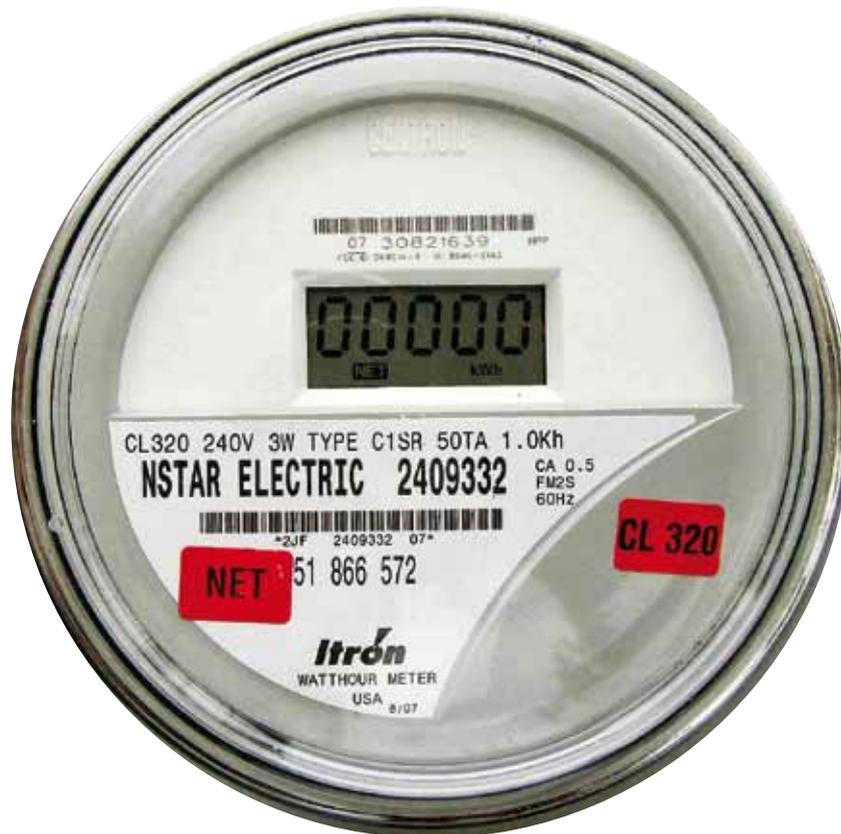


# NET METERING

Net metering comes as a new concept that promises an environment friendly and power efficient electricity evaluation system. It provides an easy option to produce electricity from renewables and also to get connected to the grid at the same time.



**N**et metering is a new concept where an instrument which has a special metering and billing agreement between utilities and their customers, facilitates the connection of small, renewable energy-generating systems to the power grid. This new programme is being developed to encourage small-scale renewable energy systems to ensure that customers always have a reliable source of energy even when their renewable generators are not producing energy, and to provide substantial benefits to the electric power-generating system as well as the environment.

When a net metering client's renewable generator is

producing more power than is being consumed, the electric meter runs backward generating credits. Whenever the net metering customer uses more power than is being produced, the meter runs forward normally. Net metering customers are charged only for the net power that they consume from the electricity service provider that has accumulated over a specific period. In other words, if their renewable energy-generating systems make more electricity than is consumed, they may be credited or paid for the excess electricity contributed to the grid over that same period. Net metering is also a way to increase the energy in the power grid to keep up with increase in demand during peak power use

times, and this is of particular interest to states facing power shortages.

In a recent development, the Ministry of New and Renewable Energy (MNRE) undertook a national consultation on net metering for grid-tied PV projects, where officials from central ministries, secretaries of state regulatory commissions and officials from state power departments and distribution companies came together to prepare an action plan with practical solutions for the introduction of net metering. The Ministry has also planned a project which can be tried on a pilot basis in a few cities in India. The MNRE is trying to collaborate with companies, the municipalities and the state governments to agree to this project. The groundwork and seeking consent from the building owners has to be done either by the municipal body or by the distribution company or by any other state government agencies. There will be no extra burden on the distribution company if capital subsidy is provided. Using the net metering system will ensure that the house owner gets assured power supply during the day and this will get cheaper over the long period.

Although net metering system is a new concept in India, this programme is successfully working in countries like Australia, Canada, Italy, Spain, Denmark and United States. In 2002, Thailand was the first country to initiate the first net metering policy in the developing world. The Very Small Power Producer (VSPP) regulations were aimed at encouraging the use of small scale renewable generation almost under 1 MW. The Thailand Government mandates the purchase of any surplus electricity generated through renewables at rates which are adjusted every three months. The VSPP programme covers production from a variety of sources including Solar Photovoltaic (SPV) and bioenergy. The initial legislation was extended in 2006 and now includes mandates on the purchase of electricity derived from production of upto 10 MW.

Another successful use of the net metering system may be seen in Canada, which started in 2006. The first net metering site for demonstration was chosen in the rural community of Knowlesville near Hartland in 2004. Now Canada has adopted the net metering system and it is available for all. California, US, is also using the net metering systems successfully. Residents of California also have the option to live off-grid and use renewable energy as stand-alone systems instead of incurring expenses for long distance wire connections. Other residents have the additional opportunity to install their own systems that are linked to the grid through net-metering which is also

**Net metering can increase the energy in the power grid to keep up with demands during peak times, which is of particular interest to states facing power shortages.**



known as grid-intertied.

In India, this concept could be an important incentive for consumer investment in onsite renewable energy generation and also a motivating factor for consumers to utilise renewable energy. The MNRE plans to start net metering systems in India soon. The Karnataka Renewable Energy Development Ltd (KREDL) has stated that Karnataka is poised to develop the concept. The West Bengal Renewable Energy Development Agency (WBREDA) has put a 25 kW Grid Interactive Roof Top SPV Power Plant in place, where the net metering concept has been adopted and a MoU has been signed with the State Electricity Board. The Rajasthan Renewable Energy Cooperation Ltd. (RRECL) is planning to start an Urban Development and Housing Project (UDH) where the net metering system will be used as also the Renewable Energy Agency of Puducherry (REAP). The concept is new and innovative and provides low cost and easily administered methods for encouraging customers to invest in renewable energy technologies. Adopting this technology will herald a new era for India and create an interface that can significantly reduce the rising carbon footprint of the nation. ❁

*Courtesy: Arun K Tripathi, Director, MNRE & [www.solarserver.com](http://www.solarserver.com)*