

INDRA SOLUTIONS SUCCEED AT REDUCING THE ANNUAL COMMERCIAL ENERGY LOSSES OF A SINGLE UTILITY BY OVER 170 MILLION EUROS

- **According to a study conducted by the company based on its experience in projects of this sort, its solutions and services in this field have helped attain absolute annual reductions of nearly 5% with returns on investment shorter than one year**
- **Indra's advanced analytical systems are capable of detecting 70% of real fraud by inspecting only 10% of supplies with the highest likelihood of fraud**

Madrid, 14 December 2017.- Indra services and solutions for utilities (energy, water and gas) to reduce non-technical (or commercial) energy losses have helped attain absolute annual reductions of nearly 5%, resulting in figures that, depending on the company size, have even topped €170 million annually. Moreover the returns on the investments made in this process, including the implementation of solutions and commissioning of services or inspections, were less than one year.

These are some of the main conclusions of the study "*Technical and non-technical Energy Losses Control: making electricity more affordable and accessible while reducing costs*" conducted by the company based on the projects undertaken in over twenty utilities in Europe, Latin America and Africa. The report stresses that every project intended to guarantee revenue requires a specific focus, adapted to the needs of each company, where it is essential to define the characteristics and source of the losses and implement effective actions for the short-term reduction of losses to rapidly secure results and implement lasting policies in this regard.

"Commercial losses could tally up to 40% of the total energy losses and are normally associated with different factors such as illegal connections or tampering, difficulties in metering the real consumption or inefficiencies during internal order intake or contract closure, reading and billing processes at every company" said Juan Prieto, Energy Control and Modelling manager at Indra.

For this reason, Indra's offer includes services and tools for a reliable diagnosis of the causes of losses, customized recovery engagements designed on the basis of this diagnosis, and monitoring their impact to improve their application. This is the case of InGRID.ECL, a system comprising continuous monitoring and supervision of energy losses through the distribution grid and the impact of recovery plans; revenue assurance consulting services for accurately diagnosing the causes of losses and optimizing reduction plans; and, finally, predictive analysis systems, which estimate the risk of customer fraud and payment default through a combination of different data sources such as historical consumption, characterization of the supply and the enrichment of socio-demographic variables in the environment.

These systems make continuous and systematic energy balances throughout the grid, and, when combined with advanced analysis and viewing modules, enable permanent tracking of the distribution of losses and their dynamic figures over time; from high and medium voltages to customer levels, where they detect possible fraudulent uses based on consumption patterns.

Indra has tackled complex challenges such as the identification of fraud in rural environments of difficult access by combining advanced analytical services with satellite imaging technologies, drones or cadastral information to substantially improve accuracy in identifying direct power line coupling and fraud in these environments.

"Understanding the characteristics of the company's customer base and where fraud could potentially crop up is essential for keeping non-technical losses under control. In fact, we confirmed that we could detect 70% of the real fraud by narrowing down inspections to only 10% of the supplies with the greatest likelihood of fraud" explained Juan Prieto.

A profitable investment

The main factors influencing the success of projects of this sort include the company's baseline, success rate in ascertaining the causes of losses, effectiveness of actions established for loss reduction and the organization's maturity level. "We can reduce a loss level of 40% to 20% in three years, though starting with 10% and applying the same effort, three years might only reduce the figure to 8%. Our experience has proven that utilities with a specialized loss reduction unit are getting returns on their investment in only six months", indicated Juan Prieto.

Indra incorporates data into the study that demonstrate how, regardless of the size of the markets and price of the resources used to produce energy, the reduction of losses significantly affects profitability. As a general rule, when the cost of energy resources increases, the beneficial effects of reducing non-technical losses also increase because of the combined effect of increasing revenue while decreasing expenses. Based on its experience, the company has seen that a 5% improvement in losses entails an annual revenue increase of between €860 million and €4,300 million for an average market of 50 Terawatt/hour (50 TWh), depending on the energy price. Likewise, this same reduction in losses in a smaller market (7 TWh) entails a revenue increase of between €20 million and €60 million.

The correct combination of services and systems

According to the Indra study, the correct selection to take on the investment depends, above all, on the level of maturity of the reduction of energy losses and includes a combined involvement of software solutions and consulting services with a view to analyzing the underlying factors, identifying the most important ones and where they occur, establishing the process to focus on the causes of the most relevant effects in an economic context, and commencing implementation of the measures and subsequent tracking to quantify the results achieved.

Thus, for instance, a company undertaking a project of this nature for the first time might opt to use a cloud-based platform under a SaaS (Software as a Service) arrangement to limit the initial investment of capital in infrastructure and reduce the term yielding the initial economic returns. Another option would be to outsource processes (BPO) to execute a business analysis and study the fraud map across the grid before investing in a system and training for personnel.

Moreover, a utility with more extensive experience in revenue assurance policies might be more interested in integrating a business analysis tool into its commercial management system that can create a more adjusted loss map and track new fraud points. By the same token, companies with a low percentage of non-technical losses would benefit substantially from any fraud dissuasion tool, e.g., CCTV cameras, satellite images and facility inspections.

Indra's energy solutions have been deployed at over 140 electricity, water, oil and gas companies in more than 45 countries. Today, over 100 million customers worldwide are managed using the systems developed by the multinational consulting and technology firm.

About Indra

Indra is one of the world's top consulting and technology companies, the leader in IT in Spain, and the advanced technology partner for core business operations of its customers everywhere. 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 clients' needs. Indra is a world leader in the development of end-to-end technology solutions in fields such as Defense and Security; Transport and Traffic, Energy and Industry, Telecommunications and Media, Financial Services, Electoral Processes, and Public Administrations and Healthcare. Through its Minsait unit, it addresses the challenges



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of digital transformation. In 2016 Indra posted revenues of €2,709m and had a workforce of 34,000 professionals, a local presence in 46 countries, and sales operations in more than 140 countries. Following its acquisition of Tecnom, Indra's combined revenues amounted to more than €3,200m in 2016 with a team of nearly 40,000 professionals.