




Jawaharlal Nehru National Solar Mission



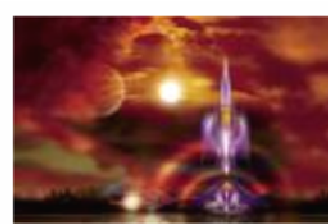
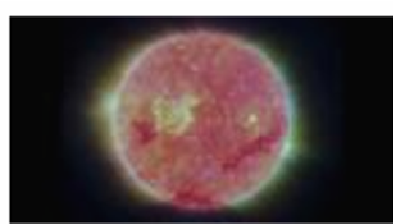
Guidelines for Solar Grid Power Projects



NTPC Ltd.



NTPC Vidyut Vyapar Nigam Ltd.



AGENDA

1

NTPC / NVVN at a glance

2

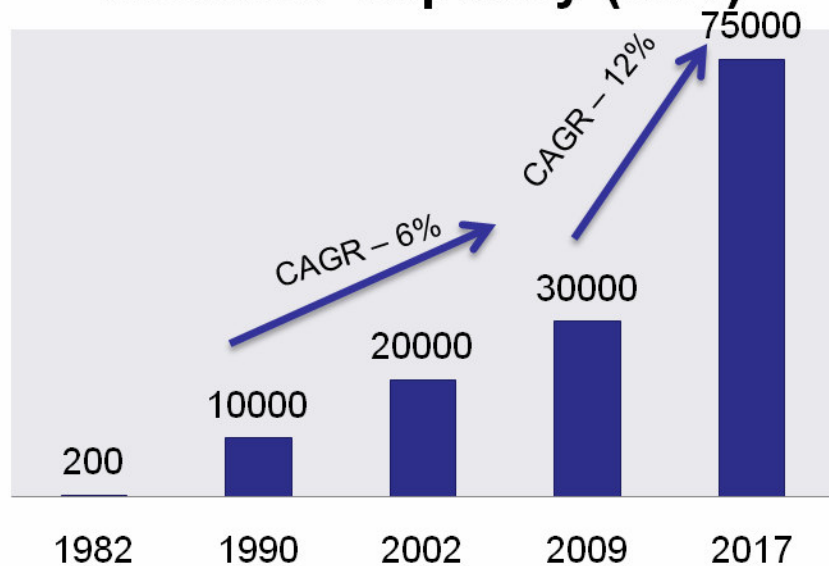
Broad Guidelines for Selection of Solar Power Developers

3

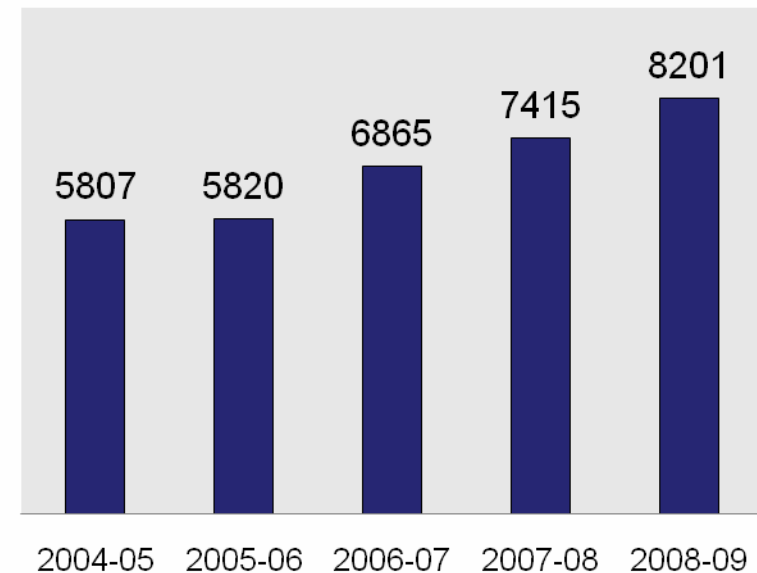
Elements of PPA

NTPC Limited – At a glance

Installed Capacity (MW)



Profit after Tax (Rs Crore)



- One of the three largest Indian companies with market cap of nearly Rs.1,75,000 Crore.
- Net worth of over Rs. 57,000 Crore
- Total assets of over Rs. 1,05,000 Crore

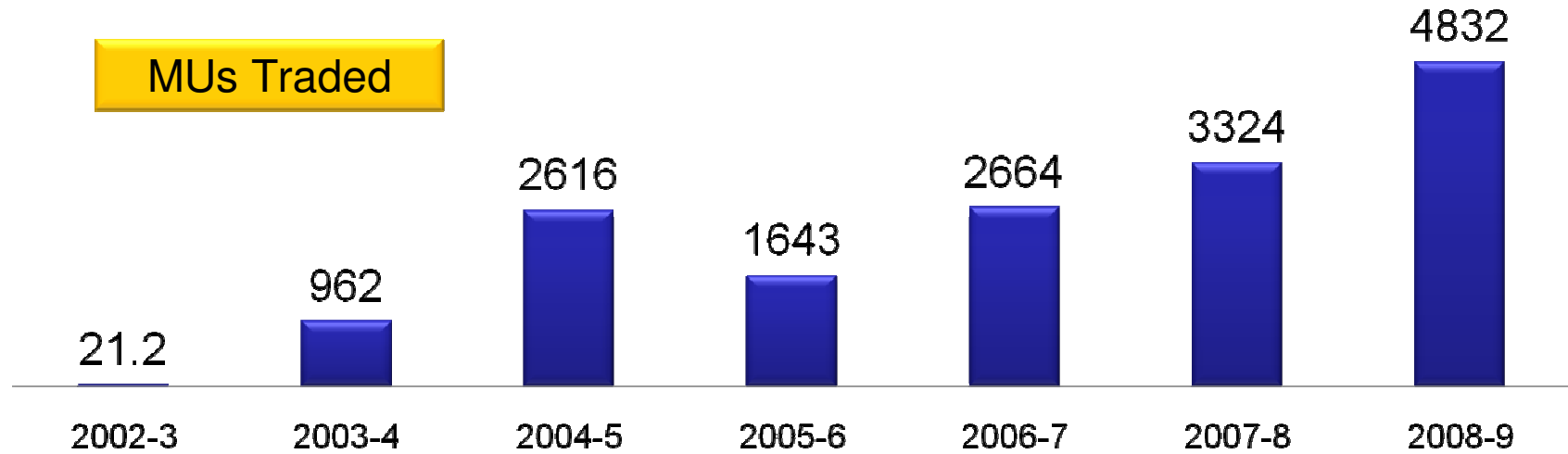
- Ranked # 1 independent power producer in Asia in 2009 (by Platts, a division of McGraw-Hill companies)
- No.1 globally in capacity utilisation
- 317th Largest company in the world (FORBES ranking – 2009)
- The largest generator in India with a share of nearly 30%

NTPC VIDYUT VYAPAR NIGAM LTD.



<p>Background</p> <ul style="list-style-type: none">Incorporated on 26th Nov 2002Wholly owned subsidiary of NTPC LtdHighest rated Trading Licensee Category "I"	<p>Core Strengths</p> <ul style="list-style-type: none">Strong Promoter – NTPC LimitedFormidable NetworkGovernment SupportProfessional Manpower
<p>Current Business</p> <ul style="list-style-type: none">Power Trading market share ~ 20%Presence in ash business	<p>Future potential</p> <ul style="list-style-type: none">Cross Border TradingGreen Power Trading & Emission TradingCaptive Power TradingLong Term Power Trading

Operational Performance of NVVN



Year	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Units traded (MU)	962	2616	1643	2664	3324	4832
Turnover (Rs. Million)	2240	5870	4346	8613	7598	18996

National Solar Mission (NSM)

✓ Targets set for development of Solar Power under NSM:

Installed Capacity (MW)		
Phase -I	(up to 2013)	1100 MW
Phase -II	(up to 2017)	4000 MW
Phase -III	(up to 2022)	20000 MW

National Solar Mission - Features

- **NVVN** appointed the **Nodal Agency** for sale and purchase of 33 kV and above Grid connected Solar Power under Phase -I of the NSM by Ministry of Power
- Cumulative capacity to be limited to 1000 MW under phase-I
- Tariff shall be as fixed by the CERC
- MOP to allocate the equivalent megawatt capacity from the central unallocated power of NTPC coal based stations to NVVN, for bundling together with the solar power
- NVVN will undertake the sale of the bundled power to Power Utilities at regulated tariff plus facilitation charges.



Selection of Solar Power Developers

Migration from existing scheme

- The guidelines for migration of existing under development grid connected solar power projects from existing arrangements to JNNSM has been finalized.

New Projects

- The ratio of Solar PV to Solar Thermal is proposed to be in the ratio of 50 : 50

**BROAD PROPOSED GUIDELINES FOR
SELECTION OF NEW SOLAR POWER
DEVELOPERS...**

Proposed Guidelines for Registration

Expression of Interest (EOI)

- Invitation of EOI for Registration of the new Solar Power Developers (SPDs) with NVVN.
- SPDs meeting the eligibility requirements will be registered.
- The final selection shall be made out of registered SPDs.

Eligibility Requirement

- Net worth @ Rs. 3 - 5 Crore/MW for the past three years.
- Land in possession of at least 1 hectare/MW.
- Water allocation for Solar Thermal.
- Confirmation from STU regarding evacuation of power at 33kV & above.
- Technical requirement as approved by MNRE
- Undertaking for domestic content to be submitted as under-
 - For Solar PV – Use of both Cells & Modules.
 - For Solar Thermal – 30% local content

NEW PROJECTS

PROPOSED TIME FRAME AND PROCESS

Invitation of Expression of Interest
(EOI)

By 31st March 2010

Last date of submission of
Applications with documents for
Registration

By 30th June 2010

Selection of Developers by the
Central Empowered Committee

By 15th September 2010

Signing of MOU with SPD

By 30th September 2010

Readiness for signing of PPA &
PSA

By 31st October 2010

Conditions Precedents for signing of MOU

- ❖ Statutory and other clearances as applicable
- ❖ Complete Detailed Project Report (DPR)
- ❖ Letter of comfort for Equity/Debt from Promoter(s) /Financial Institution(s)
- ❖ Submission of Performance Bank Guarantee- Rs.50 Lakh/MW
 - ❖ Rs.25 Lakh/MW before signing of MOU
 - ❖ Rs.25 Lakh/MW before signing of PPA.
- ❖ No change in controlling share holding in the Company permitted from MOU signing till PPA execution.

Solar Power Developers who are meeting the set conditions will be called for signing of MOU with NVVN

Signing of PPA / PSA

- NVVN shall approach Distribution Utilities for signing of MOUs for purchase of solar power along with equivalent NTPC power.
- Based on the above MOUs, NVVN would be approaching MOP, Govt. of India for allocation of NTPC power from its unallocated quota of coal based station to NVVN for bundling it with solar power.
- Based on above allocation, NVVN shall sign PSA with Distribution Utilities.
- After signing of PSAs with Distribution Utilities, NVVN will sign PPAs with Solar Power Developers.

ELEMENTS OF PPA...

Elements of PPA – 1/2

- PPA to remain **valid for 25 years** (in line with CERC regulations) duration from the date of commencement of supply from the Solar Power Project.
- The Solar power tariff shall be applicable for the year of commissioning as determined by the CERC.
- Transmission charges, losses, RLDC/SLDC charges, scheduling charges or any other charges for supply of solar power beyond delivery point to be borne by the respective Distribution Utility.
- Billing & Payment cycle shall be as per Energy Accounts issued by RPC / SLDC.

Elements of PPA – 2/2

- Scheduling of power shall be as per Indian Electricity Grid Code (IEGC).
- NVVN shall establish irrevocable revolving Letter of Credit (LCs) in favour of the Solar Power Developers prior to commencement of electricity supply from the proposed Solar Power Plant.
- Distribution Utilities shall ensure Payment Security Mechanism as per Escrow / Tri Partite Agreement and open irrevocable revolving Letter of Credit.
- After execution of PPA, controlling share holding in the Company shall be maintained up to 3 years after commencement of supply of power.

Thank you !

Please send suggestions to akgoyal@ntpc.co.in