The 67th Meeting of the APEC Expert Group on Energy Efficiency and Conservation (EGEEC 67)

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Update of Japan's energy efficiency and conservation policy

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60th Anniversary

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- Direction for Japan’s energy policy through 2040
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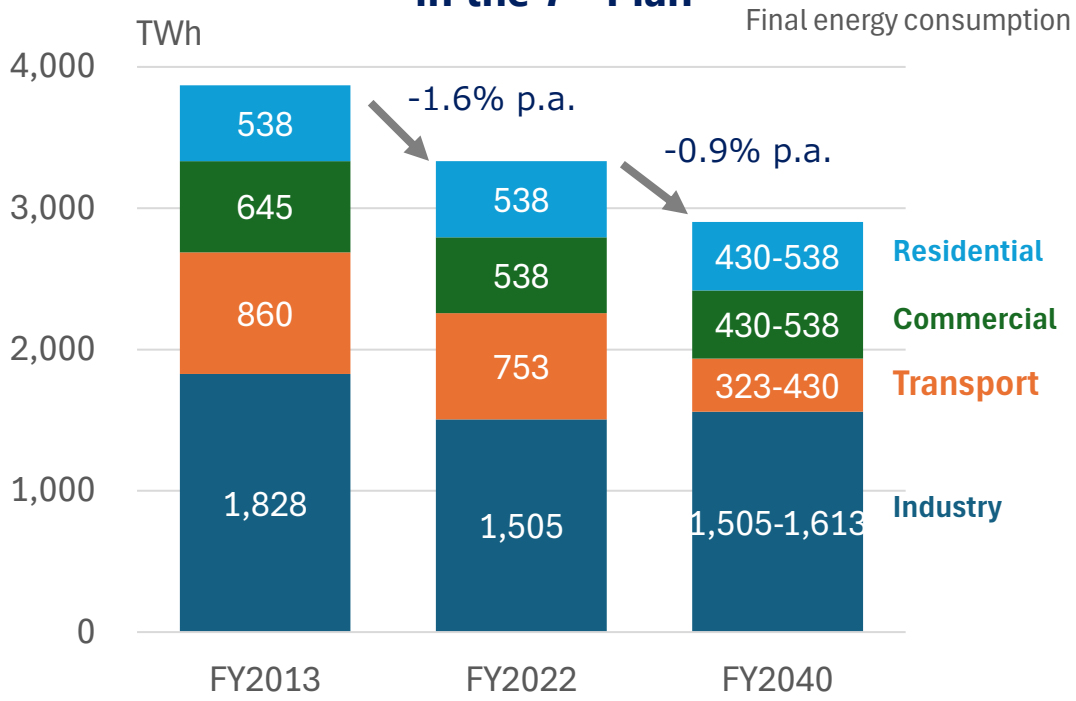
The 7th Strategic Energy Plan is outlining Japan's fundamental direction for energy policy through 2040

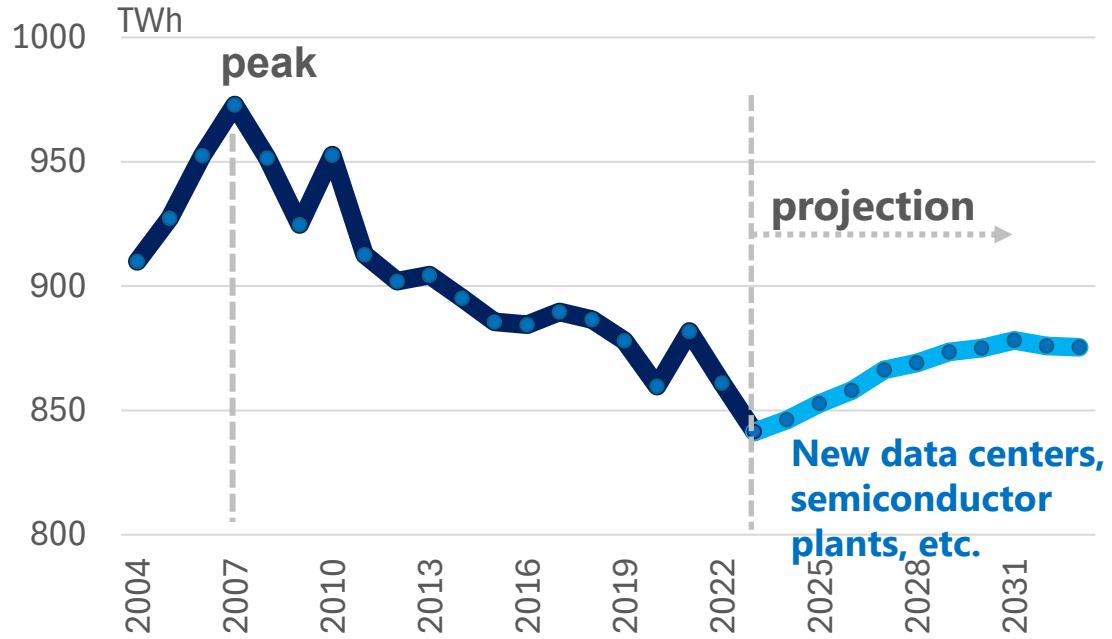
- ✓ The situation is now changing: Resurgence of **energy security risks,** Growing importance of **economic security** and **industrial cost, Expected increase in power demand** ⇒ Maintaining **climate goal while seeking for realistic approaches**
- ✓ The **7th Strategic Energy Plan** places more weight on **energy security** and **economic efficiency**. (approved by the Cabinet on February 2025)

Outlook of total final energy consumption in the 7th Plan



FY = fiscal year (April-March), p.a. = per annum

Electricity Demand Projection (national total)



Source: OCCTO

Source: Ministry of Economy, Trade and Industry (2024), Outlook of energy supply-demand balance in the fiscal year 2040

An Overview of Energy efficiency & Conservation Strategies based on the 7th Strategic Energy Plan

✓ To minimize cost increases associated with decarbonization and other initiatives as much as possible, prioritize the adoption of **economically feasible** measures.

Thorough Energy efficiency and Conservation

- Enhance energy efficiency and conservation efforts without compromising economic activity
- Address the rise in electricity consumption due to the advancement of **DX** and **GX**(E.g., such as data centers).
- Enhance disruptive **technological innovations** and initiatives to pursue even greater energy conservation
- **Energy efficiency and conservation** are considered the **initial step for many SMEs and households** in their decarbonization efforts. These can serve as a catalyst to drive decarbonization

Electrification and Transition to Non-Fossil Fuels

- Promoting **electrification** with a particular focus on sectors where electrification is challenging, advancing the shift towards fuels like natural gas and the use of hydrogen, CCUS, and other technologies
- Proceed with **systematic capital investments, supply chain enhancements**, and other measures, for a fundamental shift in manufacturing processes within energy-intensive sectors
- Promoting **Demand Response (DR)**

Support ↕ **Regulation**

Equipment upgrades, energy-saving audit, technical development, human resource development, and support system establishment, etc.,

Top Runner Program, goal setting, periodic reporting, disclosure of information, establishment of compliance standards,

Source: Ministry of Economy, Trade and Industry (2026.6.26) The 50th Meeting of the Subcommittee on Energy Conservation and New Energy
https://www.meti.go.jp/shingikai/enecho/shoene_shinene/sho_energy/pdf/050_01_00.pdf

Strengthening subsidies scheme for Energy efficiency & Conservation and Transition to Non-Fossil Fuels

✓ From the FY2025 supplementary budget, the **GX III category** has been established, and support for **supply chain collaboration** initiatives has been strengthened.

(Ⅰ) Factories and Workplaces	• Subsidies for initiatives aimed at achieving significant energy savings across entire factories and business sites • Subsidy rate: 1/2 (SMEs), 1/3 (Large Companies) • Maximum amount: 1.5 billion yen, etc. ※ Supply chain collaboration (added)
(Ⅱ) Electrification and Decarbonization through Fuel Switching	• Subsidies for electrification and the updating of equipment that employs alternative fuels • Subsidy rate: 1/2, etc. • Maximum amount: 300 million yen, etc. ※ Retrofits to hydrogen-compatible facilities (added)
(Ⅲ) Equipment Unit	• Subsidies for upgrading to Equipment Selected from a List • Subsidy Rate: 1/3, etc. • Maximum Amount: 100 million yen, etc. ※ GXⅢtype (new category)
(Ⅳ) EMS	• Subsidies for the Implementation of an EMS (Energy Management System) • Subsidy Rate: 1/2 (SMEs), 1/3 (Large Companies) • Maximum amount: 100 million yen

Source: Ministry of Economy, Trade and Industry (2025.12.11) The 49th Meeting of the Subcommittee on Energy Conservation and New Energy

A new category (GX III) has been established to further expand the adoption of highly energy-efficient equipment.

- ✓ Increase the subsidy rate for equipment upgrades (from 1/3 to 1/2)
- ✓ Expand eligibility to include newly installed systems, previously not covered for.

For Top performance equipment

High-Efficiency Air Conditioning

[Current EE standard]
- The achievement rate for Top Runner≥ 102%

[Top performance standard]
- The achievement rate for Top Runners ≥ 107%
- Improvements in performance of about 15% via AI management

High-Efficiency Boiler

[Current EE standard]
- Energy efficiency rate ≥ 95%

[Top performance standard]
- Energy efficiency rate ≥ 102%
- Improvements in performance of about 10% via Capacity control

Low-Carbon Industrial Furnaces

[Current EE standard]
- The minimum efficiency rate≥ 20%

[Top performance standard]
- The minimum efficiency rate by installation of a high-efficiency burner ≥ 30%

Industrial Heat pumps (Medium-high temperature)

[Top performance standard]
- Heat pumps with high temperatures (for generating hot air and steam) with an improvement of about 250% over boilers.

Industrial Motor

[Current EE standard]
- IE3+Inverter

[Top performance standard]
- Performance improvement of around 2.4% or more by IE4 or higher

Source: Ministry of Economy, Trade and Industry (2026.6.26) The 50th Meeting of the Subcommittee on Energy Conservation and New Energy https://www.meti.go.jp/shingikai/enecho/shoene_shinene/sho_energy/pdf/050_01_00.pdf

Encourage manufacturers to commit to corporate growth goals that aim to increase the use of energy-efficient equipment

- ✓ Subsidies for equipment manufactured by companies committed to meeting GX requirements.
- ✓ The maximum amount will be elevated within a different budget category (GX Budget), set apart from the current budget category (Special Account for Energy Measures).

GX(Ⅲ) for Manufacturer

- Subsidy rate: 1/3
- Maximum amount: ★300 million Yen

[GX requirements for Large company]

①**Initiatives for GHG reduction**

- Set targets for FY2025 and FY2030 regarding domestic Scope 1 and Scope 2 GHG emissions
- Report and publish progress annually following third-party verification

②**Drafting strategies for business growth** and providing information on their implementation status (3 years)

③**Initiatives aimed at securing jobs**, including ongoing wage increases

List of manufacturers meeting the GX requirements

No.	メーカー名
1	株式会社アースクリーン東北
2	株式会社アーステクニカ
3	株式会社IHIボールワー
4	株式会社アイシン
5	アイダエンジニアリング
6	アイナックス稲本株式会
7	アイリスオーヤマ株式会
8	株式会社浅野研究所
9	株式会社アサヒ製作所
10	アトラスコプコ株式会社
11	アネスト岩田株式会社
12	株式会社アマダ
13	株式会社アマダプレスシ
14	株式会社アマダマシナリ
15	株式会社イリス
16	イワサキインターナショ
17	株式会社イワシタ
18	株式会社AIRMAN
19	株式会社エグロ

No.	メーカー名
37	京セラ株式会社
38	株式会社栗本鐵工所
39	黒田精工株式会社
40	Koenig & Bauer JP株式会社
41	小池酸素工業株式会社
42	コイズミ照明株式会社
43	コトブキ技研工業株式会社
44	コニカミノルタジャパン株式会
45	コベルコ・コンプレッサ株式会
46	コマツNTC株式会社
47	コマツ産機株式会社
48	株式会社小森コーポレーション
49	サイエンス株式会社
50	株式会社ササクラ
51	株式会社サムソン
52	株式会社サルバニーニジャパン
53	三起機械株式会社
54	三建産業株式会社
55	株式会社三條機械製作所

For enhanced Manufacturer

As of July 2, 2026, **169 manufacturers** have publicly announced their GX commitments, and the list is frequently updated and becomes publicly available.

31	株式会社神崎高級工機製
32	関東冶金工業株式会社
33	北芝電機株式会社
34	キタムラ機械株式会社
35	木村工機株式会社
36	キヤノンプロダクション

68	swissQprint Japan株式会社
69	株式会社SCREENグラフィックソリューションズ
70	スター精密株式会社
71	スチールプランテック株式会社
72	住友重機械工業株式会社
73	住友重機械モダン株式会社
74	清和ジーテック株式会社
75	株式会社ソディック
76	ダイキン工業株式会社

Source: Sustainable open Innovation Initiative
https://sii.or.jp/setsubi07r/uploads/r7h_gx_ichiran.pdf

Subsidy for the Implementation of an EMS (Energy Management System)

✓ Outcome of the Initial Funding Round for the FY2026 :Total 65 cases (2.3 billion yen) , Visualization 40 (1.5 billion yen), Control 24 (0.8 billion yen), Advance 1 (0.2 billion yen)

Type

Visualization

✓ **Data analysis: EMS with measurement, visualization functions**

Control

✓ **Optimizing energy usage: EMS with measurement, visualization, and control functions**

Advance

✓ **Optimizing advanced energy usage: EMS with AI-powered learning of operating conditions and automatic tuning**

Overview of Subsidy	
Eligibility for Subsidies	• Projects targeting significant energy consumption reduction and energy demand optimization through a **designated energy management system** (designated EMS), which is highly regarded as effective
Energy Efficiency Requirements	• Within the scope of the designated EMS, monitor, display, analyze energy consumption and improve operation at the facility or process level • Develop a medium- to long-term energy-saving plan utilizing EMS, and publish the results of the improvements (with a target improvement of 2%) • The EMS must be equipped with features that enable the implementer to independently manage and improve operations. If it lacks these features, the implementer must contract (not eligible for subsidies) with a provider able to propose operational improvements
Eligible Expenses	• Design Costs, Construction Costs, and Equipment Costs
Subsidy rate	• Large companies 1/3, Small companies 1/2
Maximum amount	• Upper limit: 100 million yen • Lower limit: 300,000 yen

Source: Ministry of Economy, Trade and Industry (2026.6.26) The 50th Meeting of the Subcommittee on Energy Conservation and New Energy

Further rationalize Data Center's own energy use alongside securing a power supply

Current Regulation

All	• Energy consumption more than **1,500kl/year** • Improvement in energy intensity by an average of **1% or more per year over 5 years** • **Periodical reporting** on energy use, etc. • Submission of mid- and long-term plans
DC	• Benchmark Target year: 2030 • Target level: average energy efficiency (PUE) ≤ 1.4

*This applies to businesses in the data center sector whose annual energy consumption totals 1,500 kiloliters or more of crude oil equivalent, and which oversee energy management for both data center buildings and associated facilities.

Additional Measure

(Effective April 1, 2026)

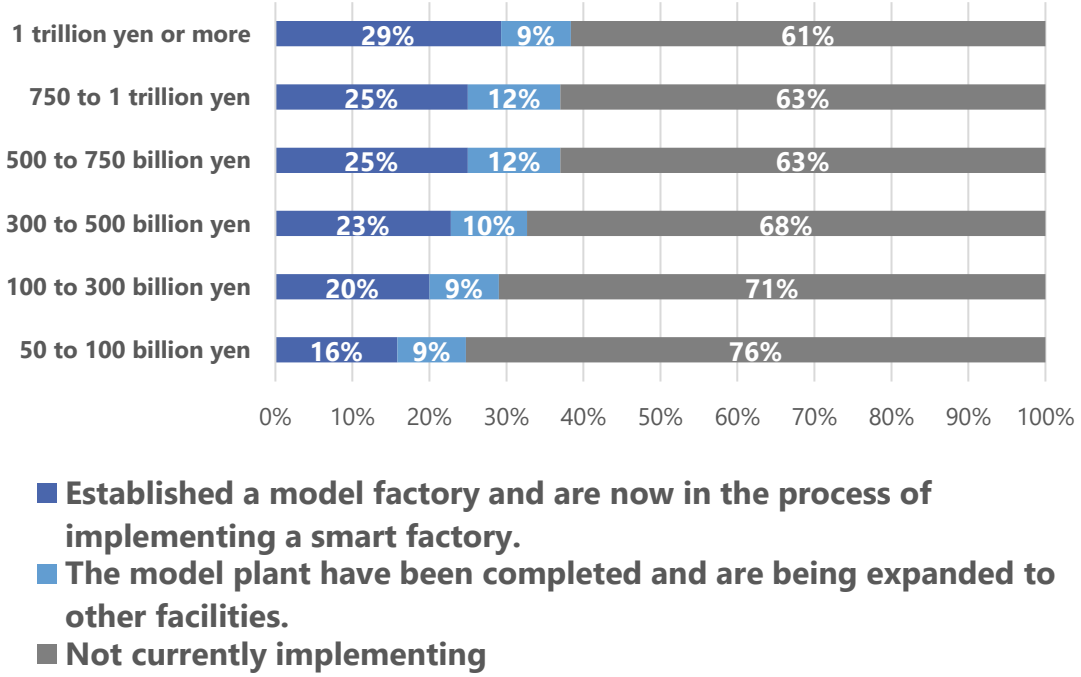
Additional measure(1): Goals, Initiatives, and performance of the DC	• **Expand the scope** of periodic reports • Data center operators are required to **disclose some of this information**.(e.g., the names of data centers newly established in FY2025 or later, and their PUE, etc.) • The government will **monitor disclosure status** and publish aggregated data.
Additional measure(2): Energy efficiency standard	• Average energy efficiency (PUE) ≤ 1.3 • Data centers (newly built in FY2029 or later) will need to comply two years after the facility starts.
Additional measure(3): Tenant-type data centers	• **Tenant-type data centers** will also be incorporated into PUE calculations (effective for fiscal year 2026) • Subject to the current Benchmark System and additional measures (1) and (2)

Source: Ministry of Economy, Trade and Industry (2026.6.26) The 50th Meeting of the Subcommittee on Energy Conservation and New Energy

Guidebook for Energy efficiency and Productivity Improvement through Digital and AI Technologies

✓ Aiming at serving as a starting point for consideration on enhancing energy efficiency and boosting productivity by leveraging digital and AI technologies. (published in March 2026)

Status of Smart Factory Initiatives



Source: edited from ABeam Consulting survey report
https://www.abeam.com/jp/ja/insights/010/

Contents of Guidebook

1. Interest in digital technology use (The need and efficacy of energy conservation through digital adoption)
   - 1.1 Why is it necessary to consider implementation now?
   - 1.2 Benefits anticipated from digital technology use
2. Key elements for accelerating digital adoption
   - 2.1 Steps for assessing Implementation
   - 2.2 Key points to consider during the review process
     - ①DX Promotion Team Development, ②Concept Design,
     - ③Conducting a PoC (Proof of Concept),
     - ④Detailing and Implementation, ⑤Verification of Effectiveness and Rollout Planning
3. Case Studies

Source: Agency for Natural Resources and Energy,
https://www.enecho.meti.go.jp/category/saving_and_new/saving/enterprise/ai/pdf/digital-ai_detail.pdf?update=260410

✓Thank you for your attention.