

**6 MARCH 2018**

## Elia tests first drone for long-distance flight

- On 6 March 2018, a Delair fixed-wing drone successfully completed a demonstration flight along a 70kV high-voltage line in Sint-Truiden. The unmanned aerial vehicle took off from Droneport, an incubator for drones, and completed a 10 km flight lasting 30 minutes.
- The system operator wants to deploy drones to inspect Belgium's high-voltage grid, which comprises more than 5,700 km of high-voltage overhead lines. Drones can help to perform daily visual checks and assess for damage in the event of power outages.
- At the moment, only drone flights within the field of vision are permitted. The aim of this test flight was to demonstrate that long-distance flights can be conducted safely.

### Drones for inspecting Belgium's high-voltage grid

Deploying drones as 'eyes in the sky' has a number of key advantages: the current running through the high-voltage line does not need to be switched off, the inspection takes less time, and the inspector remains safe on the ground. After an incident, such as a storm, Elia can more quickly ascertain whether any damage has been caused.

Elia has already conducted tests deploying multicopter drones for local inspection flights. Now it is the turn of long-distance flights involving fixed-wing drones. Elia's current policy on inspections provides for regular checks on foot, by car or by helicopter. This way the grid operator verifies whether pylons and electrical equipment are still in an acceptable state or condition and if the distance to vegetation remains sufficient. Elia is busily preparing for the structural deployment of drones. To this end, four pilots have already been trained internally, and four more Elia employees have started training as pilots.

Belgium has had a legal framework in place since May 2016 that permits the deployment of drones. However, flights remain limited to staying within the pilot's field of vision. In other European countries, such as France, drones may already carry out long-distance flights. The European framework is currently being developed and the public consultation procedure is ongoing. Elia is looking forward to a speedy development of the Belgian legal framework for long-distance flights. This test flight already marks a step in the right direction.

### Results of demo flight to help define legal framework

This first long-distance demo flight proves that this type of drone is both reliable and safe. The organisation was taken care of by the French drone company Delair. The full results of the test flight will be submitted to FPS Mobility's Directorate-General for Aviation (DGTA/DGLV) which can use the data to help devise the legal framework.

*"Delair is one of the world's most experienced providers of industrial drone solutions, with a track record of successful long distance drone operations while controlling our drones via a 3G cellular network,"* explains Peter Cosyn from Delair. *"We are delighted to perform this test flight with Elia, confirming that renowned enterprises are committed to adopt drone solutions to improve business efficiencies through aerial-based data collection and analysis."*

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Peter Dedrij, Droneport: "Droneport is the platform for testing and demonstrating new drone applications. This long-distance flight is certainly an important step in this connection".

Michiel Uwaerts, Elia's Drones Project Leader: "Our job is to manage and maintain the Belgian high-voltage grid as effectively as possible to keep it in excellent condition. New technologies like drones can certainly help to do this even more safely and efficiently, which can only be good for ensuring the grid's reliability".

### Characteristics of the drone used for long-distance flights

#### Drone Delair DT18:

Maximum flight duration = 120 mins

Weight = 2 kg

Wingspan = 1.8 m

Maximum range = 100 km

#### Drone Delair DT26X:

Maximum flight duration = 135 mins

Weight = 18 kg

Wingspan = 3.3 m

Maximum distance = 150 km

### The two tested drones





A fixed wing drone carrying out an inspection flight



# About the Elia Group

## ONE OF EUROPE'S TOP FIVE PLAYERS

The Elia Group is active in electricity transmission. We ensure that generation and consumption are balanced at all times, supplying 30 million end users with electricity. With subsidiaries in Belgium (Elia) and north-east Germany (50Hertz), we operate 18,600 km of high-voltage connections. As such, our group is one of Europe's top 5. With a reliability level of 99.999%, we give society a robust power grid, which is important for socio-economic prosperity. We also aspire to be a catalyst for a successful energy transition towards a reliable, sustainable and affordable energy system.

## WE MAKE THE ENERGY TRANSITION HAPPEN

By expanding international high-voltage connections and integrating ever-increasing amounts of renewable energy generation, the Elia Group promotes both the integration of the European energy market and the decarbonisation of our society. At the same time, the Elia Group is innovating its operational systems and developing market products so that new technologies and market parties can access our grid, thus making the energy transition happen.

### Headquarters

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## IN THE INTEREST OF SOCIETY

As a key player in the energy system, the Elia Group is committed to working in the interest of society. We respond to the rapidly changing energy mix, i.e. the increase in renewable energy, and constantly adapt our transmission grid. We also ensure that investments are made on time and within budget, with a maximum focus on safety. When we carry out our projects, we manage stakeholders proactively by establishing two-way communication with all affected parties very early on in the development process. We also offer our expertise to our sector and relevant authorities to build the energy system of the future.

## INTERNATIONAL FOCUS

In addition to its activities as a transmission system operator, the Elia Group provides various consulting services to international customers through its subsidiary Elia Grid International (EGI). Elia is also part of the Nemo Link consortium that is building the first subsea electrical interconnector between Belgium and the UK.

The Group operates under the legal entity Elia System Operator, a listed company whose core shareholder is the municipal holding company Publi-T.

[www.elia.be/www.eliagroup.eu](http://www.elia.be/www.eliagroup.eu)

