

RESPONSE TO

THE MINISTERIAL COUNCIL ON ENERGY

NATIONAL FRAMEWORK FOR
DISTRIBUTION NETWORKS (NERA/ACG
REPORT) -
NETWORK PLANNING AND CONNECTION
ARRANGEMENTS

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positive energy

TABLE OF CONTENTS

1. INTRODUCTION	3
1.1 Summary of Key Issues	3
2. NATIONAL FRAMEWORK FOR NETWORK DEVELOPMENT AND PLANNING ARRANGEMENTS	4
2.1 Annual Planning Report	5
2.2 Threshold test for evaluations	6
2.3 Design of RFP Process	8
2.4 Form of Cost Benefit test	9
2.5 Regulatory oversight	9
2.6 Further Issues	9
3. NATIONAL FRAMEWORK FOR DISTRIBUTION NETWORK CONNECTION.....	10
3.1 Obligation to Connect	10
3.2 Technical Requirements	10
3.3 Standard Connections	10
3.4 Negotiation Framework.....	11
3.5 Connection Process.....	11
4. NATIONAL FRAMEWORK FOR CONNECTION CHARGES.....	11
4.1 Funding of Shared network costs	12
4.2 Connection Asset Charges	13
5. NETWORK LOSSES.....	13

1. INTRODUCTION

This submission presents ENERGEX Limited's views in response to the NERA Economic Consulting and Allen Consulting Group paper *Network Planning and Connection Arrangements – National Framework for Distribution Networks* (NERA/ACG report), released by the Ministerial Council on Energy (MCE) Standing Committee of Officials (SCO) in August 2007.

1.1 Summary of Key Issues

ENERGEX supports the MCE's continued efforts towards establishing a national regulatory framework for distribution and recognises the complexity of issues to be addressed. ENERGEX acknowledges that the NERA/ACG report on network planning and connection arrangements forms part of this process. However, many of the recommendations, particularly those relating to planning, do not reflect electricity distribution realities because energy market participants have not been sufficiently engaged in the development of the report. If implemented, the planning recommendations would impose significant additional operating costs on Distribution Network Services Providers (DNSPs) for an uncertain benefit to the national electricity market, including electricity consumers.

The following is a summary of the key issues for ENERGEX identified through its review of the NERA/ACG report:

- ENERGEX notes that the NERA/ACG report has been released as an independent paper for stakeholder comment and does not represent a policy position;
- ENERGEX is concerned that the NERA/ACG report, as well as the MCE SCO *Introductory Note*, does not provide clarity as to how the proposed recommendations will be progressed, with both Ministerial Order and the Australian Energy Market Commission (AEMC) Rule change process identified as potential mechanisms for adoption of relevant recommendations. ENERGEX believes recommendations should be progressed as a Rule change in accordance with the National Electricity Law (NEL), rather than by Ministerial Order;
- ENERGEX is concerned with the report's general application of transmission practices to distribution, without recognising the different network structure, operational circumstances, customer expectations and drivers associated with a distribution network;
- ENERGEX is concerned that many of the report recommendations draw upon proposed policy positions, which are yet to be endorsed by the MCE. This adds complexity to the consultative process as participants are restricted in their ability to fully consider NERA/ACG's recommendations given much of the supporting legislative framework is yet to be finalised or the subject of further review;
- ENERGEX is concerned that the adoption of the report recommendations would have a significant impact on business processes and generally place onerous obligations on DNSPs. This would impact on the ability of ENERGEX to be responsive in the high growth Queensland environment and may have a detrimental impact on customer service levels;

- ENERGEX believes that the NERA/ACG report reflects an unwarranted bias towards Distribution Generation (DG) on the premise that DNSPs have a potential bias against non-network solutions. ENERGEX is concerned that the recommendations do not demonstrate a robust analysis of all issues and appropriate consideration of the trade off between the level of detail and the accuracy of data, and the costs/benefits of implementing recommendations; and
- ENERGEX is concerned that the NERA/ACG report focuses on demand management initiatives from the perspective of external proponents and does not recognise the role of network businesses as a provider of both network and non-network options. ENERGEX has proactively implemented and/or investigated DG and Demand Side Response (DSR) options where a net benefit to the network has been identified. For example, ENERGEX has a Cool Change trial, which aims to manage the demand for electricity caused by the increasing installation and use of air-conditioners.

Overall, the issues raised in the NERA/ACG paper are diverse and complex, and potentially have an impact on a broad range of participants – retailers, customers, generators, DNSPs and transmission network service providers (TNSPs). Given this broad impact ENERGEX recommends that appropriate consultation is undertaken in accordance with the AEMC rule change process. This will ensure all interested and affected parties are provided the opportunity to comment and that jurisdictional differences are considered.

2. NATIONAL FRAMEWORK FOR NETWORK DEVELOPMENT AND PLANNING ARRANGEMENTS

ENERGEX supports the development of a national framework for network development and planning arrangements, however ENERGEX believes that further consultation needs to be undertaken to ensure proposed improvements consider the impact on customers and the unique characteristics of distribution networks.

ENERGEX recommends that a national framework for network development and planning arrangements consider the:

- trade off between the level of detail and the accuracy of data, given the dynamic nature of distribution networks;
- focus on distribution service delivery, including legislated reliability and quality of supply obligations, and the need for DNSPs to be responsive to customer demand;
- industry and jurisdictional realities that will impact on the application of the proposed national framework; and
- aim of regulatory requirements to ensure costs generated are at least offset by the benefits created.

2.1 Annual Planning Report

ENERGEX supports in principle NERA/ACG's recommendation that DNSPs undertake an annual planning process and publish an annual planning report. ENERGEX generally agrees with the objectives of the annual planning process, adopting a standard format and forming a central repository for report publication. ENERGEX also agrees that the Rules should only include high level obligations and the AER should develop specific statements of requirements in accordance with the consultation process outlined in the draft *National Electricity (Economic Regulation of Distribution Services) Amendment Rule 2007* (the draft Rules), released in April 2007. However, ENERGEX has concerns regarding the impact of the increase in information requirements, the value of specific elements of the annual planning report and the structure of the annual process.

The impact of the increased information requirements is significant. ENERGEX believes that the NERA/ACG report does not fully consider the related costs and potential benefits associated with the proposed requirements. The existing Annual Network Management Plan (ANMP)¹ published by ENERGEX provides a five year growth forecast and a description of major in delivery and planned reliability improvements. ENERGEX's network is characterised by high growth, high utilisation and a high volume of projects. For ENERGEX to meet the proposed information requirements for the annual planning report, considerable additional scoping and detailed planning would need to be undertaken at an earlier stage than currently required. The high growth nature of ENERGEX's network may also mean this work would need to be revisited and updated prior to project approval. Consequently, it is envisaged that the resourcing and cost impact of implementing this recommendation would be significant given the potential for regular changes to the planned projects on ENERGEX's network over the five year window. ENERGEX questions whether the benefits identified in the NERA/ACG report sufficiently offset the imposed costs.

ENERGEX also queries the value of specific elements of the proposed annual planning report, particularly the inclusion of five year forecasts of Distribution Loss Factors (DLFs). Network losses are a complex issue, are only calculated annually and can be influenced in a number of ways. Hence a locational DLF may be out of date or irrelevant due to a change in network circumstances.

ENERGEX is concerned that the structure of the annual process appears to treat DG/DSR projects preferentially pre-empting the outcomes of a thorough cost benefit analysis. Whilst it is acknowledged that DG/DSR projects can provide an efficient alternative to network investment in certain circumstances, the NERA/ACG report does not recognise demand management initiatives that have been established by DNSPs. ENERGEX has adopted a proactive approach in working with stakeholders to trial and offer demand management alternatives that will reduce network peak demand.

¹ Under the Queensland Electricity Code each of the DNSPs are required to prepare Annual Network Management Plans.

In addition, given the current limitations of DG/DSR and the fact that the NEL objective² requires the long term interest of consumers of electricity services to be considered with respect to reliability and service quality, the annual planning process should be structured to consider both network and non-network solutions equally to ensure that the most efficient approach is selected and that customers derive maximum benefit from any investment decision. To do otherwise would introduce distortions to the national market which could have serious long term consequences for investment in the energy sector.

As an alternative proposal that will minimise the cost impact and create benefit, ENERGEX proposes that the annual planning report include:

- 5 year forecast of network constraints and project scope/costs down to zone substation level;
- an invitation for non-network solutions, in the form of a statement of network demand management opportunities; and
- report on 11kV distribution network solutions.

Due to information volume and the dynamic nature of the network it is recommended that for 11kV distribution network solutions the DNSP should take the lead in initiating or sourcing of non-network solutions.

It is recommended that this alternative proposal be discussed as part of the consultation process undertaken to determine a workable model for distribution network planning that considers the network environment characteristics and provides an overall balance between costs and benefits.

2.2 Threshold test for evaluations

ENERGEX does not support the NERA/ACG recommendations in relation to threshold tests for evaluations on the basis that the AEMC review of the Regulatory Test should be completed before thresholds are set. In addition, ENERGEX has concerns regarding the basis of determining the proposed thresholds, the practicality of implementing the proposed thresholds and the failure to consider previous reviews.

When determining the proposed thresholds the NERA/ACG report does not consider the likely impact on distribution network operational processes given the significantly higher number and generally smaller size of projects in distribution compared to transmission. NERA/ACG supports imposing more onerous obligations on the basis that '*...if experience later demonstrates this belief to be in error, then the Rules (and AER statements of specific requirements issues there under) can be modified or removed in an expeditious manner from that time onwards.*' Given the cost impact on DNSPs and ultimately customers, ENERGEX does not support the proposed thresholds or the basis on which they have been determined.

² The National Electricity Objective is defined as follows: "The objective of the law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to – (a) price, quality, safety, reliability and security of supply of electricity; and (b) the reliability, safety and security of the national electricity system.

The appropriateness of establishing and prescribing threshold levels should be determined through an AEMC review prior to be included in the NER.

The proposed thresholds acknowledge that DG and DSR can provide an efficient alternative to network investment, but do not appear to have considered that the scope and reliability of these alternatives is currently limited. DNSPs have an obligation to ensure compliance with legislated reliability and technical standards. To be a viable and acceptable alternative to network constraints, the non-network solutions need to be able to meet these standards.

The practicality of implementing the proposed thresholds is a particular issue for Queensland given that it is currently experiencing significant growth in electricity demand, particularly peak demand, which far exceeds that in other NEM jurisdictions.³ This environment, coupled with a highly utilised distribution network, requires ENERGEX to be increasingly responsive in delivering investments to match customer demands. The proposed low threshold for the requirement to conduct a formal cost benefit assessment for network projects is likely to inhibit ENERGEX's ability to build an efficient and secure network in a timely manner.

In addition, the proposed low threshold for request for proposal consultations may affect ENERGEX's ability to be sufficiently responsive in a dynamic market, given that a large investment consultation process generally takes a minimum of four months to complete. This delay may be further exacerbated if non-network solutions are unable to deliver the network benefits assumed through the planning process. The likelihood for time lags has the potential to significantly impact a DNSP and its customers in terms of network performance (e.g. reliability) and customer service levels.

The thresholds proposed by NERA/ACG also fail to acknowledge consultation papers from the transmission review of the regulatory test. In particular Powerlink highlighted that limited response was received from market participants unless the project was greater than \$25M due to cost of constructing non-network solutions.⁴ This information should be considered in deciding the thresholds to apply to distribution.

ENERGEX also proposes that consideration is given to the indexation of thresholds. Over recent years network providers have been exposed to significant input cost inflation due to strong demand in construction, labour and materials markets. As a result, over time an increasing number of projects will be subjected to an economic cost benefit assessment and preparation of request for proposals if the thresholds remain fixed in nominal dollar terms.

In light of distribution project characteristics and the limited opportunities for non-network solutions, ENERGEX considers that the threshold at which it is required to prepare request for proposals should be limited to certain investment classes/values. Below this threshold, the decision to publish request for proposals should rest with the DNSP, acting reasonably. The DNSP would provide a summary of the outcomes of any request for proposals undertaken for projects below this threshold in its annual planning report.

³ Speech by Geoff Swier at Queensland Power Conference – What does the Australian Energy Regulator envisage for Queensland, September 2007

⁴ Powerlink Queensland Submission to the ACCC Review of the Regulatory Test, April 2003, p9

ENERGEX recommends the inclusion of a “reasonableness test” similar to that specified in the NSW Code of Practice - Demand Management for Electricity Distributors.⁵ As previously identified there is not always a non-network solution to alleviate network constraints so it would be beneficial to incorporate a preliminary assessment of whether a non-network solution exists that could provide an efficient alternative to network investment, e.g. for ENERGEX the environmental constraints in urban areas limit the possible non-network solutions.

2.3 Design of RFP Process

ENERGEX supports the use of the Request for Proposal process (RFP) to encourage transparency and agrees that the AER should develop guidelines for the contents and details of the RFP process in accordance with the consultation process outlined in the draft Rules (April 2007). However, in relation to the NERA/ACG report recommendations, ENERGEX has concerns regarding the timeliness of the RFP process, the viability of non-network solutions and the consideration of jurisdictional obligations.

ENERGEX is concerned that when establishing the minimum timelines for the RFP process, consideration should be given to the impact a prolonged project evaluation process would have in a rapidly growing dynamic environment such as Queensland.

ENERGEX proposes that to provide assurance on the viability of non-network solutions, the RFP process needs to provide clarity around the materiality/firmness of a proposed non-network solution. For a non-network solution to be a viable alternative it has to provide an acceptable level of ‘firmness’ as a network solution. In ENERGEX’s view, this will occur where a non-network solution is able to meet the same reliability standards as the DNSP at the point on the network to which it is connected. If the non-network proposal is immature, it may delay the project implementation and impact the ability of the DNSP to comply with its minimum service standards. Consequently, it is unlikely that a DNSP would consider a non-network solution that results in a higher risk of supply interruptions to be a valid alternative solution.

ENERGEX believes that the NERA/ACG report does not adequately consider the requirement of DNSPs to meet jurisdictional obligations. ENERGEX recommends that the responses to an RFP process must comply with the Rules, DNSP-specific and jurisdictional requirements for reliability, security and technical standards. In accordance with Australian Energy Market Agreement (AEMA) the prescription of service reliability standards and licensing will remain a function conducted by the State and Territory governments.⁶ This obligation effectively drives both the level and type of investment undertaken by a DNSP and consequently should be considered as part of the network option decision process. To provide clarity, ENERGEX proposes that the AER Distribution Guidelines outline the technical requirements (e.g. firmness, reliability and quality of supply) to be applied to non-network solutions as part of the RFP process.

⁵ Department of Energy, Utilities and Sustainability, NSW Code of Practice – Demand Management for Electricity Distributors, September 2004

⁶ COAG Amended Australian Energy Market Agreement, June 2006, Annexure 2 Distribution and Retail Functional Allocation

2.4 Form of Cost Benefit Test

ENERGEX does not agree that DNSPs should be required to apply the ‘standard regulatory test’ outlined in rule 5.6.5A. ENERGEX considers that this recommendation in referring to “the standard regulatory test is to be applied in a manner that is proportionate to the size and scale of the project” is highly subjective. ENERGEX recommends that consultation regarding the form of cost benefit test to be applied to distribution projects of varying sizes should be undertaken following completion of the AEMC review of the Regulatory Test.

The AEMC review also encompasses the outcomes of the Energy Reform Implementation Group (ERIG) review, which are not reflected in the NERA/ACG report. The ERIG review concluded that the current form of the Regulatory Test was inappropriate on the basis that:

- a project by project assessment cannot be expected to deliver efficient, long term development of the national network; and
- a two limb approach attempts to artificially identify and justify an individual project as either providing reliability or market benefits where in reality any network augmentation is part of a total network which delivers both (i.e. reliable and efficient supply).⁷

ENERGEX believes there will be difficulties in applying the market benefit test to distribution, in that a DNSP has very little controllable impact on the market through a single network augmentation project.

2.5 Regulatory oversight

ENERGEX supports the intention of the recommended dispute resolution process; however it is not clear, why the dispute resolution provisions should be broader than those currently used for new large network assets. In particular, the scope of the review should be consistent with the current dispute resolution regime (Rules 5.6.6 (j)–(n)). Failure to limit dispute resolution to the final decision may result in the planning process being frustrated due to applications at each stage of the consultation process.

2.6 Further Issues

ENERGEX supports in principle the recommendation that the Rules should encourage DG/DSR trials and risk sharing. However, ENERGEX is concerned that although this may allow a DNSP to gain more confidence in a DG/DSR option, it will not remove the DNSP’s contingent liability if that option is implemented and does not deliver as expected. DNSPs face contingent liabilities associated with DG/DSR options operating on their networks to the extent that if the DG/DSR option fails or does not perform as contracted, the DNSP bears the consequences. This may be addressed by providing clarity around the degree of materiality and firmness required from a non-network solution as previously mentioned.

⁷ Energy Reform Implementation Group, Energy Reform – The Way Forward for Australia, January 2007, p.184

3. NATIONAL FRAMEWORK FOR DISTRIBUTION NETWORK CONNECTION

The NERA/ACG recommendations effectively create a national connection framework, replacing the jurisdictional arrangements. ENERGEX believes this matter requires proper consultation to ensure flexibility in arrangements is maintained, customers are not adversely impacted and jurisdictional issues are transitioned.

ENERGEX recommends that a national framework for distribution network connection consider the:

- jurisdictional obligations for technical and service reliability that will impact on the application of the proposed national framework; and
- aim of regulatory requirements to ensure costs generated are at least offset by the benefits created.

3.1 Obligation to Connect

ENERGEX supports in principle the process of including in the Rules a DNSP's obligations to provide connection services to users and the connection requirements that must be met by a user. However, as previously mentioned it should be acknowledged that a DNSP's technical and service reliability obligations will continue to be a State and Territory obligation under the national framework. The Rules should recognise the need for all connections to comply with legislated reliability and technical standards.

3.2 Technical Requirements

ENERGEX does not support the NERA/ACG recommendation that the Rules include a definition of the technical requirements for small load, large load, micro DGs, small DGs and medium DGs. As highlighted previously any Rule changes need to be consistent with DNSP and jurisdictional technical standard requirements. This level of detail is also inappropriate for the Rules. ENERGEX recommends that the AER, not the Rules, should develop guidelines for technical requirements for small load, large load, micro DGs, small DGs and medium DGs, in accordance with the consultation process in the draft Rules (April 2007).

3.3 Standard Connections

ENERGEX supports the recommendations that the Rules define the standard connection services to apply to micro DGs, outline the minimum content for standard applications and contracts, and require the AER to approve the standard application form and contract.

3.4 Negotiation Framework

ENERGEX does not support the NERA/ACG recommendation that the negotiation framework developed for “negotiated services” should be applied in the negotiated connection application process. ENERGEX believes that this recommendation does not recognise that a connection service could be categorised as direct control, alternative or a negotiated service. Further ENERGEX is concerned that the NERA/ACG report promotes arbitrary application of a negotiating framework that has been designed and tailored to facilitate the provision of negotiated services to other service categorisations.

3.5 Connection Process

The NERA/ACG report states an objective of its review and subsequent recommendations to be aimed at streamlining the connection process, reducing complexity and prescriptiveness. ENERGEX questions whether this has been achieved through the proposed reorganisation of the connection process. In ENERGEX’s view a single process to the degree nominated is not workable due to the inherent complex nature of connections, including diversity in jurisdictional arrangements.

ENERGEX considers that the timelines outlined for the connection process are too prescriptive and do not reflect the commercial reality and complexity of some connections. ENERGEX recommends that further consultation is undertaken on this matter to determine workable and realistic timeframes that meet the needs of both the DNSP and users.

4. NATIONAL FRAMEWORK FOR CONNECTION CHARGES

ENERGEX supports in principle the development of a national framework for connection charges. However, in ENERGEX’s view further consultation needs to be undertaken to develop a framework that considers the:

- unique characteristics of distribution network connections;
- complexity of capital contribution arrangements; and
- impact on existing network users compared to new users.

The most significant change to connection charges proposed by NERA/ACG relates to the proposed removal of a requirement for good faith negotiations between the DNSP and a connection applicant in relation to the recovery of network augmentation costs through the connection charge (Rule 5.5(f)(3)(i)). ENERGEX does not support this proposed change.

4.1 Funding of Shared Network Costs

ENERGEX does not support the recommendation that connection asset charges should not include the cost of any shared network augmentation, particularly in cases where the augmentation costs are directly attributable to a connection applicant. ENERGEX queries the argument provided by the NERA/ACG report that efficiency would be enhanced by both existing and new users being exposed to higher prices arising from network augmentation caused by a new connection.

ENERGEX considers that the efficient use of a distribution network is likely to be promoted where a user faces the full cost of its usage of the network. The recommendation to only charge shallow connection costs (i.e. charges for dedicated connection and extension assets only) to new users means that the locational signal of available capacity and constraint will be lost. In addition ENERGEX submits that if directly attributable augmentation costs are not charged to new customers, cross-subsidisation by existing customers will result.

NERA/ACG's proposal also relies heavily on the view that there should be competitive neutrality between conventional generation and distributed generation in connecting to the transmission and distribution networks respectively. In particular, given conventional generators are not required to pay deep connection charges, nor should distributed generators. In effect, NERA/ACG is inferring that a distortion in the connection of conventional generators to transmission networks should be perpetuated by an equivalent distortion in the connection of distributed generators to distribution networks.

NERA/ACG's proposal effectively justifies not ever having deep connection charges in relation to conventional generation. While the promotion of competition between all forms of generation is likely to be consistent with the NEL objective, this is a secondary consideration in relation to connecting distributed generation. ENERGEX submits that the most important consideration here in the context of the NEL objective is the choice between distributed generation and deferral of new capital expenditure in the distribution network.

ENERGEX submits that to the extent that distributed generation increases system fault levels and requires upstream augmentation, then on economic efficiency grounds it should be required to pay these incremental costs provided they are identifiable and solely attributable to the distributed generator. If these costs are not recovered from the distributed generator, then the costs will be recovered from all network users through distribution use of system (DUOS) charges, resulting in disparity of cost components and generator bias. Inability to request an upfront fee or guarantee from the distributed generator may also create stranded assets, with the cost (with no associated benefit) likely to be borne by customers.

4.2 Connection Asset Charges

ENERGEX considers NERA/ACG's proposed requirements for the AER's connection charging guidelines to be pitched at too high a level to be able to provide any substantive comment. In particular capital contributions vary significantly between jurisdictions and the issues are multifaceted. The NERA/ACG report adopts a piecemeal approach and only focuses on a small part of the overall process, i.e. repayment periods.

ENERGEX strongly recommends that due to the variability and complexity of capital contributions frameworks and issues, and the implications of potential changes, the NERA/ACG recommendations in relation to capital contributions should be deferred and handled in a singular review by the AER.

ENERGEX also recommends that the methodology of calculating connection charges be based on an analysis of expected revenue and costs associated with the connection. The NERA/ACG report recommends that connection charges be calculated based on specific asset components (i.e. dedicated connection and extension assets only), and that the applicant through negotiation with the DNSP may choose whether to fund shared network augmentation. This approach does not consider the revenue and costs associated with the connection.

5. NETWORK LOSSES

ENERGEX supports in principle the objective of ensuring that the treatment of network losses in distribution networks is consistent with providing efficient signals for investment in DG projects. However, ENERGEX is concerned that the NERA/ACG report does not appropriately consider the complexity of losses, including the difficulties associated with the practical application of its recommendations.

ENERGEX believes that practical application of the NERA/ACG recommendations has not been considered and that the report provides insufficient detail to enable a comprehensive impact analysis. In particular ENERGEX notes that no guidance was provided regarding when site specific marginal DLFs are required for DGs. The calculation of site specific DLFs is an onerous process, which could potentially have a significant impact on DNSP processes.

ENERGEX supports NERA/ACG's recommendation that DNSP charges for calculating site specific DLFs below the Rules threshold should be treated as an alternative control service.

ENERGEX does not support the recommendation to allow the AER to develop an incentive mechanism for DLF management. This recommendation is based on regulatory experience in the UK and the purported lack of incentive for DNSPs to minimise distribution losses because they do not bear the cost of any such losses. NERA/ACG notes that the proposed clause 6.6.2 in the draft Distribution Rules appears sufficiently generic to accommodate a loss incentive scheme. In ENERGEX's view, this may be the case; however, ENERGEX believes more analysis is required on this issue. ENERGEX also notes that the AEMC did not consider the merits of introducing incentive schemes for Transmission Loss Factor (TLF) management when it developed the incentive scheme provisions in the new Part 6A of the Transmission Rules.