

Electricity distribution price control (ED3) – Response from Beyond Fossil Fuels

Beyond Fossil Fuels is a civil society network committed to ensuring a just and rapid transition to a fossil-free, renewables-based future. Building upon the Europe Beyond Coal campaign, its goal is for Europe to be coal-free by 2030 and phase out fossil gas from the power sector by 2035. A clean and flexible energy system will deliver lasting benefits for citizens, the climate and the broader economy. Beyond Fossil Fuels is a non-profit organisation with an office in Berlin, with staff spread across Europe.

Q1. What are your views on our regulatory guiding principles that will inform the development of accountable investment planning and delivery?

We encourage the addition of two principles to be incorporated: (1) **“public interest”** – going beyond “consumer value” to more holistically consider the role of DNOs in the energy transition; and (2) **“fast and fair transition”** – going beyond “strategic alignment with national goals” to better encapsulate the need for DNOs to proactively play a role in enabling an inclusive and timely energy transition.¹ As well as including these as principals, we encourage deeper governance changes to be made to reflect the new role that DNOs must play in the energy transition.

Distribution grids need to transition from a network where households and businesses passively consume electricity generated principally from centralised thermal power plants; to a system where electricity is generated and consumed in a much more decentralised, flexible manner. DNOs will play a critical role as a golden thread connecting households and businesses to the benefits of renewables and clean flexibility solutions. This transformation redefines the role of DNOs. Their new role as key enablers, innovators and investors for the energy transition necessarily implies that current governance and operational structures need overhauling.

During the transition, DNOs will be entrusted with the billions of pounds needed to upgrade the UK's creaky distribution grid. This will require a greater level of oversight than ever before; as well as further steps taken to address current potential conflicts of interests. Greater foresight will prevent the kind of governance scandal seen in the UK water company sector in recent years.²

Energy is a public good, and is as essential to the functioning of our society as water, public health and education. As a public good, grids should be governed in the public interest.

¹ The [Fast and Fair Renewables and Grids Agreement](#) brings together developers, local governments, civil society and industry to establish a shared framework rooted in the first European consensus on what “fairness” means in the context of rapidly building renewables and grid projects with community support; in turn helping address some causes of public opposition to new renewables and grids at the local level.

The most relevant principle from the agreement calls on DSOs to “*facilitate a level-playing field for community-led initiatives when providing access to the grid including in applicable connection queue regulation. This can include reservation of available grid capacity, reserving space in tender procedures for opening new grid capacity and/or providing flexible grid connections*”.

² For example, see <https://hansard.parliament.uk/commons/2025-07-21/debates/4449E1C6-F2CA-4F96-9CFE-2B0504A4242B/IndependentWaterCommission>

Electricity is essential not only to meet basic needs, but also to sustain economic well-being. How DNOs operate and invest in the grid impacts whether households and businesses can produce their own energy and use energy in a smart and flexible way.

DNOs, as highly regulated entities, are bound to follow a set of rules which have not yet been adapted to the new energy horizon. Current grid rules fall short of making it fit for the opportunities the transition can provide. With much of the current regulatory framework designed for the fossil age, Beyond Fossil Fuels proposes a regulatory shake-up.

A fresh outlook and blueprint is needed to manage and build-out the grid; one which is centred on ensuring that DNOs act in the public interest and to support a fair and fast transition.³ This would entail that DNOs are obliged to act in a way which promotes climate-aligned, public – rather than private – interests, without excessive profit-making at the expense of consumer bills.⁴

Existing regulatory approaches can incentivise outcomes that are misaligned with both public and climate interests. As profit-driven organisations, this can sometimes result in excessive profit-making. In the UK, Citizens Advice found that a regulatory misjudgment allowed energy networks to profit from high inflation, pocketing nearly £4 billion in excess profits over four years.⁵

In the 2000s, after recognising that it was too easy for a power company to use its ownership of the grid to its advantage, EU legislators split transmission system operators from both generation and supply businesses, known as ‘unbundling’.⁶ In contrast, DSOs and DNOs underwent a very limited form of unbundling, which still allows for parent companies to own DNOs. As a result, almost all of Europe’s largest DSOs remain owned by major utilities – creating potential conflicts of interest.

Given DNOs’ monopoly status within their region, it falls to regulators to set strong financial incentives that drive urgency and action. Governments can reclaim the power for local communities and businesses, ensuring fair access to the grid, at a fair price.

To further support the development of accountable investment planning and delivery, we recommend that Ofgem:

- **Mandate full ownership unbundling of DNOs, to minimise conflicts of interests.** This could include separating out the delivery functions of DNOs, from the operational, planning and flexibility functions (which affect levels of investment and therefore rates-of-return) of DSOs – with the latter run as not-for-profit companies. Alternatively, the planning aspects could be transferred to NESO.
- **Introduce legislation requiring DNOs to reinvest profits** into grid upgrades and

³ For example, see <https://www.aer.gov.au/system/files/2025-02/Policy-led%20sandboxing%20-%20February%202025.pdf>

⁴ <https://www.citizensadvice.org.uk/about-us/media-centre/press-releases/energy-network-companies-pocket-gbp4-billion-in-excess-profits-from-cost-of/#:~:text=In%20its%20analysis%20of%20new%20Ofgem%20company,rely%20on%20Ofgem%20to%20set%20fair%20network>

⁵ <https://www.citizensadvice.org.uk/about-us/media-centre/press-releases/energy-network-companies-pocket-gbp4-billion-in-excess-profits-from-cost-of/#:~:text=In%20its%20analysis%20of%20new%20Ofgem%20company,rely%20on%20Ofgem%20to%20set%20fair%20network>

⁶ https://energy.ec.europa.eu/system/files/2014-10/2010_01_21_the_unbundling_regime_0.pdf

modernisation, and prevent excess profit-making.

- **Align DNO's incentives and performance metrics with criteria associated with securing the public interest**, linking rewards to customer value, connection performance, and innovation.

Q2.Are the proposed objectives for the long-term integrated network development plans appropriate?

We encourage Ofgem to ensure the objectives are suitably ambitious and aligned with a fair and fast energy transition. It is vital DNOs align their network development plans with the needs of a renewables based, electrified society and economy – including with the UK's ambitious 2030 Clean Power objective (CP2030). In fact, it will be impossible to achieve CP2030 without the full alignment and meaningful engagement from DNOs.

However, at present, this is not necessarily happening. DNOs depend on supportive regulatory frameworks that apply a more forward-looking investment approach.⁷ Stronger standards need to be set to ensure that these are aligned with the long-term needs of the energy transition. Agora Energiewende found that a key cause of network scarcity was insufficient holistic long-term planning.⁸ A recent report from European energy regulators also highlights that DSOs face struggle to translate long-term assumptions into concrete capacity needs,⁹ posing challenges for effective network planning.

Our recommendations:

- DNOs should be mandated to ensure that network development plans incorporate the necessary foresight and anticipatory investment to build out and upgrade the grid in line with high levels of electrification and renewables – as a minimum, aligned with national climate, renewable and electrification targets (including but not limited to Clean Power 2030).
- DNOs should consult extensively with stakeholders and be transparent about the assumptions underpinning their plans (including by using open source models); regularly publishing information and data in a consistent and accessible manner.
- Ofgem should monitor and scrutinise the plans and investments of DNOs to ensure they are aligned with the needs of a renewables-based, electrified economy, and provide support with preparing high-quality long-term plans. These assessments should also be made publicly available, publishing data on key aspects related to DNO performance.
- Ofgem, with the support of NESO, should be granted with more robust tools to intervene in network development plans that are inconsistent with the needs of a renewables-based, electrified economy in line with the Clean Power 2030 objective.

⁷ https://eudsoentity.eu/wp-content/uploads/2024/09/DSO_SolarReport_2023-v11.pdf

⁸ https://www.agora-energiewende.org/fileadmin/Projekte/2023/2023-23_EU_boosting_flexibility/24-0184_Rev.2_DNV_Report_Agora_Energiewende_-_Boosting_flexibility_in_distribution_grids.pdf

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<https://www.acer.europa.eu/sites/default/files/documents/Publications/ACER-CEER-electricity-distribution-network-planning-guidance-2025.pdf>

Q10. Are additional delivery incentives needed, or can a combination of accountability mechanisms and output-based incentives sufficiently ensure delivery performance?

We believe that additional delivery incentives may be needed.

Current governance structures can discourage DNOs from developing solutions that clearly serve the public interest. DNOs need to actively engage with households, local or regional governments and businesses to solve connection bottlenecks and enable flexible energy use¹⁰— yet regulatory constraints can limit their ability to innovate or collaborate effectively with stakeholders.

Australia shows how regulatory innovation can empower DSOs to take a more proactive role in the energy transition to help overcome barriers to access, and enable new energy resources deployment that benefit consumers.¹¹ The Australia Energy Regulator (AER) recognised the need for a fundamental shift in how DSOs operate: from the current market-driven, demand-led approach; to a policy driven one, focused on overcoming barriers to access. AER is looking to reduce friction between innovation and the regulatory framework by identifying where flexibility in the rules exists, or where rules must be changed.

As part of this, AER requested DSOs propose network-led solutions through a “regulatory sandbox” process. AER invited proposals aimed at improving access to the benefits of solar and storage, while reducing consumer costs.¹² As a result, the DSO Ausgrid has proposed a pilot to harness the unused rooftop solar potential currently sitting in the existing network - particularly on commercial buildings - and ensure the resulting benefits go into the local community. The project is forecast to generate \$22.9 million in energy savings over five years – equating to about \$150-\$200 per customer per annum for a typical household.¹³

- Assess where regulation currently deters DNOs from taking a more innovative approach to boosting accessibility to the grid; and instead introducing incentives to encourage a more proactive approach to supporting fast connections, bill savings and flexible energy use.
- Align DSOs’ incentives with the public interest, linking rewards to customer value, connection performance, and innovation. More detailed information on the proposed metrics are set out in response to question number 82.

Q13. How can adaptability mechanisms be designed to ensure DNOs respond quickly to new network needs while maintaining transparency, accountability and value for money?

While significant capital investment in physical grid expansion is clearly needed, regulation must ensure that these investments are cost-effective and incorporate innovative and

¹⁰https://www.agora-energiewende.org/fileadmin/Projekte/2023/2023-23_EU_boosting_flexibility/24-0184_Rev.2_DNV_Report_Agora_Energiewende_-_Boosting_flexibility_in_distribution_grids.pdf

¹¹<https://www.aer.gov.au/news/articles/communications/innovative-trials-welcomed-aer-introduces-policy-led-sandboxing-approach>

¹²<https://www.aer.gov.au/news/articles/communications/innovative-trials-welcomed-aer-introduces-policy-led-sandboxing-approach>

¹³ <https://www.ausgrid.com.au/About-Us/News/Community-Power-Networks>

efficient solutions. Analysis suggests current regulatory models often favour capital asset investments over innovative, operational solutions.¹⁴ As a result, crucial operational spending – particularly for digitalisation and smart grid development – is often crowded out.

DNOs must be incentivised to use non-CAPEX solutions such as dynamic line rating to ensure a cost-effective upgrade to the grid and to ensure that progress can be made immediately in reducing grid bottlenecks.

- Adopt regulatory best practice on incentive structures to encourage DNO use of non-wire solutions (e.g. by implementing a TOTEX model and incentive-based schemes), addressing the current “CAPEX bias” that can occur. Incentivise the widespread adoption of solutions that maximise the existing grid: such as dynamic line ratings, cable pooling, non-firm connections, use of storage and demand flexibility for grid balancing.

Q19. Do you have views or suggestions on how redefining connection types, with potentially more types being introduced, will be able to be operationalised at this level of granularity?

Our additional recommendations include:

- Where there are significant connection queues, DNOs should be provided with a mandate to prioritise “ready-to-go” projects that offer the greatest benefit to communities and climate. Ofgem should consult transparently on developing a metric to assess these benefits
- DNOs should facilitate a level playing field for community-led initiatives by reserving grid capacity for renewables and storage projects that deliver community benefits. As part of this, Ofgem should mandate DNOs to introduce a dedicated ‘bike lane’ process for community energy projects to apply for grid connection in a way that reflects their different characteristics.¹⁵
- DNOs should be required to streamline connection procedures to reduce bureaucracy for energy communities, social housing, SMEs and other small-scale or community-centered projects. They should also be required to publish grid hosting capacity maps to help applicants plan more effectively.

Case study: More rights for energy communities embedded in the rules in Austria

In Austria, energy communities benefit from clearly defined legal rights and simplified licensing procedures for installations below a certain capacity threshold. Network users have a legal right to participate in an energy community,¹⁶ and DSOs have several key responsibilities, including:

- Responding to grid access requests within two weeks;
- Installing a smart meter upon request within two months;

¹⁴ https://publications.jrc.ec.europa.eu/repository/bitstream/JRC132379/JRC132379_01.pdf

¹⁵ <https://www.rescoop.eu/toolbox/consultation-response-european-grids-package-call-for-evidence>

¹⁶ <https://www.rescoop.eu/uploads/rescoop/downloads/REScoopEU-Briefing-on-Enabling-frameworks-for-RECs-final.pdf>

- Signing a contract with the energy community;
- Measuring consumption of members in an energy community, as well as feed-in and purchase from their production installations;
- Providing quarter-hourly data to suppliers and the energy community by the following day;
- Making all data available, free of charge and on-line;
- Allocating energy generation shares (dynamic or static) among members.

Q20. Do you agree with our proposal for LCT connections and their associated enabling works to be brought into the connections scope and incentivised, with the potential to set varying working day targets for different connection activities? Why?

Yes, we agree that greater incentive should be provided to support the roll-out of low carbon technologies. There should be penalties for DNOs who have significant connection delays associated with LCT connections – in turn, transparently reported by Ofgem.

Those connecting LCTs to distribution networks frequently report delays, unclear timelines and costs, and a general lack of transparency and communication. In many cases, there is no standardised process for new grid connections.¹⁷ Connecting new demand, low-carbon technologies, or generation requires completing different forms and paying different fees for the same outcome. Comparable connections in the same region may face different timescales and often cannot be submitted in bulk under a single application.¹⁸

Case study: UK social housing upgrades obstructed by cumbersome connections

Together Housing Group, one of the largest social housing providers in northern England, has committed to removing fossil fuels from all their properties by 2035. With 31,000 homes currently using gas central heating, this is an ambitious challenge – but one which can unlock serious energy bill savings for residents. A combination of solar panels, batteries, and heat pumps will help households minimise energy costs and escape the fossil fuel rollercoaster of electricity bill spikes.

However, the group has encountered major challenges associated with the local DNOs – Electricity North West and Northern Powergrid¹⁹ – due to an unwieldy connection process. Before installing heat pumps or EV chargers, the DNO must carry out a series of time-consuming steps, such as in-person surveys, meter checks, and installing 60 amp fuses. While important, this piecemeal and uncoordinated process makes large-scale retrofit projects extremely difficult to deliver.

¹⁷ For example, see

<https://www.energy-uk.org.uk/publications/getting-britain-connected-part-3-the-role-of-local-distribution-networks-for-homes-and-businesses/> and

<https://www.clientearth.pl/najnowsze-dzialania/artykuly/nowy-raport-sieci-waskie-gardlo-transformacji-energetycznej/>

¹⁸

<https://www.energy-uk.org.uk/publications/getting-britain-connected-part-3-the-role-of-local-distribution-networks-for-homes-and-businesses/>

¹⁹ This information has been provided via email and correspondence to Beyond Fossil Fuels.

For individual households, the process is slow but manageable. But for retrofitting at scale, the current system is simply too fragmented. Despite repeated attempts by the social housing association to collaborate with DNOs, a viable solution has yet to be found.

Q21. Do you agree the incentive should be reward and penalty (as per the RII0-ED2 minor connections incentive)? Why?

Yes, we agree that there need to be clearer rewards and penalties, based on quantifiable and transparent metrics. Additional considerations include:

- Through price control frameworks, incentivise DSOs to adopt a more innovative, problem-solving approach to grid connections (see response to question 10).
- Ensure that existing regulation does not block creative solutions that would enable more projects to connect efficiently.

Q41. Do you have any views on our proposal for DNOs to play a bigger role in the delivery of energy efficiency and low carbon measures?

We support the proposal for DNOs to play a bigger role in the delivery of energy efficiency measures, as well as other supportive measures such as solar panels, heat pumps, batteries and EV chargers. These measures taken together can help reduce “peak” energy demand, support more flexible energy use, while also reducing bills. If there is transparent information on grid constraints, policy makers could target subsidies or supplier obligations with a time and/or place-based element.

Some countries in the EU have ‘white-certificate’ schemes in place (to meet Energy Efficiency Directive targets), which can support simple building upgrades such as insulated windows and attic/cavity wall insulation. In some countries DSO’s are involved in executing this scheme - e.g. Fluvius in Flanders.²⁰ In the US we have seen moves in this direction, where utilities tend to be more vertically integrated, e.g., in Nevada and Texas they have peak reduction elements to their Energy Efficiency Resource Standards.²¹

One of the most advanced versions is seen in California, where a ‘metered energy savings’ model has been developed to understand the real-time savings for the electricity grid associated with energy efficiency upgrades.²² The industry-wide adoption of the CalTRACK standard methodology for calculating baseline energy consumption has been crucial to the growth of the retrofit market in California and other states. CalTRACK calculates avoided energy use by defining the counterfactual baseline – the estimated consumption of energy in a building following a retrofit – as if the retrofit had not taken place. As well as energy

²⁰ <https://www.vlaanderen.be/bouwen-wonen-en-energie/premies-van-netbeheerder-fluvius>

²¹ https://eta-publications.lbl.gov/sites/default/files/2025-01/lbnl_eers_report_v0113_final.pdf

²²

<https://www.greenfinanceinstitute.com/wp-content/uploads/2024/06/Towards-a-protocol-for-metered-energy-savings-in-UK-buildings.pdf>

efficiency, CalTRACK can be used to monitor the effect of any Behind-the-Meter (BTM) Distributed Energy Resource, such as solar panels or fuel cells installed in the building.

The CalTRACK methodology was developed to address challenges facing California's energy system and has been highly effective to date. It allows utilities facing energy efficiency obligations to shape their load curves, assisted by the amount of electric heating, ventilation and air-conditioning systems that have been improved by retrofit engineers and the widespread deployment of Advanced Metering (smart metering), which provides valuable data for utilities and their contractors.

- We recommend that Ofgem ensures that any DNO involvement in energy efficiency, whether operationally or in terms of financing, does not distract the DNOs from their core activities, including unlooping and enabling the installation of Low Carbon Technologies. A holistic, integrated approach should be considered.
- Ofgem should actively consider how to avoid letting energy efficiency alter the balance of the next price control too far in the favour of DNOs. Financing or delivering energy efficiency would likely be a small part of the overall package.
- Consider the role of a 'metered energy saving' methodology to help better measure the network benefits associated with home retrofit measures.

Q63. How should DNOs incorporate flexibility services and connection process improvements into their network planning approach to ensure timely, efficient, and predictable connections? Should this be incentivised, and if so, how?

At present, it is not always easy nor especially attractive for domestic and business energy users to shift their electricity usage to times of high renewable generation – despite the significant cost savings this can offer. Clean flexibility can also benefit NOs by reducing peak demand costs and limiting the need for expensive grid build-out through greater efficiency.

In the UK alone, it is estimated that flexibility can reduce distribution network investment needs by around 15%, ultimately lowering electricity bills for consumers.²³ DNOs should also play a key role in promoting the technologies needed to unlock clean flexibility, such as smart meters and heat pumps.

- Accelerate the roll-out of standardised local flexibility markets.
- Ensure that the expansion of heat pumps, EVs and industrial electrification of industry facilitates demand side response – requiring technologies are smart-enabled, and smart meters installed.
- Promote incentives and benefits to encourage engagement in flexibility markets. Raise awareness of flexible energy use opportunities – including collaboration with EV and heat pump providers, households, businesses and public buildings.
- Encourage DNOs to establish and operate local flexibility markets where they already exist. Introduce time-of-use network tariffs to encourage flexible use.
- Support smart meter roll-out, with neighbourhood-level engagement and installations, working with energy suppliers and coordination with suppliers and local governments.

Case study: New tariffs promoting flexible energy use in Belgium

In Belgium, the region of Flanders is experiencing a strong growth in electrification of heating and transport. In order to ensure their smooth integration, and reduce the potential impacts of high peaks in energy demand, the government is working with the DSOs to promote and incentivise more flexible energy use among consumers.²⁴ One key measure was the introduction of a 'capacity tariff' – a charge based on the level of grid capacity a consumer reserves. The tariff was developed through broad stakeholder engagement, with careful consideration of social inclusion, transparency and non-discrimination.

The first positive trends are already visible, especially among users of new flexible appliances, such as EVs or heat pumps. These users are adapting their behaviour in response to the new tariff, avoiding simultaneous peak usage. This benefits the grid by reducing the need for costly upgrades, while also lowering costs for consumers.

Q67. Are further incentives required to incentivize and encourage the use of flexibility in line with our approach for ED3?

Current governance structures can discourage DNOs from developing solutions that clearly serve the public interest. Further incentives are needed to actively engage with households, local or regional governments and businesses to solve connection bottlenecks and enable flexible energy use²⁵ – yet regulatory constraints can limit their ability to innovate or collaborate effectively with stakeholders. Australia shows how regulatory innovation can empower DSOs to take a more proactive role in the energy transition to help overcome barriers to access, and enable new energy resources deployment that benefit consumers (see response to question 10).²⁶

- Enable DNOs to support clean flexibility and the roll-out of distributed energy assets by removing barriers to innovation and community-led solutions.
- Reform incentive structures to favour the procurement of flexibility services from the market rather than defaulting to new infrastructure builds
- Adopt regulatory best practice on incentive structures to encourage DNO use of non-wire solutions (e.g. by implementing a TOTEX model and incentive-based schemes), addressing the current "CAPEX bias" that can occur. Incentivise the widespread adoption of solutions that maximise the existing grid: such as dynamic line ratings, cable pooling, non-firm connections, use of storage and demand flexibility for grid balancing.

Case study: DSOs leading the way on clean flexibility in Portugal

In 2023, the Portuguese DSO proposed to the energy regulator a 2-year sandbox pilot for a local market for integrated flexibility services.²⁷ The mechanism would allow the DSO to efficiently manage network planning by using flexibility services as a complement to investment decisions in specific grid constraint situations. It enables the DSO to save costs

²⁴ https://eudsoentity.eu/wp-content/uploads/2024/09/DSO_SolarReport_2023-v11.pdf

²⁵ https://www.agora-energiawende.org/fileadmin/Projekte/2023/2023-23_EU_boosting_flexibility/24-0184_Rev.2_DNV_Report_Agora_Energiawende_-_Boosting_flexibility_in_distribution_grids.pdf

²⁶ <https://www.aer.gov.au/news/articles/communications/innovative-trials-welcomed-aer-introduces-policy-led-sandboxing-approach>

²⁷ https://drive.google.com/drive/folders/11sFQ0Av01Mplc7QP-rw0_D0Neggag7F4

on scheduled maintenance, improve the quality of service avoiding unexpected outages, and also enables an increase of capacity for new connections.

The DSO contracted flexibility from aggregators, consumers, generators and storage assets. Market agents made themselves available to manage their assets, changing consumption or energy injected into the grid, depending on the needs predefined by the DSO.

Different type of services were procured:

- Secure: Supports the operation of the network under normal conditions to manage local consumption peaks.
- Dynamic: Respond to constraints during scheduled unavailability of distribution grid assets (i.e., maintenance).
- Restore: Support the re-establishment of the network after sporadic events resulting from network failures (in contingency situations).

Q82. How should the incentive framework evolve to reflect the DNO's more proactive role in network planning, operational use of flexibility, flexibility market development, and whole-system coordination?

Having appropriate metrics will be an essential element of ensuring that DNOs' are spurred to take innovative steps towards supporting a fair and fast energy transition aligned with the public interest. These should be quantifiable and ambitious, covering areas including but not limited to the following:

- Average connection waiting times for LCT installations of no more than one day;
- Zero rejection rate of eligible community energy projects seeking connection to the grid;
- Targeted reduction of fuel poverty in their area (% of total);
- Increase in the share of renewable energy (%) in the electricity grid from local generators (including from households, businesses and public buildings).