



Bihar State Power Transmission Company Ltd., Patna
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – U74110BR2012SGC018889
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, Vidyut Bhawan, Bailey Road, Patna -800021,

File no-ULDC/SOP of ULDC/130/2023

Letter No. 769

Date 02/11/2023

From,

Chief Engineer (System Operation)
SLDC , BSPTCL

To,

DBA IT/BSPTCL

Sub:- Uploading the standard operating procedure for integration of Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) to SCADA of the Main and Backup Control Centers.

Sir,

With reference to subject cited above it is to inform that SOP related to integration of Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) to SCADA of the Main and Backup Control Centers has been framed by ULD for the smooth integration of the third party transmission elements to SCADA Control Centre.

In view of above, it is requested to upload the same on the SLDC and BSPTCL Website.

This has got the approval of competent authority

Encl:-As above

Yours faithfully


Chief Engineer (System Operation)
BSPTCL

**Standard Operating Procedure (SOP) for integration of Third Party (RE Generators/
Transmission Utilities/ Other System Utilities) to SCADA of the Main and Backup
Control Centers:**

Case I: Integration of new Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) to SCADA Control Center of SLDC, Bihar.

A. In case of integration of any new Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) to the SCADA the following procedures may be followed:

- i. The Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) shall submit the scheme for integration of data to SLDC Control centers along with the action plans and following documents to Chief Engineer (System operation):
 - a. Block Diagram
 - b. Distance from nearest GSS of BSPTCL
 - c. Make of RTU
 - d. Make and range of SDH/ Media Converter and other associated equipments.
 - e. Details of Integrators at Remote End (if any).
 - f. Make and details of Firewall.
- ii. The proposal and action plan shall be reviewed/checked/examined from the office of Chief Engineer (System operation) and accordingly any necessary suggestions shall be forwarded for necessary modification (if required). The scheme shall be approved within 15 days. After approval of the scheme, go ahead for the execution of work shall be given.
- iii. After receiving go ahead for execution of work, the Third Party Utilities (RE Generators/ Transmission Utilities/ Other System Utilities) may raise request to M/s Chemtrols Industries Pvt. Ltd. (OEM of SCADA) for the integration of data in the SCADA. Only M/s Chemtrols Industries Pvt. Ltd. (OEM of SCADA) which also executes overall AMC of SCADA of BSPTCL is authorized to carry out the integration work in SCADA Control center at SLDC. M/s Chemtrols Industries Pvt. Ltd. will quote the justified rate. The work order for the integration of data to SCADA placed by the Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) to M/s Chemtrols Industries Pvt. Ltd. shall be submitted to Chief Engineer (System operation). After the submission of the work order, go ahead for the integration of SCADA Data shall be given by BSPTCL to M/s Chemtrols and copy of the same will be provided to Third Party (RE Generators/ Transmission Utilities/ Other System Utilities). The charges applicable for integration shall be paid by the RE Generators/ Transmission Utilities/ Other System Utilities to M/s Chemtrols Industries Pvt. Ltd. directly.

- iv. If required, Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) shall be allotted time slot (date and time) to do the installations of Gateway/router/ switches/GPRS Modem etc. at SLDC Control center (detailed procedure mentioned in B. iii) and shall be informed at least 03 (Three) days prior.
- v. After the completion of the integration work, request for the point to point checking and data validation may be raised to SLDC. The same shall be done from the ULDC Department in 03 (Three) working days. After successful integration of data a certificate of integration will be issued from SLDC.
- vi. It is mandatory to do the data validation and point to point checking of data before the First Time Charging (FTC)/Synchronization of the Third Party (RE Generators/ Transmission Utilities/ Other System Utilities). Detailed procedure may be seen in the First Time Charging (FTC) SOP of BSPTCL.

B. Mandatory guidelines to be followed for the process of Data Integration:

- i. The integration of data to SLDC shall be allowed only through Reliable Communication media i.e OPGW Cable and integration to the SCADA is to be done on IEC 104.
- ii. The exemption from installation of OPGW Cable shall only be given in case of difficult terrain/ any other special circumstances.
- iii. In case of exemption from installation of OPGW the Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) shall strictly comply the below mentioned guidelines:
 - a. The Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) shall ensure the availability of real time data of the generating station to 98% or above.
 - b. The integrator shall install a firewall at SLDC, SCADA Server to ensure the cyber security of SCADA System. One combined firewall is to be installed by each system integrator for all the RE Generators/ Transmission Utilities/ Other System Utilities integrated through it and the Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) shall ensure the compliance.
 - c. The system integrator shall perform the cyber security audit and VAPT of the integrated system and peripheral devices annually by CERT empaneled agency with prior information to BSPTCL and it is also requested to submit the action taken report against vulnerabilities raised during performed audits and Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) shall ensure the compliance.
 - d. Installation of Gateway/Router shall be done properly and the termination of cables shall be done through cable trench/ proper channel. There shall be tagging on the initial and final points of cable.

- e. The Third party (RE Generators/ Transmission Utilities/ Other System Utilities) shall comply any new regulations of IEGC/BERC/CERC etc regarding the data telemetry, safety and cyber- security.
- iv. Checklist for the integration of data is attached as Annexure-I.
- v. Integration Certificate shall be issued to the Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) after successful completion of the integration of data to main and back-up control center.
- vi. Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) shall also be responsible for expansion/up-gradation as well as operation and maintenance of communication equipment owned by them including the routers, modem and other equipments installed by them at SLDC.

Case II: Third party (RE Generators/ Transmission Utilities/ Other System Utilities) already integrated to SCADA

- If the data of the Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) is communicating to SLDC through OPGW cable the RE generator shall ensure 98% or above availability of data.
- If the data of the Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) is communicating to SLDC through GPRS then third party has to follow the following guidelines:
 - i. Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) shall submit a plan to Chief Engineer (System operation) to shift the communication to the reliable communication media that is through OPGW Cable in next 02(Two) months.
 - ii. After submission of the action plan the same will be approved from the office of Chief Engineer (System operation) and go ahead for the execution shall be given in 15 (Fifteen) working days.
 - iii. Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) shall do the execution (installation and commissioning of OPGW Fiber and terminal equipment) within 02 (Two) months.
 - iv. After receiving approval, Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) may request to update the configuration in SCADA to M/s Chemtrols Industries Pvt. Ltd. (OEM of SCADA) installed at BSPTCL. M/s Chemtrols Industries Pvt. Ltd. will provide the justified rate for the updating of data to SCADA. The work order for the updating the configuration in SCADA placed by the Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) to M/s Chemtrols Industries Pvt. Ltd. shall be submitted to Chief Engineer (System operation). After the submission of the work order, go ahead for the integration of SCADA Data shall be given by BSPTCL to M/s Chemtrols and copy of the same will be provided to Third Party (RE Generators/ Transmission Utilities/ Other System Utilities). The charges applicable for integration shall be paid by the RE Generators/ Transmission.

- v. Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) may be exempted to switch to OPGW only in special circumstances like difficult terrain etc. with separate approval from competent authority also RE Generators will ensure following in case of GPRS:
- a. The Third party (RE Generators/ Transmission Utilities/ Other System Utilities) shall ensure the availability of real time data of the generating station to 98% or above.
 - b. The integrator shall install a firewall before the SCADA Server at SLDC to ensure the cyber security of SCADA System. One combined firewall is to be installed by each system integrator for all the renewable energy generators integrated through it and the Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) shall ensure the compliance.
 - c. The system integrator/ RE representative shall perform the cyber security audit and VAPT of the integrated system and peripheral devices annually by CERT empaneled agency with prior information to BSPTCL and it is also requested to submit the action taken report against vulnerabilities raised during performed audits and Third Party (RE Generators/ Transmission Utilities/ Other System Utilities) shall ensure the compliance.
 - d. Installation of Gateway/Router shall be done properly and the termination of cables shall be done through cable trench/ proper channel. There shall be tagging on the initial and final points of cable.
 - e. The Third party (RE Generators/ Transmission Utilities/ Other System Utilities) shall comply any new regulations of IEGC/BERC/CERC etc regarding the data telemetry, safety and cyber- security.