

Development of Standard PPA and PSA for procurement of Solar Power on Long Term Basis

April, 2010

Agenda for the Discussion

- Contract Structure
- Salient Features of the Draft NVVN - SPD PPA
 - Pre-commissioning Phase
 - Commissioning
 - Operation Phase
- Salient Features of the Draft NVVN-Discom PSA
- Applicable Tariff

Contract Structure – Power Purchase Agreement (PPA) & Power Sale Agreement (PSA)

NTPC signs a PPA with NVVN for 'X' MW of power for a term of 25 years at a Tariff determined by CERC.

NTPC Plant (Unallocated Quota)



- **Contract Period:** 25 years from Date of Commissioning
- **Back-to-back contracts:** PPA shall be operative and co-terminus with PSA.



Solar Power Developer (SPD)

SPD signs a PPA with NVVN for 'X' MW of power for a term of 25 years at a Tariff determined by CERC.

NVVN will bundle 'X' MW from Solar Power Plant with 'X' MW of thermal power from unallocated quota of NTPC and come up with a bundled tariff

NVVN signs a PSA with Discom for 2X MW Bundled Power at the rate identified in the PSA.

PricewaterhouseCoopers

PPAs and PSA are co-terminus agreements and are back-to-back

Performance Guarantee and Conditions Subsequent

- Scheduled Commissioning Date:
 - 12 months for Solar PV and 28 months for Solar thermal from Effective Date
- Performance Bank Guarantee:
 - SPD to submit BG of Rs. 50 Lacs/MW
 - BG shall be invoked if SPD delays Scheduled commissioning for (other than FM reasons or NVVN Event of Default) on a per MW per day basis up to 12 months
 - BG to be released after 3 months of Commissioning Date
- Satisfaction of conditions subsequent by the SPD within 3 months (+Grace Period of 1 month) of Effective Date (unless prevented from achieving these due to Force Majeure or waived off by NVVN):
 - Obtain all consents, clearances and permits
 - Documentary evidence for water arrangement (in case of Solar Thermal)
 - Achieve Financial Closure
 - Documentary evidence for evacuation arrangement

Conditions Subsequent and Project Development

- Non fulfilment of Conditions Subsequent
 - a) Provisions for time extension (if accepted and agreed to but not beyond March 31 '2013) with provision for additional BG
 - b) If time extension is not envisaged, termination of PPA and BG to be invoked.
- Project development: SPD to,
 - Be responsible for consents, clearances and permits
 - Arrange inter-connection facilities
 - Maintain its controlling shareholding up to 3 years from COD

Commissioning Phase & Time Extensions

- Interconnection Point:
 - The commercial metering point at STU grid substation interface at 33kV or above
- Extension of time to COD:
 - If due to NVVN Event of Default
 - Scheduled COD to be extended up to a period of 6 months but not beyond March 31, 2013
 - For Force Majeure affecting NVVN or SPD
 - Scheduled COD to be extended up to a period of 3 months (for Solar PV) and 6 months (for Solar Thermal)
 - No extension allowed (for any reasons) beyond March 31, 2013

Liquidated Damages for delay in Scheduled COD

- LD for delay in Scheduled COD (due to non-FM or non-NVVN EOD):
 - SPD liable to pay LD charges to NVVN on a per MW per day basis
- SPD's Maximum Liability for LD shall be limited for and upto 12 months of delay for commencement of supply of power from Scheduled COD
- NVVN's right to terminate the PPA beyond this period

Acceptance Test and Third Party Verification

- Acceptance/ Performance Test
 - SPD to get the Project certified for the requisite acceptance/ performance test by an agency identified by the central/state government
- Third Party Verification:
 - SPD to allow NVVN or third Party nominated by any Indian Governmental Instrumentality for inspection & verification of work being carried out by SPD
 - SPD to provide clarifications; if asked by third party or NVVN

Contracted Capacity & CUF

- NVVN to assign payment of LD on SPD, if CUF of the plant during the agreement is found to be below CUF (as per CERC regulation):
 - By 5% at any point in the term, or
 - By 3% for consecutively or non-consecutively for 3 months in a year
- Right to contracted capacity:
 - SPD to sell exclusively to NVVN the entire Contracted Capacity subject to maximum of energy generation (calculated say as per CUF specified by CERC regulations)
 - NVVN not obligated to purchase power generated beyond the contracted number of units. SPD free to sell such power to third party(/ies).
 - SPD free to sell power generated before Scheduled COD to third party(/ies)

Billing and Payment, Payment Security Mechanism

- **Billing and Payment**
 - SPD to raise Monthly Bill within 5 days of billed month.
 - Due Date: 30 days from raising of Monthly Bill
 - Late Payment Surcharge: 1.25% per month for delay beyond Due Date
 - Rebate: before Due Date,
 - If payment through LC on presentation, 2% to be allowed
 - If payment not through LC but before Due Date, 1% to be allowed
- **Payment Security Mechanism:**
 - Letter of Credit (LC): NVVN to open LC within 1 month of Scheduled COD to be made operative prior to Due Date of first Monthly Bill
- **Limitation of Payment Liability:**
 - NVVN's payment liability limited to payments realized from Discom after exhausting all payment security measures, as described in PSA.

Event of Default and Termination

- Event of Default (EOD) by one party - Right to Terminate by the other
 - SPD EOD:
 - Failure to commence supply of power by 12 months from Scheduled COD or March 31, 2013 whichever is earlier.
 - NVVN EOD:
 - Failure to pay more than 15% of undisputed part of Monthly Bill or Supplementary Bill, for 90 days after Due Date and SPD is unable to recover the same through LC.

Key Features of Draft NVVN-Discom PSA

Operating responsibilities and arrangements

- **Open Access and Transmission**
 - The Discom shall be responsible for obtaining and maintaining long term open access, if required, from the Delivery Points to its receiving substation(s).
 - All charges pertaining to open access of the transmission network of the concerned STU/CTU from the Delivery Points to the receiving substation(s) shall be borne by the Discom.
 - **Losses:** Discom to bear all the transmission losses in respect of the power evacuated from the Delivery Points to its receiving substation.
 - **Metering:** Metering will be performed at NTPC Delivery Point and SPD Delivery Point in accordance with the Grid Code
 - **Energy Accounting and Scheduling:** For NTPC power, these shall be as per the provisions of the Grid Code and NVVN-NTPC PPA while the scheduling and energy accounting of solar power shall be as per the provisions of the NVVN-SPD PPA and Grid Code

Billing and Payment

- Billing and Payment
 - Monthly Billing - NVVN to raise a signed Monthly Bill for the immediately preceding Month not later than ten (10) days after the respective Monthly Bills for energy supplied by NTPC and the SPD are received by NVVN.
 - Payment due date – 30 days after the monthly bill or supplementary bill is received
 - Late Payment Surcharge – Discom to pay late payment surcharge to NVVN at the rate of 1.25% per month if Payment made beyond thirty (30) days from its Due Date.
 - Rebate: before Due Date,
 - If payment through LC, 2% to be allowed
 - If payment not through LC, 1% to be allowed

Payment Security Mechanism

- **Payment Security Mechanism**

If the Discom fails to pay a Monthly Bill or Supplementary Bill or part thereof within thirty (30) days from the Due Date, NVVN shall have the right to invoke following instruments

- Letter of Credit (LC) - Discom to open LC within 1 month of Scheduled COD to be made operative prior to Due Date of first Monthly Bill
- Collateral Arrangement (only in case of Private Discoms) – Discom and NVVN to execute a “*Default Escrow Agreement*” in favor of NVVN
- Tripartite Agreement (only for Government Owned Discoms) – Tripartite Agreement (TPA) may be executed between the Central Govt, State Govt and RBI.
- NVVN shall be authorized by the Central Government to invoke such TPA in case of payment default by the Discom.
- The **renewable purchase obligation (RPO)** of the Discom shall be considered to be met only if there is no payment default towards NVVN.

Third Party Sale in case of default

- Third Party Sale by NVVN:
 - In case NVVN is not able to realize the due payments beyond 30 days after the Due Date, NVVN shall have the right to divert the Bundled Power or part thereof and sell it to any third party.
 - The amount realized from third party sale over and above the energy charges, trading margin, open access charges and other costs shall be adjusted against the pending liability of the Discom.

Events of Default and Termination

- Events of Default
 - Discom Event of Default:
 - Any undisputed amount remains outstanding beyond a period of 90 days after the Due Date and after NVVN having invoked Letter of Credit
 - The Discom fails to evacuate power from the Delivery Points.
- Right to Terminate
 - In case the Discom fails to pay in full any outstanding undisputed amount for more than 2 months, NVVN shall have the right to terminate this Agreement.
 - No right on part of Discom to terminate during operating period
- Termination of back to back agreements
 - In case of termination of NVVN-NTPC PPA or NVVN-SPD PPA or both, the PSA shall automatically terminate.

Applicable Tariff

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Amount Realisation for Solar Power (monthly)

$$A(sp) = E(sp) * T(sp)$$

Where

- A(sp) = Amount realization (in Rs.) for Solar Power;
- E(sp) = No. of units (kWh);
- T(sp) = Tariff (in Rs./kWh) which shall be as defined in NVVN-SPD PPA;

Amount Realisation for NTPC Power

A (np) = Capacity Charges + E(np) * V(np) + Other applicable charges as per CERC order

where

- A(np) = Amount realization (in Rs.) for NTPC power component;
- E(np) = No. of units (kWh) scheduled at NTPC Delivery Point
- V(np) = Variable charges (in Rs./kWh);

And

$$T(np) = A(np)/E(np)$$

where

- T(np) = Tariff (in Rs./kWh);

Applicable Tariff for Bundled

$$T(bp) = [E(sp)*T(sp) + E(np)*T(np)]/[E(sp)+E(np)] + T(m)$$

where

- T(bp) = Tariff (in Rs./kWh) for Bundled Power;
- E(sp) = No. of units (kWh) scheduled/metered at SPD Delivery Point
- T(sp) = Tariff (in Rs./kWh) which shall be as defined in NVVN-SPD PPA;
- E(np) = No. of units (kWh) scheduled at NTPC Delivery Point
- T(np) = Tariff (in Rs./kWh) for the applicable Month;
- T(m) = Trading Margin, as applicable.

Amount realisation for Bundled Power:

$$A(bp) = E(bp) * T(bp)$$

E(bp) = E(sp) + E(np), in kWh; and

T(bp) = Tariff (in Rs./kWh) for Bundled Power

Thank You