Cygni Energy wins "Most Innovated Product Award 2018" for their Solar DC Inverterless technology

Cygni's flagship product is Integrated Solar-DC Inverterless Systems. This is one of the most efficient photovoltaic power backup systems available in the market offering up to 40% lesser power consumption and 50% reduction in electricity bills. In addition, Cygni systems come integrated with Mobile App, which helps you monitor your energy consumption, which in turn will enable you to monitor and control your energy usage. The solution is not just limited to rural households but is robust enough to handle urban homes/offices and its backup needs.

Cygni Energy Ltd has been awarded the prestigious Confederation of Indian Industries (CII) award under the Most Innovative Energy Saving Product of the Year 2018. The award was accepted by **Mr. Venkat Rajaraman, CEO, Cygni Energy** from Ajay Mishra, Principal Secretary – Energy, Telangana in the presence of several dignitaries and other eminent guests. Over 50 Companies participated in multiple sectors like Paper, Energy, and Metal. Cygni was shortlisted from a pool of over 25 contestants.

The 19th National Award for excellence in Energy Management was held in HICC, Hyderabad. The objective of the Award Scheme is to recognize and award Excellence in Energy Management among the Industrial Sector and facilitate sharing of information on best practices & technologies. Energy Award is the best platform for the organizations that have made outstanding contributions in the area of energy efficiency to showcase their efforts and achievements. CII National Award for Excellence in Energy Management is the 19th edition of its series covering all types of industrial sectors in India.

Speaking on the occasion Mr. Venkat Rajaraman, CEO, Cygni Energy said "We are delighted to receive this prestigious Award for Most Innovative Energy Saving Product of the Year 2018 Category. We are honored as our innovative Inverterless Solar DC product is recognized and appreciated. We believe that 5'D of Energy (Decentralization, Digitization, Democratization, Decarbonization, and Deregulation) and our Solar-DC inverter less is a unique disruptive product that can bring about a paradigm shift in the way the solar energy is generated and consumed".

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SPEAKING TO...

Energetica India catches up with Mr.Venkat Rajaraman, CEO, CygniEnergy Private limited to learn more about the company

ENERGETICA INDIA: **Please introduce Energetica India readers to Cygni Energy?**

VENKAT RAJARAMAN: Cygni Energy Pvt ltd (Cygni) is a Solar-DC technology and solution provider based out of Hyderabad, India. Founded in 2014 and incubated at the prestigious Indian Institute of Technology Madras (IITM), the company specializes in Inverterless technology and Rooftop Solar-DC solutions. At Cygni, we believe in a better way to power homes and businesses at a lower cost while contributing to a cleaner planet. We also believe solar power can actually cost less than we pay now resulting in significant savings. Our products are deployed in over 22,000 homes in 10 states of India. In the FY 2018, we aim to illuminate 45,000 more homes. The world has come a full-circle in the "war of currents" between Alternating Current (AC) and Direct Current (DC). With Solar (which generates DC power) and Battery storage (which stores/retries in DC power) and that all the home/office appliances are moving towards DC, we believe that time has come for the "Go-DC" revolution. With the advent of power electronics integrated circuits, all our appliances (LED for Lighting, Brushless DC motor for Fans, LED/LCD Television, Set-top boxes, Laptops, Computers, Network equipments, Servers etc) have all moved towards DC. Combined this with de-centralized generation with rooftop solar and local storage, the need for Alternating Current in homes/offices has come down and will eventually be replaced by Direct Current. Now with Solar-DC solution, the need for Inverters (DC-AC conversion) and for other AC-DC conversions is avoided and this results in 45% energy savings when compared to the traditional Solar-AC system. This makes the solar with storage very cost effective and viable for the first time. We believe this disruption with change the way the energy is generated and consumed.

ENERGETICA INDIA: **Please share more details on your innovative Inverterless Solar DC product?**

VENKAT RAJARAMAN: Cygni's flagship product is Integrated Solar-DC Inverterless Systems. This is one of the most efficient photovoltaic power backup systems available in the market offering up to 40% lesser power consumption and 50% reduction in electricity bills. If you look at the traditional usage at homes/offices, the solar power in PV module is generated in DC, it is stored in batteries in DC and finally consumed in DC, with the newer appliances like TV, Laptops and LED Bulbs run on DC. They use AC-DC convertor to convert 230V AC to lower Voltage DC. These conversions are inherently inefficient with each conversion step results in a loss of 15-20%. Cumulatively these can stack up and result in net losses of close to 60%. Which means, of the 100 units users pay for, only 40% is actually usable. We have designed a complete DC based system which achieves an efficiency of >90%, making solar both efficient and attractive from a cost perspective In addition, Cygni systems come integrated with Mobile App, which helps you monitor you energy consumption, which in turn will enable you to monitor and control your energy usage. The solution is not just limited to rural households but is robust enough to handle urban homes/offices and its backup needs.

ENERGETICA INDIA: **Please share your concept of 5'D of Energy**

VENKAT RAJARAMAN: We strongly believe that the utilities will have to transform it or face extinction. It is in the verge of revolution. In next 10 years the way people will produce and consume energy will be significantly different from what is being done now. This Energy 2.0 will be fueled by the 5 D's namely

1. Decentralization – instead of a centralized power generation station which supplies power to entire cities, we will move towards decentralized approach where we will have multiple mini grids powering a cluster of homes or individual homes generating their own power.

2. Decarbonization – the renewable energy for power generation will effectively reduce the need for fossil fuels in power generation and be a cleaner and greener alternative

3. Disruption –The advancement is energy generation and storage has been rapid over the last decade. With increasing efficient PV module and better energy storage technologies, people can power for their homes cheaper and cleaner. The energy industry will be disrupted in the way that we have not done before.

4.Democratization – With homes generating power, this can lead to a Peer-to-peer economy, where people can buy and sell power to each other instead of a monopolistic utility where the consumer don't have any bargaining power.

5. Digitization – Energy is considered as a black-box and it is very difficult to understand and decipher ones energy consumption and the energy bills. We believe that this will change. We live in a time when even a home refrigerator can have an online account. Digitization of power generation devices will make energy consumption transparent, flexible and help conserve energy at a very basic level. The first step in controlling usage is monitoring. With devices that can connect over Wifi and GSM or other means, remote monitoring and control of the system is not only possible but will definitely be the future.