

## CHALLENGES IN IMPLEMENTING NET METERING IN INDIA

In the last issue the basics of net metering and associated payment mechanisms which serves as an incentive for adoption of rooftop solar were discussed. In spite of several advantages, quite a few challenges remain in increasing uptake of rooftop solar or solar net metering in India.

In the initial phase of the policy, there was an increase in rooftop solar installations. Since, last year there has been a [significant drop](#) in the rooftop solar installations. For example, Tamil Nadu was one of the first states to come up with a [Solar Policy in 2012](#) and with incentives for encouraging electricity consumers to install net meters. Further, in terms of installed capacity it has been varied while some states like Rajasthan, Haryana and Telegana are [lagging in implementation](#), states like Tamil Nadu, Karnataka and Maharashtra have a higher [installed capacity](#). While 21 states in India have announced policies and guidelines around net-metering, it is only operational in a couple of states mainly because of slow implementation process.

In the following section we will see some of the challenges facing the implementation and scaling up of net metering in India. The barriers can be broadly be classified as i) Policy (subsidy) ii) Technical iii) Economic and iv) Political. V) Regulatory (price). Regulatory, technical and institutional barriers are the primary focus of this article.

**Regulatory barriers:** Tariff structure is one of the important policy barriers. For consumers to go for alternative options like rooftop solar, the incentives in the form of power credit or tariff should be higher than the per unit rate paid by consumers. But in many Indian states the electricity prices are kept artificially low for certain categories and slabs of residential consumers thus serving as a disincentive to consider solar as an alternative.

The subsidy given for the rooftop solar installations can be [availed](#) both from central and state governments. However, consumers find that there is no clarity in availing subsidies making them reluctant to go for rooftop solar installations. At the ground level, no proper training and education has been imparted to distribution company employees, which act as barriers to promoting rooftop solar. This is despite the fact, that clear installation guidelines and processes from State Regulatory Electricity Regulatory Commission have been made to install net-meter plans.

**Technical barriers:** Several State Electricity Regulatory Commission regulations limit the amount of penetration of rooftop solar in a locality. These levels are limited in terms of how much capacity a distribution transformer can take as a result of inflow from rooftop solar generation. For example, Delhi Electricity Regulatory Commission (DERC) has given the following limitation, "For Connecting Renewable Energy System for Net Metering by the Distribution Licensee shall not be less than 20% (Twenty percent) of the rated capacity of respective distribution transformer." This regulation essentially means if there are too many solar installations in a locality which is pumping electricity through the transformer's size, then there is a possibility that transformer may not be able to take the load of inflow of power. As a result, there is a greater need for improvement in grid enhancement and management for rooftop solar to take off. Improvement in storage technology is crucial for uptake of rooftop solar as it serves as alternative when net metering is not in place.

**Institutional Barriers:** Customers in higher tariff slabs are the most profitable for DISCOMs. They are also the ones that will benefit the most from net-metering. Implementation of net-metering will make them self sufficient and make them reduce their energy dependence on the utility. As a result, this will cause the utility lose profitable customers as they depend on sale of power for their survival. Hence, uptake of rooftop solar by consumers is becoming an increasing concern for the DISCOMs who are already under heavy financial losses.

### Electricity Contacts

- Call center—1912
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**Tamil Nadu and Chennai**
- RTI—[TANGEDCO](#)
- TNERC & Ombudsman: 044-28411376, 28411378, 28411379
- CGRF: [Addresses](#)
- Pay online: [TNEBNET](#)

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

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## Tamil Nadu News

### Shortage in meters affects solar energy users

P.J. Nagaraj of GN Mill post installed rooftop solar energy system and submitted an application to the Tamil Nadu Generation and Distribution Corporation (Tangedco) in September last year so that he can start using the solar energy generated. Though he had paid the required fees, he was unable to use the solar energy system till the end of December due to non-availability of solar bi-directional meter and the net metering facility was not provided to him. Mr. Nagaraj approached the Tangedco consumer grievances redress forum and submitted a petition on January 3 this year seeking net meter facility.

There was a problem due to shortage in availability of solar net metering facility for three phase connections. It was supplied on seniority basis and service had been provided to those who had registered till August.

Chief Engineer of Tangedco, T. Haldorai, told The Hindu that the bi-directional meters are expected shortly. "It is a matter of days before it comes," he said. About 300 applications were pending for the net meter in this region, he said. At a meeting of the consumer forum, K. Kathirmathiyon, its member, said that according to the Tamil Nadu Solar Policy 2012, there is a provision for the consumer to procure and supply the meter.

The State Government's policy and the instruction of the Tamil Nadu Electricity Regulatory Commission is to encourage clean energy and consumers cannot wait for eight months after investing in the solar energy system just because the net meter is not available with the licensee (Tangedco). If the licensee is unable to effect the service for solar energy for want of net meter, the consumer could have been advised to procure it and he could have started generating solar power.

Based on the views of the petitioner, the licensee and the forum members, an order was passed about 10 days ago directing the licensee to provide details within 15 days to the petitioner on the availability of the meter and the procedure to be followed as per the TNERC norms.

The service for solar power should be provided with net meter within a week after the consumer gets the meter.

Source: [The Hindu](#), June 10 2017

## India News

### Local solar manufacturers seek 'Safeguard Duty'

Badly hit by a shrinking market and idle capacity, local manufacturers of solar cells and modules have decided to approach the government again seeking to impose a 'safeguard duty' on imported equipment. They had petitioned the Ministry of Trade and Commerce in early June seeking an anti-dumping duty on solar imports but have not received any response so far. They now plan to petition the Director General of Safeguards in the same ministry to impose a duty of 10 US cents (RS6.50) per watt on imported cells and modules. Solar manufacturers are getting desperate as they say they have been marginalized in the country's ambitious solar energy programme. In 2016-17, as much as 5,525 MW of solar projects were set up in country, but about 90% of the solar cells and modules used were imported, mainly from China, Malaysia and Taiwan.

Thanks to the scale of the manufacturing units in those countries and supportive government policies there, they can provide solar cells and modules at prices 10-20% cheaper than their Indian counterparts. India's imports of solar cells and modules rose 36% in 2016-17 to \$3.2 billion. Total domestic module manufacturing capacity is 8,113 MW of which 5,286 MW are operational. But actual manufacturing in 2016-17 was 1,000-1,500 MW, due to lack of demand. Previously, the local industry was guaranteed at least partial off-take thanks to the 'domestic content requirement' (DCR) in the National Solar Mission, under which some solar projects had to be compulsorily built using local cells and modules, with higher tariffs permitted for the power they produced. But with the WTO having ruled last year that DCR amounted to an unfair trade practice, no fresh DCR projects are being initiated.

Imposing anti-dumping, or safeguard, duty on imports will raise the cost of solar installations and thereby increase tariffs. Solar tariffs have been falling steeply in the past two years, and protective steps may reverse the trend. But, local manufacturers see the impact to be limited. "If, say, a 20% safeguard duty is imposed, it will add about 11% to the total project cost, raising the tariff from `2.44 to around `2.70-3 per kWh, which is not all that much," said a leading manufacturer, defending the petition.

"Safeguard duty is allowed for a maximum of five years, which will give local industry time to find its feet.

Overseas manufacturers, as well as solar developers, do not agree. "Dumping is an unfair trade practice, and if it is taking place, local manufacturers have a right to petition against it," said Sujoy Ghosh, India CEO of US-headquartered First Solar, which makes solar equipment and sets up projects. "But safeguard duty creates entry barriers for global manufacturers even when they are transacting in a fair manner."

Source: [The Economic Times](#), June 30 2017

## Consumer Focus

### FACTS

The petitioner is a consumer of Coimbatore Electricity Distribution Circle / Metro / Coimbatore. The Licensee stated that as per the under taking furnished by the consumer, the IEX power purchased during the slot of a day should be utilized on the particular day and any units unutilized will be deemed to be lapsed. But the lapsed units were adjusted in that month. Based on Audit wing observation, the Licensee had demanded the consumer to pay Rs 11,89,722/- towards the revised amount for the period from 2011 to 2014. The Petitioner stated that he had paid the amount for all the Units consumed and the claim for second time is unfair.

### CONTESTATIONS

**Petitioner:** He was not able to consume the units on the particular slot only due to unscheduled power outage. They have already made payment of the bills in respect of all the Units consumed by them during the period.

**Respondent:** The IEX power supply has been allotted in strict compliance of allotted periods and immediately at end of the period, the supply is cut off. Thus whether the allotted units have been consumed in full or less, the injection of power into TNEB grid is stopped.

### OBSERVATIONS AND JUDGMENT

The Licensee could not distribute the power to the petitioner purchased by him, but had sold the same, for which the cost was met out by the consumer. The petitioner was not able to consume the injected units on the particular slots only due to unscheduled power outage. For the all the units consumed by the petitioner, the amount had already been received by the Licensee. Hence the court concluded that in the absence of any specific clause / rule for the Licensee's claim and at no point, the petitioner could be found fault. Therefore, accordingly the demand of the Licensee for Rs,11,89,722/- from the petitioner vide his letter dated 29/05/2015 is set aside.

## ECC Voice

### வீட்டின் மீது சென்ற உயர் அழுத்த மின்கம்பி பாதை மாற்றம்

#### புகார்

கடலூர், மஞ்சக்குப்பம், தட்சணாமூர்த்தி நகர், வளையாபதி வீதியை சேர்ந்த திரு. R. கணபதி என்கிறவருடைய மின் இணைப்பு எண் 1024 ஆகும். தமிழ்நாடு மின் உற்பத்தி மற்றும் பகிர்மான கழகத்தினால் வழங்கப்பட்ட உயர் அழுத்த மின்கம்பி தன்னுடைய வீட்டின் மீது செல்வதால் தொந்தரவாக இருக்கிறது என்றும், மேற்படி உயர் அழுத்த மின்கம்பியால் மின் சாதனங்கள் அடிக்கடி பழுதடைந்து விடுவதாகவும் 09.06.2017 அன்று தெரிவித்திருந்தார்.

#### தீர்வு

கடலூர், மின் நுகர்வோர் மையம் (Electricity Consumer Cell) கடலூர் பகுதியிலுள்ள மஞ்சக்குப்பம் தமிழ்நாடு மின் உற்பத்தி மற்றும் பகிர்மான கழக அலுவலகத்திற்கு இந்த பிரச்சனை குறித்த புகாரினை 12.06.2017 அன்று அனுப்பியிருந்தது. பகிர்மான கழகத்தின் தேவையின்படி, மின் நுகர்வோர் மையத்தின் மூலம் நுகர்வோர் கடைசியாக செலுத்திய மின் கட்டண ரசீது, வீடு உரிமம் சார்ந்த ஆவணங்கள், DCW கட்டணம் போன்றவை சமர்ப்பிக்கப்பட்டன. அப்பகுதியை சேர்ந்த உதவி மின் பொறியாளர் நல்ல ஒத்துழைப்பு அளித்தார். நுகர்வோருக்கு அவர் கோரிக்கையின்படி 30.06.2017-ல் உயர் அழுத்த மின்கம்பி வேறு பாதையில் மாற்றி அமைக்கப்பட்டது. மின் நுகர்வோர் மையத்தின் தலையீட்டால் தன்னுடைய பிரச்சனை நல்லமுறையிலும் மற்றும் விரைவாகவும் முடிந்ததாக நுகர்வோர் தெரிவித்தார்.

(மின் நுகர்வோர் மையம், கடலூர்)

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**Initiative of**



*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.*

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# World News

## China Is Now Home To The World's Largest Floating Solar Power Plant

The massive waterborne plant is expected to generate 40 megawatts at one time and could supply electricity for over 15,000 homes. The pioneering project, located in eastern China, is thought to cement China's status as a top producer of solar energy in the world. The plant has been built in Huainan city, Anhui Province, by Sun grow Power Supply, a Chinese company specialized in renewable energy.

The ambitious company has put the first phase of the project into use after connecting hundreds of solar panels to form the impressive power plant, according to its website. In order to find a body of water large enough to hold the plant, workers filled an abandoned coal mine with water to create a reservoir. The cool air near the surface of the water would help reduce the heat generated from the solar panels and lower the risk of battery malfunction, said Chinese news website Sohu. In addition, building a solar plant on water could save land space, which puts China one step ahead of other countries in providing green energy, according to the same report. The solar power plant is expected to generate 800 megawatts a year.

solar plant on the Queen Elizabeth II reservoir in Walton-on-Thames, which is due to power 1,800 homes. The power station features 23,046 solar panels and measures 57,046 sq metres (618,925 square feet). The floating plant in China is six times the size of the plant in Britain.

Donald Trump pulled the United States out of the Paris accord on climate change on June 1 - deriding it as bad for American jobs and bad for the environment.

The decision could accelerate China's unlikely ascent toward leadership in stemming global warming and promoting green technology, and on global matters far removed from the environment.

The world's largest emitter of man-made carbon dioxide, considered a top cause of climate change, is already making rapid progress toward its Paris goal of stopping emissions growth by 2030. It has overtaken the U.S. in transitioning to renewable energy, generating a fifth of its electricity from renewable sources. The U.S. only sources about 13 per cent of its electricity from renewable.

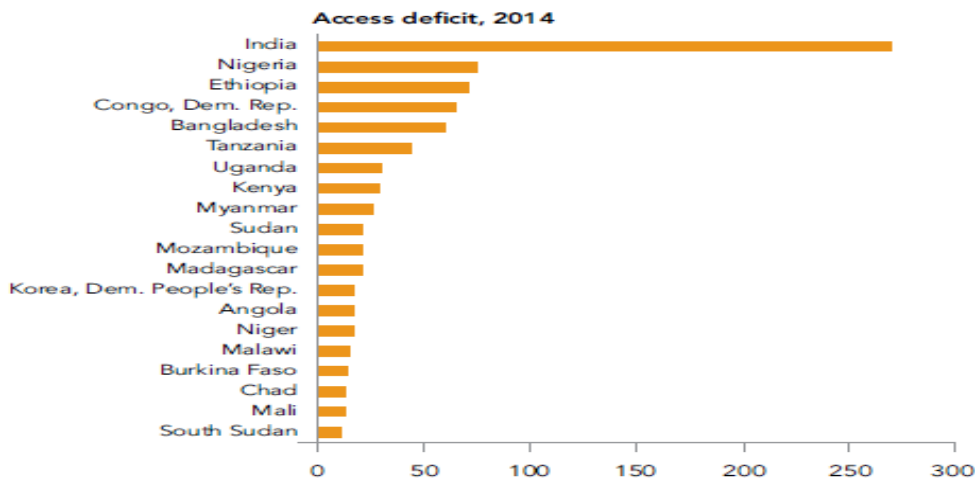
Last year, Britain built a similar floating Source: [Daily mail](#), June 9 2017

## Publications/Regulations

- Foundation Platform, "Renewable Energy, Climate Action and Resilient Societies", July 2017, [Click here](#)
- Council on Energy, Environment and Water; Natural Resources Defence Council, "Greening India's workforce", June 2017, [Click here](#)

## [STATE OF ELECTRICITY ACCESS](#) , WORLD BANK REPORT

**FIGURE O.2 India has the world's largest electricity access deficit**  
 (Top 20 countries for access deficit in electricity, 2014)



Source: IEA and World Bank 2017  
 Note: These countries account for more than 81 percent of the global access deficit.

## நுகர்வோர் குறைதீர் மன்றம் (CGRF)

மூன்று நபர்களை உள்ளடக்கியது

மேற்பார்வைப்  
பொறியாளர்  
(மன்றத்தலைவர்)

நிதி அல்லது சட்ட  
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அல்லது நுகர்வோர்  
அமைப்புகள் அல்லது  
நுகர்வோர்  
செயற்பாட்டாளர்

குறைதீர்க்கும் மன்றத்தின் தலைவரிடம்  
ஒவ்வொரு குறையையும் எழுத்துப்பூர்வமாக  
சமர்ப்பிக்க வேண்டும்

### நடைமுறை

- ◆ ஒவ்வொரு வருடமும் முறையீட்டாளரிடமிருந்துப் பெறப்படும் குறையினை பதிவுசெய்து வரிசையாக எண்ணிட வேண்டும்
- ◆ குறைகளைப் பெற்ற ஏழு நாட்களுக்குள் முறையீட்டாளருக்கு ஒப்புக்கக் கடித்தினை அனுப்ப வேண்டும்
- ◆ குறைதீர் மன்றத்திற்கு புகாரினை ஏற்றுக்கொள்வதற்கோ அல்லது நிராகரிப்பதற்கோ உரிமை இருக்கிறது. புகாரை நிராகரிக்கும்பட்சத்தில் அதனை எழுத்துப்பூர்வமாகத் தெரிவிக்க வேண்டும்
- ◆ புகாரினை பெற்ற 10 நாட்களுக்குள் அதனை ஏற்றுக்கொள்வதுபற்றி முடிவு செய்துவிட வேண்டும்
- ◆ உரிமதாரர் குறைதீர்ப்பு மன்றத்திடமிருந்து கடிதம் பெற்ற 15 நாட்களுக்குள் பத்தி வாரியாக குறைகளுக்கு விளக்கம் தர வேண்டும்
- ◆ முறையீட்டாளர் தாமாகவோ அல்லது அவர் தேர்வு செய்த பிரதிநிதிலுமலாகவோ முறையிடலாம்
- ◆ நுகர்வோர் குறைதீர் மன்றமானது, புகார் பெற்று அதிகபட்சம் 50 நாட்களுக்குள் விசாரணையை முடித்து ஆணை வழங்க வேண்டும்
- ◆ நுகர்வோர் குறைதீர் மன்றமானது முறையீட்டாளரின் நலன் கருதி மின்சார துண்டிப்பினை தடுக்கும் பொருட்டு 10 நாட்களுக்குள் இடைக்கால ஆணையினைப் பிறப்பிக்கலாம்
- ◆ அதிகபட்ச வாக்குகளின் அடிப்படையில் முடிவுகள் எடுக்கப்படும். சமமான வாக்குகள் இருக்கும் பட்சத்தில், மின்சார குறைதீர்ப்பாளர் இறுதி ஆணையை முடிவு செய்வார்
- ◆ உரிமதாரர் கொடுக்கப்பட்ட கால அவகாசத்துக்குள் குறைதீர் மன்றத்தின் முடிவினை செயல்படுத்த வேண்டும்
- ◆ உரிமதாரர் ஆணையினை செயல்படுத்தியதற்கான இணக்க அறிக்கையை குறைதீர் மன்றத்திடம் 5 நாட்களுக்குள் தெரிவிக்கவேண்டும்

ஆதாரம்: நுகர்வோர் குறைதீர் மன்றம் மற்றும் மின்சார குறைதீர்ப்பாளருக்கான வழிமுறைகள், தமிழ்நாடு மின்சார ஒழுங்குமுறை ஆணையம்

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