets.
2. Expression of transmission reliability standards	
a) What would be the effect of expressing transmission reliability standards on an N-x basis and complementing this with the inclusions of additional parameters?	Nil comment.
b) Is AEMO the appropriate body to be responsible for developing the national reference standard template for transmission? If not, which body should be responsible for this task?	Nil comment.
3. Structure of the standard setting process	
a) Is the proposed timeframe for undertaking the standard setting process able to be achieved in practice?	Ergon Energy suggests that the proposed timeframe of 35 months prior to the start of the regulatory period presents the following general challenges: • Starting the process this far out may result in a flawed analysis on the basis of

	benefits continuing to flow through at that time from previous investments; and • Any further extension of the period will effectively require consideration of targets one regulatory control period before the period in which they will apply. This is a real concern given reliability investments from the period preceding application of the targets will not have materialised by that time. For example, benefits from the previous regulatory control period continue to flow through to customers up to 2 years into the current regulatory control period. Ergon Energy questions whether the standard setting process will result in targets that are substantially different from that arising from light handed regulation through STPIS and using a 5 year average. Ergon Energy suggests this process should only apply if the jurisdiction is not satisfied STPIS is driving the correct direction. Given the timeframe proposed by the AEMC has already passed for Ergon Energy's next Distribution Determination, transitional arrangements would be required in order for the standard setting process to apply prior to the next regulatory control period, i.e. 2015-2020. Furthermore, changing from the current STPIS method to a new standard would cause a fundamental change to reliability management. Given reliability benefits have a delay of some years and improvement projects occur over the regulatory control period, a change in standard each period has the risk of getting out of sync with the standard from the period before. The current STPIS framework allows a transition from one regulatory control period to the next. Reliability improvements that result from investments in the period before run the risk of not resulting in STPIS benefits in the following period. Hence although the STPIS scheme is still proposed, setting standards each period would limit STPIS benefits to fund the investment. This may require reliability improvement Capital Expenditure (Capex) in the regulatory determination which may be confused with STPIS. Ergon Energy therefore supports a more light-handed and efficient approach as proposed by the ENA.
b) Are there any specific jurisdictional arrangements that would need to be considered in adopting the proposed frameworks, including how the responsibilities could be allocated?	Ergon Energy recommends there be provision for jurisdictions to consider the suitability of a national framework, and have the flexibility to opt in or out of the arrangement where the new process determines a significantly different customer expectation to existing reliability targets.
4. Development of guidelines and the VCR	
a) Which aspects of the proposed frameworks should be covered in the economic assessment process guidelines?	Ergon Energy recommends the guidelines include a methodology for the calculation of the Value of Customer Reliability (VCR). When reviewed, the VCR needs to consider the

	changing reliability performance, given that customers should then value improvement slightly less as reliability improves. Furthermore, VCR also needs to consider that reliability performance does not follow a normal distribution, but a log normal distribution and tends to skew above the mean rather than symmetrical about it. Notwithstanding, Ergon Energy suggests that the value of high impact, low probability events needs to be assessed by something more than VCR. Customer outrage and potential intervention by the jurisdiction bears the risk of the DNSP being subject to other local directions. Any consideration of worst served customers also needs to be included. Although there is a risk that these customers may be ignored as not economically viable, there needs to be some process to enable expenditure to remedy the very worst served. Finally, if a standard setting process does occur, it should ensure all jurisdictions are consistent and ensure regional economic factors are covered.
b) Is the AER the appropriate body to develop the guidelines, in light of its other roles under the proposed frameworks? If not, which body should be responsible for this task?	Ergon Energy agrees that the AER's role in developing the guidelines for the VCR would be consistent with its role as the economic regulator and standard setter on a national level. Ergon Energy also suggests the AER initially adopt the work of AEMO to avoid duplication of processes. Ergon Energy agrees there should be no more than one body handling the VCR assessments.
c) Is the AER the appropriate body to be responsible for updates to the VCR? If not, which body should be responsible for this task? Should the CPI be used to escalate VCRs each year?	Ergon Energy agrees that the AER's role in updating the VCR would be consistent with its roles as the economic regulator and standard setter on a national level. Ergon Energy also suggests the AER initially adopt the work of AEMO to avoid duplication of processes. Ergon Energy agrees that VCRs should be escalated annually by the Consumer Price Index (CPI), and then re-evaluated at the start of each regulatory control period.
5. Customer consultation and selection of reliability scenarios	
a) How should the customer consultation process be conducted to provide sufficient information to the standard setter to make an informed decision on the selection of a range of reliability scenarios?	Ergon Energy believes customers' inputs in the economical assessment process are sought through the VCR development process. Customer's preferences on reliability measures (e.g. duration or frequency of interruptions or something else) could be covered through surveys independent of the reliability scenario development. Re-involving customers for the consultation on the types of reliability scenario will add unnecessary complexity and cost to the process. Furthermore, distribution customers are unlikely to have the required expert understanding of industrial measures and technical terms used to describe the reliability

	scenarios. Ergon Energy suggests collaboration of the standard setter, economic advisor and the relevant NSP should suffice for reliability scenario development.
b) Should limits or constraints be placed on the discretion that the standard setter has regarding the selection of reliability scenarios?	Yes. Ergon Energy believes the number of scenarios should be limited. However, restricting this too much to save cost may also limit the effectiveness of the standard setting process. Scenarios should be able to be modelled by the DNSP with typical data held and should not require a whole range of data / system changes to be carried out.
c) Should the evaluation of measures to address worst served customers for DNSPs be included in the economic assessment process?	Ergon Energy believes the economic evaluation of measures to address the worst served customers for DNSPs could add another layer of complexity to an already complex process. Ergon Energy recommends that no additional obligations be established for worst served customers by the national framework. Rather, a definition and/or supportive criteria of what defines a worst served customer, or a worst performing feeder against the set targets, and reporting on what actions or non-action was undertaken by the DNSP to resolve the performance should be considered. Flexibility should be driven by assessment of the performance of the worst served customers by the DNSP, over the measured period, and determination of what solutions are able to be implemented to either prevent the event occurring again, or lessening the impact of future events. In setting measures and/or definitions for worst served customers, the inherent network reliability performance (network configuration, line lengths, design criteria etc.) should be recognised. Above this level, reliability improvement would come at an uneconomic price. Hence it should be recognised there must always be outliers. Ergon Energy suggests establishing a process to recognise and make specific provision for recognising and documenting that improvement options for worst served customers have been exhausted for explicit customers or feeders, so that these do not get reworked and re-queried unnecessarily. Any focus on worst served customers should be innovative, low cost methods that improve performance but do not necessarily reach average performance. Mandatory output targets for all feeders would drive up investment significantly, and should therefore not be included.
6. Economic assessment of reliability scenarios	
a) What are likely to be the main costs and resource implications for NSPs, economic advisers, and other stakeholders from the economic assessment process?	Ergon Energy believes that there will be substantial additional cost and resource requirements associated with the complex economical assessment process imposed by the national framework on DNSPs, the local jurisdictions and the AER for setting of reliability standards. Any costs should reflect the benefit to customers.

b) What are the main risks associated with the economic assessment process? Is the use of sensitivities during the economic assessment process likely to address risks around the uncertainty of key assumptions?	The key risks are high cost and high resource demand for a lengthy process to set and apply the economically assessed standards. The number of assumptions made during the process also creates the risk of uncertainty of outcomes. This may lead to the need for an interim review of the standards within a regulatory control period if the basis of assumptions changes during the period. Furthermore, the accuracy of VCR is a risk. Analysis of the impact on statistical variation also needs to be considered, particularly given that weather pattern changes can drastically alter STPIS outcomes for Ergon Energy with little intervention. Ergon Energy suggests consideration of sensitivity analysis of VCR to understand the investment drivers, as well as sensitivity of variation in performance year to year. Moreover, setting targets each period also has a risk of missing longer term weather trends.
7. Setting reliability standards and targets	
Does the Commission's proposed approach provide sufficient information to the jurisdictional minister to allow the minister to make an informed decision on the levels of reliability that appropriately meets community expectations?	Apart from the customer consultation as part of this framework, community expectations would need to be obtained through separate processes. Jurisdictions will need to obtain this information if they want to set targets outside of the economically efficient process. This is likely to be dominated by poorly performing areas where the existing STPIS framework would drive improvement in any case. Jurisdictions are more likely to want to benchmark performance between DNSPs to confirm which performance in any DNSP should be higher. In a business like Ergon Energy where there is a number of large provincial cities, internal benchmarking is available to identify communities that are not within benchmarks.
8. Links between the standard setting process and the revenue determination process	
a) Should NSPs be required to align the consultation process at the commencement of the standard setting process with their consultation process on their regulatory proposal? Is this feasible and what costs or benefits may arise under this approach?	Yes. However, with the timeframes to set the reliability targets in advance of the development of the regulatory proposal there is a risk that this early timing may give information that may not be relevant for the following regulatory control period.
b) What factors should the AER consider in taking into account any differences in the cost forecasts submitted during the standard setting process and in a NSP's regulatory proposal?	Given the shortened period over which the standard setting process occurs, the forecasts submitted during the regulatory proposal are likely to be more robust. Ergon Energy suggests that if the standard setting process was optional, and there was a strong jurisdictional driver for a particular regulatory control period, then both stages of standard setting and regulatory proposal development could be coordinated. Ergon

	Energy also notes that under the ENA's preferred approach the economic assessment of expenditure proposals to improve reliability are part of the regulatory proposal development process.
9. Updating reliability standards and targets within the regulatory control period	
a) Are the Commission's proposed criteria for when an update can be sought appropriate for TNSPs and DNSPs, noting the differing characteristics of these networks?	Ergon Energy suggests that such a trigger is only likely in highly unusual circumstances. However, if a trigger did occur and was material, it may be worth updating standards.
b) Do the Commission's proposed criteria represent a sufficiently high materiality threshold for updates?	Ergon Energy does not object to the materiality thresholds proposed.
c) Would the proposed mechanism affect the incentives for efficient investment that exist under incentives based ex ante revenue allowances?	Potentially yes. Regular changes to standards would limit the ability to forward plan for an effective period. Reliability improvement is not immediate and a five year period is sufficient to allow a plan of reliability improvements to be implemented and benefits to emerge.
10. Compliance and performance reporting	
a) If the proposed framework for transmission reliability is adopted in Victoria, should AEMO be responsible for complying with Victorian transmission reliability standards?	Nil comment.
b) Does there need to be any changes to the current STPIS in order to enable it to be used to promote compliance with reliability targets for DNSPs?	If the reliability targets that are determined via the proposed framework are significantly more lenient, or more onerous than the existing STPIS targets, then changes in the current STPIS for DNSPs would be required. However, Ergon Energy notes that the intent of STPIS is not to enforce compliance with predetermined reliability levels. If the outcome of the framework is such that the new targets are significantly different to the existing STPIS targets, then the alignment of such could be contrary to the intent of STPIS which incentivises maintaining the status quo.
c) How should independent audits of NSPs' internal processes be conducted to demonstrate that NSPs have processes in place to meet their standards and targets?	An annual audit of reliability planning processes for long term reliability investment and reporting of such could prove to be very onerous and resource intensive for both the regulator and a DNSP and would not add any value. The current STPIS mechanism incentivises reliability improvement therefore it is not clear why additional auditing of processes would be required. DNSP's may choose to invest in reliability improvement, reduce investment to lower performance or maintain performance. Hence auditing of processes is not required and the incentive regime will ensure the desired outcome.
d) What issues should be considered in specifying how	• Ergon Energy is supportive of a national framework on reliability reporting which will

performance reporting should be undertaken by TNSPs and DNSPs?	allow consistency in the types and extent of reliability reporting to the regulators and to the general customer base/public. • However, both the frequency and contents of regulatory reporting must be practical and must add value for the regulators, public, DNSPs, as well as other stakeholders. • 'Annual' reporting on reliability performance against the annual targets for a given regulatory year is considered the most practical by Ergon Energy. More frequent reporting within a regulatory year will only mean additional cost and resources for both a regulator and a DNSP without any added value. • Reporting should be more at a summary level, not the detailed data requested in the AER RINs. • Ergon Energy supports the type of information sought through the Distribution Annual Planning Report (DAPR). • Adequate time should be allowed for transitioning into new reporting requirements (IT system changes, resource, training etc.) • Adequate time should be allowed for the reports to be compiled after a regulatory year closure. • The public reporting should not be used for benchmarking (of performance and/or reliability Capex) purposes and/or comparative reporting amongst the DNSPs. The general public will not always have a full understanding of the underlying reasons behind the differences in performance levels delivered by different DNSPs. • Reporting based on the size of the gap to compliance to individual DNSP's SAIDI/SAIFI targets could also assist with consistency in performance reporting.
11. Next steps and implementation	
Do you have any views on the changes to the NEM regulatory architecture which may need to be made in light of our proposed frameworks?	Nil comment.