**Subject: Agenda for the 58th meeting of the Techno-Economic Subgroup (TESG) scheduled to be held on ……November 2021 at 3 PM through online MS Teams.**

1. **Examination of old Proposals for which inputs submitted by project entities for PSDF funding:** Inputs submitted for Three (3) under examination proposal shall be discussed. The Project summary and observations received from the members are as below:
2. **UPPTCL, Uttar Pradesh: Implementation of Reliable Communication and data acquisition system for OFC connectivity up to 132kV Sub-Stations of UPPTCL. (Proposal No**. **115)**
3. Estimated DPR cost- Rs. 194.00 crores

1. This proposal was examined by the TESG in its 57th Meeting held on 27.09.2021 and following observations were communicated to the entity.

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| **TESG Member** | **Input required** |
| NLDC | 1. List of all OPGW lines along with line length required. 2. Details of existing OPGW is to be provided. 3. Confirmation from entity not to be overlapped in other projects required |
| PSETD | 1. It may be confirmed that proposed communication system shall be integrated with the communication system of the transmission system of PGCIL or other utilities so that nationwide connectivity could be achieved. 2. Utility has to confirm that OPGW, FOTE & RTU are proposed for existing lines/sub-stations only and no under construction/planned line has been included. 3. There are substations to be connected with OPGW, where requirement of RTU and FOTE has been indicated as zero. UPPTCL may clarify how it is going to make use of OPGW facility without RTU and FOTE for such substations else these substations may be removed from the list. 4. Details of the existing communication facilities available for the proposed substations and lines to be provided. 5. Requirement of communication system shall comply with CEA (Technical Standards for Communication System in Power System Operation) Regulations 2020. 6. Target for physical & financial milestones to be specified. 7. Salvage value of the scrap material (existing earth wire and accessories) to be subtracted from the final cost of the project. |
| NPC | 1. Entity may confirm whether it is using SDH based technology or MPLS based technology for this DPR. In case of any change in technology from SDH to MPLS same is to be incorporated in this DPR by revising BOQ and seeking approval from its SERC for adoption of MPLS based technology. **No request for change in technology will be entertained in future.** 2. Copy of Appraisal report (Management approval) is to be provided. 3. Network topology/ power map of UPPTCL showing all existing communication network (OPGW) and proposed communication network (OPGW) in this DPR with different colours is to be provided 4. As earth wire is going to be replaced with OPGW, the salvage value of the earth wire may be provided. 5. Date of commissioning of lines and substations considered in this DPR may be provided. 6. Entity may also ensure cyber security of the system in line with the various Acts and Regulations/Guidelines issued by the Government of India. 7. The entity may also ensure to comply Public Procurement (Preference to Make in India) order and its amendments issued by the Government of India time to time. |
| PGCIL Cost Eng. | 1. NIL |
| CTU Eng. | 1. NIL |
| CTU Plng. | 1. NIL |

1. **Deliberations in the 57th TESG Meeting:**
2. TESG was informed that the entity has recently submitted the map for existing OPGW installation in their network, However, a list of lines in excel format is required. Also the soft copy of BOQ in excel format is asked to be submitted by entity. As per the MoP’s order issued in March 2016, all new lines packages shall include the OPGW installation. Therefore, Entity shall submit the date of commissioning of each line on which the OPGW installation is proposed.
3. CE (NPC), CEA informed that the cost estimate submitted by the entity needs to be examined for its acceptability. NLDC informed that recently one OPGW project has been approved in 2019 for funding through PSDF scheme where the cost considered was on the basis of PGCIL latest SOR.
4. CE (NPC), CEA requested PGCIL (Cost Engg) to examine the DPR cost estimates and provide their comments along with the latest SOR. CTU (Engg.) was also requested to submit the latest LOA available with them for any OPGW project.
5. **TESG decided that above observations may be communicated to UPPTCL by NLDC and proposal will be further examined after submission of the inputs by the entity**.
6. Entity vide letter mail dated 03.11.2021 (Annexure-I ) and 11.11.2021 (Annexure-II) submitted the following inputs:
7. Commissioning date of Substations and lines covered:
8. Fiber Optic Map of UPPTCL:
9. The map for all six zones of UPPTCL
10. Salvage value of Earth Wire:
11. A recent purchase order is enclosed for reference of rates. However, as a matter of practice, earth wire salvaged after stringing with OPGW is received back as scrap@ Rs. 15/- per kg.
12. In view of impending requirement of expansion of the communication system of the State, it is requested that these documents may kindly be put up before the CEA sub-group on expedited basis for assessment and further appraisal.
13. Excel sheet of BOQ (Cost estimates )is provided.
14. Confirmation from entity not to be overlapped in other projects required
15. It may be confirmed that proposed communication system shall be integrated with the communication system of the transmission system of PGCIL or other utilities so that nationwide connectivity could be achieved.
16. Utility has to confirm that OPGW, FOTE & RTU are proposed for existing lines/sub-stations only and no under construction/planned line has been included.
17. There are substations to be connected with OPGW, where requirement of RTU and FOTE has been indicated as zero. UPPTCL may clarify how it is going to make use of OPGW facility without RTU and FOTE for such substations else these substations may be removed from the list.
18. Details of the existing communication facilities available for the proposed substations and lines to be provided.
19. Requirement of communication system shall comply with CEA (Technical Standards for Communication System in Power System Operation) Regulations 2020.
20. Target for physical & financial milestones to be specified.
21. Entity may confirm whether it is using SDH based technology or MPLS based technology for this DPR. In case of any change in technology from SDH to MPLS same is to be incorporated in this DPR by revising BOQ and seeking approval from its SERC for adoption of MPLS based technology. No request for change in technology will be entertained in future.
22. As per the MoP’s order issued in March 2016, all new lines packages shall include the OPGW installation. However, Entity proposed few Lines for OPGW which are commissioned after 2016. Entity may clarify the same.
23. Entity may also ensure cyber security of the system in line with the various Acts and Regulations/Guidelines issued by the Government of India.
24. The entity may also ensure to comply Public Procurement (Preference to Make in India) order and its amendments issued by the Government of India time to time.
25. The above inputs submitted by entity were examined by the TESG and following observations were made by the members of the subgroup:

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| **TESG Member** | **Input/comments required** |
| NLDC | 1. The cost estimate of UPPTCL for OPGW was examined in line with the similar approved cost estimate of HVPN (approved in 21st App Co). 2. The submitted cost estimated is excluding GST is Rs.194.00 crores. 3. If we add GST the cost estimate comes to Rs.228.48 crores, which seems to be OK. 4. Their submitted DPR/Board approval is for Rs.194.00 crores which is excluding Taxes. 5. Both files of UPPTCL & HVPN is enclosed for other TESG members comments |
| PSETD |  |
| NPC | 1. Entity need to provide inputs sought in the 57th TESG. 2. As per the MoP’s order issued in March 2016, all new lines packages shall include the OPGW installation. However, Entity proposed few Lines for OPGW which are commissioned after 2016. Entity may clarify the same. |
| PGCIL Cost Eng. |  |
| CTU Eng. |  |
| CTU Plng. |  |

**TESG may deliberate on the inputs received**

1. **TSTRANSCO, Telangana Proposal for Implementation of SAMAST (Scheduling, Accounting, Metering and Settlement of Transactions in Electricity) in Telangana. (Proposal No. 185)**

**Estimated Cost - ₹84.54 crore. Revised Estimated Cost- ₹52.52 crore**

1. The proposal was examined by the TESG in its 56th Meeting held on 07.07.2021 and following observations were communicated to the entity;
2. Furnishing the Single line diagrams (SLD) showing the interface points where meters funded through PSDF are proposed to be installed along with the excel sheet showing meter location in tabular form and they should match with the meters shown on SLD. Further, they need to submit the undertaking for installing the meters as per the CEA, metering regulations for any renovation and upgradation or future/upcoming networks of TSTRANSCO system. CE, SLDC, Telangana agreed for the above and confirmed to furnish the all above details within a week time.
3. Entity vide letter mail dated 28-09-2021(Annexure-III ) submitted the above inputs and the same were circulated to all the TESG members.
4. The above inputs submitted by entity were examined by the TESG and following observations were made by the members of the subgroup:

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| **TESG Member** | **Input/comments required** |
| NLDC |  |
| PSETD |  |
| NPC | 1. Entity provided all inputs sought in the 56th TESG 2. Acceptable no of Meters 701 as per CEA metering guidelines and its cost by considering each meter cost Rs.56150 total meter cost is 3.936 crs 3. As per the Appraisal Committee has approved an upper cap of benchmark cost of ₹10 crore for Hardware, Software and other components. 4. Total acceptable cost is 13.94 Crs |
| PGCIL Cost Eng. |  |
| CTU Eng. |  |
| CTU Plng. |  |

**TESG members may finalise the cost and SEM meters for SAMAST project of TSTRANSCO.**

1. **UPPTCL proposal for Implementation of SAMAST (Scheduling, Accounting, Metering And Settlement of Transactions in Electricity) for sanction from PSDF.**

**Proposal No. 288**

**Estimated Cost ₹. 127.64 Crores. Revised estimated cost - ₹. 35.22 Crores.**

1. The proposal was examined by the TESG in its 56th  meeting held on 07.07.2021. The following observations were conveyed to the entity and inputs clarifications were sought:
2. UPPTCL shall submit the revised inputs as per the discussion points at 7.4 (a) to (d).
3. Ownership of each proposed meter location may be provided. UPPTCL agreed for submission of ownership of the proposed meter location.
4. List of G-T & T-D interface points and Inter Discom feeders as per revised number of meters.
5. The configuration and break-up of number of meters for each 58 OA Licensee.
6. Physical and Financial milestones.
7. UPPTCL vide letter mail dated 18.10.2021 the above inputs.
8. The above inputs submitted by entity were examined by the TESG and following observations were made by the members of the subgroup:

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| **TESG Member** | **Input/comments required** |
| NLDC | Inputs seems to be OK |
| PSETD |  |
| NPC |  |
| PGCIL Cost Eng. |  |
| CTU Eng. |  |
| CTU Plng. |  |

**B) Any additional agenda with the approval of chair.**

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