Generative AI Data Center Development in Japan

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I. Introduction

Amid intensifying competition in the development of generative AI, the demand is increasing in Japan for data centers ("**DCs**"), which store and process data. In selecting DC locations, proximity to areas of high data demand and the availability of power and telecommunications networks are critical factors. Thus, as of 2023, almost 90% of DCs in Japan (by floor area) were concentrated in the Tokyo and Osaka metropolitan areas, which are close to major centers of demand.[1]

On the other hand, from the perspective of maintaining digital infrastructure in the event of any large-scale disaster, as well as effectively utilizing infrastructure in regions with available land, industrial water, and grid capacity, promoting the regional decentralization of DCs has become a national priority.

This article provides a brief overview of Japan's national strategy for DC development and key considerations for overseas companies interested in engaging in the Japanese DC market.

II. National Strategic Direction for the DC Business

1. Public–Private Council on Watt–Bit Collaboration

In anticipation of future DC development, Japan's Ministry of Internal Affairs and Communications ("**MIAC**") and Ministry of Economy, Trade and Industry ("**METI**") established the "Public–Private Council on Watt–Bit Collaboration" in March 2025 as a forum for cooperation between public and private stakeholders. It is aimed at effectively integrating electricity and telecommunications infrastructure through efficient development.

In June 2025, the government published the "Public–Private Council on Watt–Bit Collaboration Summary 1.0"[2] (the "**Summary**") based on the discussions held within this forum. The Summary recognizes the long-term need to decentralize DC clusters from a disaster-resilience perspective. However, given the continued short-term trend toward concentration in the Tokyo and Osaka metropolitan areas due to proximity to centers of demand and well-developed power and telecommunications networks, the Summary outlines a roadmap for gradually promoting regional decentralization while addressing such immediate demand.

1. MIAC and METI, *Expert Study Group on the Development of Digital Infrastructure (Data Centers, etc.) (7th Meeting – Secretariat Explanatory Materials)*, p. 6, available at: https://www.meti.go.jp/policy/mono_info_service/joho/conference/digital_infrastructure/0007/004_jimukyokusiryou.pdf (in Japanese).
2. Available at: https://www.meti.go.jp/press/2025/06/20250612001/20250612001.html (in Japanese).

Key policy measures of the Summary include:

a. Responding to Near-Term DC Demand

- Promoting the location of DCs in areas with available grid capacity through expanded disclosure of grid capacity, such as "Welcome Zone Maps"
- Advancing R&D and use cases for All-Photonics Networks (APNs) to enable flexible DC operation utilizing existing power infrastructure
- Reviewing grid interconnection rules to facilitate timely power supply to projects with genuine electricity needs
- Promoting the development and implementation of advanced, comprehensive energy-saving technologies to improve DC energy efficiency

b. Establishment of New DC Cluster Hubs

- Developing multiple new large-scale DC hubs (on a gigawatt scale) in addition to existing clusters through the development of advanced power and telecommunications infrastructure
- Refining DC site selection criteria based on:
  (i) Availability and expandability of power infrastructure
  (ii) Telecommunications redundancy and underground deployment
  (iii) Ground stability and land availability
  (iv) Geographical dispersion away from existing clusters to promote disaster-resilience
- Encouraging local government involvement from the perspective of regional coexistence and infrastructure development
- Strategically developing international submarine cables and Internet exchanges in tandem with DC cluster formation to enhance convenience and global competitiveness

c. Promotion of Regional DC Deployment and Advancement

- Continuously promoting regional DC deployment to support digital transformation initiatives and enhance national disaster-resilience
- Considering the installation of batteries and cogeneration systems to maximize effective use of existing power infrastructure
- Advancing the development of technology for DC operations, including sophisticated workload-shifting technologies utilizing demand response based on power supply-demand conditions, weather forecasts, and computing demands (which will require improved operational flexibility due to lower GPU costs and expanded DC deployment for AI load distribution)

A further key policy perspective in the Summary is the DC project's "coexistence with local communities and environmental considerations:"

- While DCs are considered essential infrastructure for Japan's digitalization, their development inevitably affects their host communities. Accordingly, both public and private sectors have reaffirmed the need for sustainable coexistence with local communities. In particular, the selection of future DC cluster sites will respect the intentions of local governments and involve municipalities in the DC site selection process.
- DC operators are also expected not only to comply with applicable laws and regulations but to make efforts toward careful consensus-building, including providing opportunities for local communities to hear explanations regarding construction plans and environmental impacts.
- Moreover, as DCs require substantial electricity, supplying them with decarbonized power is essential to achieving national CO_2 reduction goals. Accordingly, feasibility studies and the development of advanced energy-saving technologies—including liquid cooling and immersion cooling—will be promoted, along with efforts to secure a decarbonized supply of electricity.

- From a regulatory standpoint, to promote further DC efficiency through steady implementation of available technologies as well as accelerated development and social deployment of cutting-edge technologies, Japan will:
  - Establish energy efficiency standards for newly constructed DCs
  - Require the submission of medium- to long-term plans for efficiency improvements
  - Require periodic reporting of energy consumption and efficiency for each DC (with partial public disclosure)
- In addition, initiatives led by local governments—including decarbonization pilot regions—will promote the introduction of decarbonized energy sources, thereby enhancing regional attractiveness for companies and investments, while accelerating the peaceful coexistence between DCs and their host communities.

2. GX Strategic Region Selection Process for DC Clusters

Based on the above roadmap as outlined in the Summary, specific policy measures will be implemented. Most recently, on December 23, 2025, METI published application guidelines for the designation of "GX Strategic Regions"[3] (DC Cluster Type) and began soliciting applications from prefectures wishing to be selected.

Prefectures selected as "GX Strategic Regions" will form DC cluster hubs by utilizing measures such as planned development of advanced power grid infrastructure and regulatory reforms in designated candidate areas, thereby fostering industry clusters that include related sectors.

While the application process primarily targets prefectures, it also permits joint applications by businesses associated with the relevant prefectural plans.

III. Key Considerations in DC Development

1. Applicable Laws and Regulations

DC development requires consideration of a wide range of issues, including:

- Investment structuring
- Securing business land
- Obtaining necessary permits and approvals
- Securing grid interconnection
- Engineering, procurement, and construction ("**EPC**") contracting
- Stakeholder engagement with local residents

Due to space constraints, this article focuses on one issue that is expected to become particularly significant going forward: engagement and coordination with local communities.

2. Community Engagement and Stakeholder Coordination

(a) Local Opposition

Concerns frequently raised regarding DCs include:

- Noise and vibration from emergency generator testing
- Heat emissions from cooling equipment
- Low-frequency noise
- Sunlight obstruction
- CO_2 emissions
- Disaster risks
- Terrorism risks

DC projects are also sometimes criticized for generating limited local employment opportunities. In Japan, such concerns have led to opposition from local residents in a number of cases, and in some instances, development plans have been abandoned due thereto.[4]

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3. Available at: https://www.meti.go.jp/policy/energy_environment/global_warming/gx_strategy_area/Yoryo_2.pdf (in Japanese).
4. Nikkei, *Data Center Construction Plans Abandoned — Treated as a 'Nuisance Facility' Due to Proximity to Residential Areas*, May 7, 2024, available at: https://www.nikkei.com/article/DGXZQOUC182QS0Y4A410C2000000/ (in Japanese and behind a paywall).

(b) Environmental Regulations

DC development may be subject to a range of environmental and development-related laws, including:

- National Land Use Planning Act
- City Planning Act
- Building Standards Act
- Environmental Impact Assessment ("**EIA**") Act
- Noise Regulation Act
- Landscape Act
- Act on Promotion of Global Warming Counter-measures

Developers must therefore investigate applicable regulatory requirements in advance.

Generally, DC projects are not subject to the EIA Act, depending on the site area, building size, and height. However, where local governments have established their own EIA ordinances, DC projects may be subject to environmental assessment procedures thereunder.[5]

Under Japan's current legal framework, DC development typically does not require formal EIA procedures. While this is advantageous for developers, the absence of such EIA procedures can also exacerbate local opposition as residents may perceive such absence as lack of transparency of environmental impacts—particularly given the inherently confidential nature of DC facilities.

In light of the policy direction to encourage careful community engagement, future legal or local regulatory changes requiring environmental impact assessments for DC development cannot be ruled out. Notably, discussions are underway within the Tokyo Metropolitan Government to establish guidelines concerning certain standards of landscape and environmental considerations for the construction of DCs, and cooperation from project operators will be sought.[6]

3. EPC Contracting Considerations

In Japan, EPC design and construction contracts are typically executed based on standard-form agreements, such as:

- Standard Form of Agreement for Architectural Design and Supervision Services
- Standard Form of Construction Contract for Private Projects

These standard forms primarily establish broad rights and obligations and differ significantly from the detailed contractual frameworks common in international construction practice. In this regard, many global companies often seek to localize their standard global contracts for use in Japan. However, due to differences in commercial practices and language, Japanese design firms and contractors may not be willing to accept such global contract formats, resulting in extended negotiation periods.

Accordingly, overseas companies planning to engage in DC projects in Japan should allow sufficient time for EPC contract negotiations when preparing their project schedules.

IV. Conclusion

This article has provided a brief overview of Japan's future policy direction for DC development and key considerations for overseas companies interested in undertaking DC projects in Japan.

We hope this overview will serve as a useful reference for businesses planning to engage in DC projects in Japan.

5. *See* the outline of environmental assessment laws published by the Ministry of Land, Infrastructure, Transport and Tourism, available at: https://www.cbr.mlit.go.jp/local_info/eco/assessment/02.htm (in Japanese).
6. Nikkei, *Tokyo Metropolitan Government to Issue Guidelines for Data Center Construction to Curb Environmental and Landscape Disputes*, Feb. 18, 2026, available at: https://www.nikkei.com/article/DGXZQOCC172DB0X10C26A2000000/ (in Japanese and behind a paywall).