Design Information Package

Network Customer Operations Officer:
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Planning and Supply Negotiations – East
130 Joynton Ave , Zetland NSW 2017

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PROJECT Two Transformer Substation

Project Identification No.: xcz015305

Project Location: 157 Redfern St Redfern

Applicant for Supply / Owner: Deicorp Constructions
Postal Address:
Telephone No.: 8507 5600 Facsimile No:

Applicant/Developers' Representative: SEMF Phil Rizgalla
Postal Address:
Telephone No.: 9957 4815 Facsimile No:

Project Description: New Two Transformer Substation and remove any existing supplies.

Introduction

A. A design from this Design Information Package must conform to the requirements detailed in Energy Australia's Network Standard NS104, Network Project Design Plans.

B. Customers and service providers are cautioned against relying on quotations provided prior to certification of the design by Energy Australia (Network Customer Operations Division). Quotations for contestable customer connection works are generally dependent on the extent of Energy Australia's funding of shared assets and recoverable equipment components. While this document may contain a section headed "Apportionment of Costs (Preliminary)" the information the section contains is based on the Network Customer Operations officer's assumptions on the probable final design. Acceptance of a design that does not conform to such assumptions may require revision of the Apportionment of Costs and this may require re-assessment of any quotations issued prior to Design Certification.

C. The developer is required to have Energy Australia approve architectural drawings detailing the construction of the chamber substation civil works prior to any construction work being commenced. For the finalisation of architectural drawings it is necessary for the accredited service provider undertaking the electrical design to submit the proposed electrical design for approval by Energy Australia.

Details of Proposed Substation

- Number : 36229
- Name : Regent Redfern
- Type : 2 transformer chamber
- Transformer Size / Vector Group 1000 kVA / DY1
  Tap Setting 10670/433V
- HV Input & Control Ring Main Isolator (RMI) Lucy (side connected)
  Three 80 ampere Bussmann OHFMA HV fuses

LV Output: LV Circuits: 1. 157 Redfern St Supply No.1 (1200 amps)
2. 157 Redfern St Supply No.2 (800 amps)

Fuses as per Energy Australia stock at time of installation

LV Board Components
2 of 2000A incoming ACB un motorised
1 of 3000A bus section
3 of 2 x 400 + 1 x 800A fuse distributor (2 together on one Tx the other with the 1600A panel on the other Tx)
1 of 1000 - 1600A customer supply disconnector controlled fuse

- Prospective fault current at terminals of transformer will not exceed 50kA.

11kV Linkage Point

- Loop the S.3624 Cope Turner to S.112 Renwick St Tee S.8947 Renwick Wells into S.36229 Redfern Regent using 300 Cu cable
- Install an EFI at S.36229 Redfern Regent on the S.3624 Cope Turner feeder
- 11kV Phasing by Energy Australia

LV Network Development

- If a customer substation is required, the additional LV network distributor load that Energy Australia requires from the substation.
  - adequate number of conduits to the street.

Apportionment of Costs (Preliminary)

The work associated with this project has four distinct segments in compliance with Energy Australia's ES8 document "Capital Contributions and Recoverable Work Guidelines" used in determining funding of works. After submission of a design for approval the full extent of the work funded by Energy Australia and the customer will be determined. The following serves only as a guide: -

1. Contestable Construction Works to funded by the Applicant for Supply
   For the purposes of this project, this portion of construction works has been defined as the entire project except as specified in 3

   The applicant for supply may elect to have this work completed by a Level 1 Service Provider accredited by the Electricity Association of NSW and Authorised by the network owner - Energy Australia.

2. Monopoly Fees to be funded by the Applicant for Supply

   For the purposes of this project, the outstanding monopoly fees to be paid have been defined as:

- Network Inspection, Clerk of Works, Access Permit, Substation Commissioning, Preparation of Final Lease Arrangement and Survey Plans

These fees will be determined once the design has been certified and apply irrespective of whether Energy Australia or another accredited designer carries out the electrical design.

3. Construction Works/Materials to be funded by Energy Australia

For the purposes of this project, this portion of works has been defined as:

- supply of economically recoverable equipment as per ES.8
- All work within an existing substation (including screening) connected to Energy Australia's Network.

Energy Australia has reserved the right to complete any work that it will fund. If for practical reasons the nominated Level 1 Service Provider wishes to complete this work, then Energy Australia will reimburse the Service Provider for the associated cost. The amount of reimbursement will be determined, upon request, by Energy Australia in accordance with ES5 - Network Miscellaneous Connection Charges.

4. Civil Works on The Premises of Applicant for Supply.

Civil works is all necessary conduits, trenches, cable fixings and substation site preparation on the premises of the applicant for supply. This work is to be completed by the applicant for supply, at their own cost.

Street Lighting Requirements:

Meet the local council's development application condition regarding street lighting for the project.
Designed in accordance with NS-0118 and AS/NZ 1158.3.1:1999 Part 3.1.
Designer to investigate lighting style with developer.

Compliance with Energy Australia Network Standards

Design and Construction is to be done in accordance with all relevant Energy Australia Network Standards and any related Network Standard Advice (NSA).

In the event that any user of any of Energy Australia's Network Standard considers that any of its provisions is uncertain, ambiguous or otherwise in need of interpretation, the user should request Energy Australia to clarify the provision. Energy Australia's interpretation shall then apply as though it was included in the Standard, and is final and binding. No correspondence will be entered into with any person disputing the meaning of the provision published in the Standard or the accuracy of Energy Australia's interpretation.

All of Energy Australia's Network standards, including all relevant amendments (Network Standard Advice) can be found on our website at www.energy.com.au under the Company Information Link.

The Network Standards are correct at time of issue only and Energy Australia may issue further amendments at any time.

Materials Used to Construct the Project

All materials including (but not limited to) cables, cable covers, conduits and substation equipment etc must be "Approved Materials" in accordance with Energy Australia's Policies and Network Standards. These materials may be purchased from suppliers satisfying Energy Australia's Quality Assurance requirements or purchased through Energy Australia. For quotations on materials purchased through Energy Australia contact the Administration Officer - Procurement on telephone number 9394 6045 or facsimile number 9394 6060.

Use of Energy Australia Spare Conduits

If existing 'out of service' conduits are proposed to be used for the installation of cables for this project, advice from the Network Customer Operations officer must be sort as to the conduits availability for use.

Approval of local council and other authorities.

Inform the applicant that the customer / developer is responsible for obtaining any local council development consent that may be required for the extent of the electrical works. (This includes all electrical and civil works on public roads required to supply the development.) The customer / developer will be required to provide evidence to Energy Australia that local council development consent has been obtained or is not required.

Inform the applicant that the design may require the approval of other relevant authorities such as the RTA, Telstra, State Rail, Sydney Water etc

The designer must lodge with local council the notice required under Section 45 of the Electricity Supply Act 1996 for the proposed construction of Network assets. A copy of local council comments to the Section 45 notice must be submitted to Energy Australia Network Customer Operations with the design prior to certification.

The designer is to carry out service utility checks and verify that the design does not conflict with existing utility assets.

The developer is responsible for obtaining any local council development consent or approval from other authorities that may be required for the extent of the electrical work. Energy Australia will require evidence that local council development consent or other authorities approval has been obtained or is not required.

Easements and Leases

The substation's occupancy on private property is to be covered by a lease/easement agreement between Energy Australia and the property owner. Easements (created in favour of Energy Australia) are required over all distribution network assets constructed on private property. A Right-of-Way (ROW) in favour of Energy Australia for heavy vehicles and personnel is also required. Reference should be made to the design drawing for details of easement widths and ROW. A survey plan is to be prepared by the Applicant for Supply or Accredited Service Provider for inclusion in the lease/easement documentation.

Energy Australia's nominated Network Customer Operations Officer will provide further detail on the requirement for a lease and easement in separate documentation to the Applicant for Supply.

Environmental Impact Assessment (EIA)

Inform the applicant that an EIA must be submitted with the final design in a format acceptable to EA for Authorisation and carried out by a qualified and competent person. A standard pro forma has been prepared by the EA Environment group for this purpose to issue to accredited designers. The EIA must also include details of any environmental management requirements stipulated by the local council in their approval for the development. The extent of the development includes the electrical works within and external to the site. Any parts of the project that do not require development consent will still require preparation of an EIA.

The Designer can obtain further information on how to comply with the Environmental Assessment Act from the Department of Urban Affairs and Planning.

Possible Presence of Energy Australia Assets Manufactured from Asbestos

Asbestos or asbestos-containing material may be present in Energy Australia's network assets. Information on specific equipment that may contain asbestos will be issued when the connection works design has been approved. Energy Australia's Network Standard NS 0156 – *Working Near or Around Underground Cables* (Clause 2.10) contains general information on possible asbestos material relative to underground mains and ducts.

Other Conditions and Arrangements:

Design documentation must conform to Energy Australia Network Standard NS104.
Both a hard copy and an electronic format copy (DXF, DGN or DWG) of the proposed electrical design plan is required.
Usually 14 working days should be allowed for Energy Australia to certify completed designs.
Electrical reticulation work must not commence until the design has received certification by Network Customer Operations.

Energy Australia's ES9 Agreement for Connections of Developments

To maintain the integrity of its distribution system, Energy Australia must ensure that Contestable Works are built and maintained to comply with the standards it administers.

Accordingly, before such work is undertaken, the Customer and the appointed ASP/1 must enter into this Agreement which:

(a) seeks to ensure a satisfactory standard for the Contestable Works;

(b) sets out the relationship between Energy Australia, the Customer and the ASP/1; and

(c) sets out the conditions upon which Energy Australia will agree to accept transfer of the works from the Customer when they have been completed.

This Agreement also sets out certain requirements for:

- Non-Contestable Works that are also agreed to be undertaken by the ASP/1; and
- the equipment that will be owned by the Customer (known as the "Customer's installation").

Subsequent discussions and consultations

The fees charged for Design Information did not contain an allowance for consultation and discussion as the design is being prepared. The time involved in providing any unreasonable subsequent discussions and consultations will be charged at commercial rates.

Miscellaneous

- This design information package is valid for a period of three months from the date of this package. After three months Energy Australia reserve the right to reassess and change the design information details.
- The design information is based on the load details provided by SEMF Phil Rizgalla.
- All design criteria is to meet or exceed the current standards as of the date of design submission.
- On request from an Accredited Service Provider Level 3 Energy Australia will provide detail plans to assist in the design stage. One initial meeting will be available on pick up of plans to clarify any issues with information provided.

List of Attached Documents

- Energy Australia System Diagram

Prepared By :- Ross McLeay Date :- 13-5-2009