



TP CENTRAL ODISHA DISTRIBUTION LIMITED

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Standard Operating Procedure (SOP) for Operations & Issue of PTW for
33kV Feeders emanating from OPTCL Grid Sub-Station or Primary Substation under
Central Power System Control Centre (CPSCC)

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Tushar Kulkarni

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Chintamani Chitnis

Issued By

Niranjan Rout



TP CENTRAL ODISHA
DISTRIBUTION LIMITED

(A Joint Venture of Tata Power and Government of Odisha)

Standard Operating Procedure (SOP)

For

Operations & Issue of PTW for 33kV Feeders
emanating from OPTCL Grid Sub-Station or Primary
Substation under
Central Power System Control Centre (CPSCC)

POWER SYSTEM CONTROL CENTER

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1. Scope.

This document includes Standard Operating Procedure (SOP) for Operation and Communication between PSCC, OPTCL Grid Substation authorized working party and Primary sub-station operators for issuing Permit-To-Work (PTW) on 33 kV feeders and other associated 33kV network elements in the power distribution network emanating from OPTCL Grid Sub-stations under Power System Control Center (PSCC).

Central Power System Control Center (CPSCC) established 24 x 7 Operations for whole of 33 kV Network of the TPCODL license area.

2. Permit-To-Work Guide lines.

- 2.1. Any work carried out on the 33kV distribution network and any associated 33kV network element requires Permit-To-Work (PTW).
- 2.2. The PTW is issued from Power System Control Center using Suraksha Kavach 2.0 web application.
- 2.3. PTW issued only to the authorized personnel who have been given permission by appropriate authority (i.e., Executive Engineer) of that particular area in Suraksha Kavach 2.0 web application using working party approval procedure.
- 2.4. The authorized personnel should be Executive Engineer/SDO/EMR
- 2.5. The authorized personnel i.e., the PTW holder should have a valid HT Supervisory license to avail Permit-To-Work on 33kV electrical network.

3. Elaboration of Operating Procedure of Remote Operated PSS and Un-manned PSS

3.1 Full feeder shutdown or outage and issuing PTW

3.1.1 Outage of 33kV feeder emanating from GSS:

1. The authorized personnel calls PSCC requesting for outage and shares the following details:
 - a) Name of the Authorized person who is asking for PTW.
 - b) Grid Substation/ Primary Substation/ Feeder /Feeder Section/Equipment where work is to be done.
 - c) Brief Work Description.
 - d) Information regarding the isolation of back feeding if any.

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- e) Any requirements for feeders in close vicinity that also need to be turned off for this work.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

2. PSCC checks if the shutdown is Planned (PSD) or Emergency (ESD).
 - a) In case of PSD, it should be approved by PSCC and Executive Engineer of the respective area and available in Suraksha Kavach.
 - b) If it is not approved and required to be availed, then it needs to be approved by Executive Engineer and issued as Unplanned Shutdown (UPSD).
 - c) In case of Emergency, the PSCC creates the entry in Suraksha Kavach.
3. PSCC, after creating the entry in Suraksha Kavach, calls Primary Substation (PSS) Operator/ Mobile Operating Crew (MOC) for isolation at PSS. Following procedure is followed,
 - a) PSCC will check for possible load change over to alternate source and will execute by opening the breaker remotely of the incoming breaker remotely in SCADA system and Closing the breaker of alternate source
 - b) PSCC will inform Opening Reference Number to PSS operator/MOC for further isolation.
 - c) Once breaker opened by PSCC, PSS operator/MOC has to confirm the same (i.e. breaker shows open indication and load current drops to zero).
 - d) PSS operator/MOC opens Line Isolator and Bus Isolator of the particular feeder and confirms it to PSCC after all the three blades are in open condition confirming visually.
 - e) PSCC will create unique code no. with a message sending to the OPTCL Authorities for "No Back feeding Confirmation".

Note:

- i. *In case of indoor switchgear, when there is no isolators are available for the particular feeder PSS operator/MOC will rack out the respective circuit breaker for complete isolation.*
- ii. *In case of Gas Insulated switchgear, PSS operator/MOC will open the dis-connector switch for isolation.*
- iii. *In case of Ring Main Unit, PSS operator/MOC will open LBS or dis-connector for isolation.*

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4. OPTCL Authorities shall handtrip, isolate and earth the feeder at GSS and shall share "Line Clearance" with to TPCODL Authorized personnel.
TPCODL Authorized personnel share the Line Clearance no. received from GSS Authorities with PSCC.
PSCC will record the same in Suraksha Kavach.
5. PSCC get the confirmation from authorized personnel for the availability of safety equipments such as neon tester, discharge rod, Ladder & PPEs.
6. PSCC calls Primary Substation (PSS) Operator/ Mobile Operating Crew (MOC) to complete the isolation at PSS,
 - a) PSS operator/MOC will now closes Earth Switch or provide local portable grounding.
 - b) PSS Operator/MOC will put the Do Not Operate tags on the Breaker Panel and Feeder isolators.
 - c) PSS Operator/MOC will give a return opening reference no. confirming the above isolation of that particular feeder, which PSCC will record it in the Suraksha Kavach.
7. PSCC will now take the authorized personnel on conference call along with PSS operator/MOC and get confirmation of following safety checks before creating the PTW,
 - I. Zero Voltage Confirmed.
 - II. No Live Line Crossing near working area.
 - III. All HT & LT back-feeding points identified and isolated.
8. PSCC then generates PTW number in Suraksha Kavach (which is randomly generated unique number by system).
9. PSCC will put PTW Tag on SCADA system the particular Circuit Breaker of the feeder against which the PTW is generated.
10. PSCC shares generated PTW number with authorized personnel and asking him to ensure proper safety zone before executing work.
11. In case of multiple PTWs on same feeder -

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- a) In the event of another outage requirement on the same feeder by different authorized personnel, PSCC will follow all the points mentioned in the section 3.1.1 except for isolations, which is already in place for the particular feeder.
- b) PSCC then share this information of multiple PTWs with other PTW holders for information.

3.1.2 Normalization of 33kV feeder emanating from GSS after completion of work

1. The authorized personnel who is the PTW holder calls PSCC for return of the same and shares the following details
 - a) Issued PTW number.
 - b) GSS/PSS/Feeder /Feeder Section/Equipment where work is completed.
 - c) Location where work execution is completed.
 - d) Name of the Authorized person who has taken PTW.
 - e) All portable grounds, tools and materials removed and all men at work are moved out of the working perimeter.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)
2. PSCC checks the record against PTW number shared and validates all the information received in Suraksha Kavach and SCADA (for Tags).
3. PSCC checks for any other pending PTWs on the same feeder. If yes then PSCC will await for call from other PTW holders for closure of PTW.
4. PSCC will repeat from Point no 1 to 3 of section 3.1.2 until all the PTWs with same isolation called for normalization of the particular feeder.
5. PSCC calls PSS Operator/MOC and shares Closing Reference Number to do the following operations:
 - a) PSS Operator will remove the PTW tags of the Breaker Panel and Feeder AB Switch/GOD.
 - b) PSS operator will open the respective Earth Switch /remove local portable groundings.

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c) PSS operator will close the Line and Bus Isolators and visually confirm all three blades are connected properly.

d) PSS Operator/MOC will give a return closing reference no. confirming the all isolation normalized of that particular feeder, which PSSCC will record in the Suraksha Kavach.

Note:

- i. In case of indoor switchgear, PSS operator/MOC will rack in the respective circuit breaker*
- ii. In case of Gas Insulated switchgear, PSS operator/MOC will close the dis-connector switch*
- iii. In case of Ring Main Unit, PSS operator/MOC will close LBS or dis-connector*

6. PSSCC will inform the authorized personnel about the normalization. Authorized personnel will return the "Line Clearance" to GSS authorities for normalization at GSS. OPTCL authorities will open earth switch and close isolator.
7. PTW holder will call PSSCC and after confirmation, charge the particular feeder from GSS
8. PSSCC will now take all PTW holders on conference call along with PSS operator/MOC and after confirmation, will remove the TAG in SCADA from the respective circuit breaker. Then the breaker will be closed remotely from SCADA.
9. PSSCC will close the PTWs on that feeder in Suraksha Kavach.
10. PSSCC will confirm PTW holders and PSS operator/MOC regarding the restoration/normalization of the feeder in case feeder charged ok and shows healthy electrical parameter.
11. In case of any abnormalities, the authorized person will once again have to take PTW as per requirement for execution of further work.

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3.1.3 Outage of 33kV feeder emanating from PSS:

1. The authorized personnel calls PSCC requesting for outage and shares the following details:
 - a) Name of the Authorized person who is asking for PTW.
 - b) PSS/ Feeder /Feeder Section/Equipment where work is to be done.
 - c) Brief Work Description.
 - d) Information regarding the isolation of back feeding if any.
 - e) Any requirements for feeders in close vicinity that also need to be turned off for this work.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

2. PSCC checks if the shutdown is Planned (PSD) or Emergency (ESD).
 - a) In case of PSD, it should be approved by PSCC and Executive Engineer of the respective area and available in Suraksha Kavach.
 - b) If it is not approved and required to be availed, then it needs to be approved by Executive Engineer and issued as Unplanned Shutdown (UPSD).
 - c) In case of Emergency, the PSCC creates the entry in Suraksha Kavach.
3. PSCC gets the confirmation from authorized personnel for the availability of safety equipments such as neon tester, discharge rod, Ladder & PPEs.
4. PSCC after creating the entry in Suraksha Kavach, calls PSS Operator/MOC for arranging the outage. Following procedure is to be followed,
 - a) PSCC will OPEN the breaker remotely in SCADA system and inform Opening Reference Number to PSS operator/MOC for further isolation.
 - b) Once breaker opened by PSCC, PSS operator/MOC has to confirm the same (i.e. breaker shows open indication and load current drops to zero).
 - c) PSS operator/MOC opens Line and Bus side isolators of the particular feeder and confirms it to PSCC after all the three blades are in open condition confirming visually.
 - d) PSS operator/MOC then closes Earth Switch or provide local portable grounding.
 - e) PSS Operator/MOC will put the Do Not Operate tags on the Breaker Panel and Feeder AB Switch/GOD.

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- f) PSS Operator/MOC will give a return opening reference no. confirming the above isolation of that particular feeder, which PSCC will record it in the Suraksha Kavach.

Note:

- i. *In case of indoor switchgear, when there is no isolators are available for the particular feeder PSS operator/MOC will rack out the respective circuit breaker for complete isolation.*
- ii. *In case of Gas Insulated switchgear, PSS operator/MOC will open the disconnector switch for isolation.*
- iii. *In case of Ring Main Unit, PSS operator/MOC will open LBS or dis-connector for isolation.*

5. PSCC will now take the authorized personnel on conference call along with PSS operator/MOC and get confirmation of following safety checks before creating the PTW,
 - I. Zero Voltage Confirmed.
 - II. No Live Line Crossing near working area.
 - III. All HT & LT back-feeding points identified and isolated.
6. PSCC then generates PTW number in Suraksha Kavach (which is randomly generated unique number by system).
7. PSCC will put PTW Tag on SCADA system the particular Circuit Breaker of the feeder against which the PTW is generated.
8. PSCC shares generated PTW number with authorized personnel who ensures proper safety zone before executing work.
9. In case of multiple PTWs on same feeder -
 - c) In the event of another outage requirement on the same feeder by different authorized personnel, PSCC will follow all the points mentioned in the section 3.1.3 except for isolations, which is already in place for the particular feeder.
 - d) PSCC then share this information of multiple PTWs with other PTW holders for information.

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3.1.4 Normalization of 33kV feeder from PSS after completion of work

1. The authorized personnel who is the PTW holder calls PSCC for return of the same and shares the following details
 - a) Issued PTW number.
 - b) PSS/Feeder /Feeder Section/Equipment where work is completed.
 - c) Location where work execution is completed.
 - d) Name of the Authorized person who has taken PTW.
 - e) All portable grounds, tools and materials are removed and all men at work are moved out of the working perimeter.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

2. PSCC checks the record against PTW number shared and validates all the information received in Suraksha Kavach and SCADA (for Tags).
3. PSCC checks for any other pending PTWs on the same feeder. If yes, then PSCC will await for call from other PTW holders for closure of PTW.
4. PSCC will repeat from Point no 1 to 3 of section 3.1.4 until all the PTWs with same isolation called for normalization of the particular feeder.
5. PSCC calls PSS Operator/MOC and shares Closing Reference Number to do the following operations:
 - a) PSS Operator/MOC will remove the PTW tags of the Breaker Panel and Feeder isolators.
 - b) PSS operator/MOC will open the respective Earth Switch /remove local portable groundings.
 - c) PSS operator/MOC will close the line and bus side isolators and visually confirm all three blades are connected properly.
 - d) PSS Operator/MOC will give a return closing reference no. confirming the all isolation is normalized of that particular feeder, which PSCC will record it in the Suraksha Kavach.

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Note:

- i. In case of indoor switchgear, PSS operator/MOC will rack in the respective circuit breaker*
- ii. In case of Gas Insulated switchgear, PSS operator/MOC will close the disconnector switch*
- iii. In case of Ring Main Unit, PSS operator/MOC will close LBS or disconnector*

6. PSCC will now take all PTW holders on conference call along with PSS operator/MOC and after confirmation, will remove the TAG in SCADA from the respective circuit breaker. Then he will CLOSE the breaker remotely from SCADA.
7. PSCC will close the PTWs on that feeder in Suraksha Kavach.
8. PSCC will confirm PTW holders and PSS operator/MOC regarding the restoration/normalization of the feeder in case feeder is charged ok and shows healthy electrical parameters.
9. In case of any abnormalities, the authorized person will once again have to take PTW as per requirement for execution of further work.

3.2 Part feeder shutdown or outage and issuing PTW.

3.2.1 Part Section isolation by opening Line AB Switch/ DT AB Switch on feeder emanating from GSS

1. The authorized personnel calls PSCC requesting for outage and shares the following details:
 - a) Name of the Authorized person who is asking for PTW.
 - b) GSS/Feeder /Feeder Section/Equipment where work is to be done.
 - c) Brief Work Description.
 - d) Information regarding the isolation of back feeding if any.
 - e) Any requirements for feeders in close vicinity that also need to be turned off for this work.
 - f) Information of the isolation point (Name & Location of Line AB Switch/RMU/DT AB Switch).

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

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2. PSCC checks if the shutdown is Planned (PSD) or Emergency (ESD).
 - a) In case of PSD, it should be approved by PSCC and Executive Engineer of the respective area and available in Suraksha Kavach.
 - b) If it is not approved and required to be availed, then it needs to be approved by Executive Engineer and issued as Unplanned Shutdown (UPSD).
 - c) In case of Emergency, the PSCC creates the entry in Suraksha Kavach.

3. PSCC get the confirmation from authorized personnel for the availability of safety equipments such as neon tester, discharge rod, Ladder & PPEs.

4. PSCC after creating the entry in Suraksha Kavach, asks authorized personnel if the concerned feeder breaker needs to be opened to isolate on load zero.
 - a) In case of Line AB Switch/GOD or DT AB Switch/GOD isolation on dead feeder
 - i. PSCC will send message to OPTCL authority of the particular GSS requesting handtrip with a unique code no.
 - ii. PSCC along with Authorized personnel will call OPTCL GSS providing the message no. for handtrip
 - iii. OPTCL GSS authority will OPEN the respective breaker confirming load zero
 - iv. Authorized personnel will check and confirm with neon tester that the feeder is dead.
 - v. Authorized personnel will open the AB Switch/GOD.
 - vi. Authorized personnel will confirm against visual inspection that all three blades are clearly opened
 - vii. The feeder will be now charged by OPTCL GSS authority and confirm the charging of the feeder to authorized personnel. The call with OPTCL will be disconnected.
 - viii. Authorised personnel share opening reference no. against the isolation and this will be recorded in Suraksha Kavach confirming the section is isolated.

 - b) In case of DT ABS/GOD isolation on No load
 - i. Authorized personnel will disconnect the load
 - ii. DT ABS/GOD will be opened on no load condition.

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iii. Authorized personnel will confirm against visual inspection that all three blades are clearly opened and share opening reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is isolated.

c) In case of RMU isolation on load

- i. Authorized personnel will hand trip RMU Circuit breaker or open RMU Load break Switch
- ii. Authorized personnel will confirm once isolation is done and share opening reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is isolated.

5. PSCC gets confirmation of the following safety checks from authorized personnel before creating the PTW,

- i. Zero Voltage Confirmed.
- ii. No Live Line Crossing near the working area.
- iii. All HT & LT back-feeding points were identified and isolated.

6. PSCC then generates PTW number in Suraksha Kavach (which is randomly generated unique number by system).

7. PSCC then shares generated PTW number with authorized personnel and asking him to ensure proper safety zone before executing work.

8. In case of multiple PTWs on section of feeder/DT -

- a) In the event of another outage requirement on the same feeder by different authorized personnel, PSCC will follow all the points mentioned in the section 3.2.1 except for isolations, which is already in place for the particular feeder section/DT.
- b) PSCC then share this information of multiple PTWs with other PTW holders for information.

3.2.2 Normalization by Closing Line AB Switch/ DT AB Switch on feeder emanating from GSS

1. The authorized personnel who is the PTW holder calls PSCC for return of the same and shares the following details.

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- a) Issued PTW number.
- b) GSS/Feeder /Feeder Section/Equipment where work is completed.
- c) Location where work execution is completed.
- d) Name of the Authorized person who has taken PTW.
- e) All portable grounds, tools and materials are removed and all men at work are moved out of the working perimeter.
- f) Information of the isolation point (Name & Location of Line AB Switch/RMU/DT AB Switch).

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

2. PSCC checks the record against PTW number shared and validates all the information received in Suraksha Kavach and SCADA (for Tags).
3. PSCC checks for any other pending PTWs on the same feeder. If yes then PSCC will await for call from other PTW holders for closure of PTW.
4. PSCC will repeat from Point no. 1 to 3 of section 3.2.2 until all the PTWs with same isolation called for normalization of the particular feeder.
5. PSCC will now take all PTW holders on conference call and asks if the concerned feeder breaker needs to be opened to normalize the isolation on load zero
 - a) In case of Line AB Switch/GOD or DT AB Switch/GOD normalization on dead feeder
 - i. PSCC will send message to OPTCL authority of the particular GSS requesting handtrip with a unique code no.
 - ii. PSCC along with Authorized personnel will call OPTCL GSS providing the message no. for handtrip
 - iii. OPTCL GSS authority will OPEN the respective breaker confirming load zero
 - iv. Authorized personnel will check and confirm with neon tester that the feeder is dead.
 - v. Authorized personnel will close the AB Switch/GOD.
 - vi. Authorized personnel will confirm against visual inspection that all three blades clearly engaged

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- vii. The feeder will be now charged by OPTCL GSS authority and confirm the charging of the feeder to authorized personnel. The call with OPTCL will be disconnected.
- viii. Authorised personnel share closing reference no. confirming the charging of ABS and this will be recorded in Suraksha Kavach

b) In case of DT ABS/GOD normalization on no load

- i. DT ABS/GOD will be closed on no load condition.
- ii. Authorized personnel will add the load to the DT
- iii. Authorized personnel will confirm closing reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is charged.

c) In case of RMU normalization on load

- i. Authorized personnel will CLOSE RMU Circuit breaker or RMU Load break Switch.
- ii. Authorized personnel will confirm closing reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is charged.

- 6. PSCC will close the PTWs on that feeder in Suraksha Kavach.
- 7. PSCC will confirm PTW holders regarding the restoration/normalization of the feeder section/DT in case charged ok and shows healthy electrical parameter.
- 8. In case of any abnormalities, the authorized person will once again have to take PTW as per requirement for execution of further work.

3.2.3 Part Section isolation by opening Line AB Switch/ DT AB Switch of feeder emanating from PSS

- 1. The authorized personnel calls PSCC requesting for outage and shares the following details:
 - a) Name of the Authorized person who is asking for PTW.
 - b) PSS/Feeder /Feeder Section/Equipment where work is to be done.
 - c) Brief Work Description.
 - d) Information regarding the isolation of back feeding if any.

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- e) Any requirements for feeders in close vicinity that also need to be turned off for this work.
- f) Information of the isolation point (Name & Location of Line AB Switch/RMU/DT AB Switch).

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

- 2. PSCC checks if the shutdown is Planned (PSD) or Emergency (ESD).
 - a) In case of PSD, it should be approved by PSCC and Executive Engineer of the respective area and available in Suraksha Kavach.
 - b) If it is not approved and required to be averted, then it needs to be approved by Executive Engineer and issued as Unplanned Shutdown (UPSD).
 - c) In case of Emergency, the PSCC creates the entry in Suraksha Kavach.
- 3. PSCC get confirmation from authorized personnel for the availability of safety equipments such as neon tester, discharge rod, Ladder & PPEs.
- 4. PSCC after creating the entry in Suraksha Kavach, asks authorized personnel if the concerned feeder breaker needs to be opened to isolate on load zero.
 - a) In case of Line AB Switch/GOD or DT AB Switch/GOD isolation on dead feeder
 - i. PSCC will OPEN the respective breaker remotely in SCADA and share Opening Reference number after confirmation of load zero.
 - ii. Authorized personnel will check and confirm with neon tester that the feeder is dead.
 - iii. Authorized personnel will open the AB Switch/GOD.
 - iv. Authorized personnel will confirm against visual inspection that all three blades are clearly opened and share opening reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is isolated.
 - v. The feeder will be now charged remotely on SCADA and confirm the charging of the feeder to authorized personnel.
 - b) In case of DT ABS/GOD isolation on No load
 - i. Authorized personnel will isolate the load
 - ii. DT ABS/GOD will be opened on no load condition.

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- iii. Authorized personnel will confirm against visual inspection that all three blades are clearly opened and share opening reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is isolated.
 - c) In case of RMU isolation on load
 - i. Authorized personnel will hand trip RMU Circuit breaker or open RMU Load break Switch
 - ii. Authorized personnel will confirm once isolation is done and share opening reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is isolated.
- 5. PSCC get confirmation of following safety checks from authorized personnel before creating the PTW,
 - i. Zero Voltage Confirmed.
 - ii. No Live Line Crossing near working area.
 - iii. All HT & LT back-feeding points identified and isolated.
- 6. PSCC then generates PTW number in Suraksha Kavach (which is randomly generated unique number by system).
- 7. PSCC will put PTW Tag on SCADA system the particular Circuit Breaker of the feeder against which the PTW is generated.
- 8. PSCC then shares generated PTW number with authorized personnel and asking him to ensure proper safety zone before executing work.
- 9. In case of multiple PTWs on section of feeder/DT -
 - a) In the event of another outage requirement on the same feeder by different authorized personnel, PSCC will follow all the points mentioned in the section 3.2.3 except for isolations, which is already in place for the particular feeder section/DT.
 - b) PSCC then share this information of multiple PTWs with other PTW holders for information.

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3.2.4 Normalization by Closing Line AB Switch/ DT AB Switch of feeder emanating from PSS

1. The authorized personnel who is the PTW holder calls PSCC for return of the same and shares the following details.
 - a) Issued PTW number.
 - b) PSS/Feeder /Feeder Section/Equipment where work is completed.
 - c) Location where work execution is completed.
 - d) Name of the Authorized person who has taken PTW.
 - e) All portable grounds, tools and materials are removed and all men at work are moved out of the working perimeter.
 - f) Information of the isolation point (Name & Location of Line AB Switch/RMU/DT AB Switch).

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

2. PSCC checks the record against PTW number shared and validates all the information received in Suraksha Kavach and SCADA (for Tags).
3. PSCC checks for any other pending PTWs on the same feeder. If yes then PSCC will await for call from other PTW holders for closure of PTW.
4. PSCC will repeat from Point no. 1 to 3 of section 3.2.4 until all the PTWs with same isolation called for normalization of the particular feeder.
5. PSCC will now take all PTW holders on conference call and asks if the concerned feeder breaker needs to be opened to normalize the isolation on load zero
 - a) In case of Line AB Switch/GOD or DT AB Switch/GOD normalization on dead feeder
 - i. PSCC will OPEN the respective breaker remotely in SCADA and share Closing Reference number after confirmation of load zero.
 - ii. Authorized personnel will check and confirm with neon tester that the feeder is dead.
 - iii. Authorized personnel will close the AB Switch/GOD.

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- iv. Authorized personnel will confirm against visual inspection that all three blades clearly engaged and share closing reference no. of his own. This will be recorded in Suraksha Kavach.
- v. The feeder will be now charged remotely on SCADA and confirm the charging of the feeder to PTW holder.

b) In case of DT ABS/GOD normalization on no load

- i. DT ABS/GOD will be closed on no load condition.
- ii. Authorized personnel will take the load and confirm
- iii. Authorized personnel will confirm closing reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is charged.

c) In case of RMU normalization on load

- i. Authorized personnel will CLOSE RMU Circuit breaker or RMU Load break Switch
- ii. Authorized personnel will confirm closing reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is charged.

- 6. PSCC will remove the TAG in SCADA from the respective circuit breaker.
- 7. PSCC will close the PTWs on that feeder in Suraksha Kavach.
- 8. PSCC will confirm PTW holders regarding the restoration/normalization of the feeder section/DT in case charged ok and shows healthy electrical parameter.
- 9. In case of any abnormalities, the authorized person will once again have to take PTW as per requirement for execution of further work.

3.3 Outage for work inside PSS and issuing PTW.

3.3.1 Issuing PTW for any work inside PSS.

- 1. The authorized personnel calls PSCC requesting for outage and shares the following details:
 - a) Name of the Authorized person who is asking for PTW.
 - b) PSS/Feeder /Feeder Section/Equipment where work is to be done.
 - c) Brief Work Description.

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- d) Information regarding the isolation of back feeding if any.
- e) Any requirements for feeders in close vicinity that also need to be turned off for this work.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

2. PSCC checks if the shutdown is Planned (PSD) or Emergency (ESD).
 - a) In case of PSD, it should be approved by PSCC and Executive Engineer of the respective area and available in Suraksha Kavach.
 - b) If it is not approved and required to be availed, then it needs to be approved by Executive Engineer and issued as Unplanned Shutdown (UPSD).
 - c) In case of Emergency, the PSCC creates the entry in Suraksha Kavach.
3. PSCC get the confirmation from authorized personnel for the availability of safety equipments such as neon tester, discharge rod, Ladder & PPEs.
4. PSCC after creating the entry in Suraksha Kavach, calls PSS Operator/MOC for arranging the outage. Following procedure is to be followed,
 - a) PSCC will OPEN the upstream and downstream breakers remotely in SCADA system and inform Opening Reference Number to PSS operator/MOC for further isolation.
 - b) Once breaker opened by PSCC PSS operator/MOC has to confirm the same (i.e. breaker shows open indication and load current drops to zero).
 - c) PSS operator/MOC opens upstream and downstream Isolator/AB Switch/ GOD of the particular equipment or racks out the upstream and downstream circuit breakers in case of indoor switchgear.
 - d) PSS operator/MOC then confirms it to PSCC after all the three blades are in open confirming visually or CB racked out condition.
 - e) PSS operator/MOC then closes Earth Switch or provides local portable grounding.
 - f) PSS Operator/MOC will put the Do Not Operate tags on the Breaker Panels and Isolator/AB Switch/GOD.
 - g) PSS Operator/MOC will give a return opening reference no. confirming the above isolation of that particular equipment, which PSCC will record it in the Suraksha Kavach.

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5. PSCC will now take the authorized personnel on conference call along with PSS operator/MOC and get confirmation of the following safety checks before creating the PTW,
 - i. Zero Voltage Confirmed.
 - ii. No Live Line Crossing near the working area.
 - iii. All back-feeding points identified and isolated.
6. PSCC then generates PTW number in Suraksha Kavach (which is randomly generated unique number by system).
7. PSCC will put PTW Tag on SCADA system the particular Circuit Breaker of the feeder against which the PTW is generated.
8. PSCC then shares generated PTW number with authorized personnel and asking him to ensure proper safety zone before executing work.
9. In case of multiple PTWs on same feeder -
 - a) In the event of another outage requirement on the same feeder by different authorized personnel, PSCC will follow all the points mentioned in the section 3.3.1 except for isolations, which is already in place for the particular feeder.
 - b) PSCC then share this information of multiple PTWs with other PTW holders for information.

3.3.2 Normalization of system after work inside PSS

1. The authorized personnel who is the PTW holder calls PSCC for return of the same and shares the following details
 - a) PTW number that was issued.
 - b) PSS/Feeder /Feeder Section/Equipment where work is completed.
 - c) Location where work execution is completed.
 - d) Name of the Authorized person who has taken PTW.
 - e) All portable grounds, tools and materials are removed and all men at work are moved out of the working perimeter.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

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2. PSCC checks the record against PTW number shared and validates all the information received in Suraksha Kavach and SCADA (for Tags).
3. PSCC checks for any other pending PTWs on the same feeder. If yes then PSCC will await for call from other PTW holders for closure of PTW.
4. PSCC will repeat from Point no 1 to 3 of section 3.3.2 until all the PTWs with same isolation called for normalization of the particular feeder.
5. PSCC calls PSS Operator/MOC and shares Closing Reference Number to do the following operations:
 - a) PSS Operator/MOC will remove the PTW tags of the upstream and downstream Breaker Panel and Isolator/AB Switch/GOD.
 - b) PSS operator/MOC will open the respective Earth Switch /remove local portable groundings.
 - c) PSS operator/MOC will close the upstream and downstream Isolator/AB Switch/ GOD and visually confirm all three blades are connected properly or will rack in upstream and downstream circuit breakers in case of indoor switchgear.
 - d) PSS Operator/MOC will give a return closing reference no. confirming that all isolation is normalized of that particular feeder, which PSCC will record in the Suraksha Kavach.
6. PSCC will now take all PTW holders on conference call along with PSS operator/MOC and after confirmation, will remove the TAG in SCADA from the respective circuit breaker. Then he will CLOSE the breaker remotely from SCADA. The closing of the Breakers should be done in sequence to the direction of the power flow (i.e. 33kV I/C to 33kV OG).
7. PSCC will close the PTWs on that feeder in Suraksha Kavach.
8. PSCC will confirm PTW holders and PSS operator/MOC regarding the restoration/normalization of the feeder in case the feeder is charged ok and shows healthy electrical parameters.
9. PSCC will confirm the authorized person and the PSS operator/MOC regarding the restoration/normalization of the PTW zone.

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10. In case of any abnormalities, the authorized person will once again have to take PTW as per requirement for execution of further work.

3.4 Test Charging of 33kV Feeder tripped on fault,

3.4.1 Feeders emanating from GSS

This includes the 33kV feeders emanating from OPTCL Grid Substation,

1. In case of fault trip of any 33kV feeder, PSCC gets an alarm in SCADA or OPTCL GSS authority calls PSCC to inform about the tripping
2. OPTCL GSS authority shall provide the details of the fault current
 - a. In case of Single phase to Earth fault, with fault current less than 8kA – GSS will test charge once after 5 mins
 - b. In case of Single phase to Earth fault, with fault current greater than 8kA – GSS will test charge only after proof of reason leading to fault or after providing IR testing
 - c. In case of Phase to Phase fault, with fault current less than 4kA – GSS will test charge once after 5 mins
 - d. In case of Phase to Phase fault, with fault current greater than 4kA – GSS will test charge only after proof of reason leading to fault or after providing IR testing
3. The load will be changed over to the alternate source
4. On getting clearance for charging from respective authorized personnel, PSCC shall send a message with a unique code requesting OPTCL GSS authority to charge the feeder along with the reason of the fault
5. In case of any delay in charging due to any abnormality message received or failed test charge (feeder declared to be under breakdown)
6. In case of any fault found or for attending the full feeder/part feeder breakdown, PTW to be availed by the authorized person as per the process laid down in Section-1/2 above
7. Any breakdown will be attended by taking the PTW from PSCC by authorized personal only.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

3.4.2 Feeders emanating from PSS

This includes the 33kV feeders emanating from Substation, 33kV Incomers and 33kV PTR breakers,

1. In case of fault trip of any 33kV feeder, PSCC gets an alarm in SCADA.
2. The load will be changed over to the alternate source

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3. PSSC then checks the type of fault and calls the respective PSS Operator/MOC to confirm for any abnormal condition visible in the substation
4. On getting clearance for charging from respective authorized personnel, PSSC will CLOSE the breaker remotely and communicate to both Authorized personnel and PSS Operator/MOC.
5. In case of any delay in charging due to any abnormality message received or failed test charge (feeder declared to be under breakdown)
6. In case of any fault found or for attending the full feeder/part feeder breakdown, PTW is to be availed by the authorized person as per the process laid down in Section-1/2 above
7. Any breakdown will be attended by taking the PTW from PSSC by authorized personal only.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO)

3.5 Hand Trip required for Emergency Condition/ Situation.

3.5.1 Feeders emanating from GSS

During the emergency condition/situation which includes

- a) Fire Hazard
 - b) circumstance which might lead to risk of life of Human/Animal/Property
1. On receipt of information, PSSC will call OPTCL GSS Authority to hand trip immediately.
 2. PSSC will inform the authorized personnel about the status of the feeder
 3. PSSC will change the load to the alternate source
 4. Against the receipt of clearance from authorized personnel, PSSC will send a message with unique code to OPTCL GSS Authority requesting to charge the feeder with reason of emergency
 5. Any breakdown will be attended by taking the PTW from PSSC by authorized personal only

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO)

3.5.2 Feeders emanating from PSS

During the emergency condition/situation which includes

- a) Fire Hazard
 - b) circumstance which might lead to the risk of life of Human/Animal/Property
1. On receipt of information the feeder shall be hand-tripped immediately either by PSS operator or PSSC Engineer.
 2. Authorized personnel will call PSSC to inform the details of the information and PSSC will record the information as Tag in SCADA and as entry in Suraksha Kavach.
 3. The charging of the feeder is not to be done by PSS operator.

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4. Against the receipt of clearance from authorized personnel, PSCC will charge the feeder
5. Any breakdown will be attended by taking the PTW from PSCC by authorized personal only

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

3.6 Loss of telephonic communication during operation.

1. All operations are to be done as per the SOP based on telephonic communication with PSCC.
2. In case of loss of telephonic communication channel PSS operator/PSCC have to escalate the matter to the respective SDO/Executive Engg. for pursuing subsequent operations.
3. Respective SDO/Executive Engg. will take the entire responsibility for restoration/normalization of the power supply ensuring safe operating procedures.
4. Once the supply is restored, respective SDO/Executive Engg. shares the details of tripping & outages with PSCC, so that the same can be recorded in Suraksha Kavach for further reporting.

3.7 Loss of SCADA/ RTU Network Communication during operation.

During the SCADA Communication failure, all operations to be done locally by PSS Operator against the instructions from PSCC only.

In case of PTW requirement the respective procedure will be followed as deliberated in this document.

3.8 Requirement of Load Curtailment

1. In case of demand limitation, generation failure or equipment breakdown at distribution side requirement of Load curtailment from SLDC/Respective Executive Engineer/SDO will communicate it to PSCC.
2. PSCC will also be intimated regarding the volume of load restriction and duration.
3. PSCC then get the confirmation from the respective Executive Engineer.
4. Against the receipt of the confirmation, PSCC will conduct operation as per the requirement with intimation to SDO.
5. Note that when a line is dead due to load curtailment, no work is to be done without PTW from PSCC.

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4. Elaboration of Operating Procedure Non-Remote operated PSS

4.1 Full feeder shutdown or outage and issuing PTW.

4.1.1 Outage of 33kV feeder emanating from GSS:

1. The authorized personnel creates Suraksha Kavach entry with respect to the required outage.
2. The authorized personnel calls PSCC confirming the Suraksha Kavach entry for outage and shares the following details:
 - a) Name of the Authorized person who is asking for PTW.
 - b) Grid Substation/ Primary Substation/ Feeder /Feeder Section/Equipment where work is to be done.
 - c) Brief Work Description.
 - d) Information regarding the isolation of back feeding if any.
 - e) Any requirements for feeders in close vicinity that also need to be turned off for this work.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

3. PSCC checks if the shutdown is Planned (PSD) or Emergency (ESD).
 - a) In case of PSD, it should be approved by PSCC and Executive Engineer of the respective area and available in Suraksha Kavach.
 - b) If it is not approved and required to be availed, then it needs to be approved by Executive Engineer and issued as Unplanned Shutdown (UPSD).
 - c) In case of Emergency, the PSCC checks for the entry created by authorized personnel.
4. PSCC asks authorized personnel to initiate isolation by providing opening reference number
5. Authorized personnel calls PSS operator for required isolation at PSS end and ensures as follows -
 - a) If there is possible load change over authorize personnel will execute it in conversation with PSS operator
 - b) PSS Operator will OPEN the breaker and confirm the same (i.e. breaker shows open indication and load current drops to zero).

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- c) PSS operator opens Line Isolator and Bus Isolator of the particular feeder and confirms it to authorized personnel after all the three blades are in open condition confirming visually.
- d) PSS Operator will put the Do Not Operate tags on the Breaker Panel and Feeder isolators.

Note:

- i. *In case of indoor switchgear, when there is no isolators are available for the particular feeder PSS operator will rack out the respective circuit breaker for complete isolation.*
- ii. *In case of Gas Insulated switchgear, PSS operator will open the dis-connector switch for isolation.*
- iii. *In case of Ring Main Unit, PSS operator will open LBS or CB and dis-connector for isolation.*

- 6. TPCODL Authorized personnel provide “No Back feeding Confirmation” to OPTCL Authorities
- 7. OPTCL Authorities shall handtrip, isolate and earth the feeder at GSS and shall share “Line Clearance” with to TPCODL Authorized personnel.
TPCODL Authorized personnel share the Line Clearance no. received from GSS Authorities with PSCC.
- 8. Authorized personnel calls PSS operator to close Earth Switch or provide local portable grounding
- 9. Authorized personnel with PSS operator call PSCC confirming the required isolations and provide return opening reference number confirming all required isolations done.
- 10. PSCC get the confirmation from authorized personnel for the availability of safety equipments such as neon tester, discharge rod, Ladder & PPEs.
- 11. PSCC will now get confirmation from authorized personnel of following safety checks before creating the PTW,
 - i. Zero Voltage Confirmed.
 - ii. No Live Line Crossing near working area.
 - iii. All HT & LT back-feeding points identified and isolated.

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12. PSCC then generates PTW number in Suraksha Kavach (which is randomly generated unique number by system).

13. PSCC shares generated PTW number with authorized personnel and asking him to ensure proper safety zone before executing work.

14. In case of multiple PTWs on same feeder -

- a) In the event of another outage requirement on the same feeder by different authorized personnel, PSCC will follow all the points mentioned in the section 4.1.1 except for isolations, which is already in place for the particular feeder.
- b) PSCC then share this information of multiple PTWs with other PTW holders for information.

4.1.2 Normalization of 33kV feeder emanating from GSS after completion of work

1. The authorized personnel who is the PTW holder calls PSCC for return of the same and shares the following details

- a) Issued PTW number.
- b) GSS/PSS/Feeder /Feeder Section/Equipment where work is completed.
- c) Location where work execution is completed.
- d) Name of the Authorized person who has taken PTW.
- e) All portable grounds, tools and materials removed and all men at work are moved out of the working perimeter.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

2. PSCC checks the record against PTW number shared and validates all the information received in Suraksha Kavach

3. PSCC checks for any other pending PTWs on the same feeder. If yes then PSCC will await for call from other PTW holders for closure of PTW.

4. PSCC will repeat from Point no 1 to 3 of section 4.1.2 until all the PTWs with same isolation called for normalization of the particular feeder.

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5. PSCC provides the Closing reference no. and asks authorized personnel to initiate normalization procedure
6. PTW Holder calls PSS Operator and ensures following operations:
 - a) PSS Operator will remove the PTW tags of the Breaker Panel and Feeder Isolator/AB Switch/GOD.
 - b) PSS operator will open the respective Earth Switch /remove local portable groundings.
 - c) PSS operator will close the Line and Bus Isolators and visually confirm all three blades are connected properly.

Note:

 - i. *In case of indoor switchgear, PSS operator will rack in the respective circuit breaker*
 - ii. *In case of Gas Insulated switchgear, PSS operator will close the dis-connector switch*
 - iii. *In case of Ring Main Unit, PSS operator will close LBS or dis-connector*
7. Authorized personnel will return the "Line Clearance" to GSS authorities for normalization at GSS.
OPTCL authorities will open earth switch and close isolator.
8. PTW holder will call PSCC and provide return Closing reference no. after confirmation, charge the particular feeder from GSS
9. PSCC will now take all other PTW holders on conference call along with PSS operator and after confirmation, PSS operator will close the circuit breaker and normalize the supply.
10. PSCC will close the PTWs on that feeder in Suraksha Kavach.
11. PSCC will confirm PTW holders and PSS operator regarding the restoration/normalization of the feeder in case feeder charged ok and shows healthy electrical parameter.
12. In case of any abnormalities, the authorized person will once again have to take PTW as per requirement for execution of further work.

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1. The authorized personnel creates Suraksha Kavach entry with respect to the required outage.
2. The authorized personnel calls PSCC confirming the Suraksha Kavach entry for outage and shares the following details Name of the Authorized person who is asking for PTW.
 - a) PSS/ Feeder /Feeder Section/Equipment where work is to be done.
 - b) Brief Work Description.
 - c) Information regarding the isolation of back feeding if any.
 - d) Any requirements for feeders in close vicinity that also need to be turned off for this work.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

3. PSCC checks if the shutdown is Planned (PSD) or Emergency (ESD).
 - a) In case of PSD, it should be approved by PSCC and Executive Engineer of the respective area and available in Suraksha Kavach.
 - b) If it is not approved and required to be aailed, then it needs to be approved by Executive Engineer and issued as Unplanned Shutdown (UPSD).
 - c) In case of Emergency, the PSCC checks for the entry created by authorized personnel.
4. PSCC asks authorized personnel to initiate isolation by providing opening reference number
5. Authorized personnel calls PSS operator for required isolation at PSS end and ensures as follows -
 - a) PSS Operator will OPEN the breaker and confirm the same (i.e. breaker shows open indication and load current drops to zero).
 - b) PSS operator opens Line Isolator and Bus Isolator of the particular feeder and confirms it to PSCC after all the three blades are in open condition confirming visually.
 - c) PSS operator then closes Earth Switch or provide local portable grounding.

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- d) PSS Operator will put the Do Not Operate tags on the Breaker Panel and Feeder isolators.

Note:

- i. *In case of indoor switchgear, when there is no isolators are available for the particular feeder PSS operator will rack out the respective circuit breaker for complete isolation.*
- ii. *In case of Gas Insulated switchgear, PSS operator will open the dis-connector switch for isolation.*
- iii. *In case of Ring Main Unit, PSS operator will open LBS or CB and dis-connector for isolation.*

6. Authorized personnel with PSS operator call PSCC confirming the required isolations and provide return opening reference number confirming all required isolations done.
7. PSCC gets the confirmation from authorized personnel for the availability of safety equipments such as neon tester, discharge rod, Ladder & PPEs.
8. PSCC will now get confirmation from authorized personnel of following safety checks before creating the PTW,
 - i. Zero Voltage Confirmed.
 - ii. No Live Line Crossing near working area.
 - iii. All HT & LT back-feeding points identified and isolated.
9. PSCC then generates PTW number in Suraksha Kavach (which is randomly generated unique number by system).
10. PSCC shares generated PTW number with authorized personnel who ensures proper safety zone before executing work.
11. In case of multiple PTWs on same feeder -
 - a) In the event of another outage requirement on the same feeder by different authorized personnel, PSCC will follow all the points mentioned in the section 4.1.3 except for isolations, which is already in place for the particular feeder.
 - b) PSCC then share this information of multiple PTWs with other PTW holders for information.

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4.1.4 Normalization of 33kV feeder from PSS after completion of work

1. The authorized personnel who is the PTW holder calls PSCC for return of the same and shares the following details
 - a) Issued PTW number.
 - b) PSS/Feeder /Feeder Section/Equipment where work is completed.
 - c) Location where work execution is completed.
 - d) Name of the Authorized person who has taken PTW.
 - e) All portable grounds, tools and materials are removed and all men at work are moved out of the working perimeter.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

2. PSCC checks the record against PTW number shared and validates all the information received in Suraksha Kavach
3. PSCC checks for any other pending PTWs on the same feeder. If yes, then PSCC will await for call from other PTW holders for closure of PTW.
4. PSCC will repeat from Point no 1 to 3 of section 4.1.4 until all the PTWs with same isolation called for normalization of the particular feeder.
5. PSCC provides the Closing reference no. and asks authorized personnel to initiate normalization procedure
6. PTW Holder calls PSS Operator and ensures following operations:
 - a) PSS Operator will remove the PTW tags of the Breaker Panel and Feeder Isolator/AB Switch/GOD.
 - b) PSS operator will open the respective Earth Switch /remove local portable groundings.
 - c) PSS operator will close the Line and Bus Isolators and visually confirm all three blades are connected properly.

Note:

- i. *In case of indoor switchgear, PSS operator will rack in the respective circuit breaker*

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ii. In case of Gas Insulated switchgear, PSS operator will close the dis-connector switch

iii. In case of Ring Main Unit, PSS operator will close LBS or dis-connector

7. PTW holder will call PSCC and provide return Closing reference no. after confirmation, charge the particular feeder from GSS

8. PSCC will now take all other PTW holders on conference call along with PSS operator and after confirmation, PSS operator will close the circuit breaker and normalize the supply.

9. PSCC will close the PTWs on that feeder in Suraksha Kavach.

10. PSCC will confirm PTW holders and PSS operator regarding the restoration/normalization of the feeder in case feeder is charged ok and shows healthy electrical parameters.

11. In case of any abnormalities, the authorized person will once again have to take PTW as per requirement for execution of further work.

4.2 Part feeder shutdown or outage and issuing PTW.

4.2.1 Part Section isolation by opening Line AB Switch/ DT AB Switch on feeder emanating from GSS

1. The authorized personnel calls PSCC requesting for outage and shares the following details:

- Name of the Authorized person who is asking for PTW.
- GSS/Feeder /Feeder Section/Equipment where work is to be done.
- Brief Work Description.
- Information regarding the isolation of back feeding if any.
- Any requirements for feeders in close vicinity that also need to be turned off for this work.
- Information of the isolation point (Name & Location of Line AB Switch/RMU/DT AB Switch).

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

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2. PSCC checks if the shutdown is Planned (PSD) or Emergency (ESD).
 - a) In case of PSD, it should be approved by PSCC and Executive Engineer of the respective area and available in Suraksha Kavach.
 - b) If it is not approved and required to be availed, then it needs to be approved by Executive Engineer and issued as Unplanned Shutdown (UPSD).
 - c) In case of Emergency, the PSCC creates the entry in Suraksha Kavach.

3. PSCC get the confirmation from authorized personnel for the availability of safety equipments such as neon tester, discharge rod, Ladder & PPEs.

4. PSCC after creating the entry in Suraksha Kavach, asks authorized personnel if the concerned feeder breaker needs to be opened to isolate on load zero.
 - a) In case of Line AB Switch/GOD or DT AB Switch/GOD isolation on dead feeder
 - i. Authorized personnel will call OPTCL authority of the particular GSS requesting handtrip
 - ii. OPTCL GSS authority will OPEN the respective breaker confirming load zero
 - iii. Authorized personnel will check and confirm with neon tester that the feeder is dead.
 - iv. Authorized personnel will open the AB Switch/GOD.
 - v. Authorized personnel will confirm against visual inspection that all three blades are clearly opened
 - vi. The feeder will be now charged by OPTCL GSS authority and confirm the charging of the feeder to authorized personnel.
 - vii. Authorised personnel will call PSCC and share opening reference no. against the isolation and this will be recorded in Suraksha Kavach confirming the section is isolated.

 - b) In case of DT ABS/GOD isolation on No load
 - i. Authorized personnel will disconnect the load
 - ii. DT ABS/GOD will be opened on no load condition.
 - iii. Authorized personnel will confirm against visual inspection that all three blades are clearly opened and share opening reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is isolated.

 - c) In case of RMU isolation on load

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- i. Authorized personnel will hand trip RMU Circuit breaker or open RMU Load break Switch
- ii. Authorized personnel will confirm once isolation is done and share opening reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is isolated.

5. PSCC gets confirmation of the following safety checks from authorized personnel before creating the PTW,

- i. Zero Voltage Confirmed.
- ii. No Live Line Crossing near the working area.
- iii. All HT & LT back-feeding points were identified and isolated.

6. PSCC then generates PTW number in Suraksha Kavach (which is randomly generated unique number by system).

7. PSCC then shares generated PTW number with authorized personnel and asking him to ensure proper safety zone before executing work.

8. In case of multiple PTWs on section of feeder/DT -

- a) In the event of another outage requirement on the same feeder by different authorized personnel, PSCC will follow all the points mentioned in the section 4.2.1 except for isolations, which is already in place for the particular feeder section/DT.
- b) PSCC then share this information of multiple PTWs with other PTW holders for information.

4.2.2 Normalization by Closing Line AB Switch/ DT AB Switch on feeder emanating from GSS

1. The authorized personnel who is the PTW holder calls PSCC for return of the same and shares the following details.

- a) Issued PTW number.
- b) GSS/Feeder /Feeder Section/Equipment where work is completed.
- c) Location where work execution is completed.
- d) Name of the Authorized person who has taken PTW.
- e) All portable grounds, tools and materials are removed and all men at work are moved out of the working perimeter.

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- f) Information of the isolation point (Name & Location of Line AB Switch/RMU/DT AB Switch).

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

2. PSCC checks the record against PTW number shared and validates all the information received in Suraksha Kavach
3. PSCC checks for any other pending PTWs on the same feeder. If yes then PSCC will await for call from other PTW holders for closure of PTW.
4. PSCC will repeat from Point no. 1 to 3 of section 4.2.2 until all the PTWs with same isolation called for normalization of the particular feeder.
5. PSCC will now take all PTW holders on conference call and asks if the concerned feeder breaker needs to be opened to normalize the isolation on load zero
 - a) In case of Line AB Switch/GOD or DT AB Switch/GOD normalization on dead feeder
 - i. Authorized personnel will call OPTCL GSS requesting for handtrip
 - ii. OPTCL GSS authority will OPEN the respective breaker confirming load zero
 - iii. Authorized personnel will check and confirm with neon tester that the feeder is dead.
 - iv. Authorized personnel will close the AB Switch/GOD.
 - v. Authorized personnel will confirm against visual inspection that all three blades clearly engaged
 - vi. The feeder will be now charged by OPTCL GSS authority and confirm the charging of the feeder to authorized personnel. The call with OPTCL will be disconnected.
 - vii. Authorized personnel will call PSCC and share closing reference no. confirming the charging of ABS and this will be recorded in Suraksha Kavach
 - b) In case of DT ABS/GOD normalization on no load
 - i. DT ABS/GOD will be closed on no load condition.
 - ii. Authorized personnel will add the load to the DT
 - iii. Authorized personnel will confirm closing reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is charged.

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c) In case of RMU normalization on load

- i. Authorized personnel will CLOSE RMU Circuit breaker or RMU Load break Switch
- ii. Authorized personnel will confirm closing reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is charged.

6. PSCC will close the PTWs on that feeder in Suraksha Kavach.

7. PSCC will confirm PTW holders regarding the restoration/normalization of the feeder section/DT in case charged ok and shows healthy electrical parameter.

8. In case of any abnormalities, the authorized person will once again have to take PTW as per requirement for execution of further work.

4.2.3 Part Section isolation by opening Line AB Switch/ DT AB Switch of feeder emanating from PSS

1. The authorized personnel calls PSCC requesting for outage and shares the following details:

- a) Name of the Authorized person who is asking for PTW.
- b) PSS/Feeder /Feeder Section/Equipment where work is to be done.
- c) Brief Work Description.
- d) Information regarding the isolation of back feeding if any.
- e) Any requirements for feeders in close vicinity that also need to be turned off for this work.
- f) Information of the isolation point (Name & Location of Line AB Switch/RMU/DT AB Switch).

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

2. PSCC checks if the shutdown is Planned (PSD) or Emergency (ESD).

- a) In case of PSD, it should be approved by PSCC and Executive Engineer of the respective area and available in Suraksha Kavach.
- b) If it is not approved and required to be availed, then it needs to be approved by Executive Engineer and issued as Unplanned Shutdown (UPSD).
- c) In case of Emergency, the PSCC creates the entry in Suraksha Kavach.

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3. PSCC get confirmation from authorized personnel for the availability of safety equipments such as neon tester, discharge rod, Ladder & PPEs.
4. PSCC after creating the entry in Suraksha Kavach, asks authorized personnel if the concerned feeder breaker needs to be opened to isolate on load zero.
 - a) In case of Line AB Switch/GOD or DT AB Switch/GOD isolation on dead feeder
 - i. PSCC will call PSS Operator and OPEN the respective breaker and share Opening Reference number after confirmation of load zero.
 - ii. Authorized personnel will check and confirm with neon tester that the feeder is dead.
 - iii. Authorized personnel will open the AB Switch/GOD.
 - iv. Authorized personnel will confirm against visual inspection that all three blades are clearly opened and share opening reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is isolated.
 - v. The feeder will be now charged locally by PSS Operator and confirm the charging of the feeder to authorized personnel.
 - b) In case of DT ABS/GOD isolation on No load
 - i. Authorized personnel will isolate the load
 - ii. DT ABS/GOD will be opened on no load condition.
 - iii. Authorized personnel will confirm against visual inspection that all three blades are clearly opened and share opening reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is isolated.
 - c) In case of RMU isolation on load
 - i. Authorized personnel will hand trip RMU Circuit breaker or open RMU Load break Switch
 - ii. Authorized personnel will confirm once isolation is done and share opening reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is isolated.
5. PSCC get confirmation of following safety checks from authorized personnel before creating the PTW,
 - i. Zero Voltage Confirmed.

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- ii. No Live Line Crossing near working area.
- iii. All HT & LT back-feeding points identified and isolated.

6. PSCC then generates PTW number in Suraksha Kavach (which is randomly generated unique number by system).
7. PSCC then shares generated PTW number with authorized personnel and asking him to ensure proper safety zone before executing work.
8. In case of multiple PTWs on section of feeder/DT -
 - a) In the event of another outage requirement on the same feeder by different authorized personnel, PSCC will follow all the points mentioned in the section 4.2.3 except for isolations, which is already in place for the particular feeder section/DT.
 - b) PSCC then share this information of multiple PTWs with other PTW holders for information.

4.2.4 Normalization by Closing Line AB Switch/ DT AB Switch of feeder emanating from PSS

1. The authorized personnel who is the PTW holder calls PSCC for return of the same and shares the following details.
 - a) Issued PTW number.
 - b) PSS/Feeder /Feeder Section/Equipment where work is completed.
 - c) Location where work execution is completed.
 - d) Name of the Authorized person who has taken PTW.
 - e) All portable grounds, tools and materials are removed and all men at work are moved out of the working perimeter.
 - f) Information of the isolation point (Name & Location of Line AB Switch/RMU/DT AB Switch).

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

2. PSCC checks the record against PTW number shared and validates all the information received in Suraksha Kavach

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3. PSCC checks for any other pending PTWs on the same feeder. If yes then PSCC will await for call from other PTW holders for closure of PTW.
4. PSCC will repeat from Point no. 1 to 3 of section 4.2.4 until all the PTWs with same isolation called for normalization of the particular feeder.
5. PSCC will now take all PTW holders on conference call and asks if the concerned feeder breaker needs to be opened to normalize the isolation on load zero
 - a) In case of Line AB Switch/GOD or DT AB Switch/GOD normalization on dead feeder
 - i. PSCC will call PSS Operator to OPEN the respective breaker and share Closing Reference number after confirmation of load zero.
 - ii. Authorized personnel will check and confirm with neon tester that the feeder is dead.
 - iii. Authorized personnel will close the AB Switch/GOD.
 - iv. Authorized personnel will confirm against visual inspection that all three blades clearly engaged and share closing reference no. of his own. This will be recorded in Suraksha Kavach.
 - v. The feeder will be now charged locally by PSS Operator and confirm the charging of the feeder to PTW holder.
 - b) In case of DT ABS/GOD normalization on no load
 - i. DT ABS/GOD will be closed on no load condition.
 - ii. Authorized personnel will take the load and confirm
 - iii. Authorized personnel will confirm closing reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is charged.
 - c) In case of RMU normalization on load
 - i. Authorized personnel will CLOSE RMU Circuit breaker or RMU Load break Switch.
 - ii. Authorized personnel will confirm closing reference no. of his own. This will be recorded in Suraksha Kavach confirming the section is charged.
6. PSCC will close the PTWs on that feeder in Suraksha Kavach.

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7. PSCC will confirm PTW holders regarding the restoration/normalization of the feeder section/DT in case charged ok and shows healthy electrical parameter.
8. In case of any abnormalities, the authorized person will once again have to take PTW as per requirement for execution of further work.

4.3 Outage for work inside PSS and issuing PTW.

4.3.1 Issuing PTW for any work inside PSS.

1. The authorized personnel calls PSCC requesting for outage and shares the following details:
 - a) Name of the Authorized person who is asking for PTW.
 - b) PSS/Feeder /Feeder Section/Equipment where work is to be done.
 - c) Brief Work Description.
 - d) Information regarding the isolation of back feeding if any.
 - e) Any requirements for feeders in close vicinity that also need to be turned off for this work.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

2. PSCC checks if the shutdown is Planned (PSD) or Emergency (ESD).
 - a) In case of PSD, it should be approved by PSCC and Executive Engineer of the respective area and available in Suraksha Kavach.
 - b) If it is not approved and required to be availed, then it needs to be approved by Executive Engineer and issued as Unplanned Shutdown (UPSD).
 - c) In case of Emergency, the PSCC creates the entry in Suraksha Kavach.
3. PSCC get the confirmation from authorized personnel for the availability of safety equipments such as neon tester, discharge rod, Ladder & PPEs.
4. PSCC after creating the entry in Suraksha Kavach, calls PSS Operator for arranging the outage. Following procedure is to be followed,
 - a) PSCC will call PSS operator to OPEN the upstream and downstream breakers and inform Opening Reference Number to PSS operator for further isolation.
 - b) Once breaker opened PSS operator has to confirm the same (i.e. breaker shows open indication and load current drops to zero).

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- c) PSS operator opens upstream and downstream Isolator/AB Switch/ GOD of the particular equipment or racks out the upstream and downstream circuit breakers in case of indoor switchgear.
 - d) PSS operator then confirms it to PSCC after all the three blades are in open confirming visually or CB racked out condition.
 - e) PSS operator then closes Earth Switch or provides local portable grounding.
 - f) PSS Operator will put the Do Not Operate tags on the Breaker Panels and Isolator/AB Switch/GOD.
 - g) PSS Operator will give a return opening reference no. confirming the above isolation of that particular equipment, which PSCC will record it in the Suraksha Kavach.
5. PSCC will now take the authorized personnel on conference call along with PSS operator and get confirmation of the following safety checks before creating the PTW,
 - i. Zero Voltage Confirmed.
 - ii. No Live Line Crossing near the working area.
 - iii. All back-feeding points identified and isolated.
6. PSCC then generates PTW number in Suraksha Kavach (which is randomly generated unique number by system).
7. PSCC then shares generated PTW number with authorized personnel and asking him to ensure proper safety zone before executing work.
8. In case of multiple PTWs on same feeder -
 - a) In the event of another outage requirement on the same feeder by different authorized personnel, PSCC will follow all the points mentioned in the section 4.3.1 except for isolations, which is already in place for the particular feeder.
 - b) PSCC then share this information of multiple PTWs with other PTW holders for information.

4.3.2 Normalization of system after work inside PSS

1. The authorized personnel who is the PTW holder calls PSCC for return of the same and shares the following details
 - a) PTW number that was issued.
 - b) PSS/Feeder /Feeder Section/Equipment where work is completed.

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- c) Location where work execution is completed.
- d) Name of the Authorized person who has taken PTW.
- e) All portable grounds, tools and materials are removed and all men at work are moved out of the working perimeter.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

2. PSCC checks the record against PTW number shared and validates all the information received in Suraksha Kavach
3. PSCC checks for any other pending PTWs on the same feeder. If yes then PSCC will await for call from other PTW holders for closure of PTW.
4. PSCC will repeat from Point no 1 to 3 of section 4.3.2 until all the PTWs with same isolation called for normalization of the particular feeder.
5. PSCC calls PSS Operator and shares Closing Reference Number to do the following operations:
 - a) PSS Operator will remove the PTW tags of the upstream and downstream Breaker Panel and Isolator/AB Switch/GOD.
 - b) PSS operator will open the respective Earth Switch /remove local portable groundings.
 - c) PSS operator will close the upstream and downstream Isolator/AB Switch/ GOD and visually confirm all three blades are connected properly or will rack in upstream and downstream circuit breakers in case of indoor switchgear.
 - d) PSS Operator will give a return closing reference no. confirming that all isolation is normalized of that particular feeder, which PSCC will record in the Suraksha Kavach.
6. PSCC will now take all PTW holders on conference call along with PSS operator and after confirmation. Then PSS Operator will CLOSE the breaker locally. The closing of the Breakers should be done in sequence to the direction of the power flow (i.e. 33kV I/C to 33kV OG).
7. PSCC will close the PTWs on that feeder in Suraksha Kavach.

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8. PSCC will confirm PTW holders and PSS operator regarding the restoration/normalization of the feeder in case the feeder is charged ok and shows healthy electrical parameters.
9. PSCC will confirm the authorized person and the PSS operator regarding the restoration/normalization of the PTW zone.
10. In case of any abnormalities, the authorized person will once again have to take PTW as per requirement for execution of further work.

4.4 Test Charging of 33kV Feeder tripped on fault,

4.4.1 Feeders emanating from GSS

This includes the 33kV feeders emanating from OPTCL Grid Substation,

1. In case of fault trip of any 33kV feeder, OPTCL GSS authority calls Authorized personnel to inform about the tripping
2. OPTCL GSS authority shall provide the details of the fault current
 - a. In case of Single phase to Earth fault, with fault current less than 8kA – GSS will test charge once after 5 mins
 - b. In case of Single phase to Earth fault, with fault current greater than 8kA – GSS will test charge only after proof of reason leading to fault or after providing IR testing
 - c. In case of Phase to Phase fault, with fault current less than 4kA – GSS will test charge once after 5 mins
 - d. In case of Phase to Phase fault, with fault current greater than 4kA – GSS will test charge only after proof of reason leading to fault or after providing IR testing
3. The load will be changed over to the alternate source by authorized personnel
4. Authorized personnel request OPTCL GSS authority to charge the feeder along with the reason of the fault
5. All details shall be shared with PSCC by authorized personnel
6. In case of any delay in charging due to any abnormality message received or failed test charge (feeder declared to be under breakdown)
7. In case of any fault found or for attending the full feeder/part feeder breakdown, PTW to be availed by the authorized person as per the process laid down in Section-1/2 above
8. Any breakdown will be attended by taking the PTW from PSCC by authorized personal only.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

Name of the Document

**Standard Operating Procedure (SOP) for Operations & Issue of PTW for
33kV Feeders emanating from OPTCL Grid Sub-Station or Primary Substation under
Central Power System Control Centre (CPSCC)**

Prepared By
A Antony
Reviewed By
Tushar Kulkarni
Approved By
Chintamani Chitnis
Issued By
Niranjan Rout

4.4.2 Feeders emanating from PSS

This includes the 33kV feeders emanating from Substation, 33kV Incomers and 33kV PTR breakers,

1. In case of fault trip of any 33kV feeder, PSS operator call authorized personnel
2. The load will be changed over to the alternate source by authorized personnel
3. Authorized personnel then calls the respective PSS Operator to confirm for any abnormal condition visible in the substation
4. Authorized personnel will call PSS operator to CLOSE the breaker
5. All details shall be shared with PSCC by authorized personnel
6. In case of any delay in charging due to any abnormality message received or failed test charge (feeder declared to be under breakdown)
7. In case of any fault found or for attending the full feeder/part feeder breakdown, PTW is to be availed by the authorized person as per the process laid down in Section-1/2 above
8. Any breakdown will be attended by taking the PTW from PSCC by authorized personal only.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO)

4.5 Hand Trip required for Emergency Condition/ Situation.

4.5.1 Feeders emanating from GSS

During the emergency condition/situation which includes

- a) Fire Hazard
 - b) circumstance which might lead to risk of life of Human/Animal/Property
1. Authorized personnel will call OPTCL GSS Authority to hand trip immediately.
 2. Authorized personnel will change the load to the alternate source
 3. Authorized personnel will call OPTCL GSS Authority requesting to charge the feeder with reason of emergency
 4. All details shall be shared with PSCC by authorized personnel
 5. Any breakdown will be attended by taking the PTW from PSCC by authorized personal only

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO)

4.5.2 Feeders emanating from PSS

During the emergency condition/situation which includes

- a) Fire Hazard
- b) circumstance which might lead to the risk of life of Human/Animal/Property

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1. On receipt of information the feeder shall be hand-tripped immediately either by PSS operator.
2. Authorized personnel will call PSCC to inform the details of the information and PSCC will record the information as entry in Suraksha Kavach.
3. Authorized personnel will call PSS operator to charge the feeder and the same shall be shared with PSCC to update it in Suraksha Kavach
4. Any breakdown will be attended by taking the PTW from PSCC by authorized personal only

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

4.6 Requirement of Load Curtailment

1. In case of demand limitation, generation failure or equipment breakdown at distribution side requirement of Load curtailment from SLDC/Respective Executive Engineer/SDO will communicate it to PSCC.
2. PSCC will also be intimated regarding the volume of load restriction and duration.
3. PSCC then get the confirmation from the respective Executive Engineer.
4. Against the receipt of the confirmation, PSCC will conduct operation as per the requirement with intimation to SDO.
5. Note that when a line is dead due to load curtailment, no work is to be done without PTW from PSCC.

5. OPTCL Grid Substation outage requirement

5.1 Feeders Emanation from GSS feeding Remote Operated and un-manned PSS

- 5.1.1. OPTCL authority will inform PSCC about the outage requirement along with details of work on particular feeder
- 5.1.2. In case of Planned Shutdown
 - a) PSCC will ensure necessary load change over and isolation at PSS end will be done during early hours
 - b) PSCC will capture the details in Suraksha Kavach
- 5.1.3. In case of Emergency Shutdown
 - a) PSCC will inform authorized personnel about the details of shutdown and the duration
 - b) PSCC will ensure necessary load change over and isolation at PSS end
 - c) PSCC will capture the details in Suraksha Kavach

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- 5.1.4. PSCC will create unique code no. with a message sending to the OPTCL Authorities for
“No Back feeding Confirmation”.

(Refer Clause 2.4. The authorized personnel should be Executive Engineer/SDO/EMR)

5.2 Feeders Emanation from GSS feeding Non-Remote Operated PSS

- 5.2.1. OPTCL authority will inform authorized personnel about the outage requirement along
with details of work on particular feeder
- 5.2.2. Authorized personnel will ensure necessary load change over and isolation at PSS end
will be done
- 5.2.3. Authorized personnel will inform PSCC about the changeover and isolation and same
shall be captured in Suraksha Kavach
- 5.2.4. Authorized personnel will provide “No Back feeding Confirmation” to the OPTCL
Authorities

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			Eff. Date 12.12.2024
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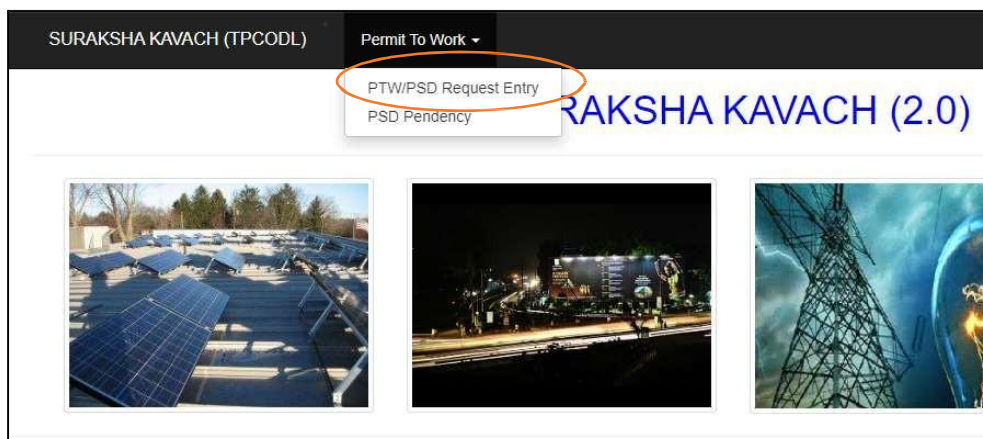
Annexure I

Steps to enter a Planned or Emergency Shutdown PTW Request through Suraksha Kavach

1. Open Internet browser and go the <https://kavach.tpodisha.com/>
2. Log into the application with outlook credentials. User ID and password would be same as webmail/outlook.
*Ensure to put a tick at ☒ **Active Directory Authentication**

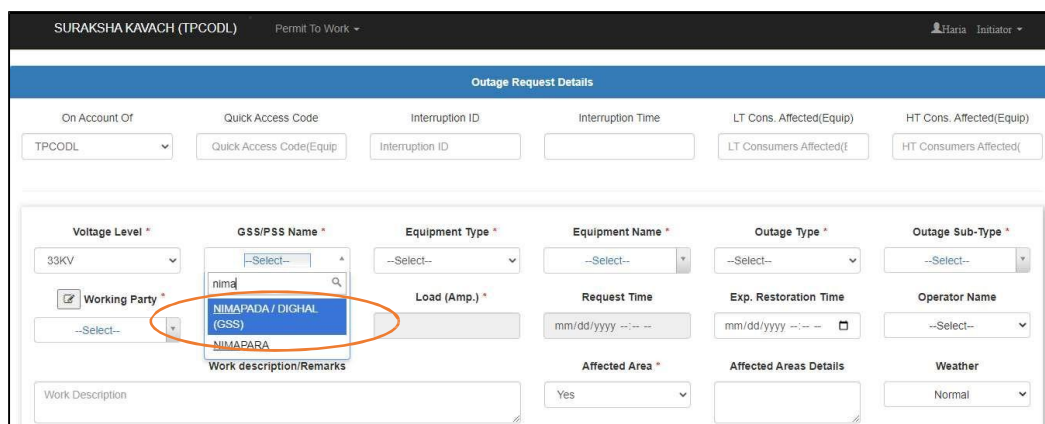


3. Step 3: Click of PTW/PSD Request Entry

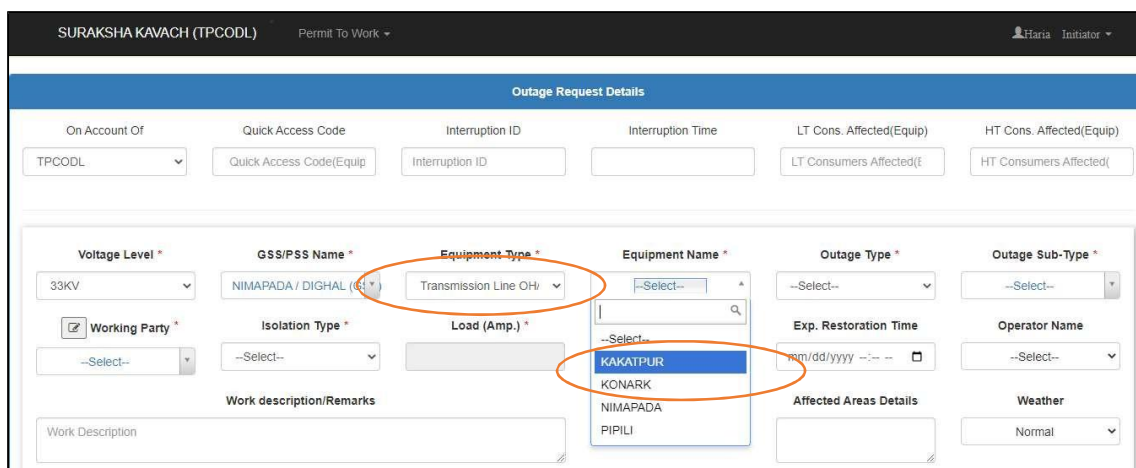


4. Step 4: Select 33kv in Voltage Level and Select the GSS where the outage is being taken

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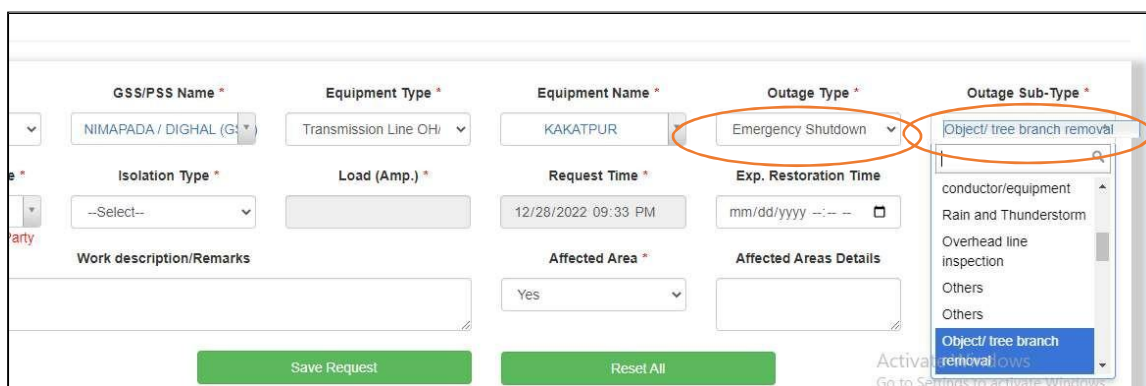


- Select Equipment Type as “Transmission Line OH/UG” and select the 33kv Line on which outage is to be taken. In this example 33kv Kakatpur feeder of Nimapada GSS is selected



- Select Outage Type and Outage Sub-Type
Following outage types can be selected Planned/Emergency/Oppurtunity and accordingly outage sub-types will appear
Note: Planned Shutdown requests can only be put one day ahead before 1600 hrs.

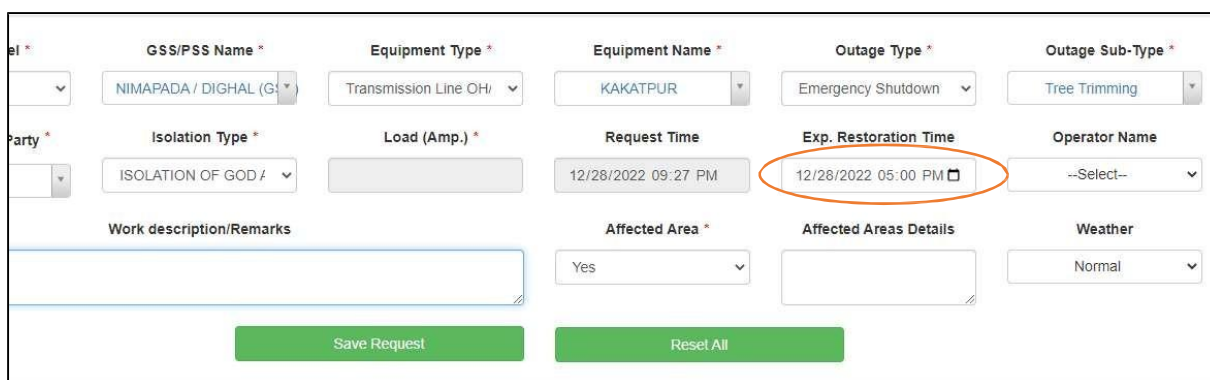
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The screenshot shows a web-based form for creating a PTW request. The fields are as follows:

- GSS/PSS Name:** NIMAPADA / DIGHAL (G)
- Equipment Type:** Transmission Line OH
- Equipment Name:** KAKATPUR
- Outage Type:** Emergency Shutdown
- Outage Sub-Type:** Object/ tree branch removal
- Isolation Type:** --Select--
- Load (Amp.):** (Empty)
- Request Time:** 12/28/2022 09:33 PM
- Exp. Restoration Time:** mm/dd/yyyy -- --
- Work description/Remarks:** (Empty text area)
- Affected Area:** Yes
- Affected Areas Details:** (Empty text area)
- Buttons:** Save Request, Reset All

- Select the Working Party name from the available drop-down list. Note: In case some name is not available please contact:
Manoj Senapati: - 9937104194
Pradyumna Balabantaray: - 7978174806
- Select the Isolation type from the following:
For Full feeder shutdown select "Complete from Breaker and GOD of GSS/PSS" For Part feeder outage select "Part HT section isolated"
- Enter the Expected Restoration Time



The screenshot shows the same PTW request form with the following updates:

- Outage Sub-Type:** Tree Trimming
- Isolation Type:** ISOLATION OF GOD /
- Request Time:** 12/28/2022 09:27 PM
- Exp. Restoration Time:** 12/28/2022 05:00 PM (highlighted with a red circle)
- Operator Name:** --Select--
- Weather:** Normal
- Buttons:** Save Request, Reset All

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10. Put Work Description in detail and enter the affected area details

If no area is affected then "No" can be selected in the Affected Area section

Voltage Level *	GSS/PSS Name *	Equipment Type *	Equipment Name *	Outage Type *	Outage Sub-Type *
33KV	NIMAPADA / DIGHAL (G)	Transmission Line O/H	KAKATPUR	Emergency Shutdown	Object/ tree branch removal
☒ Working Party *	Isolation Type *	Load (Amp.) *	Request Time	Exp. Restoration Time	Operator Name
--Select--	ISOLATION OF GOD #		12/28/2022 09:27 PM	12/28/2022 05:00 PM	--Select--
Work description/Remarks			Affected Area *	Affected Areas Details	Weather
For Removal of Object fallen on line near KIIT square			Yes	KIIT College, Patia, Kanan Vihar	Normal
Save Request			Reset All		

11. Click on Save Request to insert the request into system

Voltage Level *	GSS/PSS Name *	Equipment Type *	Equipment Name *	Outage Type *	Outage Sub-Type *
33KV	NIMAPADA / DIGHAL (G)	Transmission Line O/H	KAKATPUR	Emergency Shutdown	Object/ tree branch removal
☒ Working Party *	Isolation Type *	Load (Amp.) *	Request Time	Exp. Restoration Time	Operator Name
--Select--	ISOLATION OF GOD #		12/28/2022 09:27 PM	12/28/2022 05:00 PM	--Select--
Work description/Remarks			Affected Area *	Affected Areas Details	Weather
For Removal of Object fallen on line near KIIT square			Yes	KIIT College, Patia, Kanan Vihar	Normal
Save Request			Reset All		

Name of the Document

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A Antony

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12. PTW number will be generated and received on WhatsApp as a number and downloadable PTW document as seen below:



TP CENTRAL ODISHA DISTRIBUTION LIMITED
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ISSUE OF PERMIT TO WORK (PTW)

UNDER POWER SYSTEM CONTROL CENTRE (PSCC) / AREA POWER SYSTEM CONTROL CENTRE (APSCC)

1	PTW NO - DATE OF ISSUE	515251 - 08/01/2023
2	Name & Designation of official issuing PTW	A Antony
3	Name & Designation of PTW availing official	PRAKASH CH. SAHOO
4	Name of the Division:	BCDD-I, BBSR
5	Name of the Sub Division:	SDO-1
6	Name of the Sub Station:	CHANDAKA-A (GSS)
7	Name of the Equipment:	UNIT8 FDR2
8	Voltage Level:	33KV
9	Mention the type of isolation done:	COMPLETE FROM BREAKER AND GOD OF GSS/PSS
10	Work Description	Work in Vicinity-WORK IN UNIT8 FDR1 AT SALISAHI RMU
11	OPTCL REF NO: (If any)	180/UDHAYGIRI

Declaration of Official by whom PTW is being issued

I certify that comprehensive Safety Zone creation will be adhered to and the network portion identified for working would be safe for personnel to work and all standard PPE, Tool and equipment will be used

Name of the PTW availing official: PRAKASH CH. SAHOO SDO
Location: CHANDAKA-A (GSS) Date: 08/01/2023 Time: 09:18

Returning of PTW

Declaration of Official by whom PTW is being returned.

PTW No.<515251> is hereby cleared, all temporary earths & extra Connections have been removed. I hereby declare that all men & material under my charge have been withdrawn and warned that it is no longer safe to work on the Equipment/Line specified in this PTW.

Name of PTW returning official: PRAKASH CH. SAHOO SDO
Location: CHANDAKA-A (GSS) Date: 08/01/2023 Time: 11:54
Name of PTW Clearing official: Sunil Kumar Sahoo
Location: PSCC/ APSCC

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Annexure II: Sandesh mail dated 03.09.2024


SANDESH
 From Human Resources

TPCODL/HR/2024/A- 665

Date: 03.09.2024

Roles & Responsibilities of SDO Engineering with respect to Sub-Transmission Network and Assets

TPCODL is spread across a wide geographical area of approximately 30000 sq kms. The ownership of 11 KV and LT assets including feeders and DSS is with respective Section Managers and the ownership of all Sub-Transmission Assets such as complete PSS and 33 KV feeders are with concerned SDOs. These SDOs are responsible for upkeep of 33KV PSS and feeders, in close coordination with support functions like E&MR, STS, Projects and NEG etc.

The broad roles and responsibilities of respective SDOs for 33 KV PSS and feeders are shared below:

1. Planned maintenance and breakdown of 33KV feeders and PSS shall be attended under the supervision of concerned SDO. Respective E&MR Division shall be responsible for ensuring maintenance of PSS equipment, new equipment commissioning, protection and testing, relay coordination, upkeep of AC and DC system etc. within the PSS keeping SDO in loop.
2. SDO shall be responsible to finalize and monitor the monthly duty roster of PSS operators and 33KV AMC crew (Maintenance & B/D) under his jurisdiction in coordination with AMC BA. The monthly duty roster shall be displayed at individual PSS.
3. SDO shall ensure resource mobilization i.e. man, material, PPEs, T&Ps, mobile phones, vehicles as per requirement within the subdivision in coordination with section managers, STS, DS teams and AMC BA. In case of any exigency for early restoration of network, concerned SDO have complete authority to divert 11 kV AMC BA manpower for 33 kV line works under his supervision observing all applicable SOPs of TPCODL.
4. The Invoice of AMC BA shall be vetted by SDOs / DMs for 33KV AMC and PSS operators.
5. SDO will act as nodal officer for a particular GSS of OPTCL at the time of energy crisis.
6. SDO is responsible for carrying out Energy Audit in his operational area with help of EA group.
7. The SDO concerned shall be responsible for taking local control of operational activities at PSS operated from PSCC under his direct supervision, when desired connect with PSCC is not possible.

Additionally, during such extreme emergency case following is to be observed:

- a) This transition should be done after due approval from the concerned Division Manager and a copy of the same should be shared with HoD, PSCC simultaneously.

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- b) During this specially approved period of exception, any hand trips/trial charging can be done by SDOs with the required co-ordination and communication with all concerned.
- c) All the interruption event details to be recorded and subsequently shared with PSCC at pssc@tpcentralodisha.com once normalcy is restored.
- d) Any required outage where PTW could not be routed through PSCC, local PTW could be taken as per *point 10 of WI-04 (10.17.06)* in the manual PTW format and same needs to be regularized in system.
- 8. The SDO should maintain each PSS at 5S level (progressively) and ensure sustainability thereafter with the help of E&MR, Admin, Civil departments etc.
- 9. All material reservations and their consumption posting to be ensured by SDOs concerned for Sub-Transmission System.
- 10. Concerned SDO must act as the SPOC for implementation and enhancement of safety procedures in his subdivision.
- 11. SDOs shall ensure that PPEs and T&Ps allotted to individual PSS must be used within that PSS only and any movement outside PSS shall be restricted to the extent possible. In case of emergency, SDO is the authorized person to approve any movement of T&Ps and shall ensure the return of same to base location.

As such, all other responsibilities remains unchanged and the SDO (Electrical) shall continue to monitor and supervise all the activities carried out at section level under his jurisdiction including support and guidance to other departments for overall Operational Excellence.

All support Functions such as E&MR, STS, Protection, Automation, Security and Admin etc. shall extend wholehearted support to the SDOs for smooth functioning of Sub-Transmission Systems.

The above is being issued to bring clarity on roles and responsibilities and must be adhered to at all times.

Looking forward to everyone's cooperation in our journey of Operational Excellence.

Chief- Human Resources & Admin