



# WORLD FIRST DRONE AIRSHIP FLIGHT FOR AUTOMATIC POWER LINE INSPECTION

News / Business aviation



RTE, Réseau de Transport d'Electricité, and its industrial partner CNIM Air Space experimented this fall with the very first diridrone flight to monitor the condition of power lines using sensors on board the airship. This new tool enables RTE to inspect power lines with precision, without de-energizing the lines and therefore without risk of power cuts. After a first experimental flight in October and the analysis of the images collected by the drone, RTE will continue its development work from 2021 with the integration of diridrone in its network monitoring processes.

The very first flight test of the Diridrone in real conditions took place on October 15 and 16, 2020 between the municipalities of Mauriac and Soursac. Its objective is simple: to monitor the condition of live power lines using sensors on board the airship and to facilitate maintenance of the power grid over great distances.



After a first phase of testing at a training site, the diridrone was able to fly successfully in real conditions over live lines! This flight made it possible to test:

- its operational implementation,
- its capacity to acquire data with a payload of 10kg fixed under the airship and composed of a double photo sensor slaved to the position of the cables.

#### *Long-distance flights: search for innovation and performance*

Each year, RTE teams use 7 helicopters to cover the entire overhead electricity network. As part of preventive maintenance activities, automatic long-distance drone flight is therefore a challenge for the future. Also, through projects such as diridrone, RTE's ambition is to modernize and automate aerial surveillance resources.

#### *An innovative industrial and technological solution*

This concentrate of innovation, both in its form and in its ergonomics, has been specially designed since 2017 with our industrial partner CNIM Air Space, who then designed it in its entirety. Work carried out in close collaboration with the Directorate of Civil Aviation (DGAC) so that the diridrone can be integrated as a user of airspace, while respecting the regulations in force. The diridrone will be able to collect data on the network which will allow: the modeling of our structures and their environment in 3D; automatic detection of hardware anomalies; monitoring the development of our assets.



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