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BRAZILIAN REGULATOR, ANATEL, AUTHORIZES NEOENERGIA TO OPERATE PIONEERING LTE NETWORK IN BRAZIL

In partnership with Nokia, the private LTE network will be operated by Neoenergia electricity distributor, Elektro, which is developing an Intelligent Electric Grid Network project in the countryside near São Paulo

The Brazilian National Telecommunications Agency (Anatel) has authorized Neoenergia distributor, Elektro, to operate a private LTE network in the 3.5GHz frequency. The network will be part of the Energy of the Future project to build a new smart grid in the region of Atibaia, in the countryside near São Paulo. This technology is being deployed in partnership with the industry leader Nokia. It will be the first private LTE broadband network in Brazil and the first for smart electric grids in Latin America.

4G/LTE technology will enable wireless communications for all devices on the smart grid in the cities of Atibaia, Bom Jesus dos Perdões, and Nazaré Paulista. It will support a total of 75,000 Elektro customers and will be fully operational by 2020. The breakthrough project, which began in January, 2018, will enable more conscious and efficient power consumption, provide an improved customer experience, improve supply quality, reduce losses and integrate distributed energy resources such as solar generation and battery storage, including electric vehicles.

The 4G LTE network is part of the group's strategy to bring smart grids to Neoenergia's 13.9 million customers in the coming years, developing the Distribution System Orchestrator (DSO) model, in which the distributor performs complete energy management of the electrical system. Telecommunications technology will ensure the necessary reliability of the communications crucial for smart grid operations.

“Elektro’s private LTE project was planned to maintain stable, resilient and secure communications with devices on Elektro's distribution network,” said **Aguinaldo Luiz Sousa**, Account Manager at Nokia.



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The technology will connect network automation equipment, smart meters, substations, sensors and data concentrators throughout the service area, enabling automation through real-time information exchange between devices and Elektro's Operations Center in Campinas, São Paulo. LTE will be the connectivity element that will enable real-time reading of data while maintaining the necessary security and reliability.

“The Energy of the Future project is a milestone in the development of smart grids in Brazil. The use of the cellular network for smart grid operation shows our group's pioneering spirit and commitment to delivering more quality to our customers”, said **Frederico Candian**, Director of Processes and Technology at Neoenergia. The 4G LTE network will be 100 percent operational by the end of January, 2020, with an investment of approximately 10 million Reais.

LTE, also known as 4G, is the fourth generation of mobile network technology currently used by many smartphones. “This technology is made up of two basic elements. One is the network and data management core, and the other is the radio access system, made up of base stations (eNodeB) and antennas that connect devices that have a network SIM card”, explains Sousa.

The intelligent network automation system relies on extremely robust and reliable communication. “That's why Elektro is building its private LTE network in partnership with Nokia. It is fundamental to have safe operations of the power grid at critical times and reliability for rapid recovery in the event of a power outage”, said Candian.

“Nokia's main role is to connect all the elements of the project into a single system, 4G/LTE, as well as ensuring the evolution of the network to 5G in the near future”, said Sousa. Nokia has over 120 private LTE customers worldwide in different industries. In Brazil, Nokia's focus with this technology is agribusiness, mining and the electricity sector.



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The new technologies used in the Energy of the Future project also support Internet of Things (IoT). The network will provide open and interoperable connectivity for sensors and other devices with all connected elements working to provide better quality services to the population — part of the evolution to smart cities.

About Neoenergia

Controlled by the Spanish group Iberdrola, Neoenergia has been operating since 1997 in Brazil. Since then, it has expanded its activities and today has energy distribution, generation, transmission and trading assets in 18 states. It brings together the distributors Coelba (BA), Celpe (PE), Cosern (RN) and Elektro (SP). The four companies serve 13.9 million customers, corresponding to about 34 million people - making Neoenergia the second largest group in Brazil by number of consumers.

About Nokia

We create the technology to connect the world. We develop and deliver the industry's only end-to-end portfolio of network equipment, software, services and licensing that is available globally. Our customers include communications service providers whose combined networks support 6.1 billion subscriptions, as well as enterprises in the private and public sector that use our network portfolio to increase productivity and enrich lives.

Through our research teams, including the world-renowned Nokia Bell Labs, we are leading the world to adopt end-to-end 5G networks that are faster, more secure and capable of revolutionizing lives, economies and societies. Nokia adheres to the highest ethical business standards as we create technology with social purpose, quality and integrity. www.nokia.com

