

R+D in the energy sector

## Red Eléctrica and Elewit seek innovative designs for high voltage power line towers

- They are launching a technological innovation challenge to find innovative solutions to continue to drive the evolution and modernisation of these infrastructures.
- The call is available for the whole ecosystem and will remain open until 19 April.

**Madrid, 13 January 2022.-** Red Eléctrica de España, operator and transporter of the electricity system, and Elewit, the Group's technology platform, are jointly launching a technological innovation challenge to find new designs for high-voltage power line towers (also known as pylons). This call will remain open until April 19 for start-ups, technology centres, researchers and engineering and architecture professionals.

“We are launching this challenge in order to continue promoting the ongoing evolution and modernisation of infrastructures. It represents a step forward in Red Eléctrica Group’s commitment to ensure that its facilities weave living networks and generate a positive impact on the communities in which they provide an essential service”, stated Silvia Bruno, Director of Elewit.

Spain’s electricity transmission grid now has more than 44,500 km of high-voltage line circuits that are spread all around the country. To date, the construction of the assets that make up the grid has taken on designs based on the use of metal lattice towers on which the electrical conductors are supported.

“We are looking to make the most of all the potential offered by new technologies and the evolution of materials in order to find innovative solutions with which to continue promoting the sustainability of these infrastructures, which are key to making ecological transition possible in Spain”, added María Soler, Engineering and Construction Director at Red Eléctrica de España.

Specifically, the challenge is to find solutions that, among other aspects, use recyclable materials and contribute to reducing the carbon footprint associated with their manufacture, installation, maintenance and dismantling at the end of their useful life. Similarly, the proposals should focus on reinforcing the safety of professionals working at the facilities and should also consider ways to improve their integration into the landscape.

### Originality and sustainability

The proposals submitted must offer designs applicable to one or more of the voltages contemplated (400, 220, 132 and 66 kV) and must comply with the necessary mechanical and electrical requirements established in current regulations. Likewise, they must prove the viability of their installation in areas with different landscape and orographic characteristics.

Along with the designs’ innovative and original features, merit will be given to new solutions that contribute to reducing the space required for their installation and that are able to introduce more efficiencies in their manufacture and installation.

The rules of the challenge can be consulted at [www.elewit.ventures/es/vc-startups/retos](http://www.elewit.ventures/es/vc-startups/retos)

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## Challenges to drive ecological transition and connectivity

Elewit develops and launches technological innovation challenges in order to promote the swift introduction of cutting-edge technology and processes within the Red Eléctrica Group, to help them face present and future challenges in the sectors in which it is a benchmark, namely energy and telecommunications.

Elewit also recently launched two calls for proposals together with K-Node, an open innovation initiative of the Universidad Autónoma de Madrid, aimed at its teaching and research staff. Specifically, the first of them focused on the search for alternative methods for measuring electrical magnitudes, and the second on the single-phase connection of a power voltage transformer to a high-voltage line. The winning teams will be notified shortly and will work on a proof of concept to validate their proposed solution.

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**Es la plataforma tecnológica del Grupo Red Eléctrica. Nacemos en 2019 con el propósito de ofrecer soluciones a los nuevos desafíos de los sectores de la electricidad y las telecomunicaciones. Con una meta: impulsar la transición energética y la conectividad para crear un futuro sostenible.**

**Para ello, Elewit focaliza su actividad en torno a las siguientes áreas de impacto: ciudadano en el centro; transmisión y accesibilidad de la información; energías renovables y flexibilidad en la operación del sistema eléctrico; electrificación de la sociedad; desarrollo y gestión inteligente de activos; y ciberseguridad como área transversal.**

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