



KERALA STATE ELECTRICITY BOARD LIMITED

(Incorporated under the Companies Act, 1956)

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ABSTRACT

Up gradation/ replacement of SCADA/EMS system in the SLDC- Signing MoU with SRLDC/POSOCO - Approval - Orders issued.

Corporate Office (SBU-T)

BO(FTD) No.458/2021/D(T&SO)/PSE/SRPC/SCADA-EMS Upgradn/2021-22, Thiruvananthapuram, dated 18.06.2021

- Read: 1. Letter No. CESO/Tech/SCADA/EMS System Up-gradation 2023/20-21/2056 dated 30.11.2020 of the Chief Engineer (Transmission System Operation).
2. Note no. D(T&SO)/PSE/SRPC/SCADA-EMS Upgradn/2021-22/14 dated.28.05.2021 of the Director (Transmission and System Operation). (Agenda item No. 85/5/21)

ORDER

The Chief Engineer (Transmission System Operation) had reported the following as per letter read as 1st above, regarding the SCADA/EMS system in KSEBL at the Main and Back up control centers:-

- The present SCADA/EMS system in KSEBL at the Main and Back up control centers is in service for the last 5 years and was implemented as part of the SCADA/EMS upgradation project in the Southern region. The Upgradation project was a combined project of SRLDC, APTRANSCO, Puduchery and Kerala with M/s PGCIL as consultant. AMC of the existing SCADA system has completed 3 years. The total period of AMC is 6 years with provision to extend for 2 more years at the same terms and conditions and rate.
- The existing SCADA is lacking several functionalities that are required in the present scenario of increasing penetration of RE and market structures. The operating system of the servers, work stations etc have become obsolete and the threat to cyber security exists.
- In the 170th OCC (Operation Coordination Committee) meeting held on 11.09.2020, there was discussion by POSOCO (Power System Operation Corporation Limited) on whether to go for a new SCADA system or to upgrade the existing SCADA. POSOCO further proposed to go ahead with the

upgradation/replacement of existing SCADA system at RLDCs in a unified manner citing advantages such as uniform technology implementation at all SLDCs and RLDC, cost effective upgradation, coordination by a nodal agency, simplified interfacing and compatibility among systems etc. A detailed discussion was held with the Southern Region (SR) constituents on 21.9.2020 . The matter was also discussed in the TCC meeting of SRPC held on 28.10.2020.

- In the meeting held with the Southern Region (SR) Constituents on 21.9.2020, it was pointed out that the existing SCADA systems in all SLDCs (except Karnataka) are completing 5 years of service. Several advance features facilitating increased grid management requirements were incorporated in the existing SCADA system which was commissioned during 2015-16. The faster rate of grid expansion combined with the continuous evolution of cyber security techniques have necessitated upgradation of the system to accommodate the new requirements. Hence the upgradation/replacement of existing SCADA/EMS system at RLDCs was proposed with a commissioning time frame of early 2023 and it was cited that the proposal was in line with CERC's approved life cycle of 7 years for SCADA/IT systems. It was also informed in the meeting that the unified upgradation framework includes implementation of SCADA/EMS systems at all SLDCs & RLDC in a region on a common platform based on uniform technical specifications and common time frame of implementation in a coordinated manner. This approach in earlier projects have ensured timely implementation with uniform systems and practices without any issues related to interoperability, data base updation and maintenance, optimised spare availability etc. It also provides economy of large-scale procurement for all the entities in Southern region. KSEBL welcomed the proposed unified model of SCADA/EMS upgradation and intimated willingness to partner with POSOCO and informed that the proposal would be put up, for in principle approval from the Management.
- The SRLDC shared the following details towards the upgradation of SCADA/EMS system:-
 - POSOCO to provide consultancy services for the project without any consultancy charges.
 - The upgradation would be carried out in unified mode for all the SLDCs and concerned RLDC in a region.
 - SLDCs and RLDC to award and execute their respective part of SCADA/EMS systems.
 - Preparation of technical specifications and BOQ to be done through a Committee of Technical experts with 1-2 members from each participating entity.

- Tender shall have separate package for each Control Centre (SLDC/RLDC)
- Tendering will be done by POSOCO.
- Letter of Intent would be issued by POSOCO. Letter of Award would be placed individually by the respective entity (SLDC/RLDC) for its portion of SCADA system.
- Project execution to be carried out by the respective entity and all project payments to be done directly by them.
- Project Coordination Committee to be constituted with members of POSOCO and SLDCs for the smooth commissioning of the project.
- Necessary support/hand holding will be provided by POSOCO for the project implementation.
- All the above activities will be collaborated through an MOU between POSOCO & SLDCs.

A draft MoU (appended as annexure) was circulated by SRLDC and POSOCO suggested that all the SLDCs to confirm the agreement formally by signing the MoU after obtaining approval from the respective Management.

The Chief Engineer (TSO) had strongly recommended the proposal of POSOCO of upgradation/ replacement of SCADA/EMS system as per letter read 1 above for the following reasons:-

- The involvement of Technical experts from POSOCO, RLDC and other SLDCs are essential in preparing a foolproof Technical specification for the upgradation of SCADA system, incorporating the future requirements of high RE penetration and essential data analytics requirements and for addressing all the issues which are experienced now. Preparation of specifications independently by the constituents may end up in inter- operability issues and deficiencies in the specification.
- The present system is vulnerable to cyber security threats which are increasing day by day.
- There is no consultancy charge to POSOCO for providing consultancy service for the project.

The Chief Engineer (TSO) had opined that the terms and conditions of the draft MoU appended as annexure is generally acceptable and sought approval for entering into MoU with SRLDC for the upgradation/replacement of SCADA/EMS system by partnering with POSOCO.

The Director (T&SO) has recommended as per note read 2 above to approve the proposal of upgradation/replacement of SCADA/EMS system at SLDC by partnering with POSOCO for a unified SCADA/EMS system in the Southern region. It is also suggested to entrust the Chief Engineer (TSO) to sign the MoU with SRLDC/POSOCO on behalf of KSEBL.

Having considered the matter in detail, the Full Time Directors in its meeting held on 31.05.2021 resolved to approve the proposal of Upgradation/replacement of SCADA/EMS system at SLDC by partnering with POSOCO for a unified SCADA/EMS system in the Southern Region. Further resolved to authorize the Chief Engineer (TSO) to enter in to a MoU (appended as annexure) with SRLDC/POSOCO for the implementation of the same.

Orders are issued accordingly.

By order of the Full Time Directors

Sd/-

Lekha. G

Company Secretary (In-Charge)

Acc: Annexure - Draft MoU between POSOCO and SLDC for Upgradation/Replacement of SCADA/EMS system

To

**The Chief Engineer,
Transmission System Operation**

Copy to:

**The Financial Adviser/ The Chief Internal Auditor.
The Deputy Chief Engineer (IT)
T.A to Director (T&SO)
Company Secretary
Fair Copy Superintendent/Library/Stock File**

Forwarded / By Order



Assistant Executive Engineer