



ABSTRACT

Solar Rooftop Installation – Announcement made by the Hon’ble Chief Minister on the floor of Assembly on 25.4.2013 under rule 110 of the Tamil Nadu Legislative Assembly – Provision of “either generation based incentive (GBI) or capital subsidy of Rs.20,000 for 1 kW for 10,000 domestic consumers who install the Solar Rooftops and generate power” – Orders – Issued.

Energy (E1) Department

G.O.(Ms.) No.102

Dated: 18.10.2013

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திருவள்ளூர் ஆண்டு 2044.

Read:

From the Chairman and Managing Director, Tamilnadu Energy Development Agency Lr.No.TEDA/CMD/Solar Policy-Capital subsidy/ F.No.3650/ 2013, dated 22.5.2013.

ORDER:

Hon’ble Chief Minister made the following Announcement on the floor of Assembly on 25.4.2013 under rule 110 of the Tamil Nadu Legislative Assembly.

“Either generation based incentive (GBI) or capital subsidy of Rs.20,000 / kW will be provided for 10,000 domestic consumers who install 1 kW Solar rooftops and generate power”.

2. The Chairman and Managing Director, Tamil Nadu Energy Development Agency has stated that the bench mark cost fixed by Ministry of New and Renewable Energy of 1 kW Grid tied Solar Photo Voltaic Rooftop System (herein after referred as the Solar System) is Rs 1.00 lakh. The actual cost is likely to be less. On this cost 30 % Central Financial Assistance is available from Ministry of New and Renewable Energy, Government of India, New Delhi. The proposed subsidy from State Government is Rs.20,000/-. The allocation of subsidy for first year is fixed as Rs.10 crores. The viability from the beneficiary’s perspective is worked as below :-

Name of the work	Amount Rs. in lakhs
Installation of Rooftop cost 1 kW Solar as per Ministry of New and Renewable Energy, Government of India, New Delhi.	1.00
30 % Subsidy given by Ministry of New and Renewable Energy, Government of India, New Delhi.	0.30
Incentive given by State Government.	0.20
Beneficiary contribution	0.50

3. Thus the beneficiary has to invest only Rs 50,000/- to install 1 kW solar Photo Voltaic Rooftop system, balance cost of Rs 50,000/- is proposed to be provided as a subsidy by the State and Central Governments. 1kW of Solar PV plant generates approximately 1,600 units of electricity every year. If the bi-monthly electricity consumption of beneficiary is more than 500 units then the total annual saving of beneficiary under the scheme is likely to be $1600 \times 5.75 = \text{Rs.}9200$. (Tariff Rs 5.75/unit). Thus by investing in 1 kW Solar PV Rooftop System the beneficiary may save Rs 9200/ annum on his electricity bill which is higher than returns from conventional investment.

4. Apart from savings in Transmission and Distribution losses, there are other indirect benefits of reduction in transfer and sub-station loading thus reduction in Operation and Maintenance (O & M) and capital expenditure. Similarly there is also substantial saving as cost of supply/unit to domestic consumers exceed the revenue realized/unit from them. Hence the scheme for provision of subsidy for the Rooftop solar Photo Voltaic system to domestic consumers is beneficial to both Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO) and the consumers.

5. The Chairman and Managing Director, Tamil Nadu Energy Development Agency has therefore requested the Government to issue necessary orders for 10,000 Solar systems with the bench mark cost fixed by Ministry of New and Renewable Energy, Government of India, New Delhi for the installation of 1 Grid Tie. Solar Photo voltaic Rooftop system (herein after referred as the Solar system). The proposed subsidy from the State Government is Rs.20 crores. The subsidy for the first year is fixed as Rs.10 crores.

6. The Government after careful examination of the proposal of the Chairman and Managing Director, Tamil Nadu Energy Development Agency has decided to accept the same and accord sanction for a sum of Rs.10.00 crores (Rupees ten crores only) towards the installation of Solar system and Generate

power. The details of guidelines for implementation of the scheme is annexed to this order.

7. The expenditure sanctioned in para 6 above shall be debited under the following new head of Account opened under the Demand No.14-02:

2801 Power – 80 General – 800 other expenditure-I Non-Plan AC – installation of Solar Rooftop Photo Voltaic and Generate Power II subsidies – 01 Individual Based subsidy.

(DPC: 2801-80-800-AC-1117)

8. The Chief Electrical Inspector to Government, Chennai is the Estimating, Reconciling and controlling authority of the above new subhead of account.

9. The Pay and Accounts Officer / Treasury Officers concerned are requested to open the new head on their accounts.

10. The expenditure sanctioned in para 6 above constitutes an items of “New service”. The approval of the legislature will be obtained in due course. Pending approval of the Legislature, the expenditure will be initially met by drawal of an advance from contingency fund, orders regarding which will be issued by Finance (BG-I) Department separately. The Chief Electrical Inspector to Government, Chennai is requested to send necessary proposals to Government in Finance (BG-I) Department in the prescribed format along with a copy of this order for sanction of an advance from the contingency fund. He is also requested to send necessary explanatory notes for inclusion of the above expenditure in the supplementary estimates to Finance (BG-I) Department at an appropriate time.

11. The Chief Electrical Inspector to Government, Chennai is authorized to draw the amount sanctioned in para 6 above. The amount sanctioned in para 6 above shall not be paid in cash but shall be paid by means of Account Payee Cheque in favour of Personal Deposit Account of Tamil Nadu Energy Development Agency.

12. The amount sanctioned in para 6 above shall not be paid in cash but credited to the following head of account

“K” Deposit and advances (b) – Deposit not bearing interest – 8443-00-Civil Deposit – 800 Other Deposit – BQ Deposits of Tamil Nadu Energy Development Agency (TEDA)

(DPC: 8443-00-800-BQ-0000) (Receipts)

13. This order issues with the concurrence of Finance department vide its U.O No. 52969/PW-II, dated. 4.10.2013 and ASL No.1514 (One thousand five hundred fourteen).

(By order of the Governor)

RAJESH LAKHONI
Secretary to Government

To
The Chief Electrical Inspector to Government,
Chennai-32.
The Chairman and Managing Director,
Tamil Nadu Energy Development Agency,
Chennai-6.
The Chairman and Managing Director,
Tamil Nadu Generation and Distribution Corporation Limited ,
Chennai-2.
The Principal Secretary to Government,
Finance Department,
Chennai-9.
The Secretary to Government,
Finance (Expenditure) Department, Chennai-9.
The Secretary,
Ministry of New and Renewable Energy,
Government of India, New Delhi.
The Chief Engineer,
Non-Conventional Energy Sources (NCES),
Tamil Nadu Generation and Distribution Corporation Ltd.,
Chennai-2.
All District Collectors.
All Departments, Secretariat, Chennai-9.

Copy to:

Hon'ble Chief Minister's Office, Chennai-9.
Sr.P.A. to Hon'ble Minister (Electricity, P& E).
The Finance (PW-II/BG-I/II/W&M-I) Department,
Chennai-9.
SF/SC.

// Forwarded / By order //

SECTION OFFICER

Annexure for G.O (Ms.)No.102, Energy (E1) Department, dated. 18.10.2013

1. (i) The Scheme Details:

Under the scheme an incentive of Rs.20,000/- will be provided towards installation of Grid tied Battery-less Solar Rooftop Photo Voltaic(PV) plants of 1 kW capacity for residential use. The incentive can be availed by consumers registered with Tamil Nadu Generation and Distribution Corporation Limited under tariff category LT-1A as domestic consumers. The generated solar power from the Rooftop shall be consumed in the premises of the consumer without feeding into the electric grid of Tamil Nadu Generation and Distribution Corporation Limited till net-metering guidelines are finalized by Tamil Nadu Electricity Regulatory Commission.

ii) System Type & Capacity – General Information

The proposed solar system capacity for sanction of incentive is 1 kW. Only 1 kW plants are proposed to be considered for grant of capital incentive as this is the optimum capacity for buildings with constructed area of 1500 sq ft or less. Only Grid tied Battery-less Solar PV Power Plants is to be considered for provision of incentive under the scheme. In grid tied system the generated solar power is consumed first in the building and additional requirement of electricity is met from the electricity grid. Feeding the excess power in electricity grid of Tamil Nadu Generation and Distribution Corporation Limited is not allowed till the guidelines of net-metering are approved by the Tamil Nadu Electricity Regulatory Commission. Further, the incentive shall be restricted only towards installation of Battery less Solar PV System as

- a) Battery requires regular maintenance and replacement in every 3 years which is expensive and cost up to 30 % of the solar system cost.
- b) Upto 15 % of generated solar power is lost in charging and discharging cycle of the battery.
- c) Disposal of the batteries is not environmental friendly.
- d) Defective batteries may draw power from the grid and thus increase the electricity consumption of the consumers inviting adverse feedback.

iii) System Cost and Subsidy

The Bench mark cost fixed by the Ministry of New and Renewable Energy, Government of India, New Delhi for battery less grid tied 1 kW Solar Photo Voltaic Rooftop Plant is Rs.1.00 lakh. State financial incentive of Rs.20,000/- per installation of Battery-less Rooftop Solar Photo Voltaic power plant of 1 kW capacity is provided. The beneficiary shall also be eligible to draw subsidy/grant

etc under any other scheme of Ministry of New and Renewable Energy, Government of India, New Delhi.

iv) Beneficiary's selection

The selection of Beneficiaries shall be done on first come first served basis.

- A. The beneficiary can apply online on Tamil Nadu Energy Development Agency website. An online application monitoring system shall be hosted on the website of Tamil Nadu Energy Development Agency. All the online applicants shall also submit a print out of signed application which should reach Tamil Nadu Energy Development Agency office at Chennai within a maximum period of three months. The sanction order shall be generated immediately after receipt of signed application. In case application is not received within 3 months the online registration shall be annulled and fresh application will have to be submitted.
- B. The application can be submitted in paper form containing all details prescribed in model application form. All such applications shall be acknowledged and entered in the application monitoring system by Tamil Nadu Energy Development Agency. Every week on Friday Tamil Nadu Energy Development Agency shall generate sanction letters for both online and off line applications. These sanction letters will be available on the website of Tamil Nadu Energy Development Agency for downloading by the beneficiaries. An intimation about generation of sanction letter shall also be sent to the applicant through SMS, E-mail or Acknowledgement card. The seniority of offline applications vis-à-vis online application will be based on date of receipt of offline application at Tamilnadu Energy Development Agency's office. The offline application will be kept after the online application for a particular date.
- C. The application shall contain address of the premises where the system is proposed to be installed. After submission of application the address of the premises cannot be changed. If the address is changed before installation of the solar system it will be considered as a fresh application and old seniority of registration shall not be considered for release of capital incentive.
- D. The beneficiary will have the freedom to select the system supplier / integrator from the list provided by Tamil Nadu Energy Development Agency. The beneficiary shall indicate the vendor from the list in the application or should select vendor whenever such list is finalized by Tamil Nadu Energy Development Agency. The beneficiary shall have to place a written order with the vendor for supply of the solar system . A model order with terms and condition shall be made available on the website.

- E. As the capital incentive is available only for the solar system for domestic use, the existing Tamil Nadu Generation and Distribution Corporation Limited electricity connection number should be mentioned in the application. The existing electricity connection should be in the tariff class LT-1A with Tamil Nadu Generation and Distribution Corporation Limited.
- F. In case of flats, the application can be made either individually or collectively by flat owners. In the case of combined solar plant the applicants shall have to ensure that the generated power is shared in the same proportions as if the plants were installed individually. Separate invoices should be raised for each flat. The payment towards the capital cost of respective share should be paid by each flat owner through cheques to the vendor. Apartments having swimming pool have some portion under the commercial category tariff hence such apartments shall be permitted even if their tariff class is not LT-1A.
- G. The beneficiary shall not be permitted to change the location of installation within one year from the commissioning of solar system.

v) Implementation Agency

The Tamil Nadu Energy Development Agency will act as a Nodal Agency which will perform the following activities in the implementation of the Solar Rooftop Capital incentive scheme.

- a) Receiving Application, Register applicants on first come first served basis and issue sanction for capital incentive of Rs.20,000 per kW.
- b) The installation and commissioning should be completed within 6 months of receiving the allotment letter from Tamil Nadu Energy Development Agency.

vi) Implementation Strategy/ Selection of beneficiaries

- a) Tamil Nadu Energy Development Agency will float a tender for empanelling vendors for the installation of 1 kW domestic Rooftops.
- b) The list of selected vendors with the price will be uploaded in the Tamil Nadu Energy Development Agency website by Tamil Nadu Energy Development Agency.
- c) A beneficiary will have the freedom to select the vendor from the list provided by Tamilnadu Energy Development Agency according to their choice and the beneficiary will then place a firm work order to the supplier.

d) A copy of the work order along with invoice and bill of material have to be presented to Tamil Nadu Energy Development Agency before release of the incentive. After installation and commissioning of the system, the eligible incentive will be released to the vendor, after conducting inspection by Tamil Nadu Energy Development Agency. The vendor has to collect from the beneficiary the cost after deducting the financial assistance. This should be clearly mentioned in the invoice too.

e) Technical specification of the system shall be according to Ministry of New and Renewable Energy, Government of India, New Delhi norms / specification as intimated by Tamil Nadu Energy Development Agency. The wiring upto the Distribution Board (DB) for maximum cable length of 25m will be in the scope of the vendor beyond which it is to be borne by the beneficiary. A separate manual disconnect switch shall have to be provided for isolating the system for carrying out the maintenance works.

vii) Warranty & Maintenance

a) The entire solar Rooftops shall carry a warranty of five years with a panel warranty of 25 years.

b) The Tamil Nadu Energy Development Agency shall call tenders for the solar system inclusive of maintenance Contract. The period of maintenance contract is fixed as 5 years.

c) The beneficiary shall allow Tamil Nadu Energy Development Agency officials to inspect the plants, as and when required in the future.

viii) Technical Committee

Technical Committee should prepare the technical specifications to be incorporated in the bid document for Empanelment of vendors for the programme and will be constituted with the following members.

- a) Deputy General Manager / Tamil Nadu Energy Development Agency.
- b) Representative from Tamil Nadu Generation and Distribution Corporation Limited
- c) Representative from C-WET/ Chennai

ix) Tender Acceptance Committee

Tender Acceptance Committee will approve the technical specifications & bid documents and approval of bids as prescribed in Tender Transparency Act. It will constitute the following members.

- a) The Chairman and Managing Director, Tamilnadu Energy Development Agency, Chennai.
- b) Representative from Tamil Nadu Generation and Distribution Corporation Limited, Chennai.
- c) The Joint Secretary to Government, Finance department, Chennai-9.
- d) Executive Director/ C-WET/Chennai.

2. Total capital incentive amount works out to be Rs.20 crores for 10,000 solar systems as mentioned in Hon'ble Chief Minister's announcement under rule 110 of Tamil Nadu Legislative Assembly. The capital incentive will be released to Tamilnadu Energy Development Agency in installments. The first installment of 25 % will be released after the tender for selection of vendors are finalized. Subsequent installments will be sanctioned after 80% of the released financial assistance is utilized by Tamilnadu Energy Development Agency. The allocation of capital incentive for first year is fixed as Rs.10 crores.

RAJESH LAKHONI
Secretary to Government

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SECTION OFFICER