

THE SMART MANAGEMENT SYSTEM FOR ENERGY DEVELOPED BY INDRA FOR SENA, IN COLOMBIA, RECEIVES THE NATIONAL ENERGY EFFICIENCY AWARD

- **This award, granted by ANDESCO (National Association of Public Services and Communications Companies), the Ministry of Mines and Energy, Findeter and UPME (Mine and Energy Planning Unit), recognizes commitment and good practices in the implementation and dissemination of projects promoting energy savings and sustainability**
- **SENA (National Training Service) will become the first public entity in Colombia to hold energy management system certification per ISO 50001, and its headquarters will become Smart Building pioneers, with annual savings in its annual energy bill of approximately 25%**
- **The system's implementation, based on IoT and Big Data, is one of the main initiatives of the ambitious digital transformation project that the global consulting and technology company is implementing for this Colombian entity**

Madrid, April 26, 2017.- The energy efficiency project developed by the National Training Service (SENA) of Colombia in collaboration with Indra has been granted the Energy Efficiency Prize in the category of Public Entities in Colombia, granted by ANDESCO (National Association of Public Services and Communications Companies), the Ministry of Mines and Energy, Findeter and UPME (Mine and Energy Planning Unit).

The global consulting and technology company has implemented and operates an energy management system in alignment with the ISO 50001 standard, fed by a Smart Energy platform. Its goal is the ongoing improvement of energy efficiency of processes by identifying viable technical solutions and defining recommendations and action plans to reduce energy, water and gas bills.

The system's implementation, based on IoT and Big Data, is one of the main initiatives of the ambitious digital transformation project that the global consulting and technology company is implementing for this Colombian entity.

The Smart Energy platform is based on FEEP IoT Sofia2 (<http://sofia2.com>), the solution by Minsait, Indra's digital transformation unit. It acts as a central "brain" that can monitor the various readings for energy, water and gas use across different SENA headquarters, as well as store data, generate charts and establish consumption forecasts by combining historical data extraction from the database with real-time data collection. All of this monitored data is used by the energy management system to move toward ISO 5001 certification.

According to an initial study implemented by the project managers with regards to 28 SENA headquarters, the savings could entail a reduction of approximately 25% of the energy bill, with a return on investment of 1.7 years when implementing measures that require a minor investment. Recommendations to achieve this include, for example, replacing central climate control systems with individual ones, substituting fluorescent light panels with LEDs, and automating the on/off controls, among other actions.

In the case of implementing measures that require little investment, savings could exceed 6% of the energy bill, with an immediate return on investment. These include, for example, improving use habits of lighting and air conditioning systems or establishing maintenance programs.

The report has been drafted on the basis of the pilot developed at three headquarters of the Colombian public entity, identified as representative of the whole (for their "thermal floors" or altitude, from 168 meters above

the level of the Valledupar sea, to the 2,640 meters of Bogota) and their extrapolation to another 25, using the energy bills of those 25 headquarters as the basis.

With this project, SENA will become the first public entity in Colombia to hold energy management system certification per ISO 50001, and its headquarters will become Smart Building pioneers. Likewise, the full initiative contemplates the progressive expansion of the pilot to new headquarters.

Now, this award recognizes commitment and good practices in the implementation and dissemination of projects promoting energy savings in the country's public and private companies. The Indra project for SENA has been awarded within the first category.

Broad experience in energy efficiency projects

Indra maintains a global strategy focused on developing new energy efficiency and sustainability technologies and solutions for areas encompassing generation, transmission, and distribution, as well as for industrial, residential and transport use. The company works on a number of new smart infrastructure projects (Smart Grids) that guarantee sustainable, secure and economical development, while it also works as an advisor to the Spanish Energy Committee in matters of Smart Grids. Its services include consulting and building certifications to Cloud/BPO services, as well as the installation of products for energy management in homes and buildings.

Likewise, it has become a benchmark in Spain for businesses and individuals to secure LEED certification for sustainable buildings. The company has achieved certification for 100% of buildings that have benefited from our consultancy services.

Furthermore, via Minsait, Indra's digital transformation unit, the company is also involved in developing Smart Building, Smart Home, Smart Store and Smart Industry 4.0 solutions based on new technological environments, such as Internet of Things (IoT) and Big Data, to provide buildings, homes, businesses and industry with monitoring systems and automated control.

About SENA

The National Training Service (Servicio Nacional de Aprendizaje, SENA) is a public institution with a nationwide presence, independent legal status and capital structure, and administrative autonomy. Affiliated with Colombia's Ministry of Labor, it offers free training to millions of Colombians who benefit from technical, technological and complementary programs designed to promote the economic, technological and social development of the country. Graduates of SENA programs join the production units of companies and industrial plants, improving their competitiveness and productivity in globalized markets.

About Indra

Indra is one of the main global consulting and technology companies and the technology partner for core business operations of its clients businesses throughout the world. It offers a comprehensive range of proprietary solutions and cutting edge services with a high added value in technology, which adds to a unique culture that is reliable, flexible and adaptable to its client's needs. Indra is a world leader in the development of comprehensive technological solutions in fields such as Defense & Security, Transport & Traffic, Energy & Industry, Telecommunications & Media, Financial Services and Public Administrations & Healthcare. Through its Minsait unit, it provides a response to the challenges of digital transformation. In 2016 it reported revenues of €2,709m, had a workforce of 34,000 professionals, a local presence in 46 countries, and sales operations in more than 140 countries.