

IIT-Gandhinagar, UL join hands for solar power research

The Indian Institute of Technology, Gandhinagar ([IIT-Gn](#)) has joined hands with US-based [Underwriters Laboratories](#) Inc. (UL), USA, a not-for-profit product safety testing and certification organisation for a student research project in solar power.

In a bid to enhance research in the renewable energy (RE) sector, UL and IIT-Gn also organised a research competition on photovoltaic (PV) system recently.

"Solar energy is the next opportunity to explore through small and large scale off-grid and on-grid power generation. Also it reduces the huge burden of green house gas in the environment. Power reliability, stand-by power for critical loads are the other side benefits which will improve our quality of life. It is for these reasons UL has started a student project at IIT Gandhinagar on Photovoltaic (PV) system and study their performance, reliability, durability, safety issues," said [Sudhir Jain](#), director of IIT-Gn.

The collaboration between IIT-Gn and UL allows the latter to bring its safety mission to India through education and research. The students have shown a remarkable ability to research a new subject and develop truly inventive ideas for application of solar energy, Jain added.

Further, in order to provide practical knowledge to the students, IIT Gandhinagar has recently installed a 10 kWp roof-top solar PV system sponsored by NTT Facilities, Inc., Japan. "The plant is based on thin film CIS technology with total 64 solar modules, made by Solar Frontier, each of 150 W. In fact, according to Mr. [Ogura Noritake](#), GM, NTT Facilities, Inc. Japan, this is their first installation in the Asia-Pacific region," said Jain.

Similarly, Gujarat Energy Research Agency ([GEDA](#)) has also sponsored another 10 kWp PV system based on the polycrystalline silicon materials with 44 of panels, each of 230 W, made by Jain Irrigation system Ltd., India. Each of the PV station at IIT-Gn is expected to generate around 15000 kWh and help to reduce the utility cost. More importantly, it is also expected to eliminate about 15000 kg of Carbon dioxide emissions in every year throughout its 25 years life time.

According to Jain, the two pilot PV plants will be used for research and education purpose.

"The planned research for initial period are to study the base-line capabilities of these plants, the electrical, thermal and mechanical characteristics of both type of the materials. These studies will be further extended towards the research related to performance and safety issues (fire, electrical etc.), reuse of PV panel, innovative use of PV system and explore their use in industry as well as in agriculture in rural India. Of course, the research on the cost effective efficient materials for PV system is the ongoing research at IIT Gandhinagar," Jain said further.

Source: Business Standard, 15 February 2012