Minutes of meeting for Grid Constraints in Assam for the Upcoming Summer Season and the Status of Telemetry held in the conference hall of AERC on 17th of April, 2024 at 11.30 AM.

Members present-

From AERC-

1. Shri Satyendra Nath Kalita, Hon'ble Member (Technical)
2. Shri Alokeswar Bhattacharyya, Hon'ble Member (Law)
3. Shri Manoj Kumar Deka, IAS (Retd). Secretary
4. Shri Nipen Deka, Joint Director (Engg)
5. Shri Jayjeet Bezbaruah, Deputy Director (GEN PPA, P&P)
6. Smt. Jharna Devi, Deputy Director (Engg)
7. Shri Kishore Rajkumar, Assistant Director (IT&RIMS)
8. Shri A.N. Dev Choudhury, Consultant (Tariff)

From APDCL-

1. Shri Rakesh Kumar, IAS, MD APDCL
2. Shri R. Kalita, GM (COM -REV) & GHY ZONE, APDCL

From APGCL-

1. Shri Bibhu Bhuyan, MD APGCL
2. Shri T.C. Basumatary, OSD to MD, APGCL
3. Md. Zakir, CGM (GEN)I/C, APGCL
4. Smt. Pinky Deb, DGM (AUDIT), APGCL
5. Sri Himangshu Das, AGM(REG), APGCL
6. Sri Pankaj Bikash Sarmah, AGM, APGCL

From AEGCL & SLDC-

1. Shri Debajyoti Das, MD, AEGCL
2. Shri Arup Kr. Kalita, CGM, (O&M,LAR), AEGCL
3. Smt. Jayashree Devi, CGM, SLDC and CGM, (O&M,UAR), AEGCL
4. Shri Pragyan Kr. Saikia, CGM, (O&M,CAR), AEGCL
5. Shri Ashutosh Bhattacharya, GM(T&C), AEGCL
6. Shri Rituporna Khargharia, GM (P&D), AEGCL
7. Shri Arup Sarmah, AGM (T&C & COMM), AEGCL
8. Shri Debashish Choudhury, DGM (O), SLDC
9. Smt. Toushita Jigdung, DGM (L), SLDC
10. Shri Rupanka Kishore Goswami, AGM, OSD TO THE MD, AEGCL
11. Smt. Tarali Deka, AGM (TARIFF), AEGCL
12. Shri Asish Kr Das, DM, CAR, AEGCL
13. Smt. Dipmoni Nath, AM (TARIFF), AEGCL

1. The meeting started with the welcome address by the Hon'ble Member (Technical), AERC on the technical concerns raised by MD, APDCL citing the critical constraints in the Assam state grid for the upcoming summer season.
2. A presentation was given by APDCL and the response of AEGCL to the issues was presented by AEGCL subsequently which is summarized as below:
   a) **ISSUE 1: Vulnerability of the 220 KV Rangia-Salakati D/C transmission line.**

      One tower of the 220 KV Rangia- Salakati D/C line which was washed away in the flood has been temporarily restored using Emergency Restoration System (ERS). This has become a vulnerable contact considering the area as flood prone and may happen in the next summer too.

   APDCL's suggestion: Work of installing one permanent tower in the place of the ERS is going on. But it needs to be finished early as monsoon is coming.

   AEGCL's response: The work for construction of the three towers of 220kV Rangia-Salakati transmission line has already been awarded and work is expected to complete by May-June, 2024 subject to shutdown approval.

   b) **ISSUE 2: Overloading in Kahilipara Grid Sub- Station**

      The Kahilipara GSS caters the load of the Capital Area. Total capacity of the 3 nos. of 132 KV Kahilipara- Sarusajai line is 210 MW. Under N-1 scenario, the total capacity is only 140 MW. The demand in those lines has already crossed 200 MW in the last summer. In the past summer also, many a times the Narengi area is removed from these lines and fed from Sonapur GSS which resulted in voltage drop in Narengi. The 132 KV Bus in Kahilipara GSS has capacity of 190 MW. In case of high demand, the bus gets overloaded. Then, 33KV load of Kahilipara is diverted to other GSS. Accordingly shedding may need to be implemented in those GSSs.

   APDCL's suggestion: Capacity enhancement of the lines by replacing the existing conductors by High Temperature Low Sag (HTLS) Conductors. The 132 KV Bus in Kahilipara GSS needs urgent augmentation.

   AEGCL's response: For the enhancement of the capacity of 132 kV Bus at Kahilipara GSS, extra jumpering of the joints is under process as **Temporary measure**. Also,

diversion of around 15-20MW load to 220kV Jawaharnagar and 132kV Kamakhya GIS from 132kV Kahilipara GSS is possible for minimizing the Kahilipara Bus load (This is to be done in consultation with APDCL).

As long-term measures, the capacity augmentation of three numbers of 132kV Sarusajai-Kahilipara line with HTLS is going on and the work is expected to complete by June 2024 subject to shutdown approval from APDCL. As permanent measure, the Bus is to be augmented with HTLS Conductor. Estimate of Rs. 9.5Cr proposals have already been prepared. However, source of fund is being explored.

c) **ISSUE 3: Overloading in Rangia area**

The Rangia GSS presently has 2 (two) nos. of 100 MVA Transformers. The Rangia GSS is feeding other GSS like Tangla, Kamalpur, Sipajhar, Barnagar, Nalbari, Sisugram etc. When the demand rises, the transformers in Rangia GSS become overloaded. As such, shedding need to be implemented in the other above mentioned GSSs.

APDCL's suggestion: One of the two transformers to be replaced by a 200 MVA transformer (augmentation under process) needs to be done before the summer season. Also, work is going on for commissioning of 220 KV Amingaon- Rangia D/C line. This will divert the load from Rangia. But that also needs to be competed at the earliest.

AEGCL's response:

i. The replacement of one no. of 100MVA Transformer at 220kV Rangia GSS with 200MVA is under process and is expected to be reached at site by September-October. AEGCL committed that the works shall be completed by 31st December, 2024.

ii. AEGCL also stated that the commissioning of the 220 kV Amingaon-Rangia line is anticipated to occur by 2nd week of May 2024 (As per PGCIL). If 220kV Amingaon-Rangia comes, n-1 criteria of the Sarusajai-Kahilipara line will be fulfilled.

iii. AEGCL also suggested that as an immediate measure, shifting around 10-15 MW load from Depota GSS to Tezpur GSS, AEGCL will provide relief of this load on Rangia GSS in the upstream. APDCL mentioned that this feeder is already under construction of which around 3kms is pending.

d) **ISSUE 4: Overloading in Depota- Rowta area**

In case of high demand, the 3 (three) nos. of 132 KV lines namely Depota- Sonabil, Sonabil- Ghoramari and Ghoramari- Depota become overloaded. It caused around 20-25 MW shedding in the last summer. The shedding is likely to increase in the coming summer.

APDCL's suggestion: The conductors of these lines may be changed to High Temperature Low Sag (HTLS) Conductors which will enhance the capacity of the transmission lines.

AEGCL's response: Almost 15 MW load have already been diverted from Depota GSS to newly constructed 132 kV Tezpur GSS, as discussed earlier.

Regarding augmentation of the Depota-Sonabil, Sonabil-Ghoramari and Ghoramari-Depota Line with HTLS, DPR is already prepared and submitted to NLDC for PSDF funding. However, due to non-approval of funding through PSDF for FY 2024-25, AEGCL is exploring another source of fund.

e) **ISSUE 5: Curtailment of generation in Upper Assam area**

There are number of generators in the Upper Assam area namely, NEEPCO's AGBPP, APGCL's LTPS, NTPS, NRPP and LRPP and Jakson's Amguri Solar Plant. The total generation is around 420 MW which may increase in case of availability of more gas. But there are only 3 nos. of 220 KV lines and 1 no. of 132 KV line in that area to evacuate this power to the other area of Assam. When demand is less in Upper Assam due to bad weather, the power evacuation to other areas become more. In the past also, generation needed to be back down due to the overloading of the existing evacuation lines.

APDCL's suggestion: Re-commissioning of 220 KV Samaguri- Mariani line may solve the problem.

AEGCL's response: For recommissioning of the 220kV Samaguri-Mariani-I, route survey for diversion of the route (from location no 86 to 194) has been conducted as the line traverses through Hostile terrain of Kaziranga National Park. The report is expected by the end of April, 2024, after which the estimate will be prepared. However, funding is yet to be finalized for recommissioning the line.

f) **<u>ISSUE 6:</u> Construction Delays and Other Issues**:

i. Early Commissioning of Under Construction Grid Sub Stations will help in increasing the reliability.

ii. Early construction of 33 kV bays in the existing Grid Sub Station.

iii. Double Source should mandatorily exist in all GSS (e.g. GMCH, Paltan Bazar GSS, etc.)

iv. Identification and Construction of new GSS as per the joint recommendation of AEGCL and APDCL officials: As an example, the site selection for Panjabari Grid Substation was discussed. MD, AEGCL stated that after extensive search, land could be identified in Narengi. However, APDCL informed that construction of 33kV feeders in this area may lead to severe RoW issues.

v. APDCL also submitted a list of issues identified at divisions all across Assam. (Annexure I)

3. The discussion on the Telemetry Status of Assam started with the Hon'ble Member (Technical), AERC's address citing the poor state of Telemetry Status in Assam which is only 66% overall and emphasizing on the role of SLDC in ensuring telemetry availability in the state.

4. SLDC gave a presentation on the telemetry status which depicted the identified non-reporting points alongwith reasons:

   a) AEGCL: 1178 (Lower Assam: 405, Upper Assam: 442, Central Assam: 331)

   b) APGCL: 118 (KLHEP: 6, LRPP: 2, LTPS: 17, NRPP: 0, NTPS: 22, Myntring Stage-1: 38, Myntring Stage-2: 33)

   c) OAC, CPP, IPP: 74 (JACKSON POWER: 10, CENTURY PLY: 10, PURBANCHAL TIMBER: 14, STAR CEMENT: 1, DALMIA CEMENT (NE), UMRANGSO: 14, DALMIA CEMENT (NE), LANKA: 11, AZURE POWER, BOKO: 2, AZURE POWER, SAMAGURI: 2, AZURE POWER, ROWTA: 2, AZURE POWER, PAILAPOOL: 3, MAHESHWARI MINING: 1, PATANJALI: 3, EMAMI LIMITED, PACHARIA: 1

5. SLDC's presentation also included the status of Redundant links (RL) for the three regions in Assam:

   a) Lower Assam: Total no. of GSS/ Generating plant:35
   (RL available: 11, RL not available: 24, Radial substation: 4)

b) Upper Assam: Total no. of GSS/ Generating plant:33
(RL available (Partial): 8, RL not available: 33, Radial substation: 5)

c) Central Assam: Total no. of GSS/ Generating plant:19
(RL available: 6, RL is going to be available: 2, RL not available: 11, Radial substation: 7)

6. Hon'ble Commission took note of both the matters (i.e. the constraints in the Assam state grid and the telemetry status of Assam) and after discussions with the utilities on the presentations given by them, directed the following:

a) ISSUE 1: The timeline for completion stated by AEGCL as 31st of May, 2024 is accepted and AEGCL is directed to maintain the said timeline.

b) ISSUE 2: A meeting is to be conducted by AEGCL with EPC (for HTLS reconductoring) and APDCL immediately. The matter for Kahilipara bus extra jumpering may also be discussed in the same meeting. Based on the outcome of the meeting, AEGCL shall submit a report on the proposed schedule for carrying out the works (in Pert diagram). Also, the augmentation of the old 31.5 MVA transformer by 50 MVA, which is currently in progress should be completed at the earliest.

c) ISSUE 3: AEGCL shall maintain the committed timeline of 31st December, 2024 for commissioning of the 200 MVA Transformer as this issue has been persisting for a long time. A meeting is to be conducted by AEGCL with PGCIL and APDCL immediately for commissioning of the Amingaon Substation. Subsequently, AEGCL shall submit the actual timeline for completion to the Commission.

In addition to the above, APDCL and AEGCL are to take necessary steps for early completion of the feeder under construction and shifting of load to Tezpur GSS.

d) ISSUE 4: Since this issue has already been discussed in several earlier meetings, AEGCL needs to carry out the restringing of the said lines urgently to resolve the constraint in power flow in the area. The technology is to be finalized on the basis of Cost-Benefit Analysis.

e) ISSUE 5: AEGCL should treat this as a priority project and explore source of fund for carrying out the work at optimum cost.

f) ISSUE 6: Acknowledging the concern raised by APDCL, the Commission recommended that location for new grid substations should be finalized in co-ordination with APDCL as the RoW for outgoing 33kV feeders is of grave importance. The MDs of APDCL and AEGCL may re-look into the location for Panjabari GIS. AEGCL is directed to submit their response on the issues submitted by APDCL (vide Annexure I) and present the same alongwith the action taken report in the follow-up meeting, likely to be scheduled in the 1st week of May, 2024.

g) TELEMETRY:

   i. SLDC is to furnish a weekly report by every Monday to AEGCL, APGCL and APDCL alongwith a copy to AERC (via email) in the format prescribed in Annexure II.

   ii. APGCL and AEGCL shall submit an action taken report to the Commission within 15 days with a target to resolve all issues within 3 months.

   iii. SLDC, in co-ordination with the concerned utilities, shall submit an action plan, depicting in phase-wise manner, with weekly average for achieving 85% availability within three months.

Meeting concluded with thanks offered by the Hon'ble Commission.

Sd/-

Secretary,

Assam Electricity Regulatory Commission,
Guwahati.