

9 August 2012

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Dear Ms Lai

**National Electricity Amendment (Connecting Embedded Generators)
Rule 2012**

Energex Limited (Energex) is pleased to provide this submission to the Australian Energy Market Commission's (AEMC) National Electricity Amendment (Connecting Embedded Generators) Rule 2012 Consultation Paper. The Rule change proponents are concerned that the National Electricity Rules (NER) provides insufficient certainty to generation connection applicants, particularly those between 10kW and 30MW.

Energex considers that Chapters 5 and 5A of the NER provide considerable guidance regarding the connection process. The Distribution Network Service Provider (DNSP) must publish information on the connection process and application forms, and make offers within stipulated timeframes. In Energex's experience, delays generally arise when the distribution business is not provided sufficient information to assess an application and make a complete offer.

Energex believes that it is impractical to include additional automatic connection standards for certain embedded generators in the NER. DNSPs operate their networks in accordance with jurisdictional reliability, security and power quality requirements. It would be difficult for national standards to be drafted in harmony with the various jurisdictional requirements.

Energex's response to the AEMC's specific questions are provided as an Attachment to this letter. Should you have any enquiries please contact Alex McPherson Regulation Manager – Commercial on (07) 3664 4104.

Yours sincerely

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AEMC National Electricity Amendment
(Connecting Embedded Generators) Rule
2012 – Consultation Paper

Energex Submission

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1 Introduction

Under section 43 of the Queensland Electricity Act 1994, it is a condition of Energex's Distribution Authority that Energex allow, as far as technically and economically practicable, a person to connect supply to the Energex distribution network, on fair and reasonable terms, if:

- The person is a generation entity, a transmission entity or a distribution entity;
- The supply network is capable of being safely used to take electricity as proposed by the person;
- The person has complied with all provisions of the regulations relevant to connecting supply to, or taking electricity from, the network;
- The person pays the reasonable cost of connection to the network.

Section 28 of the Queensland Electricity Regulations 2006 provides that a customer must not install generating plant for interconnection with a supplier's supply network without the supplier's agreement.

Within this context, the following provides a general description of the connection processes implemented by Energex for Registered (generally above 30MW) and Non-Registered (generally less than 30MW) Embedded Generators. An indicative generator size classification is provided as **Attachment A**.

This information is provided to assist the AEMC and other stakeholders understand Energex's general approach to connecting generators to the distribution network. Further information is provided on Energex's website: www.energex.com.au.

- Registered Embedded Generators:
 - Must follow cl. 5.3.1 of the NER which requires, amongst other things, a connection enquiry, a subsequent process to seek and provide information relevant to the connection, and application for connection. There may also be a pre-feasibility stage which can involve general and early discussions around the possible feasibility of the connection.
 - The terms and conditions for network connection are set out in commercial agreements on reasonable terms entered into with Energex (clause 5.1.3(a) of the NER).
 - Chapter 5 does not override any contractual terms unless the term is inconsistent with Chapter 5 and the application of the term would adversely affect the quality/security of services provided to other users (clause 5.2.2(c) of the NER).
- Non-Registered Embedded Generators:
 - For micro and mini EGs, Energex's Network Connection Agreement for Inverter Energy Systems Photovoltaic Systems and Microgenerators will generally apply.
 - For larger Non-Registered EGs, Energex will enter into a negotiated agreement with the customer, similar to the type of process set out in Chapter 5. It will

generally involve a pre-feasibility enquiry, a formal connection enquiry, a connection application, an offer to connect and execution of the connection contract. Energex has a detailed process manual "*Large Customer Connections Manual*" to assist in managing these connections.

1.1 Potential changes under Chapter 5A

The National Energy Customer Framework (including Chapter 5A) provides a regulatory framework which is applicable to the issues raised by the Rule change proponents. While the NECF package will be considered in Queensland it is implemented in some other jurisdictions. It is important to recognise that Chapter 5A has not been designed only for micro embedded generators.

Chapter 5A introduces a clear regulatory framework which requires distributors to meet strict timeframes for responding to enquiries and applications. Chapter 5A provides that where a connection service is being sought by a customer typical of a significant class of customers and minimal or no augmentation is required a Basic Network Connection Offer must be made within 10 business days of receiving a complete application. Connection Agreements for most other customers (generally where network augmentation is required) would be negotiated, and a distributor must use best endeavours to make a negotiated connection offer within 65 business days.

These provisions may make the proposed Rule change unnecessary, particularly if co-generators become a significant class of customer.

Energex notes that the Rule change proponents consider that distributors do not have the obligation to provide 'standard' connection offers for embedded generation above the micro embedded generation definition. The primary reason why distributors may not provide standard connection offers for embedded generators is that Chapter 5A provides that a standard connection offer must be made within 10 business days after receiving a complete application. This timeframe is insufficient to allow a distributor to undertake the necessary technical assessment and prepare a suitable offer.

Moreover, it should be noted that it would be impractical to draft a one size fits all connection offer for embedded generators above a certain threshold.

In the absence of a standardised connection offer for embedded generators, Chapter 5A provides that minimum content requirements must be met in the negotiation of connection contracts involving embedded generation. For example, it specifies that a connection offer must include:

- Details of the connection assets
- Timeframes for completion of work to establish the connection
- Metering requirements
- Technical and safety obligations
- Details of the customer's monetary obligations

1.2 Technical Standards

The reason why legislation specifically provides that agreement from the distributor is a precondition to a generator connecting to the network is that network service providers have an obligation to ensure the network operates in a safe and reliable manner. To meet this obligation, a distributor must ensure that a generator connecting to the network does not result in degradation in the quality of supply to the network or other network users.

The significant variances and characteristics between networks across Australia also means that each embedded generator needs to be assessed against certain technical standards. In this respect it is important that distributors maintain the flexibility to have different terms and conditions in relation to technical standards.

Issue	Energex Comments
1. Connection Process	
<p>Question 1 – Complying with Chapter 5</p> <p>(a) Currently any person can require a network service provider to comply with Chapter 5 or elect to use the connection procedure under Chapter 5. Are there any problems or barriers to how this is applied in practice?</p> <p>(b) If so, what are the problems and/or barriers? What are the costs and impacts on stakeholders?</p> <p>(c) How would the proposed amendment to specify that an embedded generator has the right to require a network service provider to comply with Chapter 5 resolve these problems?</p> <p>(d) Given that any person can elect to use the connection process under Chapter 5, when, and why, do Non-Registered embedded generators choose not to use this process?</p>	<p>(a) Energex makes several points regarding compliance with Chapter 5:</p> <ul style="list-style-type: none"> • Clause 5.2.1(b) implies that Chapter 5 is non-binding on connection agreements between NSPs and Non-Registered Participants, unless there is agreement to the contrary; • Energex is unable to recall an instance where a Non-Registered Embedded Generator has sought Energex’s agreement regarding compliance with Chapter 5 under clause 5.2.1(b); • Any person can elect to use the connection procedure set out in Rule 5.3, including Non-Registered Embedded Generators. Energex will follow the procedures in Rule 5.3 for Registered Participants, and will use Rule 5.3 to guide the connection process for small and medium embedded generators. <p>The proponents seek to remove the requirement for Non-Registered Participants to obtain DNSP agreement for compliance with Chapter 5. This, on Energex’s reading, will ensure that automatic access standards (as proposed) are binding on the DNSP if the applicant so chooses. Without the requirement for the DNSP to comply with Chapter 5, it may be perceived that any automatic access standards included as proposed Schedule 5.3b would be non-binding on the DNSP (i.e. would be subject to agreement).</p> <p>It seems reasonable that if any automatic access standard is included in Chapter 5, that it is binding otherwise its purpose may be defeated. However, Energex does not agree that automatic access standards be included for small and medium generators. Energex’s views on the inclusion of automatic access standards for these generators are provided in response to Question 9.</p> <p>(b) Non-Registered Embedded Generators rarely (if ever) seek agreement regarding compliance with Chapter 5 under clause 5.2.1. In many cases it is apparent that these prospective customers are unaware of Chapter 5 of the Rules.</p> <p>(c) Refer to Energex’s response to (a) and (b). Providing the generator the right to force the DNSP to comply with Chapter 5 including any automatic access standards will only be successful to the extent that the applicant is</p>

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	<p>aware of Chapter 5 and is sufficiently sophisticated to navigate and understand Chapter 5.</p> <p>(d) In Energex's experience Non-Registered embedded generators are often unfamiliar with the provisions of electricity legislation, including Chapter 5 of the NER.</p>
<p>Question 2 – Good faith provisions</p> <p>(a) The current NER sets out that network service providers and connection applicants must conduct negotiations in 'good faith'. Are there any problems associated with the application of this provision?</p> <p>(b) How would the proposed amendment for an additional 'good faith' provision impact stakeholders?</p>	<p>(a) Energex always negotiates with connection applicants in good faith. Energex notes that the proponents have not provided any evidence that would suggest that DNSPs do not negotiate in good faith.</p> <p>(b) The proposed amendment would not impact Energex. Energex negotiates in good faith with connection applicants.</p>
<p>Question 3 – Publishing information requirements</p> <p>(a) What are the costs and benefits to distributors and embedded generators in requiring distributors to publish information on its connection process including an application form and information on application fees and calculation of connection costs?</p> <p>(b) How would the proposal to add a clause that each party 'must provide the other with information the other reasonably requires in order to facilitate connection to the network' address any problems? What are the details and examples of the current communication issues that stakeholders have experienced with</p>	<p>(a) The proposed Rule requires the NSP to publish certain information on its website. As described below, most, if not all, of this information is already published on Energex's website:</p> <ul style="list-style-type: none"> • Application form for a new connection: Application forms necessarily vary depending on whether the connection is for export or import, and the size of connection. Publishing a single form to cover all scenarios would likely cause significant confusion and frustration for prospective customers and DNSPs. There are many permutations of generators, available network voltages and available network fault levels, which require many applications to be uniquely handled. Publishing a single application form may give the connection applicant a false impression that there is a "one-size-fits-all" connection process. <p>For micro and mini generation customers, Energex provides detailed information regarding the connection process on its website: http://www.energex.com.au/sustainability/saving-energy/solar-for-customers. For larger generators, Energex utilises the large customer connections process.</p> <ul style="list-style-type: none"> • The fee applicable to process the application and connect and basis for calculation of connection charges:

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<p>the connection process?</p> <p>(c) Noting that there are currently provisions under the NER for the exchange of information, what are the deficiencies of the current arrangements?</p> <p>(d) Would the demand side engagement document under the distribution network planning and expansion framework rule change address these information requirements?</p> <p>(e) Should the proposed changes apply generally to all network service providers.</p>	<p>In circumstances where Energex charges a fee for a regulated service, this fee will be published in Energex's tariff schedule which is published on our website. Fees to connect to the network will vary depending upon the scope of the work required and whether the work is classified as a standard control service or alternative control service.</p> <ul style="list-style-type: none"> • Description of how an application is to be made, including information required for the application, and the connection process: As mentioned above, significant detail is already provided by Energex on our website for load and generation customers of all sizes. <p>(b) Connecting customers on a negotiated basis can be a complicated process involving technical (engineering), commercial (pricing) and legal discussions between the customer and the DNSP. Generally, communication issues relate to ensuring the customer is fully aware of, and understands, Energex's obligations under electricity legislation. Often the customer will not be aware of the requirements of Chapter 5 of the Rules, or the Queensland Electricity Act. Communication issues rarely relate to information sharing. Energex therefore does not believe that the proposed Rule change is necessary.</p> <p>(c) Refer to Energex's response to (b).</p> <p>(d) The demand side engagement document envisaged by the AEMC's proposed Schedule 5.9 (as part of the concurrent Distribution Planning and Expansion Rule Change process) would require that, amongst other things, the DNSP publish:</p> <ul style="list-style-type: none"> • A summary of the factors the DNSP takes into account when negotiating connection agreements with Embedded Generators; • The process used, and a summary of any specific regulatory requirements, for setting charges and the terms and conditions of connection agreements for embedded generating units; • The process for lodging a connection application for an embedded generating unit and the factors taken into account by the DNSP when assessing connection applications. <p>This document is to be updated at least once every three years.</p> <p>Further, the Distribution Annual Planning Report (DAPR) will include a requirement for the DNSP to publish,</p>

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	<p>annually, details of feeders which are forecast to experience an overload and the extent of that overload, and information relating to zone substation limitations. Energex also notes that the current Network Management Plan (submitted to the Queensland Competition Authority every year) lists thermal capacity limitations pertaining to bulk supply substations, zone substations, 33kV feeders and 11 kV feeders.</p> <p>On this basis, Energex believes that the Rule proposal to require additional information regarding the connection process for embedded generators is unnecessary given existing reporting requirements and anticipated requirements under the concurrent distribution planning Rule changes.</p> <p>(e) Energex does not believe that the requirements should be applied to DNSPs for the reasons identified above.</p>
<p>Question 4 – Response to connection enquiries</p> <p>(a) In stakeholders’ experience, have the response that the network service providers provided in response to connection enquiries been clear and reasonable?</p> <p>(b) Have there been experiences where a connection applicant has been asked to provide information that it has already submitted and, if so, why?</p> <p>(c) Have there been experiences where a connection applicant has been asked to provide information that it did not consider was ‘reasonable’? How was this situation resolved?</p> <p>(d) To what extent would the requirements for distributors to publish the demand side engagement strategy document resolve any issues?</p>	<p>(a) The connection procedures set out in Rule 5.3 envisage that the first step in the connection process is a connection enquiry from the customer which sets out the timing, magnitude and type of connection proposed.</p> <p>This is rarely the first step in Energex’s experience. Generally, the customer will make first contact with Energex with a pre-feasibility enquiry, providing relatively high-level details of potential connection options the customer is considering. In response to this, Energex provides initial information to the extent possible and requests that the customer provide a formal connection enquiry (per clause 5.3.2(a)). Energex’s provides the customer a form for this purpose.</p> <p>(b) Energex may ask an applicant to clarify or explain information and material previously provided by the applicant.</p> <p>(c) In circumstances where a connection applicant has not understood the basis for a request for information, or understood the request itself, this has generally been resolved through consultative engagement with that customer. Energex is unaware of an instance where an applicant has considered a request to be unreasonable and this has been left unresolved.</p> <p>(d) The requirements for distributors to publish the demand side engagement document, which must detail matters which the DNSP will take into account may assist prospective applicants understand the requirements for information. Energex notes that it already provides information for embedded generators on its website.</p>

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<p>Question 5 – Information in offers to connect</p> <p>(a) In practice to date, what information on connection costs are provided in offers to connect? How are the requirements of conforming to rule 5.5 being met? How are the current arrangements deficient?</p> <p>(b) How would the proposed rule to add an ‘itemised statement of connection costs’ improve the current arrangements? How would stakeholders be impacted if this requirement were to be introduced?</p> <p>(c) Should this requirement apply to all types of connection?</p>	<p>(a) Energex notes that the proponent does not appear to directly justify this proposed amendment to the Rules. Attachment B provides an example of the connection costs provided in an offer to connect.</p> <p>(b) It is not clear to Energex how this would improve current arrangements. Energex already provides the customer with itemised connection costs as relevant to the particular connection.</p> <p>(c) If introduced, this requirement should only apply to connections managed under Chapter 5 of the Rules. Energex notes that the process used, and a summary of any specific regulatory requirements, for setting charges and the terms and conditions of connection agreements for embedded generating units, will be included in its demand side engagement strategy document.</p>
<p>Question 6 – Time to Connect in Preliminary Program</p> <p>(a) Under the current arrangements (either under the NER or jurisdictional arrangements), what are the typical timeframes within which offers to connect are made by distributors?</p> <p>(b) What are the factors that affect the timeframe for finalising an offer to connect?</p> <p>(c) Is it feasible or practical to include a specific timeframe to finalise an offer to connect at the time of preparing the preliminary program? What information is currently provided in preliminary programs?</p>	<p>(a) Timeframes will vary depending on the complexity of the connection and the information made available by the connection applicant. For example, a customer may request departures from terms and conditions or change their connection requirements during the course of negotiations.</p> <p>(b) The following factors affect the timeframe between the initial enquiry and the offer to connect:</p> <ul style="list-style-type: none"> • The size of the proposed generator / load. Generally the larger the generator / load, the more likely that the customer will require a network upgrade to connect. Until recently, this was mainly for larger generators / loads. However, significant increases in the uptake of micro and mini solar generation will require network augmentation investment to be brought forward, particularly to manage potential power quality issues for network users. • The location of the generator / load. Network constraints may complicate the connection process, and

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<p>(d) If adopted, should this requirement apply to all connection enquiries?</p>	<p>potentially require negotiations as to upstream augmentation charging. An extension to the network may also be required to connect the customer.</p> <ul style="list-style-type: none"> • The customer’s familiarity with the requirements of the Rules and other electricity legislation. Generally, applicants are mostly unfamiliar with the requirements of the Rules and jurisdictional legislation such as the Queensland Electricity Act. • The volume of applications being considered concurrently. Energex has a small number of specialist large customer connections staff which manage the negotiations to the specific requirements of the customer. <p>(c) It is not feasible to include a specific timeframe in the offer to connect due to the number of factors which can affect the timeframe as set out in (b) above. It may be feasible to include an indicative timeframe, for example “if requested, the DNSP is to provide an indicative timeframe for the provision of any offer to connect, and update this timeframe as required”.</p> <p>The process set out in Rule 5.3, which involves the provision of preliminary programs, is compulsory for Registered Participants and optional for other persons (i.e. Non-Registered Participants). Energex cannot recall an instance where a Non-Registered Participant has elected to follow Rule 5.3, and therefore, where a “preliminary program” of the sort required by clause 5.3.3(b) would have been provided. That said, Energex will, where possible, provide target dates for final connection of smaller embedded generators.</p> <p>(d) This requirement should not be included in the Rules because it will be extremely difficult to comply with. Energex also notes that clause 5.3.3(b) is a civil penalty provision.</p>
<p>Question 7 – Offer to connect within 65 business days</p> <p>(a) What are the factors that affect the timeframe within which offers to connect may be made? What are the factors that impact the process for negotiating negotiated access standards?</p> <p>(b) Have there been cases (particularly in Victoria) where 65 business days was not sufficient to</p>	<p>(a) As indicated in the response to Question 6, the date in the preliminary program should only be considered indicative, given the number of factors (many of which are outside Energex’s control) that can influence the negotiation and agreement timetable. 65 days may be sufficient in some cases, but not in other cases.</p> <p>(b) There has and will be cases where 65 days is insufficient or may be impacted by the customer’s ability to provide sufficient information to allow the distributor to make a complete offer. Based on this, Chapter 5A provides that a distributor must use best endeavours to make a negotiated connection offer within 65 business days and time stops while the customer provides requested information. Negotiating access standards,</p>

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<p>finalise an offer to connect? What were the reasons for requiring more than 65 business days?</p> <p>(c) How would the network service providers and connection applicants be affected by the proposed amendment?</p> <p>(d) Should this requirement apply to all network service providers for all connections?</p>	<p>particularly for larger, complex embedded generators, may involve detailed analysis by transmission planners, protection engineers and power quality engineers.</p> <p>(c) This would require significant diversion of network engineers away from day-to-day operations, at short notice.</p> <p>(d) These requirements should not apply to any connections.</p>
<p>Question 8 – Terms and conditions of connection</p> <p>(a) How are the current provisions under clause 5.3.6(b)(2) being applied? That is, are the terms and conditions for connection of the kind as set out in schedule 5.6?</p> <p>(b) In what ways are varying terms and conditions between distributors a problem? Is it appropriate for distributors to have different terms and conditions? Does this reflect relevant differences in network requirements?</p>	<p>(a) Where a connection application is progressed under Rule 5.3, the offer to connect will contain proposed terms and conditions of the kind set out in Schedule 5.6.</p> <p>(b) It is appropriate for distributors to have different terms and conditions to reflect differences in:</p> <ul style="list-style-type: none"> • Jurisdictional legislation, including power quality, network security, reliability and network access; • The prevailing distribution determination, particularly the classification of services and connection charging policies approved by the AER.
<p>2. Technical Standards</p>	
<p>Question 9 – Technical standards for embedded generators</p> <p>(a) Without technical standards currently being in place for embedded generators, how well has the connection process under Chapter 5 worked in practice? How urgently are</p>	<p>(a) The proposed Rule seeks to include automatic access standards for small and medium embedded generators. Energex has developed a customer standard for small and medium embedded generators, which includes a summary of the connection application process and technical requirements and performance standards. This document has been prepared by Energex to provide proponents of embedded generation installations information about their rights and obligations for the connection to, and interfacing with, the Energex Distribution</p>

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<p>standards needed?</p> <p>(b) Would standards for different types/classes of embedded generators be required?</p> <p>(c) What factors should be taken into consideration in developing such standards? Are there any specific jurisdictional or local requirements?</p> <p>(d) What should be the scope of such standards? Can all relevant technical requirements be 'standardised'?</p>	<p>Network. Many of the requirements are based on those set out in Schedule 5.2 of the Rules.</p> <p>The availability of this guideline to small and medium embedded generation proponents has assisted with an efficient connection process. In Energex's view, national standards would not be necessary in these circumstances.</p> <p>(b) The connection of embedded generation is dependent upon:</p> <ul style="list-style-type: none"> • The level of generation already connected; • The voltage to which the generation is to be connected; • The size of generation system to be connected; • The type of generation system proposed; • The electrical strength of the network at point of connection. <p>(c) There are a number of jurisdictional standards that are relevant. Most distributors will be subject to network operation standards and reliability standards set out in their Distribution Licence/Authority, jurisdictional electricity legislation (in Queensland this will include the Electricity Act, Electricity Regulations and Electricity Industry Code). Distributors also operate within pre-existing Service Installation Rules.</p> <p>(d) Meaningful automatic access standards would be extremely difficult to develop. Should the AEMC wish to develop standards, Energex would seek to be closely involved in the development of the standards.</p>
3. Right to export to the grid	
<p>Question 10 – Automatic right to export</p> <p>(a) Under what circumstances have embedded generators not been allowed to export electricity to the network?</p> <p>(b) What are the impacts on embedded generators</p>	<p>(a) Embedded generators may not be allowed to export electricity to the network where they do not meet a technical requirement for connection, or refuse to pay an appropriate capital contribution (if required under electricity legislation or the AER Distribution Determination) for dedicated assets.</p>

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<p>and other participants when exporting is not allowed?</p> <p>(c) Are there circumstances where the ability of embedded generators to export electricity to the network should be limited? What conditions could reasonably be imposed to limit exporting?</p> <p>(d) What are the costs and benefits of allowing, and not allowing, embedded generators to export electricity to the network?</p> <p>(e) Is there any basis for embedded generators to be treated differently to load or other generators? For what reasons?</p>	<p>(b) Energex does not provide comment on this question.</p> <p>(c) Export should be limited in circumstances where it may adversely affect the quality of supply to other network users or the safety of the network and its users, as contemplated by the Queensland Electricity Act.</p> <p>(d) The potential benefits of allowing efficient embedded generators to export electricity include:</p> <ul style="list-style-type: none"> • A reduction in greenhouse gas emissions, assisting households and businesses to make a personal contribution to environmental outcomes. • Deferring network augmentation requirements, ultimately reducing the cost of network services provided by DNSPs. However, there is mounting evidence that relatively unfettered access to distribution networks for micro and mini embedded generators is causing the DNSP to bring forward network augmentation requirements simply to provide sufficient headroom for these generators, and manage power quality requirements within legislated levels. Further, the benefits to peak demand provided by generation which is unable to be scheduled warrants further consideration. <p>(e) Energex will connect load and generators to the distribution network where it is technically and economically feasible to do so, as stipulated under the Queensland Electricity Act. In circumstances where this is not the case, Energex may not connect this customer. This can occur where an embedded generator is unwilling to pay an appropriate capital contribution for dedicated connection assets, or the embedded generator causes adverse impact on the quality of supply to other customers.</p>
<p>4. Connection fees and charges</p>	
<p>Question 11 – Fee for service</p> <p>(a) What are the barriers that prevent network service providers from charging a ‘fee for service’ under the current arrangements?</p> <p>(b) Is the proposed rule sufficient in identifying what services would be provided for the ‘fee for service’? If not, how should the relevant service</p>	<p>(a) The proponent suggests that, to incentivise the DNSP to efficiently progress embedded generation applications, the DNSP should be able to levy a fee to process the connection enquiry.</p> <p>Energex is entitled to charge an application fee for large customer connection applications (which includes small and medium embedded generator applications). The service is currently classified as an alternative control service (quoted service), and the fee is determined in accordance with the quoted services formula determined by the AER. It will cover all work reasonably anticipated to arise from investigation of the connection application</p>

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<p>be specified?</p> <p>(c) What factors should be considered on how such a service should be classified. That is should it be a direct control service or negotiated service? Should the service be on a cost recovery basis only?</p> <p>(d) Should the NER provide any guideline on how such a fee should be determined or should it be negotiated between a distributor and embedded generators? Should the fee be approved by the AER and, if so, on what basis?</p>	<p>and preparing the offer to connect.</p> <p>(b) Refer to Energex’s response to (a).</p> <p>(c) Refer to Energex’s response to (a). The AER determines the classification of services as part of a distribution determination.</p> <p>(d) Refer to Energex’s response to (a).</p>
<p>5. Other Issues</p>	
<p>Question 12 – Shared network augmentation costs</p> <p>(a) Is the current approach to attributing connection costs, particularly in relation to shared network augmentation costs, inefficient, inequitable and not cost-reflective? For what reasons?</p> <p>(b) Should embedded generators (noting that embedded generating installations can encompass a broad range of installations) be exempt from paying shared network augmentation costs? Why or why not?</p> <p>(c) If embedded generators are exempt from shared network augmentation costs, how</p>	<p>(a) Shared network augmentation is a core distribution service, the costs of which are recovered in use of system charges levied on load customers. In circumstances where a customer requires an augmentation to the shared network, and the DNSP considers that the benefits of this augmentation will not be shared with existing or new customers, the assets will generally be considered to be ‘dedicated’, and the customer will be requested to provide an appropriate capital contribution.</p> <p>This approach is applied to all connecting customers, whether load customers or generation customers. It is noted, however, that any use of system charges which may be paid by generation customers does not currently cover a notional network capacity ‘allowances’ to receive their export capacity. This is noted by the AER in its Connection Charging Guideline (June 2012) Final Decision:</p> <p><i>The key difference between embedded generators and load customers, which require different treatment with respect to connection charges, is that embedded generators do not contribute to the cost of the shared network through DUoS charges. (p65)</i></p>

Issue	Energex Comments
<p>should these costs be allocated?</p>	<p>Energex continually seeks to improve the economic efficiency of its network tariffs, particularly to remove any inappropriate cross-subsidies between customers, including load and generation customers. Energex believes that the AEMC should consider whether it is appropriate for an embedded generator to pay shared network charges for the shared network capacity notionally made available to the generator to export energy into the distribution network (a benefit embedded generators currently receive for free). In this context, the intended operation of clause 6.1.4(a) of the Rules should be clarified.</p> <p>Energex notes the approach to recovering shared network augmentation costs from embedded generators under Chapter 5A and the AER's Connection Charging Guideline (June 2012):</p> <ul style="list-style-type: none"> • Under Chapter 5A, micro embedded generators are exempt from shared network augmentation charges if they apply for a basic connection or "a relevant threshold in the DNSP's connection policy is not exceeded". This threshold must be based on a measure of demand (required by the AER's Connection Charging Guideline). Therefore, if a micro embedded generator is below this (demand) threshold (to be approved by the AER), they will be exempt from shared network augmentation charges. • Non-Registered embedded generators are dealt with in section 7 of the AER's Connection Charging Guideline. Non-Registered embedded generators which seek to remove a specific network constraint will generally pay for this, unless "the DNSP's normal asset management may lead to a DNSP funding such shared network augmentation if there is a demonstrable net benefit to other network users". <p>This condition is relatively broad and has the potential to cause disputes between non-micro EG connection applicants and DNSPs. In addition, this service is to be classified as an alternative control service, which may add additional complexity to how the costs are to be recovered from customers. Should Chapter 5A become applicable to Energex, Energex will work closely with the AER to ensure the development of a balanced and accessible connection charging policy.</p> <p>(b) Referring to Energex's response to (a), customers, including embedded generators, should pay for dedicated assets, and contribute to the cost of shared asset augmentation, whether those be upstream or at the connection point. This ensures all connection applicants are provided user pays signals and, to the extent practicable, ensures compliance with the Pricing Principles provided in Section 6.18.5 of the NER in the formulation of tariffs and development of pricing signals.</p> <p>In addition Energex applies a number of pricing objectives to support and complement the NER Pricing</p>

Issue	Energex Comments
	<p>Principles. These objectives require tariffs and pricing to be cost-reflective and equitable, and for there to be no cross-subsidisation between each tariff class of standard control services, or between standard control and alternative control tariffs. Requiring embedded generators to contribute to shared network augmentation costs supports these objectives.</p> <p>(c) Embedded generators should not be exempt from shared network augmentation costs solely attributable to that customer. For clarity, this is not the same as the “tipping point” approach because, in these cases, the augmentation will be to the benefit of future customers and therefore not solely attributable to the tipping point customer.</p>

2 ATTACHMENT A – EMBEDDED GENERATOR CLASSIFICATION

Chapter 10 of the National Electricity Rules (NER) defines an embedded generator unit as a generating unit connected within a distribution network and not having direct access to the transmission network.

Embedded generating units are sub-categorised differently across the NEM. For example, a “Non-Registered embedded generator” has different meanings depending on whether you are operating under the AEMO classification framework or Chapter 5A (NECF) classification framework.

Table 1: Classifications of embedded generation units used by different instruments and stakeholders

Threshold ¹	AEMO ²	AEMC ³	Chapter 5A (NECF)	Energex (Solar PV) ⁶
2kW	Non-Registered	Micro	Micro ⁴	Solar Micro EG
10 kW (1p) or 30 kW (3p)		Mini		
1MW		Small	Non-Registered ⁵	Solar EG
5MW		Medium		
5-30MW		Large		
5-30MW	Registered			
>30MW				

1. For example, the 5MW category is for embedded generators between 1MW and 5MW. p = phase

2. AEMO, NEM Generator Registration Guide (generators between 5-30MW may or may not be Registered, depending on exemption status)

3. AEMC, Power of Choice Directions Paper (162-3)

4. Chapter 5A Definition of micro EG connection is that contemplated by AS4777

5. Chapter 5A Definition of Non-Registered EG is an EG which is not micro or a Registered Participant

6. Energex classification for solar micro-embedded generation (MEG) and other solar embedded generation (EG)

3 ATTACHMENT B – Example Connection Costs Breakdown in Letter of Offer

4

Financial Terms

The following applies only to the *Final Connection Arrangement*. (i.e. not the *Interim Connection Arrangement* referred to above.

The following table outlines the amount and due dates of any payments, please note that late payments will delay the project and may result in termination of the project.

STAGE	VALUE	
Application Fee	██████████	
Audit Fee (Audit plans and construction of connection assets)	██████████	
Switching Fee (Fee for any network switching to required to install commission and energise connection assets – Indicative estimate only, exact fee will be quoted based on Customer's requirements)	██████████	
Capital Contribution (Connection Asset Works)	██████████	
GST	██████████	
Total Estimated Cost (GST incl.)	██████████	Due Date: 01 May 2011

ENERGEX will provide a Tax Invoice at the completion of work.

Bank Account For Receiving Payments

Account: ENERGEX Limited
 BSB No: 084-004
 Account No: 89-748-1362 National Bank Capital Office Brisbane 4000

Remittance Advice: CreditMan@energex.com.au
 Attention: Accounts Receivables
 Fax No: (07) 3407 4669
 Ph No: (07) 3407 4979

For other methods of payments please phone (07) 3407 5817.

Network Charges

The network charges will be developed as per ENERGEX's Network Pricing Principles approved by the Australian Energy Regulator.

Security

ENERGEX will require security in the form of a Bank Guarantee as covered in the Connection Agreement. The required security is \$0.