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Terms of Reference of USAID/SARI/EI Task Force 2 on “Advancement of Transmission System Interconnections”

This Task Force 2 (TF-2) comprise of members engaged in South Asian country power system planning/operations/design functions.

The key deliverables of this TF-2 will be an assessment of the economically feasible potential for electricity exchange/ trade in South Asia over the next20 - 30years and development of minimum intercountry coordination procedures and standards required with respect to power system planning, design, and operations, inconsistent with the legal and regulatory practices that would facilitate such electricity exchange/trade.

1. Objective:

The TF will identify import-export points for technically and economically feasible cross border interconnections considering generation capacity additions in the pipeline over the next20-30 years, evaluate the electricity available for cross border exchange transfer and formulate required coordination procedures for stable regional/national grid operations. The TF will develop a road map that would give prospective investors a comfort level on a long term basis to setup power plants within the South Asia region for electricity export/import with a minimum level of power flow congestion.

2. Constitution of Task Force:

Task Forces shall be constituted with one member from each country from their power system planning/operations/design functions.

3. Term of Reference:

- 3.1. Evolve a South Asia Regional Electricity Plan preferably up to the year2035 based on country specific master plans and in consultation with country planning agencies.
- 3.2. Review generation capacity of addition program and identify the measures required to facilitate any additional corresponding infrastructure/ institutional development or augmentation required to achieve target outcomes in capacity addition up to the year 2035.
- 3.3. Review country specific supply demand projections up to year2035.
- 3.4. Identify electricity that would be available for cross border transfer over different time periods with technical and economic feasibility.
- 3.5. Review power system adequacy under different load flow conditions and suggest remedial measures against any congestions arising.
- 3.6. Review the extent to which cross border power transfer can be accommodated over interconnections planned and the technical improvements required to enhance such transfer
- 3.7. Review of existing country criteria and practices on the following aspects and suggest any improvements based on proven international best practices
- 3.8. Long term electricity demand forecasting
- 3.9. Long term power generation and transmission planning.
- 3.10. Open access in power transmission
- 3.11. Power transmission congestion management
- 3.12. Power transmission pricing and loss sharing

- 3.13. Balancing mechanism for unscheduled power input/output deviations
- 3.14. Power transmission system design, connectivity, and grid operation codes

4. Time Schedule:

- 4.1. The taskforces shall meet periodically (Preferable once in each quarter)
- 4.2. The TF shall prioritize the various deliverables with a view to enhancing public/private investment in power system expansion and deliver them on a timely basis
- 4.3. The activities assigned shall be completed within a period of 24months from the date of constitution of the Task Force.

5. Program Secretariat:

- 5.1. The Program Secretariat shall be provided by IRADe. It would facilitate holding of the Task force meetings, prepare agenda, and coordinate the meetings and would issue minutes.
- 5.2. In case the TF finds the need for a study or assistance of an external Consultant for advice, the Project Secretariat would arrange for the same from its internal resources or by engaging consultants.

6. Working Groups:

- 6.1. The TF can setup working groups to carryout some of the functions under the TF. If a working group consists of members of two or more countries then the Program Secretariat shall formally form such a working group and arrange and coordinate its meetings also.
- 6.2. If a sub group is formed within a country for facilitating the functioning of the country's TF member then the respective country may form such group on its own and keep the Program Secretariat informed of the same.

7. Deliverables:

- a) Reviewthesupplydemandscenarioupto2035
- b) Review of Power generation capacity addition program for infrastructure and availability and readiness of enabling institutions required to achieve planned outcomes in capacity addition upto the year2035.
- c) Assess CBET opportunities in25 –30 year time frame
- d) Prepare Regional Electricity plan in 25-30 year time frame in periods of 5years based on National plans
- e) Check and formulate risk analysis and mitigation policies, if any
- f) Standard Technical specifications for equipment of different voltage levels with parameters and list of codes to be prescribed for cross border equipment.
- g) Review open access and congestion management policies
- h) Evolve transmission cost and loss sharing Guidelines.
- i) Develop coordinated system operating procedures to be adopted for import export tie lines.
- j) Another report to meet the objectives