

# **North Eastern Regional Power Committee**

## **Agenda**

### **For**

### **19<sup>th</sup> NETeST Sub-Committee Meeting**

**Time of meeting : 10:30 Hrs.**

**Date of meeting : 20<sup>th</sup> January, 2021 (Wednesday)**

**Venue : “NERPC ”, Shillong.**

#### **A. CONFIRMATION OF MINUTES**

##### **CONFIRMATION OF MINUTES OF 18<sup>th</sup> NETeST Meeting held on 26.09.2020.**

The minutes of 18<sup>th</sup> NETeST Meeting held on 26<sup>th</sup> September, 2020 at Shillong were circulated by NERPC vide letter No. NERPC/SE(O)/TeST/2020/1509-1545 dated 4<sup>th</sup> November, 2020.

*NERLDC vide letter dtd. 10.11.2020 has requested for modification in the Minutes of 18<sup>th</sup> NETeST meeting held on 29<sup>th</sup> September 2020. A copy of the aforesaid letter is attached as **Annexure- I**.*

#### **ITEMS FOR DISCUSSION**

##### **A.1 Status of FO works under different projects:**

Latest status as per 18<sup>th</sup> NETeST:

<b>Project</b>	<b>States</b>	<b>Current Status</b>	<b>Comments/ Issues</b>
<b>MW Vacation &amp; OPGW Project</b>		Completed except 1 links. (Zimabawk2 end of) Zemabawk2-Aizawl- Front not ready) Target Nov2020.	Latest Status to be updated.
<b>NER FO Expansion</b>	<b>Tripura</b>	132kV Palatana - Udaipur	Latest Status to be updated.
		132kV Udaipur - Rokhia (GTP)	
		66kV Udaipur - Gumti HEP	
		66kV Gumti HEP - Amarpur	
		132kV Rokhia - Surjamani Nagar	
		132kV Surjamani Nagar - Monarchak (NEEPCO)	

	<b>Meghalaya</b>	132kV NEHU - NEIGRIHMS	Parallel routing to be done by POWERGRID-NERTS for diversion of traffic and carry out works of this link.
	<b>Mizoram</b>	Aizawl – Zemabawk I	Latest Status to be updated.
	<b>Nagaland</b>	132kV Kohima - Wokha	OPGW stringing completed but end equipment not commissioned.
		132kv Kohima (132kV) - Kohima (220kV)	LILO of Kohima-Wokha at New Kohima pending from DoP-Nagaland side.
		132kV Doyang- Sanis Target: Feb/March 2021.	

In addition to the above links NERLDC requested NERTS to further update the status of the links given below:

	Link Name	Utilities	Remarks
1	400kV Bongaigaon (PG) - 220kV Salakati - 220kV BTPS	NERTS	Target completion is February -March 2021.  Latest Status to be updated.
2	400kV Mirza (Azara) – Byrnihat		
3	400kV Silchar – Palatana		
4	132kV Jiribam (PG) (Manipur) - Loktak (NHPC)		
5	P.K. Bari (TSECL) - LILO of NETCL Belonia		
6	132kV Pare – Chimpu		
Manipur State Sector			
1	132kV Imphal (State) – Karong	MSPCL and NERTS	Completion by November – December 2020.  MSPCL may confirm about completion of diversion part of Imphal(State)to Karong line
2	132kV Yaingangpokpi – Hundung		
3	132kV Loktak (NHPC) – Rengpang		
4	132kV Jiribam - Jiribam (State)	NERTS	

**Members may please discuss.**

**B. NEW ITEMS**

**B.1 Strengthening of PLCC System by NER States:**

In 18<sup>th</sup> NETeST meeting Director, NERPC requested states to update the progress on strengthening of PLCC systems. The summary of discussion is mentioned below:

S N	States	Status as per 18 <sup>th</sup> NETeST meeting
1.	Meghalaya	Digital PLCC project under PSDF completed. Almost all stations are having PLCC backup. Installation of Data-Concentrator at Mawlai Station delayed due to COVID-19.
2.	Tripura	Proposal for PLCC links for all important stations through PSDF funding. EE, NERPC requested TSECL to give the PLCC Scheme to the committee for concurrence. Based on that they can place the DPR to NLDC for PSDF funding.
3.	Manipur	Approval for PLCC strengthening proposal is pending.
4.	Nagaland	PLCC installation work completed. Commissioning delayed due to COVID-19.

All new Utilities as are being connecting in NER grid like KMTL, STERLITE etc., are also requested to keep a redundant path of data through PLCC wherever feasible.

***Members may please discuss.***

**B.2 Status of URTDSM**

The status on various issues related to URTDSM and other PMU related matters needs to be updated to the forum as listed below (pending since 17<sup>th</sup> NETeST Meeting):

**AEGCL:**

- PMU in Agia station is not reporting to Assam-SLDC due to SAS upgradation activities.

**NERTS :**

- Installation of pending analytical application: 1 analytical application for Control schemes for improving system security is still pending. NERTS mentioned that it will take up the matter with NR-1 RHQ team of POWERGRID.

***NERTS and AEGCL may please intimate the latest status***

**B.3 GPRS connectivity for substations and Leased Line for SLDC:**

Many stations which are still working on GPRS for real-time data transfer are: –

**Tripura:** PK Bari, Dharmanagar, Gamitilla, Ambassa, Rabindranagar, Satchand, Belonia, Bogafa and Amarpur (Note: These configured stations are not reporting consistently at NERLDC)

**Manipur:** Tipaimukh and Jiribam (Note: These configured stations are not reporting consistently at NERLDC)

**Nagaland:** Nagarjan, Mokokchung, Kohima and Powerhouse (Note: These configured stations are not reporting consistently at NERLDC)

**Mizoram:** Luangmual and Zuangtui (Note: These configured stations are not reporting consistently at NERLDC)

As per the Technical Standards for Communication System released in 2020 by CEA, the following major points need to be followed –

- Cellular communication may be used for data acquisition system, where feasibility of access to wideband network is not possible.
- Cellular communication shall be adopted after ensuring the available signal level up to the required strength and dual or more Subscriber Identification Module (SIM) with different service provider with automatic changeover to ensure 99.5 per cent link availability for interruption free operation of the communication system.
- Router shall be capable of handling Virtual Private Network (VPN) based security by assuming a fixed IP issued by the Multi Wide Area Network Virtual Private Network (WAN VPN) concentrator at the supervisory control and data acquisition (SCADA) end.
- Device shall have capability to decide and act according to the best available link in redundant mode configuration with automatic switch over.
- Design shall be for satisfactory and continuous operation in open environment with operating temperature range of -10 deg. C to 55 deg. C and humidity up to 95 per cent. Non-condensing.
- Other technical and cyber security compliances.

NERLDC request all the constituents using GPRS or other cellular communication technologies to please submit compliance on the above-mentioned regulations.

***Member may please discuss.***

**B.4 Selected cases of sub-stations for rectification of corresponding data/communication related issues:**

Utility	Station	Latest Status/ Issues
NEEPCO	Ranganadi-2 <sup>nd</sup> channel	BNC link completed. NEEPCO to connect PLCC link up to BNC wide-band node.
NTPC	BgTPP	No VOIP at unit control room (3 no.) NTPC to extend telephone inside their premise and discuss with NERTS (for any port) and get it done. NTPC had given assurance in 18 <sup>th</sup>

		NETeST that it will be completed soon.
<b>OTPC</b>	Palatana	OTPC to ensure 2nd channel up to next wide band node (Silchar) through PLCC as discussed in earlier NETeST. For configuration of 2nd port of RTU, OTPC will take up with BHEL.
<b>NHPC</b>	Loktak	RTU procurement underway. PO placed. Delayed due to COVID-19.

***All constituents may please intimate the status.***

#### **B.5 VSAT For Roing Tezu Namsai:**

In the 18<sup>th</sup> NETeST meeting, NERTS mentioned that after repeated extension of bid and persuasion, with help & intervention of NERPC (matter taken up with highest authority of bidder), the party has ultimately quoted in bid floated. Earlier, the party mentioned various reasons due to COVID19, difficulty faced in NER and bids were extended multiple times. The same will be evaluated soon for LOA placement. Target for award is Nov'20. Completion by 4 months w.r.t LOA (as per party).

***NERTS may please intimate the status.***

#### **B.6 Integration of Dikshi HEP real time data and pending Voice communication:**

M/s Devi Energies Private Limited informed that purchase-order was placed for PLCC equipment to be placed in Dikshi, Tenga and Balipara (PG) stations but it delayed due to COVID-19 pandemic situations.

NERLDC apprised the forum that M/s Devi Energies Private Limited informed NERLDC via letter as attached Annexure-B.12 (of 17<sup>th</sup> NETeST meeting MoM) that they would install Session Initiated Phones (SIP) for establishing voice-communication between Dikshi/Tenga and Arunachal Pradesh-SLDC until the PLCC equipment is commissioned.

***DoP, AP and M/s Devi Energies Pvt. may please intimate the status.***

#### **B.7 Automatic Generation Control(AGC) in Indian Grid:**

NERLDC informed the forum that as per the CERC order on AGC, all the ISTS stations need to get connected with NLDC for receiving AGC signals. The status is as follows:

<b>Sl. No.</b>	<b>Station Name</b>	<b>Status as in 18<sup>th</sup> NETeST</b>
1.	BgTPP	AGC operational for Unit 1 & 3. For Unit #2 C&I works alongwith wiring to be done. By Nov'20
2.	AGBPP	Siemens requested for some data from DVR of each unit. Units are of Mitsubishi and BHEL/GE-make and require OEM visit. Have received offer from BHEL. Delayed due to COVID-19.
3.	Loktak	Purchase-order has been placed to Andritz Hydro. Target Date: <b>By Oct. 2020.</b>

***Members may please discuss.***

**B.8 Status of RGMO to the Load Dispatch Centers:**

NERLDC requested that all generating stations of NER needs to provide the RGMO related “ON/OFF” status to the SLDCs/NERLDC which is required for real-time grid operation as well as post-dispatch analysis.

In the 18th NETeST meeting, NTPC representative informed the forum that RGMO status of Unit 1 & 3 is going to NLDC through AGC line. NERLDC requested NTPC to extend the RGMO status of Unit 2 to NERLDC.

DGM, NEEPCO informed the forum that they require visit from OEM, BHEL and Mitsubishi. BHEL has not responded till now and visit by Mitsubishi Japan will take time due to COVID19.

***Members may please discuss.***

**B.9 Status of FSC in stations of NER:**

NERLDC mentioned that the real-time ON-OFF status of FSCs in Balipara station is required for grid operation purposes.

NERTS requested NERLDC to provide a list of signals required from the site corresponding to FSC set-up and the same data will be configured and provided after checking the requirement at the site (as per practice followed in the other region). The list of required points was provided by NERLDC to NERTS.

***NERTS may please intimate the status.***

**B.10 Improvement of data availability of NER:**

SN	Utility	Stations Not Reporting	Latest Status/ Issues
1	Assam		Impacted due to SAS upgradation work
2	Tripura	Dhalabil, Badarghat, Baramura, SM Nagar, BJ Nagar	Links completed. Voice and data configuration pending.
		Gumti, Amarapur, Rokhia	Nodes are now reporting.
		Sabroom, Satchand	Island FO link. Needs PLCC to bring data to WB location Udaipur.
		13 station not covered by NERFO	TSECL to submit action plan for remaining 13 stations.

		expansion project	
3	<b>Meghalaya</b>		Proposal moved by MRT team for procurement of DI card. Matter of PSDF funding may be taken up with NERPC.
5	<b>Manipur</b>	Jiribam	To be shifted from GPRS to OPGW.
		Churachandpur, Kakching	Issues at communication panel to be rectified with help from NERTS.
		Tipamukh	NSK-5 Modem to be installed at Tipamukh for Tipaimukh-Jiribam PLCC link.
		Rengpang	Integration with OPGW pending
		Elangkokpki, Thoubal	Needs to be configured in SCADA database and RTU installation needs to be done.
6	<b>Nagaland</b>	Nagarjan, Kohima and Mokokchung	Shifting from GPRS/ BB to FO link pending.
		Wokha	RTU is not working.
		Sanis	RTU installed. DOP taken for PLCC
		Melrui	Proposal for RTU pending with higher management.
		PLCC	Status of project may be updated.
7	<b>Mizoram</b>	Luangmual,	Reporting partially over GPRS.
		Zuangtui	BSNL ISP will be installed at Mizoram-SLDC by 03rd July 2020.
		Kolasib	RTU delivered. Installation pending by NERTS. Delayed due to COVID-19.
		Saitual, Khawzawl, Champai, Serchhip, Lunglei	Entire station not modelled at SLDC.
8	<b>Ar. Pradesh</b>		Materials for VSAT received for 8 stations. Installation delayed due to COVID-19. Progress and target dates needs to be updated.

As recorded in the MoM of the 15<sup>th</sup> NETeST meeting and 16<sup>th</sup> NETeST meeting, some of the monitoring actions to be taken by NERPC are listed below –

- Team to be formed by NERPC for close monitoring of progress in SAS related works.
- Letter from NERPC to MD-AEGCL to expedite the completion of SAS works.
- Pursue the matter with higher authorities of AEGCL that the target-dates should be strictly followed by AEGCL.
- AEGCL to present the scheduled target-dates and present status of the work-progress in SAS upgradation of its stations. The issue has been reported by NERLDC to

MD-AEGCL vide letter ref. NERLDC/SL/SCADA/Assam/Aug'20/385 dated 04th August 2020 with a copy to CGM (Assam, SLDC) but no reply has been received yet.

***Members may please discuss.***

**B.11 Status of connecting Backup NERLDC (Guwahati) on ULDC network:**

In the 18<sup>th</sup> NETeST meeting, NERTS informed the forum that tender documents etc., are sent to C&M and same is under tendering and tentative target is 3months.

***NERTS may please intimate the status.***

**B.12 Feasibility to connect Lekhi substation over Fiber-Optic network:**

In the 18<sup>th</sup> NETeST meeting, DGM, NERTS informed the forum that Equipment for Lekhi (new node) has been considered for amendment in NER FO Expansion Project (Equipment package) and amendment has already been issued to FIBCOM. The supply of equipment is also delayed due to COVID19 with target date as March, 2021.

***DoP AP, NERTS may please intimate the status.***

**B.13 Status and details of Fiber Optic projects approved in 17th TCC/RPC meeting:**

Two number of projects were approved in 17th TCC/RPC meeting held on 04th October 2016 at Imphal. The projects which were approved are listed below:

- a. Agenda no. A.11 of 17th RPC/TCC meeting, Additional Communication Scheme (755km)
- b. Agenda No. A.12 of 17th RPC/TCC meeting, Reliable Communication Scheme (2124 km - Central sector)

Status as per 18<sup>th</sup> NETeST meeting

a. Additional Communication Scheme:. Approximate target completion/Closing date is Dec2021 as projected keeping in view various insurmountable constraints.

b. Reliable Communication Scheme: The project/package is yet to be awarded. Under tendering/Award stage. Delayed due to COVID19.

***NERTS may please intimate the status.***

**B.14 Upgradation Activities of SCADA-EMS systems at Regional/State level in North Eastern Region:**

The management of POSOCO has decided to provide consultancy at no-cost for the SLDCs to plan and execute the upgradation of SCADA/EMS systems which needs to be



completed by 2024 as per the expiry of seven (07) years life-cycle (as per CERC guidelines) of existing Software/Hardware systems at respective Control Centre.

The Corporate Engineering department has prepared a Memorandum of Understanding with detailed responsibility matrix and the same is attached as **Annexure B14** for kind information and consideration by the SLDCs.

***Members may please discuss.***

**B.15 Cyber Security aspects in SCADA/IT systems at Load Despatch Centres in North-Eastern region:**

A meeting among RLDCs and NLDC headed by Corporate Chief Information Security Officer of POSOCO was held on 12<sup>th</sup> January 2021 on Webex Online Platform in which it was mentioned that the Intelligence Bureau (IB) is doing the audit of the IT Systems deployed in RLDCs/NLDC and has conveyed that all the Load Despatch Centres which are connected to the RLDCs and NLDC shall put efforts to keep the systems secure for any cyber threats.

The SLDCs and NERLDC are performing the mission critical functions of grid operation activities in North-Eastern region to ensure the smooth and reliable operation of the power system network. The SCADA/ EMS and IT systems deployed in the SLDCs are prone to cyber-attacks and all necessary precautions need to be taken for its cyber security.

As the SCADA and IT systems of SLDCs and NERLDC are working in an inter-connected manner in terms of various data/file exchanges related to real-time SCADA data, Web-scheduling, information dissemination through web-sites, intranet portals, etc.; hence, it is advisable to ensure that at least following checks and measures are in place from SLDCs side for cyber security purposes in the IT System –

- **Deployment of Firewalls with stringent policies**
- **End-point security solutions for all devices**
- **Vulnerability Assessment and Penetration Tests (VAPT) and its compliance on yearly basis**
- **Patch Management for all software and devices incl. Operating Systems**
- **Replacement of End-of-support products**
- **SSL certificates for all web-hosted applications**

***Members may please discuss.***

**B.16 Transition from 101 to 104 for MW Vacation assets:**

In 173<sup>rd</sup> OCCM S.E., DoP Nagaland stated that the links which have been switched from MW Vacation to fiber still is on 101. He requested for the transition to 104 to be completed at the earliest. After detailed deliberation the forum referred the matter for discussion in the next NETeST meeting of NERPC.

***Members may please discuss.***

**B.17 LILO of ULDC fibers at 132KV Karimganj (132 KV Badarpur-Kumarghat line):**

With reference to the above, it is for your kind information that AEGCL is constructing a LILO line to 132 KV Karimganj substation from 132 KV Badarpur-Kumarghat line (PGCIL). As such ULDC fibers are required to be made LILO at 132KV Karimganj for fiber optic communication with OPGW and associated equipment. Necessary SDH and Drop Insert multiplexer to connect Kumarghat substation and Badarpur substation with LILO 132KV Karimganj Substation will be taken care by AEGCL. AEGCL shall also take care for minimum outage during splicing of the existing OPGW fibers.

With reference to the above AEGCL has informed the following: -

- Existing protection panel (BPL make) between Kumarghat and Badarpur to be shifted from Badarpur to Karimganj for establishing protection link between Karimganj and Kumarghat.
- A DPLCC panel (SIEMENS make) will be shifted to Badarpur PG GSS from Srikona(AEGCL) for the establishment of communication link between Badarpur and Karimganj
- Old BPL panel for 132kV Panchgram- Badarpur at Badarpur to be dismantled and new MUX panel to be installed.
- Existing PLCC panel (BPL make) at Kumarghat to remain as it is.
- MUX panel to be set up at Kumarghat(PG) for OPGW connectivity by AEGCL.

***For kind information.***

**Any other item:**

**Date and Venue of next NETeST:**

It is proposed to hold the 20<sup>th</sup> NETeST meeting of NERPC on second week of April 2021. The date & exact venue will be intimated in due course.

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AGREEMENT BETWEEN  
POWER SYSTEM OPERATION CORPORATION LIMITED  
AND  
STATE LOAD DESPATCH CENTRE, .....

FOR  
UPGRADATION / REPLACEMENT OF SCADA/EMS SYSTEM

## AGREEMENT

THIS AGREEMENT is made on this day..... of 2020 between Power System Operation Corporation Limited(POSOCO) having its Registered office at B-9, Qutab Institutional Area, New Delhi -110016 (hereinafter referred to as the "Consultant" which expression shall unless repugnant to the context or meaning thereof include its administrators, successors, executors and permitted assigns) of the first part.

And

State Load Despatch Centre, having its Registered Office at <.....(ADDRESS)>, (hereinafter referred to as "Owner" which expression shall unless repugnant to the context or meaning thereof include its administrators, successors, executors and permitted assigns) of the second part. .

(POSOCO and SLDC are hereafter individually referred to as the 'Party' and collectively as 'Parties')

WHEREAS, SLDC desires to obtain consultancy services separately for Upgradation / Replacement of SCADA/EMS system installed at SLDC, Back-up SLDC and Sub-LDCs.

AND WHEREAS POSOCO has consented to provide consultancy services to SLDC for Upgradation/Replacement of its SCADA/EMS systems as mentioned above, on terms and conditions stipulated herein.

NOW THEREFORE THIS DEED WITNESSETH AS UNDER:

For the purpose of this agreement, terms used herein shall unless repugnant to the context thereof shall have the meaning assigned to them as under:

### DEFINITIONS

1.1 "Agreement" shall mean the agreement herein containing the Terms & Conditions set forth & agreed therein, including all other documents expressly annexed thereto or incorporated therein.

1.2 "Project " shall mean and comprise the following:

- i) Upgradation/Replacement of existing SCADA/EMS system at SLDC / Back-up SLDC and Sub-LDCs
- ii) Integration of existing and future direct reporting RTUs with Main & Back up SLDC control centres.
- iii) Integration of SLDC(Main & Back up control centres) with RLDC Main & Backup control centres.

- 1.3 "Bid Documents" shall mean the tender documents prepared by Consultant consisting of technical specifications and other terms & conditions of contract ( GCC, SCC etc.) pursuant to which Consultant shall invite tender for procurement of goods and services for the project.
- 1.4 "System Integrator" shall mean the Bidder whose bid is accepted by the Consultant for the award of Contract for the total work or any part of the work of the project resulting in a Contract and shall include such System Integrator's legal representatives, successors and permitted assigns.
- 1.5 "Nodal Officers" shall mean the official nominated by the Consultant on behalf of the Consultant and by the Owner on behalf of the Owner in writing, who shall be responsible for co-ordination of all activities concerning the execution of the project.
- 1.6 "Equipment/material" shall mean the equipment/materials procured by SLDC for this work.
- 1.7 "Site" shall mean the location identified by the Owner at which the project is to be executed, which may be allocated or used by the Owner / System Integrator in performance of their work under this Agreement.
- 1.8 Words denoting singular only shall also include plural and vice-versa, where the context so desire.

## 2.0 SCOPE OF SERVICES

### 2.1 SCOPE OF SERVICES TO BE PERFORMED BY the Consultant

The broad scope of services to be rendered by the Consultant for execution of the project under this Agreement will be as under:

- i) Design & Engineering of SCADA/EMS system duly considering the Owner's System requirements along with its future requirements.
- ii) Preparation of all Bid documents including technical specification, BOQ, Qualifying Requirements in consultation with the Owner.
- iii) Preparation of common bid document including all SLDCs & RLDC for award & execution of SCADA/EMS systems in a unified mode.
- iv) Preparation of NIT cost estimate, Conditions of Contract, GCC, SCC, etc.
- v) Evaluation of bids including recommendation of award, pre-award discussions, preparation of draft LOA, draft contract agreement. However, placement of award on System Integrator(s) and contract signing is to be done by the Owner along with subsequent contract amendments, if desired so.
- vi) Review and approval of System Integrator's drawings/documents.
- vii) Assistance in project management in order to have the implementation of the agreed contract as per schedule, supply of all the materials and equipment and assistance in supervision at site for installation, testing & commissioning of the equipment. However, overall coordination for the project management activity shall be done by the Consultant.

- viii) Association in witnessing of testing of equipment/materials at test laboratory, factory (FAT), review of test reports and inspection of materials at manufacturer's works or site along with the Owner.
- ix) Association in testing for exchange of data with RLDC for, RTUs / SAS coming up with new protocols.
- x) Any other technical inputs required for smooth execution of the project is deemed to have been included in the scope of service.
- xi) The specific roles and responsibilities of the Consultant and the Owner is attached at Annexure I.

## 2.2 EXCLUSION FROM CONSULTANT'S SCOPE OF SERVICES

- i) Placement of award on System Integrator(s) and signing of contract with System Integrator(s).
- ii) Certification of bills and release of payments to System Integrator(s).
- iii) Issuance of dispatch clearances (CIP/MICC), site acceptance
- iv) Final acceptance/clearance of test reports.
- v) Issuance of Post-contract amendment (if any).
- vi) Ensuring timely availability of infrastructure, Air conditioning, Firefighting, Power Supply etc.
- vii) Final acceptance of installation & commissioning.
- viii) Maintenance of the system.
- ix) All statutory clearances from Statutory Authorities including issue of necessary notification(s).

## 3.0 WORKING PROCEDURE

- 3.1 On signing of this AGREEMENT, the concerned SLDC shall issue a letter of intent to POSOCO informing intent of availing a consultancy for the Upgradation/ Replacement of its control centre ,back-up control centre & Sub LDCs.
- 3.2 On receipt of the letter of intent and based on the broad scope of work, the Consultant shall finalize the BOQ in consultation with the Owner. Within two months from the date of finalization of BOQ, Consultant shall furnish the cost estimate of the project and time schedule for various activities for implementation of the project.
- 3.3 The Consultant shall provide the consultancy as defined in clause 2.1 above. To enable the Consultant to discharge their functions in a smooth and efficient manner, the Owner shall issue necessary authorization in favour of the Consultant to act on their behalf for the scope of services under this Agreement.
- 3.4 To ensure proper co-ordination between the Consultant and the Owner for carrying out the works under the scope of this Agreement both the Owner and the Consultant shall nominate their respective Nodal Officers which shall be the focal point for all matters relating to this agreement.

- 3.5 The timeline needs to be adhered to as the unified approach has been taken for SCADA/EMS Upgradation/Replacement and timely consent by SLDCs will facilitate smooth implementation of the project.

#### 4.0 FUNDING OF THE PROJECT

- 4.1 Consultant shall commence the work under this Agreement after the receipt of the letter of intent duly signed by the authorised representative of the Owner.
- 4.2 The Owner shall fund the project and release timely payment to the System Integrator as per the contract agreement signed between the Owner and the System Integrator.

#### 5.0 AWARD OF CONTRACT (METHODOLOGY)

- 5.1 For the purpose of execution of work under this agreement, the entire work of the project shall be in one package only. Accordingly, the Consultant shall prepare the bid documents after duly incorporating the suggestions of the Owner & submit to them for final approval. On receipt of approvals from all the SLDCs issuance of NIT and other tendering activities will be taken up by the Consultant. The bids shall be made available at the Consultant office, Qutab Institutional Area, New Delhi for evaluation of the same by the Consultant.
- 5.2 Tender documents to be prepared by the Consultant shall have a provision of Annual Maintenance Contract (AMC) of SCADA/EMS system for 6(Six) years after warranty period of one year. However, the Warranty & AMC shall be operated by the Owner directly.
- 5.3 Bid evaluation and selection of the successful bidder for the combined project, which includes concerned SLDCs & RLDC of the respective region, shall be done by the Consultant. Consequently, the Consultant shall issue a Letter of Intent(LOI) to the successful bidder for the combined project.
- 5.4 After the issuance of LOI for combined project by the Consultant, all the concerned Owners(SLDCs) shall place their respective Letter of Award(LOA) for implementation the SCADA/EMS system related to their portion and contract agreement shall be signed accordingly.

#### 6.0 PROJECT COST

The Project cost shall include:

- 6.1 The cost of all equipment and services as paid to the System Integrator(s) or any other agency as required under the sub-contracts, if any, to be placed by the Owner for executing the project plus applicable taxes & duties.

6.2 There will be no consultancy Fees payable to the Consultant for the services provided towards consultancy as mentioned above.

## 7.0 TIME SCHEDULE

7.1 The completion schedule to be incorporated in the bid documents will be reckoned from the date of award i.e issuance of LOA by the Owner for execution of the project. During this period, drawings/documents submitted by the System Integrator shall be approved by the Consultant progressively as per requirement.

7.2 Delay in any work will affect the completion schedule and therefore, the period of implementation of this Agreement shall be deemed to have been extended to cover such delay as may occur.

7.3 If by reason of extra or additional work or any industrial dispute or any cause or causes outside of and beyond the reasonable control of the Consultant, the work is delayed or impeded, the delayed period shall be construed as automatic time extension.

7.4 This agreement shall remain valid for a period of five (5) years from the date of signing of this agreement. Renewal if required shall be done on mutual agreement between the Consultant and the Owner. Individual SLDC project time schedule will be agreed while forwarding cost estimate for the project as brought out in para 3.0 of this agreement.

## 8.0 PROGRESS REVIEW MEETINGS

A quarterly Engineering progress review meeting shall be held at the level of the Nodal Officers of both the parties at mutually agreed places,

## 9.0 FACILITIES / INFORMATION TO BE PROVIDED BY "OWNER"

9.1 All necessary information data and facilities as may be required by the Consultant in connection with services shall be promptly rendered by the Owner under this agreement.

9.2 The Owner shall give their views on all matters pertaining to this project as may be referred to by the Consultant from time to time within a reasonable time which would normally not exceed fifteen(15) days and shall discharge faithfully all its obligations.

9.3 Any statutory clearance/Right of way, provision of space required for establishment of the control centre along with AC power source shall be arranged by the Owner.

## 10.0 FORCE MAJEURE

10.1 Force Majeure is hereby defined as any cause, which is beyond the control of Consultant or the System Integrator or the Owner as the case may be, which they could not foresee or with a



reasonable amount of diligence could not have foreseen and which substantially affects the Performance of the work including, but not limited to the followings:

- i) Natural phenomena including but not limited to floods, droughts, earthquakes, epidemics etc.
- ii) Acts of any Government, domestic or foreign, including but not limited to war, declared or undeclared, priorities, quarantines, embargoes etc.
- iii) Hostilities, revolutions, riots, civil commotions, illegal strikes, including in the premises of the System Integrator.

10.2 The Consultant shall not be liable for any delay in performing its obligation resulting from force majeure causes as referred to and/or defined herein above. The date of completion will be extended by corresponding period equal to the period of force majeure if the situation so warrants and by such period to be mutually agreed to by Consultant and the Owner. Should one or both parties be prevented from fulfilling their obligations by the state of force majeure lasting for a period of three months both the parties shall consult each other and decide as to further course of action.

## 11.0 TERMINATION OF AGREEMENT

11.1 Generally, this agreement shall be irrevocable and shall not be terminated once executed before expiry of the term of contract as specified in Clause 7.4 of the agreement.

11.2 In the event, when both the parties mutually agree to terminate the agreement on account of force majeure or any other reason, termination shall take effect from the date and time to be agreed upon mutually.

## 12.0 SETTLEMENT OF DISPUTE

12.1 This agreement shall be governed by & construed in accordance with the laws of India.

12.2 This Agreement shall be subject to the jurisdiction of the courts of New Delhi.

## 13.0 AMENDMENT

This agreement may be amended or modified, if necessary, by a written instrument signed by both the parties and the same shall be considered as an integral part of this document.

## 14.0 EFFECTIVE DATE

This agreement shall be deemed to have come into force with effect from the date of signing of Agreement. All rights, obligations and responsibilities of the Owner and the Consultant shall be deemed to have commenced and accrued from the said date.

## 15.0 NOTICE of DEFAULT

Notice of default given by either party to the other party under this agreement shall be in writing and deemed to have been duly and properly served upon the parties hereto, if delivered against acknowledgement due, addressed to the signatories to this agreement.

## 16.0 CORRESPONDENCE

16.1 All communications from the Owner to the Consultant shall be addressed to the Nodal officer nominated by the Consultant in writing for the purpose of this work.

16.2 All communication from Consultant to the Owner shall be addressed to the Nodal Officer nominated by the Owner in writing for the purpose of this work.

IN WITNESS WHEREOF, the parties hereto have fully executed these present through their authorized representatives on the Day, Month and Year mentioned above.

For and on behalf of

OWNER

For and on behalf of

POSOCCO

## Annexure-I

Responsibility Matrix

S.No.	Description of Activity	Responsibility Centre	
		Consultant	Owner
	<b>Pre-NIT Activities</b>		
1	BOQ finalization	Y	Y
2	Qualification Requirement	Y	Y
3	NIT Cost Estimate	Y	
4	Tech Spec Preparation	Y	Y
5	Preparation of GCC, Bid proposal Sheet, SCC and other tender documents	Y	Y
6	Issuance of NIT	Y	
7	Preparation of Clarifications, if any, required by the bidder	Y(**)	Y(*)
8	Issuance of Clarifications	Y(**)	Y(*)
	<b>Post-NIT Activities</b>		
1	Bid Opening	Y	
2	Evaluation of Bid	Y	
3	Preparation of recommendation report	Y	
4	Approval of Recommendation Report	Y	
5	Post bid discussions with bidder	Y	
6	Preparation of LOA and Contract agreement	Y(**)	Y(*)
7	Placement of LOI	Y	
8	Placement of LOA		Y
8	Signing of Contract Agreement		Y
	Post-Award activities SCADA/EMS		Y
1	Survey		Y
2	Approval of Design Documents ( FDS )	Y(**)	Y(*)
3	Approval of DRS	Y(**)	Y(*)
4	Submission of data		Y
5	Approval of Testing (FAT & SAT ) Documents	Y(**)	Y(*)
6	Factory Acceptance Test	Y(*)	Y(**)

7	Issuance of MICC / CIP		Y
8	Testing with existing ICCP and Existing RTU		Y
9	Data base and Display development		Y
10	Engg. Inputs for Post-Contract Amendment	Y(*)	Y(**)
11	Post-Contract Amendment		Y
12	Installation and commissioning		Y
13	Site Acceptance Test		Y
14	Issuance of Taking Over Certificate		Y
15	Payment		Y
a. Prime Responsibility : **                      b. Association : *			