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Elia Group publishes white paper on a consumer-centric and sustainable electricity system, calling for collaboration and inviting allies to its first hackathon

- White paper on a Consumer-Centric Market Design (CCMD) published as starting point for discussions about unleashing competition ‘behind the meter’ and encouraging the development of consumer-oriented services
- Elia Group is aiming to foster dialogue between all market parties, and is hosting its first hackathon which will focus on the development of consumer-centric services this October - interested parties are being invited to register to take part now

BRUSSELS – BERLIN | “Towards a Consumer-Centric and Sustainable Electricity System” outlines Elia Group’s proposed market design for unleashing competition behind the meter. Digitalisation and the adoption of electric vehicles and heat pumps are opening the door to new ways for consumers to interact with the electricity system. The flexibility of these appliances could play an important role in maintaining the balance in an energy system that encompasses a high amount of intermittent renewables and a decreasing amount of thermal generation.



Through the publication of its white paper, Elia Group aims to open up discussions and foster collaboration between stakeholders from across the energy value chain and wider society. As part of this, the Group is hosting its first hackathon in October - everyone from tech-savvy stakeholders, students and start-ups is being invited to take part in the three-day event. See below for more information about how to register for the event.

“A consumer-centric market design will offer the energy sector an incredible opportunity. It will allow the efficient integration of more renewable energy, will allow consumers to reap the benefits of their investments in flexible assets such as electric vehicles and heat pumps, and will support the decarbonisation of society. Elia Group is keen to collaborate with partners from across the energy value chain and society on the development of consumer-centric services”.

Chris Peeters, Elia Group CEO

Breaking down barriers to better services

The integration of intermittent renewables and the electrification of society are crucial for enabling Europe's transition to a net-zero society. However, both of these bring new challenges to the electricity system, since generation and consumption should always be in balance.

The inherent flexibility of electric vehicles (EVs) and heat pumps, alongside digital technologies such as cloud computing, the Internet of Things, and digital meters (which distribution system operators have already started rolling out), mean that these assets could be charged by consumers at times when there is a high amount of renewables in the grid. In this way, consumers would be contributing to maintaining the balance of the grid, which is known as demand side response (DSR).

However, as highlighted by Elia Group's white paper, the large-scale participation of retail demand side flexibility is not yet underway. For example, end consumers cannot easily sell excess photovoltaic (PV) production when going on holiday. Moreover, they cannot charge their EV at a friend's house while still being invoiced by their own supplier.

Elia Group's Consumer-Centric Market Design includes proposals for addressing these points, meaning that existing and new suppliers will be able to provide better services to their customers. Moreover, customers will be given more control over the energy they use and how much it costs, capitalising on moments when there are high amounts of renewables in the grid.

If a consumer-centric market is established, end consumers will be able to decide which electricity sources they want to buy their electricity from; choose different energy services for different appliances in their homes; charge their electric vehicles anywhere they want, whilst making sure they are billed for the service; and sell any excess energy they produce via their solar panels.

"Germany wants to become climate-neutral by 2045. We need to speed up the growth of renewables, the expansion of the electricity grid and the necessary approval processes related to grid infrastructure. We also need to speed up the development of flexibility options in the electromobility and heating sectors. Our vision paper on a Consumer-Centric Market Design is intended to support this."

Stefan Kapferer, 50Hertz CEO

Our vision

The CCMD proposes two changes to the current market design which would help to unleash the flexibility held in assets like EVs and unlock better services for consumers. Firstly, an 'Exchange of Energy Blocks' hub is proposed; this would allow energy to be exchanged between consumers and other market parties on a fifteen-minute basis. Secondly, the CCMD proposes that a real-time price reference be shared with consumers. The price of electricity

changes according to factors like the time of day, weather, and demand for electricity. This real-time price reference will enable consumers to use electricity when it's cheapest for them and most convenient for the system.

Several years ago, Elia Group's Belgian subsidiary (Elia) was at the forefront of the introduction of a market design for industrial demand side response. Elia Group believes that the CCMD can be just as successful as the latter was if stakeholders from across the energy sector work together to implement it. Indeed, the Group will be engaging with a wide range of partners throughout 2021 to rethink the current market design and discuss the proposed CCMD.

Hackathon in October 2021

This October, Elia Group will be hosting its first hackathon, which will focus on the development and testing of consumer-centric energy services that could be enabled if the two main elements of the proposed CCMD (the Exchange of Energy Blocks hub and real-time price reference) are implemented. Elia Group is keen to ensure all interested parties are involved in the development of these services; consequently, everyone from tech-savvy stakeholders, students and start-ups is being invited to take part in the hackathon, which will run from 13 to 15 October this year. If you are interested in taking part in the hackathon, you can register to participate [here](#).

The CCMD [white paper](#) and shorter [vision note](#) are now available online.

About Elia Group

One of Europe's top five TSOs

Elia Group is a key player in electricity transmission. We ensure that production and consumption are balanced around the clock, supplying 30 million end users with electricity. Through our subsidiaries in Belgium (Elia) and north and east Germany (50Hertz), we operate 19,276 km of high-voltage connections, meaning that we are one of Europe's top 5 transmission system operators. With a reliability level of 99.99%, we provide society with a robust power grid, which is important for socioeconomic prosperity. We also aspire to be a catalyst for a successful energy transition, helping to establish a reliable, sustainable and affordable energy system.

We are making the energy transition happen

By expanding international high-voltage connections and incorporating ever-increasing amounts of renewable energy into our grid, we are promoting both the integration of the European energy market and the decarbonisation of society. We also continuously optimise our operational systems and develop new market products so that new technologies and market parties can access our grid, thus further facilitating the energy transition.

In the interest of society

As a key player in the energy system, Elia Group is committed to working in the interest of society. We are responding to the rapid increase in renewable energy by constantly adapting our transmission grid. We also ensure that investments are made on time and within budget, with a maximum focus on safety. In carrying out our projects, we manage stakeholders proactively by establishing two-way communication channels between all relevant parties very early on in the development process. We also offer our expertise to different players across the sector in order to build the energy system of the future.

International focus

In addition to our activities as a transmission system operator, we provide various consulting services to international customers through our third subsidiary, Elia Grid International (EGI). Elia (in Belgium) is also part of the Nemo Link consortium, which operates the first subsea electrical interconnector between Belgium and the UK.

The legal entity Elia Group is a listed company whose core shareholder is the municipal holding company Publi-T.

MORE INFORMATION: eliagroup.eu



For further information, please contact:

Corporate Communication

Marleen Vanhecke (English) | **M** +32 486 49 01 09 | marleen.vanhecke@elia.be

Marie-Laure Vanwanseele (Dutch) | **M** +32 499 51 58 | marielaure.vanwanseele@elia.be

Jean Fassiaux (French) | **M** +32 474 46 87 82 | jean.fassiaux@elia.be