FACT SHEET: Information about dedicated connection assets to be transferred to Ergon Energy

February 2021 – Version 2.0

Purpose

This Fact Sheet provides advice to Major Customers where the Major Customer is (either itself or through a third-party Service Provider) designing and constructing dedicated connection assets for transfer to Ergon Energy. In particular, this Fact Sheet sets out the recommendations for prescribed materials, and information that Ergon Energy requires in relation to various items of equipment to be transferred.

Definitions

Major Customer: In this Fact Sheet, refers to a person intending to submit an application to connect to Ergon Energy (for either a new connection or modification of an existing connection) where the acceptance of that application and completion of necessary works will result in that customer being classified by Ergon Energy as any of an ICC (Individually Calculated Customer), CAC (Connection Asset Customer) or EG (Embedded Generator) in accordance with Ergon Energy's pricing proposal available on the Network Tariff section of Ergon Energy's website.

Service Provider: An entity providing a relevant design or construction service.

Technical Representative: This is a person appointed by Ergon Energy to provide a single point of contact between the Major Customer and Ergon Energy regarding technical aspects of the works and interfacing with internal design groups and subject matter experts.

Requirements for Transferred Materials

In 2012, the Australian Competition and Consumer Commission (ACCC) passed a notification of exclusive dealing in favour of Ergon Energy in relation to the supply of testing, commissioning and connection services by Ergon Energy to connect large customers. For assets that are transferred back to Ergon Energy, it is important that this equipment meets Ergon Energy's network standards and are compatible with its distribution network. Ergon Energy maintain an Approved Materials List on its website.

As such Ergon Energy will prescribe the exact manufacturer and model of relevant equipment and plant that the customer must use. If there are technical difficulties in using the specified equipment, the Service Provider must seek approval from Ergon Energy to the use of alternative equipment that meets Ergon Energy's technical equipment specifications.

This includes items such as terminal blocks, cable marking systems, labelling systems, cable ladders and ducts, control cables, LV power cables, earthing conductors, void filling materials, etc.

Information on Approved Materials

Information on the long lead time pre-selected items is available as follows:

Ergon Energy's period contract items and stock items are listed on the Substation Materials List included in Appendix C of the Works Specification.

Drawings of Ergon Energy's preferred major plant items where available are included in the Appendix C of the Works Specification, or will be transmitted when they become available. The Service Provider is to confirm that the drawings provided are still the latest drawings prior to starting detailed design.

Drawings of other period contract and stock items are generally available in the EDMS, and can be provided to the Service Provider on request.

NOTE: In some instances, equipment of a higher rated voltage than the nominal voltage may be required due to re-energisation or switching transients at the proposed location. In these instances, any investigations and discussions with suppliers must be undertaken by the Service Provider to select appropriate plant that aligns with the Ergon Energy standard specifications.

In particular, circuit breakers may require single pole point on wave switching capability, subject to the Service Provider's transformer energisation study.

Labelling of Equipment

Ergon Energy will provide the Major Customer with details of the operational and identification labels that the Major Customer must place on items of equipment, substation buildings and enclosures to be transferred to Ergon Energy, and the Major Customer must give Ergon Energy a table identifying each item of equipment, label identification, make, model and serial number.

Provision of Information

Prior to commissioning assets to be transferred, the Major Customer must give Ergon Energy all:

- associated design manuals and test certificates for these assets;
- copies of relevant approvals and authorizations; and
- relevant technical details of equipment, as set out below.

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Equip. Class	Nameplate
Bushing	Rated Current (A) Bushing Catalogue No Bushing Position Type of Bushing Manufacturer of the Bushing Model No Phase (A,B,C,N, All) Serial Number Short Time Current (KA) Short Time Seconds (S) Nominal Operational Volt (kV) Rated Voltage (kV) Year of Manufacture Parent Equipment Details
Circuit Breaker	Rated Current (A) CB Asymmetrical Break Cap (KA) CB Equivalent Break Cap (KA) CB Symmetrical Break Cap (KA) CB Fault Rating CB Fault Rating Units Nameplate Circuit Breaker Installation CB Peak Making Capacity (KA) CB Symmetrical Making Cap (KA) Manufacturer of the CB Model No Serial Number Short Time Current (KA) Short Time Seconds (S) Terminal Rated Current (A) Nominal Operational Volt (kV) Rated Voltage (kV) Year of Manufacture
Current Transformer Set (e.g.: internal to transformer)	Instr Set Description Instr Set Number Instr Tx Set Position Parent Equipment Details
Cable (Power)	Rated Current (A) Burial Method Cable Armour Cable Description Cable Formation Cable Insulation Number of Cores in Cable Type Bus/Cable (Cond) Installation Bus/Cable Purpose Conductor Nominal Area (mm2) Conductor Number per Phase Conductor / Cable / Bus Type Diameter (mm) Length (m) Manufacturer of the Bus/Cable Model No Standard Asset Tested to Type of Standard Nominal Operational Volt (kV) Rated Voltage (kV) Year of Manufacture Installed Cable Length (m) Installed Trench Profile Installed Cable Earth Bonding Arrangement
Current Transformer Core	Instr Burden Units Instr Tx Core Avail Ratios Instr Tx Core Burden (Ohms) Instr Tx Core Class Instr Tx Core Output (VA) Instr Tx Core Rating (A) Instr Tx Core Ratio Instr Tx Purpose Manufacturer of Instrument Tx Model No Phase (A,B,C,N, All) Temp for Res Measure (Degrees) Resistance of Asset (Ohms) Serial Number Short Time Current (KA) Short Time Seconds (S) Standard Asset Tested to Type of Standard Thermal Limit (A) Nominal Operational Volt (kV) Rated Voltage (kV) Year of Manufacture Parent Equipment Details
Current Transformer	Instr Tx Purpose Manufacturer of Instrument Tx Model No Phase (A,B,C,N, All) Number of Phases Serial Number Short Time Current (KA) Short Time Seconds (S) Standard Asset Tested to Type of Standard Thermal Limit (A) Nominal Operational Volt (kV) Rated Voltage (kV) Year of Manufacture Parent Equipment

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	Details
Fan	Tx Accessory Capacity (L/min) Tx Accessory Rating UOM Tx Accessory Rating Tx Accessory Speed (RPM) Manufacturer List Accessories Model No Standard Asset Tested to Type of Standard Year of Manufacture Parent Equipment Details
Isolator	Rated Current (A) Manufacturer of Switch Model No Product Serial Number Short Time Current (KA) Short Time Seconds (S) Nominal Operational Volt (kV) Rated Voltage (kV) Year of Manufacture
Link	Rated Current (A) Type of Bushing Manufacturer of Switch Model No Product Short Time Current (KA) Short Time Seconds (S) Nominal Operational Volt (kV) Rated Voltage (kV) Year of Manufacture
Overhead Line	Conductor Type from QESI Standard Conductor Size (mm) Operating Voltage (kV) Span Length (m) Installed % of Net Breaking Load (NBL) Maximum Design Temperature (°C) Designed Wind pressure (kPa)
Pump	Tx Accessory Capacity (L/Min) Tx Accessory Rating Commissioning Date Contract No Manufacturer List Accessories Model No Rating UOM Speed Standard Asset Tested to Type of Standard Temperature Indicator Range Year of Manufacture Parent Equipment Details
Regulator - Power	Conservator Fitting Contract No Fibre Probes Heat Run Data Source * Manufacturer of the Tx Model No Serial Number Standard Asset Tested to Tx Ambient Temp For Run (MVA) Tx Connection Configuration Cooling For Tx 1st Rating Cooling For Tx 2nd Rating Cooling For Tx
	3rd Rating Cooling For Tx 4th Rating Tx Heat Run Base Tx HV Temp Gradient (Degrees) Tx HV Winding Temp Rise (Deg) Tx LV Temp Gradient (Degrees) Tx LV Winding Temp Rise (Deg) 1st Rating of Tx (MVA) 2nd Rating of Tx (MVA) 3rd Rating of Tx (MVA) 4th Rating of Tx (MVA) Tx Reactance (%) Tx Top Oil Temp Rise (Degrees) Tx Winding Resistance (%) Vector Group Primary Voltage (kV) Secondary Voltage (kV) Tertiary Voltage (kV) Year of Manufacture Total Mass (kg) Transport Mass (kg) Tank Mass (kg) Main Tank Oil Volume (L) Year of Manufacture
Tap changer	Rated Current (A) Contract No Manufacture of the Tap changer Model No Number of Phases Serial Number Type of Tap changer Nominal Operational Volt (kV) Rated Voltage (kV) Year of Manufacture

	Parent Equipment Details		(Degrees) Tx HV Winding Temp Rise (Deg) Tx LV Temp Gradient (Degrees) Tx LV Winding Temp Rise (Deg) 1st Rating of Tx (MVA)
Temperature Indicator	Commissioning Date Contract No Manufacturer of Temp Indicator Model No Temperature Indicator Range Temp Indicator Switch Type Temperature Indicator Type Year of Manufacture Commissioning Date Parent Equipment Details		2nd Rating of Tx (MVA) 3rd Rating of Tx (MVA) 4th Rating of Tx (MVA) Tx Reactance (%) Tx Top Oil Temp Rise (Degrees) Tx Winding Resistance (%) Iron Losses (kW) Copper Losses (kW) Vector Group Primary Voltage (kV) Secondary Voltage (kV) Tertiary Voltage (kV) Year of Manufacture Total Mass (kg) Transport Mass (kg) Tank Mass (kg) Main Tank Oil Volume (L) Year of Manufacture
Transformer - Power	Conservator Fitting Contract No Fibre Probes Heat Run Data Source * Manufacturer of the Tx Model No Serial Number Standard Asset Tested to Tx Ambient Temp For Run (MVA) Tx Connection Configuration Cooling For Tx 1st Rating Cooling For Tx 2nd Rating Cooling For Tx 3rd Rating Cooling For Tx 4th Rating Tx Heat Run Base (MVA) Tx HV Temp Gradient		

* Supply Heat Run Test and Loss data for all applicable cooling modes.

For Further Information

Please contact your Project Sponsor.