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iDSOs for Germany: How independent system operation of electricity distribution grids can drive efficiency and save costs

by Andreas Jahn and Zsuzsanna Pató

The goal of this paper

Germany has 851 distribution system operators (DSOs), many of them small. This fragmentation leads to uneven and often substandard service for customers. Solving the problem by merging DSOs has proved difficult to achieve in the past. In this paper, we propose a system of regional independent system operators (iDSOs) that operate the grid but do not own it. An iDSO regime should cover the whole of Germany, with contiguous territories aligned with TSO redispatch zones.

The goal of this paper is to kick-start the discussion on the feasibility and implementation steps of this process in Germany.[1]

Independent distribution system operator – iDSO

Today, most distribution system operators (DSOs) own and operate the grid themselves. Having an independent distribution system operator (iDSO) – created and owned by several DSOs – reduces grid costs by scaling up operational solutions and provides a harmonised service over larger geographies. The iDSO drives grid planning and investments – both in terms of scale and type – to meet demand for grid services, while the grid owners remain subject to revenue regulation and share the cost of the operating company.

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The changing roles of DSOs

In the past, the main task of DSOs was to plan, build and maintain power grids in order to distribute electricity from the transmission grid to consumers. Today, however, their task is far more complex. DSOs must manage:

- Dynamically changing physical flows and load profiles from flexible demand, storage and variable renewables.
- Voltage and reactive power problems due to bidirectional flows.
- Increasing grid congestion and connection queues.
- Extensive real-time data management (from smart meters, smart inverters, smart transformers, etc.) and time-of-use billing processes.
- Supplier switches within short timeframes.
- Increased grid resiliency risks from climate-change-induced weather events and cyberattacks.
- 24/7 online cooperation with the transmission system operator (TSO).
- Frequent updating of grid development plans and grid capacities.
- Frequent updating of IT systems in line with advances in technology and regulation.

Meeting these increasing requirements necessitates significant investments in IT upgrades and in operational measures, for both existing and new grids. The investments needed for distribution grids are massive – about EUR 1.3-1.9 trillion in Europe by 2050,[2] and at least EUR 235 billion by 2045 in Germany.[3,4] At the same time, the political pressure to keep down energy bills (increasingly driven by grid costs) is stronger than ever, even with aspirations for a swift electrification process that can spread this cost more widely in future.[5]

German DSO underperformance

DSOs are increasingly aware of these tasks defined by European and national regulations, but progress and compliance are very uneven, both across countries and between DSOs. The political debate on the performance of DSOs in the energy transition is especially heated in Germany:

- Grid hosting capacity maps – mandatory under Article 57 of the Electricity Regulation – are only provided by a few DSOs in Germany, leaving the country some way behind the rest of the EU.[6]

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[2] Agency for the Cooperation of Energy Regulators. (2024). *Electricity infrastructure development to support a competitive and sustainable energy system: 2024 monitoring report*. https://acer.europa.eu/monitoring/MMR/electricity_infrastructure_2024

[3] Energiewirtschaftliches Institut an der Universität zu Köln & BET Consulting. (2025, 15 September). *Energiewende. Effizient. Machen. Monitoringbericht zum Start der 21. Legislaturperiode* [Making the energy transition efficient: Monitoring report at the start of the 21st legislative period]. Federal Ministry for Economic Affairs and Energy. https://www.bundeswirtschaftsministerium.de/Redaktion/DE/Publikationen/Energie/energiewende-effizient-machen.pdf

[4] BET Consulting. (2026). *Kooperationen von Verteilnetzbetreibern: VNB-Roadmap 2045* [Cooperation between distribution system operators: DSO roadmap 2045]. https://www.bet-consulting.de/aktuelles/whitepaper-und-studien/kooperationen-von-verteilnetzbetreibern-vnb-roadmap-2045

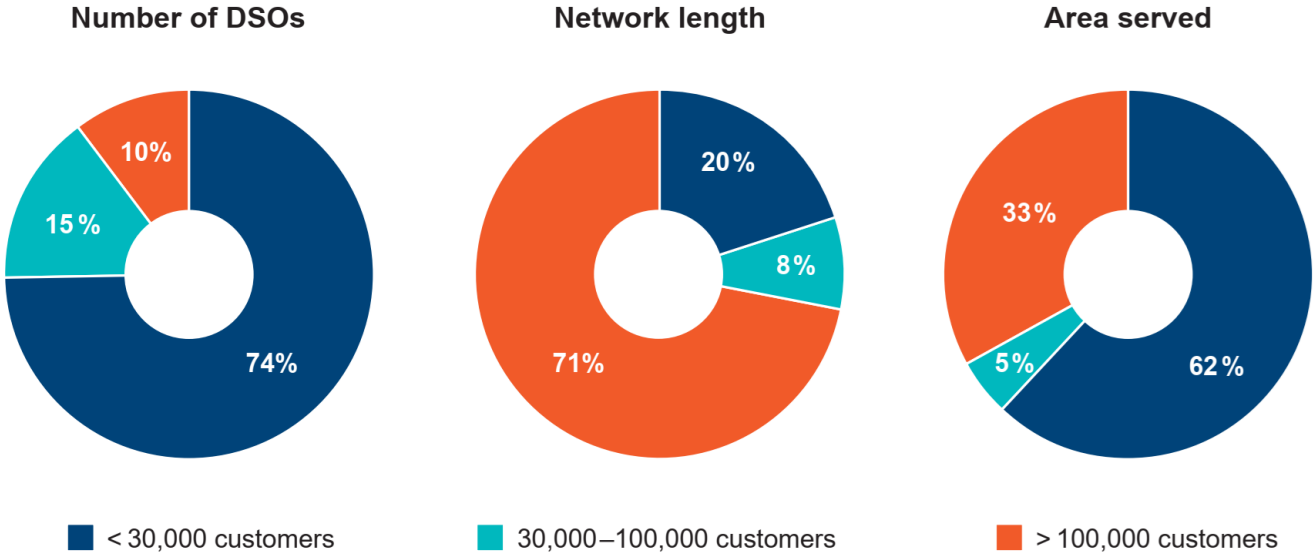
[5] European Commission. (2026, 22 April). *AccelerateEU – Energy Union: Affordable and secure energy through accelerated action* (COM (2026) 370 final). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52026DC0370

[6] See Grid Capacity Maps (https://www.gridcapacitymaps.eu/) and Pató, Z., Cremona, E., & Rosslowe, C. (2024). *Transparent grids for all*. Ember & Regulatory Assistance Project. https://www.raponline.org/toolkit/transparent-grids-for-all/

- Grid development plans, which it is mandatory for larger DSOs to publish, are not standardised, complete, publicly reviewed, or binding.[7]
- The national regulator, Bundesnetzagentur (BNetzA), launched legal proceedings against 77 DSO-owned metering companies in March 2026[8] because they had taken no action to begin the mandatory rollout of smart meters.
- Mandatory time-of-use network tariff offers[9] are listed on DSO webpages, but market participants and consumers report that these offers are hard to access.[10]
- DSOs fail to meet the 24-hour deadline to complete the supplier switching process in a quarter of cases.[11,12] Some customers are forced to wait for months to switch from an expensive default tariff.

Discussion of the reasons behind Germany's substandard performance usually ends at the fact that the country has too many DSOs. This is true: Germany currently has 851 DSOs, with wide variation in customer numbers, network structures, areas served, organisational integration, personnel, and financial resources (Figure 1).[13] Almost two-third of the DSO have less than 30,000 connected customers, operating 20% of the grid-length but serving 62% of the developed area of the country.

Figure 1. Classification of DSOs by customers, network length and area covered



Source: BET Consulting. (2026). Kooperationen von Verteilnetzbetreibern: VNB-Roadmap 2045

[7] See VNBdigital (https://www.vnbdigital.de/service/nap).

[8] Bundesnetzagentur. (2026, 27 March). *Bundesnetzagentur starts proceedings over failures in smart meter rollout* [Press release]. https://www.bundesnetzagentur.de/SharedDocs/Pressemitteilungen/EN/2026/20260327_Aufsichtsverfahren.html

[9] Bundesnetzagentur. (n.d.). *Integration von steuerbaren Verbrauchseinrichtungen* [Integration of controllable consumption devices]. https://www.bundesnetzagentur.de/DE/Vportal/Energie/SteuerbareVBE/start.html

[10] Bundesnetzagentur. (2026, 28 May). *Proceedings over failure to implement network tariff reductions for electric vehicles and heat pumps* [Press release]. https://www.bundesnetzagentur.de/SharedDocs/Pressemitteilungen/EN/2026/20260528_14a.html

[11] In March 2024, the national regulatory authority Bundesnetzagentur (BNetzA) decided that supplier switching would become mandatory within 24 hours by the middle of 2025. See Bundesnetzagentur. (n.d.). *Lieferantenwechsel* [Supplier switching]. https://www.bundesnetzagentur.de/DE/Vportal/Energie/KuendigungLieferantenwechsel/Lieferantenwechsel/start.html

[12] Rabe, J. (2025, 2 October). *Strommarkt: Warum der 24-Stunden-Lieferantenwechsel nicht reicht* [Electricity market: Why the 24-hour supplier switch is not enough]. Tagesspiegel Background. https://background.tagesspiegel.de/energie-und-klima/briefing/warum-der-24-stunden-lieferantenwechsel-nicht-reicht

[13] BET Consulting, 2026.

The majority of these DSOs are small, operating only a small fraction of the grid – but collectively they serve 13 million customers. Their size ranges from Böbing[14] with 900 connected customers to Westnetz, the largest DSO, which has about 4 million customers.[15] In Germany, smaller DSOs are legally exempted from important regulatory requirements such as the obligation for planning and transparency and revenue incentive requirements (Table 1).[16] Smaller DSOs often lack human and financial resources as well. DSO fragmentation also means that the regulator has to monitor the performance of 851 entities.

Table 1. Regulatory exemptions provided for smaller DSOs in Germany

Connected customers	Number of DSOs	Exempted from
> 100k	86	-
30k–100k	122	Legal unbundling, grid planning and transparency requirements
< 30k	643	Legal unbundling, grid planning and transparency requirements, and incentive regulation (*NEST* process)[17]

Source: Bundesnetzagentur & Bundeskartellamt. (2025). *Monitoringbericht 2025*

The EU Agency for the Cooperation of Energy Regulators (ACER) reported recently that derogations and exemptions for DSOs are a significant issue in some member states. In Europe, 14.6 million customers are served by DSOs that are exempt from grid planning, unbundling and transparency requirements.[18] Of these, 13 million live in Germany – they comprise a quarter of the country's consumers. The evidence suggests the current institutional and governance setup of the German distribution grid is a major barrier to the energy transition.[19]

Why not merge?

An obvious route to consolidation in Germany would be to merge smaller DSOs. However, this has rarely happened in the past and is not likely to gain enough political support in future for two main reasons. First, the majority of German DSOs are municipally owned, and ownership of local assets – since it implies the ability to take action – is seen as a demonstration of political strength. Berlin managed to take back ownership of its power grid from the Swedish-owned energy utility Vattenfall only a decade after a non-binding referendum supporting the change.[20] The second, equally important, reason is that

[14] Peters, C. (2024, 28 March). *Die Gemeinde Böbing ist der kleinste Stromnetz-Betreiber der Region und sieht die Energiewende als Herausforderung* [The municipality of Böbing is the smallest electricity grid operator in the region and sees the energy transition as a challenge]. Merkur. https://www.merkur.de/lokales/schongau/boebing-ort377063/energiewende-als-herausforderung-gemeinde-boebing-stromnetzbetreiber-92917310.html

[15] Westnetz. (2025). *Strukturmerkmale Strom* [Structural features: Electricity]. https://www.westnetz.de/de/ueber-westnetz/unser-netz/netzkennzahlen/strukturmerkmale-strom.html

[16] Bundesnetzagentur & Bundeskartellamt. (2025, 26 November). *Monitoringbericht 2025* [Monitoring report 2025]. https://data.bundesnetzagentur.de/Bundesnetzagentur/SharedDocs/Mediathek/Monitoringberichte/MonitoringberichtEnergie2025.pdf

[17] *Netze. Effizient. Sicher. Transformiert.* [Networks. Efficient. Secure. Transformed.]. The NEST process includes several changes to the regulatory framework for grids, including incentives and revenues.

[18] Agency for the Cooperation of Energy Regulators. (2026, 14 April). *Managing the ramp-up of electricity distribution investments to better serve grid users*. https://www.acer.europa.eu/sites/default/files/documents/Publications/ACER-2026-DSO-revenue-setting-report.pdf

[19] Ronkartz, T., Haas, S., Schröder, M., & Hüllenkremer, J. (2020, 30 September). *Stadtwerke: Retter des kommunalen Haushalts?* [Municipal utilities: Saviours of the municipal budget?]. BET Consulting. https://www.bet-consulting.de/webmagazin/artikel/stadtwerke-retter-des-kommunalen-haushalts

[20] Stromnetz Berlin. (2024). *140 years of electricity for Berlin*. https://www.stromnetz.berlin/en/about-us/history/

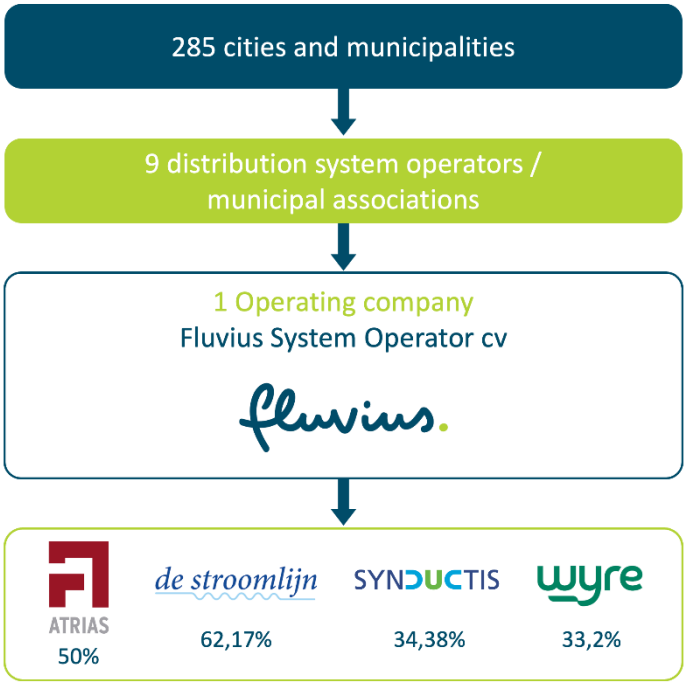
municipalities often use profits from regulated returns, a stable and easy source of income, to finance local public services or contribute to the city budget.[21] Municipalities are reluctant to give up this fiscal option.

In Belgium, however, Flanders has successfully implemented an alternative to merging ownership at the distribution level in its region. The story of this company – Fluvius – could serve as a starting point for discussion concerning DSO consolidation in Germany (and elsewhere).

Fluvius, the first European iDSO

In Flanders, Belgium, DSOs established a single joint company to operate their energy (electricity and gas) distribution grids more efficiently. [22] These changes eventually led to the creation of Fluvius System Operator: a single integrated company responsible for managing distribution networks across the region on behalf of – and fully owned by – nine intermunicipal asset companies, former DSOs.[23] Fluvius is responsible for several regulated activities, including electricity and gas distribution, sewerage, and data management. It is also responsible for non-regulated areas such as public lighting and district heating. Fluvius has ownership in four subsidiaries to support its communications, data exchange and construction activities (Figure 2).[24]

Figure 2. The ownership structure of Fluvius



Source: Fluvius. (2026, May). *Investor Presentation 2026*

[21] Ronkartz et al., 2020; Bundesverband Neue Energiewirtschaft. (2025). *Hintergrundinformation: Wie die Gewinne der größten deutschen Stromnetzbetreiber berechnet wurden* [Background information: How the profits of the largest German electricity grid operators were calculated]. https://www.bne-online.de/hintergrundinformation-wie-die-gewinne-der-groessten-deutschen-stromnetzbetreiber-berechnet-wurden/

[22] Based on Vlaamse Nutsregulator. (n.d.). *Aanwijzing netbeheerders* [Designation of system operators]. https://www.vlaamsenutsregulator.be/elektriciteit-en-aardgas/technische-reglementen-flexibiliteit-niet-publieke-netten/wie-is-mijn-netbeheerder/aanwijzing-netbeheerders, and on personal communications of representatives of the Flemish regulator (VNR) and Fluvius with the authors.

[23] Fluvius. (2026, May). *Investor Presentation 2026.* https://over.fluvius.be/sites/fluvius/files/2026-05/fluvius-investor-presentation-may-2026.pdf

[24] Fluvius, 2026.

Municipalities are the sole owners of the asset companies, which in turn fully own Fluvius. Fluvius hosts all operational, financial and management activities and employs the staff needed. Fluvius also develops the network investment plan for the entire Flemish region, and the DSOs approve these plans before they are submitted to the regulator. The DSOs, however, remain subject to revenue regulation.[25] While Fluvius acts on behalf of the DSOs through their intermunicipal asset companies – preparing, coordinating and submitting all dossiers and data, and charging grid fees to consumers – it is not subject to revenue regulation itself. The municipalities receive dividends from the regulated business but outsource the operational burden of network operation.

The process

Before 2006, Flanders had 10 electricity DSOs, 10 separate electricity network tariff structures, and 10 separate grid development plans. The creation of Fluvius from the various DSOs did not happen in a single step. First, the DSOs without Electrabel[26] as shareholder created one operating company (Infrax), while the DSOs with Electrabel as shareholder created another (Eandis). Few DSOs remained separate from these consolidations.[27] Over time, the remaining DSOs in Flanders voluntarily called on one of the two operating companies to manage the challenges of the transition. The Flemish Energy Decree of 2009 gave DSOs the legal option to outsource grid operation, data management and public service obligations to an 'operating company'.[28]

The need for further consolidation entered the public debate in 2013 because of the cost and coordination problems caused by the sharp increase in rooftop PV in the distribution grid. At the same time, the Flemish regulator (Vlaamse Nutsregulator, VNR) became responsible for setting network tariffs and shifted from cost-plus to revenue regulation with service quality targets. This increased the pressure on DSOs to reduce costs, as by this time the generous subsidies for rooftop PV had noticeably increased the tariff. The financial benefits of consolidation became very tangible.[29]

Further consolidation gained support both from municipalities and from the Flemish government. The 2014–2019 coalition agreement called for the development of an integrated vision of a utility managing gas, electricity, water, cable and sewerage. Merging the DSOs outright was also considered as an alternative to a single operating company. That would, however, have meant a single tariff across the whole of Flanders, where there were still considerable regional tariff differences. It would have also meant that the regulator no longer

[25] Fluvius is supervised by the regulator and is subject to other obligations including maintaining independence from producers and suppliers, and it is prohibited from being otherwise engaged in such activities.

[26] Electrabel being a vertically integrated energy company merged the DSOs it had ownership in.

[27] GHA (the grid operator in the Port of Antwerp) and AGEM (the DSO of the municipality of Merksplas).

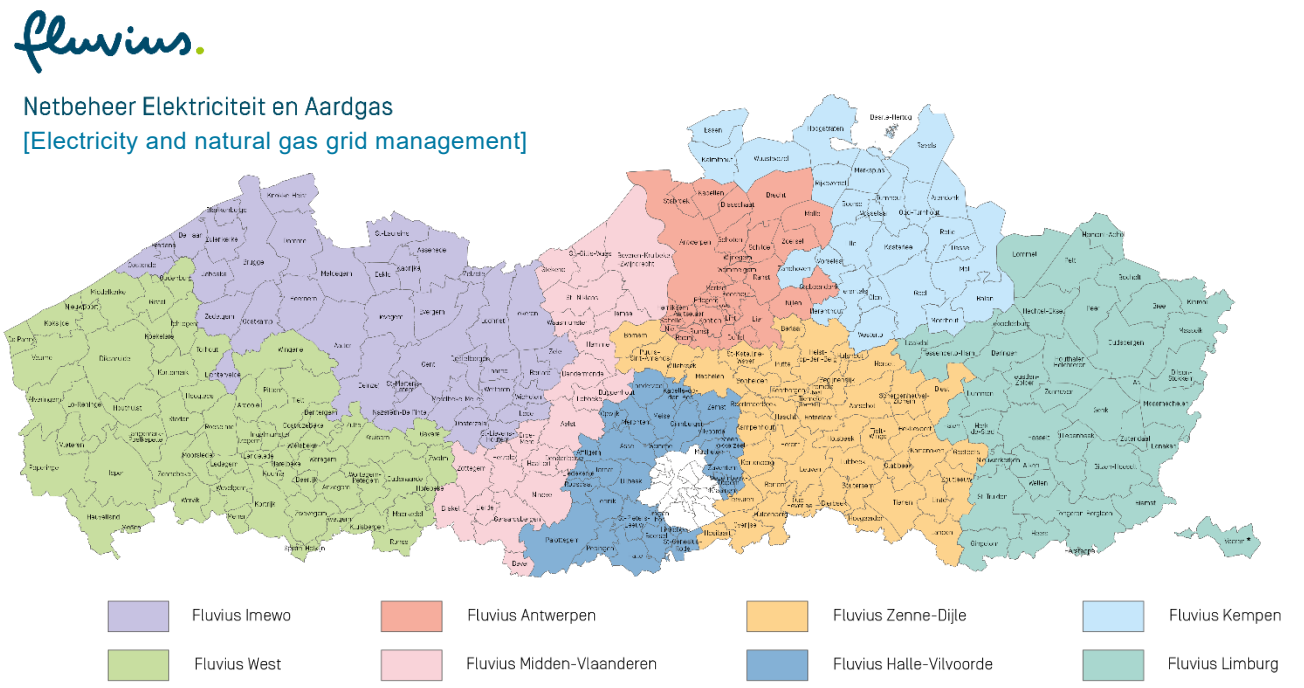
[28] Definition of "operating company" in the Energy Decree of 8 May 2009: *"The private-law company in which the distribution system operator has a shareholding or the legal person governed by public law which has a shareholding in the distribution system operator, which is responsible, in the name and on behalf of the distribution system operator, for the operation of its system and the application of public service obligations."* Vlaamse Regering. (2009, 8 May). *Decreet houdende algemene bepalingen betreffende het energiebeleid (Energiedecreet)* [Decree on general provisions concerning energy policy (Energy Decree)]. https://codex.vlaanderen.be/PrintDocument.ashx?id=1018092&datum=&geannoteerd=false&print=false#H1045613

[29] Fluvius. (2023, 14 November). *Structure of distribution system operators in Flanders* [Presentation]. Shared directly with the authors.

had the option to benchmark performance across DSOs, and concerns were raised over the loss of the link to local communities.[30]

In 2016, Eandis and Infrax collaborated on a limited scale to consolidate operations in a few areas such as the smart meter rollout and to increase cooperation between support services. This collaboration delivered an estimated EUR 35 million in annual savings through economies of scale, following an initial investment of EUR 36 million. Full cooperation was estimated to save EUR 100–160 million per year.[31] In 2018, Eandis and Infrax merged to form Fluvius System Operator. The goal – enshrined in statute – was to create regional DSOs with contiguous operating areas, covering both electricity and gas, with at least 200,000 customers each (Figure 3).[32,33]

Figure 3. Governance of electricity DSOs



Source: Fluvius. (n.d.). *Our shareholders*

Savings shared between consumers and DSOs

The regulator estimated that, by 2024, the merger of Eandis and Infrax into Fluvius would deliver net recurring savings of EUR 109 million (EUR 73 million for electricity distribution and EUR 36 million for gas distribution).[34] The regulator introduced an additional reduction of the allowed revenue in the 2019–2024 period to ensure that the potential savings would

[30] Winckelmans, W. (2025, 18 July). *Vlaamse regering investeert 1,56 miljard in Fluvius, fusie intercommunales is "finale doel"* [Flemish government invests 1.56 billion in Fluvius, merger of intermunicipal companies is "final goal"]. De Standaard. https://www.standaard.be/economie/vlaamse-regering-investeert-156-miljard-in-fluvius-fusie-intercommunales-is-finale-doel/78758270.html

[31] Fluvius, 2023.

[32] Required by an amendment to Article 4.1.1 of the Energy Decree, with which DSOs had to comply by 1 January 2025.

[33] Fluvius. (n.d.). *Our shareholders*. https://over.fluvius.be/en/who-are-we/governance/shareholders

[34] Vlaamse Regulator van de Elektriciteits- en Gasmarkt. (2018). *Bijlage 12: Besparingsstimulans na fusie* [Annex 12: Savings incentive after merger] (BESL-2018-73). https://assets.vlaamsenutsregulator.be/2025-11/Bijlage%2012%20besparingsstimulans%20na%20fusie%20-%20BESL-2018-73.pdf

materialise.[35] As the full cost savings would be achieved by the end of 2024, the regulator dropped the additional saving requirement from the 2025–2028 tariff methodology.[36] At the end of 2025, the Flemish regulator VNR began a study into the savings achieved through the merger between 2018 and 2024. That investigation is currently ongoing.

The future

Fluvius plans to invest EUR 4 billion over the next decade, on top of EUR 7 billion in regular investments, to prepare the grid for the energy transition. As the shareholder municipalities do not have enough money to keep the ratio of equity to regulated asset base at an optimal level of 40%, the Flemish government has been prepared to invest EUR 1.56 billion directly.[37] Negotiations between the Flemish government and the DSOs stopped in April 2026 due to a lack of agreement on asset valuation, control and dividend policy.

Lessons for Germany

- Significant cost savings can be achieved by consolidating operations. Estimated savings, extrapolated from Flanders to Germany based on population size, would amount to EUR 1.3 billion (EUR 890 million for electricity and EUR 440 million for gas distribution).
- Contiguous territories are essential for efficient service delivery.
- Revenue regulation needs to be designed to share the savings between DSOs and the consumers.
- The intermunicipal structure could make capital injections for grid development complex and challenging.

Implementing regional iDSOs in Germany: the design questions

We propose, for discussion, that the 851 German DSOs form a number of regional iDSOs that function in a similar way to Fluvius. In this section we explore how an iDSO regime in Germany could be designed.

[35] An additional x'-factor, on top of the standard x-factor of the income regulation (CPI-X). Amending decision BESL-2018-73 and the 2021–2024 Tariff Methodology.

[36] Vlaamse Nutsregulator. (2024). *Tariefmethodologie voor distributie elektriciteit en aardgas gedurende de reguleringsperiode 2025-2028* [Tariff methodology for electricity and gas distribution during the 2025–2028 regulatory period] (BESL-2024-41). https://assets.vlaamsenutsregulator.be/2025-11/Tariefmethodologie%20reguleringsperiode%202025-2028%20-%20BESL-2024-41.pdf

[37] The Brussels Times. (2025, 18 July). *Flemish government to invest 1.56 billion in electricity network*. https://www.brusselstimes.com/1670688/flemish-government-to-invest-1-56-billion-in-electricity-network

How many iDSOs should there be, and how should their territory be defined?

Three principles should be followed in defining iDSO territories:

- Each iDSO needs to be large enough to enable economies of scale and reduce coordination costs. We propose a minimum size similar to Flanders, which was 200,000 customers.
- Each iDSO should have a contiguous territory so that it can operate a bordering (and not mosaic-like) grid.
- iDSO territories should align with existing transmission grid operation zones to naturally enable TSO/DSO coordination.

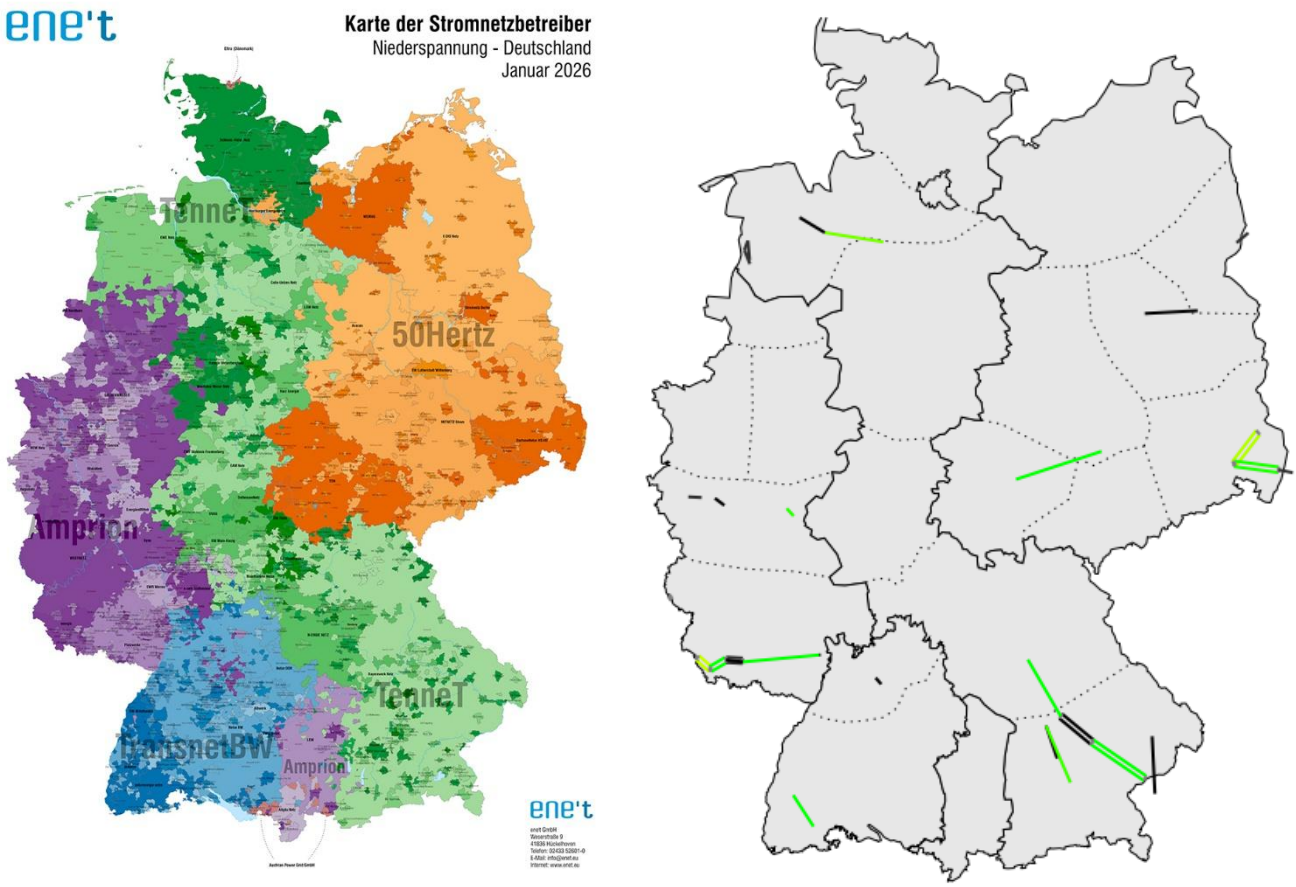
Fluvius covers the entire region of Flanders, as this is the level of governance for energy in Belgium. By contrast – given the size of the country, the current level of fragmentation and the current multilevel energy governance – having a single iDSO for Germany is not the goal.

The territories of Germany's 851 DSOs do not correspond with either the federal states governing regional distribution grids, or the TSO areas governing transmission (Figure 4).[38] We propose that **iDSO territories align with the overlying transmission network zones** and avoid internal congestion for coordination on balancing needs, flexibility products, and potential time-varying tariff pass-throughs. One potential approach to zoning is to use the 22 zones defined by the TSOs for the proposal on a locational/dynamic network tariff regime for very-high-voltage power.[39] This means the area governed by an iDSO should sit within one of these 22 zones.

[38] Ene't. (n.d.). *Karte der Stromnetzbetreiber: Niederspannung – Deutschland Januar 2026* [Map of electricity grid operators: Low voltage – Germany, January 2026]. https://www.enet.eu/portfolio/karten; 50Hertz, Amprion, TenneT, & TransnetBW. (2025, 7 November). *Diskussionspapier: Dynamische Netzentgelte* [Discussion paper: Dynamic network charges]. https://www.transnetbw.de/_Resources/Persistent/6/4/7/3/64735d3bc909da39efaae4d38008dd65bbd7e6d2/4%C3%9CNB-Diskussionspapier%20Dynamische%20Netzentgelte_202511.pdf

[39] 50Hertz et al., 2025; Fraunhofer CINES. (2026, 12 March). *Gebotszonenteilung kann den deutschen Strommarkt flexibler machen* [Bidding zone division can make the German electricity market more flexible]. https://www.cines.fraunhofer.de/de/pressemitteilungen/ariadne--gebotszonenteilung.html

Figure 4. Map of low-voltage DSO grids in Germany (left) and proposed TSO redispatch zones by dotted lines (right)



Note: Colours (left) and solid lines (right) show TSO territories; dotted lines (right) show proposed redispatch zones.

Sources: Ene't. (n.d.). *Karte der Stromnetzbetreiber: Niederspannung – Deutschland Januar 2026* [Map of electricity grid operators: Low voltage – Germany, January 2026]; 50Hertz, Amprion, TenneT, & TransnetBW. (2025). *Diskussionspapier: Dynamische Netzentgelte* [Discussion paper: Dynamic network charges]

Voluntary or mandatory?

The example from Belgium shows that a combination of intelligent incentives and the right legal framework is required, and that these can only be achieved with a clear political vision. The creation of iDSOs can, at least initially, be voluntary but supported by incentives. The current revenue regulation already incentivises scaling, but the majority of DSOs are partially exempted from that incentive. The new draft revenue regulation, NEST, will not change that much. Instead of the threshold of 30,000 connected customers, the sum of exempted DSO revenues must remain lower than 10% of all DSO revenues – but this will not reduce the share of consumers served by 'exempted' DSOs, as BNetzA acknowledges.[40]

[40] Bundesnetzagentur. (2025). *Finale Festlegungen im NEST-Prozess* [Final determinations in the NEST process]. https://www.bundesnetzagentur.de/DE/Beschlusskammern/1_GZ/GBK-GZ/2025/FL_NEST_Prozess/Zusammenfassung_FE-Entwuerfe.pdf?__blob=publicationFile&v=1

There seem to be two different pathways towards a regional iDSO system:

- An iDSO can be established by three or more DSOs in a defined area by setting up a joint operating company that is open to further participants.
- If there is a dominant DSO in the region, it could establish the framework for such a company on its own. In such cases, however, it is important that majority rights are diversified as soon as other DSOs join, to prevent any single shareholder from holding a dominant position.

At the same time, the regulator must ensure that only one or two geographically contiguous iDSOs are launched in each zone, so that efficient operation of the power system can be maintained across all voltage levels. If there is no third-party operator available in a given region in a defined timeframe, backup solutions (e.g., official designation of one DSO to create an iDSO) should be discussed.

As the DSOs are responsible for each iDSO's operations – and are therefore also exposed to the regulatory revenues granted to and the costs incurred by the iDSO – the individual owners must agree on a detailed allocation of the costs of joint network operation. We recommend that at least one iDSO should be created in each zone over the next two years. If this does not take place, the state will need to explore further financial and regulatory measures to drive change.

Implementing regional iDSOs in Germany: next steps

The most important first step is to start a discussion on the merits of this approach, to consider its benefits and risks, and to assess the conditions needed to create political buy-in to the change. Implementation would require the following steps from the various actors:

The regulator (BNetzA):

- Provide much stronger financial incentives: (1) for service-level quality, (2) to promote investments in cooperation, and (3) to provide dedicated first-mover support for the first five years.
- Further limit the number of DSOs that are exempted from the incentive regulation.
- Set the iDSO zones with assistance from the TSO.
- Regulate how savings will be shared.
- Provide a regulatory sandbox for a pilot project.

Federal government:

- Create a clear vision together with the regulator.
- Develop the necessary legislation for iDSOs, including geographical rules along with rules on tasks and responsibilities, approval, governance and ownership, and cost-sharing.
- Finance officially designated or first-mover iDSOs.
- Change legislation to remove legal unbundling exemptions.

DSOs:

- Set up a forum and format to discuss the proposal (or alternatives).
- Set up iDSOs as legal entities.

TSO:

- Define zones of long-term operational consistency by agreeing on the proposed 22 zones (not approved yet).



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B – 1040 Brussels
Belgium

+32 2 789 3012
info@raponline.org
raponline.org

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