



Energy for Peace & Prosperity

**SAARC
ENERGY
CENTRE**

On-line Training of SAARC Professionals on Power Purchase Agreements of Renewable Energy Projects



Operations, Maintenance and decommissioning Provisions in RPAs

November 11, 2021

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List of contents of the presentation

1. Operation and Maintenance
2. Provisions for Force Majeure
3. Ownership of assets after expiry of PPA
4. Transfer price of Assets
5. Provisions for Decommissioning of Plant

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Operations and Maintenance of the Plant

1. Operating Manual

- O&M Contract and O&M plan before financial closure
- Develop operating manual codifying the O&M practices-approved by Operating Committee, if there is a dispute it is settled by Independent Engineer
- Operational procedures for emergencies
- Communication procedure with Procurer
- Approved by the Procurer
- Regularly revised as per the experience gained

2. Operation as per prudent and reasonable operation practices and applicable codes

- Maintain availability and Net energy as per contract, provision for deemed energy
- Energy output delivered along with mandated Pf and Voltage Profile
- Maintain anti-Islanding protection
- Interconnection Agreement to be honoured-protection settings not to be changed
- Operational information exchange as per the protocol

3. Forecast and Scheduling as per Grid Code/System Operator Instructions-yearly, monthly and daily forecast to be provided

Operations and Maintenance of the Plant

4. Scheduled Outages

- Scheduled outage plan provided before COD and approved by Procurer
- Outage plan confirmed before 60 days of the start of the Operating year
- Confirmation provided within 30 days of the anticipated outage schedule
- Outages are not scheduled during peak months as declared by Procurer
- Procurer can seek reschedule of the outage but request has to be made 15 days before hand
- Coordination has to be maintained with the outage schedule of evacuation line and Interconnection point

5. Short notice outage (7 to 3 days notice) provide estimate of the time required

6. Forced Outages due to emergencies

7. Plant cannot be abandoned even if termination notice has been given

8. Procurer can visit the plant at short notice and inspect plant and records

9. Periodic reports on the plant performance and outages (number, duration, reasons and action taken)

10. Employment of qualified personnel-approval of procurer required

11. Purchasers or Lenders step in rights

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Provisions for Force Majeure

1. Force Majeure Events (Events which are beyond the reasonable control of Plant Owner and Procurer)
 - Natural Force Majeure Events (Lighting, Earthquake, flood or unusual weather conditions, epidemic or Plaque etc)
 - Political Force Majeure Events (Act of war, rebellion, riot, terrorism, a change of law)
 - Force Majeure affecting Contractor (provided appropriate measures taken)
 - Force Majeure affecting Supplier
2. Notification and obligation to remedy
 - Affected Party notifies Force Majeure event within 48 hours to the other party
 - Continuously Informs to the other party the action taken or being taken to mitigate the impact
3. Consequence of Force Majeure-None of the parties to the PPA will be considered in breach of its obligations. If Force Majeure continues for more than 180 days either of the party can terminate the PPA
4. Payments will be made for the energy provided (even if reduced output)

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Ownership of Assets after expiry of PPA

1. After expiry of the PPA

- Projects such as Solar Plants, Wind etc are retained by the Plant Owner but land in case it is leased by the Government or local Authority is handed back
- Projects such as Hydro (as natural resources are owned by the Government) are handed over to the Government

2. Termination of PPA

- For Project Owner's default-Procurement have the right to purchase the asset
- For Procurement's default-Owner can ask the procurement to procure the plant
- Project Owner for termination of PPA under Force Majeure condition may require Procurement to procure the plant

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Transfer price of Assets

- Project company events of default
 - All debt outstanding (including outstanding principal, outstanding interest, prepayment fees, hedge break costs, and other charges); plus
 - All termination costs incurred by the project company (costs incurred by the project company in connection with the termination of the project, including taxes, amounts payable by the project company to the EPC contractor under the EPC contract, and amounts paid to terminate other significant project agreements; less
 - The account balances (all funds that are under the control of the lenders and are available to be applied by the lenders to reduce debt outstanding, including all funds on deposit in any debt service reserve accounts or collateral accounts); less
 - Insurance proceeds.

Transfer price of Assets

- Procurer's event of default
 - debt outstanding (as described earlier); plus
 - termination costs (as described earlier); less
 - the account balances (as described earlier); less
 - insurance proceeds; plus
 - the amount of equity contributed by the sponsors; plus
 - a return on the equity contributions of the sponsors calculated with respect to each contribution of equity for the period from such contribution until the date on which the project is purchased using the projected internal rate of return on equity from the financial model; less
 - all distributions of capital from the project company to the sponsors, including distributions in the form of dividends, payments of interest or principal in respect of shareholders' loans, or returns of capital.

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Provisions for Plant Decommissioning

- Plant Owner is responsible for decommissioning of the plant
 - Relevant only if the land has been leased by the Government or the local Authority for the period of PPA and has to be returned back after the expiry or termination of the PPA
 - Land has to be deregistered if it is registered in the name of the plant owner
 - Dismantle the plant and its facility at its own cost
 - The role and responsibilities for decommissioning of the plant is specified in Implementation Agreement
 - In case of any breach of any condition of IA , the Government or the local Authority is entitled to encash Decommissioning Bond or can itself take up the restoration of site and charge the Plant Owner the cost incurred.



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Thank you

