TECHNOELITE GREEN ENERGY, ITSA & FIMER are shaping the future of energy

Innovative partnership to share expert knowledge and deliver continuous improvement training is supporting the strong and sustainable growth of the solar industry in Colombia.

TECHNOELITE GREEN ENERGY SAS (TGE) is a Colombian company, dedicated to the development of renewable energy, the promotion of energy efficiency as well as the commercialization of energy. TECHNOELITE uses its expertise to promote new businesses, provide consultation on the development of clean energy generation, and improve industrial infrastructure and public services.

TECHNOELITE's vision for renewable energies, specifically the generation of electricity from solar, began in 2012 before the issuance of Law 1715 in 2014, which encourages the use of Non-Conventional Sources of Renewable Energy (NCRE) in Colombia. Thanks to the vision and experience of its partners, TECHNOELITE has paved the way for the development of the energy sector in Colombia and the Caribbean, through the development of photovoltaic solar projects and the improvement of the expertise of the people working in this field.

To ensure its team received the highest standard of training, TECHNOELITE introduced a triple helix model of innovation by working with industry (TGE), academia (ITSA) and the manufacturer FIMER to create a training program that improves the team's knowledge of the assembly of photovoltaic solar systems within the utility-scale segment.

The ITSA University Institution is a public higher education establishment that has two campuses, located one in Barranquilla - Colombia, and the other one in Soledad - Atlántico-Colombia, which implements training that uses technology to simulate real-life cases and

situations. This ensures that those participating in the training develop skills and solutions that can be applied to real scenarios.

> “We are at a stage, where the use of renewable sources is crucial for the generation of electricity. From the beginning of TECHNOELITE solar installations , the management observed that to carry out EPC's activities, it was necessary to strengthen the local talent, taking into account how new the country is in the development and installation of solar projects, especially utility-scale applications. For this reason, with the support of the ITSA and FIMER, we decided to establish educational courses to teach our students about all solar park components, and to learn and gain expertise in the installation of PV plants.”
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> Oswaldo Ballestas – Technoelite New Business Manager

The new initiative is an extension of the “Diploma for the Assembly and Installation of Photovoltaic Systems focused on Generation Parks" course, and consists of 100 hours, delivered by the ITSA University Institution, whose lecturers were trained by experts at TECHNOELITE. Students also participate in the creation of a photovoltaic laboratory, which was donated to ITSA by TGE, where they are able to simulate real-life situations in a PV installation. During the course, the students of the Mechatronics Engineering program at the ITSA University Institution - following TGE specifications – are able to develop, implement and install the support structures of the solar panels, benefiting from an important experience in this type of installation. In addition, as the structures are dismountable, students have the opportunity to carry out the installation, service and maintenance practices on a real scale.

The lab is located on the Soledad campus at the ITSA University Institution, and has the following equipment:

- 2 solar inverters TRIO-5.8-TL-OUTD
- 40 solar panels
- 2 converter boxes
- 2 PMU units
- 2 calibrated cell type irradiance sensors
- Protection and connection box AC
- Interconnection transformer

The TRIO-5.8-TL-OUTD three-phase inverters offer performance, ease of use, installation and monitoring. With a maximum efficiency of up to 98% and a wide input voltage range, the inverter is suitable for flexible installations and powerful output, making it perfectly suited to the laboratory project.

The first course was given in October 2017 and today, more than 130 students have been trained in total. The country’s reactions to this initiative are positive as companies in the sector have provided scholarships to promote skills in photovoltaic systems that are developed in the laboratory at the ITSA University Institution.

This project is part of TECHNOELITE's objective to strengthen the renewable energy sector, as well as support its own corporate social responsibility strategy. Likewise, the course is supporting the objectives of ITSA, which aims to promote its relationship with solar industry that also creates a social impact. The initiative also reflects FIMER's philosophy of achieving continuous improvement through innovation and training.

Thinking about your next installation project?
With our large portfolio of solar solutions, integrated digital services, and a reliable support network, you can count on us. To find out how FIMER can help you achieve even more with your installations, visit www.fimer.com to find your local sales representative.

Please note that this project was completed when the product portfolio was under the ABB brand.