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PowerMarket wins the second edition of the Open Innovation Challenge

- The British start-up PowerMarket will receive €20,000 to carry out a proof of concept in collaboration with the Elia Group.
- Elia and PowerMarket will spend three months testing the concept to demonstrate the effectiveness of this innovative solution for forecasting solar generation.

The start-up PowerMarket has won the second edition of the Open Innovation Challenge organised by the Elia Group. The Group aims to use this international start-up competition to develop innovative solutions to improve the quality of its consumption and generation forecasts. PowerMarket convinced the jury with its solution that automatically detects solar panels and thus more accurately maps the solar energy predictions.

PowerMarket was chosen from among the five finalists. Its solution can be used to better estimate power generation from solar panels. By using both satellite images and artificial intelligence, PowerMarket can very accurately identify the exact location of solar panels and their installed capacities. These valuable data can then be combined with meteorological data to estimate solar energy for every hour and every day of the year. Accurate forecasting reduces the need to activate reserves and, as a result, prevents activation costs.

135 entries from 38 countries

Selected from among 135 contenders, PowerMarket will receive €20,000 to carry out a proof of concept in collaboration with Elia. The start-ups Watt-IS and Adaptix by Sensewaves came second and third respectively and will receive tickets for the European Utility Week, which will be held in Vienna in November and will be attended by the major energy players, with the central theme being the rapid transition to a clean energy system.

Rising to the challenges of the energy transition

The Open Innovation Challenge is open to start-ups from across the world and gives them a chance to present their solution for coping with one of the many challenges of the energy transition. By holding this competition, which aims to develop solutions for improving electricity generation and consumption forecasts, the Elia Group is trying to accelerate innovation by creating synergies with start-ups or SMEs.

As an electricity transmission system operator, the Elia Group is responsible for keeping the electricity system balanced at all times. This requires accurate forecasts on expected generation and consumption for the coming minutes, days, weeks and even years. When Elia anticipates a shortage or surplus of energy, it has to restore the balance to avoid damaging the grid and the assets connected to it.

The development of new generation units that are increasingly dependent on weather conditions, and the changing consumption habits of grid users (e.g. solar panels, heat pumps and electric vehicles) make forecasting extremely complicated. In Belgium, Elia estimates that the installed capacity of solar power could rise from 3.3 GW to 18 GW by 2040. Thanks to this British start-up's solution, Elia will be able to build and keep up to date its own database of photovoltaic facilities.

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The concept tests will focus on identifying the photovoltaic facilities in a Belgian city. With Elia's help, PowerMarket will compare the new solar generation data and forecasts with current models. If successful, PowerMarket's solution could be extended to the whole of Belgium and the region covered by 50Hertz in Germany.

Follow-up on the collaboration with Gilytics, the 2017 winner

Last year, this challenge was dedicated to Elia's new approach to public acceptance, which focuses on local collaboration and innovation with external partners. The Swiss start-up Gilytics won this first edition with its 3D-visualisation system that can be used at both the planning and the permit application stages. Representing high-voltage infrastructure in a virtual but realistic environment enables engineers and stakeholders to have a better idea of the future result. Having proven the effectiveness of its solution, the approach will now be extended to lines of future projects.



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 around the clock, supplying 30 million end users with electricity. With subsidiaries in Belgium (Elia) and north-west 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. The Elia Group is also 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.

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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

