GERMAN DATACENTER ASSOCIATION

Consultation

of the Federal Ministry
for Digital and State Modernization
on the national data center strategy

Positions of the GDA for a National Data Center Strategy

1 Introduction

On 21 August 2025, the Federal Ministry for Digital and State Modernization (BMDS) launched a consultation to develop a national data center strategy. In doing so, the ministry is beginning to implement the coalition agreement to establish Germany as a high-performance, sustainable and sovereign data center location.

The German Datacenter Association (GDA) is the voice of the data center industry in Germany. It represents around 260 companies that operate data centers, belong to the supplier industry, or offer related services. Research institutions and municipalities are also part of the association.

Digital transformation is one of the greatest challenges—and greatest opportunities—of the 21st century, and it requires a powerful digital infrastructure. With the coalition agreement, there is finally political recognition that the sector builds and operates a special kind of infrastructure: strategically important for innovation, growth, security, sovereignty and sustainability.

The strategic nature of this importance is already underscored by last year's Draghi Report,[1] which presents proposals for digital transformation, the expansion of energy infrastructure, less bureaucracy and addressing the skills shortage. A German data center strategy therefore has important points of orientation. A recent study by Deloitte[2] shows that Germany is not only heading toward a data-center capacity gap of around 2.5 GW by 2030, but is also falling behind internationally (e.g., USA €110bn) and within Europe in terms of AI investment—e.g., behind the United Kingdom (€4.5bn), Sweden (€4.3bn) and France (€2.6bn) with roughly €2bn in 2024.

The GDA will contribute constructively to the consultation. The following areas must be tackled in a coordinated manner: Energy supply must be planned with a long-term perspective to ensure security of supply and investment certainty. The GDA calls for a debate on recognizing data centers—just like electricity and telecommunications networks—as being of "overriding public interest." In addition, permitting processes should be swiftly simplified through parallel procedures and stronger inter-agency coordination. Harmonized rules at the state and municipal levels help to limit varying scopes of discretion and enable faster decisions on the ground. Effective initiatives are also needed to address the shortage of skilled workers.

1 European Commission, *The Draghi Report: An Industrial Strategy for Europe (Part A) / In-Depth Analysis and Recommendations (Part B)*, 2024, available at: https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en [last accessed: 15 Sept 2025].

2 Deloitte, *AI Infrastructure Study*, 2025, available at: https://www.deloitte.com/de/de/issues/sustainability-climate/ki-infrastruktur-studie.html, [last accessed: 15 Sept 2025].

2 Ensuring Electricity Availability

A reliable infrastructure policy that focuses primarily on a robust energy supply must be the main field of action for any data center strategy. Available electricity—and its constraining factors in various forms—is the chief concern of the German data center industry.

Germany faces a threefold challenge: digital transformation, an energy system in transition, and safeguarding its industrial base in global competition. Data centers are central to the success of these developments. Given their uninterrupted 24/7 load profile, data centers depend on reliable supply and planning certainty for future investments. Security of energy supply is an economic foundation, not merely a political premise.

The report published in January 2025 by the Federal Ministry for Economic Affairs and Climate Action (BMWK; now the Federal Ministry for Economic Affairs and Energy—BMWE)[3] [4] assumes that the electricity consumption of data centers in Germany could quadruple to around 80 TWh by 2045; an increase to 30 TWh is expected by 2030. The strategy should therefore include a step-by-step process for strengthening energy infrastructure. Suitable measures are outlined below.

2.1 Speed in Grid Expansion Remains Essential

Planning-secure expansion of transmission and distribution networks is necessary for investment certainty and site quality. Due to rising demand, the power-grid infrastructure is increasingly becoming a bottleneck. In view of dynamic developments in artificial intelligence and digitization across business, administration and the private sector, grid development must be comprehensively accelerated. The basis for this lies in the Grid Development Plans. Going forward, it will be crucial to incorporate newly planned data center projects (and other large consumers such as electrolyzers) into electricity-demand modeling to reinforce the distribution grids. Essentially the same applies at the transmission level: grid interconnection points such as substations and switching stations are decisive location factors; their scarcity weighs heavily in site selection. Comprehensive grid build-out therefore remains the most important measure.

We also advocate mapping data-center clusters visibly in grid-development and state-level network plans and making their grid relevance transparent. Interfaces with heat and fiber-optic networks should be institutionally organized (integrated corridor planning) so that waste-heat use and data connectivity are considered at an early stage. To improve transparency and accelerate processes, we recommend binding capacity maps from DSOs and TSOs with clear milestones and timelines for new substations, transformers and connection lines.

2.2 Grid-Access Procedures

Access to new grid capacity is critical for data centers. In November of last year, the Federal Network Agency pointed to the growing mismatch between grid-connection capacity and demand

3 Federal Ministry for Economic Affairs and Climate Action (BMWK), *Status and Development of the Data Center Location Germany. Expert Report*, 2025, available at: https://www.bundeswirtschaftsministerium.de/Redaktion/DE/Publikationen/Technologie/stand-und-entwicklung-des-rechenzentrumsstandorts-deutschland.html [last accessed: 15 Sept 2025].

4 Note on designation: The BMWK now presents itself as the BMWE; the text uses the designation valid at the time of publication (Jan 2025).

and conducted a market consultation. The GDA supports the goal of finding a viable, lasting solution to this mismatch when providing new grid-connection capacity. The fact is that, in the medium term, not all capacity requests can be met. It is therefore crucial to develop a robust procedure for prioritizing and aligning demand and supply.

The GDA has therefore advocated a procedure that continues to be based on needs assessment, the time of application, and clearly defined pre-qualification criteria: Especially for applications in AI and high-performance computing (HPC), large, energy- and space-efficient data centers are required. Grid-connection capacity should be allocated in the order of qualified applications ("first-ready, first-served approach"), combined with pre-qualification (including secured/exclusive site control, a reliable delivery schedule, and financial capacity) as well as appropriate payment and security mechanisms that can be credited against construction cost contributions (BKZ). Allocation should be accompanied by binding milestones and fallback mechanisms. Pro-rata allocation models should be avoided, as they systematically disadvantage large-scale projects and reduce investment certainty. Ample instruments are thus available to avoid perverse incentives and unnecessary bureaucracy.

Given the acute pressure around grid-connection procedures at both distribution and transmission levels, an additional factor is the Federal Court of Justice decision of 26 November 2024 (EnVR 17/22), which established the applicability of the Power Plant Grid Connection Ordinance (KraftNAV)[5] to large battery-storage systems. This gives storage operators prioritized treatment for connection requests without any fulfillment criteria or assessment procedure. Requests are rising sharply: the four TSOs report cumulative connection requests totaling 204 GW, compared to around 1.6 GW of existing capacity.

Battery storage is an important building block in the future power system. However, this example shows that a data-center strategy must realign the relevant legal framework. The KraftNAV dates from 2007 and was designed for power-plant connections. It is no longer suitable for the current grid-connection situation and must be revised—for example, by excluding its applicability to battery storage. Without reform, the TSOs' grid-connection points would be tied up into the 2030s. What is needed, therefore, is not only an appropriate procedure for allocating grid capacity, but also modernization of the legal foundations (e.g., Energy Industry Act, Renewable Energy Act, KraftNAV).

2.3 Electricity Costs – Network Charges and Electricity Tax

The GDA reiterates its position that the network-charge structure must continue to reflect the specific operating profile of data centers. The load profile requires continuous 24/7 operation with only limited flexibility potential. The fundamental legitimacy of special network charges for certain electricity consumers therefore remains justified.

For the ongoing network-charge reform being developed by the Federal Network Agency—which will have long-term effects—the coalition agreement should serve as the guiding benchmark. We refer to the agreement that energy-intensive consumers without flexibility potential should continue to be relieved. Concretely, this means that the general regulatory framework now being designed must from the outset be compatible with subsequent, politically intended privileges and must not unduly impede their implementation.

5 Clarification: *Verordnung zur Regelung des Netzanschlusses von Anlagen zur Erzeugung von elektrischer Energie (KraftNAV).*

To ensure international competitiveness, the GDA also advocates reducing the electricity tax[6] for digital key infrastructures to the EU minimum. In light of the federal financial plan for 2025–2029—which provides for reducing the electricity tax for certain parts of the manufacturing sector to the EU minimum—the GDA again urges that this demand also be kept on the agenda for data centers as a core element of strategic industry.

3 Energy Efficiency and Sustainability

The legal framework for energy-efficiency requirements is governed by EU law (EU Energy Efficiency Directive, EED). In 2023, Germany pre-emptively adopted a national Energy Efficiency Act (EnEfG) that goes noticeably beyond the requirements of the EED and, in terms of feasibility and practical applicability, requires adjustments.

The GDA welcomes and supports the rollback of the requirements enacted in the German EnEfG as announced in the coalition agreement. The GDA emphasizes that this is not an environmental or climate policy rollback in substance, but rather a response to obligations that are practically barely feasible in their current form.

An ambitious yet practicable design of efficiency and sustainability requirements is a prerequisite for managing the power densities of modern data-center clusters while supporting digital transformation. Decisive here are: an EU-level playing field, lean reporting processes, realistic efficiency metrics, and a waste-heat framework that enables utilization and sets clear, plannable requirements.

Addressing current energy-efficiency requirements is also justified within the data center strategy because it is not only about revising the EnEfG: at the European level, work on further requirements is advancing. A first assessment of data-center efficiency in Europe has been available since July,[7] offering recommendations for next steps. In addition, the European Commission has announced a new package of energy-efficiency requirements for data centers for spring 2026. The results of this consultation must feed into the Commission's considerations.

3.1 Energy Efficiency (Power Usage Effectiveness)

Power Usage Effectiveness (PUE) is the ratio of total power consumption to IT power (PUE = Total Power / IT Power). Because it depends on utilization and technology (e.g., air vs. liquid cooling), it is only conditionally suitable as a rigid target or limit value. Assessment depends on several parameters, such as utilization, cooling concept and cooling medium. To ensure investment-secure data-center planning, the following steps should be considered: uniform calculation rules with transparent system boundaries and measuring points; a design-PUE as a binding planning/permits parameter. Efficiency metrics must be applied in a technology-neutral manner and appropriate to the operating phase. Fundamentally, future regulation must not rely on this single parameter as the sole benchmark. A balanced approach that also considers sustainability aspects (e.g., water cooling) would be far more robust.

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6 Electricity tax / EU minimum: Current German electricity tax €20.50/MWh; EU Energy Tax Directive minimum €0.50/MWh.

7 European Commission – DG ENER, *Assessment of the energy performance and sustainability of data centres in EU – First technical report*, 2025, available at: https://op.europa.eu/en/publication-detail/-/publication/83be4c3e-5c79-11f0-a9d0-01aa75ed71a1 [last accessed: 15 Sept 2025].

3.2 Waste-Heat Utilization

Waste heat from data centers can significantly contribute to the energy transition, but only in interplay with capable heating networks, available heat sinks and the necessary infrastructure. Data-center operators fully support heat utilization. Offtake, network infrastructure and seasonal availability are the responsibility of the heat-infrastructure side. Where networks or offtakers are lacking, there must be no sanctions. Any obligation to offtake or generate must be ruled out. Own-use of waste heat should take priority over third-party supply if technically and economically sensible. It therefore makes little sense to set fixed percentage requirements as in the EnEfG.

Standardized data and transfer interfaces between data centers and municipal heat planning create predictability. Responsibilities along the chain—from generation, to the transfer station, to the network, to the offtaker—should be clearly regulated, and the cost and funding logic should be transparent. Targeted funding modules, including seed financing for economically viable projects, accelerate the realization of bankable undertakings.

4 Planning and Permitting Processes

Lengthy and inconsistent procedures at the interface between the Federal Building Code (BauGB)/state building regulations and the Federal Immission Control Act (BImSchG) are a central obstacle to data-center investment. What is required are clear guardrails, binding deadline mechanisms and a harmonized enforcement practice.

4.1 Uniform Guideline

We propose a nationwide guideline “Data Center Permitting” that makes procedural steps and interfaces transparent and contains a binding checklist of submission documents. In addition, a completeness presumption should apply after a defined deadline has elapsed; fixed decision deadlines for special structures should be anchored; and partial decisions once taken should have binding effect for subsequent reviews. This architecture increases planning and legal certainty, relieves authorities and prevents iteration loops. It follows proven debureaucratization approaches with clear cut-off dates and standardized documentation (including in line with the recommendations of the National Regulatory Control Council, NKR).[8]

4.2 Harmonizing State-Level Practice and Land-Use Planning

In parallel, state-level practice should be harmonized: model application templates and uniform testing standards create comparability; fast-track development plans with streamlined participation cycles speed up land-use planning; where possible, procedural steps are conducted in parallel after the formal “approval for public display.” Cut-off rules clearly define the applicable legal status; transparent responsibilities and fixed points of contact across all procedural phases increase reliability and speed. This accelerates procedures without lowering substantive protection standards.

4.3 BImSchG Clarification for Backup Generators

Backup generators in data centers are not continuously operated industrial installations: they usually run only for testing or in case of malfunctions. Current regulation—for example the “Technical

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8 National Regulatory Control Council (NKR), *Position Paper – Recommendations on the Pact to Accelerate Planning and Permitting Procedures*, 2023, available at: https://www.normenkontrollrat.bund.de/Webs/NKR/SharedDocs/Downloads/DE/Positionspapiere/pakt_beschleunigung.html?utm_source=chatgpt.com [last accessed: 01 Sept 2025].

Instructions on Air Quality Control" (TA Luft) or the 44th Federal Immission Control Ordinance—has so far scarcely reflected this particularity. The result is inconsistent administrative interpretations and excessive requirements (e.g., chimney heights or permitted operating hours) that are hardly necessary in practice. This leads to planning uncertainty and lengthy permitting—often over a year. Remedy would come from nationwide, clearly comprehensible requirements explicitly anchored in the relevant provisions, supplemented by practical tools such as application checklists and binding deadlines for supplementary requests.

4.4 Continuous Adjustment

For ongoing quality assurance and prioritization of necessary adjustments, a stakeholder format could be envisaged under the BMDS with the involvement of the Federal Network Agency (BNetzA), the Federal Office for Information Security (BSI), states, municipalities, network operators and the sector. This body would consolidate interpretation and monitoring and establish clear escalation paths (cf. implementation in Section 5.2).

4.5 Procedural Examples from Europe

In Germany, the expansion of fiber and mobile networks was recently recognized as being of overriding public interest.[9] Data centers, like these networks, are the backbone of digitization. They form part of critical infrastructure and underpin the modern economy. The GDA therefore suggests recognizing data centers themselves as objects of overriding public interest and taking into account infrastructure directly associated with data centers. This would enable acceleration during the ramp-up that provides sufficient traction to meet Germany's digitization and AI goals.

Other European countries are accelerating the construction and siting of data centers. Examples show how complexity can be reduced, responsibilities bundled and procedures run in parallel—without weakening substantive protection standards. In the United Kingdom, data centers are currently on track to be classified as "Nationally Significant Infrastructure Projects" (NSIP). This alternative planning process is comparable to Germany's "overriding public interest" approach and, in particular, accelerates approvals by enabling provisional permits and elevating processes to a higher federal level.

In Italy, Article 13 of Legislative Decree 104/2023 enables an accelerated special procedure for foreign direct investments from one billion euros: the Council of Ministers can classify projects as of outstanding national strategic interest and appoint a government commissioner who coordinates all administrative processes. This results in a single, unified permit bundling all approvals at the local, regional and national levels—significantly reducing administrative effort, shortening time-to-market and increasing planning and legal certainty for large-ticket investments.

Similarly targeted—albeit at the regional level—the Autonomous Community of Aragón in Spain accelerates approvals using the PIGA instrument. PIGA centralizes all permits with a single (regional) authority, unites coordination between specialist departments and municipalities, and enables parallel processing of previously sequential procedures—e.g., building and environmental permits. With a single governmental point of contact, average processing time is reduced from two to three years to around eight months from submission—again, with unchanged substantive pro-

[9] German Bundestag, *Dossier on the Telecommunications Act*, available at: https://www.bundestag.de/dokumente/textarchiv/2025/kw26-de-telekommunikationsgesetz-1084808 [last accessed: 15 Sept 2025].

tection standards. Taken together, these examples underline that procedural integration, clear responsibilities and parallelization are the key levers for substantially reducing permitting times while maintaining legal certainty.

5 Federal-State Guidelines and a Standing Dialogue Format

To achieve speed, legal certainty and planning coherence, nationwide guidelines developed jointly with states and municipalities and anchored at the BMDS are needed. They create clarity and can be continued as a living, versioned document with fixed update cycles to promptly reflect technical and regulatory developments.

5.1 Suggestions for Federal-State Guidelines

The legal requirements for constructing and operating data centers are interpreted inconsistently across the states because it is unclear whether they should be handled under building-regulation law or under the BImSchG. Some authorities classify them as "special structures," focusing on structural safety and urban-development aspects; others focus on their technical equipment—such as backup generators, cooling systems or energy consumption.

This leads to uncertainty and delays. What is needed is uniform nationwide application, supported by model decrees, standardized building templates and clearly regulated responsibilities, to accelerate procedures and create legal certainty. Practical rules for backup generators are also needed (see Section 4.3). Uniform guidelines—possibly anchored in TA Luft or a general administrative regulation—ensure consistent implementation.

Another focus is standardizing waste-heat interfaces between data centers and municipal heat planning: data and transfer interfaces should be harmonized, responsibilities along the chain clearly regulated and cost/funding logic made transparent. A "real offtaker" requirement prevents false incentives; from 2030 onward, the Energy Reuse Factor (ERF)—the ratio between the amount of energy reused and the total energy consumed in the data center—should be the key metric.

5.2 Governance: Federal-State-Municipal Dialogue "Data Centers"

A standing federal-state-municipal format at the BMDS would close the gap identified in the BMWK report regarding integrated land and infrastructure planning and the absence of structured communication channels. It would coordinate and update guidelines on fixed schedules, establish transparent monitoring with clear KPIs—e.g., permitting throughput times, grid-connection durations, waste-heat utilization or the implementation of standard procedures—and report regularly on progress. The body would prioritize necessary adjustments, ensure uniform interpretation of requirements and maintain defined escalation paths so that decisions are taken swiftly and consistently. By involving BNetzA, BSI, states, municipalities, network operators and the industry, it would ensure practicality and acceptance, strengthen the implementability of the guidelines and enhance planning certainty for all stakeholders.

6 Site Development and Land Availability

To enable rapid siting of high-performance data-center clusters, municipalities need plan-ready sites with key infrastructure conditions already met: secured power connection at high- or medium-voltage level; realistic options for using or delivering waste heat; a high-performance fiber backbone; and—where water-based cooling is used—a robust water/wastewater concept. Already during site preparation, it must be examined whether future requirements for critical infrastructure (KRITIS) and resilience can be met—including redundant power and data connections, suitable safety distances and protective measures against natural hazards. Even without formal designation of "preferred areas," this enables swift site development. A standardized approach to area preparation increases planning and investment certainty and reduces procedural risk.

6.1 Minimum Requirements for Data-Center-Ready Sites

For site selection and development, early safeguarding of central infrastructure is decisive: demonstrable access to high/medium voltage with realistic timelines for substations, transformer stations and connection lines, plus reserved space for grid infrastructure. For waste-heat utilization, the assessment of real heat sinks in the vicinity—e.g., residential and office buildings, social infrastructure such as schools, swimming pools or hospitals, and planned new neighborhoods—and compatibility of temperature ranges and seasonal load profiles with the waste-heat supply. For digital connectivity, a fiber backbone with redundant routes and openness to different network operators. For water/wastewater, a robust concept covering cooling and process-water needs, permit feasibility, discharge routes and contingency strategies must be in place. Aspects of KRITIS classification and resilience are consolidated in Chapter 7.

6.2 "Data-Center-Ready Sites" Program (Modular Toolkit)

For implementation, we recommend a nationwide, interoperable modular program that supports municipalities in rapid, legally secure data-center planning. It includes model building-plan components—e.g., construction method, building heights, emissions prevention, utility routing, parking and security zones—as well as standardized environmental reports with clearly defined scope (covering emissions, noise, air pollutants, species protection, water and other relevant environmental aspects).

In addition, the program provides checklists and guides (see Section 4.1) and offers standardized template agreements on power, heat, utilities and site servicing that simplify negotiations and reduce transaction costs. The program is technology-neutral, applies to both air- and liquid-cooled architectures and various power densities, and is regularly updated.

6.3 Land and Capacity Monitoring

A central monitoring system can be established in parallel to systematically record all sites suitable for data centers—including their planning status, availability and constraints. In parallel, grid and heat capacities with realistic timelines are mapped in capacity maps. This allows early identification of bottlenecks and prioritization of land development and grid expansion. The results flow continuously into the federal-state guidelines and the dialogue format (see Section 5) and enable forward-looking steering and transparent investor communication. The deficit in integrated land and infrastructure planning identified in the BMWK report is addressed in a targeted manner by the "data-center-ready sites" program and central monitoring. Municipalities gain more planning certainty, network operators receive clear signals for expansion and investment decisions, and investors gain a reliable basis for site decisions—without the formal designation of "preferred areas."

7 Security and Critical Infrastructure

Depending on size, importance for critical services and supply relevance, data centers can be classified as critical infrastructure (KRITIS). Thresholds determine when special security and reporting obligations apply. KRITIS data centers already today must operate an information-security management system, implement protective measures and report security incidents within set deadlines.

With Directive (EU) 2022/2555 on measures for a high common level of cybersecurity (NIS2) and its transposition via the IT Security Act 3.0, the circle of affected data centers will expand: facilities below KRITIS thresholds—so-called “important entities” in relevant sectors—will also be covered. Additional requirements will include comprehensive risk management and harmonized reporting obligations, and data-center clusters may be considered more strongly. Existing thresholds should therefore be reviewed and clearly defined to enable unambiguous classifications. For large data-center clusters, uniform security and resilience profiles should be developed jointly with the BSI. These regulate multiple redundancy for power supply, cooling and networks as well as emergency concepts—for example in blackouts—backup power, fuel reserves and restart procedures.

Responsibilities and reporting channels for security incidents, disruptions and outages must be clearly regulated at all levels—from the federal and state levels through municipalities to network and data-center operators. Requirements should be aligned with the NIS2 Directive, which provides multi-stage reporting obligations for operators of critical infrastructure. In addition, a joint situational picture for cluster regions creates transparency regarding dependencies on electricity, cooling and network connectivity and enables preventive measures. This ensures that central digital infrastructures can be reliably protected.

8 Shortage of Skilled Workers

Accelerated expansion of high-performance data centers requires readily available skilled workers along the entire value chain. The state can generate speed through digital recognition procedures with binding deadlines, clear checklists and a one-stop logic. Fast-track visas with advance approvals and central contact points should be introduced for defined shortage occupations. Practice-oriented rules—such as provisional employment under supervision during ongoing recognition procedures, and crediting relevant work experience and partial qualifications—shorten the time to productive employment without lowering quality standards. Training remains industry-led—by companies, chambers of commerce and industry, and education providers.