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**Press
Release**

INDRA DESIGNS THE NEW OPERATIONS MODEL FOR PERU'S ELECTRIC MARKET


- **It will perform a study for the Supervisory Body of Investments in Energy and Mines (OSINERGMIN) that will determine the necessary regulations for automating the Secondary Regulation service of the power that is generated and consumed in the nation**
- **The multinational has extensive experience in regulatory consulting projects, with key customers in countries such as Vietnam, the Philippines, Spain and the Central American region**

Indra has been awarded a new regulatory consulting project by the Supervisory Body of Investments in Energy and Mines (OSINERGMIN) to modernise the operating procedure of the Additional Secondary Regulation Service of the Power System by implementing an Automatic Generation Control (AGC) system. The project is funded by the Programme for the Efficient and Sustainable Management of Peru's Energy Resources (known as PROSEMER in Spanish), an agreement between the Government of Peru and the Inter-American Development Bank (IDB), and it includes defining the general regulatory framework for its launch as well as the alternatives for the future management of the demand that accompanies the Secondary Regulation.

The Secondary Regulation is the mechanism that works with the Primary Regulation and it guarantees that the frequency and net sum of the power exchanges in the electrical system maintain their established values in order to ensure stable and safe operations. In other words, it resolves imbalances derived from the operation of the Primary Regulation, which is responsible for compensating imbalances between the power that is generated and consumed.

The study that Indra is preparing will make it possible to define the steps that are required for evolving the current manual framework of the Secondary Regulation to an AGC programme, and to develop the necessary regulations for determining the full power reserve that is required, distributing this reserve amongst the various generation agents, monitoring the service in real time and processing its economic liquidation.

The launch of an Automatic Generation Control system is key for effectively addressing the plans that are being established in Peru in order to face the strong growth of energy



demands--with 8% annual increases--and to provide incentives for renewable production that does not require management, such as aeolian, photovoltaic solar and heat energy.

As a result of this study, Indra experts will propose a new operating procedure to OSINERGMIN, and it will be published so it may receive feedback and references from the Committee for the Economic Management of the System as well as market agents (generators, transport companies and distributors).

Another aspect that will be studied is the possibility of implementing in Peru a Voluntary Load Management Service to support the AGC. This support, which is usually paid, is provided by consumers, primarily major industrial customers, and it enables the Market Operator to disconnect them and send power limitation guidelines in order to reinforce the system's Secondary Regulation.

Extensive international experience in regulatory consulting

The contract has a high strategic value since it is an important regulatory consulting reference for Indra in the field of secondary regulation and competitive markets for power systems. In addition, the automation of these types of operating procedures in Latin America is usually found on an emerging development level and regulations are not very precise. The growth in demand and the progressive interconnection will require the revision and expansion of many existing procedures. The company is also consolidating its presence as a strategic partner of OSINERGMIN, with whom it also signed another major contract to design the Smart Grids implementation plan for Peru's electrical system.

Indra has extensive experience in carrying out regulatory consulting projects, especially in the areas of support for creating and altering energy markets, segregating activities, providing regulatory support to agents and operating organised markets. One of its most relevant references is the support systems plan for the operation of the Central America's Electrical Regional Market (MER in Spanish) that administers the international energy transactions derived from interconnecting the grids of Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama, as well as the Regional Transmission Grid with Mexico and Colombia.

It has also participated in a multi-nation project, funded by the Asian Development Bank, to prepare an energy trading agreement between the six largest countries of the Mekong region (Cambodia, Laos, Vietnam, China, Myanmar and Thailand). It has also completed two consulting projects in Vietnam to define the framework plan for the deregulation of the nation's energy sector as well as the horizontal disintegration of the public utility Electricity of Vietnam (EVN) into the three main business areas: generation, transport and distribution. Lastly, other relevant examples are the design of the regulatory framework for the Electric Market of the Philippines in order to facilitate the transition to a free market, and the adaptation of the Automatic Generation Control (AGC) system of the Spanish Power Grid (REE in Spanish) to the characteristics and norms of the regulatory model for the Shared Peninsular Grid.



OSINERGMIN is the public Peruvian body that is responsible for regulating and supervising companies in the electrical, hydrocarbon and mining sector to ensure they comply with the industry's regulatory framework. The institution's regulation and supervision efforts are guided by technical-financial criteria and contribute to the sustainable development of the nation's mining-energy sector.

Indra is one of the world's largest consultancy and technology multinationals, a leader in Europe and Latin America and is expanding in other emerging economies. Innovation is the cornerstone of its business, which is highly focused on customers, as well as of sustainability. The multinational is one of the top European companies in its sector in terms of R&D&i, with more than €550 million invested in the last three years. With sales approaching €3,000M, it employs 42,000 professionals and has customers in 128 countries.