Submission to the Ministerial Council on Energy Standing Committee of Officials

National Frameworks for Distribution Networks: Network Planning and Connetions Arrangements

October 2007

This submission was prepared by the EUAA with assistance from Marsden Jacobs Associates Pty Ltd (MJA). The views expressed herein are those of the EUAA. The National Electricity Consumers' Advocacy Panel provided funding assistance for this submission.

Executive Summary

The Energy Users Association of Australia (EUAA) welcomes the opportunity to provide a submission to Ministerial Council on Energy (MCE) Standing Committee of Officials (SCO) on issues relating to a new national framework for distribution networks. The submission focuses on a response to proposals and recommendations made by Allen Consulting Group and NERA Economic Consultants (ACG/NERA) in their August 2007 paper *Network Planning and Connection Arrangements – National Frameworks for Distribution Networks* (the Framework paper).

The EUAA's members are directly affected by, and have a strong interest in connection agreement issues. These agreements regulate the quality, reliability, service levels and price for connection-related services. These elements of the connection service arrangements are crucial to ensuring that our members receive energy, delivered to the quality and reliability standards that suit the needs of their businesses, at a price that mirrors those requirements. The EUAA has previously commissioned a research into users' difficulties in relation to connection agreement issues. In particular, that research revealed that:

- Most electricity Users are heavily affected by the terms and conditions of connection agreements, but a poor understanding of, the process of establishing connection agreements and the regulatory framework relevant to their establishment;

- There is a lack of incentive for distributors to fully inform users about the range of options that are available to users in terms of reliability, quality and service offerings in relation to connection agreements;

- In the current environment, there are information asymmetries that make it difficult for users to fully understand and place a value on the various connection agreements characteristics that could be provided by distributors; and

- There is a lack of incentive for distributors to develop and discuss possible demand-side solutions to congestion management issues within distribution networks

While there are some outstanding issues in this area, the EUAA generally supports the direction of the majority of the recommendations contained in the Framework paper. In particular, the EUAA fully endorses the following important elements of the recommendations:

- The alignment across all NEM jurisdictions of the way distribution network service providers (DNSPs) deal with planning issues, connection processes and connection pricing;

- The requirement for DNSPs to provide more detailed, and standardised, information in annual planning reports and prior to negotiation of non-standard connection agreements;
- The inclusion of all 'deep augmentation costs' associated with connection arrangements in costs to be recovered through regulated distribution tariffs; and

- Recognition that distributed generation (DG) should recover the value it creates in improving distribution losses.

The recommendations, when implemented, are likely to improve the ability of EUAA members to negotiate better and fairer connection arrangements with less effort and less frustration than occurs currently. However, as mentioned, the EUAA considers that the MCE and SCO should place higher priority on implementing recommendations appearing in the report relating to demand-side management and distributed generation. In particular, the EUAA recommends that the MCE and SCO substantially simplify the process for connection of 'micro distributed generation'.

Finally, the EUAA recognises that most connection agreements are, and have been in place for some time. In addition to measures for increasing the level of education about connection agreement issues, the EUAA would like to see the MCE and SCO canvassing further options for the review of existing connection agreements, to enable a comprehensive review of existing contracts to be undertaken. This, over time, would ensure that benefits from any revised approaches to these issues arising as a result of this review, are captured to the fullest extent possible.

1. Introduction

The Energy Users Association of Australia (EUAA) welcomes the opportunity to provide a submission to Ministerial Council on Energy (MCE) Standing Committee of Officials (SCO) on issues relating to a new national framework for distribution networks. The submission focuses on a response to proposals and recommendations made by Allen Consulting Group and NERA Economic Consultants (ACG/NERA) in their August 2007 paper *Network Planning and Connection Arrangements – National Frameworks for Distribution Networks* (the Framework paper).

The EUAA is a non-profit organisation focused entirely on energy issues. Members determine the EUAA's policy and direction; and our activities cover both national and state issues. The membership represents a wide spectrum of end users located in all states. Currently, the EUAA has nearly 90 members, which are predominantly large business users of energy with activities across all states and many sectors of the economy.

Some EUAA members operate at sites connected directly to the electricity transmission network; but most members operate sites that connect to distribution networks. Many of our members have expressed concern about the terms and conditions of connection agreements and have been involved on an EUAA working group investigating connection agreement issues. EUAA members have a substantial interest in connection arrangements that currently exist in each jurisdiction; and all our users will be affected by the proposals and recommendations contained in the Framework paper.

The EUAA is well aware that members have experienced substantial frustration with current processes related to network connection. For example, a recent survey of EUAA members in Queensland and interviews with the Distribution Network Service Providers (DNSPs) by Evans & Peck showed that a majority of respondents reported unsatisfactory experiences.[1] Key issues identified in this process were:

- Most Electricity Users are heavily affected by the terms and conditions of connection agreements, but have a poor understanding of, the process of establishing connection agreements and the regulatory framework relevant to their establishment;

- There are several information bottlenecks in the connection agreement process, and these are accentuated with the lack of incentives on DNSPs, in particular to spend time with major users to ensure that connection agreements appropriately reflect and ensure the quality and performance standards in electricity provision

[1] *Review of Network Connection Arrangements for Large Electricity Users in Queensland – Final Report*, Evans & Peck, November 2006.

that major users require to run their production processes effectively. Knowledgeable staff within the DNSPs are not faced with clear and direct incentives to ensure that users are fully aware of, and negotiate through, the terms and conditions of connection agreements to ensure that they are appropriately tailored.

- The information hurdles that users must jump in order to fully appreciate the range of performance and quality outcomes that are possible when negotiating connection agreements are significant.

- Both users and DNSPs are not aware of the other's business drivers. The report recognised that it would be difficult to gain a high level of understanding without further significant commitment to education and resource levels in this area.

- There is a lack of understanding from users about the content and range of possible service level arrangements that are available from DNSPs, and a lack of understanding from DNSPs about what service level requirements are required from users, and those that could be added to agreements in order to customise them to meet end user issues; and the process to determine and negotiate these.

- There is no incentive for DNSPs to negotiate enhanced levels of reliability or service provision for specific electricity users. This is, at least in part, due to the process established under the National Electricity Rules (NER) for the purposes of revenue assessment, which does not provide incentives for DNSPs to take a concerted approach to ensuring that users are aware of, and are able to negotiate, tailored connection agreements where this is appropriate.

The EUAA is also aware, in feedback from members that similar issues arise in all jurisdictions. A key question for the MCE and SCO, and one that might readily be used to assess the merit of any reforms, is whether the recommendations made by ACG/NERA and any reforms introduced as a result of those recommendations, will assist in addressing any of the key issues identified by Evans & Peck.

Of particular relevance to this submission is the fact that the EUAA and its members have been actively involved in promoting the development of demand side response (DSR) in the National Electricity Market (NEM). This activity has included conduct of Australia's first DSR Trial in November and December 2002, support for the formation of Energy Response Pty Ltd, Australia's first demand side aggregator, and active participation in the development of DSR regulatory incentive schemes in NSW and South Australia.

While noting that virtually all of ACG/NERA's proposals and recommendations are based on making as few changes as possible to current arrangements in the process of making the aspects of distribution regulation 'national', the EUAA generally supports the direction of the majority of the recommendations contained in the Framework paper. Many of the recommendations address concerns that have been raised by the

EUAA for several years. In particular, the EUAA fully endorses the following important elements of the recommendations:

The alignment across all NEM jurisdictions of the way distribution network service providers (DNSP) deal with planning issues, connection processes and connection pricing;

- The requirement for DNSPs to provide more detailed, and standardised, information in annual planning reports and prior to negotiation of non-standard connection agreements;

- The inclusion of all 'deep augmentation costs' associated with connection arrangements in costs to be recovered through regulated distribution tariffs; and

- Recognition that distributed generation (DG) should recover the value it creates in improving distribution losses.

The general thrust of the recommendations is likely to improve the ability of EUAA members to negotiate better and fairer connection arrangements with less effort and less frustration than occurs currently; thereby assisting in addressing some of the issues identified by Evans & Peck.

We have, however, suggested that several of the recommendations be modified. Some of the suggested modifications are intended to improve the clarity of the recommendation, without changing the substance or intended outcome. Other suggestions relate to changes in the 'materiality rating' assigned by ACG/NERA or fundamental changes to what has been proposed.

In particular, we strongly recommend that the MCE and SCO place higher priority than indicated by some of 'materiality ratings' proposed by ACG/NERA for recommendations relating to DSR and DG. These recommendations relate to areas that the MCE has recognised need improvement, a view that the EUAA strongly endorses. Given this recognition, it seems appropriate to assign a 'High' materiality rating to all the recommendations that impact on DSR and DG.

We also strongly recommend that the MCE and SCO modify the recommendations dealing with DSR to ensure that momentum is maintained in promoting DSR to end users and distribution network service providers (DNSPs). We accept ACG/NERA's conclusion that the gains in promoting DSR in NSW and South Australia have been small so far. However, given the widespread reluctance of DNSPs to embrace DSR without additional 'regulatory incentive', a national framework for distribution should encourage such incentive schemes. However, it would be highly advantageous and more likely to produce success, if such schemes also ensure the active participation of users. The ability of DNSPs to act without the support of end users is problematic.

In addition, we strongly recommend that the MCE and SCO substantially simplify the process for connection of 'micro DG'. In our view, DNSPs should be required to offer a standard connection process for 'micro DG' that is no more complex than connecting an equivalent increment of load (e.g. fixed-wired, residential air-conditioning system).[2] Any more complex process is a waste of end user and DNSP resources. In particular, we note that Evans & Peck identified that DNSPs had insufficient resources assigned to connection arrangements. It is our firm view that DNSP resources should be allocated to ensuring connection arrangements for large users and larger DGs are processed as quickly and efficiently as practicable.

In support of this recommendation, we note that publicly available information suggests DNSPs currently process around 1,500 connections each year for Solar photovoltaic (Solar PV) 'micro DGs'. This rate of connection is likely to increase substantially in coming years in response to recently increased level of government subsidy for Solar PV installations and/or future 'carbon pricing' initiatives. We also note that electrical safety regulations require that each 'micro DG' installation be undertaken by a qualified installer and must comply with network technical standards specified by the National Electricity Rules (NER) and Australian Standard AS4777. In particular, we note that AS4777 requires grid-connected inverters to be capable of 'automatic islanding' in the event of loss of energisation of the connecting network. As such, these installations are likely to impose no greater technical or safety burden on a distribution network than an increment of load of similar magnitude. ACG/NERA's proposal to incorporate a four-step 'standard' connection process for 'micro DG' simply imposes another level of regulation that appears to deliver no benefit to DNSPs or energy users.

We are also fully aware that many of the recommendations impose significant new obligations on DNSPs, particularly in respect of information disclosure related to network planning and, as a key part of any connection process, including negotiation of the terms and conditions of connection agreements. We strongly encourage the MCE and SCO to resist any pressure to water down or overturn these recommendations.

Even so, we note that if all the recommendations are implemented, the resulting framework and processes will remain complex and still present significant challenges to EUAA members and other large users. We accept that a level of complexity is probably inevitable where a large users' requirements impact on the DNSPs' networks,

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[2] The EUAA recognises that widespread proliferation of grid-connected 'micro DG' is likely to trigger the need for fundamental re-design and operational changes of distribution networks, particularly to allow two-way flow of energy across the low voltage parts of the distribution network.

We are aware that these requirements are being discussed with increasing frequency in overseas markets in terms of the need for 'intelligent networks'. Given the very long timeframes required (to date) to address energy policy issues in Australia, it appears prudent for related issues to be included in a review of distribution network policies as soon as possible.

but urge the need for balance and note that the complexity may also allow the DNSPs to retain much of the information asymmetry advantage they currently enjoy.

The EUAA intends to maintain its commitment to inform and educate members and encourage them to share their experiences in an effort to limit this advantage. We strongly encourage the MCE and SCO to do the same.

2. Background to submission

As noted above, this submission responds to the issues covered by ACG/NERA's August 2007 Framework paper. The Framework paper reviews four aspects of economic regulatory policy relating to distribution networks and makes recommendations for consideration by the MCE. The four aspects cover:

- Network development and planning arrangements;
- Distribution network connection;
- Connection charges; and
- Treatment of distribution network losses in respect of DG.

The discussion of each aspect includes references to DSR and DG impacts. In general, these impacts are considered concurrently, for example, by referring to DSR/DG or 'DSR and DG'. The report contains few particular references to DSR but contains more frequent references to impacts on (or of) DG.[3]

The paper generally follows a format of presenting information on each aspect covering the matters listed below.

- A summary of current arrangements in each NEM jurisdiction (with details of how all four issues are dealt with by each jurisdiction in separate Appendices).

  These summaries confirm what many EUAA members know only too well. Each jurisdiction has chosen different approaches to implement exactly the same aspect of economic regulatory policy. These differences create confusion for large, multi-jurisdictional end users (such as most EUAA members) and add to the cost of dealing with different DNSPs on the same issues.

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[3] *Revised Demand Side Response and Distributed Generation Case Studies*, NERA Economic Consulting, August 2007 provides an analysis of two examples of 'large scale' DSR.

We presume this 'Case Studies' paper has been circulated by the SCO because it informed ACG/NERA's discussion in the 'Framework paper'. If that is the case, it is unfortunate that the analysis does not demonstrate greater rigour. For example, the first 'Case Study' analyses early data from two (relatively) large, fixed orientation, Solar PV installations in Sydney. However, the analysis makes no comment on how current policy may have influenced these installations. Nor is there any comment on whether different metering or pricing arrangements might have stimulated more flexible operation of the Solar arrays (or vice versa). In addition, the 'large DSR' case studies make repeated references to DNSP control of DSR capacity despatch, which is generally unacceptable to large energy users who contemplate offering DSR.

- An outline of proposals for achieving national consistency, including (where applicable) brief summaries of views contained in recent reports to the MCE, DITR and/or Utility Regulators Forum by ACG/NERA[4], NERA[5], NERA/Gilbert + Tobin[6], Allens Arthur Robinson[7], PB Associates[8] and CRA International.[9]

  ACG/NERA treat each of the supplementary reports with gravitas, sometimes adopting the positions espoused, and sometimes rejecting those positions in favour (generally) of positions founded more solidly in rational economic theory (e.g. when arguing why allocative efficiency is more likely to be enhanced by recovering all 'deep augmentation' costs through regulated distribution tariffs, rather than the current (and more arbitrary) method of recovering some network augmentation costs through connection charges).

  Unfortunately, the SCO reference for ACG/NERA's work did not include any review or commentary on substantial reports prepared by (or for) the EUAA on DSR or connection issues;[10]

- Recommendations from ACG/NERA for amending the NER for consideration by the MCE.

- An assessment of how the recommendations contribute to achievement of the NEM objective.

The actual criteria applied by ACG/NERA in deciding what should be included in the recommendations are not explained in the report. However, it appears that the following hierarchy of criteria has been applied:

- Current practice in one or more jurisdictions (if based on sound economic theory or other criteria below apply);

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4 *Distribution Rules Review: Network Incentives for Demand Side Response and Distributed Generation*, NERA and ACG, March 2007.

5 *Revised Demand Side Response and Distributed Generation Case Studies*, NERA Economic Consulting (peer reviewed by ACG), August 2007.

6 *Public Consultation on a National Framework for Energy Distribution and Retail Regulation*, Gilbert + Tobin and NERA, May 2005.

7 *Consultation Paper prepared for the Retail Policy Working Group – National Framework for Non-Economic Distribution and Retail Regulation*, Allens Arthur Robinson, June 2007.

8 *Draft - A National Code of Practice for Embedded Generation, Utility Regulators' Forum (Embedded Generation Working Group)*, PB Associates, February 2006.

9 *Review of NEM Arrangements for Renewable and Distributed Generation (for DITR)*, CRA International, October 2006

10 See: *Trial of a Demand Side Response Facility for the National Electricity Market: Independent Consultant's Report*, Pareto Associates Pty Ltd, April 2004; and *NEMMCO 2005/06 Tender for Reserve - Assessment of Energy Response Bid*, Marsden Jacob Associates, February 2006.

- Existing or proposed NER provisions;
- Align with recent AEMC decisions on transmission revenue and pricing policy (i.e. there appears to be a concerted effort to apply the same regulatory policies to distribution and transmission - where this is possible and relevant);
- Views expressed in other reports to MCE, DITR and/or URF; and
- Based on rational economic theory promoting efficient economic outcomes (generally mentioned explicitly where ACG/NERA propose recommendation of practices that depart from current practice or other suggestions).

The first three criteria reflect a conscious effort to propose as few changes as practicable, providing the outcome is consistent with sound economic theory. The main challenge to maintaining the *status quo* is that jurisdictional regulators have generally implemented slightly different mechanisms in each of the areas under review. ACG/NERA appear to have ignored the implications of this at a detailed level. For example, the report contains no detailed reference to the 'DSR incentive' schemes implemented in NSW and South Australia. The EUAA accepts that examination of these schemes may not have been part of the scope of work assigned to ACG/NERA, but we are concerned that moves to achieve uniform policy and outcomes do not result in 'throwing the baby out with the bathwater'. Accordingly, we strongly recommended that the MCE and SCO consider mechanisms for ensuring that the limited advances achieved to date in promoting DSR are enhanced, not ignored.[11]

Overall, the report presents 36 separate recommendations; nine (9) in respect of network development and planning arrangements, fifteen (15) in respect of network connection arrangements, six (6) in respect of capital contribution requirements and six (6) in respect of network loss factors. The recommendations are consolidated as a summary in Appendix I to the Framework report, grouped according to the relevant aspect of policy and indicating the relevant Rule in the NER and the materiality of the issue rated as High, Moderate to High, Moderate or Low.

Section 4 of this submission provides a brief response to these recommendations.

[11] The EUAA notes that the MCE appears to have pre-empted this consultation process by issuing (on 8 October 2007) a 116 page second exposure draft of the NER that incorporates an agreed SCO Response to the NERA recommendations regarding network incentives for DSR and DG. This agreed SCO Response includes a proposal that the AER will have responsibility for developing DSR/DG incentives for DNSP Networks, and that this will be a matter for the AER rather than being detailed in the NER.

3. Outcomes from ACG/NERA recommendations

The structure of the ACG/NERA paper makes it relatively difficult for end users to gain an appreciation and clear understanding of the outcome if all of the recommendations were accepted by the MCE. Given that the processes arising from these recommendations would apply to all EUAA members, we have taken the liberty of summarising the resulting processes in this section of the submission. Where considered relevant, we have also added a brief comment on matters that are likely to be important to large end users.[12]

3.1 Network development and planning arrangements

The ACG/NERA report asserts that the nine (9) recommendations for network planning arrangements incorporate the elements of best practice[13] from the current jurisdictional arrangements and addresses the issues that ACG/NERA found with those arrangements.[14] This approach has been taken because ACG/NERA conclude that the:

- Bational arrangements alone (as specified in the NER Chapter 5) are too vague to ensure that:
    - DNSP planning obligations operate effectively across the NEM; and
    - DNSP planning material is sufficiently consistent to minimise costs to connecting parties, including DSR or DG participants;

12 The EUAA acknowledges that all of the recommendations will impact on small energy users. But virtually all small users, except grid-connected 'micro DG' owners, would be subject to standard processes that are, for all intents and purposes, similar in impact to current processes. Small users are also rarely exposed to slightly or significantly different processes in each jurisdiction.

13 As noted above, ACG/NERA do not explicitly articulate criteria for 'best practice regulation'. The NERA/Gilbert + Tobin paper of May 2005 defines the criteria below as characterising 'best practice' distribution price regulation; but it is not clear if these same (rather vague and general) criteria have been applied, or are relevant, in this case.

(a) transparency and predictability (which, in turn, facilitates investment certainty);

(b) adaptable to change through transparent and equitable process;

(c) minimising compliance costs;

(d) separation between rule making and rule enforcement; and

(e) accountability to all parties (implies transparent processes in which all parties have the opportunity to be heard, together with a clear and effective dispute process).

14 p. 19, *Network Planning and Connection Arrangements – National Frameworks for Distribution*, ACG/NERA, August 2007.

- State arrangements are an improvement in the NER Chapter 5 provisions, but with rigour and transparency clearly more developed in some regimes than in others;[15] and
- Even if the differences are not marked, the existence of multiple regimes raises costs to industry participants.

Recommendations 1 and 2 would result in all DNSPs producing annual planning reports with a standard format and contents specified by the AER. The annual planning reports (and any other planning-related information) would be public and available from a single point (such as the NEMMCO website).

The reports would be for a 5-year rolling forecast period and would cover:

- Potential constraints, together with preliminary estimates of the costs of network solutions;

- Areas of substantially under-utilised existing transfer capability;

- Average and marginal distribution loss factors for different points in the network over the planning horizon; and

- Description of the DNSP's compliance with their planning-related obligations, including:

    - a summary of case-by-case applications of the regulatory test completed in the previous year, and on the status of the relevant projects (and the status of any projects from previous years); and
    - the results of applying the regulatory test to projects below the threshold for a case-by-case process but that meet the threshold for transparent reporting and the status of the relevant projects (and the status of any projects from previous years).

The EUAA strongly supports a requirement in the Rules for periodic reporting and prescription of minimum requirements in distribution planning reports, at a level to enable end users and DSR/DG proponents to assess the potential impact of network loading on end user sites and identify opportunities for the provision of DSR and network support. Access to distribution planning information is essential to evening out the information asymmetry that exists between distributors and end users, particularly within a framework that relies on a negotiated approach to distribution connection. It is

[15] ACG/NERA also conclude that direct evidence for success to date is limited for jurisdictional arrangements promoting uptake of DSR, specifically noting that ETSA Utilities has not yet selected one single DG or DSR option in preference to a network augmentation solution – despite ESCoSA imposing an explicit obligation to seek out non-network solutions.

the case, however, that any measure to improve information will ultimately never address the issue of imperfect information between networks and users.

The majority of the remaining recommendations (3 to 8) govern the process and criteria applying to:

- Assessments of augmentation options (involving application of an 'appropriate'[16] cost benefit analysis in the form of the regulatory test), including a requirement to publicly report on these assessments as part of annual planning reports for projects with estimated capital cost of $0.5 million or more;

- Requirements for mandatory request for tenders (using a process to be specified by the AER) to potential providers of non-network solutions for augmentation options estimated at $2 million or more; and

- Dispute resolution between non-network augmentation proponents and DNSPs (overseen by the AER).

The EUAA considers that these proposals would add to the transparency of network development option assessments by DNSPs, including the routine assessment of non-network solutions and supports these proposed recommendations. Additionally, the EUAA considers that this proposed Rule needs to be supplemented with a requirement that DNSPs consider unsolicited proposals for non-network options irrespective of the estimate cost of the augmentation, so as not to preclude small scale non-network projects, some of which may offer the greatest network benefits.

Recommendation 9 states that the NER should ensure that DSR/DG trials and risk sharing arrangements are encouraged in order to build trust and communication between DNSPs and proponents of non-network alternatives; and the regulatory framework should be reviewed to determine whether insufficient incentives are provided to DNSPs to invest efficiently in research and development, warranting the development of a specific incentive mechanism in the Rules. ACG/NERA do not specifically address how the framework should be reviewed, or by whom it should be reviewed. However, the EUAA notes that the second exposure draft of the NER circulated by the SCO on 4 October 2007 includes a proposal that the AER will have responsibility for developing DSR/DG incentives for DNSP Networks, and that this will be a matter for the AER rather than being detailed in the NER.

In summary, recommendations 1-9 essentially seek to provide clear, consistent (and uniformly detailed) 'information to the market' and 'clear process'. The recommended processes rely on 'public response' from DSR/DG proponents and 'consistent project

[16] That is, the DNSPs would be permitted the discretion of deciding the level or rigour and detail of analysis based on the cost of the augmentation and the cost of the analysis.

evaluation practice' focussed on mechanisms for achieving economically efficient outcomes.

To achieve those outcomes, end users would have to develop the organisational and technical capability to regularly scrutinise the DNSPs network planning reports (and other technical material), develop credible, technically coherent, priced 'tenders' in response to the DNSPs requests for tender; and have the capacity to challenge the DNSPs final decisions (if dissatisfied) following a formal dispute resolution process.

The proposals to do not anticipate any form of response from end users to network augmentation opportunities valued below $2 million.

It is the EUAA's view that questions remain about whether DNSPs would seriously and actively pursue non-network augmentation options in the absence of explicit additional regulatory incentive mechanisms. Questions also remain about whether large end users will be prepared to make the commitments needed to respond successful to 'tender' opportunities; although it is possible that implementing nationally consistent processes would allow DSR aggregators to operate more efficiently and effectively.

3.2 Distribution network connection

The ACG/NERA report concludes there would be some benefit from developing a national connection application framework that is sufficiently flexible to accommodate the varying connection requirements of users and that meets the following objectives:

- Is not unduly complex or prescriptive;
- Contains the technical provisions necessary to ensure the safe and reliable operation of the power system;
- Recognises the administrative costs associated with negotiating connection and, where possible, provides users with the option of utilising either a standard connection application process or a negotiated connection application process;
- Minimises any imbalance in the bargaining power that may otherwise exist between a user and DNSP negotiating a connection application by:
    - clearly setting out the obligations of both parties;
    - establishing a single common negotiation framework to be used when negotiating the terms and conditions of connection (including price, non-price and technical terms) that amongst other things require:
        i. the DNSP and user to negotiate in good faith;
        ii. the DNSP to use its reasonable endeavours to provide the user with the connection services sought by the user;

iii. the DNSP and user to exchange technical and commercial information that the other party may reasonably require to enable them to engage in effective negotiation;
iv. the DNSP to adhere to well defined time limits within the negotiation process and the connection enquiry phase;

- providing sufficient protection for vulnerable users;
- ensuring that users have access to a cost-effective dispute resolution mechanism in the event that agreement cannot be reached; and
- recognises the emerging contestable nature of constructing connection assets.[17]

ACG/NERA state that (consideration of) these objectives, supplemented, where relevant by a number of specific recommendations contained in the February 2006 PB Associates/Utility Regulators' Forum *Draft National Code of Practice for Embedded Generation*, formed the foundation for the development of the proposed national connection application framework.

The existing framework is set out in a series of diagrams (Figures 3.1, 3.2 and 3.3)[18] in the ACG/NERA report. The framework contains six discrete phases in the connection application process (specified in Rules 5.3.2 through 5.3.7), *viz*:

- Connection enquiry;
- Response to connection enquiry;
- Application for connection;
- Preparation of offer to connect;
- Offer to connect; and
- Finalisation.

The provisions of Rule 5.3, in turn, interact with other provisions of the NER the more notable of which relate to connection charges (draft Rules 6.7.1 and 6.7.5), prudential requirements (draft Rules 6.21.1 and 6.22) and access arrangements for generators (Rule 5.5, which also refers to market network service providers), each of which is referred to in the offer to connect phase.

ACG/NERA's consideration of the issues leads to recommendations for a new, slightly more streamlined, framework which is set out in Figure 3.3 of the ACG/NERA report. This proposed framework is reproduced in the following pages of this submission. The framework is contracted to a four phase process of:

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17 p. 55, ACG/NERA, *Op Cit*.

18 Figure 3.1 identifies 30 separate steps in the existing connection application framework. Figure 3.2 separately identifies which of these steps is required to connect 'small, medium and large DG' and 'micro DG'. EUAA notes that 'micro DG' requires 6 discrete steps, while 'small, medium and large DG' requires 11 steps.

- Connection enquiry - taking between 10 business days (for a 'standard connection') and 15 business days (for a 'negotiated connection');

- Response to connection enquiry - taking between zero (for a 'standard connection') and 30 business days (for a 'negotiated connection');

- Development of offer - taking up to 20 business days (for a 'standard connection') and an unspecified time (for a 'negotiated connection'); and

- Finalisation – allowing up to 2 months for small and large end-users to accept an offer without change to the terms and conditions proposed by the DNSP (for a 'standard connection') or agreed with the DNSP (for a 'negotiated connection').

The fifteen recommendations on connection arrangements cover the full gamut of NER, technical, commercial and process issues related to both 'standards' and 'negotiated' connections. These recommendations, and the EUAA's response, are summarised in section 4 of the submission.

The EUAA accepts that imposing the same process for assessing and completing connection arrangements in each jurisdiction would be a significant improvement on current arrangements that differ between jurisdictions. Clarifying the information exchanges needed by each of the participants in the process is also welcome, although this is likely to have more impact on the wording in the NER than currently (e.g. formalising the timing and sequence for 'negotiation' of technical, non-price and price phases most probably confirms what happens in practice).

However, it is also clear that the resulting uniform process will remain complex and time consuming for end users, particularly for 'negotiated connection' arrangements required by the overwhelming majority of EUAA members. Given this complexity, it is not clear that substantial benefit will accrue to end users from implementing the recommendations. This is largely because end users would normally only deal with a connection process on an intermittent basis, when a new connection is required or when substantial changes are proposed to an existing connection. Nonetheless, the EUAA fully endorses the objective of achieving nationally consistent processes for connection.

3.3 Connection Charges

The ACG/NERA report concludes that the manner by which connection charges are calculated varies markedly across each jurisdiction. It is pleasing to see ACG/NERA put forward a series of six (6) recommendations that seek to:

- Clarify the definition of connection asset charges and assets that currently vary across each of the jurisdictions;

- Develop specific connection charge pricing principles that provide incentives for efficient investment in the expansion of, and connection to, the distribution network;

- Develop a methodology for determining efficient connection charges; and

- Ensure that the NEM objective is satisfied.[19]

A key feature of these recommendations, that is fully supported by the EUAA, is the application of economically efficient pricing principles based on marginal cost pricing and clear definition of terms used to refer to asset costs involved in connection,[20] *viz*:

- *Connection costs* - costs arising directly from, and attributable to, the connection of a new network user.

- *Connection charge* – a charge for recovery of connection costs.

- *Connection asset costs* - costs for dedicated connection assets that would not have been incurred, but for the new connection.

- *Dedicated connection assets* - assets installed for the purpose of connecting a new network user that are expected to remain for the sole use of the user at all times over the life of the assets.

- *Extension assets* - assets to extend the existing distribution system to facilitate the connection of a new network user. These assets may commence their lives as dedicated connection assets (i.e. linking one user only to the network) but later become shared network assets as additional users connect to the network via the extension asset. And

- *Shared network assets* - assets that constitute the shared network, the cost of which is recovered through network charges.

19 p. 82, ACG/NERA, *Op Cit*.

20 The wording used by ACG/NERA to define these categories of assets (in Box 4.1, p. 73) is relatively cumbersome. Accordingly, the EUAA proposes that the definitions above be adopted.

Figure 1: ACG/NERA Recommended Connection Process - Part 1 of 3

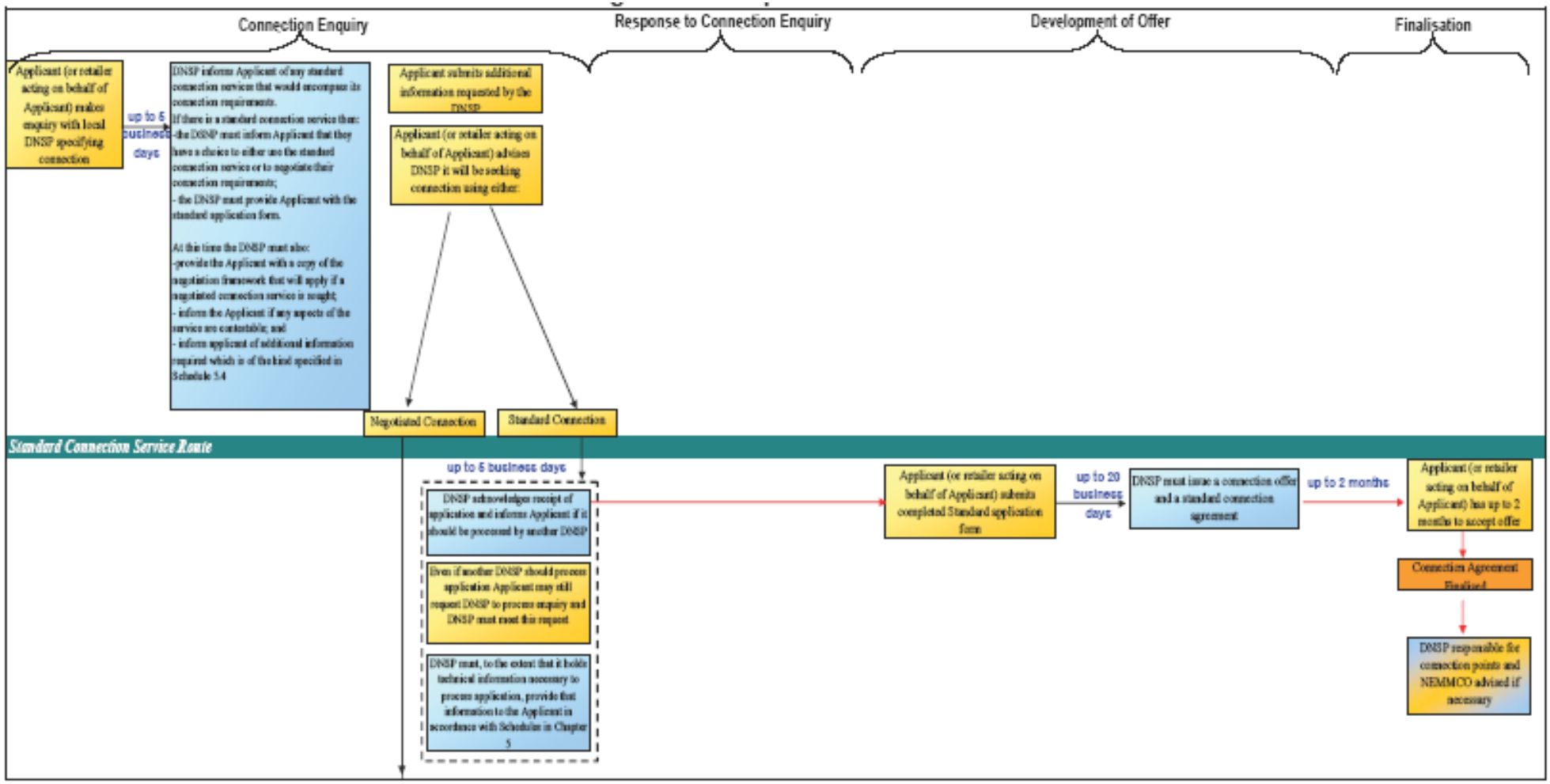


Figure 2: ACG/NERA Recommended Connection Process - Part 2 of 3

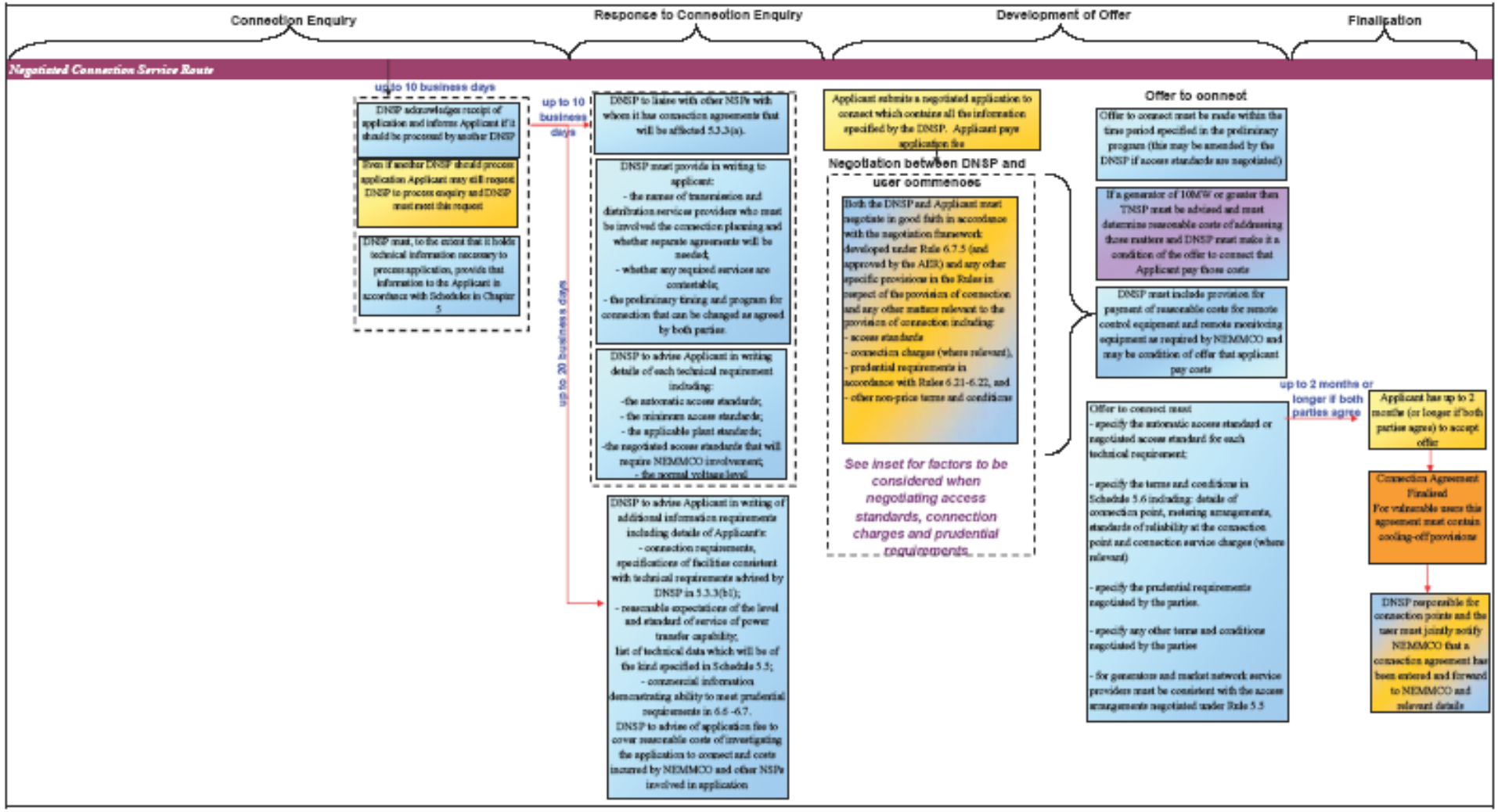
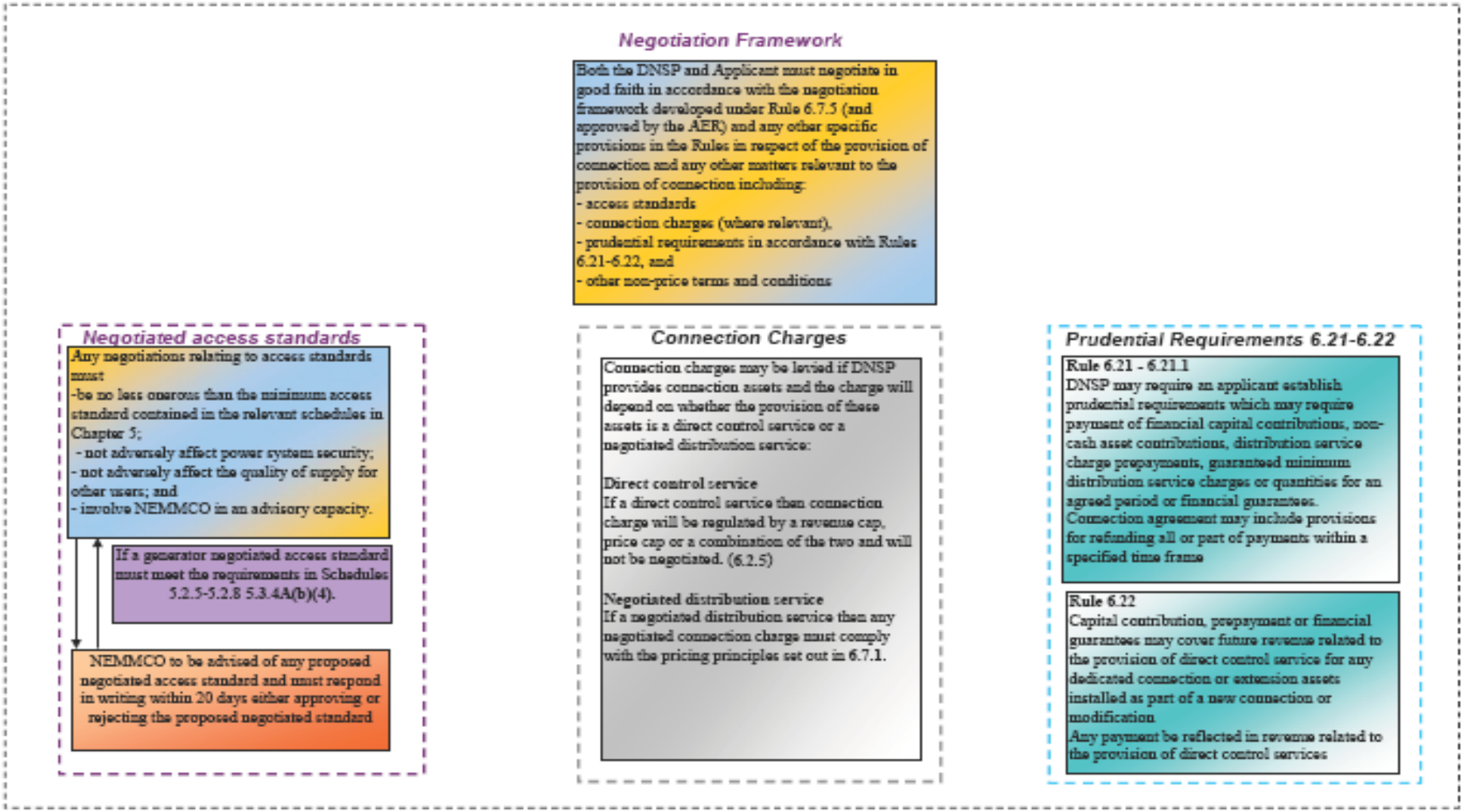


Figure 3: ACG/NERA Recommended Connection Process - Part 3 of 3



Application of the above definitions leads ACG/NERA to recommend the following connection pricing principles that the EUAA endorses.

> *'In summary, principles for economic efficient provision of connection assets would require that a connecting customer:*
>
> - *should not pay for any augmentation of the shared distribution network that might arise from servicing the load/generation output of a newly connected customer;*
> - *should pay for the dedicated connection assets; and*
> - *should pay for extension assets where necessary, although it is acknowledged that in some instances a subsequent customer may make use of the extension assets, and therefore it would be appropriate to provide a repayment of part of the cost of the extension to the initial customer. This should occur to the extent that the likelihood that the cost may be shared was taken into consideration by the initial customer in deciding to proceed with the extension construction. For this reason, it would be appropriate to provide a limitation on the period over which a repayment would be made.*[21]*'*

The EUAA also notes that ACG/NERA say that it is important to ensure that the relevant costs included in the connection charge are the efficient cost of providing connection, given the technical requirements and standards. ACG/NERA suggest this means that the framework should provide incentives to ensure that DNSPs minimise the cost of providing connection assets; but does not say whether any changes are required to ensure this outcome is achieved.

Under the current arrangements, large end users can access competitive supply for construction of *connection assets* and *extension assets* – but not shared assets. The competitive supply option provides incentives for DNSPs to keep costs of connection and extension assets at efficient levels, as does the basic incentive applying to recovery of shared asset costs through regulated revenue. In the proposed arrangements, both DNSPs and users would be required to disclose information necessary to complete successful negotiations. This would, of necessity include any information related to changes in the status of *extension assets* to enable the user to negotiate on the amount and timing of any repayment.

Successful implementation of these recommendations, including their fair and reasonable application by DNSPs, would go a long way towards easing the frustration experienced by large end users in the current arrangements. In particular, the transfer of *shared asset* costs to regulated tariff charges and repayment of a reasonable part, of *extension asset* costs on change in their status, will be seen as being 'fair and

[21] p. 86, ACG/NERA, *Op Cit.*

reasonable' and has the potential to significantly simply the administration involved in the connection negotiation process (for both DNSPs and end users).

However, some uncertainty is created by deferring final decisions on the treatment of connection costs to the AER. The EUAA would prefer that the NER bind the AER to accept the principles outlined by ACG/NERA in respect of the treatment of *connection assets*, *extension assets* and *shared network assets*,

In addition, the AER should be permitted discretion to review all aspects related to determining the 'fair and reasonable' share of *extension asset cost* that will be repaid to affected end users. ACG/NERA has adopted a cut-off period of seven years, based on the length of time adopted in a number of jurisdictions for similar mechanisms – but noting that the choice of seven years is "somewhat arbitrary".[22] ACG/NERA do not report whether this 'arbitrary period' has ever been subject to any detailed analysis in any of the jurisdictions where it is applied. However, the EUAA notes that some large users are required to make substantial contributions to *extension asset costs* and some EUAA members have reported degradation in service quality where DNSPs have connected other users to *extension assets*.

The EUAA accepts there will be a trade off between the complexity of extending the repayment period and the administrative simplicity of transferring *extension assets* into *shared network assets* after seven years. However, large users would prefer that the length of this period be based on something more concrete than a "somewhat arbitrary" decision of jurisdictional regulators and ACG/NERA.

3.4 Treatment of Network Losses in respect of Distributed Generation

\The section of the ACG/NERA report dealing with treatment of distribution loss factors is considerably more technical and complex that other sections. ACG/NERA put considerable effort into attempting to explain:

- The economic principles that underpin their consideration of the relevant issues (which, basically, rest on efficiency and competitive neutrality); and

- How losses arise in each part of the 'electricity transportation system' and how they are treated in the NER.

Rather than attempting to develop a revised framework, ACG/NERA present an extended titled 'Analysis' that attempts to explain how treatment of losses in accordance with the NER. However, this 'Analysis' is based on application of 'marginal loss factors' to estimate the benefits conferred by DG. The EUAA contends that substituting the use of marginal loss factors with 'average loss factors' can assist in improving economically efficient outcomes. This 'Analysis' leads to six (6) detailed

[22] p. 89, ACG/NERA, *Op Cit*.

recommendations, five of which relate to how loss factors should be calculated and treated. The last recommendation would allow (but not require) the AER to develop an incentive mechanism that would 'encourage' DNSPs to actively pursue optimisation of distribution loss factors.

The material in this section of the report is likely to be too complex for end users to fully understand. Nor is there sufficient quantitative information that might assist end users comprehend the level of materiality of the benefit that might accrue if they offered DG export to a distribution network.[23]

Nevertheless, the EUAA fully endorses the attempt to ensure that end users who offer DG are able to recover the full value of any benefit they confer on distribution networks, transmission network, energy prices and other end users. Such an outcome would be the most effective in providing an incentive for end users to offer existing DG capacity – and invest in efficient new DG capacity.

[23] Table 2.1, p. 101 provides a worked example illustrating how treatment of losses as 'average' and 'marginal' impacts on 'Customer DLF', 'DG paid for' and 'Load at a transmission connection point'. But the units are in loss factor fractions or MW. This example suggests that adopting 'marginal loss factors' would increase the benefit attributed to 10MW of DG output from 10.9MW (using 'average loss factors') to 11.8MW, which is an 'improvement' of some 8.25% (in MW terms). It would have more meaning to end users if the benefit had been translated into dollar terms (even if notional).

4. Response to ACG/NERA Recommendations

The brief EUAA response to the 36 recommendations made by ACG/NERA is shown in the table following. The table includes the 'issue' identified by ACG/NERA, the Recommendation number assigned by ACG/NERA, a paraphrased summary of the recommendation, ACG/NERA's NER reference and a brief comment by the EUAA.

Table 1 : EUAA Response to ACG/NERA Recommendations - Network development and planning arrangements

Issue	ACG/NERA Recommendation				EUAA General Comment
	No	Paraphrased Recommendation	Relevant Rule	Materiality of Issue	

Network development and planning arrangements	1	The NER should require DNSPs to undertake an annual planning process and publish an annual planning report that sets out the outcomes of that planning process.	Proposed for 5.6.2	High	Agree entirely that DNSPs should be required to publish annual planning reports in a uniform format and uniform level of detail that forecast network loading conditions for a rolling 5-year period. The planning reports should disclose sufficient detail to enable end users and DSR/DG proponents to assess potential impact of network loading on end user sites and identify opportunities for offering DSR and network support. Understand and accept that the administrative cost of an RFP process means it should not be mandatory for all augmentations. However, improved and more transparent planning reports may assist large users in identifying opportunities for deferral of smaller network augmentations – either individually or via a demand side aggregator. Therefore, the NER should require DNSPs to consider any offer of a non-network option in an appropriate cost-benefit assessment (or investment analysis) irrespective of the value of the augmentation requirement.
	2	The AER should be required to produce a statement of specific requirements (given effect by the NER) that sets out the standard format and required contents of the annual planning report.	Proposed for 5.6.2	High	
	3	For any project to alleviate a network constraint for which the network solution would require an estimated capitalised expenditure of $2m or more, DNSPs should be required to perform an economic cost-benefit assessment of that project (see recommendation 6).	Proposed for 5.6.2(f)	Moderate to High	
	4	For any network constraints for which the network solution would require an estimated capitalised expenditure of $0.5-2m, DNSPs should be required to undertake an economic cost-benefit assessment of the project and publish the results in the annual planning report, without being required to issue a Request for Proposal (RFP) or consult on the options.	Proposed for 5.6.2(f)	Low	
	5	The NER should require the AER to issue a statement of specific requirements that sets out the contents of a RFP for non-network solutions and the process to be followed in issuing such requests.	AER statement of specific requirements and 5.6.2(f) off the rules	High	
	6	DNSPs should be required to apply the standard regulatory test (rule 5.6.5A) when undertaking a cost-benefit assessment of alternative projects in a manner that is proportionate to the size and scale of the project.	Proposed for 5.6.2(g)	High	

	7	The DNSP's obligations to undertake the annual planning and reporting activities, and to undertake project evaluations, should be NER obligations and able to be enforced through standard NER-enforcement processes.	Any change would affect 5.6.2(i)	Moderate	
	8	A dispute resolution regime based on rules 5.6.6(j)-(n) should exist in relation to the DNSP's conduct of a cost-benefit assessment (and associated RFP for non-network options).	Proposed for 5.6.2(i)	Moderate	Support mandatory requirement for dispute resolution process, including oversight and involvement of AER if required. Given the difficulty reported by some EUAA members in achieving satisfactory outcomes from, or progress in, negotiations with DNSPs,[24] this should be assigned a rating of High materiality.
	9	The NER should ensure that DSR/DG trials and risk sharing arrangements are encouraged in order to build trust and communication between DNSPs and proponents of non-network alternatives.		Moderate	'Encouragement' of risk sharing arrangements is not likely to be effective as it places no obligation on DNSPs. However, better understanding by both DNSPs and end users/DSR/DG proponents of each party's requirements and expectations is an essential first step in developing the potential for effective non-network alternatives. Given this circumstance, it seems prudent to assign this issue a rating of High materiality.

[24] See: *Review of Network Connection Arrangements for Large Electricity Users in Queensland – Final Report to the Energy Users Association of Australia,* Evans & Peck, November 2006.

Table 2 : EUAA Response to ACG/NERA Recommendations - Network connection arrangements

Issue	ACG/NERA Recommendation				EUAA General Comment
	No	Paraphrased Recommendation	Relevant Rule	Materiality of Issue	
Network connection arrangements	10	The NER should specify the connection requirements that must be met by a user, including the requirement to: • pay the DNSP for the construction of any dedicated connection assets; and • comply with technical and safety requirements in relation to the customer's installation or equipment.	Proposed for Rule 5.3	Moderate	Support achieving alignment across jurisdictions and proposed end user requirements, subject to *caveat* that method of, and timeframe for, payment for dedicated connection assets can be subject to negotiation.
	11	Schedules to Chapter 5 of the NER should be amended to include a definition of the technical requirements for small load, large load, micro, small and medium DGs.	Proposed for schedules to Chapter 5	Moderate to high	Strongly recommend that proposals for including 'micro DG' into complex connection process (with other DG) be reviewed. AGO statistics show there have been at least 4,160 grid connections of Solar PV installations (in all jurisdictions) partly funded by Government rebates from the beginning of 2000 through to June 2007. In addition, University of NSW survey data suggests that around 1/3rd of all small grid-
	12	The NER should define the standard connection services to apply to micro DGs.	Proposed for Rule 5.3	Moderate to high	
	13	The NER should set out the minimum content for standard applications in a schedule to Chapter 5.	Proposed for schedules to Chapter 5	Moderate	

[25] See: Table 1, p7, *National Survey Report of PV Power Applications in Australia, 2002, Report for the International Energy Agency Co-operative Programme on Photovoltaic Power Systems*, Muriel Watt, UNSW, June 2004.

	14	The NER should: • set out the minimum content for standard connection contracts; and • require the AER to approve the content of the standard application form and the terms and conditions specified in the standard contract by applying the 'fair and reasonable' test.	Proposed for Chapter 5 and schedules to Chapter 5	Moderate to high	connected Solar PV capacity is installed without the aid of government grants.[25] Therefore, new grid connections of Solar PV could be currently running at approximately 1,500 per year and that rate is likely to increase in coming years, possibly substantially. Maintaining current procedures, or adopting the ACG/NERA recommendation, could possibly result in DNSP resources being overwhelmed – and/or distracted from offering efficient connection service to larger DG and larger user connection. Preferred option is to treat all 'micro DG' connections as 'standard' where installation is carried out by qualified installer in accordance with specified network technical standards and AS4777. This would 'free up' DNSP resources and allow delivery of better service to larger DG installations and other genuinely 'non-standard' connection arrangements. Given that AS4777 mandates automatic 'islanding' of all grid-connected inverters, there appears little justification for treating AS4777-compliant installations differently to any equivalent increment of load. Ideally, DNSP procedures should allow automatic grid-connection of AS4777-compliant installation by licensed installer with subsequent notification to DNSP by installer or user's retailer. DNSP could elect to conduct post-connection inspection on random quality assurance basis and require disconnection for non-compliant installations.

	15	The NER should state that the negotiation framework developed in accordance with Draft Rule 6.7.5 and as modified should apply in the negotiated connection application process.	Proposed revision to Draft Rule 6.7.5	Moderate	Strongly support aligning connection processes across all NEM jurisdictions, including specifying key attributes, steps and timing for 'standard' and 'non-standard' connections and negotiation process. However, as noted above, some EUAA members have reported difficulty in achieving satisfactory outcomes from, or progress in, negotiations with DNSPs. The recommendations dealing with connection negotiations should, therefore, be assigned a rating of High materiality. In addition, wording of several of these recommendations is confusing and should be revised. For example, why should DNSP be required to provide user with any technical information along with advice that application should be processed by another DNSP?
	16	Schedule 5.6 of the NER should be amended to ensure that it can be utilised in contracts negotiated with small users, large users, micro, small and medium DGs.	Schedule 5.6	Moderate	
	17	The NER should require a DNSP to respond to a user's initial enquiry within five business days: • advising whether there is a standard connection service that would suit the applicants requirements; • supplying the relevant standard contract and application form; • informing user they have the option of using either the standard connection service or negotiating an alternative connection service; • providing the user with a copy of the negotiation framework developed in accordance with Rule 6.7.5; • informing the user of any additional information required which is of the kind specified in Schedules 5.4; and • informing the user of the indicative value of the loss factor applying in the connection area.	Proposed revision to Rule 5.3	Moderate	
	18	The NER should require a user to advise the DNSP whether it will be seeking connection via the standard connection service route or the negotiated connection service route.	Proposed revision to Rule 5.3	Moderate	

	19	The NER should state that where a user selects the standard connection application route the DNSP must, within five business days: • advise the user if the application should be processed by another DNSP; and • provide the user with any technical information necessary to process the application in accordance with the technical schedules in Chapter 5 to the extent that it holds such information.	Proposed revision to Rule 5.3	Low	
	20	The NER should require the DNSP to issue a connection offer and a standard connection agreement within twenty business days of receiving a completed standard application form.	Proposed revision to Rule 5.3	Moderate	
	21	The NER should allow a user (utilising the standard connection application route) two months to accept the offer otherwise the offer should be deemed to have lapsed unless the DNSP agrees to extend the offer.	Proposed revision to Rule 5.3	Low	
	22	The NER should state that where an application is for a negotiated connection service the DNSP must within ten days: • advise the user if the application should be processed by another DNSP; and • provide the user with any technical information necessary to process the application in accordance with the technical schedules in Chapter 5 to the extent that it holds such information.	Proposed revision to Rule 5.3	Low	
	23	The NER should combine the technical, price and non-price negotiation phases currently set out in the application for connection and offer to connect phases; and set out some specific steps in the negotiation process.	Proposed revision to Rule 5.3	Moderate	

	24	The NER should allow the user (utilising the negotiated connection application route) two months to accept the offer otherwise the offer should be deemed to have lapsed unless the DNSP agrees to extend the offer.	Proposed revision to Rule 5.3	Low	

Table 3 : EUAA Response to ACG/NERA Recommendations - Capital contribution requirements

Issue	ACG/NERA Recommendation				EUAA General Comment
	No	Paraphrased Recommendation	Relevant Rule	Materiality of Issue	
Capital contribution requirements	25	The NER should allow, subject to a decision by the AER as to the form of regulation to apply to the provision of connection assets, a DNSP to recover from connecting users the cost of dedicated connection assets as well as extension assets for the sole use of a new connection that, but for the new connection, would not have been incurred.	Proposed revision to Chapter 5 or Chapter 6	Moderate to High	Accept that new network users should be expected to pay for the costs of connecting to the shared network. Also strongly endorse the recommendation to recover all costs associated with augmentation of the shared network (i.e. any costs incurred by a DNSP beyond the point of connection) through regulated network charges, not connection charges. The economic efficiency and competitive neutrality arguments presented by ACG/NERA to support the above recommendation are fully endorsed.[26]

[26] The EUAA notes that, in the past, we have argued that transmission connected generators should contribute to “deep augmentation” and "use of system" costs. We note that the main thrust of these arguments has been (in effect) that the current arrangements are neither “fair & reasonable” nor "competitively neutral". We still believe there is merit in transmission connected generators contributing to use of system costs because the generators are better able to put pressure on TNSPs to be efficient (than end users). However, we note and agree with ACG/NERA's economic efficiency argument in respect of deep augmentation costs. We also note that the "shallow connection cost" position should be simpler for DNSPs to administer and will remove one of the substantial causes of frustration for large users in the connection negotiation process. We note, in particular, that large users are never going to be a position to know whether or not any contribution to "deep augmentation" was "fair & reasonable".

	26	The NER should adopt specific terminology for the purposes of calculating a connection asset charge. • *Connection costs* - costs arising directly from, and attributable to, the connection of a new network user. • *Connection charge* – a charge for recovery of *connection costs*. • *Connection asset costs* - costs for *dedicated connection assets* that would not have been incurred, but for the new connection. • *Dedicated connection assets* - assets installed for the purpose of connecting a new network user that are expected to remain for the sole use of the user at all times over the life of the assets. • *Extension assets* - assets to extend the existing distribution system to facilitate the connection of a new network user. These assets may commence their lives as *dedicated connection assets* (i.e. linking one user only to the network) but later become *shared network assets* as additional users connect to the network via the extension asset. • *Shared network assets* - assets that constitute the shared network, the cost of which is recovered through network charges.	Proposed revision to Chapter 5 or Chapter 6	Moderate	The wording of the definitions proposed by ACG/NERA (in Box 4.1, p. 73) is cumbersome and confusing. Suggest use of wording shown in the Paraphrased Recommendation column opposite. Given the frustration that this aspect of connection negotiations has always caused for large end users, we strongly recommend that this issue be assigned a rating of High materiality.
	27	A compulsory connection asset charge should not include the cost of any shared network augmentation. However, a connection applicant may also choose to fund shared network augmentation by negotiation between the DNSP and the connection applicant.	Proposed revision to Chapter 5 or Chapter 6 Moderate to	High	Support allowing any user to choose to fund shared network augmentation where this provides service or supply quality attributes in excess of standards specified through the NER.

	28	The NER should require the AER to develop a Guideline for the determination of connection asset charges. The Rules should provide that the Guideline include a definition of: • a standard small customer connection asset that may vary for each DNSP, for which no connection asset charge may be levied; and • the relevant connection point.	Proposed revision to Chapter 5 or Chapter 6	Moderate	Support the recommendation that the NER require the AER to develop a uniform Guideline for the determination of connection asset charges. Also support the recommendation that the Guideline include a methodology for partial repayment of any charge for connection assets that are subsequently utilised for connection of other users or for any other service attribute that delivers benefit to other users. However, the question of accepting the timing limit of 7 years for repayment should be subject to review by the AER. This matter has been a substantial cause of frustration for some EUAA members who have paid for 'extension assets' and/or 'deep augmentation' (sometimes to achieve improved reliability and/or service quality) only to find DNSPs subsequently connecting other users whose load characteristics also cause decline in service quality. Users who pay for connection assets subsequently utilised for other purposes should be entitled to expect both maintenance of service quality and partial repayment at any time during the depreciating life of the asset.
	29	The NER should require the AER to develop a Guideline that provides a methodology for the partial repayment of connection asset charges when a new customer connects to an extension asset within 7 years.	Proposed revision to Chapter 5 or Chapter 6	Moderate	
	30	Provisions within the NER that currently refer to the recovery of network augmentation costs through a connection charge should be removed (i.e. Rule 5.5(f)(3)(i) and Draft Rule 6.22(1)(b).	Rule 5.5(f)(3)(i) and Draft Rule 6.22(1)(b).	Moderate to High	

Table 4 : EUAA Response to ACG/NERA Recommendations – Network loss factors

Issue	ACG/NERA Recommendation				EUAA General Comment
	No	Paraphrased Recommendation	Relevant Rule	Materiality of Issue	
Network loss factors	31	It is proposed that DG receive a DLF that reflects the amount of losses that the DG would avoid by being present and operating (i.e. a marginal loss factor). In contrast, customers would continue to receive a loss factor that distributes the losses to be recovered across customers in proportion to each customer's usage, where the losses to be recovered are the sum of the forecast of actual losses and the sum of the 'avoided losses' from DGs.	Rule 3.6.3 in general will need to be revised to distinguish between DG distribution connection points receiving a site specific marginal loss factor, those receiving a geographically averaged marginal loss factor and customer distribution connection points. In particular, those rules that require average losses to be used will need revision: Rules 3.6.3(b)(1), 3.6.3(b)(2)(ii) and 3.6.3(h)	High	Generally endorse the recommendations made in respect of treatment of DLFs, particularly the 'capture' of DLF benefits by DGs and the introduction of incentives for DNSPs to optimise DLFs – providing such incentives can be demonstrated to deliver overall net benefits to end users. However, it is noted that treatment and estimating of DLFs is a complex matter that no end user is ever likely to fully understand. This complexity, and the fact that it results in overwhelming information asymmetry that favours DNSPs, mandates that the AER clearly specify and endorse the methodology adopted by DNSPs for estimating DLFs and any benefits delivered to DGs.

	32	Marginal loss factors for site specific DG would be calculated on the basis of the forecast losses with the DG being present and operating as forecast, compared to the losses that would be forecast in the absence of that DG. For smaller sites, the distribution loss factor should reflect a marginal loss factor (averaged across the relevant geographic area), but estimated in a manner that keeps the computation burden to a reasonable level – for example, through the use of a 'rule of thumb' relationship between average and marginal loss factors.	As above: Rule 3.6.3 in general, and in particular Rules 3.6.3(b)(1), 3.6.3(b)(2)(ii) and 3.6.3(h)	High	
	33	The AER should be encouraged to require the price that a DNSP charges to determine a site specific DLF for a DG or customer that is below the threshold in the Rules be a regulated service (for example, by requiring it to be listed as an alternative control service).	Any measures to be reflected in the rules would affect Rule 3.6.3(b1)	Moderate	
	34	DNSPs should be required to calculate a separate loss factor for geographic regions that are expected to suffer materially different levels of losses, and to combine geographic regions for this purpose only where they are expected to suffer materially similar levels of losses.	Rules 3.6.3(c)-(h)	Moderate-High	
	35	A site should be treated for DLF purposes as a 'customer' when it imports, and a 'generator' when it exports, on the gross flows of electricity, requiring two metered connection points at a site that is a combined distributed generator and customer.	Rule 3.6.3	High	
	36	Allow, but not require, the AER to develop an incentive mechanism for DLF management guided by specific principles.	Proposed clause 6.6.2 in the draft Distribution Rule appears sufficiently generic to accommodate a loss incentive scheme.	Moderate	