

## Net feed-in mechanism

The [Tamil Nadu Solar Energy Policy 2019](#) was released in February 2019. The policy came up with an accounting mechanism for grid-connected solar systems for all low tension (LT) consumer categories called “net feed-in”. This net feed-in mechanism is to supersede the prevailing [net-metering](#) mechanism.

According to the policy, net feed-in will be applicable for new grid-connected solar systems however net-metering will continue to be applicable for the existing system as present. This article gives clarity about the net feed-in mechanism as per the said policy and other relevant orders such as [order on rooftop solar generation](#) and [order on generic solar tariff for solar power and related issues](#).

### Major difference between net metering and net feed-in:

- Net metering: The consumer pays for the difference between import and export of energy (the net-metered energy).
- Net feed-in mechanism: The consumer either pays or gets paid for the difference between debit (the cost of imported energy) and credit (the cost of exported energy) respectively. The cost of import and export of energy differs as explained below.

### Unit cost of export to the grid:

Unit cost of surplus solar energy exported to the grid by consumers under solar net feed-in will be fixed by the [Tamil Nadu Electricity Regulatory Commission \(TNERC\)](#). This cost is variable for each financial year, as the lowest of the following three tariffs shall be applicable for the financial year.

- 75% of the pooled cost of power notified by the Commission for the respective financial year, or
- 75% of last feed in tariff determined by the Commission, or
- 75% of tariff discovered in latest bidding

The tariff has been fixed at [Rs 2.28](#) for the financial year 2019-20. However, the unit cost of export energy fixed to a consumer in the respective financial year will be the same for the entire life of the grid-connected solar system, which is 25 years.

### Cost of import from grid:

The cost for the electricity imported from grid supply will be the same as per present [tariff](#), based on consumer category.

### Billing procedure:

The total cost for export will be calculated by multiplying the number of units exported (surplus solar energy) and unit cost fixed for the LT consumer category. This will be considered as credit. Total cost for import will be calculated based on [present tariff](#), as mentioned earlier. This will be considered as debit. During every billing cycle (i.e., bi-monthly), the [billing](#) will be done as follows:

- If the cost of debit is greater than credit, then the consumer needs to pay the excess debit amount. (i.e., Bill amount in INR = Debit - Credit)
- If credit is greater than the debit, then exceeded credit will be added in the consumer’s account. It will be adjusted in the next billing cycle, if required.
- Otherwise, it will be carried forward in the consumer’s account.
- The cumulative credit has to be paid to the consumer by the utility at the end of the financial year.
- This amount should reach the consumer within 15 days from the date of billing.
- Beyond this period, payments will attract interest at the rate notified for interest on security deposit

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Please send your feedback to [ecc@cag.org.in](mailto:ecc@cag.org.in)

### Electricity Consumer Cells (ECCs)

#### **Madras Metropolitan Consumer Rights Protection Centre (MMCRPC)**

No. 118, Fourth Street, Kamaraj Nagar, Avadi, Tiruvallur District. Chennai - 600 071, Phone: 9382828286 Email: [ecctiruvallur@gmail.com](mailto:ecctiruvallur@gmail.com)

#### **Tirunelveli District Consumer Rights Protection Sangam**

No. 9, Kulapirai Street, Tirunelveli Town, Tirunelveli - 627 006 Phone: 0462-2338544 Email: [ecctirunelveli@gmail.com](mailto:ecctirunelveli@gmail.com)

#### **Federation of Consumer Organizations of Tamil Nadu and Pondicherry - (FEDCOT)**

5, Anthoniyarkoil Street, Cuddalore - 607 001 Phone: 9994019119 Email: [eccuccuddalore@gmail.com](mailto:eccuccuddalore@gmail.com)

#### **Sadayanodai Ilaigarnar Narpani Mandram - (SINAM)**

Avalurpet Road, Tiruvannamalai - 606 604 Phone: 04175 - 298033 Email: [ecctiruvannamalai@gmail.com](mailto:ecctiruvannamalai@gmail.com)

#### **Consumer Voice Foundation,**

31/20, Sree Rangan Street, Gugai, Salem - 636 006 Phone: 9994941050 Email: [eccsalem1@gmail.com](mailto:eccsalem1@gmail.com)

#### **National Level Educational and Social service Trust (NEST)**

**No: 10, Pillayar Koil Street** GribblesPet Arakkonam Vellore District - 631 002 Mobile : +91 98946 32302 Email id: [eccvellore@gmail.com](mailto:eccvellore@gmail.com)

#### **People’s Action Service Society (PASS)**

No: 4/74, Sangilyandapuram Pettavaithalai & Post Tiruchirappalli District - 639 112 Landline : 0431-2612597 Mobile : +91 9788203997 Email id : [ecctiruchirappalli@gmail.com](mailto:ecctiruchirappalli@gmail.com)

# The Do-It-Yourself Energy Audit Series

## For Household Consumers (Part – 5)

### ENERGY EFFICIENT KITCHEN

This edition of the DIY Energy Audit Series will help household consumers choose energy-efficient [kitchen appliances](#) and provide a few energy saving tips.



**1. Refrigerators:** BEE star labelled refrigerators use high efficiency compressors, improved insulation, and more precise temperature and defrost mechanisms. These features make the appliances more efficient resulting in reduced electricity consumption. It is highly recommended to choose a star labelled refrigerator. More the stars, the more efficient the refrigerator

Rating	0	1	2	3	4	5
Consumption per year (kWh)	1,100	977	782	626	501	400

**Best Practices:** To maintain the efficiency of your refrigerator and minimise the load on its compressor

- Do not place hot food or overload your fridge;
- Place the refrigerator such that there is a gap [of] between the fridge and the wall; and
- Ensure that the appliance is kept away from heat sources such as an oven or direct sunlight from the window;



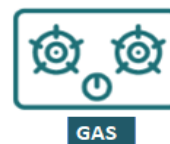
**2. Mixer grinders:** Mixer grinders with stainless steel jars are said to allow for higher efficiency. Further, ensuring that your mixer has (i) good quality accessories, (ii) [overloading protection feature](#) and (iii) a motor with a long-term guarantee, will go a long way in choosing a durable

**Best Practices:**

- Ensure that the ingredients are at room temperature before grinding as extremely hot food may cause harm to the appliance and prove unsafe.
- Do not start grinding at full speed right at the beginning. Instead, make sure that the speed goes from low to medium and then to high. This practice will reduce pressure on the motor and help maintain the efficiency of the appliance.
- Be sure to switch off/unplug the mixer grinder in your kitchen immediately after use to avoid [standby power](#) consumption

**3. Cooktops:** The three commonly used cooktops include gas, electric, and induction. While conventional LPG gas stoves are largely preferred in Indian households, induction and electric cooktops tend to be more [efficient](#) in terms of energy use. Therefore, complementing conventional gas stoves with an induction or electric cooktop will help with increased efficiency.

Cooktops	Gas	Electric	Induction
Efficiency	40%	74%	84%



**Best Practices:**

- Use pots and pans that fit the cooktops to avoid loss of heat and energy.
  - Do not switch on fans while using your stove or cooktops as it will slow-down the heat absorption and reduce efficiency in the cooking process.
  - Avoid using a strong detergent while cleaning the cooktop, cooking range and its parts as this may cause irreparable damage.
- ( to be continued )*

## Tamil Nadu News

### Tamil Nadu power regulator orders against solar output cut

The Tamil Nadu Electricity Regulatory commission (TNERC) has pulled up the State Load Despatch Centre (SLDC) for curtailment of solar power generation. The recent order, issued in response to a 2017 petition of the National Solar Energy Federation of India (NSEFI), emphasised that "the SLDC cannot curtail the renewable power at their convenience". Curtailment of power means that the SLDC asks power plants not to inject power into the grid despite availability.

In India, wind and solar plants have been assigned a 'must-run status' and SLDC can issue 'back-down orders' to these plants only if grid security is a concern. In reality however, curtailment is often driven by 'illegal' commercial concerns wherein renewable generation is backed down in favour of cheaper conventional power under the influence of state distribution companies (discoms). So far, curtailment data has never been available in the public domain due to a lack of transparency on the part of SLDCs and discoms. Industry observers had estimated this to be in the range of 1-5 per cent for solar power. However, the data from NSEFI for 10 solar plants included in the TNERC order shows that during the first half of 2017, plants faced up to 100 per cent of generation curtailment on several days during a given month. There is clear evidence of commercial motives as solar plants with a higher tariff of Rs 7 per unit, were curtailed more than newer plants with a lower tariff of Rs 5 per unit. In its response, SLDC was not able to provide clear evidence of these being technical requirements for grid security, beyond making general statements. As for Tamil Nadu, to discourage future curtailment, TNERC, in the recent order, has asked the SLDC to submit a quarterly report of curtailed renewable generation with clearly documented reasons for each back down order.

Source: [DownToEarth](#), April 12, 2019

## India News

### In Madhya Pradesh, pay power bills at your doorsteps soon

The successful implementation of [on-spot billing](#) and payment in rural areas of Indore has prompted [Madhya Pradesh](#) Paschim Kshetra Vidyut Vitaran Company Ltd (MPPKVVCL) to introduce it for city consumers.

[Discom](#) officials said that this would be introduced in four zones of city division including Goyal Nagar, GPH zone, Mechanic Nagar zone and Daly College zone. "There are around 1 lakh consumers in these four zones of city division. From April 15, they would be able to pay bills on spot," said discom officials. There are around 21000 consumers in Goyal Nagar, 26000 in GPH zone, 24000 consumers in Mechanic Nagar zone and around 29000 consumers in Daly College zone. Officials said that this system was at first introduced for nearly 18000 consumers of rural areas of Indore. "Our billing in rural areas has improved after introduction of on spot billing system. We expect the same results from urban areas," they said. This system would be introduced on trial basis and will be managed discom's meter reading staff. Discom has already arranged for at least 20 handheld devices and printers. There would be a team of some 10-15 meter readers, who would visit each and every house of respective zones on specific dates to collect reading and issue bills to consumers on spot.

Discom's managing director Vikas Narwal said that consumers, who have been paying bill offline would no longer have to visit zone offices for bill payment. "They will also not have to wait for 8-10 days after recording of meter reading," he said, adding that this system is being introduced on trial basis, and would be extended in others zones of the city in coming months.

Source: [Economic Times](#), March 12, 2019

## Consumer Focus

The petitioner owns an apartment which was vacant for four (August 2017 - November 2017) months. A new tenant had moved towards the end of November 2017. The assessor, while taking the meter reading on January 2018, noticed the meter was faulty and it was replaced. The petitioner was asked to pay an amount of Rs 15,438 towards arrears for the period August 2017 - November 2017. This arrear was raised for the period the apartment was vacant. The petitioner paid the said amount but approached the Consumer Grievance Redressal Forum (CGRF) for remedy. During the hearing, the petitioner produced the rental agreement as evidence of vacancy during the time period and non-usage of the current in his premises.

TANGEDCO responded by stating that the petitioner's meter was defective and it was replaced immediately. The utility further reported to CGRF that the meter had no display (Display not functioning) and reading, which was verified through a Meter Reading Test (MRT). The MRT report was also requested by the petitioner.

The CGRF observed that the petitioner's consumption was low because of non-usage of current during the vacant period. This is evidenced by the rental agreement and the MRT report declares that the meter was defective. Thus, CGRF ordered the utility to refund the additional amount of Rs. 15,438 immediately.

## ECC VOICE

என் பெயர் ராஜா. நான் துரிஞ்சாபுரம் கிராமத்தில் வீட்டிலேயே ஒரு பகுதியை கடையாக வைத்துள்ளேன். மின்சார இணைப்பினை வீட்டு சர்வீசிலிருந்து கடை சர்வீசாக எப்படி மாற்றுவது என்று எனக்கு தெரியாமல் இருந்தது. அப்பொழுது சென்ற மாதம் நடை பெற்ற மின் நுகர்வோர் மையம் - திருவண்ணாமலை நடத்திய ஆலோசனை கூட்டத்தில் நான் கலந்து கொண்டேன். இதில் மின்சாரம் சம்பந்தமான ஆலோசனைகள் மற்றும் சோலார் சக்தி பற்றியும் விரிவாக விளக்கம் அளித்தனர். துண்டுப் பிரசுரத்தில் மின் நுகர்வோர் மையத்தின் முகவரி மற்றும் தொடர்புகொள்ள வேண்டிய எண் இருந்தது.

மின் நுகர்வோர் மையம் - திருவண்ணாமலை அலுவலகத்திற்கு சென்று மின் ஆலோசகரிடம் வீட்டு சர்வீசை கடை சர்வீசாக மாற்ற வேண்டும் என்று ஆலோசனை கேட்டேன். மின் ஆலோசகர் கீழ்க்கண்ட விதிமுறைகளை சொன்னார்: முதலில் Tariff மாற்றம் செய்வதற்கான கட்டணத்தை செலுத்தவேண்டும். பின்னர், முன்பு பயன்படுத்திய மின்சார கட்டணத்தை முற்றிலும் கட்ட வேண்டும். பின்னர் இளநிலை பொறியாளர் (Junior Engineer) நேரில் வந்து Meter Reading எடுத்து அதனை AEE/North/T.V.Malai அவர்களுக்கு அனுப்பி அனுமதி வழங்க கூறுவார். ஓரிரு நாட்களில் பதிவு செய்யப்பட்ட சான்றிதழை தருவார்கள். சான்றிதழ் தந்த நாள் முதல் கடை சர்வீசாக (Tariff - V) மாறிவிடும்.

அதன் பேரில் நான் செயல்முறைகளை செய்து எனது கடைக்கு சர்வீசை Tariff - V யாக மாற்றிக் கொண்டேன். நான் Tariff - V யை மாற்றிக் கொள்வதற்கு ஆலோசனை அளித்த திருவண்ணாமலை மின் நுகர்வோர் மையத்திற்கு எனது நன்றியை தெரிவித்துக் கொள்கிறேன்.

**Citizen consumer and civic Action Group (CAG)**

New #246 (Old #277B),  
TTK Road (J.J. Road ),  
Alwarpet, Chennai 600 018  
INDIA

Phone: 91-44-24660387  
Telefax: 044-24994458  
Email: ecc@cag.org.in

[www.cag.org.in](http://www.cag.org.in)

**Initiative of****CAG**

Citizen consumer and civic Action Group

*Citizen consumer and civic Action Group (CAG) is a non-profit, non-political and professional organization that works towards protecting citizen's rights in consumer and environmental issues and promoting good governance processes including transparency, accountability and participatory decision making.*

**Editorial Team**

K. Vishnu Mohan Rao

Balaji M K

Bharath Ram

Jeya Kumar R

Pavithra R

## World News

### Pilot Project Brings 24-Hour Solar Power to Remote Philippine Island

The Malalison Island Solar Photovoltaic (PV) Hybrid Pilot Project is a private sector joint venture with Antique Electric Cooperative (ANTECO), the electric distribution franchise holder, and One Renewable Energy Enterprise, Inc. (OREEI). Electricity has been generated from diesel-fuelled generators, providing power only four hours a day. Due to the costs and difficulties transporting fuel, the approximately 160 households on the island also have to pay a much higher tariff than those on the mainland where electricity is available 24 hours a day. Under the pilot project, the existing diesel power plant is augmented by a solar PV system. The solar power generated by day is then stored in lithium-ion batteries. The system is a 50 kW solar PV system with a storage capacity of 273 kWh and supported by a 54 kW diesel generator. Which will provide Islanders with reliable and continuous 24/7 electric services.

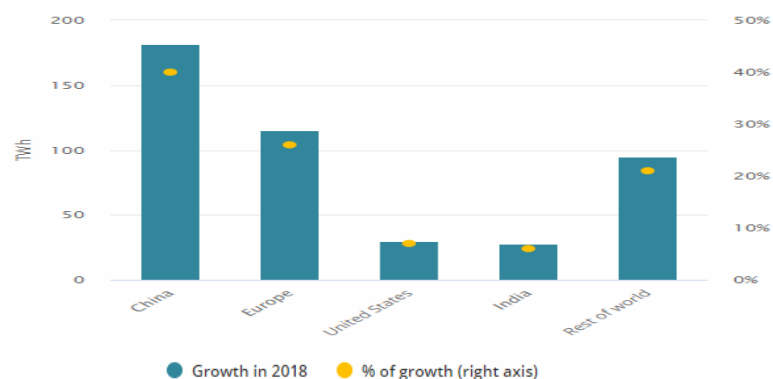
ADB Vice-President said the role of the private sector in this project is showcasing a new business model for deploying a distributed renewable energy system. "ADB's support of this venture is proof of its desire to concretely contribute to the government's target of 100% household electrification by 2022 through private sector participation in the energy sector," he said. "The success of this project will encourage more investors into the country's off-grid electrification efforts using distributed renewable energy system, thereby promoting the goal of increasing energy access and inclusive growth."

Source: [Saur Energy International](#), April 05, 2019

## Publications / Regulations

- Global energy transformation: A roadmap to 2050 (2019 edition), April 2019, International Renewable Energy Agency ([IRENA](#))
- Central Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2019 ([CERC](#))
- State Nodal Agencies under the provisions of "Charging Infrastructure for Electric Vehicles - Guidelines and Standards", April, 2019 ([Ministry of Power](#))

### Growth in renewable electricity generation by region and



Source: Growth in renewable electricity generation by region and technology, 2017-18, [International Energy Agency \(IEA\)](#)