Clean up distribution-grid connection queues and prioritise projects that deliver for people

Europe needs to upgrade its grids to electrify homes, public buildings and businesses - but it also needs to run the grids we already have more efficiently. Too much clean capacity is sitting unused, connection queues are clogged, and outdated rules can make it harder and more expensive to connect the technologies we need for the energy transition. Decision-makers and energy regulators can help Distribution System Operators (DSOs) free up the grid, speed up connections, and make the system work for everyone.

1. Plan the grid for renewables-based electrification. DSOs should be required to plan ahead for the growing use of electricity, including heat pumps, electric vehicles, industry, and renewable energy. Instead of waiting for new connections to create problems, DSOs should identify where the grid will need to grow, consider territorial planning adopted by local authorities when they plan the grid development, and identify where smarter solutions, such as shifting when electricity is used, can avoid or delay expensive grid upgrades.

2. Reward DSOs for using the grid efficiently, not just for building more of it. The way DSOs are regulated needs to change so that they have an incentive to find the most cost-effective solution to reduce grid congestion and accelerate grid connection procedure. This means allowing them to spend money on smart systems, flexibility solutions like market-based solutions, flexible connection agreements, cable polling and other alternatives to new cables and substations when these can deliver the same result at lower cost. Where capacity has been reserved but is not actually being used, rules such as “use it or lose it” should be considered. In short, DSOs should be rewarded for keeping costs down and making better use of the existing grid. Time-based or other targeted tariffs can encourage this flexibility, helping DSOs manage peaks and reduce the need for new infrastructure.

3. Use digital tools and flexible electricity use to reduce pressure on the grid. DSOs should be supported for the rollout of smart meters and the digital systems needed to understand where and when the grid is under pressure and improve the grid observability. Those devices are also indispensable to make households and businesses more flexible. DSOs should be more transparent regarding the current and future state of grid congestion and capacity to enable local authorities, RES developers, aggregators of flexibility and consumers to make decisions accordingly.

4. Make the connection process fairer and more transparent. DSOs should be required to improve the way new customers are connected to the grid. Instead of simply connecting people on a “first come, first served” basis, priority should take into account factors such as how quickly a project can contribute to electrification and decarbonisation, whether it can be

flexible, and the wider benefits it can bring to society. Clear deadlines should also prevent grid capacity from being held indefinitely by projects that are not progressing.

5. Ensure large electricity users pay their fair share. Freeing the grid also means making sure its costs are shared fairly. Households and small businesses should not face higher network charges to cover grid investments driven by very large electricity users, such as data centres. National regulators should ensure that these users make an appropriate contribution to the connection and network costs they create, including investments in both distribution and transmission grids. Those who drive significant new grid costs should pay their share, rather than passing the burden on to households and small businesses.

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