

Managing the ramp-up of electricity distribution investments to better serve grid users

ACER report on distribution system operator (DSO) revenue setting practices

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Annex: Summary tables of national practices

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Annex: Summary tables of national practices

Table 1: Number of electricity DSOs by country, early 2025

Country	Number of DSOs serving less than 100,000 customers	Number of DSOs serving at least 100,000 customers	Total number of DSOs	Evolution in total number of DSOs between 2019-2024	Incentivisation of mergers ¹
Austria	106	12	118	Decrease (4)	Yes ²
Belgium	Brussels (BXL): 0 Flanders (FLA): 0 Wallonia (WAL): 3	BXL: 1 FLA: 8 WAL: 2	BXL: 1 FLA: 8 WAL: 5	BXL: No change FLA: Decrease (2) ³ WAL: No change	BXL: No FLA: No WAL: Yes ⁴
Bulgaria	1	3	4	Increase (1)	No
Croatia	0	1	1	No change	Not applicable ⁵
Cyprus	0	1	1	No change	Yes
Czechia	267	4	271	Increase (moderate)	No
Denmark	26	8	34	Decrease (6)	No
Estonia	33	1	34	No change	No
Finland	66	11	77	No change	No
France	154	7	161	Decrease (4)	No
Germany	784	82	866	Decrease (17)	No
Greece	0	1	1	No change	No
Hungary	0	6	6	No change	No
Ireland	0	1	1	No change	No
Italy	103	11	114	Decrease (12)	Yes ⁶
Latvia	7	1	8	Decrease (2)	No
Lithuania	3	1	4	Decrease (1)	No
Luxembourg	3	1	4	No change	No
Malta	0	1	1	No change	No
Netherlands	3	3	6	Decrease (1)	No
Norway	63	9	72	Decrease (23)	No
Poland	184	5	189	Increase (4)	No
Portugal	10	3	13	No change	No
Romania	45	4	49	Decrease (4)	No
Slovakia	129	3	132	No information	No
Slovenia	0	1	1	No change	No
Spain	320	6	326	Decrease (15)	Yes from 2026
Sweden	160	6	166	Decrease (8)	No
Total	2470 (92%)	204 (8%)	2674		

Note: The source of number of DSOs is the Annex of the *ACER-CEER Guidance on Distribution Network Planning, 2025*. Some NRAs provided updates. The validity date of the values is early 2025, however it may slightly differ for some countries.

¹ Existing law, regulation, issued consultation or law proposals regarding the number of DSOs.

² AT: National law allows DSOs benefitting from a higher regulatory asset base, provided the merger demonstrates cost reductions.

³ BE-WAL: In 2025.

⁴ BE: The 2024–2029 Regional Policy Declaration of the Walloon Government provides for the creation of a single DSO as part of a rationalisation of public structures. Discussions are ongoing with Walloon DSOs and CWaPE (no legal text has been adopted yet).

⁵ HR: National law states that HEP-Distribution System Operator Ltd. is the single DSO for a period of 50 years.

⁶ IT: An incentive for aggregation of small DSOs (below 25,000 customers) is active for some years now. A second incentive (reward based on the number of customers of the smaller DSO being aggregated), favouring the aggregation of medium DSOs (between 25,000 – 100,000 customers) was introduced on 1 January 2024.

Table 2: Customer concentration in small and large DSOs, end 2024

Country	Total number of customers	Customers connected to DSOs serving less than 100,000 customers	Customers connected to DSOs serving at least 100,000 customers	Connected customer to the smallest DSO	Connected customers to the largest DSO
Austria	6 237 330	561 084 ⁷ (9.00%)	5 676 246 (91.00%)	31	1 644 064
Belgium	BXL: 685 206 FLA: 2 428 634 WAL: 1 948 979	BXL: N/A FLA: 163 735 (6.74%) WAL: 73 683 (3.78%)	BXL: N/A FLA: 2 264 899 (93.26%) WAL: 1 875 296 (96.22%)	BXL: N/A FLA: 66 077 WAL: 20 473	BXL: 685 206 FLA: 662 836 WAL: 1 412 740
Bulgaria	5 342 653	1 748 (0.03%)	5 340 905 (99.97%)	1748	2 237 565
Croatia	2 544 635	N/A	N/A	N/A	N/A
Cyprus	615 497 (end of 2023)	N/A	N/A	N/A	N/A
Czechia	6 293 682	62 065 (0.99%)	6 231 617 (99.01%)	0	3 800 546
Denmark	3 597 428	411 611 (11.44%)	3 185 817 (88.56%)	411 611	3 185 817
Estonia	759 628	64 562 (8.50%)	695 066 (91.50%)	3	695 066
Finland	3 865 673	1 376 272 (35.60%)	2 489 401 (64.40%)	746	492 629
France	42 444 371	889 088 (2.09%)	41 555 283 (97.91%)	141	39 069 188
Germany	52 964 419	13 055 973 (24.65%)	39 908 446 (75.35%)	55 ⁸	3 733 692
Greece	7 989 090 ⁹	N/A	N/A	N/A	N/A
Hungary	5 835 461	N/A	100%	738 612	1 654 307
Ireland	2 468 937	N/A	N/A	N/A	N/A
Italy	37 372 000	639 000 (1.71%)	36 733 000 (98.29%)	22	31 792 000
Latvia	1 122 809	6 406 (0.57%)	1 116 403 (99.43%)	6	1 116 403
Lithuania	1 868 958	58 (0%)	1 868 900 (100%)	12	1 868 900
Luxembourg	351 107	29 449 (8.39%)	321 658 (91.61%)	4 198	321 658
Malta	388 161	N/A	N/A	N/A	N/A
Netherlands	11 625 077	228 113 (1.96%)	11 396 964 (98.04%)	52 940	4 167 147
Norway	3 393 028	906 039 (26.70%)	2 486 989 (73.30%)	422	992 316
Poland	19 299 212	150 138 (0.78%)	19 149 074 (99.22%)	No data	6 000 000
Portugal	6 826 545	34 371 ¹⁰ (0.50%)	6 792 174 (99.50%)	480	6 512 570

⁷ AT: The value refers to metering points.

⁸ DE: This value related to market locations (smallest DSO measured by revenue cap under BNetzA supervision).

⁹ GR: MV: 18.491, LV: 7.970.599 (2024).

¹⁰ PT: Supply points.

Country	Total number of customers	Customers connected to DSOs serving less than 100,000 customers	Customers connected to DSOs serving at least 100,000 customers	Connected customer to the smallest DSO	Connected customers to the largest DSO
Romania	>10 263 066	No data	10 263 066	No data ¹¹	3 975 223
Slovakia	2 730 298	25 175 (0.92%)	2 705 123 (99.08%)	1	1 238 179
Slovenia	989 671	N/A	N/A	N/A	N/A
Spain	30 486 847	1 248 532 (4.1%)	29 238 315 (95.90%)	28	12 522 985
Sweden	5 630 000	2 225 000 (39.52%)	3 405 000 (60.48%)	7	1 044 000

Note: The reference date of the data is 31 December 2024. Six countries (Croatia, Cyprus, Greece, Ireland, Malta and Slovenia) have only one DSO.

Table 3: Ownership unbundling of DSOs serving at least 100,000 customers ('large DSOs'), 2024

Country	Large DSO's unbundling from generation and supply	Large DSO's unbundling from activities in other sectors	Large DSO's majority control / ownership by private entities
Austria	12 (100%)	12 (100%)	0 (0%)
Belgium	BXL: 1 (100%) FLA: 8 (100%) WAL: 2 (100%)	BXL: 0 (0%) FLA: 0 (0%) WAL: 0 (0%)	BXL: 0 (0%) FLA: 0 (0%) WAL: 0 (0%)
Bulgaria	0 (0%)	0 (0%)	0 (0%)
Croatia	0 (0%)	1 (100%)	0 (0%)
Cyprus	0 (0%) ¹²	0 (0%)	0(0%)
Czechia	3 (75%)	2 (50%)	1 (25%)
Denmark	8 (100%)	8 (100%)	8 (100%)
Estonia	0 (0%)	0 (0%)	0 (0%)
Finland	3 (27%)	3 (27%)	3 (27%)
France	7 (100%)	7 (100%)	0 (0%)
Germany	Likely 0 (0%)	Not available to NRA ¹³	Not available to NRA
Greece	1 (100%)	0 (0%)	0 (0%)
Hungary	1 (17%)	0 (0%)	4 (67%)
Ireland	1 (100%)	1 (100%)	0 (0%)
Italy	0 (0) ¹⁴	0 (0%) ¹⁵	See note ¹⁶
Latvia	1 (100%)	1 (100%)	0 (0%)
Lithuania	1 (100%)	0 (0%)	0 (0%)
Luxembourg	0 (0%)	0 (0%)	0 (0%)
Malta	0 (0%)	1 (100%)	0 (0%)
Netherlands	3 (100%)	0 (0%)	0 (0%)

¹¹ RO: The number of customers of the smallest of the concessionary distribution operators is 1 520 058.

¹² CY: Only operationally and accounting unbundled from the electricity generation and supply incumbent companies.

¹³ DE: There is no data available regarding the unbundling from activities in other sectors and it is not legally required to be unbundled from other sectors.

¹⁴ IT: Likely 0 out of 11 large DSOs (at the end of 2025), accounting, legal and functional unbundling is applied.

¹⁵ IT: Most parent companies / groups controlling the 11 large DSOs are active also in other sectors. 6 large electricity DSOs (Unareti, Ireti, Inrete Distribuzione Energia, V-Reti, Edyna, AcegasApsAmga) are also dealing at least with gas distribution; accounting unbundling is applied.

¹⁶ IT: There are no DSO parent companies which are under majority control by a private entity. There are 3 DSO parent companies which are under majority control by a public entity: Rome municipality – ACEA - areti DSO; Verona municipality – MAGIS (was AGSM AIM) - V-Reti DSO; Aosta Valley Region – CVA – Deval DSO. The parent companies owning the other 8 large Italian DSOs have no majority control by any entity.

Country	Large DSO's unbundling from generation and supply	Large DSO's unbundling from activities in other sectors	Large DSO's majority control / ownership by private entities
Norway	9 (100%)	9 (100%)	0 (0%)
Poland	5 (100%)	5 (100%)	1 (20%)
Portugal	3 (100%)	3 (100%)	1 (33%)
Romania	4 (100%)	3 (75%)	4 (100%)
Slovakia	3 (100%)	3 (100%)	0 (0%) ¹⁷
Slovenia	1 (100%)	1 (100%)	0 (0%)
Spain ¹⁸	6 (100%)	6 (100%)	6 (100%)
Sweden	0 (0%)	0 (0%)	2 (33%)

Note: The reference date of the data is 31 December 2024. There are various forms of unbundling such as legal, functional, and ownership unbundling. ACER calls for caution with interpretation of the data as in some instances, the question about ownership unbundling may have been confused with implementation of the unbundling requirements set by Article 35 of the Electricity Directive. ACER notes that the term "majority control by private entities" may have been interpreted differently in some instances owing to variations in ownership and control structures (e.g. stock exchange traded companies, ownership of the parent company in the corporate group, cooperatives-owned companies, etc.)

Table 4: Flexibility services from local markets procured by DSOs serving at least 100,000 customers

Country	Large DSOs procuring flexibility services from local markets	Large DSOs procuring flexibility services under preliminary arrangement / pilot projects	Remuneration of the flexibility services costs ¹⁹
Austria	N/A	N/A	N/A
Belgium	BXL: 0 (0%) FLA: 0 (0%) WAL: 0 (0%)	BXL: 0 (0%) FLA: 0 (0%) WAL: 1 (50%)	BXL: N/A FLA: N/A ²⁰ WAL: no data
Bulgaria	0 (0%)	0 (0%)	
Croatia	1 (100%)	N/A	Pass-through OPEX
Cyprus	0 (0%)	Some ²¹	N/A
Czechia	1 (25%)	0 (0%)	Controllable OPEX
Denmark	Not registered	~ 3 (37.5%)	Controllable OPEX
Estonia	0 (0%)	1 (100%)	N/A
Finland	0 (0%)	1 (9%)	Pass-through OPEX ²²
France	1 (14%)	1 (14%)	Controllable OPEX and capitalised costs
Germany	0 (0%)	0 (0%)	N/A
Greece	0 (0%)	0 (0%)	N/A
Hungary	0 (0%)	2 (33%)	No data
Ireland	1 (100%)	1 (100%)	Controllable OPEX ²³

¹⁷ SK: All three DSOs have a majority shareholding of 51% held by the state through the Ministry of Economy of the Slovak Republic. The owner of the remaining 49% of shares in the ZSE Group is the E.ON Group. In Slovenská energetika Holding a.s., 49% is owned by EP Energy, a.s. However, managerial control falls under private foreign owners, and all three are under the control of the private sector regarding the strategic direction.

¹⁸ ES: The six large Spanish DSOs are legally unbundled entities and operate as separate legal persons. Nevertheless, they may belong to the same corporate group as other undertakings engaged in generation, supply, or other competitive energy activities, as long as they comply with the applicable legal, functional, and decision-making independence requirements (see also Article 12 of Spanish Electricity Sector Law, 24/2013).

¹⁹ The question does not account for own DSO expenditures for being ready to procure flexibility.

²⁰ BE-FLA: Project budget is currently applied. The Energy Decree does provide for a pass-through (Article 4.1.17/4, §2), but given the pilot nature of the flexibility services, this has not yet been implemented.

²¹ CY: Some pilot projects regarding local flexibility, of minor importance though.

²² FI: All flexibility procurement costs (market-based or non-market-based) are accepted as is (essentially passed through) for 2024-2027, up to 1% of total revenue (i.e. the flexibility incentive). From 2028 onwards, market-based flexibility procurement costs are allowed to be passed through (up to 2% of total revenue), non-market-based costs will be part of the OPEX efficiency benchmarking.

²³ IE: Costs associated with flexibility services are currently remunerated through controllable OPEX. The NRA will consider treatment when market becomes established and mature.

Country	Large DSOs procuring flexibility services from local markets	Large DSOs procuring flexibility services under preliminary arrangement / pilot projects	Remuneration of the flexibility services costs ¹⁹
Italy	0 (0%)	3 (27%)	Pass-through ²⁴
Latvia	1 (100%)	1 (100%)	Controllable OPEX
Lithuania	0 (0%)	0 (0%)	N/A
Luxembourg	0 (0%)	1 (100%)	Controllable cost (if deemed useful and reasonable)
Malta	0 (0%)	0 (0%)	N/A
Netherlands	3 (100%)	3 (100%)	Pass-through OPEX, Controllable OPEX and capitalised costs ²⁵
Norway	0 (0%)	9 (100%)	Controllable OPEX
Poland	~ 1 (20%) ²⁶	~ 3 (60%)	No data
Portugal	1 (100%)	1 (100%)	To be defined ²⁷
Romania	0 (0%)	0 (0%)	Pass-through OPEX
Slovakia	0 (0%)	0 (0%)	N/A
Slovenia	1 (100%)	Not applicable	Pass-through OPEX
Spain	0 (0%)	Under development ²⁸	Still to be defined ²⁹
Sweden	2 (33%)	3 (50%)	Pass-through OPEX

Note: The instances where none of those DSO, who are serving at least 100,000 customers, procures from local markets for system operation services and the instances where there is no local market for system operation services are treated the same, i.e. 0 (0%)

Table 5: Mechanism to counter bias towards CAPEX

Country	Mechanism to counter bias towards CAPEX (and thus against flexibility) ³⁰
Austria	Yes (TOTEX benchmarking)
Belgium	BXL: Yes (TOTEX revenue cap)

²⁴ IT: These costs are passed through. Pursuant to ARERA decision 352/2021, they are recovered by a dedicated fund.

²⁵ NL: All direct costs for curtailment (e.g. contract costs or actual deployment of capacity curtailment) are remunerated as pass-through OPEX. All other costs for flexibility services are remunerated as controllable OPEX and capitalised costs, similar to costs for other activities of DSOs.

²⁶ PL: Currently there is no flexibility services market in Poland, and local markets are very small. They are limited to individual locations for which the operators are trying to contract flexibility services.

²⁷ PT: There is a regulatory sandbox regarding flexibility in Portugal (FIRME Project).

²⁸ ES: A project 'Flexibility Solutions for Electricity Distribution Networks (S2F)' is currently being developed in Spain, with the participation of several Spanish DSOs. The project is approved by the Ministry for Ecological Transition and the Demographic Challenge and financed by IDAE, and is implemented within the regulatory sandbox framework established under Royal Decree 568/2022 of 11 July. The S2F project is designed to test the deployment of flexibility services in Spanish electricity distribution networks. Its primary goal is to enhance grid efficiency, accelerate the integration of renewable energy and electric vehicles, and support Spain's decarbonisation strategy. Further it contributes to Spain's broader commitments under the updated National Integrated Energy and Climate Plan (PNIEC), which includes the promotion of local flexibility markets. The sandbox framework allows limited-scale pilots with explicit learning objectives to inform future energy regulation and reduce the risks associated with innovation under uncertainty. The project is a collaborative effort involving all major Spanish DSOs, industry associations, OMIE and academic partners. This multi-actor configuration maximises synergies, ensures diverse perspectives and facilitates cross-learning across regions and network topologies. Approximately 30 demonstrations will be deployed across Spain, covering diverse regions and real operating conditions. These pilots address different grid challenges (e.g., congestion, voltage control, renewable integration) and will test various flexibility service designs in urban, rural and isolated systems such as Melilla.

²⁹ ES: The NRA is currently working on a new regulatory scheme considering flexibility services as a pass-through.

³⁰ The data refers to any regulatory mechanism to remove or reduce CAPEX-(vs. OPEX) bias when the DSO chooses between building infrastructures and deploying flexibility. The question accounts for both DSO costs and the costs of flexibility services.

Country	Mechanism to counter bias towards CAPEX (and thus against flexibility) ³⁰
	FLA: via investment plans ³¹ WAL: -
Bulgaria	No
Croatia	Yes (pass-through OPEX)
Cyprus	N/A
Czechia	No
Denmark	No
Estonia	No
Finland	Yes (both CAPEX and OPEX benchmarking)
France	Yes: non-network investments subject to a total trajectory incentivised within the scope of the sum of OPEX and capital expenditure. In its decision regarding the 2025-2028 network tariff for DSO Enedis, the NRA introduced a new regulatory framework to incentivise flexibility when it is the most cost-effective technical solution, by allowing the DSO to retain part of the savings generated by using flexibility rather than reinforcing the network.
Germany	Yes: applying benchmarking on TOTEX and setting allowed revenues for TOTEX for the regulatory period. But during the course of the regulatory period at the moment only CAPEX can be adjusted annually on a planned basis. Part of the OPEX is treated as pass-through costs that can also be adjusted annually.
Greece	N/A
Hungary	No
Ireland	Yes: the DSO can, upon request, move allowances from CAPEX to OPEX (or vice versa) under the Flexibility Mechanism ³²
Italy	Yes: The former hybrid framework (CAPEX rate of return, OPEX under incentive regulation) has been amended from 1 January 2024 by introducing a transition towards a TOTEX approach, which features a fixed OPEX-CAPEX share.
Latvia	No
Lithuania	N/A
Luxembourg	Via cost benefit analysis (CBA) and business plan integral part of revenue setting methodology ³³
Malta	No
Netherlands	Via investment plans ³⁴
Norway	No
Poland	No
Portugal	Yes (TOTEX approach, benefit-based incentives): The DSO is under a revenue cap on TOTEX (since 2022), with a profit/loss sharing mechanism. One of the aims of implementing the TOTEX approach was to incentivise the DSO to use flexibility solutions as a complementary or alternative option to building infrastructure.
Romania	No
Slovakia	No
Slovenia	Yes
Spain	Yes (TOTEX revenue cap from 2026)
Sweden	No

³¹ BE-FLA: The bias towards CAPEX is primarily counteracted by the trade-off framework between flexibility and investments that DSOs must integrate into their investment plans (and that the regulatory authority must assess). This framework determines the preferred solution in the event of congestion issues.

³² [Commission for Regulation of Utilities. Price review 6. Regulatory framework, 2025.](#)

³³ LU: Generally, if there is an arbitrage to be done between OPEX or CAPEX, it should be considered ex-ante (and monitored ex-post). The operators can always choose the more efficient option as long as they justify it (even ex-post) (CBA on investment alternatives, and CBA for choice between investment and alternatives). There are no barriers to adopt OPEX based solutions and on a case-by-case basis bonuses are possible. Based on the last NDP, no actual evidence of competition between investments and flexibility has been demonstrated by CBAs. Incentives are provided under flexible connection agreements.

³⁴ NL: Mechanism to counter bias towards CAPEX is not applied directly in the Tariff Regulation; however, the NRA requires DSOs to report investment plans bi-annually and evaluates these.

Table 6: Measures implemented or planned to strengthen DSO capabilities for the energy transition³⁵

Country	Measures
Austria	<ul style="list-style-type: none"> Flat-rate OPEX factor applied for smart meters. Fixed budget for R&I amounting to 0.6% of controllable OPEX.
Belgium	BXL: <ul style="list-style-type: none"> KPI indicators for smart grid solutions (digital twin) and meter deployment and communicability. Possibility to request additional cost for R&D. Possibility to request additional cost for the energy transition.
	FLA: <ul style="list-style-type: none"> Contractual framework and acquisition of the NODES-platform.
	WAL: <ul style="list-style-type: none"> Market facilitator (DSO contribute to balancing services mechanisms).
Bulgaria	N/A
Croatia	<ul style="list-style-type: none"> Market facilitator preparing data for energy communities.
Cyprus	<ul style="list-style-type: none"> Smart meters roll out already taking place. Regulatory decision regarding flexibility procurement to be issued.
Czechia	N/A
Denmark	<ul style="list-style-type: none"> DSOs plan network development, digitalisation, and IT security to support active operation and flexibility. Opportunity for DSO to apply for an additional electrification allowance.
Estonia	N/A
Finland	<ul style="list-style-type: none"> Introduction of the flexibility incentive in the 2024 methodology. Pass-through cost for innovation.
France	<ul style="list-style-type: none"> Trajectory of incentivised charges enabling innovation projects (data exploitation & sharing).
Germany	<ul style="list-style-type: none"> Digitalisation index. Energy transition capability by KPI (speed & connected capacity to RES plant).
Greece	<ul style="list-style-type: none"> Incentive for major project (positive impact), energy loss reduction incentive, quality incentive factor.
Hungary	<ul style="list-style-type: none"> New distribution service obligation related to digital citizenship (implementation of NIS-2 cybersecurity measures). Additional cost recognition for compliance with ESG requirements.
Ireland	<ul style="list-style-type: none"> DSO to adopt a whole-of-system approach, leveraging data and digitalisation to enhance capabilities, utilisation of new grid technologies, operational tools and innovation. Strengthened DSO capability through targeted investments: system control, flexibility development, digitalisation, R&D.³⁶
Italy	<ul style="list-style-type: none"> Since 2010, various pilot projects have been launched for smart grids or integration of electromobility and other mechanisms (e.g. for network observability mechanisms). Pilot project for distribution-related flexibility services (2021).
Latvia	<ul style="list-style-type: none"> More investment planned in digitalisation.
Lithuania	<ul style="list-style-type: none"> New smart-meter-based data products.

³⁵ Efforts/measures which have been implemented or planned in the near future to improve DSOs ability to fit for their transforming roles (e.g. active system operator, market facilitator, being more digitalised, facilitator of innovation, etc.) in the energy transition.

³⁶ IE: In the [Price Review 6 Final Determination](#), published in December 2025, the DSO was allowed revenue across a number of workstreams reflecting objectives, preferred outcomes and approaches to delivery set out in the PR6 Strategy Paper. The Strategy Paper, inter alia, asks the DSO to: (i) Adopt a whole-of-system approach, working collaboratively and effectively to jointly address electricity system and customer needs, and deliver whole-of-system solutions to minimise costs. (ii) Leveraging data and digitalisation to enhance capabilities, drive efficiencies, and generate value for customers. (iii) Utilise new grid technologies, operational tools and innovations to enhance capabilities and maximise the use of existing infrastructure, including facilitating maximum use of existing generation. DSO capability is being strengthened through targeted PR6 investments in system control and DMSO functions, flexibility market development, digitalisation (IT, data, smart metering, telecoms), enhanced asset and network management, and R&D/Innovation, supported by agile funding and reopener mechanisms to adapt roles as the active system operator and market facilitator during the energy transition.

Country	Measures
	<ul style="list-style-type: none"> Enabling new market models like flexible connection agreements.
Luxembourg	<ul style="list-style-type: none"> New Methodology for 2025 - 2028: Forward looking business plan for revenue and tariff settings, and also incentives (e.g. smart station development incentive).
Malta	<ul style="list-style-type: none"> Integration of 'last gasp' and 'first breath' smart-meter signals to support faster fault detection and restoration.
Netherlands	<ul style="list-style-type: none"> New regulatory framework for 2027-2031, supporting necessary investments in electricity grids, allowing flexibility in dealing with uncertainties around cost developments during energy transition. (More details about the measures were not provided)
Norway	<ul style="list-style-type: none"> Pass-through costs for digital cooperation. Pass-through costs for R&D.
Poland	<ul style="list-style-type: none"> In the new system ordinance (law act) some provisions from EU Electricity Directive 944/2019 on flexibility are to be included.³⁷ Planned definition of standardised market products for the provision of flexibility and scope, conditions and method of used by DSOs.
Portugal	<ul style="list-style-type: none"> Non-binding opinion about NDP (HV and MV) aims to encourage the DSO to pursue measures to increase the efficiency of its operations.
Romania	<ul style="list-style-type: none"> KPIs related to smart grid development. KPIs related to energy storage and flexibility services. KPIs related to RES integration.
Slovakia	<ul style="list-style-type: none"> Measures to support the deployment of smart metering systems and cybersecurity. Measures to support integration of RES.
Slovenia	<ul style="list-style-type: none"> Cost methodology takes into account smart grids investments' performance. Earmarked funds for R&I projects.
Spain	<ul style="list-style-type: none"> The new regulatory scheme for electricity distribution considered these new roles. (More details about the measures were not provided)
Sweden	N/A

Table 7: Investment trends of DSOs serving at least 100,000 customers

Country	Total investment 2021	Total investment 2024	Total investment 2027 (estimated)	Basis of the Forecast
Austria	1 138 000 000	1 712 000 000	2 039 000 000	Yearly investment forecasts from DSOs
Belgium	BXL: 75 279 675 ³⁸	106 070 656 ³⁹	105 206 560 ⁴⁰	Regional network development plan
	FLA: 615 000 000	1 140 000 000	1 340 000 000 ⁴¹	NDP 2026-2035 submitted by DSO
	WAL: 281 253 748.70	390 215 476.40	632 113 404.31	Annual investment plan considering NDP and market studies
Bulgaria	115 118 389.64	147 470 894.71	No data ⁴²	No data
Croatia	142 300 000	214 000 000	316 000 000	NDP
Cyprus	45 243 000	71 765 000	119 000 000	Remuneration Revenues approved for 2023-2027

³⁷ PL: The system ordinance is elaborated by the Ministry of Energy (ongoing work). Based on the information available, the new ordinance planned to define standardised market products for the provision of flexibility services, together with the specification of the scope, conditions and method of their use by electricity DSOs, taking into account the current and forecasted needs of the electricity system.

³⁸ BE-BXL: Included non-network investments EUR 8 091 307.

³⁹ BE-BXL: Included non-network investments EUR 5 517 883.

⁴⁰ BE-BXL: Only investments in the network.

⁴¹ BE-FLA: Gross investments, excluding connection charges paid by new network users.

⁴² BG: The three-year regulatory period is ending 2026. The next will be for 2027-2029.

Country	Total investment 2021	Total investment 2024	Total investment 2027 (estimated)	Basis of the Forecast
Czechia	901 051 820.39	1 237 495 630.23	1 255 932 013.14 (estimation for 2026) ⁴³	DSO's self-estimate
Denmark ⁴⁴	323 905 462	659 864 784	No data	No data
Estonia	98 000 000	132 000 000	160 000 000 ⁴⁵	DSO's long-term network development plan for 2025-2035 ⁴⁶
Finland	486 000 000	431 000 000	434 000 000	Distribution network development plan (DNDP) (submitted 2024)
France ⁴⁷	4 254 000 000	4 886 000 000	6 548 000 000	DSO's 2035 and 2050 forecast and energy policy objectives
Germany	3 900 000 000 ⁴⁸	8 200 000 000 ⁴⁹	No annual breakdown of estimate (50.1 bn from 2024-2028) ⁵⁰	DNDP
Greece ⁵¹	206 515 144	404 073 044	388 816 596	NDP (5-year projections)
Hungary ⁵²	439 450 000	533 460 000	619 500 000	DSO's plan
Ireland ⁵³	544 390 000	715 610 000	1 278 600 000	Allowed revenue for DSO in Price Review 6 Final Determination ⁵⁴
Italy	3 100 000 000	4 400 000 000	5 500 000 000	DSO ⁵⁵

⁴³ CZ: Estimation for 2026: EUR 1,255,932,013.14.

⁴⁴ DK: Exchange rates: 2021 (0.1338 EUR/DKK) and 2024 (0.1338 EUR/DKK). The investments were calculated as (estimated assets Y) + (depreciation Y) – (assets Y-1).

⁴⁵ EE: According to DSO's DNDP, the optimal scenario for the period until 2035 foresees total investments of around EUR 1.6 billion, which corresponds to an annual average of about EUR 160 million. However, this level is an estimated need and is not currently backed by secured funding or tariff revenues, meaning that the actual investment in 2027 may remain below this optimal level.

⁴⁶ EE: The forecast is based on Elektrilevi's long-term NDP for 2025–2035, which identifies an investment need of approximately EUR 1.6 billion over ten years. This optimal scenario is derived from the company's forward-looking assessments of network condition, reliability targets, expected connection requests, and necessary weather-proofing of the distribution grid. The figure reflects strategic planning assumptions rather than secured financing.

⁴⁷ FR: Data provided refer to DSO Enedis.

⁴⁸ DE: Realised investments, data provided refer to 80 largest DSOs under the NRA's supervision.

⁴⁹ DE: Planned investments, data provided refer to 80 largest DSOs under the NRA's supervision.

⁵⁰ DE: Information available for 82 largest DSOs, who are obliged to publish DNDP. DNDP have a forecast period of five years, ten years and until the year 2045. DNDPs foresee for T+5 the planned investments (for the years 2024 - 2028) equal to EUR 50.1 billion (+ EUR 7 billion replacement investments without expansion of transmission capacity). This number includes all projects which are started in this time period with their total projected cost volume. The DNDP-DSOs have explicitly stated the expenditures will not be evenly distributed over the years.

⁵¹ GR: Data for 2021 and 2024 are expressed in actual real terms.

⁵² HU: Average exchange rate for 2021: 358.52 HUF/EUR, 2024: 395.2 HUF/EUR, and 2027 estimate: 410 HUF/EUR.

⁵³ IE: 2021 and 2024 investments correspond to net contributions. The 2027 estimate corresponds to the high case scenario.

⁵⁴ IE: Forecast based on allowed revenue for DSO in [Price Review 6 Final Determination for 2026-2030](#) (December 2025).

⁵⁵ IT: Expenditure forecast for years 2026-2027 submitted by each large DSO to the NRA in Q4-2025. The part of the forecast regarding distribution and regarding network development activities is required to be in line with the latest edition of the DNDP (which was finalised and published by each DSO in June 2025).

Country	Total investment 2021	Total investment 2024	Total investment 2027 (estimated)	Basis of the Forecast
Latvia	84 660 000	120 252 700	147 976 000	NDP
Lithuania	101 660 000	337 720 000	305 357 000	NDP ⁵⁶
Luxembourg	116 130 650	129 001 113	271 836 137 ⁵⁷	Investment forecast and forward-looking business plans / coherent with DNDP to be published
Malta	13 458 456 ⁵⁸	40 797 550	25 000 000	NDP
Netherlands	1 250 989 960	2 172 341 878	5 550 000 000	DSOs bi-annual investment plans
Norway ⁵⁹	273 580 621	315 884 555	320 450 185	DSO
Poland ⁶⁰	1 358 500 000	2 925 200 000	3 020 859 000	Developments plan
Portugal	382 161 839	508 555 775	685 896 444	DSO
Romania ⁶¹	453 902 960	606 160 680	881 978 297	Investment plan for the 2025-2029
Slovakia	210 000 000	303 000 000	280 000 000	Supporting documents from the 2025 tariff proposal of large DSOs
Slovenia	140 600 000	220 300 000	364 100 000	DSO's investment plan for 2024-2028 based on 10-years NDP
Spain	1 505 000 000	1 788 000 000	2 122 000 000	APS 26-28 DNDPs ⁶²
Sweden ⁶³	1 339 000 000	1 298 000 000	1 519 000 000	DSO ⁶⁴

Table 8: Remuneration- and incentive-related revenues of DSOs serving at least 100,000 customers (2020-2024) (EUR)

Country / jurisdiction	Year	Remuneration-related revenues	Incentive-related net revenues	Impact of incentives ⁶⁵ (%)	Incentive-related gross rewards	Incentive-related gross penalties
Austria	2024	1 858 000 000	N/A	N/A	N/A	N/A
	2023	1 652 000 000				
	2022	1 771 000 000				
	2021	1 412 000 000				
	2020	1 322 000 000				
	2024	264 487 767	3 183 481	1.19	3 297 157	113 676

⁵⁶ LT: Year 2027 forecast data are taken from DSO ten-year development plan, which is based on the country's energy strategic documents (National Energy and Climate Action Plan, National Energy Independence Strategy, etc.); the principles of network modernisation and development and the strategies of other related sectors.

⁵⁷ LU: 2027 network development plans are impacted by the restructuring of the 65 kV, the transition to 110 kV, as well as investments triggered by the new 220 kV and 380 kV lines at transmission level.

⁵⁸ MT: 2021 and 2024 data is based on historic data.

⁵⁹ NO: Average exchange rate 2021: 11.7285 NOK/EUR, 2024: 11.7285 NOK/EUR, and 2027: 11.7285 NOK/EUR.

⁶⁰ PL: Average exchange rate for 2021: 4.5994 PLN/EUR, 2024: 4.273 PLN/EUR, and 2027: 4.2 PLN/EUR.

⁶¹ RO: Exchange rate used for 2021, 2024 and 2027: 5 LEI/EUR.

⁶² ES: The information is based on the APS 26-28 DNDPs, which were submitted on 30 April 2025 (latest available). According to Law 24/2013 of 26 December, distribution companies are obliged to submit the DNDPs before 1 May of year n for the following three-year period (n+1, n+2 and n+3).

⁶³ SE: Average exchange rate 2021: 10.15 SEK/EUR, 2024: 11.53 SEK/EUR, and 2027: 11.09 SEK/EUR.

⁶⁴ SE: The forecast is reported by the DSOs used for the preliminary revenue cap for the regulation period 2024-2027.

⁶⁵ Impact of incentives (positive or negative) = incentive-related net revenues (positive or negative) / remuneration-related revenues

Country / jurisdiction	Year	Remuneration-related revenues	Incentive-related net revenues	Impact of incentives ⁶⁵ (%)	Incentive-related gross rewards	Incentive-related gross penalties
Belgium - Brussels	2023	235 257 473	5 065 897	2.11	5 078 677	12 780
	2022	212 541 632	2 488 819	1.16	2 575 399	86 580
	2021	203 559 516	875 343	0.43	908 518	33 175
	2020	201 994 380	469 162	0.23	602 160	132 998
Belgium - Flanders ⁶⁶	2024	1 798 038 619.87	N/A	N/A	N/A	N/A
	2023	1 674 141 751.67	N/A	N/A	N/A	N/A
	2022	1 675 705 638.33	N/A	N/A	N/A	N/A
	2021	2 085 522 537.17	N/A	N/A	N/A	N/A
	2020	2 190 631 688.56	N/A	N/A	N/A	N/A
Belgium - Wallonia	2024	781 096 630	N/A	N/A	N/A	N/A
	2023	851 739 874	N/A	N/A	N/A	N/A
	2022	755 435 749	N/A	N/A	N/A	N/A
	2021	720 035 555	N/A	N/A	N/A	N/A
	2020	734 122 988	N/A	N/A	N/A	N/A
Bulgaria	2024	No data	N/A	N/A	N/A	N/A
	2023	No data	N/A	N/A	N/A	N/A
	2022	No data	N/A	N/A	N/A	N/A
	2021	No data	N/A	N/A	N/A	N/A
	2020	No data	N/A	N/A	N/A	N/A
Croatia ⁶⁷	2024	No data	N/A	N/A	N/A	N/A
	2023	No data	N/A	N/A	N/A	N/A
	2022	No data	N/A	N/A	N/A	N/A
	2021	No data	N/A	N/A	N/A	N/A
	2020	No data	N/A	N/A	N/A	N/A
Cyprus	2024	133 866 600	N/A	N/A	N/A	N/A
	2023	123 447 000	N/A	N/A	N/A	N/A
	2022	110 716 000	N/A	N/A	N/A	N/A
	2021	96 503 000	N/A	N/A	N/A	N/A
	2020	98 476 000	N/A	N/A	N/A	N/A
Czechia	2024	1 824 100 465.63	5 561 271.19	0.30	229 047 413.21	0
	2023	1 632 255 435.42	3 798 218.41	0.23	3 798 218.41	0
	2022	1 603 983 389.04	3 996 721.02	0.25	3 996 721.02	0
	2021	1 541 550 416.31	2 849 290.14	0.18	2 849 290.14	0
	2020	1 558 384 503.05	1 245 053.21	0.08	1 245 053.21	0
Denmark ⁶⁸	2024	1 141 531 156.90	No data		No data	No data
	2023	1 046 338 303.44	No data		No data	No data

⁶⁶ BE-FLA: These incentives (and this cap and floor) were newly introduced in 2025.

⁶⁷ HR: According to the methodology, the amount of the price incentive or the quantity incentive is applied for the first time in 2026 for the year 2025, when determining the tariff items for 2027.

⁶⁸ DK: exchange rate used: 0.13 EUR/DKK

Country / jurisdiction	Year	Remuneration-related revenues	Incentive-related net revenues	Impact of incentives ⁶⁵ (%)	Incentive-related gross rewards	Incentive-related gross penalties
	2022	1 191 782 855.80	No data		No data	No data
	2021	815 609 733.65	No data		No data	No data
	2020	791 422 183.57	No data		No data	No data
Estonia ⁶⁹	2024	289 636 064	N/A	N/A	N/A	N/A
	2023	286 755 509	N/A	N/A	N/A	N/A
	2022	232 579 042	N/A	N/A	N/A	N/A
	2021	209 599 201	N/A	N/A	N/A	N/A
	2020	209 599 201	N/A	N/A	N/A	N/A
Finland ⁷⁰	2024	1 174 390 737	25 263 860	2.11	32 123 698	6 859 838
	2023	1 080 527 721	94 719 969	8.06	100 722 784	6 002 815
	2022	872 148 847	65 096 825	6.95	65 786 530	689 705
	2021	1 077 146 575	69 193 399	6.04	72 868 860	3 675 461
	2020	1 062 562 098	30 153 435	2.76	46 463 118	16 309 683
France	2024	17 647 000 000	-112 000 000		17 000 000	95 000 000
	2023	17 243 000 000	11 000 000	0.06	38 000 000	27 000 000
	2022	16 361 000 000	40 000 000	0.24	81 000 000	41 000 000
	2021	No data	No data		No data	No data
	2020	No data	No data		No data	No data
Germany ⁷¹	2024	29 900 000 000	-700 000		20 100 000	20 800 000
	2023	22 400 000 000	10 600 000	0.05	29 000 000	18 400 000
	2022	19 900 000 000	10 300 000	0.05	28 300 000	18 000 000
	2021	19 000 000 000	10 600 000	0.06	28 700 000	18 100 000
	2020	19 300 000 000	11 000 000	0.06	27 400 000	16 400 000
Greece	2024	974 179 000	-6 420 960		0	6 420 960
	2023	918 411 000	17 330 503	1.85	22 630 076	4 243 002
	2022	781 851 000	40 042 129	4.87	75 042 129	No data
	2021	782 446 000	16 180 164	2.03	19 254 386	No data
	2020	457 335 000	No data		No data	No data
Hungary ⁷²	2024	1 412 000 000	2 200 000	0.16	2 200 000	0
	2023	1 807 000 000	1 700 000	0.09	1 700 000	0
	2022	913 000 000	1 400 000	0.15	1 400 000	0
	2021	880 000 000	1 400 000	0.16	1 400 000	0
	2020	884 000 000	2 300 000	0.26	2 300 000	0
Ireland	2024	1 192 410 000	-10 690 000		12 200 000	22 890 000

⁶⁹ EE: There are no incentives in Estonia, but they are under development.

⁷⁰ FI: The figures exclude TSO charges that are passed through from customers to the TSO via the DSOs.

⁷¹ DE: Number for 80 largest DSOs under BNetzA's supervision. According to data for the year of the cost assessment (2021) CAPEX equals about 65% of the revenue cap. Incentive-related revenues include Quality Regulation and Efficiency Bonus.

⁷² HU: Exchange rates: 2020: 351.17 HUF/EUR, 2021: 358.52 HUF/EUR, 2022: 391.33 HUF/EUR, 2023: 381.95 HUF/EUR, 2024: 395.2 HUF/EUR.

Country / jurisdiction	Year	Remuneration-related revenues	Incentive-related net revenues	Impact of incentives ⁶⁵ (%)	Incentive-related gross rewards	Incentive-related gross penalties
	2023	1 044 800 000	-7 140 000		0	7 140 000 ⁷³
	2022	866 830 000	5 870 000	0.67	12 400 000 ⁷⁴	6 530 000
	2021	932 910 000	-12 170 000 ⁷⁵		3 310 000	15 480 000
	2020	854 900 000	-15 640 000 ⁷⁶		3 090 000	18 730 000
Italy	2024	5 735 255 554	18 022 212	0.31	120 382 675	102 360 463
	2023	4 981 886 150	-134 830 936	-2.71%	23 353 549	158 184 485
	2022	4 842 405 631	-4 371 609	-0.09%	36 560 240	40 931 849
	2021	5 064 072 367	22 651 993	0.45	61 401 145	38 749 152
	2020	5 033 762 055	42 891 456	0.84	73 582 682	30 691 226
Latvia ⁷⁷	2024	359 882 500	N/A	N/A	N/A	N/A
	2023	348 719 200	N/A	N/A	N/A	N/A
	2022	339 719 200	10 773 800	2.15	N/A	N/A
	2021	311 377 100	6 840 000	3.07	N/A	N/A
	2020	293 881 000	N/A	N/A	N/A	N/A
Lithuania	2024	No data	N/A	N/A	N/A	N/A
	2023	No data	N/A	N/A	N/A	N/A
	2022	No data	N/A	N/A	N/A	N/A
	2021	No data	N/A	N/A	N/A	N/A
	2020	No data	N/A	N/A	N/A	N/A
Luxembourg ⁷⁸	2024	304 082 643	1 147 991	0.38	1 211 775	63 784
	2023	390 590 372	332 427	0.09	332 427	0
	2022	206 992 543	-457 185		78 808	535 993
	2021	191 291 906	-2 117 567		349 506	2 467 073
	2020	194 969 097	-395 401.46		139 361.41	534 762.87
Malta	2024	79 676 785.26	N/A	N/A	N/A	N/A
	2023	74 782 573.32	N/A	N/A	N/A	N/A
	2022	74 079 251.00	N/A	N/A	N/A	N/A
	2021	68 539 693.00	N/A	N/A	N/A	N/A
	2020	63 847 907.37	N/A	N/A	N/A	N/A
Netherlands	2024	5 564 802 223 ⁷⁹	Not separately identifiable ⁸⁰			
	2023	4 376 628 687				
	2022	3 109 555 723				
	2021	2 862 457 989				
	2020	2 608 948 566				
Norway ⁸¹	2024	1 597 039 690	35 730.57		44 133.35	8 402.78
	2023	1 367 666 965	23 357.12	0.002	27 568.23	4 211.11
	2022	1 705 983 374	13 920.11	0.001	26 309.76	12 389.65
	2021	1 463 501 556	30 713.13	0.002	33 480.58	2 767.45
	2020	1 254 922 795	5 025.04		28 056.36	23 031.32

⁷³ IE: True up/down on 2021 performance. Forecast which was included in the 2022 decision.

⁷⁴ IE: Assumed 2021 performance.

⁷⁵ IE: 2020 results + clawback of EUR 8 million relating to 2019.

⁷⁶ IE: 2020 results + clawback of EUR 8 million relating to 2018.

⁷⁷ LV: For 2024 and 2023, no efficiency set, in 2020 no efficiency regulation in methodology.

⁷⁸ LU: The values refer to the integrated TSO-DSO, as the TSO (Creos) also functions as the largest DSO.

⁷⁹ NL: These revenues do not include the connection charges (connecting new users to the grid).

⁸⁰ NL: Although the DSOs revenues do include incentive-related revenue for improving grid quality, these amounts are not readily separable from the base revenue. This incentive is implemented as a "q-factor", which roughly is a percentage with which the base revenue is raised/lowered. The q-factor for large DSOs ranges from -0.3 to +0.25 for large DSOs, which means that the order of magnitude is a couple of million euros per large DSO per year.

⁸¹ NO: The exchange rate used is 11.7285 NOK/EUR.

Country / jurisdiction	Year	Remuneration-related revenues	Incentive-related net revenues	Impact of incentives ⁶⁵ (%)	Incentive-related gross rewards	Incentive-related gross penalties
Poland ⁸²	2024	9 748 916 000	No data		No data	No data
	2023	9 161 451 000	No data		No data	No data
	2022	5 644 549 000	No data		No data	No data
	2021	5 428 888 000	No data		No data	No data
	2020	No data	No data		No data	No data
Portugal	2024	1 191 460 779.66	43 337 643.98	3.51	43 337 643.98	0
	2023	1 162 253 199.53	33 612 622.64	2.81	33 553 255.39	0
	2022	1 126 233 235.97	23 506 010.09	0.21	23 506 010.09	0
	2021	1 122 342 994.20	5 098 612.41	0.45	11 919 612.41	6 821 000.00
	2020	1 092 578 503.55	5 679 944.21	0.52	9 505 944.21	3 826 000.00
Romania ⁸³	2024	1 420 975 125	305 026	0.02	305 026	N/A
	2023	1 392 956 793	11 140 786	0.79	11 140 786	N/A
	2022	1 215 237 360	8 312 135	0.68	8 312 135	N/A
	2021	1 148 039 753	6 420 282	0.56	6 420 282	N/A
	2020	1 109 826 179	6 513 663	0.58	6 513 663	N/A
Slovakia ⁸⁴	2024	899 242 000 000	N/A	N/A	N/A	370 587.89
	2023	1 073 251 000 000 000	N/A	N/A	N/A	248 878.25
	2022	917 573 000 000	N/A	N/A	N/A	275 219.41
	2021	817 466 000 000	N/A	N/A	N/A	392 757.72
	2020	887 700 000 000	N/A	N/A	N/A	311 841.31
Slovenia	2024	359 640 000	1 540 000	0.43	3 580 000	2 040 000
	2023	375 550 000	2 780 000	0.73	2 960 000	180 000
	2022	237 550 000	2 710 000	1.13	2 860 000	150 000
	2021	305 240 000	4 820 000	1.55	5 950 000	1 130 000
	2020	285 370 000	3 740 000	1.29	3 740 000	0
Spain ⁸⁵	2024	4 923 000 000*	No data		No data	No data
	2023	4 923 000 000*	No data		No data	No data
	2022	4 923 000 000	-440 000*		13 400 000*	13 800 000*
	2021	4 881 000 000	44 000 000*	0.98	44 000 000*	0

⁸² PL: Exchange rate: 4.5994 PLN/EUR (2021), 4.6899 PLN/EUR (2022), 4.3480 PLN/EUR (2023) and 4.2730 PLN/EUR (2024).

⁸³ RO: Controllable cost incentives and investment incentives (no penalties). Exchange rates: 5 LEI/EUR (2020-2024). In addition, there are compensatory payments that have a supporting function in quality regulation, which aims to incentivise DSOs to increase the level of compliance with quality standards. These payments are not related to regulated revenues of DSOs.

⁸⁴ SK: No incentive-based remuneration system in place for large DSOs. Compensation payments have a supporting function in quality regulation, which aims to incentivise regulated entities to increase the level of compliance with quality standards and to make investments that will ensure the growth of safety, stability and development of the regulated entities' infrastructure.

⁸⁵ ES: *Provisional remuneration until final remuneration approval. Year Investments (n-2) Year remuneration-related revenues (n) remuneration.

Country / jurisdiction	Year	Remuneration-related revenues	Incentive-related net revenues	Impact of incentives ⁶⁵ (%)	Incentive-related gross rewards	Incentive-related gross penalties
	2020	4 873 000 000	41 000 000*	0.83	41 180 000*	90 000
Sweden ⁸⁶	2024	N/A	N/A	N/A	N/A	N/A
	2023	3 200 000 000	10 000 000		41 000 000	57 000 000
	2022	3 547 000 000	49 000 000	1.36	70 000 000	42 000 000
	2021	3 296 000 000	44 000 000	1.32	62 000 000	32 000 000
	2020	2 832 000 000	36 000 000	1.26	46 000 000	17 000 000

Table 9: Application of cap and/or floor to incentives of DSOs serving at least 100,000 customers

Country	Cap and/or floor to the total amount of incentives	Has this cap increased or decreased in recent years?	Is this cap planned to increase or decrease in upcoming years?
Austria	N/A	N/A	N/A
Belgium	BRX ⁸⁷ : Individual caps on some incentives ⁸⁸	BRX: Increased ⁸⁹	BRX: Likely decrease ⁹⁰
	FLA: Yes ⁹¹	FLA: N/A (these incentives were introduced in 2025)	FLA: Increase ⁹²
	WAL: Individual caps on some incentives ⁹³	WAL: N/A	WAL: Increase ⁹⁴
Bulgaria	N/A	N/A	N/A
Croatia	No	N/A	N/A
Cyprus	No	N/A	N/A
Czechia	Individual caps on some incentives ⁹⁵		
Denmark	Yes ⁹⁶	Increased	Likely increase
Estonia ⁹⁷	N/A	N/A	N/A
Finland	Individual caps on each incentive ⁹⁸	No change	No change

⁸⁶ SE: Exchange rates: 2020: 10,54 SEK/EUR, 2021: 10.15 SEK/EUR, 2022: 10.63 SEK/EUR, 2023: 11.48 SEK/EUR, 2024: N/A. The values on incentive-related revenues refers to three incentives for efficient use of the network and good security of supply. Additionally, the regulation includes an incentive for cost efficiency which is only one-sided (a requirement/penalty). Lastly, it should be noted that the incentive-related net revenue (the sum of gross reward and penalty) is restricted to 1/3 of the total rate of return.

⁸⁷ BE-BXL: The information applies to the tariff methodology for 2025-2029.

⁸⁸ BE-BXL: Incentive (reward or a penalty) for smart meter roll out: +/- 1.5% on the WACC return. Forecasts set it at +/- EUR 13.680.523. Other KPIs range from EUR -1.327.000 to EUR +1.491.000. Revenue cap TOTEX with a sharing ratio of 100%: the DSO keeps/pays the total difference between the actual and forecasted costs.

⁸⁹ BE-BXL: It increased substantially due to the smart meters roll-out incentive.

⁹⁰ BE-BXL: After the smart meters roll out, it will most likely decrease in the next tariff methodology

⁹¹ BE-FLA: Cap: EUR 25 689 910.44, Floor: EUR -28 258 901.49.

⁹² BE-FLA: As the cap and the floor will be adjusted with inflation and additional incentives will be applied.

⁹³ BE-WAL: 9 key KPIs have been defined for the 2025-2029 period (3 directly managed, 3 will be managed as from 2027 and the final 3 as from 2028. The maximum (in case of an increase) / minimum (in case of a decrease) value of the term "quality" for each DSO and for each year depends on the objectives achieved each year and will be capped at a maximum/minimum of twice the financial incentive for the objective. The financial incentive for year N corresponds to the maximum/minimum value determined based on achieving 100% of all objectives for year N. Elec: + or EUR - 4 806 000 (2029).

⁹⁴ BE-WAL: Yes, according to implementation of KPI during the period => 3 steps: 2025, 2027 and 2028. Elec: 2025-2026: + or – EUR 1,141,000; 2027: EUR 2,223,000; 2028-2029: EUR + or – 4,806,000.

⁹⁵ CZ: [Price Regulation Rules for the Regulatory Period 2021–2025 for the Electricity Sector, Gas Sector, the Activities of the Market Operator in Electricity and Gas, and for Mandatory Off-Takers](#), 2020 (in Czech).

⁹⁶ DK: Revenue-cap regulation based on the actual cost of the given DSO and efficiency benchmarking, and quality-of-supply incentives.

⁹⁷ EE: In 2025, there are no incentives yet, but they are under development.

⁹⁸ FI: Individual caps on each incentive Bonus and sanction under the OPEX efficiency incentive and the quality incentive are capped at 20% and 15% respectively of annual allowed return (the limit has been set ex-ante, does

Country	Cap and/or floor to the total amount of incentives	Has this cap increased or decreased in recent years?	Is this cap planned to increase or decrease in upcoming years?
France	Individual caps on each incentive ⁹⁹	Increased ¹⁰⁰	N/A
Germany	Individual caps on each incentive ¹⁰¹	No change	N/A
Greece	No	N/A	N/A
Hungary	No	N/A	N/A
Ireland	Yes ¹⁰²	Decreased ¹⁰³	Increase ¹⁰⁴
Italy	Cap/floor to some incentives ¹⁰⁵	Slightly reduced or newly introduced in recent regulatory period ¹⁰⁶	N/A ¹⁰⁷
Latvia	N/A (no incentives)	N/A	N/A
Lithuania	N/A	N/A	N/A
Luxembourg	Yes ¹⁰⁸		N/A ¹⁰⁹
Malta	No	N/A	N/A
Netherlands	No	N/A	N/A
Norway	No	N/A	N/A
Poland	N/A	N/A	N/A

not require separate reopening of the methodology). Innovation incentive is capped at 0.5% of total revenue and flexibility incentive at 1% of total revenue. No cap/floor on CAPEX efficiency incentive.

⁹⁹ FR: Incentives are capped by type of regulation, i.e. quality of supply, quality of service, etc.

¹⁰⁰ FR: For the new network tariff period, the caps of each type of regulation have been increased to match the increasing revenue of the DSO and keep a constant level of incentivisation.

¹⁰¹ DE: For efficiency benchmark: a floor of 60% for the respective efficiency rate is applied. DSOs with efficiency rate >100% are eligible to receive an efficiency bonus. For Quality Regulation: Bonus / penalty is limited to 4% of the revenue cap.

¹⁰² IE: Maximum reward: EUR 45.76m (5.1% of total revenues). Maximum penalty: EUR -43.54m (4.8% of total revenues), values in 2019 prices. More information can be found in [PR5 Regulatory Framework, Incentives and reporting](#) (December 2020).

¹⁰³ IE: The cap above has decreased in recent years. In 2020 (the final year of Price Review 4 which runs from 2016-2020), the DSO's maximum reward was EUR 53.02m and maximum penalty was EUR -74.25m (2014 prices). This represented a maximum reward of 6% of revenues and a maximum downside of 8.41%. [Reporting and Incentives under Price review 4](#) (May 2018).

¹⁰⁴ IE: As per the Price Review 6 Final Determination, the maximum reward and penalty has increased for 2026-2030 to +67.50m / -64.36m (2024 prices). This represents a maximum reward of 1.65% of DSO regulated equity, and a maximum annual downside of EUR 64.36m, which is 1.57% of the DSO regulated equity. [Price Review 6 Final Determination for 2026-2030](#) (December 2025).

¹⁰⁵ IT: There are limits to several incentive mechanisms. The most significant ones are the symmetrical cap/floor for continuity of supply (4 EUR/year for each LV user served by the DSO, which means a theoretical whole country cap/floor of about 150 million EUR/year) and the cap to the reward-only incentives for DNDP projects with benefits over costs (around EUR 11 for each LV user for the 3-year period 2025-2027).

¹⁰⁶ IT: Until 31 December 2023 the cap/floor for continuity had a much more complex formulation. From 2024, it was simplified, made symmetrical and overall slightly reduced. The cap for network development incentives (and the mechanism itself) did not exist in the regulatory period 2020-2023.

¹⁰⁷ IT: The cap and floors are valid until 31 December 2027 (end of the current regulatory period). When they apply on a yearly basis, they are kept constant across the years.

¹⁰⁸ LU: Art 9 of ILR/E24/18 of 18 June 2024 sets the minimum value for dedicated incentive the biggest range being [-1 %*RAV*WACC but all in all art 8(4) set a collar for all efficiency gains (boni)/losses (mali) For each year of the regulation period, the cumulative efficiency loss or gain resulting from the application of paragraphs 1 and 2 of Article (8) regarding efficiency and performance incentives may not exceed 15% of the cost of capital in absolute terms. ≤ EUR -20 000.; 1 %*RAV*WACC ≥ EUR 20 000.]. These limits apply to all network operators.

¹⁰⁹ LU: The methodology is fixed for 2025-2028.

Country	Cap and/or floor to the total amount of incentives	Has this cap increased or decreased in recent years?	Is this cap planned to increase or decrease in upcoming years?
Portugal	Yes ¹¹⁰ (quality services and losses incentive)	Increase (fixed cap with a loss reduction incentive component that grows 5% per annum from the base value of EUR 6 million)	From 2026 onwards, an aggregate incentive has been defined ¹¹¹
Romania	No	N/A	N/A
Slovakia	No	N/A	N/A
Slovenia	Individual caps on each incentive	N/A	N/A
Spain	Yes ¹¹²	No	Increase ¹¹³
Sweden	Yes ¹¹⁴	No	Likely to change ¹¹⁵

Table 10: Potential limits of the DSO grid investments.

Country / jurisdiction	Ex-ante budget approvals or caps for some cost/revenues	Efficiency benchmarking for DSO costs	Reopener mechanism / ex-ante defined condition for ex-post changes	Include investment cost in RAB ahead of commissioning	Debt ceiling or other limits for DSO access external financing
Austria	Yes (revenue cap on OPEX, indexed annually) ¹¹⁶	Yes (TOTEX benchmarking) ¹¹⁷	Yes (potentially variable parameters following legal changes) ¹¹⁸	Yes (recognition of planned CAPEX with annual actual-	No ¹²⁰

¹¹⁰ PT: EUR 36 000 000. In the Incentive for Innovation and New Services in LV Facilities a unit price is paid for each smart meter integrated into the grid.

¹¹¹ PT: The aggregated incentive is designated as an incentive to improve the technical performance of the distribution network, which includes four incentives: i) Incentive To Reduce Losses with a component capped at EUR 14 million; ii) Incentive for Improving Service Continuity with a cap of EUR 9 million, iii) Incentive for Allocating Injection Capacity in the Network (access with restrictions) with an annual maximum number of hours with restrictions and iv) the Incentive for Innovation and New Services keeps the same conditions.

¹¹² ES: for the year 2025 the cap is 7% [3%+4%], and the floor: -7% [-3%-4%] *Individual cap/floor limits. Sector values are established at +- 4%.

¹¹³ ES: In 2026 and 2027 (for investment 2024 and 2025) cap is 8% [4%+4%] and floor is -8% [-4%-4%]* Individual cap/floor limits. Sector values are established at +- 4%.

¹¹⁴ SE: The total amount of the three incentives each year cannot exceed one third of the return of assets (the same year). The incentive for cost efficiency has no similar cap/floor, but varies between 1.00-1.82% of controllable OPEX, depending on the individual DSOs inefficiency level.

¹¹⁵ SE: Possibly there will be a change from 2028, because the incentives will be adjusted and balanced to the cost-efficiency-incentive in TOTEX.

¹¹⁶ AT: For OPEX a detailed cost review is carried out every five years before the start of a new regulatory period, which is used to determine an OPEX cost base. This "OPEX budget" is indexed annually with a target consisting of a general productivity factor (Xgen) and an individual productivity factor (Xind). No ex-ante budget approval or cap is applied for CAPEX. CAPEX are recognised in advance based on planned investments and subsequently rolled up with actual investments.

¹¹⁷ AT: Based on the benchmarking analysis, each DSO is assigned an efficiency value. This efficiency value is the key parameter for determining an individual productivity target for OPEX (Xind) and calculating a company-specific return (WACC) for investments made up to the cost review year on which the benchmark analysis was based.

¹¹⁸ AT: In the 5th regulatory period (2024-2028), the system of potentially variable parameters was implemented to be able to acknowledge for legal changes during the regulatory period.

¹²⁰ AT: However, if the equity is less than 36% of total capital, the WACC rate for the net-equity (which is granted to DSOs) will be reduced.

Country / jurisdiction	Ex-ante budget approvals or caps for some cost/revenues	Efficiency benchmarking for DSO costs	Reopener mechanism / ex-ante defined condition for ex-post changes	Include investment cost in RAB ahead of commissioning	Debt ceiling or other limits for DSO access external financing
				cost reconciliation) ¹¹⁹	
Belgium - Brussels	Yes (revenue cap on TOTEX, indexed annually) ¹²¹	No	Yes (total revenue in exceptional cases; controllable costs upon DSO request) ¹²²	Yes (investments enter the RAB when invoices are received)	No
Belgium - Flanders	Yes (revenue cap on TOTEX ¹²³ ; uniform frontier shift efficiency factor 1.1%) ¹²⁴	No	Yes (for non-controllable costs, defined in the tariff methodology) ¹²⁵	Yes (assets under construction are included in the RAB)	No
Belgium - Wallonia	Yes (Ex-ante budget approval) ¹²⁶	Yes (annual benchmark ex-ante applied efficiency factor on controllable-OPEX)	Yes (for both controllable and non-controllable costs; different conditions) ¹²⁷	No	No
Bulgaria	Yes (ex-ante approved budget for CAPEX) ¹²⁸	No	No	No	No

¹¹⁹ AT: During the current 5th regulatory period, a fundamental change was made to the recognition of planned CAPEX with subsequent planned/actual roll-up. Capital costs are therefore no longer recognized based on a t-2 time lag but will be recognized in advance based on planned investments and subsequently rolled up with actual investments. This system change is intended to synchronize the compensation of capital costs. The reason for the adjustment is the increase in network investments.

¹²¹ BE-BXL: The TOTEX cap for the first year of the regulatory period (2025) is approved ex ante by the NRA and then indexed for the others years of the regulatory period (2026-2029)

¹²² BE-BXL: The total revenue can be reopened for exceptional circumstances as stated in the tariff methodology. It is as well possible for the DSO to introduce a request for additional (controllable) costs during the regulatory period. The request must be accepted by the NRA and relies on a business plan.

¹²³ BE-FLA: Ex-ante revenue cap for total controllable costs, including operational expenditure, depreciation costs and capital costs (RABxWACC), set by the regulator based on a multi-year tariff methodology (2025-2028).

¹²⁴ BE-FLA: uniform frontier shift efficiency factor of 1.1% is applied to the revenue cap for total costs. The frontier shift is derived from a Total Factor Productivity (TFP) analysis using the growth accounting database EU KLEMS. The applied frontier shift is based on historical productivity improvements, observed over full business cycles, of companies active in competitive sectors in Belgium and The Netherlands, with activities similar to those carried out by DSOs.

¹²⁵ BE-BXL: e.g., transmission tariffs paid by the DSO, the costs of specific public service obligations such as the compulsory purchase of green certificates and combined heat and power certificates) are directly passed through in the network tariffs.

¹²⁶ BE-WAL: the NRA approves the DSOs remuneration-related revenues (CAPEX (depreciation+REMCI), OPEX, pass through and taxes) for 5 years. At the end of each year, the NRA controls the real costs of each DSO for the past year and only non-controllable costs can lead to a correction of the initial revenue.

¹²⁷ BE-WAL: For the not controllable costs, a recovery mechanism is included in the methodology. For the controllable costs, the NRA has defined in its regulation different situation which could lead to a re-opening on the approved revenue (e.g. increase of at least 2% of the revenue due to exceptional circumstances, at least 10% increase of the global peak of the low voltage grid, etc.)

¹²⁸ BG: for the regulatory period (usually 3 years) and makes ex-ante adjustments in case of non-performance of CAPEX.

Country / jurisdiction	Ex-ante budget approvals or caps for some cost/revenues	Efficiency benchmarking for DSO costs	Reopener mechanism / ex-ante defined condition for ex-post changes	Include investment cost in RAB ahead of commissioning	Debt ceiling or other limits for DSO access external financing
Croatia	Yes (ex-ante budget approval)	Yes (NRA assesses certain DSO costs against efficiency standards or comparable benchmarks)	No	Yes (investments which received the occupancy permit)	No
Cyprus	Yes	No	Yes (at the request of DSO)	No	No
Czechia	Yes (revenue cap for OPEX)	Yes (annual quality of supply assessment with reward/penalty)	Yes (revenues might be adjusted with a mechanism called "Market factor")	Yes (return on unfinished investments under specified conditions)	No
Denmark	Ex-post cap applies ¹²⁹	Yes (cost benchmarking under revenue-cap regulation)	N/A	No	No
Estonia	No	No	N/A	No	No
Finland	No ¹³⁰	Yes (efficiency benchmarking separately for OPEX ¹³¹ and CAPEX ¹³² and applied for bonus/sanction)	Yes (adjustment of the year-specific unit prices used for the evaluation of the investments) ¹³³	Yes (return on assets in commissioning or under construction) ¹³⁴	No ¹³⁵

¹²⁹ DK: In Denmark, there is currently no ex-ante budget approval. Revenue caps are determined ex-post. For each new five-year period, there is a cost frame cap, which cannot exceed 105% of the actual cost in previous period.

¹³⁰ FI: For OPEX, innovation related expenditure is allowed to be essentially passed through up to 0.5% of annual DSO revenue. Flexibility related expenditure passed through up to 1%.

¹³¹ FI: For controllable OPEX the cost frontier is estimated by using the StoNED-method determining allowed costs for an individual DSO annually. The efficiency incentive's bonus/sanction is capped at 20% of annual allowed return. Non-controllable operational costs are treated as pass-through costs (consists mainly of electricity purchases to cover network losses and TSO related charges).

¹³² FI: For CAPEX, a component specific unit price list is used to value the assets in the RAB. The year specific unit prices set the efficiency benchmark. Investments not covered by the unit price list are valued at actual costs and are therefore not part of the efficiency benchmarking, but this is a small share of total network assets. No cap on the bonus or sanction.

¹³³ FI: There are ex-ante defined conditions for finalising and freezing the year-specific unit prices used for the valuation of investments made during the regulatory period. Actual investment prices in the middle of the regulatory period are used as base and then inflated backward or forward using consumer price index for the investments made in the first and fourth year of the 4-year regulatory period.

¹³⁴ FI: assets in commissioning are allowed the regulatory rate of return, and commissioned assets are allowed the rate of return plus depreciation starting from the year of commissioning, not only from the next year onwards.

¹³⁵ FI: As part of the application for a DSO network license, and in maintaining that license, each DSO must ensure that its level of indebtedness remains controlled and at sustainable levels, as part of maintaining overall financial soundness. The Energy Authority monitors these financial indicators, conducts inquiries, and may require corrective actions from the DSO if the indicators suggest an excessive level of indebtedness. There is no fixed threshold, but each case is assessed individually.

Country / jurisdiction	Ex-ante budget approvals or caps for some cost/revenues	Efficiency benchmarking for DSO costs	Reopener mechanism / ex-ante defined condition for ex-post changes	Include investment cost in RAB ahead of commissioning	Debt ceiling or other limits for DSO access external financing
France	Yes (for controllable OPEX) ¹³⁶	Yes (for OPEX) ¹³⁷	Yes (pass-through mechanism for non-controllable OPEX ¹³⁸ and reopener mechanism in case of legal changes with a significant cost impact ¹³⁹)	Yes (only for substations, only the cost of debt) ¹⁴⁰	No
Germany	Yes (allowed revenues are determined by NRA, but annual adjustments based on pre-defined factors, including approved CAPEX for planned investments, etc.)	Yes (for TOTEX) ¹⁴¹	Yes (CAPEX mark-up for planned investments ¹⁴² ; non-controllable costs are pass-through costs; volatile costs ¹⁴³ can be adjusted on an annual basis).	Yes (return on assets under construction) ¹⁴⁴	No
Greece	Yes (ex-ante set allowed revenue for 4 years, including revenue cap on controllable OPEX)	No ¹⁴⁵	Yes (approved controllable OPEX is subject to ex-post)	Yes (return on assets under construction) ¹⁴⁸	70% ceiling on the actual gearing ratio

¹³⁶ FR: The NRA sets a multi-year trajectory of controlled operational expenses. Other operational expenses and all capital expenditures (except the non-network related capital expenditures beyond the ex-ante cap) are not controlled and are guaranteed to the DSO.

¹³⁷ FR: Efficiency is systematically assessed, by the NRA itself or by a consultant, for operational expenses on the basis of, for instance, controlled operational expenditure per customer, or per km of network)

¹³⁸ FR: list of eligible charges determined in the decision for the tariff period, after a yearly assessment, and guaranteed to the DSO.

¹³⁹ FR: i.e. exceeding 1% of total operational expenses.

¹⁴⁰ FR: Ahead of commissioning, substations are the only investments in construction that are remunerated at the cost of debt.

¹⁴¹ DE: benchmarking is implemented for approximately 200 biggest Electricity DSO.

¹⁴² DE: DSOs can adjust their allowed revenues for CAPEX incurred on planned investments on an annual basis

¹⁴³ DE: Redispatch/ Congestion Management Costs, Price for procurement of energy losses, market-based procurement of reactive power): price and/or volume.

¹⁴⁴ DE: CAPEX mark-up; assets under construction are remunerated.

¹⁴⁵ GR: Benchmarking is applied for specific WACC parameters (Gearing, Market Risk Premium, Beta factor).

¹⁴⁸ GR: Investment costs for projects that are still under construction (Work in Progress) are included in the RAB and they receive return (WACC nominal, pretax).

Country / jurisdiction	Ex-ante budget approvals or caps for some cost/revenues	Efficiency benchmarking for DSO costs	Reopener mechanism / ex-ante defined condition for ex-post changes	Include investment cost in RAB ahead of commissioning	Debt ceiling or other limits for DSO access external financing
			settlement ¹⁴⁶ ; ex-post clearance if the approved implementation schedule of major project is not met ¹⁴⁷		
Hungary	Yes (ex-ante approved cost, ex-post correction in case of deviation) ¹⁴⁹	Yes (Benchmark values are set for specific cost categories. ¹⁵⁰ The NRA may set a tolerance range around the benchmark. ¹⁵¹ The unjustified costs are removed from the recognised cost base.) ¹⁵²	Yes (ex-post reconciliation reflecting actual investments) ¹⁵³	Yes (return on assets under construction) ¹⁵⁴	No
Ireland	Yes (ex-ante allowed revenue for 5-year period, with	Yes (Frontier Shift as combination of Real Price	Yes (allowed baseline revenues and	No	No

¹⁴⁶ GR: Ex-Post Clearance via Parameter P6i of the Required Revenue, while the general principle mandates no retrospective clearance, specific deviations from the approved OPEX are subject to ex-post settlement through the parameter P6 of the Required Revenue. The Operator does not benefit from cost reductions that are not expected to be maintained long-term (Non-Permanent Savings). This includes cost reductions resulting from the non-implementation (wholly or partly) of specific necessary actions, such as deferred maintenance or limited metering. This measure ensures that cost reduction resulting from failing to implement activities necessary for effective and efficient network operation is not treated as genuine efficiency savings.

¹⁴⁷ GR: Incentive for Major Projects: Ex-Post Clearance. If the approved implementation schedule is not met, the NRA may consider scaling down this additional return.

¹⁴⁹ HU: The NRA sets the recognised costs through the calculation of the RAB, the Cost of Capital, and the recognised Depreciation. The RAB is split into short-term (RAB≤5) and long term (RAB>5) components, each multiplied by its yield factor. Depreciation is similarly predefined ex-ante based on forecast asset values and planned capitalisations, adjusted for deferred income. If actual data differ from the plan, the Regulator applies ex-post corrections to the Cost of Capital and depreciation. The ex-post correction is mandatory in all cases where the actual investment data, their timing, financing source, or asset type submitted by the DSO do not match the plan based on which the ex-ante tariffs were determined.

¹⁵⁰ HU: Benchmark values are set for specific cost indicators of each sub-activity, with the aim of identifying the least-cost level while also considering acceptable differences between licensees and required service levels (e.g., SAIDI, SAIFI).

¹⁵¹ HU: Costs within this range are accepted, while costs above the benchmark (or above the tolerance band) are considered inefficient.

¹⁵² HU: In addition, when indexing operating costs, the NRA reduces the composite price index by an expected efficiency improvement of 0.5-1.5 percentage points, applied annually as an efficiency incentive.

¹⁵³ HU: The recognised depreciation and the cost of capital are revised annually to reflect the actual capitalised investment value; deviations from planned investment levels are passed through in the following year's allowed revenues.

¹⁵⁴ HU: The value of unfinished investments in construction is incorporated into the RAB and earns a return during the construction period, but no depreciation is applied until the assets are commissioned.

Country / jurisdiction	Ex-ante budget approvals or caps for some cost/revenues	Efficiency benchmarking for DSO costs	Reopener mechanism / ex-ante defined condition for ex-post changes	Include investment cost in RAB ahead of commissioning	Debt ceiling or other limits for DSO access external financing
	annual revenue process allowing adjustments on a yearly basis) ¹⁵⁵	Effects and Ongoing Efficiency to controllable OPEX) ¹⁵⁶	high allowance) ¹⁵⁷		
Italy	No ¹⁵⁸	No ¹⁵⁹	Yes (WACC include yearly update clause based in ex-ante set formulas and the check of a triggering conditions) ¹⁶⁰	No (investments during construction receive a separate remuneration, but they are not included in the RAB yet)	No
Latvia	No	No ¹⁶¹	Yes (reconciliation of the planned and the actual revenues; unforeseen costs due to regulatory acts;	No ¹⁶³	No

¹⁵⁵ IE: Commission for Regulation of Utilities, Price Review Six. Distribution Revenue 2026-2030 (December 2025).

¹⁵⁶ IE: For the DSO, the CRU assumed a 1% ongoing efficiency challenge. The CRU applies a combination of Real Price Effects and Ongoing Efficiency (collectively known as 'Frontier Shift') to the DSO's controllable operational expenditure. This amounts to a 0.2% net increase in forecast OPEX allowance for the period from 2026-2030.

¹⁵⁷ IE: Price Review 6 introduced reopener mechanisms. The DSO is allowed baseline revenues and a 'high' allowance that can be accessed through reopener mechanisms. The Price Review 6 reopener mechanisms for the DSO provide a framework for access to an additional EUR 1.82 billion for the 2026-2030 period. The mechanisms include inter alia volume drivers, specific reopeners, regulatory change reopeners, OPEX/CAPEX flexibility.

¹⁵⁸ IT: No budget limits or any other caps on capital expenditures set by the NRA (neither by other institutions).

¹⁵⁹ IT: The 11 large DSOs are requested to publish unit investment costs (for the most frequently used assets) in an annex to the DNDP. And an efficiency assessment is set out for the largest DSO, which is submitting a 2-year Business Plan (2026-2027) to the NRA in January 2026.

¹⁶⁰ IT: Regarding CAPEX, the WACC regulatory period 2022-2027 include a yearly update clause, based on ex-ante set formulas and the check of a triggering condition. If the condition is triggered, the WACC for the years 2026 and 2027 can be different that the WACC set for 2025 (first year of the WACC semi-period 2025-2027). For 2026-2027, there will be a new fixed OPEX CAPEX share for each DSO (the previous one was set for 2024-2025). In addition, regarding OPEX (if in scope of this question), there are some pass-through (around 2% of total allowed revenues), there is an ex-post Y-factor accounting for unexpected exogenous events and there is an ex ante approved Z-factor accounting for OPEX increases due to impacts of the energy transition on DSOs.

¹⁶¹ LV: Starting from 2026, efficiency is set as mandatory. It is set at 50 percent of the projected consumer price index for the next calendar year following the year of determining efficiency. It cannot be lower than zero and higher than 1.5 percent of the total capital and operating costs. At the moment that it is the operator's own choice.

¹⁶³ LV: The RAB value calculation uses the balance sheet value of the assets or their parts at the end of the year from the latest publicly available annual financial statement. E.g., if the tariff draft is submitted in 2025, then the calculations include the remaining value of the RAB as of 31 December 2024 for the entire regulatory period.

Country / jurisdiction	Ex-ante budget approvals or caps for some cost/revenues	Efficiency benchmarking for DSO costs	Reopener mechanism / ex-ante defined condition for ex-post changes	Include investment cost in RAB ahead of commissioning	Debt ceiling or other limits for DSO access external financing
			emergency situations). ¹⁶²		
Lithuania	Yes (Price cap for a 5-year regulatory period with annual adjustments)	When approving investment projects, the NRA performs an economic assessment of investment alternatives.	Yes (If the defined conditions change, a reassessment of investment projects may be carried out)	No	No ¹⁶⁴
Luxembourg	Yes (Ex-ante maximum allowed revenue ¹⁶⁵)	Yes (unit cost assessment over time and comparison with peers)	Yes (allowed revenue is subject to reconciliation) ¹⁶⁶	Yes (referred as work in progress – WiP receiving WACC nominal pretax)	Ex-ante fixed gearing ratio of 50% ¹⁶⁷
Malta	No	No	No	No	No

¹⁶² LV: Allowed revenues for regulatory period could change if the regulatory invoice exceed predetermined value in the tariff methodology. Regulatory invoice records the difference between the planned revenues and the actual revenues during the tariff period after the end of the tariff period, as well as the unforeseen costs incurred due to changes in external regulatory acts or the prevention of emergency situations in the previous tariff period. If the actual revenues are less than the planned revenues, the balance of the regulatory invoice shall be negative, and this shall increase the costs of the system service for the next tariff period. If the actual revenues are greater than the planned revenues, the balance of the regulatory invoice shall be positive, and this shall reduce the costs of the system service for the next tariff period. Justified unforeseen costs (uncontrollable) incurred due to changes in external regulatory acts or the prevention of emergency situations in the previous tariff period shall increase the costs of the system service for the next tariff period.

¹⁶⁴ LT: When approving investment projects, an assessment of the company's financial capacity is carried out.

¹⁶⁵ LU: Regulation ILR/E24/18 of 18 June 2024 (2025-2028) base the revenue process approval on a forward-looking budget. Each year Tariffs and maximum allowed revenue are set based on comprehensive budgets for the next year.

¹⁶⁶ LU: Regulation ILR/E24/18 of 18 June 2024 Article 10: (1) The maximum allowed revenue is reviewed annually for the previous year in order to determine the revised maximum allowed revenue and any discrepancies between actual and forecast figures. The calculation of the revised figure, the detailed analysis of developments and the justification of the differences between actual and forecast figures shall give rise to a detailed update of the elements referred to in Article 3 of these Regulations, in particular the budget note and the report template. (2) As part of the revision of the maximum allowed revenue, the forecast value of the operating expenses listed in Annex 4 shall be replaced by the actual value, provided that it meets the criteria set out in Article 4(2) of this Regulation. (3) The analysis of the differences between actual and forecast figures shall identify all factors contributing to the differences and distinguish between differences caused by the network operator and other sources of differences. The aim is to neutralise differences caused by external developments and to decide on the differences caused by the actions of the network operator in order to determine how these differences are to be allocated. Budgeted expenditure using a method of extrapolating historical data shall be adjusted by updating the appropriate parameters of the extrapolation formula. Specifically budgeted expenditure, using a method that describes the objectives to be achieved with the budget and the means implemented to achieve them, is adjusted by updating the descriptions and cost drivers. (4) The network manager must be able to explain and justify any differences between actual expenditure and forecast expenditure and make the relevant adjustments to forecast expenditure. These adjustments also concern transfers between operating expenses and investment expenditure and vice versa, and temporary delays.

¹⁶⁷ LU: Regulation ILR/E24/18 of 18 June 2024 Article 6 and Annex 3: Remuneration percentage is fixed ex-ante based on a gearing of 50%. It leaves freedom to operator to finance the activity, but capital costs are covered through a fixed ex-ante WACC.

Country / jurisdiction	Ex-ante budget approvals or caps for some cost/revenues	Efficiency benchmarking for DSO costs	Reopener mechanism / ex-ante defined condition for ex-post changes	Include investment cost in RAB ahead of commissioning	Debt ceiling or other limits for DSO access external financing
Netherlands	No	Yes (Yardstick regulation) ¹⁶⁸	Yes (unforeseen events) ¹⁶⁹	No	No (law sets financing requirements for DSOs)
Norway	No	Yes (Data Envelopment Analysis, DEA)	No, yearly calculations apply	No	No
Poland	Yes (to cover justified costs and RoC justified level)	Yes (quality regulation)	Yes (ex-post reconciliation via regulatory account) ¹⁷⁰	Yes (planned investments for year t are included in RAB for years t+1)	
Portugal	Yes (revenue cap on TOTEX) ¹⁷¹	Yes ¹⁷²	Profit/loss sharing mechanism ¹⁷³	No	No ¹⁷⁴
Romania	Yes (cap for controllable OPEX costs based on a comparative analysis across DSOs)	Yes (for large DSOs) ¹⁷⁵	Yes (special expenses from legal obligations) ¹⁷⁶	No	No
Slovakia	Yes	No	Yes (upon NRA initiative) ¹⁷⁷	No	No

¹⁶⁸ NL: ACM applies yardstick regulation to the DSOs. The efficient costs are determined by calculating the average cost per standardised volume over all Dutch DSOs. Moreover, historical efficiency improvements are taken into account and are incorporated in an "x-factor", which roughly is a percentage with which the base revenue is raised/lowered. Pass-through costs such as TSO charges are excluded from efficiency benchmarking.

¹⁶⁹ NL: Allowed revenue can be adjusted during a regulatory period if unforeseen events occur that significantly change DSOs costs and that DSOs cannot (fully) control (e.g., correction to costs for network losses from 2022 onwards).

¹⁷⁰ PL: A regulatory account has been introduced. It is the difference between the planned regulated revenue for the year t and the actual revenue from the licensed activity in the year t. The balance of this account, negative or positive, is included in the tariff for the year t+2.

¹⁷¹ PT: The DSO's activity is regulated under a revenue cap on TOTEX, and estimated investment is included in the TOTEX definition. For MV and HV, the investments considered in these forecasts are those derived from the approved NDP or, if not yet approved, from ERSE's non-binding opinion on the NDP. Whenever ERSE issues its opinion, it evaluates the investment plan in terms of purpose, efficiency, cost, and structure. For LV investments, ERSE analyses the DSO forecasts using the same criteria.

¹⁷² PT: ERSE applies efficiency benchmarking and other efficiency assessments to DSO costs as part of its regulatory framework for setting allowed revenues and incentive regulation. The X-factor applied to TOTEX is based on previous DEA and SFA analyses, as well as the Malmquist index. This X-factor is not applicable to the CAPEX component of the TOTEX cost base associated with assets added to the RAB before 01-01-2022; therefore, the X-factor is not retroactive on the CAPEX component.

¹⁷³ PT: In Portugal there is in place a profit/loss sharing mechanism, calculated after the end of the regulatory period, which compares the real rate of return and the WACC defined by ERSE.

¹⁷⁴ PT: DSO concession contracts do not specify any limits. ERSE has encouraged regulated companies to follow efficient financing policies, and this principle is set out in the current Tariff Code.

¹⁷⁵ RO: The costs of inefficient DSOs are corrected in relation to the costs found to be efficient in the comparative analysis.

¹⁷⁶ RO: Special expenses resulting from the fulfilment of legal obligations, such as cybersecurity requirements are passed through ex-post.

¹⁷⁷ SK: The regulatory authority has the possibility to initiate a tariff procedure when a significant change occurs in the pricing conditions

Country / jurisdiction	Ex-ante budget approvals or caps for some cost/revenues	Efficiency benchmarking for DSO costs	Reopener mechanism / ex-ante defined condition for ex-post changes	Include investment cost in RAB ahead of commissioning	Debt ceiling or other limits for DSO access external financing
Slovenia	Yes (revenue cap) ¹⁷⁸	For grid developer companies ¹⁷⁹	Yes ¹⁸⁰	No	No ¹⁸¹
Spain	Yes (annual sectoral cap of 0.13% of the expected GDP (PIB) for the year, distributed among companies in proportion to their remuneration in the previous year) ¹⁸² ; additional strategic fund is under evaluation for anticipatory investments. ¹⁸³	No	No ¹⁸⁴	No	Penalty for large DSO whose ratios fall outside the value ranges set by NRA ¹⁸⁵

¹⁷⁸ SI: Revenue cap considering controllable OPEX (efficiency score, general productivity), uncontrollable OPEX, CAPEX (depreciation, regulated return on assets), losses, consumption, incentives and efficiency dependent WACC (for old assets (till 2020): value of RAB * efficiency dependent WACC, for new assets (from 2021): value of RAB * nominal pre-tax WACC).

¹⁷⁹ SI: The NRA performs an efficiency benchmarking across the 5 distribution grid developer companies from whom the single DSO is leasing the grid

¹⁸⁰ SI: The mechanism for reopening the regulatory framework (within the regulatory period) is provided for in both the law and the Act on the Methodology for Determining the Regulatory Framework for Electricity Operators, but the NRA has not yet applied it. Each year, after the end of the regulatory year, the NRA adjusts the parameters previously set in the regulatory framework by calculating deviations from the regulatory framework and thus determining the actual parameters.

¹⁸¹ SI: To calculate Pre-tax WACC nominal the NRA considers the debt share of 40%, equity share of 60%. The WACC calculated in this way applies to the entire regulatory period.

¹⁸² ES: This amount is currently under review, and the proposal submitted by the Ministry for public consultation introduces a more flexible dual, two-level strategic approach to the model. Firstly, it retains the base limit of 0.13% of the PIB. Secondly, it introduces an additional strategic fund that enables this limit to be increased by a fixed annual amount, pending approval by the Ministry.

¹⁸³ ES: An additional fund is intended for specific purposes related to Spanish energy policy. It includes EUR 1.540 million for the electricity distribution sector between 2026 and 2030, which is reserved for anticipatory investment, the transport decarbonisation programme and voltage control initiatives.

A draft royal decree defining anticipatory investments is currently undergoing approval by the Ministry. The NRA considers that decisions on such investments should not rest solely with DSOs but should be taken by the competent authorities, in coordination with regional administrations, to ensure network efficiency. Given that part of the transport-decarbonisation investments will derive from obligations under EU regulations and may be deemed strategic, they should be addressed separately. The recently published Sustainable Mobility Law 9/2025 establishes coordinated planning obligations for ensuring the necessary electricity supply infrastructure in ports. In line with European Commission recommendations, the NRA proposes that anticipatory investments be included in DSO plans only after a coordinated process among competent authorities, the NRA, and network operators based on plausible future-development assumptions.

¹⁸⁴ ES: In the new methodology additional costs can be considered due to new obligations which can arise during the regulatory period. However, these costs have to be previously approved by the NRA.

¹⁸⁵ ES: For the purpose of incorporating a principle of financial prudence, the new methodology establishes a penalty for large DSO whose ratios fall outside the recommended value ranges set in a CNMC Communication

Country / jurisdiction	Ex-ante budget approvals or caps for some cost/revenues	Efficiency benchmarking for DSO costs	Reopener mechanism / ex-ante defined condition for ex-post changes	Include investment cost in RAB ahead of commissioning	Debt ceiling or other limits for DSO access external financing
Sweden	Yes (preliminary revenue cap for 4 years based on forecasted costs)	Yes (controllable OPEX is based on a historical level and reduced by a DSO specific efficiency requirement 1.00-1.82%, derived from benchmarking) ¹⁸⁶	Yes (reconciliation of the revenue cap based on actual costs, adjusted for incentives, non-controllable OPEX is pass-through) ¹⁸⁷	No	No

Note: "Yes" means that the measure applies to at least one DSO. The debt ceiling and limits do not account for WACC gearing.

Table 11: National practices to assess DSO grids constraints.

Country	Legal or regulatory requirement for DSOs to monitor the utilisation of the grid?	DSOs to publish hosting capacity maps (for production, for load or for both)	DSOs to publish information on connection queues	DSOs to carry out load flow studies or other relevant simulations on the expected utilisation of the DSO grids or their constraints	DSOs to do real-time grid monitoring
Austria	Yes ¹⁸⁸	Yes (for production, new law foresees both directions)	No	Yes (for connection requests)	Yes (HV-grid)
Belgium	BXL: Yes	BXL: Work in progress	BXL: No	BXL: Yes (digital twin results) ¹⁸⁹	BXL: Yes (except some LV grids)

1/2019, of 23 October, on the definition of ratios for assessing the level of indebtedness and the economic-financial capacity of companies engaged in regulated activities, and on the recommended value ranges applicable to such ratios.

¹⁸⁶ SE: It is based on historical controllable OPEX and CAPEX.

¹⁸⁷ SE: After the regulatory period the preliminary revenue cap will be replaced by the definitive revenue cap, based on actual costs, adjusted for incentives. Controllable OPEX is based on historical costs but are reduced yearly by the cost-efficiency incentive. Non-controllable OPEX is pass-through. When calculating CAPEX, the investments and disposals of assets during the RP are forecasted by the system operators prior to the period and corrected for the actual outcome ex post. Forecasted Investments and disposals are reported for every six-month period. The RoR is decided by a WACC method which is applied to the age-adjusted RAB. The different costs are adjusted for inflation to have the same price level. Any deviations from the revenue cap will be added to the cap in the next RP. The value of the RAB is primarily determined using catalogue costs set by the NRA, as a way to estimate the replacement value for all assets. In total there are 17 asset categories in the asset base with six different depreciation periods for which the asset base is adjusted before calculating the operators' allowed return.

¹⁸⁸ AT: Legal requirement to DSOs to (1) estimate load flows and ensure the technical safety of the network, (2) legal requirement to identify network bottlenecks and take actions to mitigate them, (3) legal requirement for DSOs to publish available and booked capacities for each substation at network level 4 and to update this information quarterly.

¹⁸⁹ BE-BXL: For long term (2040-2050) the DSO uses results of the digital twin. For short and medium term, the DSOs extrapolate the long-term needs.

Country	Legal or regulatory requirement for DSOs to monitor the utilisation of the grid?	DSOs to publish hosting capacity maps (for production, for load or for both)	DSOs to publish information on connection queues	DSOs to carry out load flow studies or other relevant simulations on the expected utilisation of the DSO grids or their constraints	DSOs to do real-time grid monitoring
	FLA: No ¹⁹⁰	FLA: Yes (for HV) ¹⁹¹	FLA: No	FLA: Yes (HV grid) ¹⁹²	FLA: Yes (HV grid via DMS)
	WAL: No ¹⁹³	WAL: Yes (for generation)	WAL: Not yet	WAL: Yes	WAL: Not yet
Bulgaria	No	No	No	No	No
Croatia	Yes (for load at substations)	Yes (for generation and battery storage)	No	Yes	Yes (via SCADA)
Cyprus	No	Yes (for production)	No	Yes (load flow studies in the context of TYDP)	No
Czechia	Yes	Yes (for generation)	No	No data	Yes
Denmark	Yes ¹⁹⁴	No	Yes ¹⁹⁵	Yes	Yes
Estonia	No	Yes (for generation at MV level) ¹⁹⁶	No	No data	Yes (via SCADA)
Finland	Yes (about available capacity)	Yes (for both generation and load) ¹⁹⁷	Yes ¹⁹⁸	NRA has no information	NRA has no information
France	No data	Yes	Yes	Yes	Yes
Germany	No	No	Yes	Yes	Yes (except LV)
Greece	N/A	Published by the NRA, for RES generation	No	N/A	Yes (via SCADA)

¹⁹⁰ BE-FLA: No explicit legal requirement, but monitoring of the utilization of the grid is implicitly stimulated by following legal obligations for DSOs (among others): managing, maintaining, and developing, under economic conditions, a safe, reliable, and efficient network that respects the environment and the energy efficiency of the network, and providing the necessary support services for this; maintaining sufficient network capacity to meet the electricity and natural gas needs of customers connected to its network and to enable the transmission of electricity and natural gas to the distribution networks;

¹⁹¹ BE-FLA: https://opendata.fluvius.be/pages/map_perceel/

¹⁹² BE-FLA: On the low voltage distribution grid tools are used for long-term scenario analyses.

¹⁹³ BE-WAL: No explicit legal requirement, but some relevant information is published in the NDPs

¹⁹⁴ DK: DSOs are legally required to monitor grid utilisation for operation, congestion management, and investment planning.

¹⁹⁵ DK: Large DSO in Denmark publish information on connection queues, mainly for new production connections as well as carry out load flow studies and perform real-time grid monitoring of the grid.

¹⁹⁶ EE: The largest DSO publishes an interactive MV-level map showing available capacity on medium-voltage lines. However, the map displays only generation-oriented available capacity above 200 kW. No load-oriented hosting capacity and no LV-level hosting capacity are published.

¹⁹⁷ FI: The available capacity must be expressed with sufficient geographical accuracy. Most DSOs have presented maps for both production and load.

¹⁹⁸ FI: DSOs are required to give information about the progress of requested connection every three months until the connection request is fully processed.

Country	Legal or regulatory requirement for DSOs to monitor the utilisation of the grid?	DSOs to publish hosting capacity maps (for production, for load or for both)	DSOs to publish information on connection queues	DSOs to carry out load flow studies or other relevant simulations on the expected utilisation of the DSO grids or their constraints	DSOs to do real-time grid monitoring
Hungary	Yes ¹⁹⁹	No (list of LV level circuits where PV installations are allowed only without injection is available on NRA website)	No, but special legislative framework to manage connection capacity needs at MV and HV levels	Yes ²⁰⁰	Yes (at HV and MV levels via SCADA)
Ireland	Yes (80% of visibility of MV target by 2030) ²⁰¹	No (but DSO publish an availability capacity heatmap) ²⁰²	Yes (quarterly lists of connections under live assessments)	Yes	Yes
Italy	No ²⁰³	Yes (on usage/availability of capacity at HV/MV) ²⁰⁴	No	Yes ²⁰⁵	Yes ²⁰⁶
Latvia	No	Yes (for both generation and load) ²⁰⁷	No	N/A	Yes
Lithuania	Yes ²⁰⁸	Yes (for both generation and load)	Yes	Ongoing pilot project ²⁰⁹	Yes (HV and MV level via Distribution)

¹⁹⁹ HU: DSOs are legally required to monitor the utilisation of their grids. In particular, they must track the difference between the available capacity and the allocated (contracted) capacity.

²⁰⁰ HU: These calculations are used both for network development planning and for case-by-case investigations of connection requests (e.g. withdrawal capacity) at all voltage levels. Based on the result, DSOs identify network bottlenecks that may require grid reinforcement or the use of flexibility services.

²⁰¹ IE: PR5 introduced a Visibility Incentive for ESB Networks to have 50% visibility of the LV Network by 2025. In the Price Review 6 Final Determination, the CRU has set a target of 80% visibility of the MV Network by 2030, with further targets to be set within period (see Table 15 of the [Price Review Six. Regulatory Framework.](#))

²⁰² IE: The availability capacity heatmap provides an indication of the available transformer capacity at substations. The map indicates transformer capacity only. It does not guarantee the same capacity is available in the upstream networks. The heatmap is a snapshot, representing a moment in time, of a continually changing network system.

²⁰³ IT: The DSOs have to communicate to the NRA (and to the TSO) some data for each HV/MV transformer, esp. max power and yearly energy.

²⁰⁴ IT: pursuant to ARERA regulatory order 99/2008.

²⁰⁵ IT: Some DSOs do simulations or other analysis within the dis-NDP, the distribution network development incentives and/or the pilot projects for flexibility.

²⁰⁶ IT: DSOs may monitor current flows or power flows, but there are no regulatory requirements for that. The DSOs are obliged to monitor the status of MV network breakers.

²⁰⁷ LV: <https://karte.sadalestikls.lv/lv/briva-jauda>

²⁰⁸ LT: DSOs are legally required to monitor the network condition and loads in order to avoid overloads and ensure reliability.

²⁰⁹ LT: Ongoing pilot project will deliver for limited number of grid locations digital platform that enables the ESO to analyse current grid behaviour, anticipate future loading, and assess the impact of growing EV, heat pump, and PV adoption. By integrating accurate historical modelling with advanced scenario forecasts, the solution strengthens planning capabilities, enhances visibility of upcoming constraints, and supports more efficient, flexible, and reliable grid development.

Country	Legal or regulatory requirement for DSOs to monitor the utilisation of the grid?	DSOs to publish hosting capacity maps (for production, for load or for both)	DSOs to publish information on connection queues	DSOs to carry out load flow studies or other relevant simulations on the expected utilisation of the DSO grids or their constraints	DSOs to do real-time grid monitoring
					Management System (DMS) ²¹⁰
Luxembourg ²¹¹	No	No (in development)	No	Yes	Yes (smart substations plan by 2030).
Malta	No	Yes (for both generation and load at each substation) ²¹²	No	Yes (for MV) ²¹³	Yes (for MV via SCADA) ²¹⁴
Netherlands	Yes (every 2 years for grid investments)	Yes ²¹⁵	Yes ²¹⁶	Yes (when declaring congestion) ²¹⁷	Yes (on higher grid levels) ²¹⁸
Norway	No	Yes	Yes (via national TILKO platform)	Yes (most DSOs)	Yes
Poland	No ²¹⁹	No	Yes (entities with a rated voltage higher than 1 kV, connection location, etc)	Yes ²²⁰	Yes (high-voltage grids fully monitored and controllable in real time, medium-voltage)

²¹⁰ LT: Understood as the real-time observation of network power quality measurements (current, voltage, etc.) Data from all 110 kV and 35 kV substations, as well as from the 10 kV and 35 kV lines (feeders) extending from them. Also ~58% of distribution points is also monitored. In addition to power quality data, the positions of switching devices (circuit breakers, controlled disconnectors) and the operation of relay protection systems are also monitored in real time. Monitoring is also performed on parts of the low-voltage network, but in the context of flexibility services the data of switching devices is not relevant. Real-time network power quality monitoring is not performed in the low-voltage (LV) network. In the LV network, data are collected from smart meters; these data are gathered once per day and are used not for real-time monitoring, but for network planning, forecasting the need for flexibility services, analytics, predictive maintenance and etc. ESO is currently implementing a project in which alarms about voltage interruptions recorded by smart meters will be transmitted to the DMS in near real time.

²¹¹ LU: The largest DSO is also the TSO; in consequence the company monitors assets availability and utilisation rates, however there is no specific legislation for DSOs on this matter. For the same reason, the largest DSO also carry out load flows or other relevant simulations on expected utilisation of the grids and perform some real-time monitoring (there is a plan in place to make all substations smart by 2030).

²¹² MT: <https://enemalta.com.mt/available-capacity/>

²¹³ MT: Load flow studies are performed for the MV grid using summer and winter system peak loads recorded to execute necessary network reinforcements ensuring N-1 redundancy.

²¹⁴ MT: Real-time LV visibility is being enhanced through the integration of smart-meter signals, and through ongoing integration of AMM, GIS, and other systems to improve situational awareness and planning

²¹⁵ NL: <https://www.netbeheernederland.nl/netcapaciteit-en-flexibiliteit/capaciteitskaart>

²¹⁶ NL: <https://www.netbeheernederland.nl/netcapaciteit-en-flexibiliteit/capaciteitskaart>

²¹⁷ NL: When declaring congestion, system operators should show their flow calculation for the expected use of the grid.

²¹⁸ NL: DSOs monitoring of lower levels is expected in 2029.

²¹⁹ PL: The publication of the information on available connection capacity in power stations or in groups of these stations in HV grid is mandatory for the DSO.

²²⁰ PL: DSO analyses network flows and models the future state of the network as part of Development Plans and network analyses for new connections to the distribution network. Additionally, at the operational level, DOS conducts network analyses to identify threats and eliminate potential network problems.

Country	Legal or regulatory requirement for DSOs to monitor the utilisation of the grid?	DSOs to publish hosting capacity maps (for production, for load or for both)	DSOs to publish information on connection queues	DSOs to carry out load flow studies or other relevant simulations on the expected utilisation of the DSO grids or their constraints	DSOs to do real-time grid monitoring
					to a relatively large extend)
Portugal	Yes (annually submitted to NRA)	Yes (for production)	Yes (aggregated information is published) ²²¹	Yes (simulations carried out for the NDP)	Yes (to guarantee reliable operation)
Romania	Yes ²²²	TSO publishes available capacity maps for production for each distribution grid zone.	Yes ²²³	Yes	No
Slovakia	No	No	No	NRA has no information	Yes
Slovenia	Yes ²²⁴	Yes ²²⁵	No	Yes (for HV and MV)	Ongoing work to renovate distribution control centres and introduce DMS and ADMS for the entire distribution network.
Spain ²²⁶	No	Yes (for both generation and demand)	Yes	Yes	No

²²¹ PT: In Portugal the DSO publishes aggregated information reflecting the impact of connection queues, notably through public maps showing allocated and remaining hosting capacity for generation. However, detailed project-by-project connection queue information (e.g. queue positions or individual requests) is not published. For load connections, no public queue information is provided.

²²² RO: DSOs are legally required to monitor the operational safety of electrical distribution networks as well as the performance indicators of the distribution service.

²²³ RO: Some DSOs are publishing lists with information regarding grid connection of RES producers. Also, the TSO publishes regularly the information on connection queues (grid connection permit, grid connection contract, grid connection certificate, installed power and grid connection solution, such as voltage level/substation), including at the distribution level, based on information provided by the DSOs.

²²⁴ SI: NRA requires the DSO to monitor certain key performance indicators in its regulatory methodology, including the network capacity utilization indicator. The indicator monitors the average load on network elements in relation to their maximum permissible load, namely for HV/MV transformers and MV/LV transformers. The indicator that monitors the average load on network elements in relation to their maximum permissible load, namely for HV/MV transformers and MV/LV transformers, is one of the performance indicators used to calculate the investment performance incentive.

²²⁵ SI: DSO is obliged to perform an analysis of the capacity of distribution system nodes and publish the results in a NDP. In addition, DSO's web application provides a geographical overview of possible connection points for connecting production facilities over 50 kW. More information can be found in: <https://geoportal.si/gisapp/sodokart?public=on&lang=sl>.

²²⁶ ES: For the calculation of available connection capacity, hourly measurements from the past five years are used to assess actual network utilisation. Flexible access permits are designed to enable greater use of the network during periods of lower utilisation or to allow consumption to be curtailed when the network becomes saturated.

Country	Legal or regulatory requirement for DSOs to monitor the utilisation of the grid?	DSOs to publish hosting capacity maps (for production, for load or for both)	DSOs to publish information on connection queues	DSOs to carry out load flow studies or other relevant simulations on the expected utilisation of the DSO grids or their constraints	DSOs to do real-time grid monitoring
Sweden	Yes (linked to incentives) ²²⁷	No (some relevant information is available in the NDPs)	Yes (on voluntary basis)	The NRA has no information	Yes (most DSOs)

Note: "Yes" means that the measure applies to at least one DSO.

Each system operator publishes this information on its respective platform, and a standardised format has now been established through a dedicated resolution to ensure consistent publication across all operators.

Although Article 32 of Directive (EU) 2019/944 assigns NRA the responsibility for reviewing DNDPs, this provision has not yet been fully transposed into national law, making it difficult at this stage to establish specific indicators.

The recently approved Circular 8/2025 of 22 December provides that the NRA supervises DNDPs (Article 17), requires distributors to report on the degree of compliance with their plans (Article 18.1), and mandates the NRA to approve the content and format of the information to be submitted for monitoring purposes (Article 19.2).

Besides, a draft royal decree regulating aspects related to the approval of these investment plans is in the final stages of adoption. The NRA considers it essential that this regulatory framework completes the transposition of Article 32 of Directive (EU) 2019/944, which requires network development plans to include an assessment of the use of demand response, energy efficiency measures, and other resources that may serve as alternatives to network expansion.

Also note that the recent Circular 8/2025 already includes incentives for the integration of existing installations into the distribution network, enabling the use of existing infrastructure without the need for additional investments.

²²⁷ SE: the incentive for efficient use of the network is based on annual report of the "Utilization rate of the grid".

List of tables

Table 1: Number of electricity DSOs by country, early 2025	2
Table 2: Customer concentration in small and large DSOs, end 2024.....	3
Table 3: Ownership unbundling of DSOs serving at least 100,000 customers ('large DSOs'), 2024.....	4
Table 4: Flexibility services from local markets procured by DSOs serving at least 100,000 customers	5
Table 5: Mechanism to counter bias towards CAPEX	6
Table 6: Measures implemented or planned to strengthen DSO capabilities for the energy transition..	8
Table 7: Investment trends of DSOs serving at least 100,000 customers.....	9
Table 8: Remuneration- and incentive-related revenues of DSOs serving at least 100,000 customers (2020-2024) (EUR).....	11
Table 9: Application of cap and/or floor to incentives of DSOs serving at least 100,000 customers ...	16
Table 10: Potential limits of the DSO grid investments	18
Table 11: National practices to assess DSO grids constraints.....	27