

*Southern California Edison*  
*2023-WMPs – 2023-WMPs*

**DATA REQUEST SET Cal Advocates - SCE - 2023 WMP - 09**

**To: Cal Advocates**  
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**Job Title: Manager**  
**Received Date: 4/20/2023**

**Response Date: 4/25/2023**

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**Question 01 :**

Regarding SCE's SCADA underground (UG) switches:

- a) Please explain SCE's operating procedure for operating a SCADA UG switch to energize and de-energize a circuit or circuit segment.
- b) Please provide SCE's written procedures or other documentation related to your response to part (a).
- c) Please explain in detail SCE's operating procedure from start to finish for the following operation: after opening a normally closed switch, the switch is returned to its normally closed position during isolation of equipment or transferring load.
- d) Please explain in detail SCE's operating procedure from start to finish for the following operation: after closing a normally open switch, the switch is returned to its normally open position during isolation of equipment or transferring load.

**Response to Question 01 :**

**CONFIDENTIAL**

**The Attachment(s) Are Marked Confidential In Accordance With Applicable Law and Regulation.  
Basis for Confidentiality In Accompanying Confidentiality Declaration.  
Public Disclosure Restricted.**

*a) Please explain SCE's operating procedure for operating a SCADA UG switch to energize and de-energize a circuit or circuit segment.*

SCE System Operating Bulletin (SOB) 301 General Instructions for Distribution Line Operations provides general instructions to SCE distribution field personnel and Grid Operations Switching Center System Operators that are responsible for all investigating/troubleshooting and switching activities on SCE's distribution system. SOB 301 also provides System Operators with instructions on the operation of Remote-Controlled Switches (RCS) during normal planned operations and during unplanned operations including line section and load restoration switching activities.

Remote controlled switches (RCS) are operated either manually or are placed in an automated function feature. The automation of distribution switches is achieved through the conversion of existing switches either by (1) adding a control panel/motor operator, remote terminal unit (RTU) and radio, or (2) installing new, completely packaged, fully automated switch with load break capabilities.

All RCS devices can be set to operate automatically, manually, or remotely by radio through RTU command. Remote controlled switches may be utilized in a variety of applications. The three common applications are mid-point, parallel (tie-point), and generation RCS

A. Mid-point RCS applications are generally configured to aid in sectionalizing the total circuit load to approximately 50 percent.

B. Paralleling/Tie RCS applications are applied as normally open switches to provide alternate sources of feed to improve restoration times following interruptions or as needed for operations and maintenance.

C. Generation RCS (RCSG) applications are applied as dedicated sectionalizing points for specific generation facilities. The generation RCS or remote-controlled switch for generation (RCSG) applications have the same operation and maintenance requirements as other RCS applications. Remote controlled switches may also be applied at various locations on a circuit to provide operational flexibility based on individual circuit requirements.

Some distribution circuits are equipped with RCS that allow the circuits to be automatically sectionalized after relaying to lockout at the source station. Additionally, automated Remote-Control Switch for Generation (RCSG) that connects customer generator projects to SCE circuits will open if the circuit is deenergized. To make automatic circuit sectionalization possible, circuits are designed to include these types of automated switches:

A. Mid-point RCS or RCSG, which are normally closed, will open on the loss of potential after a predetermined time frame.

B. Paralleling/Tie RCS, which are normally open, but may be automatically closed by Tie Device Restoration Logic (TDRL) controls after a predetermined time frame.

*b) Please provide SCE's written procedures or other documentation related to your response to part (a).*

Please see the attachment: System Operating Bulletin 301 – General Instructions for Distribution Line Operations.

This attachment has been marked as confidential. In addition, SCE has removed employee names.

*c) Please explain in detail SCE's operating procedure from start to finish for the following operation: after opening a normally closed switch, the switch is returned to its normally closed position during isolation of equipment or transferring load.*

During switching operations, the System Operator will:

- Disable all automatic reclosing on the involved circuit.
- Isolate faulted equipment.
- Close normally closed RCS switch energizing previously isolated section of line potentially

restoring interrupted customer load.

- Take load readings to validate proper load distribution to ensure no abnormal load readings.
- Enable any automated reclosing features as required.

Once the faulty piece of equipment has been successfully isolated away from the circuit, the normally closed RCS switch may then be closed energizing any previously interrupted section of line via SCADA control from the Switching Center System Operator.

*d) Please explain in detail SCE's operating procedure from start to finish for the following operation: after closing a normally open switch, the switch is returned to its normally open position during isolation of equipment or transferring load.*

During switching operations System Operator will:

- Disable all automatic reclosing on any involved circuits.
- Remove SCADA Control inhibit tags.
- Close previously open (normally closed switch) switch, making a parallel.
- Open previously closed (normally open switch) breaking parallel, returning the two circuits back to normal.
- Take load readings to validate proper load distribution to ensure no abnormal load readings.
- Enable any automated reclosing features as required.