



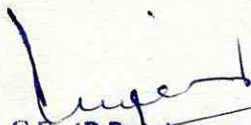
UTTAR PRADESH  
**POWER PURCHASE AGREEMENT  
BETWEEN  
M/s Power Cube Pvt. Ltd.  
AND  
Madhyanchal Vidyut Vitran Nigam Limited.**

AD 911537

**THIS AGREEMENT** is made on this day of 18/11/05 (hereinafter called the Effective Date), by and between M/s Power Cube Pvt. Ltd., registered under the Companies Act., 1956 and having its registered office at 82/2, Cooperganj, Kanpur – 208003 hereinafter called the "Generating Company/Plant ", which expression shall, unless repugnant to the context or meaning thereof, include its successors and assignees as party of the first part and Madhyanchal Vidyut Vitran Nigam Ltd. a Company registered under the Companies Act, 1956 having its Registered Office at 4A, Gokhle Marg, Lucknow hereinafter called Discom which expression shall, unless repugnant to the context or meaning thereof, include its successors and assignees as party of the second part.

WHEREAS, the Generating Company is engaged in the business of Solar Generating Plant and other incidental businesses situated at Distt. Unnao in the State of Uttar Pradesh, more particularly described in Annexure I attached hereto and made a part hereof and

AND WHEREAS, Discom is a distribution licensee operating in the State of Uttar Pradesh, and has licence to supply power in ear marked part of the State and whereas the Discom in its Board of Directors meeting held on 24.08.05 has authorized U.P. Power Corporation Limited (herein after called UPPCL) to execute/Sign the Power Purchase Agreement and also authorized U.P. Power Corporation Limited to do the necessary relevant works on behalf of DISCOM. As such all the obligations under this agreement are being undertaken by UPPCL on behalf of DISCOM till further intimation by Goup/DISCOM.

  
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U.P.P.C.L.  
Shakti Bhawan Bldg  
Lucknow.

For Power Cube Pvt. Ltd.  
  
Director

Whereas the Generating Company has undertaken to implement the Solar Thermal power project by installing Plant and Equipment having installed capacity of 10 MW situated in, Distt. Unnao and complete erection, installation and commissioning of the said capacity and make it operational by Dec.2011.

WHEREAS, the Generating Company desires to sell **entire 10 M.W.** generated in the Generating Plant's facility and DISCOM agrees to purchase such electricity generated from such capacity by the Generating Plant for sale, under the terms and conditions set forth herein and

Whereas, the Generating Company declares the load of 1MVA power for its such plant and Discom agrees to supply power as per requirement to such plant at retail tariff as per Regulations specified by the Commission and

WHEREAS the parties to this Agreement agree for prior consultation with the State Transmission Utility for the purpose of implementation of this agreement and seek its approval for permitting, inter alia, interconnection to the generating plant with the Sonik Distt. Unnao grid substation owned by STU and

WHEREAS the parties to the agreement bind themselves for compliance of all relevant provisions specified by the U.P. Electricity Regulatory Commission in different regulations regulating the functioning of State Transmission Utility, other transmission licensee and State Load Despatch Centre.

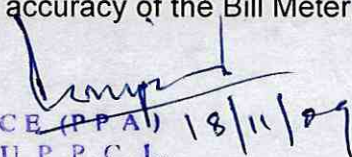
Now, therefore, in consideration of premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the parties as follows: -

## 1. Definitions

Other than those defined below, the words/expressions used in this agreement, unless repugnant to the context, shall have the meaning assigned to them in the Electricity Act, 2003, UP Electricity Reforms Act, 1999 and U.P. Electricity Grid Code as amended from time to time, UPERC (Terms and Conditions for Supply of Power and Fixation of Tariff for Sale of Power to Distribution Licensee by Captive Generating Plants, Co-generation, Renewable Sources of Energy and Other Non-Conventional Sources of Energy based Plants) Regulations, 2005 as amended from time to time, and the rules framed there under. The words/expressions listed below shall have the meanings respectively assigned hereunder.

1.1 'Bill Meter' means ABT compatible Import and Export Meter on the basis of which energy bills shall be raised by the Generating Plant/Discom.

1.2 'Check Meter' means ABT compatible Import and Export Meter for performing a check on the accuracy of the Bill Meter.

  
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For Power Cube Pvt. Ltd.  
  
 Director

1.3 'Date of Commissioning' means the date on which supply of Energy is commercially commenced by the Generating Plant to Discom and includes COD.

1.4 'Export Meter' means Bill Meter installed at the grid substation Sonik of STU for measurement of Active Energy, Maximum demand and Power factor for Energy exported to the Generating Plant from STU 's Grid Sub-Station Sonik

1.5 'Energy Account Month' means period from date of meter reading in previous month to date of meter reading in following month and such period should not exceed 35 days.

1.6 'Sub Station' means sub-station Sonik of 33 KV or higher voltage owned, maintained and operated by Discom or UP Power Transmission Corporation Limited .

1.7 'Import Meter' means Bill Meter installed at the grid substation of STU for Measurement of Active Energy, Maximum demand and Power factor of Energy Imported to Discom from the Generating Plant.

1.8 'L.C.' means " revolving and self - replenishing Letter of Credit".

1.9 'Bill' means a bill raised, that includes all charges to be paid by Discom with respect to sale of Power by the Generating Plant to Discom.


1.10 'State Transmission Utility (STU)' means Uttar Pradesh Power Transmission Corporation Limited being the Government company specified so by the Government of Uttar Pradesh.

1.11 'TOD' means "Time of day", for the purpose of Metering.

1.12 'UPERC' means the U.P. Electricity Regulatory Commission.

1.13 'Wheeling' means the operation whereby the distribution system and associated facilities of a transmission licensee or distribution licensee, as the case may be, are used by another person for the conveyance of electricity on payment of charges to be determined under section 62 of the Electricity Act 2003.

1.14 'CNCE Regulations' means the Uttar Pradesh Electricity Regulatory Commission (Terms and Conditions for Supply of Power and Fixation of Tariff for sale of power from Captive Generating Plants, Co-generation, Renewable Sources of Energy and Other Non-Conventional Sources of Energy based Plants to a Distribution Licensee) Regulations, 2005 as amended/revised from time to time.

  
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For Power Cube Pvt. Ltd.

  
 Director

## 2. POWER PURCHASE, SALE AND BANKING.

2.1 UPPCL on behalf of DISCOM shall accept and purchase 10 MW power made available to Discom/STU 's system from the Generating Plant's Solar Thermal based Plant in accordance with the terms and conditions of this Agreement, at the rate specified for such plant in Uttar Pradesh Electricity Regulatory Commission Order dated 27.11.08, as mentioned below:-

Yr.	Solar Thermal	Tariff	Incentive	Yr.	Tariff
1.	4.65	3.00	1.65	11	5.90
2.	4.88	3.00	1.88	12	6.20
3.	5.13	3.00	2.13	13	6.50
4.	5.38	3.00	2.38	14	6.83
5.	5.65	3.00	2.65	15	7.17
6.	5.93	3.00	2.93	16	7.53
7.	6.23	3.00	3.23	17	7.91
8.	6.54	3.00	3.54	18	8.30
9.	6.87	3.00	4.87	19	8.72
10.	7.21	3.00	4.21	20	9.15

The first 10 years tariff mentioned above shall be bifurcated in two components viz Rs. 3/- Unit towards tariff and remaining amount towards incentive. The incentive which the plant gets under the MNRE scheme of Central Govt. shall be in addition to the above tariff to be paid by distribution licensee as also mentioned vide UPERC order dated 27.11.08. The responsibility to obtain incentive from Central Govt. Scheme shall rest with the generator.

The following orders of Uttar Pradesh Electricity Regulatory Commission annexed hereinafter read with CNCE Regulation 2005' ( amended / revised from time to time) shall form the part of Agreement :-

- (a) UPERC Order dated 27-06-2008.
- (b) UPERC Order dated 27-11-2008.

2.2 The income tax paid in income from core business and any taxes/duties imposed on electricity shall be paid by the distribution licensee at actual.

2.3 The Solar generating plant, being solar energy a clean energy, shall be allowed to retain the benefit of carbon credits earned.

  
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For Power Cube Pvt. Ltd.

  
 Director

2.4 The rate applicable for supply of electricity by Discom to the Generating Plant shall be as per the tariff determined by the Commission under appropriate 'Rate Schedule of Tariff' for the consumer category determined on the basis of the total load requirement of the plant and billing done in the manner as specified by the Commission in the Regulations.

2.5 The provisions set out in Annexure-II shall govern the Sale and accounting for power purchased by Discom.

2.6 The generating plant and Discom shall comply with all the regulations issued by UPERC from time to time including but not limited to UP Electricity Grid Code, Open Access Regulations, SLDC Regulations to the extent they are applicable to them.

### 3 MAINTENANCE REQUIREMENT OF THE GENERATING PLANT

3.1 The Generating Plant's annual maintenance schedule shall be provided every year by the Generator The Generating Plant shall inform Discom and the STU regarding the Maintenance schedule in accordance with provisions of the UP Electricity Grid Code as revised by the Commission from time to time.

3.2 Environmental Clearance and compliance of environmental standards shall be the sole responsibility of the generating plant.

### 4. SUPPLY SCHEDULE

The Generating Plant shall furnish to Discom and the State Transmission Utility (STU) or State Load Despatch Centre (SLDC), as the case may be, a month-wise Supply Schedule, and other information, as required in the CNCE Regulation and UP Electricity Grid Code as amended from time to time or provisions of any other regulation in that regard or as desired otherwise.

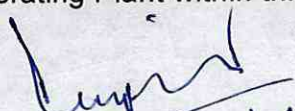
### 5. BILLING PROCEDURE AND PAYMENTS

5.1 Discom shall raise monthly bill for electricity purchased by the Generating Plant as per its normal billing cycle after taking into account maximum recorded demand in the manner as specified by the Commission in the CNCE Regulations and such bill shall be payable within the time period stipulated in the General Conditions of Tariff.

5.2 The Generating Plant shall raise monthly bill based on the monthly joint meter reading in the Bill Meter at the grid substation Sonik.

5.3 The Monthly Bill raised by the Generating Plant shall be delivered to UPPCL on behalf of Discom at its designated office of Nodal Officer on or before the fifth (5th) working day of the following month hereinafter called the Monthly Bill date.

5.4 UPPCL on behalf of Discom shall make full payment against such Monthly Bills to the Generating Plant within thirty (30) working days of the receipt of the Monthly Bill through

  
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irrevocable revolving & self-replenishing letter of credit of a value equal to the billable amount opened with a public sector bank in favour of the Generating Plant or through any other mode. The L.C. opening and maintenance charges shall be borne by the Distribution Licensee. The L.C. shall cover the average monthly billing for units indicated in the supply

schedule furnished under para 4 above for the particular calendar quarter. The LC shall be updated by 5<sup>th</sup> working day of the calendar every quarter.

5.5 A rebate of 1.25 percent on the billed amount shall be allowed for payment made through LC within one month of the date of billing and for default in payment beyond one month from the date of billing, a surcharge at the rate of 1.25 percent per month or part thereof shall be levied on the billed amount. Format of the Monthly Bill to be raised by the Generating Plant is given in Annexure III attached hereto and made a part of this agreement. If the payment is made by a mode other than through LC but within a period of one month of presentation of bill by the generating company, a rebate of 1 percent shall be allowed. However, a surcharge at the rate of 1.25 percent per month or part thereof shall be levied on the billed amount in case of default by Discom payment in within 30 days.

5.6 The bills raised by the Generating Plant shall be paid in full subject to the conditions that:-

- i) There is no apparent arithmetical error in the bill(s).
- ii) The bill(s) is/are claimed as per tariff referred to in Para 2 of this agreement.
- iii) They are in accordance with the energy account referred to in Para 14 of this agreement.

5.7 In case of any dispute regarding the bill raised by the Generating Plant, UPPCL on behalf of Discom shall file a written objection with the Generating Plant within fifteen days of receipt of the bill giving full particulars of the disputed item(s), with full details/data and reasons of dispute and amount disputed against each item. The Generating Plant shall resolve the above dispute(s) with UPPCL within 30 days.

5.8 In case, the dispute is not resolved within 30 days as provided in para 5.7 above, and in the event it is decided to proceed with the Arbitration as provided in para 23 of this agreement, then UPPCL shall pay 100% of the disputed amount forthwith and refer the dispute for arbitration as provided in this agreement. The amount of excess / shortfall with respect to the said disputed amount on final award of arbitration shall be paid / adjusted; but in case of excess, the adjustment shall be made with interest at rate 1.25% per month from the date on which the amount in dispute was refundable by the generating company to UPPCL.

## 6. PARALLEL OPERATIONS

Grid substation 132 KV/33KV Sonik owned by STU shall allow the Generating Plant to interconnect its facility and operate in parallel with STU system, subject to the provisions of this Agreement, Electricity Act, 2003 and the UP Electricity Grid Code-2000 as amended from time to time.

  
 C.E. (P.P.A.)  
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For Power Cube Pvt. Ltd.

  
 Director

## 7. GENERATION FACILITIES OWNED AND OPERATED BY THE GENERATING PLANT

7.1 The Generating Company shall own, install, operate, and maintain the generating plant equipments and associated transmission line described in Annexure I. The Generating Plant shall follow such operating procedures on its side of the electric interconnection with STUs system, as are consistent with applicable laws, rules and regulations, the terms and conditions of this Agreement, provisions of the UP Electricity Grid Code, and other related guidelines, if any, issued by UPERC, SLDC, DISCOM, STU.

7.2 All electrical equipments shall be installed in compliance with the requirements of the Director of Electrical Safety, Government of Uttar Pradesh and safety specifications of the Central Electricity Authority (CEA) under section 53 of the Electricity Act, 2003.

7.3 The Generating Plant further agrees to make no material changes or additions to its facility, which may have an adverse effect on system, or amend the single-line diagram, relay list and/or trip scheme given in Annexure I, without prior written consent. Discom agrees that such consent shall not be unreasonably withheld or given without the prior permission of STU.

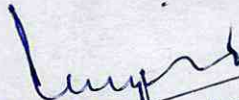
7.4 Without prejudice to the foregoing, the Generating Plant shall install, operate, and maintain its facility in accordance with accepted prudent utility practices in the electricity industry. The Generating Plant's operation and Maintenance schedules and staffing shall be adequate to meet such standards at all times.

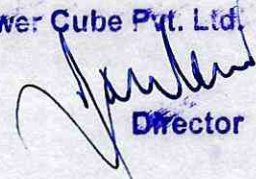
7.5 STU shall follow such operating procedures on its side of the electric interconnection point with the Generating Plant, as required to receive Power from the Generating Plant's facility, without avoidable interruptions or adverse consequences on the Generating Plant, and consistent with applicable laws, rules and regulations, and the terms and conditions of this Agreement.

## 8. INTERCONNECTION FACILITIES

8.1 Power from the Generating Plant shall be transmitted at 33 KV through a 33 KV line from the Generating plant located in Distt. Unnao. The power so transmitted shall be interfaced with 33KV side of 132 KV grid substation located at Sonik by STU .

8.2 The cost of the dedicated transmission line from the Generating Plant to the designated grid sub-station Sonik of STU shall be borne by concerned Discom and the cost of bay, tie-line, terminal equipments Metering Arrangements and associated equipments, shall be borne by UPPTCL. The cost incurred thereof shall be allowed in Annual Revenue requirements of the Discom/UPPTCL.

  
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 18/11/09

For Power Cube Pvt. Ltd.  
  
 Director

8.3 The construction of transmission line and other supporting works for evacuation of power shall be undertaken by the DISCOM/ UPPTCL will construct the bay and Metering arrangements at Grid Sub-Station.

8.4 The Generating Plant shall be responsible for the Maintenance of equipment at the generating end.

8.5 The Maintenance of 33 KV line will be done by Discom and terminal equipment at bay will be maintained by UPPTCL and their own costs.

8.6 The Generating Plant shall consult STU on the scheme of protection and the facilities at his end and accordingly provide the equipment at his end. The protection system, installed by the Generating Plant, shall be checked by STU/Discom.

8.7 Without limiting the foregoing, the Generating Plant and STU shall, operate and maintain the interconnection and parallel operation facility in accordance with accepted good engineering practices in the electricity industry and the UP Electricity Grid Code as amended from time to time and directions of Director Electrical Safety (GOUP) and safety requirements as specified by the Authority under section 53 of the Act, 2003.

8.8 The interconnection facilities, to be provided by the Generating Plant are set forth in Annexure IV attached hereto and made a part hereof.


## 9. PROTECTIVE EQUIPMENT & INTERLOCKING

9.1 The interconnection facilities shall include necessary protective equipment and interlocking devices, which shall be so coordinated that any malfunctioning or abnormality in the generators or in the bus of the Generating Plant shall not adversely reflect on or affect STU grid system. In event of any malfunctioning or abnormality, the system shall be designed to ensure that the Generating Plant's breaker trips first to protect the equipment. Prior to adopting it the Generating Plant shall obtain approval of STU for the protection logic of the generator system and the synchronization scheme.

9.2 The Generating Plant shall install necessary equipment to eliminate feeding of reverse power from the Grid to the Generating Plant's system in absence of any agreement for purchase of power with DISCOM.

## 10. TECHNICAL ASSISTANCE BY DISCOM & GENERATING PLANTS RESPONSIBILITY

10.1 On request, DISCOM., in consultation with STU, shall provide reasonable technical assistance to the Generating Plant in preparing the design and specifications of the required

  
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facilities and for laying down the standard operating and maintenance procedures. The Generating Plant, however, shall be responsible for procurement, installation, testing, maintenance and operation of the electrical system installed in the Generating Plant's premises.

10.2 Notwithstanding the above, DISCOM. Shall not be responsible for any damage caused to the electrical system/generating set of the Generating Plant, on account of errors or defects in the design, procurement, installation, testing, maintenance and operation of the system.

## 11. ARRANGEMENTS AT THE POINT OF SUPPLY

The Generating Plant shall make all arrangements for paralleling the set/s with STU grid in consultation with and to the satisfaction of DISCOM and/or STU, subject to the approval of the Director of Electrical Safety, Government of Uttar Pradesh and safety specifications of the Central Electricity Authority (CEA) under Section 53 of the Electricity Act, 2003.

## 12. SYNCHRONISATION


12.1 The Generating Plant shall synchronize its power generating set in consultation with the Executive Engineer, Electricity Transmission Division, UPPTCL In-charge of the Sonik 132KV sub-station of STU and as per provisions of the UP Electricity Grid Code as amended from time to time. The Generating Plant shall give seven (7) days prior intimation of the synchronization programme to the Nodal Officer:

- (i) When commissioning the plant for the first-time,
- (ii) When commissioning after completion of the annual Maintenance programme.

12.2 STU shall not be responsible for the damage, if any, caused to the plant and equipment of the Generating Plant due to failure of the synchronizing or the protective system provided by the Generating Plant.

## 13. LIASON WITH & ASSISTANCE FROM DISCOM.

The Generating Plant shall closely liaise with the Nodal Officer of DISCOM. and the STU and shall inform the date of commencement of delivery of power to the designated officials of DISCOM. and STU one month in advance and also arrange for testing and commissioning of the protection system at least 15 days in advance. If requested by the Generating Plant, DISCOM., in consultation with STU as the case may be, shall extend assistance for testing, subject to the condition that the Generating Plant shall pay the charges for such assistance to DISCOM/STU, if so indicated by the concerned Testing Division of DISCOM/STU. This charge shall be reasonable and be based on the man-hours devoted by staff and their usual levels of remuneration, and equipment used.

  
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For Power Cube Pvt. Ltd.

  
 Director

## 14. METERING

14.1 The UPPTCL shall supply, two identical sets of ABT compliant meters, with the facility for downloading data to measure the quantity and time details of the Power exported from and imported by the Generating Plant along with all necessary associated equipments. These meters shall be installed and maintained by STU as per requirement of Discom. These meters shall be installed at the grid substation of STU at the interconnection point. One set of export/import meters shall be termed as Bill Meter and other set will serve as the Check Meter. The complete metering system consisting of meters, Current Transformers & Potential Transformers shall conform to the 0.2 accuracy class, individually and collectively, and shall comply with the technical standards, accuracy and calibration requirements of the Indian Electricity Rules and the specifications of the Bureau of Indian Standard and the guidelines of CEA for installation of meters.

14.2 The joint meter readings shall be recorded in the format given in Annexure V & VI.

14.3 The Meter/Metering system shall be properly sealed and made pilfer proof, to the satisfaction of both parties.

14.4 DISCOM (in consultation with STU if the generating plant is connected to the substation of STU) shall, test all the metering equipment for accuracy, in the presence of a representative of the Generating Plant, if the Generating Plant so elects, at least once every year while the agreement is in force. Either party may, however, elect to get the meters tested at any time they so desire, at their own cost, in the presence of the other party.


14.5 DISCOM/STU 's designated representative and the representative of the Generating Plant shall jointly certify the meter test results. After every testing all metering equipment and the Metering system shall be securely sealed jointly by the representatives of DISCOM and the Generating Plant.

14.6 The reading and testing of meters and associated equipment shall be in accordance with accepted good engineering practices in the electricity industry.


14.7 Calibration, inspection and testing of meters and the associated equipment shall be the responsibility of DISCOM, who shall bear the related costs.

14.8 Meter readings shall be taken jointly by parties as indicated below: -

- (i) DISCOM side –Executive Engineer, Electricity Distribution Division- Unnao & Executive Engineer, Electricity Test Division jointly with the proviso that of the two may depute one of their Assistant Engineer if he is unable to be present due to an emergent situation.
- (ii) Generating Plant side - Authorized representative of the Generating Plant.

  
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 18/11/09

For Power Cube Pvt. Ltd.

  
 Director

14.9 The reading of the Bill Meter shall form the basis for the energy account, provided that the magnitude (i.e. absolute value) of the difference between the Check and Bill Meter reading is within one percent of the Bill Meter reading.

14.10 If in any month the readings of the Bill Meter and Check Meter are found to be doubtful or beyond the permissible 1% deviation indicated above, both sets of meters shall be checked and calibrated in the presence of authorized representatives of both the parties. Corrections shall be made, if required, on the basis of the error detected during this process, in the Monthly Bill for the period between the previous meter readings and the date and time from which accurate readings become available through replacement or re-calibration. These corrections shall be full and final for the Bill of that month.

14.11 During the period of checking and calibration of both meters simultaneously another export and import meter duly calibrated would be installed by DISCOM (in consultation with STU if the plant is connected to the s/s of STU. For this purpose, one spare set of meters would be required to be available with the generating plant at all times.

14.12 If the Bill Meter is found to be defective, and the Check meter is found to be accurate then the reading from the latter shall be used for billing purpose and the Bill meters would be re-calibrated and re-installed or replaced by duly tested and calibrated meters, as necessary. Where error in the Check Meter is indicated beyond permissible limit but there is no error in the Bill Meter, monthly energy account would be prepared on the basis of the Bill Meter reading and the Check Meter shall be immediately re-calibrated and re-installed or replaced as necessary. If both meters are found to be defective, then the Bill will be revised on the basis of the in-accuracy discovered in the testing. The M.R.I. output from the meters shall be considered an authentic document for verification.


14.13 Metering at generating terminal of each unit of the generating plant shall be ensured as per the guidelines of the Central Electricity Authority.

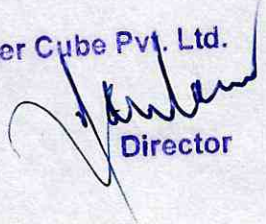
## 15. ACCEPTANCE AND APPROVAL OF DISCOM

DISCOM 's acceptance or approval for equipment, additions or changes to equipment, and their operational setting etc., would be required. Such acceptance/approval shall not be unreasonably withheld and shall be based on DISCOM 's existing policies and practices after the clearance of STU is obtained.

## 16. COMMISSIONING OF GENERATION FACILITIES

The Generating Plant shall commission the generation facility and synchronize it with STU system grid by December 2011.

  
 CB (P.P.A.)  
 U.P.P.C.L. 18/11/09  
 Shakti Bhawan Extn  
 Lucknow.

For Power Cube Pvt. Ltd.  
  
 Director

## 17. CONTINUITY OF SERVICE

17.1 The Solar power plant shall be ' must run' plant for dispatch of electricity and for that purpose it shall be connected to nearest sub-station of the Licensee subject to least breakdown/shutdown.

17.2 The supply of electricity by the Generating Plant shall be governed by instructions from the state load dispatch centre, as per the provisions of the UP Electricity Grid Code as amended from time to time. However, DISCOM /STU may require the Generating Plant to temporarily curtail or interrupt deliveries of power only when necessary in the following circumstances: -

a. Repair and/or Replacement and/or Removal of STU equipment or any part of its system that is associated with the Generating Plant's facility; and/or

b. Endangerment of Safety: If STU determines that the continued operation of the facility may endanger the safety of STU personnel or integrity of electric system, or have an adverse effect on the provision of electricity to STU other consumers/customers; and/or

c. Force Majeure Conditions as defined in Para 26 below

d. The Solar power shall be purchased by the license over and above purchase of renewable power under 7.5 percent of the total power purchase, as mentioned in CNCE Regulations, for the specified period of 20 years from commencement of generation.

**Note:** Any necessary inspection, investigation or maintenance of STU equipment or any part of its system that is associated with the Generating Plant's facility shall be planned by STU to coincide with the scheduled outage of the Generating Plant's generation system;

17.3 Before disconnecting the Generating Plant from system STU shall, except in the case of an emergent situation, give advance intimation to the Generating Plant through telephone/wireless or through other means of communication along with reasons for disconnection, and the likely period of the disconnection. However, subsequent to disconnection, STU shall immediately notify the Generating Plant by telephone and confirm in writing the reasons for, and the likely period of, disconnection. During the period so notified STU shall not be obligated to accept or pay for any power from the Generating Plant.

17.4 In any such event as described above, STU shall take all reasonable steps to minimize the frequency and duration of such interruptions, curtailments, or reductions.

17.5 STU shall avoid scheduling any event described in 17.1 above, to the extent reasonably practical, during the Generating Plant's operations. Where the scheduling of such an event during the Generating Plant's operations cannot be avoided, STU shall provide the Generating Plant with fifteen days advance notice in writing to enable the Generating Plant to cease delivery of Power to STU at the scheduled time.

*[Signature]*  
 CE (DPA)  
 U.P.P.C.L.  
 Shakti Bhawan Extn  
 Lucknow.

For Power Cube Pvt. Ltd.

*[Signature]*  
 Director

17.6 In order to allow the Generating Plant's facility to remain on-line and to minimize interruptions to Generating Plant operations, the Generating Plant may provide automatic equipment that will isolate the Generating Plant's facility from STU system during major system disturbances.

## 18. DAILY/MONTHLY/ANNUAL REPORT

The Generating Plant shall submit daily/monthly/annual and other reports on the format, and as per the procedure, specified in the UP Electricity Grid Code as amended from time to time and under the CNCE Regulations or as desired by the STU and DISCOM.

## 19. CLEARANCES, PERMITS AND LICENCES

The Generating Plant shall obtain, at its own expense, all authorizations, permits, and licenses required for the construction, installation and operation of the Generating Plant's facilities and any interconnection facilities, including but not limited to, rights-of-way or easements. DISCOM. Shall provide reasonable assistance, including permissions, approvals and clearances from STU, to the Generating Plant if so requested by the Generating Plant.

## 20. DURATION

20.1 Unless terminated by default, this agreement shall be valid till the expiry of 20 years from the date of commissioning of the plant.


20.2 The agreement may be renewed or extended for such period as may be mutually agreed between the Generating Company and DISCOM. on expiry of initial term of 20 years.

## 21. EVENTS OF DEFAULT AND TERMINATION

21.1 The occurrence of any of the following events at any time during the term of this agreement shall constitute a default by the Generating Plant:

(a) Failure on the part of the Generating Plant to use reasonable diligence in operating, maintaining, or repairing the Generating Plant's facility, such that the safety of persons and property, DISCOM./STU equipment, or DISCOM./STU service to others is adversely affected; or

(b) Failure or refusal by the Generating Plant to perform its material obligations under this agreement; or

  
 CE (PPA) 18/11/09  
 U.P.P.C.L.  
 Shakti-Bhawan Bstn  
 Lucknow.

For Power Cube Pvt. Ltd.

  
 Director

(c) Abandonment of its interconnection facilities by the Generating Plant or the discontinuance by the Generating Plant of services covered under this agreement, unless such discontinuance is caused by force majeure, or an event of default by DISCOM, or

(d) Failure by the Generating Plant to abide by all statutory provisions, rules, regulations, directions and conditions for installation, operation, and supply of power and maintenance of co-generation units etc., enforced from time to time by the Union/State Government, UPERC or other empowered authorities, including compliance with the UP Electricity Grid Code-2000, or

(e) Failure by the Generating Plant to pay DISCOM any amount payable and due under this agreement within sixty (60) working days of the demand being raised.

21.2 The occurrence of any of the following at any time during the term of this agreement shall constitute a default by DISCOM: -

(a) Failure to pay to the Generating Plant any amount payable and due under this agreement within sixty (60) working days of the receipt of the bill/monthly purchase bill; or

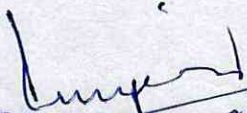
(b) Failure to use reasonable diligence in operating, maintaining, or repairing DISCOM/STU interconnecting facilities, such that the safety of persons or property in general, or the Generating Plants equipment or personnel are adversely affected; or

(c) Failure or refusal by DISCOM to perform its material obligations under this agreement; or

(d) Abandonment of its interconnection facilities by DISCOM /STU or the discontinuance by DISCOM of services covered under this agreement, unless such discontinuance is caused by force majeure or an event of default by the Generating Plant.

(e) Except for failure to make any payment due, within sixty (60) working days of receipt of the monthly purchase bill, if an event of default by including nonpayment of bills either party extends beyond a period of sixty (60) working days after receipt of written notice of such event of default from the non defaulting party, then the non-defaulting party may, at its option, terminate this agreement by delivering written notice of such termination to the party in default.

(f) Failure by either DISCOM or the Generating Plant to exercise any of its rights under this agreement shall not constitute a waiver of such rights. Neither party shall be deemed to have waived the performance of any obligation by the other party under this agreement, unless such a waiver has specifically been made in writing and approved by the UPERC.

  
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 Lucknow.

For Power Cube Pvt. Ltd.

  
 Director

21.3 DISCOM reserves the right to terminate this agreement upon one months notice to the Generating Plant, if the Generating Plant's facility fails to commence production of electric power within three months from the planned commercial operation date shown in Annexure 1.

## 22. COMMUNICATION

In order to have effective co-ordination between DISCOM and the Generating Plant, a designated official shall be kept on duty round the clock by the Generating Plant and DISCOM in their respective premises, with information to each other about the name, location, telephone number etc., of the official. Without prejudice to discharge of their rightful duties by others, this duty official shall take necessary action on receiving information about developments from the other party. The Generating Plant shall provide reliable and effective communication through wireless/hotline etc., between the Generating Plant & the interconnecting substation of STU and between the Generating Plant and the SLDC. The Generating Plant shall make provision for an RTU for remote monitoring of voltage, current and other related electrical parameters, as may be required by the STU.

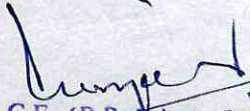
## 23. DISPUTES AND ARBITRATION

In the event of any dispute or difference between the parties concerning performance of this agreement and/or the rights and liabilities of the parties in respect of which a procedure for the resolution is not otherwise provided for in this agreement the following provisions shall apply:

a) Executive Engineer, Electricity Distribution Division of DISCOM, and the authorized representative of the Generating Plant would be empowered to indicate explicitly the nature and material particulars of the dispute/dissatisfaction and the relief sought, and serve notice thereof on the other, with copy to the Discom's Superintending Engineer of the Circle under whose jurisdiction the Generating Plants plant is located.

b) On receiving such information, the Superintending Engineer of the Circle in which the Generating Plant is located, shall be required to personally meet the authorized representative of the Generating Plant and Executive Engineer of the concerned Division, at his own office, separately and/or together, within 15 (Fifteen) days of the date of receipt of such notice, and attempt in good faith to resolve the dispute to the mutual satisfaction of the two parties, within the stipulations dictated by the letter and spirit of the agreement.

c) If the dispute is not resolved by way of a settlement being arrived at and duly signed by each of the above officers within (30) thirty days of the date of receipt of the notice described in clause (a) above, the matter may be referred by either or both the above designated officers of the two parties to the Discom's Chief Engineer who has direct

  
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 U.P.P.C.L.  
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 Lucknow.  
 18/11/99

For Power Cube Pvt. Ltd.

  
 Director

supervisory jurisdiction over the Superintending Engineer referred to above, with information to the Chief Executive of the Generating Plant Within 15 days of receipt of such notice, Chief Engineer and the Chief Executive of the Generating Plant would be required to meet at the formers office and endeavor to settle the dispute within a further period of (30) thirty days. i.e. within a total period of 45 (forty Five) days from the initial date of receipt of the notice by the Chief Engineer.

d) If the said dispute / dissatisfaction remains unresolved, either party can file a petition before UPERC, whose decision will be final and binding on both the parties. UPERC shall be empowered to determine the exact nature and modalities of the procedure to be adopted in resolving the matter.


## 24. INDEMNIFICATION

24.1 The Generating Plant shall indemnify, defend, and render harm free, DISCOM/STU, its members, directors, officers, employees and agents, and their respective heirs, successors, legal representatives and assignees, from and against any and all liabilities, damages, costs, expenses (including attorneys fees), losses, claims, demands, action, causes of action, suits, and proceedings of every kind, including those for damage to property of any person or entity (including the Generating Plant) and/or for injury to or death of any person (including the Generating Plant's employees and agents), which directly or indirectly result from or arise out of or in connection with negligence or willful misconduct of the Generating Plant.

24.2 DISCOM/STU shall indemnify and render the Generating Plant, its directors, officers, employees and agents, and their respective heirs, successors, legal representatives and assignees harmless from and against any and all liabilities, damages, costs, expenses (including outside attorneys fees), losses, claims, demands, actions, causes of action, suits and proceedings of every kind, including those for damage to the property of any person or entity (including DISCOM) and/or injury to or death of any person (including DISCOM's employees and agents), which directly or indirectly result from or arise out of or in connection with negligence or willful misconduct by DISCOM.

## 25 ASSIGNMENT

This Agreement may not be assigned by either DISCOM or the Generating Plant without the consent in writing of the other party, except that either party may assign its rights under this Agreement, or transfer such rights by operation of law, to any corporation with which or into which such party shall merge or consolidate or to which such party shall transfer all or substantially all of its assets; provided that such assignee or transferee shall expressly assume, in writing, delivered to the other party to this Agreement, all the obligations of the assigning or transferring party under this Agreement.

  
 CE (B.P.A.) 18/11/97  
 U.P.P.C.L.  
 Shakti Bhawan Extn  
 Lucknow.

For Power Cube Pvt. Ltd.

  
 Director



## 26. FORCE MAJEURE

26.1 If any party hereto is wholly or partially prevented from performing any of its obligations under this agreement by reason of or due to lightning, earthquake, riots, fire, floods, invasion, insurrection, rebellion, mutiny, tidal wave, civil unrest, epidemics, explosion, the order of any court, judge or civil authority, change in State or National law, war, any act of God or a public enemy, or any other similar or dissimilar cause reasonably beyond its exclusive control and not attributable to its neglect, then in any such event, such party shall be excused from whatever performance is prevented by such event, to the extent so prevented, and such party shall not be liable for any damage, sanction or loss for not performing such obligations.

26.2 The party invoking this clause shall satisfy the other party of the occurrence of such an event and give written notice explaining the circumstances, within seven days to the other party and take all possible steps to revert to normal conditions at the earliest.

26.3 Any payments that become/have become due under this agreement shall not be withheld, on grounds of force majeure conditions developing.

## 27. AUTHORITY TO EXECUTE

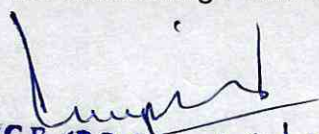
Each respective party represents and warrants as follows: -

- (a) Each party has all necessary rights, powers and authority to execute, deliver and perform this agreement.
- (b) The execution, delivery and performance of this agreement by each respective party shall not result in a violation of any law or result in a breach of any government authority, or conflict with, or result in a breach of, or cause a default under, any agreement or instrument to which either respective party is a party or by which it is bound.
- (c) No consent of any person or entity not a party to this agreement, including any governmental authority, is required for such execution, delivery and performance by each respective party. All necessary consents have been either obtained or shall be obtained in the future as and when they become due.

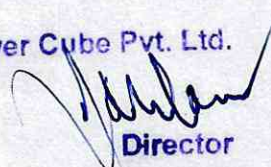
## 28. LIABILITY AND DEDICATION

28.1 Nothing in this agreement shall create any duty, standard of care, or liability to be discharged by any person not a party to it.

28.2 No undertaking by one party to the other under any provision of this Agreement shall constitute the dedication of that party's system or any portion thereof to the other party or to the public; or affect the status of DISCOM as a public utility or constitute the Generating Plant or the Generating Plant's facility as a public utility.

  
 CE. (PPA)  
 U.P.P.C.L.  
 Shakti Bhawan Bata  
 Lucknow.  
 18/11/09

For Power Cube Pvt. Ltd.

  
 Director

### 29. NODAL AGENCY OF DISCOM

The Executive Engineer, Electricity Distribution Division, Unnao on behalf of DISCOM shall act as a nodal agency for implementing this Agreement.

### 30. AMENDMENTS

Any waiver, alteration, amendment or modification of this Agreement or any part hereof shall not be valid unless it is in writing, signed by both the parties and approved by UPERC.

### 31. BINDING EFFECT

This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, legal representatives, and permitted assignees.

### 32. NOTICES

Any written notice provided hereunder shall be delivered personally or sent by registered post, acknowledgement due, or by courier for delivery on written receipt, with pre-paid postage or courier charges, to the other party, at the following address:

THE Executive Engineer,  
Electricity Distribution Division,/DISCOM  
Unnao

GENERATING PLANT:  
M/s Power Cube Pvt. Ltd.  
82/2, Cooperganj, Kanpur - 208003.


Notice delivered personally shall be deemed to have been given when it is delivered at the office of the Generating Plants or to the office of the Executive Engineer at address set forth above and actually delivered to such person or left with and received by a responsible person in that office. Notice sent by post or courier shall be deemed to have been given on the date of actual delivery as evidenced by the date appearing on the acknowledgement of delivery. Any party to this agreement may change its address for serving a written notice, by giving written notice of such change to the other party.

### 33. EFFECT OF SECTION AND ANNEXURE HEADINGS

The headings or titles of the various sections and Annexures hereof are for convenient reference and shall not affect the construction or interpretation of any provision of this Agreement.

### 34. NON-WAIVER

No delay or forbearance by either party in the exercise of any remedy or right will constitute a waiver thereof, and the exercise or partial exercise of a remedy or right shall not preclude further exercise of the same or any other remedy or rights.

  
CE. (PPA)  
U. P. P. C. L. 18/11/23  
Shakti Bhawan Extn  
Lucknow

For Power Cube Pvt. Ltd.

  
Director

### 35. RELATIONSHIP OF THE PARTIES

Nothing in this Agreement shall be deemed to constitute either party hereto as partner, agent or representative of the other party or create any fiduciary relationship between the parties.

### 36. ENTIRE AGREEMENT

This agreement constitutes the entire understanding and agreement between the parties.

### 37. GOVERNING LAW

This agreement shall be governed by and construed in accordance with the laws applicable in the State of Uttar Pradesh

### 38. NO PARTY DEEMED DRAFTER

The parties agree that no party shall be deemed to be the drafter of this Agreement and that in the event this Agreement is ever construed by arbitrators, or by a court of law, no inference shall be drawn against either party on account of this Agreement or any provision hereof being drafted by them. DISCOM and the Generating Plant acknowledge that both parties have contributed substantially and materially to the preparation of this Agreement.

### 39. APPROVALS

Wherever approvals from either Discom or the Generating Plant are required in this Agreement, it is understood that such approvals shall not be unreasonably withheld.

### 40. ANNEXURES

ANNEXURES I to IX WOULD FORM PART OF THIS AGREEMENT.

### 41. STANDARD FOR DECISION MAKING

41.1 All operational decisions or approvals that are to be made at the discretion of either Discom or the Generating Plant, pursuant to the terms of this agreement, including specifications and design criteria etc., shall be made or performed according to good engineering practices prevailing in the electricity industry.

41.2 Professional decisions or activities undertaken by either party for the purpose of constructing, installing, removing, maintaining or operating any facility, which may affect the operations of the other party's facility or facilities, shall be made or performed according to good engineering practices prevailing in the electricity industry.

  
 CE (PPAD)  
 U.P.P.C.L.  
 Shakti Bhawan Extn.  
 Lucknow  
 18/11/07

For Power Gube Pvt. Ltd.

  
 Director

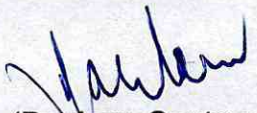
The provisions of UPERC's Regulation-2005, wherever required, will be applicable under this agreement.

This agreement is subject to approval from UPERC.

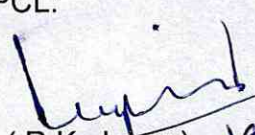
IN WITNESS:


WHEREOF, UPPCL on behalf of DISCOM and the Generating Plant have executed this agreement as of the 18<sup>th</sup> Day of Nov in the year 2009.


FOR THE GENERATING PLANT:

NAME:   
 (Pradeep Gautam )  
 DESIGNATION: Director  
 ADDRESS: M/s Power Cube Pvt Ltd..  
 82/2 Cooperganj, Kanpur

FOR UPPCL:

NAME:   
 (R.K. Jha) 18/11/09  
 DESIGNATION: Chief Engineer (PPA)  
 ADDRESS: UPPCL, Shakti Bhawan, Lko

WITNESSED BY:   
 NAME: S.P. PANDEY  
 DESIGNATION: EE  
 ADDRESS: PPA

WITNESSED BY:   
 NAME: Shimon Hossain  
 DESIGNATION: Manager  
 ADDRESS: Mohan Steels Ltd,  
 Industrial Area  
 Unnao. (U.P.)

## ANNEXURE- I

THE GENERATING PLANT FACILITIES

## 1. THE PLANT:

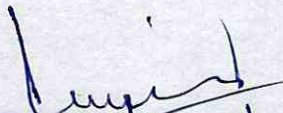
NAME: M/s POWER CUBE Pvt. Ltd.  
 LOCATION: Unnao  
 CHIEF EXECUTIVE: Mr. M.K. Kejriwal  
 CONTACT PERSON: Mr. Pradeep Gautam

TELEPHONE NUMBER: 1) 0515-2829592/3299177/9335626050  
 FAX NUMBER: 0515-2829777  
 EMERGENCY TELEPHONE NUMBER: 9336338088  
 PERMANENT MAILING ADDRESS: Kishore Niwas, Birhana Road, Kanpur-208001

2. GENERATING EQUIPMENT: -  
 BOILERS -  
 TURBO-GENERATOR SETS: -

CO-GENERATION VOLTAGE: -  
 SPEED: -  
 TYPE OF GOVERNOR: -  
 TRANSFORMER: -


FIRST SYNCHRONISATION (INITIAL OPERATION DATE):  
 COMMERCIAL OPERATION DATE December 2011

  
 CE. (PPA) 18/11/09  
 U. P. P. C. L.  
 Shakti Bhawan Bato  
 Lucknow

For Power Cube Pvt. Ltd.  
  
 Director

### 3.0 STIPULATIONS RELATING TO THE FACILITIES:


- 3.1 For the purpose of this agreement the Generating facility includes all real estate, fixtures, and property owned, controlled, operated or managed by the Generator in connection with or to facilitate the production, co-generation, transmission, delivery, or furnishing of electricity or required to interconnect and deliver the electric Power to UPPTCL's system. A single-line diagram relay list and trip scheme of the Generator facility, will be reviewed and accepted by UPPTCL. The single-line diagram, relay list, and trip scheme shall expressly identify the point of electrical interconnection of the Generator facility to UPPTCL's system. Material changes or additions to the Mill's generating and interconnection facilities reflected in the single-line diagram, relay list, and trip scheme shall be approved by UPPTCL.
- 3.2 The Generator shall furnish, install, operate and maintain facilities such as breakers, relays, switches, synchronising equipment, monitoring equipment, and control and protective devices as suitable for parallel operation with UPPTCL's system and acceptable to UPPTCL. Such facilities shall be accessible to authorised UPPTCL personnel for inspection, with prior intimation to the Generator.
- 3.3 The Generator shall furnish, in accordance with UPPTCL's requirements, all conductors, service switches, fuses, meter sockets, meter and instrument transformer housings and mountings, switches, meter buses, meter panels, and similar devices required for the service connection and meter installation at UPPTCL's premises. This equipment shall be installed and Commissioned by UPPTCL.
- 3.4 UPPTCL shall review and approve the design drawings and Bill of Material for the Generatorelectrical equipment, required to interconnect with UPPTCL's system. The type of electrical equipment, the type of protective relaying equipment and the settings affecting the reliability and safety of operation of UPPTCL's and the Mill's interconnected system shall be approved by UPPTCL. UPPTCL, at its option, may request witnessing operation of the control, synchronising, and protection schemes.

  
 CE. (P.P.A.) 18/11/97  
 U.P.P.C.L.  
 Shakti Bhawan Bsta  
 Lucknow

For Power Cube Pvt. Ltd.

  
 Director

- 3.5 The Generator shall provide a manual disconnect device, which provides a visible break to separate the Generator facilities from UPPTCL's system. Such a disconnect device shall be lockable in the OPEN position and be readily accessible to UPPTCL personnel at all times.
- 4.0 Operating Procedures:
- 4.1 The Generator shall operate its plant when interconnected with the grid as per the procedure given in the UP Electricity Grid Code 2000. The overall responsibility of operation and implementation of the UP Electricity Grid Code-2000 rests with the State Transmission Utility notified by the State Government.
- 4.2 The Generators, normal annual Maintenance shall be carried out as per schedule provided by them.
- 4.3 The Generator shall notify UPPTCL's interconnecting sub station and ALDS prior to synchronising a generator on to or taking a generator off of the system. Such notification should be as far in advance as reasonably possible under the circumstances causing the action.

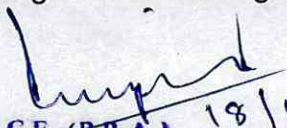
  
CE (PPA) 18/11/09  
U. P. P. C. L.  
Shakti Bhawan Extn  
Lucknow.

For Power Cube Pvt. Ltd.  
  
Director

## Annexure II

**2.0 Sale and Accounting for Power**

1. In case the Generating Plant is not a consumer of DISCOM , protective gear at STU ubstation would be designed to ensure that reverse flow of power from STU's system to the Generating Plant is totally blocked out and the circuit breaker at the Substation gets opened automatically when required. However, notwithstanding this provision, if any export to the Generating Plant takes place, it would be paid for by the Generating Plant in accordance with the terms of of this agreement.
2. On the first day of the Energy Account Month, the Generating Plant shall provide information in writing or Generation Schedule to SLDC and DISCOM .
3. The purchase of electricity by DISCOM shall be subject to the provisions of the Distribution Licence, CNCE Regulations & Directions of UPERC and other statutory authorities, and requirements of the state load dispatch centre.
4. Power accounting and Billing would be done on the basis of the section titled "Metering" in the main agreement (Clause No. 14.0)

  
CE (PPA.) 18/11/09  
U.P.P.C.L.  
Shakti Bhawan Extn.  
Lucknow.

For Power Cube Pvt. Ltd.

  
Director



## ANNEXURE III

SAMPLE MONTHLY BILL  
INVOICE

For the Month of ....., .....

Monthly Purchase Bill No.

Date

Name of Buyer: DISCOM

Address:

Town: District:

PIN Code:

Tel. No.: Fax:

Name of the Generating Plant:

Address:

Town: District:

PIN Code:

Tel. No.: Fax:

**DESCRIPTION****PRICE****AMOUNT** Energy**QUANTITY****UNIT**

1. ENERGY SUPPLIED (KWh)
2. ENERGY FOR WHEELING (KWh)
3. ENERGY FOR PAYMENT (KWh) (1-2)

**Banked Energy**

1. Energy banked during the month
2. Energy balance as on preceding month
3. Energy scheduled for withdrawal during the month
4. Banking charges
5. Energy withdrawan during the month (3-4)
6. Energy banked at the end of the month (1+2-3)

**OTHER CHARGES**

Less/Add : .....

**SUBTOTAL****TOTAL DUE**

For ..... Generating Plant Ltd.

Verified by

Authorised Signatory

Authorised Signatory, UPPCL

  
 CE (PPA)  
 U. P. P. C. L.  
 Shakti Bhawan Extn  
 Lucknow.

18/11/07

For Power Cube Pvt. Ltd.

  
 Director

## ANNEXURE IV

## INTERCONNECTION FACILITIES PROVIDED BY THE Generator

ITEMS	PROVIDED	NOT PROVIDED
-------	----------	-----------------

LINE BAY/S

STRUCTURES  
 BUS BARS, CLAMPS AND CONNECTORS  
 GROUNDING GRID  
 ISOLATORS  
 CURRENT TRANSFORMERS  
 CIRCUIT BREAKERS  
 CONTROL CUBICLES  
 CONTROL CABLING  
 AC / DC POWER SUPPLY  
 COMMUNICATION EQUIPMENT

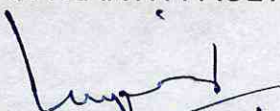
(To be provided as per  
 Approval of Discom/  
 STU)

**SYNCHRONISATION & PROTECTION FACILITIES**

AUTOMATIC VOLTAGE REGULATOR  
 AUTO SYNCHRONISATION UNIT  
 CHECK SYNCHRONISATION RELAY

**PROTECTION FOR INTERNAL FAULTS:**

DIFFERENTIAL GENERATOR  
 DIFFERENTIAL UNIT TRANSFORMER  
 RESTRICTED EARTH FAULT  
 STATOR EARTH FAULT  
 ROTOR EARTH FAULT

  
 C.E. (P.P.A.)  
 U.P.P.C.L.  
 Shakti Bhawan Extn  
 Lucknow.

18/11/09

For Power Cube Pvt. Ltd.

  
 Director

INTER-TURN FAULT

OVER VOLTAGE

LOSS OF EXCITATION

UNDER VOLTAGE

REVERSE POWER

LOW FORWARD POWER RELAY

**PROTECTION AGAINST GRID FAULTS**

MINIMUM IMPEDANCE

(DISTANCE PROTECTION RELAY)

UNBALANCE (NEGATIVE PHASE SEQUENCE)

O/C & E/F (UNIT TRANSFORMER)-LT & HT

OVERLOAD ALARM


OVERFLUXING RELAY

**PROTECTION AGAINST GRID DISTURBANCES:**

UNDER FREQUENCY

OVER FREQUENCY

POLE SLIP

  
CE (P.P.A.) 18/11/99  
U.P.P.C.L.  
Shakti Bhawan Extn  
Lucknow

For Power Cube Pvt. Ltd.

  
Director

**ANNEXURE V****BILL METER READINGS OF GENERATING PLANT**

READING SHOULD BE TAKEN ON FIRST DAY OF EVERY MONTH, AT 12.00 NOON.

NAME OF THE MILL:

PLACE: TALUKA: DISTRICT: STATE:

C.T. RATIO AVAILABLE/CONNECTED:

P.T. RATIO AVAILABLE/CONNECTED:

SCALE FACTOR (IF ANY):

MULTIPLYING FACTOR (MF):

BILLING METER MAKE / NUMBER:

METER READINGS:

EXPORT METER READING IMPORT METER READING

KWH

PREVIOUS READING

CURRENT READING

DIFFERENCE

DIFFERENCE X MULTIPLYING FACTOR

EXECUTIVE ENGINEER TRANSMISSION, UPPCL      EXECUTIVE ENGINEER T&C, UPPCL      AUTHORIZED REPRESENTATIVE. GENERATOR

DATE

NOTES:

1. UPPCL shall maintain a daily logbook to record hourly readings of the Bill Meter/ HT Meter.
2. The Genrator shall maintain a daily log to record the hourly Generation and supply in KWh, along with the schedule given by UPPCL's Dispatcher.
3. If the meter is changed, the reason/s, date, time of meter change and new meter make and number must be recorded by both parties.

*[Signature]*  
 CE (PPA) 18/11/09  
 U.P.P.C.L.  
 Shakti Bhawan Extn  
 Lucknow.

For Power Cube Pvt. Ltd.

*[Signature]*  
 Director

**ANNEXURE VI****CHECK METER READINGS OF GENERATOR**

READING SHOULD BE TAKEN ON FIRST DAY OF EVERY MONTH, AT 12.00 NOON.

NAME OF THE GENERATOR:

PLACE: TALUKA: DISTRICT: STATE:

C.T. RATIO AVAILABLE/CONNECTED:

P.T. RATIO AVAILABLE/CONNECTED:

SCALE FACTOR (IF ANY):

MULTIPLYING FACTOR (MF):

BILLING METER MAKE / NUMBER:

METER READINGS:

EXPORT METER READING IMPORT METER READING

KWH

PREVIOUS READING

CURRENT READING

DIFFERENCE

DIFFERENCE X MULTIPLYING FACTOR

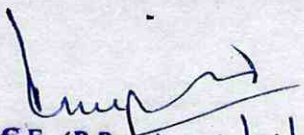
EXECUTIVE ENGINEER EXECUTIVE ENGINEER AUTHORISED

TRANSMISSION, UPPCL T&C, UPPCL REPRESENTATIVE.  
GENERATOR

DATE

NOTES:

1. UPPCL shall maintain a daily logbook to record hourly readings of the Check Meter/ HT Meter.
2. The Generator shall maintain a daily log to record the hourly Generation and supply in KWh, along with the schedule given by UPPCL's Dispatcher.
3. If the meter is changed, the reason/s, date, time of meter change and new meter make and number must be recorded by both parties.

  
CE. (P.P.A.) 18/11/09  
U.P.P.C.L.  
Shakti Bhawan Bstn  
Lucknow.

For Power Cube Pvt. Ltd.

  
Director

**ANNEXURE VII**

DAILY GENERATION REPORT

Name and Address of Plant:

Date:

Installed Capacity:

MW

Active Power, KWh

Time	Scheduled	Meter Reading	Difference x M.F.
00			
01			
02			
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			

Total (for each column)

Summary:

Time	Scheduled	Meter Reading	Difference x M.F.
0600 - 2200		Daily	
2200 - 0600			
Cumulative for Month			
0600 - 2200			
2200 - 0600			

**AUTHORISED REPRESENTATIVE OF THE GENERATOR**

To:

1. Concerned ALDS, UPPCL
2. Executive Engineer, Transmission, UPPCL

*[Handwritten Signature]*  
**CE. (P.P.A.)**  
**U.P.P.C.L.**  
**Shakti Bhawan Extn**  
**Lucknow**  
 18/11/03

**For Power Cube Pvt. Ltd.**

*[Handwritten Signature]*  
**Director**

## Annexure VIII

## MONTHLY TRIPPING REPORT

Name and Address of the Plant

Installed Capacity:

MW

Date of First Commissioning (Synchronising):

Date of Commercial Operation:

Date of Synchronising

Progressive Days (Co-generation):

Days

## TRIPPING ON FAULT:

S N	Tripping			REASON FOR TRIPPING	SYNCHRONIZATI ON	Total Time Lost		RE MA RK S					
	Date	Time				Mech.	Electrica l		Other	Dat e	Time	Hr	Min
		Hr.	Min										

## PLANNED &amp; FORCED OUTAGE:

S N	OUTAGE			REASON FOR TRIPPING			SYNCHRONISI		TOTAL TIME LOST		REMA RKS
	Dat e	Time		No. Fuel	Mech.	Electrica l	Other	Dat e	Time		
		Hr	Min						Hr	Min	

Progressive Days:

Time Lost:  
During \_\_\_\_\_ Month  
Year \_\_\_\_\_  
Since First Commissioning  
AUTHORISED REPRESENTATIVE OF THE Generator

To:

1. Concerned ALDS, UPPCL
2. Executive Engineer, Transmission, UPPCL

*[Signature]*  
CE (P.P.A.)  
U P P C L.  
Shakti Bhawan Bsta  
Lucknow

18/11/09

For Power Cube Pvt. Ltd.

*[Signature]*  
Director

# Uttar Pradesh Electricity Regulatory Commission

Kisan Mandi Bhawan, II Floor, Gomti Nagar, Lucknow-226010 Phone 2720426 Fax 2720423 E-mail [secretary@uperc.org](mailto:secretary@uperc.org)

Ref: UPERC/ Secy/JD(G)/324  
Date: 27.06.2008

1. Director, Non-conventional Energy Development Agency Vibhuti Khand, Gomti Nagar, Lucknow.
2. U.P. Power Corporation Ltd. (through its Chairman and M.D.) Shakti Bhawan, 14, Ashok Marg, Lucknow
3. Secretary, Ministry of new and renewable energy block no. 14, CGO Complex, Lodhi Road, New Delhi- 110003.
4. Secretary, Ministry of Power, Shram Shakti Bhavan, New Delhi - 1
5. Managing Director, Madhyanchal Vidyut Vitran Nigam Ltd, 4, Gokhale Marg, Lucknow.
6. Managing Director, Dakshinanchal Vidyut Vitran Nigam Ltd, Urja Bhawan, 220 KV, UP-Sansthan, By Pass Road, Agra-282007
7. Managing Director, Paschimanchal Vidyut Vitran Nigam Ltd, Victoria Park, Meerut.
8. Managing Director, Poorvanchal Vidyut Vitran Nigam Ltd, Bhikharipur, 132 KV substation, P.O. D.L.W Varanasi.
9. Chief Engineer (PPA), UPPCL, Shakti Bhawan, Lucknow.
10. Shri, M. K. Kejriwal, Director, Power Cube Pvt. Ltd., Kishori Niwas, 24/73 Birhana Road, Kanpur, U.P.
11. Chief Executive Officer, Noida Power Company Ltd., Commercial Complex-H-Block, Alpha Sector II, Greater Noida-201 308.

Sir,

Kindly find enclosed herewith Order dt. 27.06.08 in petition no. 522/2008 regarding Solar Tariff for Grid connected Solar Power.

*A. K. Srivastava*  
(A. K. Srivastava)  
Secretary

Encl: A/a  
CC:

1. Chairman
2. Member (PNP)
3. Member (RDG)
4. Director (Generation)
5. Jt. Director (Generation)
6. Petition Officer

*[Signature]*  
C.E. (P.P.A.)  
U.P.P.C.L.  
Shakti Bhawan Extn  
Lucknow.  
18/11/09

For Power Cube Pvt. Ltd.  
*[Signature]*  
Director



BEFORE THE UTTAR PRADESH ELECTRICITY REGULATORY COMMISSION

Petition No. 522/2008

IN THE MATTER OF: Re-determination of tariff of supply of electricity from solar power plants in view of Central Government incentive Scheme for grid connected solar power.

AND  
IN THE MATTER OF:

Non-conventional Energy Development Agency (NEDA),  
Vibhuti Khand, Gomti Nagar,  
Lucknow, U.P.

:Petitioner

ORDER

(Date of Public Hearing – 10.04.2008)

In the hearing, Sri. Pankaj Agarwala, Pr. Secretary, NEDA, Sri. Arun Director(D), UPPCL, Sri. S.N Dubey, CE(PPA), UPPCL, Sri. S.P Pandey, EE(PPA), UPPCL, Sri. M.P Sharma, Specialist(NEDA), Sri. Mohan K. Kejriwal, Director, Harsil Hydro / Power Cubes Ltd., Sri Pankaj, Power Cubes Ltd and Sri. A.K Arora, Resident Officer, NPCL were present.

1. Ministry of New and Renewable Energy (MNRE) Incentive Scheme:

Secretary, Govt. of India, MNRE, vide its D.O. no.32/61/2007-2008/PVSE dt 29.01.08, has issued guidelines for generation based incentive, for grid interactive solar power generation projects, to encourage grid quality power generation from megawatt size solar power plants. The Ministry will provide generation based incentive upto maximum Rs.12 per kwh for solar photovoltaic power and Rs. 10 per kwh for solar thermal power fed to the grid after deducting price under Power Purchase Agreement

CE. (P.P.A.)  
U. P. P. C. L.  
Shakti Bhawan Extn  
Lucknow.

18/11/07

For Power Cube Pvt. Ltd.

Director

to review the tariff for grid interactive solar power projects in light of the Central Government's scheme to encourage the solar energy generation. Since review of tariff for supply of electricity from solar power plants might have an effect of amending CNCE Regulations, 2005 and for any change in the tariff, public participation was required because the Commission had already determined a rate in CNCE Regulations. As such for promoting grid connected, environment friendly, solar generation in the interest of State and in view of the incentive scheme of the Government of India, the above mentioned letter of Director, NEDA was treated as petition and simultaneously a public notice was placed for inviting suggestions, objections and comments on the subject by 8<sup>th</sup> April,08 and hearing was fixed on 10<sup>th</sup> April,08.

**3. Existing Tariff:**

The Commission has made "UP Electricity Regulatory Commission (Terms and conditions for supply of power and fixation of tariff for sale of power from captive generating plants, co-generation, renewable sources of energy and other non-conventional sources of energy based plants to a distribution licensee) Regulations, 2005", herein after called 'CNCE Regulations'. Schedule-II (C) of the CNCE Regulations provides, "The tariff for all non-conventional and renewable source of energy based plants other than Bagasse/Bio-mass based co-generation plants and Mini/Micro hydel plants would be Rs.2.50 per unit for 2005-2006 with an escalation of 4% per annum for subsequent years without compounding."

**4. Other Statutory Provisions:**

National Electricity Policy (NEP), notified by the Central Government under the provisions of section 3(1) of the Electricity Act 2003, specify that there is an urgent need to promote generation of electricity based on Non-conventional sources of energy being the most environment friendly. For this purpose, efforts need to be made to reduce the capital cost of projects based on non-conventional and renewable sources of energy. At the same time, adequate promotional measures would have to be taken for

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CE. (P.P.A.)  
U.P.P.C.L. 18/11/08  
Shakti Bhawan Extn  
Lucknow.

*[Handwritten Signature]*  
**For Power Cube Pvt. Ltd.**  
*[Handwritten Signature]*  
Director

3  
*[Blue Stamp]*

Rajasthan had given their tariff for grid connected solar energy quite higher than what had been given in UP. He requested for early review and enhanced tariff so that benefit of the incentive scheme may be fully exploited particularly in light of the fact that the scheme is available for only 50 MW capacity on first come first serve basis and one State can take benefit for maximum aggregate capacity of 10 MW.

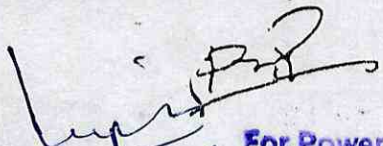
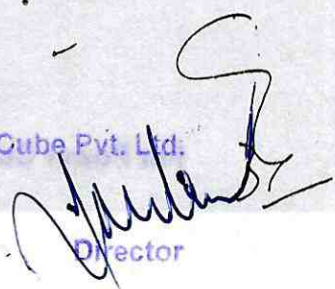
Mr. Arun, Director, UPPCL, requested for enforcement of competitive bidding process to arrive to the per unit rate of grid connected solar power. Mr. Agarwal argued that the time has not come to go for competitive bidding process as the solar energy projects are yet to take off in UP.

Mr. Kejriwal, Chairman, Power Cube Pvt. Ltd. submitted calculation of per unit kwh cost of solar PV power as calculated by their consultants. He pleaded for a tariff and power purchase agreement for not less than 20 years. He further requested that appropriate tariff after 10 years should be specified when the period of incentive scheme of the Central Govt. expires. He also requested for pass through of income tax on core business on actual basis.

6. Commission's View:

Under the provisions of Electricity Act, 2003, section 86(e) & section 61(h) the Commission has been entrusted with function to promote co-generation and generation of electricity from renewable sources of energy. The Tariff Policy at clause 6.4 clearly states that it would take some time for non-conventional technologies to compete with conventional sources in terms of cost of electricity.

It may be recalled that Non-conventional Energy Development Agency, UP had signed power purchase agreements with UP Power Corporation Ltd. for supply of electricity from its five pilot projects aggregating to capacity 350 KW, at rate specified in the CNCE Regulations against projected cost of supply of around Rs.16/unit. The

*AW*  
  
CE (PPA) 1187  
U. P. P. C. L.  
Shakti Bhawan Extn  
Lucknow.  
For Power Cube Pvt. Ltd.  
11/09  
  
Director

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period eleventh to twentieth year, there may be a scheme of the Central Government incentivizing sale of electricity than the tariff of such period shall be reviewed and enforced by the Commission.

7. Solar Energy Tariff of other SERC.s --

1. Rajasthan Electricity Regulatory Commission --

Tariff for ten years

	Solar Photovoltaic Power Plants	Concentrated Solar Power Plants
(a) Plants commissioned upto 31.12.2009 and		
(i) Covered under Gol Policy	Rs.15.78 /kWh	Rs.13.78 /kWh
(ii) Not covered under Gol Policy (Limited to 50 MW)	Rs.15.60 /kWh	Rs.13.60 /kWh
(b) Plants commissioned after 31.12.2009 but by 31.3.2010, the above tariff shall be reduced by 60 P/kWh		

2. Punjab Electricity Regulatory Commission --

Rs7.00 per unit for solar p v and Rs. 5.00 per unit for solar thermal, for ten years.

3. West Bengal Electricity Regulatory Commission -- for ten years

- Projects covered under Gol scheme -- Rs.4 per kwh to be paid by the licensee.
- Projects commissioned upto 2009-10 and not covered under Gol scheme -- Rs.11/kwh.
- Projects commissioned from 2009-10 to 31.03.12 and not covered under Gol scheme -- Rs.10/kwh

8. Data Collection and Analysis:

Data for determination of tariff is hardly available. Some information is made available particularly by NEDA and a developer Mr. M.K. Kejriwal, M/S Power Cubes Ltd., who was present in the hearing. The Commission has endeavored to congregate

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CE (PPA) 18/11/09  
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Shakti Bhawan E.cta  
Lucknow.

For Power Cube Pvt. Ltd.  
*[Signature]*  
Director

assuming 4% interest rate, 1% operating and maintenance cost, and depreciation of the capital outlay over 20 years.

Table-2: Showing average electricity costs in cents/kWh over 20 years for solar power

Cost	2400 kWh/kWp.y	2000 kWh/kWp.y	1600 kWh/kWp.y	1200 kWh/kWp.y	800 kWh/kWp.y
600 \$/kWp	2.5	3.0	3.8	5.0	7.5
1000 \$/kWp	4.2	5.0	6.3	8.3	12.5
1800 \$/kWp	7.5	9.0	11.3	15.0	22.5
3000 \$/kWp	12.5	15.0	18.8	25.0	37.5
<del>4600 \$/kWp</del>	19.2	23.0	<del>28.8</del>	38.3	57.5
5000 \$/kWp	20.8	25.0	31.3	41.7	62.5

From the above table, for a 1600 kWh/kWp.y plant, the cost is 4600 \$/kWp which means about Rs.18 Crore/MW. The sale rate from such plant at aforesaid norms comes out to be 28.8 cents/ kwh which is Rs. 11.52/kwh in Indian rupees. The above cost and tariff, pertaining to year 2007, is based on data obtained from website <http://en.wikipedia.org>. The tariff is determined at 4% interest rate, 1% operating and maintenance cost. The capital cost Rs.18 Crore/MW appears appropriate at present but the capital cost of solar is rapidly falling so it may not be relevent after few years. It is informed by the representative of M/S Power Cubes Ltd. that, for solar power

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*[Signature]*  
18/11/09

CE (PPA), U.P.P.C.L.  
Shakti Bhawan Bsto  
Lucknow.

For Power Cube Pvt. Ltd.

*[Signature]*  
Director

Stamp: 18/11/09  
Shakti Bhawan Bsto  
Lucknow

The cost of supply, for solar photovoltaic, on above norms is higher than Rs. 15 per kwh considered by the Central Government in its scheme. Considering the carbon credit available to the developer to the extent of Rs. 2.00/ kwh as informed by the developer present in the hearing, the cost is slightly higher than Rs. 15 per kwh for first ten years and there after slightly less than Rs. 15 per kwh from 11<sup>th</sup> to 20<sup>th</sup> of operation. Taken together both the period, the developer is expected not to be in loss. In absence of adequate data and operational practices, we find it difficult to assess the correct cost of supply. With the growth in solar energy market, the capital cost is reducing sharply and as the experience develops with the operation of solar plants under the scheme of the Central Government, the Commission would switch over to cost of supply model of pricing of electricity from these plants in future. But to keep in tandem with the efforts made by, Gol, the Commission decides to retain the rate of supply of electricity for solar PV at Rs.15.00/kwh for 20 years aiming at promotion of grid interactive solar energy.

The solar thermal energy plants have higher efficiency and incur lesser capital cost than the solar PV plants. There is no data available with the Commission to analyze the cost of supply from such plants and, therefore, rate of supply determined by the Gol at Rs.13.00/kwh is considered adequate.

- (b) On the basis of above data, the 20 Yr. rate of electricity applicable to the solar power plants commissioned before 31.12.11, shall be as given below.

Table-4

Types of solar power plants	Rate of electricity for twenty years
1. Solar PV	Rs.15.00/Kwh
2. Solar thermal	Rs.13.00/Kwh

CE. (P.P.A.)  
U. P. P. C. L. 18/01/17  
Shakti Bhawan Estn  
Lucknow

For Power Cube Pvt. Ltd.  
Director

- (e) The Central Government has mentioned that the Ministry may, at any given time, even before 31<sup>st</sup> March, 2010, announce a new generation based incentive and guidelines, which will be applicable to all such proposals/projects that have not been approved by that time. However, in case the Central Government announces any generation based scheme/policy or guideline for incentivizing the sale or purchase of electricity from solar plants, the Commission shall review the rates covered under this order. But such review would not prejudice the plant for which PPA has been signed between the parties before the Central Government announces any generation based scheme/policy or guideline pending approval of the Commission
- (f) The tariff from 11<sup>th</sup> to 20<sup>th</sup> year for Solar Power for the units commissioned before 31.12.2011 shall be as given in Table-7. However, this tariff shall be subject to change based on any scheme brought under Para 8(e).

Table-7

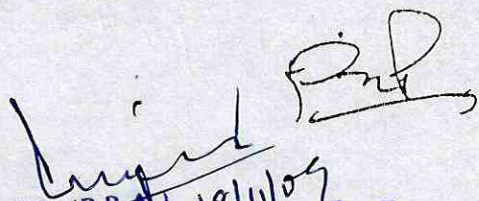
Tariff from 11 <sup>th</sup> to 20 <sup>th</sup> yr.	Solar PV		Solar Thermal	
	Licensee	Gol	Licensee	Gol
Plants commissioned before 31.12.11	15.00	0.00	13.00	0.00


(g) Impact on Tariff-

The additional cost to power purchase portfolio would be around 0.20 paisa per unit without Gol support. During first 10 years, this burden may further reduce due to incentive scheme of the Central Government.

(h) For the purpose of clarity, the interested party must note, save as otherwise provided in this order, that:

- 1. The provisions for non-conventional sources of energy made in the CNCE Regulations shall apply.

  
 CE (PPA)  
 U. P. P. C. L.  
 Shakti Bhawan Extn  
 Lucknow.

18/11/09  
 For Power Cube Pvt. Ltd.  
  
 Director

- II. The Solar power plant shall be a 'must run' plant for dispatch of electricity and for that purpose it shall be connected to nearest sub-station of the Licensee subjected to least breakdown/shutdown.
- III. The Solar power shall be purchased by the licensee over and above the purchase of renewable power under 7.5 percent of the total power purchase, as mentioned in CNCE Regulations, for the specified period.
- IV. The grid connectivity at appropriate voltage shall be provided by the Licensee and the total cost on construction and maintenance of sub-station and transmission line including bay etc. shall be borne by such Licensee. In case the sub-station/ transmission line comes under Transmission Company, the same shall be borne by the Transmission Company. The cost incurred thereof shall be allowed in Annual Revenue Requirement of the Licensee / Transmission Company. This provision shall continue unless otherwise provided by the Commission pursuant to cost plus approach to tariff determination. Metering shall be at the sub-station of the Licensee.
- V. The income tax paid on income from core business and any taxes/duties imposed on electricity shall be paid by the distribution licensee at actual.

11. Solar Energy – Clean & Green Energy:

A clean and green environment is the need of the hour. Solar energy is the most sought after and the fastest growing technology in the world. The use of more and more Solar energy shall be in aid to the environment. The generation from this technology should be accelerated. Non-conventional Energy Development Agency (NEDA) is responsible for promotion of solar energy in Uttar Pradesh as such it should make aggressive effort to harness the solar energy. Apart from generation, NEDA must also make policies on the following:

- solar lighting
- water heating, space heating and process heating
- ventilation and air-conditioning

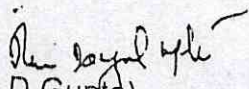
(In) *[Signature]*  
 CE (P.P.A.) 18/11/17 For Power Cube Pvt. Ltd.  
 U. P. P. C. L.  
 Shakti Bhawan Extn  
 Lucknow.  
*[Signature]*  
 Director

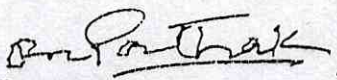
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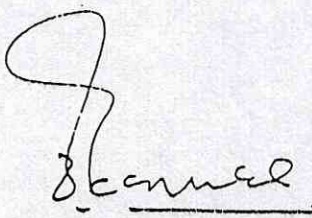


13. A copy of this order shall be sent to Ministry of Power and Ministry of New and Renewable Energy, Government of India.


14. The petition is disposed of.

  
(R.D Gupta)  
Member

  
(P.N Pathak)  
Member

  
(Vijoy Kumar)  
Chairman

Lucknow; Dated: 27<sup>th</sup> June, 2008

  
CE. (P.P.A.) 19/11/08  
U. P. P. C. L.  
Shakti Bhawan Extn  
Lucknow.

For Power Grids Pvt. Ltd.  
  
Director

# Uttar Pradesh Electricity Regulatory Commission

Kisan Mandi Bhawan, II Floor, Gomti Nagar, Lucknow-226010 Phone 2720426 Fax 2720423 E-mail [secretary@uperc.org](mailto:secretary@uperc.org)

Ref: UPERC/ Secy/JD(G)/ 462  
Date: 27.11.2008

1. U.P. Power Corporation Ltd. (through its Chairman and M.D.) Shakti Bhawan, 14, Ashok Marg, Lucknow
2. Director, Non-conventional Energy Development Agency Vibhuti Khand, Gomti Nagar, Lucknow.
3. Secretary, Ministry of new and renewable energy block no. 14, CGO Complex, Lodhi Road, New Delhi- 110003.
4. Secretary, Ministry of Power, Shram Shakti Bhavan, New Delhi - 1
5. Chief Engineer (PPA), UPPCL, Shakti Bhawan, Lucknow.
6. Shri, M. K. Kejriwal, Director, Power Cube Pvt. Ltd., Kishori Niwas, 24/73 Birhana Road, Kanpur, U.P.
7. Sri H.S.Rauth, G.M., Moser Baer India Ltd., 43-B, Okhla Industrial Estate, New Delhi
8. Sri Mayank Mehta, D.G.M., Astonfield Group of Companies, 28 Naresh Mitra Sarani, Kolkatta-700025
9. Sri. Y.P Chawla, Head (Corporate Business Development), Zoom Developers Pvt. Ltd., A-9 A, Green Park, New Delhi
10. Sri R.K Sikri, GM (REDG), 2<sup>nd</sup> Floor, Core-5, SCOPE Complex, Lodhi Road, New Delhi.

Sir,

Kindly find enclosed herewith Order dt. 27.11.08 in petition no. 572/2008 regarding Solar Tariff for Grid connected Solar Power.

*(Signature)*  
(A. K. Srivastava)  
Secretary

Encl: A/a  
CC:

1. Member (PNP)
2. Member (RDG)
3. Jt. Director (Generation)
4. Petition Officer

*(Signature)*  
CE. (PPA)  
U.P.P.C.L.  
Shakti Bhawan Extn  
Lucknow  
18/11/08

For Power Cube Pvt. Ltd.  
*(Signature)*  
Director

BEFORE THE UTTAR PRADESH ELECTRICITY REGULATORY COMMISSION

Petition No. 572/2008

IN THE MATTER OF: Re-determination of tariff for supply of electricity from solar power plants in view of Central Government Incentive Scheme for Grid connected Solar Power.

AND

IN THE MATTER OF:

Uttar Pradesh Power Corporation Ltd.  
14-Ashok Marg, Lucknow.

:Petitioner

The following were present :

1. Sri Mayank Mehta, D.G.M., Astonfield Group of Companies.
2. Sri H.S.Rauth, G.M., Moser Baer India Ltd. New Delhi.
3. Sri. Mohan Krishana Kejriwal, M.D., Power Cube Pvt. Ltd., Kanpur.
4. Sri Pradeep Gautam (Director), Power Cube Pvt. Ltd. Kanpur.
5. Sri Raghnuveer Singh C.A . Power Cube Pvt. Ltd. Kanpur.
6. Sri S.P.Pandey, E.E. PPA, UPPCL.
7. Sri M.P. Sharma. Specialist, NEDA.
8. Sri Feroz Ahmad, NEDA.

ORDER

(Date of Public Hearing – 10.11.2008)

The Commission has made "UP Electricity Regulatory Commission (Terms and conditions for supply of power and fixation of tariff for sale of power from captive generating plants, co-generation, renewable sources of energy and other non-conventional sources of energy based plants to a distribution licensee) Regulations, 2005", herein after called 'CNCE Regulations'. Schedule-II (C) of the CNCE Regulations provides, "The tariff for all non-conventional and renewable source of energy based plants other than Bagasse/Bio-mass based co-generation plants and Mini/Micro hydel plants would be Rs.2.50 per unit for 2005-2006 with an escalation of 4% per annum for subsequent years without compounding."

Non-conventional Energy Development Agency (NEDA), U.P., vide letter no.4110/NEDA-SE-Power/08 dt.14.02.08, approached to the Commission for review of the tariff for grid interactive solar power projects in view of the Central Government Incentive Scheme. The review of tariff for supply of electricity might have an effect of amending CNCE Regulations, 2005 and therefore, a Public Hearing on dt. 10<sup>th</sup> April 08 was called and on the basis of suggestions, objections, comments,

CE (PPA.)  
U.P.P.C.L.

Shakti Bhawan Bstn  
Lucknow

18/11/08

[Signature]

For Power Cube Pvt. Ltd.

[Signature]  
Director

tariff of Rs. 23 per unit for 10 years for Solar PV and afterwards liberty for merchant sale. Sri M.P. Sharma, Specialist, NEDA strongly supported the tariff for 20 years as given by UPERC and did not agree with the need of any amendment.

M/s Power Cube Pvt. Ltd. has another written submission dt.14.11.08 proposing Rs. 20.14 per unit for first ten years and Rs.10.00 per unit from 11<sup>th</sup> to 20<sup>th</sup> year for grid connected solar PV power under Gol scheme.

The Commission has specified Solar Tariff for 20 years considering plant life of about 20-25 years and in case the tariff is determined only for 10 years, as prayed by the Petitioner, it would leave uncertainty of tariff in 11<sup>th</sup> to 20<sup>th</sup> year. Such environment, if created, would not encourage developer to setup the plant in the State. Hence, we do not agree with the petitioner that review of tariff under this petition be for 10 years. If the petitioner wishes to sign PPA for 10 years only, it may agree with the plant to that effect in the PPA. After such arrangement made in PPA, the plant shall be at liberty to sell power to any person after expiry of 10 years term of such PPA however the petitioner shall be afforded another opportunity to agree to purchase power beyond 10<sup>th</sup> year, notwithstanding provision of refusal made in PPA.

On the other hand, the Respondents to this petition have expressed views as to the tariff for supply of power from the plant. We would like to clarify that the Commission has already fixed tariff for Solar Plants as such review of tariff in this petition should not be mistaken as re-initiation of the process of tariff determination. The review of tariff would have an effect of just re-adjustment in tariff keeping total pay out, during PPA term of 20 years, to the plant at level that would work out at Rs. 15.00 (in case of Solar PV) or Rs. 13.00 (in case of Solar Thermal) per unit for 20 years. The tariff for solar thermal shall be considered same as of solar PV for first ten years and thereafter tariff reduced for next ten years to keep total pay out in 20 years unchanged. The tariff for solar power under this order shall be applicable for the plants not availing the benefit of accelerated depreciation under section 32 of income tax act, 1961. Tariff for the plants taking this benefit shall be dealt separately as and when the necessity arises.

Vide order dt. 15.04.08 passed in ARR and tariff petitions filed for financial year 2008-2009 by UPPCL on behalf of State Distribution Licensees, the Commission had allowed power purchase at highest rate of Rs. 4.92 per unit. While determining tariff as decided above, a rate for first year of operation of the plant, shall be arrived at provided it is not more than the highest purchase rate of Rs. 4.92 per unit. Such rate, applicable in first year, shall be escalated at the rate of 5%

CE (P.P.A.)  
U.P.P.C.L.

Shakti Bhawan Estate

For Power Cube Pvt. Ltd.

Director