

Division Procedure: System Control: Authority for Placing Major Electrical Plant/Equipment into Service

CEOP2047

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31 March 2025 – Issue 8
Approved By: Head of System Control
Next review date: March 2028



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1.0 PURPOSE

The intention of this procedure is to confirm that System Control receives written notification of all construction, protection, inspections, testing, and pre-commissioning checks on electrical plant/equipment are completed, prior to placing electrical plant/equipment into service.

This procedure applies to all new major electrical plant/equipment, major electrical plant/equipment that has been out of service more than three months, major electrical plant/equipment that has been removed from in situ and new high voltage distribution electrical plant/equipment.

This does not apply to standby power transformers that are changed over on a rotational basis providing that the transformer has been out of service no longer than 18 months.

This procedure defines responsibilities and the method of transfer of information between the various parties involved in the process of placing electrical plant/equipment into service.

Two forms have been prepared for the transfer of information:

- For major electrical plant/equipment, [System Control: Authority for Placing Major Electrical Plant/Equipment into Service – CEOF6047.10](#).
- For new high voltage distribution electrical plant/equipment, [System Control: Authority for Placing High Voltage Distribution Electrical Plant/Equipment into Service – CEOF6047.20](#).

This procedure applies to the following major electrical plant/equipment - System Control: Authority for Placing Major Electrical Plant/Equipment into Service – CEOF6047.10:

- power transformers within zone substations;
- high voltage circuit breakers;
- reclosers located within zone substations;
- voltage regulators located within zone substations;
- new Sub transmission network feeders, including cables;
- new Distribution network feeders;
- reactive power control plant;
- protection schemes applied to any of the above;
- SCADA control schemes applied to any of the above items of plant;
- HV Instrument transformers;
- HV busbar; and
- frequency injection plant.

This procedure applies to the following high voltage Distribution electrical plant/equipment - System Control: Authority for Placing High Voltage Distribution Electrical Plant/Equipment into Service – CEOF6047.20:

- reclosers;
- ring Main Units (RMUs) with protective devices fitted;
- pad mount substations;
- distribution voltage regulators;
- sectionalises; and
- fuse savers.

1.1 Audience

This procedure is intended for all employees of the Company, including but not limited to executives, managers, staff, contractors, and third-party resources.

2.0 ACTIONS

Each section of System Control: Authority for Placing Major Electrical Plant/Equipment into Service – CEOF6047.10 and System Control: Authority for Placing High Voltage Distribution Electrical Plant/Equipment into Service – CEOF6047.20 must be completed by the responsible officer.

It is the obligation of the responsible officer to confirm that each preceding section is completed before handing the form over to the next responsible officer.

Where a process is not required, the responsible officer must give written cause on the form.

2.1 Completion By Officer Responsible For Construction

Zone - Enter the zone substation name that the electrical plant/equipment is located.

Feeder (CEOF6047.20 only) - Enter the feeder name that the electrical plant/equipment is located on.

Equipment name - List the unique identification name/s of the electrical plant/equipment to be placed in service.

WASP/Project number - Enter the WASP or Project number of the electrical plant/equipment and highlight or circle the type of number.

Network Access Request number - Enter the Network Access Request (NAR) number for the project. If a NAR is not issued for construction, do not complete as this must be completed by the officer responsible for commissioning.

Description of Equipment - Enter a full description of the electrical plant/equipment, under construction or being installed including the type, brand, and rating.

Construction completed - Tick when the works and worksite meeting Essential Energy's Safety and Environmental Standards, are complete.

Equipment serviceable - Tick when the plant and equipment defined above is constructed in accordance with Essential Energy's requirements and is ready for service.

Drawings (CEOF6047.10 only) - For privately owned equipment an operating diagram must be provided to Essential Energy, illustrating key equipment, device numbers, and normal system configuration. For Essential Energy owned electrical plant/equipment, construction drawings must be submitted to relevant parties for updating.

Ready for Service - Tick when the site, works and electrical plant/equipment are ready for service as defined, are labelled in accordance with Essential Energy's requirements and are ready for service. Enter a date and time here.

Signature - The officer responsible for construction must date, sign and print their name when they have satisfied all requirements.



2.2 Completion By Officer Responsible For Testing

Inspection and testing - Tick when all necessary inspections and tests applicable to the described electrical plant/equipment meet results suitable for the placement of the apparatus into service.

SCADA complete - Tick when SCADA is connected, and checks have confirmed it is operational in accordance with Essential Energy requirements and is ready for service. If SCADA is not part of the electrical plant/equipment complete the N/A.

Protection settings confirmed - Tick when the protection settings for the described apparatus are set in accordance with Essential Energy requirements and is ready for service. If protection settings are not confirmed or required, complete the N/A and list the reason.

PSA number or PSA number/s - If protection settings are required for the described apparatus, the officer responsible must list the PSA number/s of the settings applied. If protection settings are not required, list as NIL.

Fuse size (CEOF6047.20 only) - If fuses are fitted for the described apparatus, the officer responsible is to list the size of the fitted fuses. If no fuses are fitted, NIL is to be listed.

Float voltage (CEOF6047.20 only) - This is applicable if the electrical plant/equipment is a voltage regulator. List the float voltage of the regulator, if the electrical plant/equipment is not a voltage regulator, list as NIL.

Remarks - Enter any extra information that would assist or hinder the normal process of the electrical plant/equipment going into service.

Signature - The officer responsible for testing must date, sign and print their name if all requirements have been satisfied.

2.3 Completion By Officer Responsible For Commissioning

Operational staff trained - Tick when appropriate employees have satisfactorily completed training for the defined electrical plant/equipment and those employees have met Essential Energy requirements in accordance with [Branch Procedure: System Control: Authorisation – CEOP2065](#).

Local employees must be trained on the equipment before it is placed into service to allow ready response to any operation requirements for the network.

Project managers must liaise with relevant leaders and system control to nominate appropriate employees that require training on new equipment before it is placed into service.

Compliance with NSW Service and Installation Rules - The officer responsible for commissioning must indicate that the installation complies with the requirements of the NSW Service and Installation Rules, Section 7 – High Voltage Installations.

Electrical Safety Rules available - A copy of the sites electrical safety rules must be provided to Essential Energy.

List staff trained - A list all employees who meet the criteria of Clause 2.3.1 of this procedure must be recorded.

Major incomplete items - Enter all major incomplete items that could influence the normal operation of the defined electrical plant/equipment going into service or other electrical plant/equipment due to it going into service.

Major operational limitations - Enter all major operational limitations that could influence the normal operation of the defined electrical plant/equipment going into service or other electrical plant/equipment due to it going into service.

Secondary system changes (CEOF6047.10 only) - Enter any changes to the protection and control system that will or could affect the operation of the network eg new protection installed or modified, control schemes or SCADA routines.

Signature - The officer responsible for testing must date, sign and print their name if all requirements have been satisfied

2.4 Completion By System Control Engineering/Senior System Controller

Section 2.4 applies only to CEOF6047.10.

Like for like replacement - If the electrical plant/equipment is a like for like, the senior system controller must complete the 'yes' section and section 4.

If the electrical plant/equipment is not a like for like, system control engineering must complete the 'no' section and section 4.

Protection/system configuration checks - Network protection and system configuration checks must be completed to confirm network reliability prior to energisation. Limitations or secondary system changes must be assessed so system security is maintained. Please note any impact on system security or increase in load at risk in PowerOn.

Authority given to place equipment into service - Tick when all clauses and sub clauses from 2.1 to 2.4 for the defined electrical plant/equipment, are satisfactorily completed.

Signature - The system control engineer or senior system operator must date, sign and print their name when all requirements have been satisfied.

2.5 Completion By System Controller

Protection/system configuration checks (CEOF6047.20 only) - Network protection and system configuration checks must be completed to confirm network reliability prior to energisation. Limitations or secondary system changes must be assessed so system security is maintained. Please note any impact on system security or increase in load at risk in PowerOn.

Authority to place equipment into service (CEOF6047.20 only) - Tick when all clauses and sub clauses from 2.1 to 2.5 for the defined electrical plant/equipment, are satisfactorily completed.

PowerOn updated - Tick when the described apparatus has been updated from the description of equipment and the details in PowerOn.

Placed into service - Tick when the defined electrical plant/equipment goes into service and enter the date and time.

Signature - When completed, the system controller must date, sign, and print their name.



2.6 Staged Processing

It is the responsibility of the succeeding officer to confirm all the preceding processes are complete before handing over to the next responsible officer.

If a process is not required, the next responsible officer in the process must provide written cause on the form as to why before proceeding.

2.7 File the Form

The form must be handed to the officer responsible for the start of the next step in the process for safekeeping. This confirms a continuous linking from construction to the completion of the process.

If the form is lost, the officer responsible at the time of loss, is accountable for the completion of a substitute form confirming the exact condition of the previous processes. The author marks the form as "Substitute Form", in that section of the form when it became lost.

The completed form is filed with documentation pertaining to the same equipment in the System Control records.

2.8 Additional Details

If there is insufficient room in a section on the form, mark the relevant section 'PTO' and complete the details on the reverse side identifying the section.

2.9 Prior Completion

If there are insufficient communication facilities at the site of the electrical plant/equipment, the officer responsible can complete the section prior with the following, "subject to verbal confirmation".

The proceeding officer responsible must sign beside the "subject to verbal confirmation" statement and when verbal confirmation is received, update any prefilled data as requested from the preceding officer responsible.

2.10 Submission to System Control

The Officer responsible for Commissioning must submit the form to System Control by email to allow the appropriate System Control representative to approve the commissioning. The email is sent to one of the following two email addresses:

- Southern Control Room - outage.arrangements@essentialenergy.com.au
- Northern Control Room - networkoperations.north@essentialenergy.com.au

If unsure of which email address to send the email to, the Officer responsible for Commissioning can call System Control to confirm.

2.11 Electronic Form Submission

An electronic (eform) version of both [CEOP6047.10](#) and [CEOF6047.20](#) are available on Essential Energy electronic devices via the Field Portal.

Submission of the eform to the relevant control room converts the eform to a PDF and emails the PDF form to the relevant mailbox for completion in System Control.



The eform can be completed by multiple individuals with access to the Field Portal by the *Assign to Employee* function. Submission of the eform can only be completed once all relevant information has been entered.

3.0 AUTHORITIES AND RESPONSIBILITIES

Summarise responsibilities allocated to employees (by job/position title) within the process specified under Actions.

POSITION / TITLE	RESPONSIBILITY
Head of System Control	Has the authority and responsibility for approving the content of this document
System Control Manager	Has the authority and responsibility for updating the document
System Controllers	Have the responsibility to follow the procedure outlined in this document
System Control Engineering	Have the responsibility to follow the procedure outlined in this document

4.0 DEFINITIONS

EDNAR

Electrical Distribution Network Access Register.

Like for Like

Electrical equipment/plant is considered like for like if it is being replaced by equipment/plant of the same rating and the existing circuit wiring can be reconnected.

SCADA

Supervisory Control and Data Acquisition.

5.0 REFERENCES

INTERNAL
Company Policy: Information Classification, Labelling & Handling – CEOP1096.01
Company Procedure: Electrical Safety Rules – CEOP8030
Branch Procedure: System Control: Authorisation – CEOP2065
Branch Form: System Control: Authority for Placing Major Electrical Plant/Equipment into Service – CEOF6047.10
Branch Form: System Control: Authority for Placing High Voltage Distribution Electrical Plant/Equipment into Service – CEOF6047.20



EXTERNAL
<i>'Electricity Supply (Network Management Plan) Regulations 2014'</i>
<i>Code of Practise for Electricity Transmission and Distribution Asset Management</i>
<i>National Energy Retail Rules (NERR)</i>
<i>NSW Service and Installation Rules</i>

6.0 RECORDKEEPING

The table below identifies the types of records relating to the process, their storage location and retention period.

TYPE OF RECORD	STORAGE LOCATION	RETENTION PERIOD
Network Access Request	Electrical Distribution Network Access Register (EDNAR)	Retain minimum of 6 years after action completed, then destroy – GA28 12.4.1

* The following retention periods are subject to change eg if the records are required for legal matters or legislative changes. Before disposal, retention periods should be checked and authorised by the 'Records Management Team'.

7.0 REVISIONS

ISSUE NO.	SECTION	DETAILS OF CHANGES IN THIS REVISION	CHANGE RISK IMPACT?
4	All	Updated template in-line with Essential Energy branding	Low
5	All	Added document scope to ensure only zone sub assets are considered for commissioning. Updated to reflect change to CEOF6047. Redefined the scope.	Low
6	All	Update to reflect changes in scope and purpose and the creation of two CEOF6047 forms and changes to form.	Low
	5	Added 5.9 to allow prior completion and 5.10 for submission to system control details.	Low
7	All	Updated to current template and reformatted. Added section 2.11 Electronic form submission	Low
8	All	Updated template Role naming conventions updated NAR references changed to EDNAR	Low

