Keizerslaan 20
Boulevard de l'Empereur 20
B-1000 Brussels

T +32 (0)2 546 70 11
F +32 (0)2 546 70 10
www.elia.be

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# Elia launches 2nd Open Innovation Challenge for start-ups to improve forecasting of electricity production and consumption

For further information, please contact:

**Media**

**Kathleen Iwens (NL/E)**
+32 (0)478 66 45 55
Kathleen.iwens@elia.be

**Jean Fassiaux (FR)**
+32 (0)474 46 87 82
Jean.fassiaux@elia.be

**Elia's 2nd Open innovation challenge calls for ideas from cross sector start-ups across the world to improve its forecasting. The startup contest is one of the means for Elia Group to accelerate innovation, by creating synergies with startups or small agile businesses. It will help the Belgian grid operator and the German operator 50Hertz to better face the challenges of the energy transition that is drastically changing the energy landscape.**

## Improved forecasting to better face the energy transition.

Improved forecasting and having a clear view on the evolution of consumption and production is one of the corner stones of system operation. Every second, production and consumption must be fully in balance. Improved forecasting directly impacts for example decisions on grid investments and sizing of grid tariffs, the maintenance management of lines and substations, prevention of grid congestions and the sizing of the so-called "ancillary services" (balancing reserves).

## Which start-ups can participate?

A wide range of start-ups can apply to the competition, such as:

- Start-ups who can influence the behaviour of grid users
- Start-ups that use big data, blockchain or artificial intelligence to construct better forecasting models
- Start-ups who can communicate with grid users, to better forecast their consumption. (eg knowing when families go on holiday)
- Start-ups that help make renewable energy sources controllable.

*"We need the very best unconventional or even counterintuitive ideas for improving the forecasting of the consumption and the production of electricity. The selected start-ups will get the opportunity to work on a joint project together with Elia. They will contribute to the stability of the network and support the energy transition for the benefit of society." Filip Carton, Head of the National Control Centre of Elia*

## Close mentoring by Elia experts

The Elia Open Innovation Challenge is being launched via a dynamic online interface (Agorize) with access to more than 5 million innovators worldwide. Candidates can send in their projects via a dedicated online platform until

the 25th of March (www.innovationchallenge.elia.be). During the selection process and later for mentoring the candidate start-ups, teams of Elia experts will be closely involved.

The five finalists will be known on May 15th with the final pitch event to take place on June 21st in Brussels. The winning finalist will receive a €20.000 prize to bring, in collaboration with Elia, the idea out of the lab and into a solution that will benefit the whole society.

**Why forecasting becomes more challenging**

**Production: impact of weather and large number of small assets**

Conventional assets like nuclear, gas, or coal power plants are gradually being replaced by intermittent renewable assets like onshore & offshore windmills or solar panels.

The forecast of conventional production is built from financial calculations and can be estimated based on a number of parameters.

Renewable assets however produce when the wind blows or the sun shines. Weather forecasts have a huge impact on generation: think about the impact of icing of windmill's blades, snow on solar panels and storm on offshore wind parks.

Also, the number of generation owners is booming which makes communication much more complex. We move to a world where large assets owned by a few number of people are being replaced by small scale assets owned by a huge number of people.

**New patterns of electricity consumption**

Consumption forecast has always been complicated. But the grid user of tomorrow will be a "prosumer", adding a lot of complexity to the forecast. In the past the distinction between generation and consumption was clear; today with the development of solar cells, home batteries, etc, this is no longer true.

The latest technological developments make electrification possible in high energy consumption sectors such as transport (electric vehicles) and heat & cooling (heat-pumps). This, coupled with more digitalisation and access to intelligence, will empower the consumer and will change the patterns of electricity consumption.

Elia is committed to make the energy transition happen, and to contribute delivering clean, competitive and secure electricity to society.

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**About Elia**

The Elia Group comprises two electricity transmission system operators (TSOs): Elia Transmission in Belgium and (in cooperation with Industry Funds Management IFM) 50Hertz Transmission, which is one of Germany's four TSOs and is active in the north and east of the country.

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With more than 2,300 employees and a grid comprising around 18,300 km of high-voltage connections serving 30 million end users, the Elia Group is one of Europe's top five system operators.

It efficiently, reliably and securely transmits electricity from generators to distribution system operators and major industrial consumers, while also importing and exporting electricity from and to neighbouring countries. The Group is a driving force behind the development of the European electricity market and the integration of energy generated from renewable sources.

In addition to its transmission system operator activities in Belgium and Germany, the Elia Group offers businesses an extensive range of consultancy and engineering services via Elia GridInternational (EGI).

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