

## NET METERING- THE CONCEPT

All over the world, including India, is looking at renewable energy as a possible solutions for energy security and promoting greater choice among consumers. Specifically, due to technological innovations renewable energy sources have become small and scalable to be fitted on rooftops. This has paved the way for distributed decentralized energy systems. This has created another trend - consumers who were previously consuming electricity have also become producers of electricity, thus becoming Prosumers. In effect, electricity prosumers are those who generate and sell electricity on their own with distributed decentralized energy systems like rooftop solar. To encourage people to pursue clean energy, the government both at center and state level have introduced various incentives and subsidies promoting such decentralized solutions.

### What is Net Metering?

Net metering is a concept in which residential and commercial electricity consumers who generate their own electricity from solar can be compensated for each units of the electricity they sell it to the grid. This system is exclusively for solar power producers so as to incentivize them for the use of clean energy. This is better understood with an example. As a solar rooftop owner you may generate electricity and use it to charge all your devices and for various other purposes and sometimes still be left with excess power which is left unused (supply is more than demand). This excess electricity can either go as waste or can be stored for future use by storing it through battery backing system similar to that of an inverter. But instead, the government through net metering policy allows you to sell the excess electricity to the grid and get paid as well.

### How does it work?

For example your solar rooftop panel generates 100 units (Kwh) of electricity and you use only 90 units (Kwh) and is thus left with excess 10 units (Kwh). You can sell this 10 units to the grid and later consume electricity from the grid when your demand is greater than supply. In this way you will be charged only for the 10 units i.e. net electricity consumed (difference between the export and import). Yes you got it right! If you consume less than what you generate and just keep adding the extra electricity to the grid you will not only be charged nothing but also get paid for each additional units of power that you add on to the grid. Net meter is thus simply a policy measure to incentivize the solar power producer to go green. Apart from that, the two big advantages of net meter is that you can save your electricity bills and also help in someone who is in dire need of electricity by stabilizing the grid.

### What is Gross meter and how does it work?

People often get confused with net metering and gross metering. Gross meter is a closely related concept to net meter but is slightly different. Gross meter just calculates the gross or total amount of electricity that you sell to the grid from your solar rooftop. For example, a consumer's solar rooftop panel generates 100 units (Kwh) of electricity and he sells all the 100 units to the grid without consuming anything to power his home. That sounds crazy right! Yes no one would do that. But wait there is advantage to it. Here the electricity consumer wishes to sell all the units generated to the grid and get the electricity from the grid directly. In this way the consumer is charged only for the cumulative electricity consumption from the grid and is paid for the gross electricity sold to the grid. Gross meter is a two way process where a consumer will be charged to the total electricity consumed from the grid and paid for the gross electricity sold to the grid.

Now as you know what a net meter is, in the next article we will see that despite with such big advantages why is it difficult for the power utilities to actually implement net meters.

## Electricity Contacts

- Call center—1912
- Fuse Off Call Centre:  
**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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## Electricity Consumer Cells (ECCs)

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## Tamil Nadu News

### Tangedco gets a Boost in Performance Rating

In a shot in the arm for the Tamil Nadu Generation and Distribution Corporation (Tangedco), the Fifth Annual Integrated Rating, 2017, of State Distribution Utilities has upped the discom's performance from 'C' (low performance) last year to 'B' (below average). The report, however, does flag serious concerns about the health of the discom, including the growing subsidy support from the Tamil Nadu government.

The rating done by the ICRA and Credit Analysis and Research under the auspices of the Ministry of Power has positioned Tangedco in the 25th place all-India, up from 34th last year. The rating was carried out among 41 electricity distribution companies covering 22 States.

The annual grading exercise is being carried out to assess the financial and operational strength of the discoms to help give a true picture to lending institutions and other stakeholders. The rating covering several parameters including Aggregate Technical & Commercial (AT&C) losses, power purchase, cost efficiency, cost coverage ratio and regulatory compliance grades discoms based on the marks scored under each parameter. Tangedco has been graded as being in the 35 to 50 range. Tangedco officials point out that the 'B' grade reflects 2015-16 financial results that showed a total loss of Rs 5,787 crore. "But in this financial year (2016-17) we have reduced the total losses to Rs 3,700 crore and so there will be marked improvement in the grading next year," said an official.

The report, however, does express serious concerns about Tangedco's financial and operational health, and prescribes actions that would need to be taken to strengthen the discom. The report highlights Tangedco's moderately-high Aggregate Technical and Commercial (AT&C) loss levels, billing of consumers of only 80% (excluding agricultural connections), and failure to file tariff petitions periodically. Tangedco has got exemption from filing them under the Uday scheme. The report also mentions the high dependence on State government subsidy which stands at Rs 6,879.33 crore for 2015-16, as against Rs 952.16 crore in 2004-05. In 2014-15 the subsidy was Rs 5,599.64 crore.

Regarding the issue of AT&C losses which carries a weightage of a maximum of 28 points, Tangedco fares poorly, pegging the losses at 20.13% in 2015-16 in the Adjusted Revenue Requirement (ARR) filed with the TNERC. A senior official, however, claimed AT&C losses had reduced to 14.50% as per UDAY data. Source: [The Hindu](#), May 06 2017

## India News

### Power hurdle: Many villagers not keen on legal electricity connections

India's power-for-all plan is facing an unexpected challenge. Legal electricity connection with bills isn't attractive for many villagers in several states, because it is a drain on their meager income. Surveys in states such as Bihar, Uttar Pradesh, Jharkhand, West Bengal and Odisha indicated that many people didn't want legal electricity connections to avoid rise in expenses, a senior government official said. Having electrified nearly three-fourths of the villages targeted under the government programme, the union power ministry and state power ministers will now look at ways around this hurdle to meet the 100% goal.

Bihar, Nagaland, Uttar Pradesh, and Jharkhand have at least half the households without electricity access, said the official, adding that access to electricity and infrastructure wasn't the most important reasons for this. West Bengal and Odisha have grid connectivity, but affordability of electricity is a challenge, he said. In Bihar, of the houses with no electricity, lack of grid infrastructure is the reason for 43%, a survey has found. In the majority 57%, high connection and recurring cost and unreliable electricity supply led people to avoid legal connections.

Pilferage is rampant in many places, and it is a concern for the government. The union power ministry will deliberate ways to encourage people to take electricity connections to cut pilferage in a two-day conference this week with power ministers of all the states. The Centre has already offered soft loans from Rural Electricity Corp (REC) and Power Finance Corp to state distribution companies to offer electricity connections on installments to domestic power consumers.

The proposed measures could include spreading awareness on electricity metering, rationalization of fixed monthly charges, offering connections on easy installments and strict actions against illegal connections, the official said. The BJP-led central government aims to provide round-the clock power to all by 2019. Its Garv dashboard on village household electrification shows that 74.33% of the targeted household electrification has been completed.

About 1,50,000 new connections are given on an average every month. In April, the number was 1,81,000. REC has launched an electrification impact survey in villages that have been electrified for more than six months. It is collecting data on average hours of power supply and new industrial activities to map changes in living standards post electrification.

The surveys showed that a significant number of households aren't interested in taking electricity connections, the official said. Earlier, a study across six states by the Council on Energy, Environment and Water showed two thirds of unelectrified household didn't take electricity connections, despite having the grid in the vicinity. "Households cited main reasons as affordability of the connection charges and monthly charges, and unreliable supply," it said.

Source: [Economic Times](#), May 02 2017

## Consumer Focus

### FACTS

In this case, the service connections to a property originally stood in the name of the petitioner's mother. On her death, the petitioner and his siblings became co- owners of the said property and were entitled to 1/3<sup>rd</sup> share. Subsequently, the petitioner applied for name transfer, which was effected. But later, when the complainant went to pay the CC charges, he found that the title had been restored in the name of his deceased mother. Hence he requested restoration of title to service connections.

### CONTESTATIONS

**Petitioner:** The said services had been transferred to the names of the siblings and new white meter cards had been issued. Further, there was no court case pending with respect to these service connections. Hence it was shocking to find that the name had been transferred back.

**Respondent:** The transfer from the name of the deceased to her legal heirs had been done after considering the relevant documents (Patta copy, Property Tax copy, Indemnity bond, etc.). But subsequently, one of the legal heirs (C.Umapathy) objected to the name transfer and requested restoration to his mother's name as a court case was pending. Hence, the services were restored. The petitioner was informed of the same and he was told to submit consent letters of the other legal heirs in order for the name transfer to be effected.

### OBSERVATIONS AND JUDGMENT

The petitioner had submitted the required documents and fees. Further, the correct procedure had been followed. The transfer was made in the names of all legal heirs and not just the petitioner. It was held that the licensee had restored the service connections on receipt of the objection letter from C. Umapathy, without analysing the details of the case. This was incorrect, especially as the service holder is no more. Mr. Umapathy must have been asked to submit the details of the pending court case.

## ECC Voice

2003 ஆம் ஆண்டு மின்சாரச் சட்டத்தின்படி மின் வழங்கல் தொடர்பான விஷயங்கள் பற்றிய தகவலைப் பெறுவதற்கு பின்வரும் அடிப்படையான உரிமைகளை நுகர்வோர் பெற்றுள்ளனர்:

1. புதிய மின்னிணைப்பைப் பெறுதல், மின்துண்டிப்பு, மறு மின்னிணைப்பு, சுமை / பெயர் / மின் கட்டண வகை மாற்றம் செய்தல் பற்றிய நிபந்தனைகள் மற்றும் நடைமுறைகள்
2. பராமரிக்கப்பட வேண்டிய செயல்திறச் செந்தரங்களின் தரம் (Standards of Performance) மற்றும் மின்பகிர்மான உரிமம்தாரர்களால் வழங்கப்பட வேண்டிய சேவைகள்
3. பட்டியல் (Bills) செலுத்துகையின் பேரிலான நடைமுறைக் குறியீடுகள் (Code of Practice)
4. முறையீட்டைக் கையாளும் நடைமுறைகள் மற்றும் குறை தீர்த்தல் (Grievance Redressal)
5. தமிழ்நாடு மின்சார ஒழுங்குமுறை ஆணையத்தினால் ஒப்புதல் அளிக்கப்பட்ட மின்கட்டணப் பட்டியல் (Tariff Schedule) மற்றும் பிற கட்டணங்களின் பட்டியல்கள் (Schedule of charges)
6. மின்னளவியின் சரிநிலை (Correctness of meters)
7. திறந்த நுழைவுரிமையின் (Open Access) கீழ் ஒரு சில தகுதியான நிபந்தனைகளை நிறைவேற்றுவதன் பேரில் மின்னிணைப்பு வழங்குபவர் பற்றியும் மற்றும் சில்லறை வணிகத்தில் (Retail) போட்டி உருவாவதை நிறைவேற்றுவதல் பற்றியும் அறிதல் மற்றும் தேர்ந்தெடுத்தல்.

# World News

## Consumers prefer clean energy

It's true that fossil fuels, and especially coal, are losing market share and investor confidence: The world's 40 largest coal companies saw their market capitalization decrease by a stunning 37 percent between 2010 and 2015. But what really holds fossil fuels back is that investors and consumers prefer clean energy.

Energy productivity and renewable energy are in the early stages of innovation in three important ways:

- Reducing cost per unit of energy service. The cost of solar cells is one-fourth of what it was eight years ago, and LED lights have dropped in cost by a factor of six to eight in the same period. By contrast, the cost per unit of energy service for conventional fossil fuel plants has changed little over that time.
- Performance, as measured by efficiency in producing energy. Eight years ago, solar cells converted eight percent of the sunlight they received to electricity; today they convert 18 to 20 percent.
- Functions they can serve. Combining information technology, solar energy and storage in our homes will allow us to change energy demand hour by hour for each appliance and transfer energy to our cars overnight.

Energy productivity does something that fossil fuels can no longer consistently do; it saves people money. The cheapest energy of all is the energy we don't use. Energy productivity is already outperforming the fossil fuel sector in terms of job growth and cost savings.

In 2016, for the third consecutive year, the majority of new electric generating capacity added to the grid was from solar, wind and other renewable sources.

Energy productivity and renewable energy are a safer and lower risk for investors. As a result of uncertainty in both the demand for and the supply of energy, investors prefer projects that are smaller in scale, have a shorter payback period, or both. Renewable energy projects typically require from a few thousand to a few million dollars to launch. In addition, energy productivity and renewable energy projects can pay off investors in eight years or less.

In coming years, we will both produce and consume energy in our homes and businesses. Energy productivity and renewable energy provide more attractive options for energy users and investors.

Source: [The Baltimore Sun](#), May 09 2017

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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.*

### Supported by



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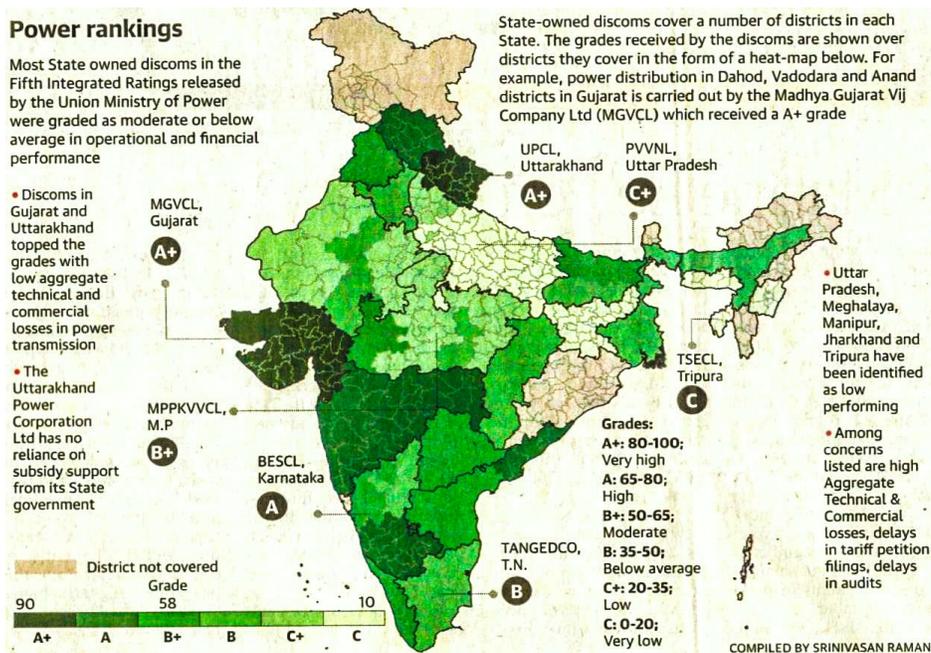
## Publications/Regulations

- Energy Transitions Commission, Better Energy Greater Prosperity, [Click here](#)
- International Renewable Energy Agency, Rethinking Energy 2017, [Click here](#)

### Power rankings

Most State owned discoms in the Fifth Integrated Ratings released by the Union Ministry of Power were graded as moderate or below average in operational and financial performance

- Discoms in Gujarat and Uttarakhand topped the grades with low aggregate technical and commercial losses in power transmission
- The Uttarakhand Power Corporation Ltd has no reliance on subsidy support from its State government



Source: [The Hindu](#), May 09 2017

## மேற்கூரை சோலார் நிறுவதல்

தமிழ்நாட்டில் நிறுவப்பட்டுள்ள ஒவ்வொரு கிலோவாட்டிற்கும், சோலார் பிவி கருவியின் உற்பத்தி திறன் ஒரு வருடத்திற்கு 1,500 கிலோவாட்டாகும். உள்ளபடியான திறன் உற்பத்தியானது சோலாரின் செயல்திறன், சோலார் பேனலின் சாய்வு கோணம், பருவநிலை, மின் தொகுப்பு கிடைக்கும் தன்மை மற்றும் சோலார் பேனலின் தூய்மை ஆகியவற்றை சார்ந்திருக்கும்



சோலார் மேற்கூரை முதலீடு ஊக்குவிப்புத் திட்டம்

### மின் தொகுப்பிணைந்த உள்நாட்டு சோலார் பிவி கருவி

மத்திய அரசு மானியம்	ரூ. 22,000 (30% MNRE யிலிருந்து உள்ளடக்கியது)
மாநில அரசு மானியம்	ரூ. 20,000
தனி வீடு / அடுக்குமாடி குடியிருப்புக்கான கருவியின் திறன்	1 கிலோவாட்
நிகர அளவு: மின்சாரம் ஏற்றுமதி மற்றும் இறக்குமதி செய்வதன் மூலமாக மின் கட்டணத்தை குறைக்கலாம்	எடுத்துக்காட்டு: ஒரு நுகர்வோர் 1000 கிலோவாட் திறனை மின் தொகுப்பிலிருந்து இறக்குமதி செய்து, 600 கிலோவாட்டினை ஏற்றுமதி செய்தால், நிகர அளவின் மூலமாக கட்டணமானது 400 கிலோவாட்டிற்கே விதிக்கப்படும்

கருவியைப் பொருத்துவதற்கு, தமிழ்நாடு ஆற்றல் மேம்பாட்டுக் கழகத்தின் பட்டியலில் உள்ள தகுதிவாய்ந்த சோலார் கருவி பொருத்துநர்களை அணுகலாம்

ஆதாரம்: தமிழ்நாடு ஆற்றல் மேம்பாட்டுக் கழகம்

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