

News for the month of November 2016...

Industry welcomes demonetisation of higher currency



The government of India has withdrawn effective midnight of 8th November 2016 the legal tender of banknotes in denomination of Rs. 500 and Rs. 1,000. The demonetisation was done in an effort to stop counterfeiting of the current banknotes allegedly used for funding terrorism, as well as a crack down on black money in the country, reducing corruption, drug menace and smuggling.

The side effects of this move was echoed by some of the leading concentrated solar thermal manufacturers.

Abhishek Bhatewara of Clique Solar said " Demonetisation will lead to easing of interest rates due to lower fiscal deficit and higher lending capacity with banks. The lower fiscal deficit will also mean government can spend more money on infrastructure. Both these impacts of demonetisation will a positive impact on the economic growth. Companies will start relooking at their capital investment plans, and there in also relook at the non-discretionary spending such as solar and other renewables. Over time this should give a boost to the sector.

Madhuudhan Rao of Oorja Energy states "It will not have a significant impact on onion business but Small and Medium Enterprise (SME) segment orders especially for cooking needs will be impacted due to tight cash position. The move will however be favourable for industries as over a long term he fiscal atmosphere will be conducive"

Prakash Bhalekar of Quadsun Solar as "The parallel economy has many debilitating effects on the country, and I welcome this move as the business activities will be more transparent."

Sandeep Arora, Director at YES Bank informs "the demonetization will yield sufficient funds in Banks and will not become a hindrance to finance considering the ambitious targets set by the Government of India."

According to Bridge to India spokesperson "We do not believe that demonetization will have any material impact on the Indian renewable sector as most leading project developers are backed by reputable Indian and international sponsors with robust corporate governance practices."

Research Survey carried by Solar Thermal Federation of India

Tribal Development sets up 18 solar cooking systems in Gujarat



(Photo courtesy: Taylormade Solar Solutions)

The Commissioner of Tribal Development in Gujarat state has set up 18 solar concentrator steam cooking systems in Residential Schools through a tendering process under *Vanbhandhu Kalayan Yojana*. This has reduced the efforts to fetch forest wood by walking long distances. The systems are supplied by Ahmedabad based Taylormade Solar Solutions Pvt. Ltd.

Six tribal schools each have set up 3 such units of SK - 40 type solar cooking dishes each using 4 m² sizes. The system has a capacity to cook 50 meals on a sunny day. Set up at a total cost of Rs. 17 lakh the system was self funded without any fiscal benefits of the central government. Each system will avoid annually about 1,500 kgs of wood.

The suppliers of the system will also maintain the system for a period of 3 years for trouble free operations under the supervision of the Commissioner. The Commissioner, Tribal Development is the chief controlling officer for departmental budget sanctions and allocations as well as implements and monitors progress of all tribal developmental programs within the State of Gujarat.

According to a spokesperson from the tribal department a new era has started for cooking and the pilot systems are already proving a boon considering the wood that is saved besides reducing the pollution. With this success and they are likely to expand this scheme to all the 33,000 and above tribal schools in the state.

<http://tribal.guj.nic.in/>

Performance brings satisfaction a Mahindra Vehicle



(Photo courtesy: Clique Solar)

Mahindra Vehicle Manufacturers is one of the few establishments that has installed two different solar thermal concentrating systems, Scheffler dishes for cooling and Arun™ dish for process heat both operating successfully since 7 years.

The 70 nos. of Scheffler dish each 16 m² and 168 m² Arun™ dish are yielding savings equivalent to 1,00,000 kWh annually and bringing satisfaction to the company. The project has almost achieved break-even and have thus showcased that proper upkeep and designing is key to success of a technology

The steam from Scheffler system is sent to vapour absorption chiller and the chilled water at 9° C is generated which is sent to Air Handling Units (AHU) which chills the air and passes through central air-conditioning system. Hot water at 143°C at 4 kg/cm² pressure is generated by harnessing solar thermal energy.

This Arun™ dish is integrated to the existing system Diesel Boiler cum Electric Heater and is utilised for washing the engine components in automobile manufacturing unit. The plant is utilizing the CST system for about 8 hours per day.

Expressing satisfaction at the functioning of the systems Manoj Sapre said “ Scheffler technology must also have dual axis tracking to improve efficiency as per our analysis. From a long term perspective solar thermal process heating systems are definitely beneficial as they directly translate in fossil fuel savings as fuel undergoes erratic pricing with time.” With this success the company is actively considering using similar solutions for their other vehicle manufacturing plants in the country.

<http://www.mahindra.com>

Solar Cooking system profits Devnar School



(Photo courtesy: Solar Thermal Federation of India)

The 18 m² area Parabolic Trough Concentrators (PTC) solar cooking systems are reaping profits at Devnar School for the Blind. Conventionally the school has a steam cooking system using LPG that caters 100 kgs of rice cooked for lunch and dinner along with 20 kgs of *dal* (pulses) catering to close to 500 students.

The system supplied by Oorja Energy Engineering Services Pvt. Ltd., Hyderabad had their receiver tubes used are tested and certified by DLR (German Space Agency). The system was designed in a manner so as to capture the heat during the entire daytime and stored in an accumulator so as to use it on demand for cooking

The solar grade curved mirrors 4 mm thick with optical efficiency above 94% ensure that there is greater accuracy in the parabola shape when compared to an arrangement of flat mirrors with chances of human error. Thermal fluid is used to capture heat from the solar field by circulating it in the evacuated tubes. A double jacketed vessel was specifically fabricated that acts as solar boiler as well as steam accumulator. The IP67 rated slew drive using a simple DC motor for tracking is the unique technique used to ensure trouble-free operations.

According to Satyanarayana the chief cook and caretaker of the school says “the system has already resulted in savings of 3,500 kgs of Liquefied Petroleum Gas ever since commissioned in April 2016 and we are happy at this magnificent solution provided by Oorja Energy.”

The success is proving a bonus to the suppliers and are capitalising on this success to expand their business.

<http://www.devnarfoundationfortheblind.org/>

SolarReserve to build gigawatt scale solar thermal storage



(Photo courtesy: Solar Reserve, USA)

SolarReserve plans to build a \$5 billion, 2,000-MW concentrated solar power (CSP) project called Sandstone Energy 10X in Nevada, California state of USA. It will be spread around 20,000 acre area and would use molten salt concentrating solar power technology to generate power and provide energy storage capability.

A CSP project aims mirrored reflectors, heliostats, at a “power tower” where the solar energy turns water into steam that drives a conventional steam generator. Using molten salt instead of water enables the heat to be retained and power to be generated into the evening.

It would come online in 2021 and its generous capacity would give Sandstone the flexibility to generate very large blocks of power on demand, morning, noon or night, including California's peak evening load period. CEO Kevin Smith told that the price will be cheaper than PV with battery storage, at somewhere “under 10 cents”. Sandstone would store each day's solar heat in molten salt in tanks, where it loses only 1 percent of the stored energy daily, and the heat is tapped to generate steam for electricity generation at any time, in the same way as a gas, coal or nuclear plant. So the firm's solar power can be delivered on demand day or night, unlike solar PV, which needs backup power (often provided by natural gas plants) on cloudy days and peak usage hours in the evening.

The huge project would help supplant California's requirement for dispatchable natural gas generation, further reducing California’s carbon footprint.

[http:// www.solarreserve.com](http://www.solarreserve.com)