Guide to Lodging a Large Customer Connection Enquiry

Background

Following the Australian Energy Regulator’s (AER) determination regarding Large Customer Connections, Energex has developed a standard approach to processing these projects, which is to meet the AER requirement and formalise communication between Energex and its customers.

Due to the usually long lead times involved for projects of this type, it is important that these protocols are adhered to, in order to meet the customer’s requirements.

The key determinations of the AER in regard to Large Customer Connections projects are:

1. Customers are to fully fund the installation of Connection Assets.
2. There should be competition around the activities to design and construct Connection Assets.
3. Customers have the choice to gift the Connection Assets to Energex to own and maintain them, or to own and maintain them on their own behalf.

Connection Assets are those components of a transmission or distribution system which are used to provide connection services.

Energex shall be responsible for determining the Network Coupling Point between existing or proposed Network and the new Connection Assets required to connect a Connection Applicant’s electrical installation or development.

In general, the design and construction of Connection Assets is contestable. However, Energex will undertake a risk assessment of the proposal and shall determine at its absolute discretion if the work is performed by Energex or an accredited service provider.

Please see the process diagram below:
Types of Enquiries

There are two styles of enquiry for Large Customer Connections:

1. Pre-Feasibility Enquiry, which is designed for a customer to obtain conceptual information. For example, process information, timing, and basic technical requirements to allow Energex to progress the project. **A Pre-feasibility Enquiry is not compulsory.**

2. Large Customer Connection Enquiry, which is designed for a customer to obtain detailed preliminary information on which to base budget and timing considerations for the intended project to be constructed. This enquiry is only valid if the customer has confirmed the scope of works on site, completed detailed load assessments, and prepared suitable site layout and preliminary substation construction drawings for assessment. **The Large Customer Connection Enquiry is compulsory** and for projects where the customer chooses to design and construct the Connection Assets, the **Detailed Enquiry Response** is the formal **design parameters**. The rated design consultant is to use this information to complete the detailed design and substation construction drawings.

Note that if you do not have enough information to lodge a Large Customer Connection Enquiry, however, wish to engage Energex to assist with options analysis etc, you will be requested to pay an Application Fee immediately. Depending on a range of issues, Energex may request an Application Fee at anytime during the Enquiry and Application phases of the project. The Application Fee is estimated for the expected effort; however, actual costs are to apply.

Lodging a Pre-Feasibility Enquiry

Please provide the following information:

1. Complete Form 1001 – Pre-Feasibility Enquiry.
2. Provide a copy of the registered/survey plan.
3. Provide details of the type of connection, e.g., commercial office spaces, industrial, hospital, embedded generation, etc.
4. Provide an indicative maximum demand calculation/size and type of embedded generation.
5. Provide a basic layout of the development if available.
6. Provide the target date for connection.

Energex Response to Pre-Feasibility Enquiry

Energex will provide a response based on the information provided as follows:

1. A schematic diagram of the assets to be installed, which will indicate the dedicated connection assets that the customer will be required to fund and the shared or network assets Energex will install to provide the capacity to make the connection. The diagram will identify proposed network coupling point(s) to connect the connection assets to the network.
2. Basic lead-time to make connection available.
3. Outline the next step in the process.
4. On receipt of your Large Customer Connection Enquiry (Form 1593) or Embedded Generation Enquiry form (Form 1519), if it is perceived that Energex will need to commence detailed analysis to assess the impact of your connection on the network in order to complete the Detailed Enquiry Response, Energex may request that a non-refundable Application Fee be paid with your submitted enquiry.
5. Should major extension works be required to Energex’s shared network to make supply capacity available, Energex will request an Early Project Initiation Bond to provide a detailed response. Typically, this would be for a project where Energex would be installing additional 11kV feeders, or 33kV – 132KV sub-transmission mains to a new zone substation or customer substation. Detailed planning needs to be completed to provide the detailed analysis of the work required and to secure line routes, substation sites and statutory approvals etc. This Early Project Initiation Bond will be refundable should the project go ahead. If the project does not proceed, Energex will draw on the bond for the reasonable costs incurred to date.

The pre-feasibility response may not be appropriate to use for budget or final timing purposes.

**Lodging a Large Customer Connection Enquiry**

Please provide the following information:

1. Complete all mandatory fields on the Large Customer Connection Enquiry form (Form 1593) for load connections including embedded generation. Alternatively, complete the Embedded Generation Enquiry form (Form 1519) for connections that are for generating systems only and have a rating of greater than 30kW.
2. Provide your final detailed AS3000 maximum demand, and diversified electrical demand for load connections.
3. For embedded generation fill out and attach Request for Generator Information (Form 1551) for mechanical generators, and Request for PV/Inverter Information (Form 1552) for solar generators.
4. Provide your proposed target date for connection of electricity supply.
5. Provide detailed site construction drawings of the proposed substation, conduits and pits and associated building/site drawings to Energex standards. Note that it is mandatory to engage an Energex rated design consultant to design and document these drawings when you lodge your Large Customer Connections Application for Network Connections Services.
6. Temporary supply requirements; refer to the section on page 6.
7. Any requirements for relocation of existing mains, or installation of underground mains in lieu of existing overhead mains.
8. Details of any risks to the project, e.g., environmental concerns such as vegetation, acid sulphate soils etc.
9. If you have more than one option to be considered, please provide the same amount of detail for each option as above.
10. If you do not request Network Pricing information at this stage, it will be provided in a Letter of Offer following receipt of a Connection Application.
11. If you have decided to design and construct the Connection Assets using Energex rated service providers, please attach the preliminary copy of the consultant’s works plan.

Note that if the submitted information is not sufficient for Energex to provide a Detailed Enquiry Response, Energex will consider the Enquiry to be non-compliant and treat the Enquiry as Pre-feasibility Enquiry. Energex will request the outstanding or additional information to make the Enquiry compliant.

For an explanation of the Fees applicable for these projects, please refer to the LCC FAQ’s for Customers and Consultants Fees & Charges. You can access this document at the following website link:


**Energex Response to a Large Customer Connection Enquiry**

1. Energex will provide one or more options in regard to installing both Network and Connection Assets to make supply available.
2. Energex will quote the preliminary fees required to proceed with an Application to Connect.
3. Energex will provide a preliminary cost of design and construction of the Connection Assets.
4. Energex may quote an amount for an Irrevocable Guarantee. An Irrevocable Guarantee will be applicable in cases where Energex is exposed to significant financial risk should the project not proceed for any reason following Energex investment to install network infrastructure to make electricity supply available. The Irrevocable Guarantee is refundable if the project proceeds and connection is made.

5. A schematic diagram of the assets to be installed, which will indicate the dedicated connection assets that the customer will be required to fund and the shared or network assets Energex will install to provide the capacity to make the connection. The diagram will identify proposed network coupling point(s) to connect the connection assets to the network.

Notes on Drawing Submissions

Your rated design consultant is to submit 1 x electronic copy (AutoCAD dwg format) and 1 x PDF copy of your drawings for the proposed works plan and or substation construction plans for approval.

To assist in the preparation of the drawings please refer to the Submission Checklist for Customer Substations (form 1328), which is available on Energex website at the link provided. This document is used in conjunction with the WCS47.6 checklist to audit your plans.

Detailed substation drawings must incorporate both plan and elevation view, and clearly show or make reference to Energex specifications and standards relative to the work.

Miscellaneous Items

Relocation of Non-Energex Services

If you have requested relocation works to be completed in conjunction with the installation of Connection Assets, there may be Non-Energex assets which are attached to Energex poles or underground assets that present an obstacle for the installation of conduits and pits in the road reserve (eg Optus, Telstra, Gas). The relocation of Non-Energex Assets shall be negotiated separately by your client with the relevant asset owner. You shall provide Energex with written evidence that an agreement has been reached with the owner of these assets prior to any work commencing on site.

Additionally, you shall provide the contact details of the officer appointed by the affected asset owner responsible for the relocation works in order for Energex to co-ordinate with the asset owner to have the works to be completed.

Temporary Power

If temporary power is required for building purposes please note that parts of the Energex Network have no spare capacity available to feed the proposed connection.

In instances where spare capacity exists, but there is no suitable connection point available (eg a service pillar, service pole etc) lead-times to provide the connection point can vary from a minimum of 16 weeks to a maximum of 24 weeks.

If supply capacity is not available, lead-times to extend the network vary between 6 and 10 months.

To avoid serious delays to the project please ensure these lead times are passed on to your client and, the builder, once appointed. To make arrangements for temporary supply, please contact the Energex Customer Service Centre on 13 12 53.

Easements

The customer may be requested to register an easement containing the substation area and / or the High Voltage cable route (2 metres wide). Please include the detail of this easement on your proposed site plan. Your solicitor and surveyor are able to provide appropriate documentation for easement registration. Energex will not commence construction until all required easements have been registered.
Conduit/Substation Inspections

For Energex design and construct projects the inspection of conduit installation and substation construction can be arranged by contacting the Energex’ officer appointed to the project.

For Customer design and construct projects your SWP47.2 & SWP2 contractor and your WCS47.6 design consultant are responsible for ensuring that the construction is completed to Energex specifications. An Assessment Officer will inspect construction on the site at the completion of civil works, and again at the completion of electrical construction. The Connection Assets will not be commissioned until all defects have been rectified.

Statutory Clearances to Overhead Electricity Mains

The Electrical Safety Regulation 2002 prescribes the statutory clearances that shall be maintained between structures and overhead electricity lines (other than overhead low voltage service lines). This information is contained in Schedule 4 of the regulation. The regulation can be viewed on the Queensland Government legislation website at the following link:


Before Construction

Prior to construction commencing on site your client is required to ensure that compliance with the statutory clearances will be achieved. If it is identified that statutory clearances cannot be achieved, your client is to make arrangements with Energex to have the overhead mains removed and replaced with an underground equivalent. This work is completed at full cost to your client.

If the height of the proposed building/structure is taller than a normal one story and is to be built up to the street RP boundary, it may result in the inability to maintain statutory clearance to the overhead electricity mains in the street. If construction were to proceed under these conditions it would be a breach of the Electricity Act. In these instances it will be necessary for these mains to be undergrounded at full cost to your client.

During Construction

If building works require the operation of a crane, the erection of a scaffold, gantry or hoarding over or near the footpath, this may also result in the inability to maintain statutory clearance to overhead electricity mains. In these instances it will be necessary for these electricity mains to be isolated, removed, relocated or undergrounded at your client's cost.

The alteration to these overhead mains can be included in the work to provide the new electricity supply to the site. If however, it is necessary to recover the mains earlier, Energex will require 16 to 20 weeks notice to complete this work. Please ensure the builder is informed of these lead times.

Energex Access to Footpath Alignment

Depending on the scope of Energex works for your site, Energex will require unrestricted access to the footpath for the installation of conduits, cables and the construction of pits. All structures such as gantries, hoardings, site sheds and site fences are to be removed or suitably relocated to allow safe access for Energex to complete the work. Failure to provide access as required and agreed will mean that the completion of the work will be severely delayed.

Relocations, Footpath Levels and Reinstatement

If your project scope requires any relocation of Energex’ assets this work is completed at full costs to the customer.

While the requirement for relocations can be quite obvious, the work can be triggered by proposed change in levels of footpaths or road surfaces, including footpath reinstatement or resurfacing.

Examples of the required relocations are lowering of existing conduits and cables, alteration or reconstruction of concrete jointing pits, raising of low voltage supply pillars etc.

The lead time to complete the work can be up to 10 months depending on complexity of the work and availability of resources.
Demolition Works

Electricity supply is to be safely disconnected, and all Energex electricity assets removed from private property prior to the demolition of existing buildings and structures.

Energex will require a minimum 5 weeks notice to do this work, however, if there is an existing substation on this site the lead time for removal can be up to 10 months as Energex may need to make substantial alterations to the network to accommodate the recovery of the assets.

To arrange this disconnection please contact the Energex Network Service Centre on 13 12 53. A request will also be required to be submitted to your electricity retailer.

Work Performed Outside Energex Business Hours

If the customer requires connection works to be undertaken outside Energex business hours please notify the Energex officer appointed to this project. Any additional costs incurred due to working outside of normal business hours (eg, overtime labour rates, obtaining permits etc.) will be at full cost to the customer unless there are Energex requirements to undertake works outside business hours. The Energex officer appointed to this project will be able to provide you an estimate of these costs upon request.

Generators

Energex will not supply generators to connect to customers switchboards in the event of any outage due to the requested network alteration. Customers should engage an electrician to arrange the connection of a generator the main switchboard to avoid outages where practical at their own cost.

EMF Shielding

If EMF shielding is required to be installed between Energex cables and equipment and the customer’s installation, provisions must be made for the shielding to be installed external to the substation room.

Dry Type Transformer Rating

Please note dry type transformers are sensitive to high temperatures and will trip once their maximum operating temperature is exceeded. These transformers will not sustain load in excess of their rated capacity and will also trip under overload conditions. Adequate and reliable ventilation is, therefore, vital for the security of your/your client’s electricity supply.

To ensure a secure supply the maximum loading on each transformer is not to exceed 80% of the nameplate rating. Please indicate the planned loading for each transformer when submitting your application.