

**MADANAPALLE INSTITUTE OF TECHNOLOGY AND SCIENCE,  
MADANAPALLE (UGC - AUTONOMOUS)**

**Report on**

***Demonstration of Hybrid Solar Inverter for PV Power Generation***

**Organized by Entrepreneurship Development Cell**

**On 02.11.2018**



Dr. Pavana Kumar, explaining the hybrid solar inverters to MITS Faculties and staffs



Dr. Pavana Kumar giving a hands-on training in setting up of Hybrid Solar Inverter, a collage of same

## **Report Submitted by: Dr. S. Manimaran, Coordinator ED Cell**

**Resource Person: Dr. Pavana Kumar, Simlife Electric Private Limited, Bangalore**

Entrepreneurship Development Cell is organized hands on training program association with Department of Electrical & Electronics, Madanapalle Institute of Technology & Science on a practical demonstration session on “**Hybrid Solar Inverter for PV Power Generation**” on **2<sup>nd</sup> November 2018** in the **WB-117 followed** by the Interactive session with the faculty members and Govt. Officials of AP Government in the Board Room of MITS to create awareness on the latest technologies available for the PV power extraction and further for integration with the grid.

Dr. Pavana Kumar, Simlife Electric Private Limited, Bangalore, an Industry Expert and consultant in the area of Power Electronics was the resource person for the event. He Started Multiple Centers of Excellence (COE) for GE, APC, Bloom, Schneider electric, SunEdison and Infineon which resulted in 100s of Millions of USD worth products Designed and Manufactured every year in India. He has more than 35 years of experience in the area of Processor based Designs of UPS, Drives, SMRs, Fuel Cells, energy meters, Solar Inverters, Design for six sigma and DMAIC of six sigma, and other power electronic equipment’s using Simulation Tools like Saber, Matlab, Mathcad, Minitab, P-spice, etc. He has developed and introduced several new products Globally which includes 350VA – 40kVA UPS, DC and AC Drives, Energy meters / Ballasts / SMRs-12000A, String inverters- 25kW - 50kW, Solar inverters-100W-50kW, SOFC Fuel cells, Wind Converterw-1.5MW etc. He has several Patents and Publications in his credit in addition to the products that he has developed satisfying/complying to international standards.

The Program started by 11.00 a.m. with the welcome address by Dr. Asha Rani M. A., HOD EEE Department. Further, Dr. C. Yuvaraj, Principal of our institution gave the presidential address where he highlighted about the consultancy activities our college has taken up in the recent times. Further, Dr. P B N Prasad, Associate Director R&D, given a special address and Dr. K. R. Kashwan- Dean EEE & ECE highlighted about the area of expertise of EEE department faculties and also about the consultancy works they are carrying out. Later, Dr. Pavana Kumar given a presentation about the various technologies available for solar PV power extraction with the merits of each of them. He also highlighted about the technologies he has developed for the same and he also suggested about the selection of topologies for power extraction based on location and demand. In addition, Dr. Mr. Sandeep Dama, Director-Quantum Energy Solutions Taiwan and one of the BOG Member of the institution was also present on the day. During his interaction with the faculty members he gave a presentation about the existing technologies available for Electric Vehicles and Energy Storage. He also mentioned about the future scope in this area as well. After the completion of the interaction session, Dr. Pavan Kumar and his team given a demonstration about how solar PV power can be extracted and can be integrated to the grid via Hybrid Solar Inverter.

The idea behind the interaction cum demonstration session is to give an insight to the participants (faculty members of MITS and Govt. Officials) working in this area about the advancements in PV power extraction

technologies for efficient power generation and grid integration. Almost 50 participants from various department of our Institute got benefited with the course.

Entrepreneurship Development Cell extends sincere gratitude to the Management, Principal, and Head of the Departments for their support.

## తక్కువ ఖర్చుతో విద్యుత్ ఉత్పత్తికి పరిశోధనలు చేపట్టండి



సదస్సులో పాల్గొన్న విభాగాధిపతి ఆశ తదితరులు

కురబకోట,నవంబరు 2 : తక్కువ ఖర్చుతో నాణ్యమైన విద్యుత్ ఉత్పత్తికి పరిశోధనలు చేపట్టాలని మిట్స్ ఇంజనీరింగ్ కళాశాల త్రిపుల్ ఈ విభాగాధిపతి ఆశ పేర్కొన్నారు. అంగళ్ల సమీపంలోని మిట్స్ ఇంజనీరింగ్ కళాశాలలో శుక్రవారం త్రిపుల్ ఈ విభాగం ఆధ్వర్యంలో హైబ్రిడ్ ఇన్వర్టర్ ఫర్ సోలార్ పీవీ పవర్ జనరేషన్ పై ప్రదర్శనలు నిర్వహించారు. ఈ సందర్భంగా ఆశ మాట్లాడుతూ రోజురోజుకూ టెక్నాలజీ ఎంతో అభివృద్ధి చెందుతోందని, దీనికి అనుగుణంగా పరిశోధనలు చేపట్టాల్సి ఉన్నాయన్నారు. ముఖ్యంగా సోలార్ ద్వారా విద్యుత్ ఉత్పత్తి చేసి పరిశ్రమలకు సరఫరా చేయవచ్చన్నారు. వీటిని బ్యాటరీలలో నిల్వ చేసుకోవచ్చన్నారు. రాబోయే కాలంలో ఈ విధానాన్ని పూర్తిగా వినియోగంలోకి తీసుకుంటు తెలిపారు. ఈ కార్యక్రమంలో ప్రెసిడెంట్ సి.యువరాజ్, అసోసియేట్ డైరెక్టర్ డాక్టర్ ప్రసాద్, డీన్ తులసీరామ్ నాయుడు తదితరులు పాల్గొన్నారు.

TITLE: LOW COST POWER GENERATION USING HYBRID SOLAR INVERTER.

Content: Dr. Asha Rani, HoD of EEE Department organised a Hands-on session on the low cost power generation using hybrid solar inverter for PhotoVoltaic power generation. The power thus generated can be stored for the future in batteries and utilized during crisis. The resource person Dr. Pavana Kumar explained how this can be done . The session was chaired by Prof. C. Yuvaraj, the Principal, Associate Director Prof. Prasad, Dean R and D prof. Tulasiram naidu.