



## Elia Group's study, 'The Power of Flex', explores how widespread consumer-side flexibility can deliver benefits for both consumers and the electricity system

### IN SHORT

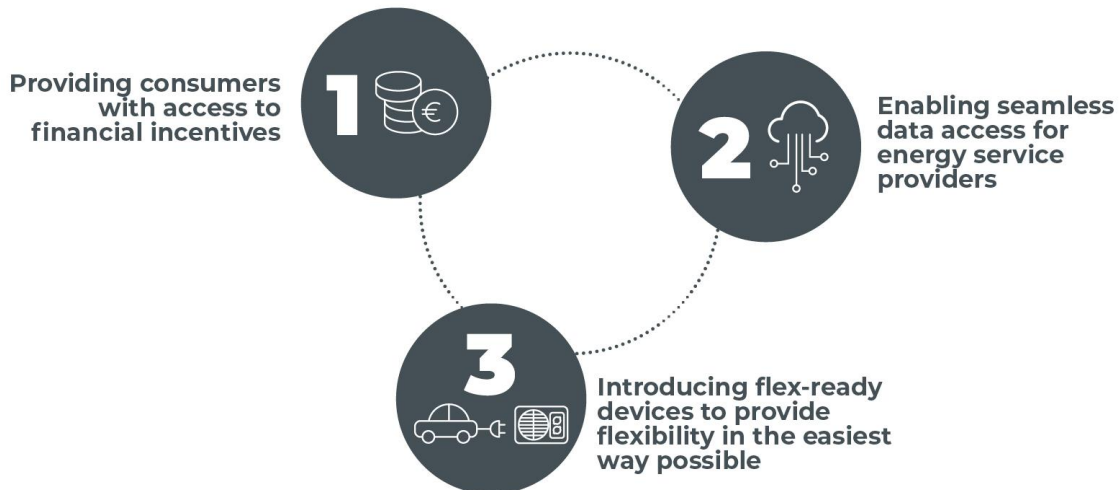
- Increasing electrification in industry, mobility and heating carries important implications for the electricity system. Charging all of these millions of electric devices at the same time would put the stability of our electricity grid at risk and would be highly inefficient.
- To avoid such an inefficient management of the system, unlocking consumer-side flexibility is essential. Residential and industrial customers who own electrical devices will be able to avoid expensive price peaks by consuming energy at times when green electricity is more abundant. This approach will level out consumption peaks and help to handle fluctuations in the supply of renewable energy.
- In our latest study, Elia Group identifies three main actions to unlock consumer-side flexibility: (1) providing consumers with access to financial incentives; (2) enabling seamless data access for energy service providers; and (3) introducing flex-ready devices.

**BRUSSELS - BERLIN | Elia Group has published a new study on an alternative approach to consuming electricity that benefits both consumers and the electricity system. As the mobility and heating sectors increasingly rely on electricity, and industry electrifies its processes, consuming electricity when it is least expensive will start to become possible. For example, charging an electric car at night, when the wind is blowing, can be much cheaper than during more expensive evening peak hours. By aligning consumption patterns with (renewable) production patterns, the electricity grid is used more efficiently, resulting in a reduced need for investments in new capacity to handle moments of peak consumption. Elia Group has once again chosen to give this topic centre stage due to the numerous advantages consumer-side flexibility can deliver.**

### **Collaboration with the actors from across the energy sector will be crucial**

We will know that barriers to consumer participation in the energy system are being successfully removed when end user flexibility becomes increasingly accessible and rising numbers of consumers provide it for the system. Collaboration with the entire energy sector will be crucial, given the complexity of and the pressing need to manage the influx of millions new electrical devices.

In our latest study, we identify three main actions to unlock consumer-side flexibility:



## **1** PROVIDING CONSUMERS WITH ACCESS TO FINANCIAL INCENTIVES

We do not expect every consumer to become a flexibility expert, but flexible consumption should be integrated into everyday practices. Any owner of flexible assets will be able to participate. It is expected that many of them will access the energy market through energy service providers (ESPs).

**To kick-start consumer-side flexibility, it is essential for current market participants to collaborate on shaping a market design that encourages innovative business models and facilitates the integration of flexibility into the broader energy landscape. For this to happen, direct access to the wholesale market is required.**

### How?

- ▶ Transmission system operators (TSOs) and distribution system operators (DSOs) should investigate dynamic grid fees to enhance the value of flexibility, rather than hindering it.
- ▶ DSOs and metering point operators (MPOs) could consider prioritising the provision of smart meters to residential consumers with flexible assets. The deployment of smart meters is essential for unlocking and capitalising on residential flexibility.
- ▶ Suppliers should offer consumers time-based energy pricing which mirrors wholesale prices so that consumers are empowered to actively manage their energy consumption. Transparent, monthly energy bills are key to boosting consumer awareness and engagement.
- ▶ Independent neutral parties, such as DSOs, TSOs, associations and governmental agencies, should inform households, industry and small and medium enterprises (SMEs) about their flexibility potential so that they can better evaluate their investment decisions. Revised regulations should support flexibility incentives for industry.energy



## ENABLING SEAMLESS DATA ACCESS FOR ENERGY SERVICE PROVIDERS (ESPs)

There is an urgent need for European Member States to start coordinating their work on enabling easy access to data and the sharing of this data at the smart meter level. Additionally, there is a need to start coordinating their work on access to data and the sharing of energy-related data from different types of behind-the-meter devices such as batteries, EVs, charging points, etc. It is important to take the services that these could offer - including flexibility services and smart charging services - into account.

**Creating a secure data exchange ecosystem with well-defined access rights that supports near real-time data exchange is crucial. It will allow commercial parties to deliver services to consumers and enable system operators to efficiently manage the grid.**

### How?

- ▶ Member States should implement existing EU regulations concerning data access, sharing and management, at both smart meter and behind-the-meter levels.
- ▶ System operators can take the lead in building a secure data infrastructure ecosystem. To ensure that data will be shared and promote communication among diverse market participants and across different sectors, having a standardised approach to data access is crucial.



## INTRODUCING FLEX-READY DEVICES

Electrical assets like EVs, batteries and heat pumps will have to meet a minimum number of requirements in order to be able to provide flexibility. These include the ability to change their load based on external signals, have communication interfaces that allow third party access, compatibility with other devices, etc. Providing flexibility should be a plug-and-play solution.

**Today, there are no official requirements regarding what it means for an asset to be smart and steerable. Elia Group supports work that is focused on standardisation and is ready to shape a flex-ready label with manufacturers and other system operators. The goal is to come up with a label that could be applied to every asset that is able to react to external pricing or steering signals and can change its load or production.**

### How?

- ▶ EU policymakers should create a Europe-wide flex-ready label that gives consumers full transparency about the capabilities of the electric devices they are buying. Requirements should focus on an asset's ability to modulate, on an assets' metering and on its communication interface.
- ▶ The European Commission should actively endorse and ensure that dominant communication standards are both future proof and interoperable. While standardisation efforts are primarily led by industry, the European Commission has an important role to play in preventing manufacturers from establishing closed ecosystems.

*"We are convinced that a plug-and-play approach to flexibility is essential for reaping the full benefits. The proposed actions will deliver more innovation and competition to the energy sector. It will enable a new ecosystem to flourish in which new and existing service providers will offer solutions that benefit both consumers and the electricity system. If we don't properly manage this rise in electrification, we will encounter challenge after challenge. It is therefore becoming urgent to focus on the barriers that are hindering the implementation of consumer-side flexibility."*

**Catherine Vandendorre, Interim CEO Elia Group**



The study is available on Elia's website and can also be downloaded via the following link:

[https://elia.group/ThePowerOfFlex\\_Study](https://elia.group/ThePowerOfFlex_Study)

## 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 the north and east of Germany (50Hertz), we operate 19,349 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 socio-economic 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 its activities as a transmission system operator, Elia Group provides consulting services to international customers through its subsidiary Elia Grid International. In recent years, the Group has launched new non-regulated activities such as re.alto - the first European marketplace for the exchange of energy data via standardised energy APIs - and WindGrid, a subsidiary which will continue to expand the Group's overseas activities, contributing to the development of offshore electricity grids in Europe and beyond.

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

[eliagroup.eu](http://eliagroup.eu)

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