PV Activities in Japan and Global PV Highlights

RTS Corporation

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Summary in December 2025

PV Highlights in Japan

Monthly PV Highlights in Japan ~ December 2025 ~

- **The national government** held the first meeting of the Ministerial Council concerning Large-scale PV Projects, and decided on the Package of Measures on Large-scale PV Projects (Mega-solar)
- **Agency for Natural Resources and Energy (ANRE)** under **the Ministry of Economy, Trade and Industry (METI)** held the 109th meeting of the Procurement Price Calculation Committee and presented its direction to support ground-mounted commercial and industrial (C&I) PV systems from FY 2027 onward
- **METI** will mandate manufacturers to take cyber security measures for PV control systems from FY 2027
- **METI** plans to strengthen security measures for PV systems and other power generation systems
- **The Ministry of Land, Infrastructure, Transport and Tourism (MLIT)** will subsidize 1.1 million yen/house ($ 7,020 /house) for houses with ultra energy-saving performance equipped with PV modules, etc.
- **MLIT** will start accepting submissions for new road-surface PV technologies toward social implementation
- **Edogawa Ward** of **Tokyo** will establish a regional Power Producer and Supplier (PPS) and start the PPA business for existing houses
- **Marugame City** of **Kagawa Prefecture** announced a draft of an ordinance which stipulates the responsibility of administrative bodies and project developers when installing PV systems on reservoirs
- **Nippon Electric Glass** developed G-Leaf, an ultra-thin glass which can be used for film-type perovskite solar cells (PSCs)
- **Nippon Sheet Glass** will enter the business of supplying glass substrates for glass and PSCs
- **YKK AP** and **Panasonic Holdings** started verifying the implementation of building-integrated PV (BIPV) in interior windows using glass-type PSCs
- **MACNICA** will start the project for demonstration of film-type PCSs for residential use
- **Taro Hatsuden GK** has put into operation a 3-MW PV power plant connected to the grid during nighttime with co-located storage batteries in Miyako City, Iwate Prefecture
- **OTS** has signed a virtual PPA with Japan Semiconductor for a 7.8 MW floating PV system
- **RENOVA** entered into a project finance loan agreement totaling 22.3 billion Yen ($ 142 million), one of the largest amounts of this kind, for FIT PV projects
- **Mitsubishi HC Capital** has established R Eco Power LLC, to handle low-voltage PV power generation business, with joint investment from its group company and Eco Style
- **Hankyu Corporation** is expanding the installation of PV systems at stations to increase the use of PV electricity in railway operations

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Founded in 1983, RTS Corporation is a consulting company specialized in PV.

(Note) 1 JPY = 0.00638 USD (as of January 1, 2026)

RTS Monthly Perspective

Global PV installed capacity has grown steadily to approx. 650 GW in 2025

The Paris Agreement, agreed in December 2015, marked its 10th anniversary in December 2025. In 2015, the annual and cumulative global PV installed capacities were 50.8 GW and 231 GW, respectively. Over the decade after 2015, PV power generation has penetrated across the world, and by 2025, they have grown significantly to approx. 650 GW and approx. 2.8 TW, respectively.

As shown in Table 1, PV power generation experienced various developments and changes in 2025 both domestically and internationally. After taking a break from the previous significant expansion of deployment, it has settled on a steady expansion. In terms of policy, the U.S. has significantly regressed its support for renewable energy due to a shift in its energy policy, while other countries and regions around the world, including Europe, China, and India, are strengthening support to expand PV deployment, and the global trend toward transitioning from fossil fuels to decarbonized power sources is irreversible.

Table 1 Ten most important news related to PV power generation in 2025

	Ten most important news in the world		Ten most important news in Japan
Policy	1) The International Energy Agency (IEA) estimated that the global PV installed capacity is expected to grow to 8,067-12,499 GW by 2035 on a cumulative basis	Policy	1) The government formulated the GX2040 Vision, planning to ensure a stable supply of energy, economic growth, and decarbonization at the same time
	2) The EU agreed to reduce greenhouse gas (GHG) emissions by 90% by 2040 compared to 1990 levels		2) The Ministry of Economy, Trade and Industry (METI) formulated the Seventh Strategic Energy Plan, positioning renewable energy as the main power source in the energy mix for 2040 and setting the renewables ratio at 40% to 50%, and PV at 23% to 29% as the power source with the largest share
	3) The U.S. has significantly regressed its renewable energy support measures due to a shift in its energy policy		3) The Ministry of the Environment (MoE) formulated the Local Action Plan for Global Warming Countermeasures, reducing GHG emissions by 60% by FY 2035 and 73% by FY 2040 compared to 2013 levels, and maximizing the use of decarbonized power sources such as renewable energy and nuclear power
	4) China announced a plan to introduce 3.6 TW of PV and wind power by 2035		4) The Ministry of Land, Infrastructure, Transport and Tourism (MLIT) enforced mandatory compliance with energy-saving standards by the revision of the Building Energy Efficiency Act
	5) India has promoted industrial policies to support domestic PV products through the National Manufacturing Mission and the Approved List of Models and Manufacturers (ALMM)		5) The Ministry of Agriculture, Forestry and Fisheries (MAFF) revised the basic policy of the Act on Promoting Generation of Electricity from Renewable Energy Sources Harmonized with Sound Development of Agriculture, Forestry and Fisheries, to promote the introduction of desirable agrivoltaics (Agri-PV)
Market	6) China, European Union (EU), the United States, and India introduced 360 GW, 65 GW, 50 GW, and 45 GW, respectively. The annual global PV installed capacity was approx. 650 GW, bringing the cumulative installed capacity to approach 3 TW	Local governments	6) The PV installations to public facilities and public land through the adoption of the PPA scheme has increased
	7) Although PV module prices are on the rise due to the Chinese government's control of low prices, the oversupply has not been resolved, and the price level is 8 cents/W		7) Tokyo Metropolitan Government (TMG) and Kawasaki City in Kanagawa Prefecture started mandatory installation of PV systems on newly built houses
	8) With the expansion of PV deployment, the negative price of the electricity trading market has increased, grid flexibility, grid forming, and installations of storage batteries annexed to PV systems have become more active	Market	8) PV installations to the self-consumption market, mainly on private and public facilities have moved into full swing
Industry	9) In China, the entire industry is exhausted due to oversupply and price competition (involution), and the industry restructuring began		9) The residential PV market has grown, driven by the installation of PV systems as standard equipment
	10) Construction of factories for solar cells and modules has spread around the world, new supply chains have emerged, and competition for next-generation solar cell development has intensified	Industry	10) Business development through on-site, off-site, and virtual PPAs has been enhanced to expand PV deployment, and new developments and new businesses related to PV power generation were activated, including O&M, energy storage, FIP conversion, aggregation, recycling, and partnerships among companies

In the market, the oversupply of PV modules has continued, but the price decline has been stopped at the level of 8 cents/W. With the expansion of PV deployment, new business opportunities are emerging due to the increase in negative prices in the electricity trading market, as grid flexibility, grid forming, and installation of storage batteries annexed to PV systems are gaining momentum. In the PV industry, in China, which leads the world's PV production, the entire industry is exhausted due to excessive competition following oversupply (involution), and while the industry has begun to reorganize and strengthen itself, the construction of solar cell/module factories has spread around the world, and new supply chains have begun to form. In addition to the competitiveness of PV power generation costs, the cost of energy storage is declining, and the advantages of PV systems integrated with energy storage are expected to increase further.

In Japan, the government formulated the GX2040 Vision and set out national goals toward 2040 aimed at securing a stable energy supply, economic growth, and decarbonization at the same time, and decided on the Package of Measures for MW-scale PV Projects to strengthen regulations, strengthen cooperation with local communities, and prioritize support for projects ensuring harmony with local communities. The Ministry of Economy, Trade and Industry (METI) formulated the Seventh Strategic Energy Plan, positioning PV as the largest power source in the energy mix for 2040, and indicating a policy for future PV deployment with three pillars: 1) rooftop PV systems, 2) ground-mounted PV systems, and 3) social implementation of next-generation solar cells. While initiating initial investment support for rooftop PV systems and a scheme to certify Long-term Stable Qualified PV Power Producers, a business environment has been developed from multiple perspectives toward a full-fledged expansion of PV deployment, including promoting the use of the FIP program, evaluating the value of renewable energy, strengthening support for perovskite solar cells (PSCs), and supporting grid-scale energy storage stations. The Ministry of the Environment (MoE) formulated the new Plan for Global Warming Countermeasures and will promote the energy transition to decarbonized power sources. In order to expand PV deployment, support for the introduction of PV has been strengthened, including deployment led by local communities, active introduction to public facilities owned by the national and local governments, and support for private companies to promote self-consumption. New efforts to expand the introduction of next-generation solar cells and introduction via the PPA scheme have also begun. The Ministry of Land, Infrastructure, Transport and Tourism (MLIT) has begun to make it mandatory for all new residential and non-residential buildings to comply with energy-saving standards through the revision of the Building Energy Efficiency Act, and has expanded the introduction of renewable energy to public infrastructure facilities such as railways, roads, and ports following airports. The Ministry of Agriculture, Forestry and Fisheries (MAFF) has revised the basic policy of the Act on Promoting Generation of Electricity from Renewable Energy Sources Harmonized with Sound Development of Agriculture, Forestry and Fisheries and has begun to organize and promote the introduction of desirable Agri-PV systems. Local governments have promoted the establishment of renewable energy promotion zones and expanded the introduction of PV by adopting the PPA scheme for public facilities and public land. In addition, the Tokyo Metropolitan Government (TMG) and Kawasaki City in Kanagawa Prefecture started mandating new houses to install PV systems.

In the PV market, PPA schemes that are not dependent on FIT and FIP programs have emerged, and the self-consumption market centered on PV installations on buildings and facilities by electricity consumers have emerged. In response to mandatory compliance with energy-saving standards, the residential market is moving toward making PV systems standard equipment and has turned to a growth trajectory.

The PV industry is strengthening its business development by shifting its focus to on-site, off-site, and virtual PPAs while promoting partnerships among companies, and is also actively expanding into new business areas such as O&M, FIP conversion, energy storage, repowering, aggregation, and recycling, which are expected to grow hereafter.

In 2026, measures are expected to be developed in line with the policies of the Seventh Strategic Energy Plan and the Package of Measures for MW-scale PV Projects. The PV industry should work with the government to open the curtain on the expansion of the second phase of PV deployment, paving the way for business independence and full-scale deployment of PV power generation.

Highlights of the Japanese PV Market

National government

The government held the first meeting of the Ministerial Council concerning Large-scale PV Projects and decided on the Package of Measures for Large-Scale PV Projects (Mega Solar)." **The Ministry of Economy, Trade and Industry (METI)** presented its policy direction for the treatment of ground-mounted commercial PV projects from Fiscal Year (FY) 2027 onward and will require cyber security measures for control systems of PV systems and battery storage systems starting in FY 2027. **The Ministry of Land, Infrastructure, Transport and Tourism (MLIT)** will launch a public call for technologies aimed at the social implementation of road-surface PV power generation.

Local governments

Edogawa Ward, Tokyo, established a regional power producer and supplier (PPS), Edogawa Denryoku (Power), and will launch a PPA service for existing residential houses. **Marugame City, Kagawa Prefecture**, published a draft ordinance stipulating the responsibilities of administrative authorities and project developers when installing PV systems at reservoirs.

Industry trends (PV cell/ module, BOS)

In the field of PV cells and modules, **Sekisui Solar Film** concluded the Partnership Agreement toward the Realization of a Decarbonized Society, with Fukuoka City, Fukuoka Prefecture. Based on this agreement, the parties will work to promote the dissemination of perovskite solar cells, conduct demonstrations and take the lead in introducing them at city-owned facilities and other sites, and promote understanding and awareness of decarbonization.

There were no special news in the field of balance of system (BOS).

PV price trends

RTS Corporation conducted a questionnaire survey of participants in its online seminar on the price of PV modules, etc. Excluding the respondents who answered they did not know, the largest number of respondents answered that the transaction price in October 2025 "remained unchanged" from the previous month, followed by "slightly increased."

Installation trends

The status of approvals of PV projects as of the end of June 2025 was released. The commissioned capacity between January and June 2025 was 1,346 MW. If this pace continues, the PV installed capacity under the FIT/FIP programs in 2025 is expected to be around 2 GW. It is assumed that PV installations via PPAs, etc., independent of the FIT/FIP programs, are increasing.

PV power generation business

Renova entered into project finance loan agreements totaling 22.3 billion yen ($ 142 million) to fund the development of approx. 1,300 small-scale distributed PV systems with a combined capacity of 170 MW. **Kunishitaike Megafloat LLC**, wholly funded by OTS LLC, concluded a 7.8 MW floating PV virtual PPA with Japan Semiconductor. **Taro Hatsuden (Power Generation) LLC** commenced operation of a PV power plant with nighttime grid connection.

Power storage

Many partnerships leveraging the respective strengths of the parties, with the aim of developing new business opportunities, were observed.

Nine companies that are members of the Battery Association for Supply Chain (BASC), including **Hitachi, Ltd.** and **Taikisha Ltd.**, established a joint venture, Swiftfab Energy Systems, to strengthen the battery manufacturing equipment industry. The joint venture will design and develop buildings, facilities, production equipment, and systems in an integrated manner and construct battery manufacturing lines.

In a project to remotely control residential battery storage systems using AI, **Omron Social Solutions**, **Kyushu Electric Power, Chubu Electric Power Miraiz, Tokyu Land**, and the U.S.-based **Lunar Energy** have invested in GridShare Japan, a subsidiary of Itochu Corporation. **Tokyo Gas** launched a service to generate revenue in electricity markets using high-voltage grid-scale battery storage systems on behalf of customers. **Hanwha Japan**, as an aggregator, began providing solutions that cover the entire process, from proposing revenue models for grid-scale battery storage systems, including those co-located with PV power plants, to their operation. **Kinden**, together with **Kansai Electric Power (KEPCO)**, established a new company, K2-BatOM, to provide one-stop services for safety supervision, maintenance and inspection, remote monitoring, and battery diagnostics for battery storage stations.

Remixpoint (RP) and its subsidiary **Seal Engineering** entered into a business alliance agreement with Blue Sky Solar (BS) to install battery storage systems at low-voltage PV power plants

owned by RP and BS and optimize their operation. **Green Growth** formed a business partnership with **K2 Holdings** to covert PV power plants owned by K2 Energy to the FIP program and operate the co-located battery storage systems.

Finance

Mitsubishi HC Capital, through a joint investment with **Ecostyle**, established a special purpose company, R-Eco Power LLC, to engage in low-voltage PV projects. The company will acquire FIT PV assets and seek to utilize the FIP program and convert them to corporate PPAs.

Renewable energy users

Suzuki, Aeon Industry, and **Chubu Electric Power Miraiz** launched onsite and offsite PPA services as part of the Enshu Decarbonization Project, in which they participate. **Air Water** adopted Itochu Enex's self-consumption PV service, TERASEL Solar, and introduced a 3.8 MW PV system at its Hofu Factory under an onsite PPA scheme. **Fukui Shimbun** concluded an offtake agreement for an offsite PPA using a 1.2 MW PV power plant with Hokuriku Electric Power.

Technology and R&D trend

Demonstration projects for next-generation solar cells were launched one after another. **YKK AP** began an implementation verification of building-integrated PV (BIPV) using interior windows incorporating glass-type perovskite solar cells currently under development by Panasonic Holdings at the Tanimachi YF Building in Osaka City, Osaka Prefecture, where YKK AP is a tenant. **Kanazawa University,** under a Ministry of the Environment project, began a demonstration test using tandem perovskite solar cells at an on-campus demonstration space in collaboration with **Toshiba Energy Systems & Solutions**, **Choshu Industry**, and **the University of Electro-Communications**. **Aisin** provided perovskite solar cells (PSCs) and solid oxide fuel cells (SOFCs) to a green hydrogen project led by Kyoto Prefecture. **Macnica**'s residential film-type PSC installation demonstration, jointly conducted with **Tokyo Gas**, **Iida Group Holdings**, and **Reiko**, was selected for a project by the Tokyo Metropolitan Government (TMG). **Nissan Motor** began a demonstration experiment of chalcopyrite solar cells manufactured by PXP on the glass surfaces and cylindrical sections of its R1 Higashi-Totsuka dealership building. FREA, The Fukushima Renewable Energy Institute, **National Institute of Advanced Industrial Science and Technology (AIST)**, will establish a new demonstration hub for next-generation solar cells, including PSCs, in 2026, utilizing subsidies from Fukushima Prefecture.

RTS Monthly Focus

1. Trends in PV power generation in Japan: 2025 highlights and prospects for 2026

<Key points>

- ✓ The Seventh Strategic Energy Plan was approved by the Cabinet, and the energy supply and demand outlook for 2040 was released
- ✓ A package of measures concerning MW-scale PV projects was compiled at a meeting of relevant ministers, including strengthening of legal regulations against inappropriate projects and prioritizing support for the development of projects in harmony with local communities
- ✓ The "Technology Development Project for the Expansion of PV Introduction" by the New Energy and Industrial Technology Development Organization (NEDO) was launched in FY 2025
- ✓ The introduction of PV systems utilizing PPAs continued to expand steadily, following the previous year
- ✓ While new market entrants into the grid-scale battery storage business increased rapidly, confusion arose in the business environment, leading to a review of the scheme

■ Policies: Support for next-generation solar cells and the development of PV projects in harmony with local communities is enhanced while regulations are tightened

As policies aimed at expanding PV deployment are rolled out, concerns over developing PV projects in harmony with local communities have become increasingly apparent, such as the issue of a MW-scale PV project in the Kushiro Wetland area on in Hokkaido Prefecture. In response, the government has decided on a package of measures concerning MW-scale PV projects. While strengthening legal regulations against inappropriate projects, the government has set out a policy to prioritize support for the development of PV projects in harmony with local communities

Policy highlights

GX2040 Vision | **Seventh Strategic Energy Plan** | **Plan for Global Warming Countermeasures**

In the 2040 energy mix, the ratio of renewable energy is targeted at approx. 40% to 50%, among other policy directions

Next-generation solar cell

R&D targets for tandem-type PV technologies have been set at conversion efficiency exceeding 30%, durability of 20 years, and power generation cost of 12 yen/kWh (7.66 cents/kWh) or less, and a mass-production technology demonstration project has been launched toward early commercialization

and so on

The "initial investment support scheme" to promote the deployment of rooftop PV systems has been applied since October 2025

Development of an environment in which the value of renewable energy is appropriately evaluated

A policy to reconsider the price levels of FIT certificates, including raising the minimum price (0.4 yen/kWh or 0.255 cents/kWh) and reviewing whether the ceiling price (4.0 yen/kWh or 2.552 cents/kWh) remains appropriate, among other measures and so on

Grid-scale battery storage

・As applications for connection assessment and contracts have surged, rules governing grid access procedures will be strengthened

・Directions of reducing solicited capacity in the supply-demand adjustment market and lowering the ceiling price have been presented, among other measures and so on

Ensuring harmony with local communities

In response to the issue of a MW-scale PV project in the Kushiro Wetland area in Hokkaido Prefecture, relevant ministries and agencies will work together to examine countermeasures

Package of measures regarding MW-scale PV projects

1) Strengthening legal regulations against inappropriate projects, etc.
2) Enhancing coordination with local initiatives
3) Prioritizing support for the development of projects in harmony with local communities

The year 2026 is expected to be a year of strengthening the PV deployment through prioritizing support for PV projects in harmony with local communities such as rooftop projects, while strict measures will be taken against inappropriate projects

Figure 1: Policy highlights in 2025 and future outlook

■ Business models and markets: Review of the topics most frequently covered in RTS report "The Frontline of PV Power Generation Business" in 2025

(1) Grid-scale battery storage

The most frequently covered topic in 2025 was grid-scale battery storage. Aiming to capture revenue opportunities in the supply-demand adjustment market, companies in a wide range of industries entered this field one after another, not only those in the energy and renewable energy sectors, but also those from finance and investment, construction and infrastructure, real estate, and IT. Entry into the aggregation business, which is key to monetization, was also active, leading to intense competition over control technologies and operational know-how.

At the same time, challenges became apparent, including the prolongation of grid access procedures due to a surge in applications for grid connection assessment, as well as rising procurement costs for balancing capacity in the supply-demand adjustment market. In response, institutional reviews have begun, and discussions are ongoing. Further changes of scheme are expected to continue in 2026 and are likely to have a certain impact on the industry structure.

(2) PPA business

The deployment of PV systems using PPAs continued to expand steadily, following the previous year. In on-site PPAs, initiatives to make effective use of surplus electricity moved into full swing. In addition to conventional market-based sales and retail sales of electricity, a variety of schemes were deployed, including intra-group power sharing with designated off-takers, local power sharing within communities, and combined use with off-site PPAs. Cases in which the environmental value of surplus electricity is supplied to PPA off-takers also increased. Going forward, the use of battery storage is expected to become an important element in meeting off-takers' needs to improve self-consumption ratios.

In off-site PPAs, including both physical and virtual PPAs, matching between power producers and electricity consumers has been considered a challenge. However, 2025 was also a year in which the use of matching businesses advanced. This trend was likely supported by the expansion of bilateral trading of environmental value from existing FIP PV power plants - including those converting to the FIP program - to cover all facilities. PPA adoption has also become more widespread in the public sector as well, contributing to the expansion of local decarbonization initiatives.

(3) Dual-use market

Initiatives related to Agro PV power generation continued to expand in 2025, following the previous year. During the year, Kubota announced plans to scale up its Agro PV business, while Yanmar also revealed its engagement in Agro PV power generation as part of new projects. In addition, Idemitsu Kosan began construction of a 2-MW PV power plant adopting technology that uses trackers to optimize solar irradiation for crops while maximizing power output. Other installation models also attracted attention, including vertically installed bifacial PV modules and applications for shading in tea plantations, highlighting the diversity of deployment formats.

Looking ahead, further acceleration in deployment is expected following the Cabinet approval of the Seventh Strategic Energy Plan and the revision of the Basic Policy under the Act on Promoting Renewable Energy in Agricultural, Forestry, and Fishery Villages, under which new targets have been set.

(4) Further utilization of the FIP program

As part of the Action Plan for Making Renewable Energy a Main Power Source (draft), measures aimed at accelerating the conversion from the FIT program to the FIP program have been promoted, leading to a further expansion in the use of the FIP program. In particular, in the Kyushu region, the number of large-scale projects combining FIP conversion with co-located battery storage increased. With conditions aligning - such as declining battery prices, revisions to priority dispatch rules, and the expansion of non-fossil certificate trading - there were more cases in which project viability was judged to be achievable even in phases where the expected premium declined due to a reduction by the unit of 0.01 yen (0.006 cents). Moreover, the expansion of non-fossil certificate trading has contributed to the diversification of the PPA business, thereby broadening the scope for utilizing the FIP program.

■ Technologies and products: Development of technologies and products aimed at expanding deployment made progress

(1) Technology development

Based on NEDO's PV Power Generation Development Strategy 2025 (NEDO PV Challenges 2025), the Technology Development Project for the Expansion of PV Introduction was launched in FY 2025. Under this project, R&D activities are being promoted with the aim of expanding deployment

and building a resource-circulating society in areas such as the “Development of the next-generation solar cells”, “Development of PV system technologies tailored to installation sites”, “Technology development for ensuring the long-term stable use of power generation facilities as power sources”, and “Development of recycling technologies for building a circular economy”.

(2) Perovskite solar cells

Technological development has been progressing rapidly both in Japan and overseas, with mass production and shipments already beginning in some overseas markets. In Japan, demonstration tests have been carried out across a wide range of installation types, including installations on folded-plate metal roofs and building façades, Agro PV and floating PV applications.

(3) Residential PV products

New high-performance residential PV products have been announced, including compact, building-integrated, lightweight, and anti-glare models, which meet the requirements of the Tokyo Metropolitan Government’s subsidy program for “PV systems with superior functionality”.

(4) High-safety PV modules

High-safety PV modules have been commercialized, in which bypass diodes are integrated into the solar cells, preventing abnormal temperature rises even when modules are partially shaded and minimizing output losses.

■ **Outlook from 2026 onward: The PV market moves toward its next phase of growth**

- ✓ With the announcement of the “Package of measures for MW-scale PV projects”, the policy direction has been clarified, and the business environment for PV deployment projects is expected to change going forward. While checks will become more stringent for large-scale ground-mounted PV projects - especially from the perspective of ensuring harmony with local communities - deployment of building-mounted systems, including rooftop installations, as well as solar carports, is expected to be promoted. Among dual-use installations, Agro PV systems are subject to strict scrutiny; however, by accumulating best-practice cases, it is anticipated that understanding among agricultural stakeholders will gradually increase
- ✓ PPAs have been the main driver of PV deployment, and in recent years, business models that enable the sharing of surplus electricity have continued to expand. As PV deployment advances further, experiences in other countries suggest that there will be surplus daytime electricity. Policies are therefore expected to evolve in a way that gives economic rationality to models that have large-capacity battery storage annexed to PV systems to raise off-takers’ self-consumption rates while generating revenue in electricity markets
- ✓ Regarding grid-scale battery storage, a direction has been indicated toward revising both the solicited capacity and the ceiling price in the supply-demand adjustment market. As the supply-demand adjustment market is expected to continue undergoing revisions as needed to move toward its ideal form, market behavior premised on high clearing prices is likely to subside, contributing to the formation of a healthier market. If revisions to grid connection rules resolve the prolongation of grid access procedures, deployment of grid-scale battery storage is expected to gradually accelerate
- ✓ On the PV module technology front, back-contact (BC) products are being introduced into the Japanese market as another technology pursuing higher efficiency, with adoption expected to progress particularly in the markets where high efficiency is required. Domestic prices are forecast to rise slightly. As PV deployment expands to building rooftops and façades, greater attention will be paid to PV modules with high design quality, as well as to MLPEs such as power optimizers and microinverters, aiming to maximize power generation and enhance safety. Development toward mass production of perovskite solar cells is expected to remain active, and trial introductions of overseas products into the Japanese market are likely to increase, leading to intensified competition

2. FY 2026 budget proposals by the ministries and agencies of Japan

<Key points>

- ✓ For strengthening the promotion of GX (green transformation), the Ministry of Economy, Trade and Industry (METI) has allocated the budget for renewable energy as follows: 49.7 billion Yen ($ 317 million) for the Project to support the establishment of the GX supply chains including perovskite solar cells (PSCs); 5.9 billion Yen ($ 37.6 million) for the Project to promote the introduction of PV power generation and storage batteries annexed to renewable energy power sources with the initiative of consumers; 5.2 billion Yen ($ 33.2 million) for the Project to support promotion of renewable energy introduction in Fukushima Prefecture; 3.1 billion Yen ($ 19.8 million) for the development of technologies to expand the introduction of PV power generation, and 35.0 billion Yen ($ 223 million) for supporting the introduction of grid-scale storage batteries
- ✓ The Ministry of the Environment (MoE) has allocated the budget for the maximum introduction of renewable energy as follows: 27.0 billion Yen ($ 172 million) for the Subsidy for promoting transition to local decarbonization and renewable energy, etc.; 2.0 billion Yen ($ 12.8 million) for the Project to promote installation of renewable energy facilities to public facilities, etc.; and 3.2 billion Yen ($ 20.4 million) to the Project to accelerate the introduction of renewable energy in harmony with local communities by private companies, etc., and 7.00 billion Yen ($ 44.7 million) to the Project to support the implementation model of PV society with perovskite solar cells (PSCs), and 8.0 billion yen ($ 51.0) for a new item, the Project to promote decarbonization of houses
- ✓ Among other ministries and agencies, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) has allocated budget for promoting the introduction of renewable energy in public infrastructure facilities and pursuing carbon neutrality, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) has allocated budget for renovating school facilities into ZEBs (net zero energy buildings), and the Ministry of Agriculture, Forestry and Fisheries (MAFF) has allocated budget for the introduction of renewable energy as part of promoting the Green Food System Strategy and the Project to develop agriculture and rural areas

(1) The FY 2026 budget proposals for resources and energy-related items by the Ministry of Economy, Trade and Industry (METI)

Table 1 FY 2026 budget proposals for technology development and introduction support for renewable energy by METI (major items, mainly PV, storage batteries, and grid connection-related items) *1 (Unit: billion Yen)

	Item		FY 2025 budget (FY 2024 supplementary budget)	**FY 2026 budget** (FY 2025 supplementary budget)	Responsible METI section
1	Technology development project to solve the issues of large-volume introduction of PV power generation	A	3.20	**3.10**	New and Renewable Energy Div., Energy Efficiency & Renewable Energy Dept., Agency for Natural Resources and Energy (ANRE)
2	R&D project to develop technology for cultivation and commercialization of seeds such as new and renewable energy	A	1.70	**1.40**	
3	Expenses of projects to implement special measures for the surcharge scheme under the FIT program, etc.	C	8.00	**8.00**	
4	Expenses to consign public relations and other businesses to promote introduction of new and renewable energy, etc.	C	0.61	**0.55**	
5	Project to promote appropriate introduction of renewable energy	C	3.50	**3.40**	New and Renewable Energy Div., Energy Efficiency & Renewable Energy Dept., ANRE Electric Power Safety Div., Industrial and Product Safety Group, Minister's Secretariat
6	Project to promote appropriated introduction of renewable energy (1) Project for efficient and stable management of the FIT program, etc.	C	3.10	**3.00**	New and Renewable Energy Div., Energy Efficiency & Renewable Energy Dept., ANRE

	Item		FY 2025 budget (FY 2024 supplementary budget)	**FY 2026 budget** (FY 2025 supplementary budget)	Responsible METI section
7	Project to promote appropriated introduction of renewable energy (2) Project to tighten regulations for renewable energy projects	C	0.36 + administrative expense	**0.40**	New and Renewable Energy Div., Energy Efficiency & Renewable Energy Dept., ANRE Electric Power Safety Div., Industrial and Product Safety Group, Minister's Secretariat
8	Project to support promotion of renewable energy introduction in Fukushima Prefecture	C	5.20	**5.20**	New and Renewable Energy Div. & Hydrogen and Ammonia Div., Energy Efficiency & Renewable Energy Dept., ANRE
9	Project to develop next-generation power control technology toward large-volume introduction of renewable energy	A	7.20	**6.00**	Policy Planning Office, Advanced Energy System Div., Energy Efficiency & Renewable Energy Dept., ANRE
10	Project for supporting the introduction of storage batteries annexed to PV and other renewable energy power sources with the initiative of consumers	C	9.80	**5.90**	New and Renewable Energy Div., Energy Efficiency & Renewable Energy Dept., ANRE
11	Project to develop human resources for working on renewable energy	C	0.75	**0.63**	
12	Project to support the establishment of GX supply chains	C	61.0	**49.7** **(5.50)**	GX Investment Promotion Div., GX Policy Group, Policy Planning Div., New and Renewable Energy Div. & Hydrogen and Ammonia Div., Energy Efficiency & Renewable Energy Dept., ANRE
13	Project to support the introduction of distributed energy resources for expanding the introduction of renewable energy	C	1.10	**0.37** **(8.10)**	Policy Div., Advanced Energy Systems and Structure Div., Energy Efficiency & Renewable Energy Dept., ANRE
14	Project to support the introduction of power storage systems (grid-scale storage batteries, etc.) for expanding the introduction of renewable energy	C	15.0	**35.0** **(8.00)**	Advanced Energy Systems and Structure Div., Energy Efficiency & Renewable Energy Dept., ANRE
15	Advanced technology development and demonstration project to promote hydrogen society (2) Demonstration project to establish a sophisticated hydrogen society model towards decarbonization of industrial activities, etc.	B	-	**4.00 (new)**	Hydrogen and Ammonia Div., Energy Efficiency & Renewable Energy Dept., ANRE
16	Project to promote investment in energy conservation such as supply/ demand integrated houses and buildings	C	-	**6.00 (new)**	Energy Efficiency Div., Energy Efficiency & Renewable Energy Dept., ANRE
17	Project expenses to promote optimization of energy utilization for small and medium-sized enterprises (SMEs)	C	0.61 (3.40)	**0.74**	
18	Project to promote investment and support social implementation for energy conservation and transition to non-fossil energy		76.0	**84.0**	
19	Project of contribution and assessed contribution to international organizations (5) Contribution to the International Energy Agency (IEA)	C	0.55	**0.55**	International Affairs Div., Commissioner's Secretariat, ANRE
20	Project of contribution and assessed contribution to international organizations: (9) Contribution to the International Renewable Energy Agency (IRENA) (Voluntary contribution to IRENA)	C	0.08	**0.08**	
21	Project of contribution and assessed contribution to international organizations: (10) Assessed contribution to the International Renewable Energy Agency (IRENA)	C	0.17	**0.17**	International Affairs Div., Commissioner's Secretariat, ANRE

	Item		FY 2025 budget (FY 2024 supplementary budget)	**FY 2026 budget** (FY 2025 supplementary budget)	Responsible METI section
22	International demonstration project of Japan's technology contributing to decarbonization and energy transition	B	4.50 (new)	**3.00**	
23	Project for the development of environmental value certification systems, etc.	C	0.47	**0.45**	GX Planning and Promotion Office of GX Policy Group, Fuel Supply Infrastructure Policy Div. of Natural Resources and Fuel Dept., ANRE, Gas Infrastructure Development Office, Electricity and Gas Industry Div.
24	Project to support deep-tech startups in the GX sector	C	30.0	**18.50**	Innovation Creation and New Business Promotion Div. & Innovation Policy Div. of Innovation and Environment Policy Bureau, Environmental Policy Division, GX Policy Group
25	Project to strengthen certification facilities, etc. for perovskite solar cells	C	-	**- (1.10)**	International Electrotechnology Standardization Div., of Innovation and Environment Policy Bureau
26	Project to promote the resilience of autonomous resource circulation systems	C	3.00	**7.30**	Resource Efficiency and Circular Economy Div., GX Policy Group
27	Project to promote certification of standards for advanced energy demand and supply structure	C	2.30	**2.30**	Standards and Conformity Assessment Policy Div., Innovation and Environment Policy Bureau
28	Project to promote Joint Crediting Mechanism (JCM) (2) Project for international deployment of low-carbon technologies through JCM, etc. led by the private sector	C	1.20	**1.20**	GX Policy Group, Global Environmental Affairs Office
29	Project to promote Joint Crediting Mechanism (JCM) (1) Consignment expenses for projects to investigate establishment of infrastructure for acquisition of the Joint Credits, etc.	C	0.99	**1.00**	
30	Project of advanced technology development and demonstration toward promoting a hydrogen society (1) Technology development project for the establishment of competitive supply chains of hydrogen, etc.	A	8.30	**7.80**	Hydrogen and Ammonia Div., Energy Efficiency & Renewable Energy Dept., ANRE
31	Project to develop evaluation technologies for next-generation storage batteries and materials	A	2.00	**3.80**	Material Industries Div. & Automobile Div., Manufacturing Industries Bureau, Battery Industry Office, Commerce and Information Policy Bureau
32	Project expenses to advance energy structure and promote understanding of the energy transition	C	7.90	**7.30**	Office for Regional Relations for Nuclear Facilities and Nuclear Energy Public Relations Office, Electricity and Gas Industry Dept., ANRE
33	Project to establish and demonstrate infrastructure to improve sustainability of products such as storage batteries	B	1.50	**1.30**	Battery Industry Div. and Digital Economy Div., Commerce and Information Policy Bureau
34	Project to establish infrastructure to promote the Fukushima Innovation Coast Initiative	C	0.87	**1.40**	Fukushima New Industries and Employment Promotion Office, Fukushima Reconstruction Promotion Group
35	Subsidy for establishment, etc. of facilities to promote the Fukushima Innovation Coast Initiative	C	4.50	**7.40**	
36	Project expenses for establishment of energy supply bases in communities in preparation for disasters	C	0.67	**0.58**	Fuel Distribution and Retail Office, Natural Resources and Fuel Dept., ANRE
37	Consigned research on measures towards advancing energy supply and demand structure and the realization of GX	C	3.30	**3.30**	Policy Planning and Coordination Div., Commissioner's Secretariat, ANRE, Environmental Policy Div., GX Policy Group

	Item		FY 2025 budget (FY 2024 supplementary budget)	**FY 2026 budget** (FY 2025 supplementary budget)	Responsible METI section
38	Project to improve safety regulations (1) Project to improve safety regulations for new and renewable energy, etc.	C	0.31	**0.30**	Industrial Safety Policy Div., Industrial and Product Safety Group
39	Project to comprehensively support the improvement of safety capabilities of small-scale power generation facilities	C	0.27	**0.22**	Electric Power Safety Div., Industrial and Product Safety Group

Note: A: Technology development, B: Demonstrative research, C: Dissemination/ support, investigation, institutional framework, public relations and others

*1: Only the confirmed items are listed.

*2: 1 JPY = 0.00638 USD (as of January 1, 2026)

Source: Ministry of Economy, Trade and Industry (METI), compiled by RTS Corporation

(2) Budget proposals for renewable energy by the Ministry of the Environment (MoE)

Table 2 FY 2026 budget proposals for renewable energy by MoE *1 (Unit: billion Yen)

	Item	FY 2025 budget (FY 2024 supplementary budget)	**FY 2026 budget** (FY 2025 supplementary budget)	Responsible MoE section
1	Project to promote decarbonization of houses (in partnership with METI/ MLIT)	-	**8.00 (new) (1.00)**	Office of Strategy on Climate Change, Climate Change Policy Div., Global Environment Bureau
2	Project to accelerate the realization of ZEB and CO_2 reduction in buildings, etc. (partly in partnership with MAFF/ METI/ MLIT)	3.82 (4.80)	**6.70 (4.80)**	Office of Strategy on Climate Change, Climate Change Policy Div., Global Environment Bureau, etc.
3	Project to accelerate CO_2 reduction at factories and offices with decarbonization technologies, etc. (SHIFT project)	2.786 (new) (3.00)	**5.786 (3.50)**	Office of Strategy on Climate Change, Climate Change Policy Div., Global Environment Bureau
4	Project to consider acceleration of renewable energy introduction in harmony with local communities through environmental conservation and optimized utilization	0.93	**0.929**	Environmental Impact Assessment Div., Director-General's Group for Comprehensive Environmental Policy, Minister's Secretariat National Parks Div. and Office for Promotion of Biodiversity Strategy
5	Project to promote the introduction renewable energy in harmony with local communities by private companies, etc. (formerly Project to promote making renewable energy a main power source/ strengthening of resilience by private companies, etc.)	3.45 (new) (7.00)	**3.20 (4.50)**	Office of Strategy on Climate Change, Climate Change Policy Div., Global Environment Bureau
6	Project to support the introduction of perovskite solar cells (PSCs) toward the creation of a social implementation model of PSCs (in partnership with METI and MLIT)	5.02 (new)	**7.00**	Office for Promoting Local Decarbonization, Councilors' Group for Local Decarbonization, Minister's Secretariat, Office of Strategy on Climate Change, Climate Change Policy Div., Global Environment Bureau
7	Project to promote decarbonization of industrial parks, etc. under the GX Strategic Areas system (in partnership with METI)	-	**0.50 (new)**	Office for Promoting Local Decarbonization, Councilors' Group for Local Decarbonization, Minister's Secretariat
8	Project to promote the use of hydrogen derived from renewable energy, etc. in local communities (partly in partnership with METI)	3.774 (new)	**3.117**	Office of Strategy on Climate Change, Climate Change Policy Div., Global Environment Bureau, Office of Decarbonized Mobility, Mobility Environmental Policy Div., Environmental Management Bureau

	Item	FY 2025 budget (FY 2024 supplementary budget)	**FY 2026 budget** (FY 2025 supplementary budget)	Responsible MoE section
9	Subsidy for promoting local decarbonization (subsidy for local decarbonization transition and promotion of renewable energy, subsidy for accelerating decarbonization transition in designated regions, etc.)	38.521 (36.50)	**27.018** **(33.50)**	Office for Promoting Local Decarbonization, Councilors' Group for Local Decarbonization, Minister's Secretariat
10	Financing by the Japan Green Investment Corp. For Carbon Neutrality (JICN)	60.0	**70.0**	Councilors' Group for Local Decarbonization, Minister's Secretariat, Office of the Counsellor for Local Decarbonization Policy Coordination
11	Project to develop information on infrastructure for promoting local decarbonization	-	**0.955 (new)**	
12	Improvement of the environment to promote recycling of PV modules	Included in 0.871	**Included in 2.132** **(Included in 0.476)**	Office for Recycling Promotion, Environmental Regeneration and Material Cycles Bureau
13	Project to promote the establishment of a decarbonized circular economy system	4.00 (1.00)	**3.603** **(0.10)**	Office for Resource Circulation of Container Packaging and Plastic Resources, and Office for Resource Recycling Business Promotion under Resource Recycling Div. under Environmental Regeneration and Material Cycles Bureau Office of Policies against Marine Plastics Pollution, Marine Environment Div., Environmental Management Bureau
14	Project to promote advanced use of recyclable resources through strengthening integrated recycling systems	0.28	**0.31**	Resource Recycling Div. under Environmental Regeneration and Material Cycles Bureau, Office for Promoting the Resource Recycling Scheme
15	Project to promote investment in advanced resource recycling (in partnership with METI)	15.0	**20.0**	Office for Resource Recycling Business Promotion and Office for Resource Circulation of Container Packaging and Plastic Resources under Resource Recycling Div. under Environmental Regeneration and Material Cycles Bureau
16	Project to promote the introduction, etc. of advanced equipment for decarbonization of the value chain of plastic and metal resources	4.28 (1.70)	**7.297** **(3.00)**	
17	Project to promote the development of a decarbonization-oriented circular economy system	4.00	**3.603** **(0.10)**	Office for Resource Circulation of Container Packaging and Plastic Resources, and Office for Resource Recycling Business Promotion under Resource Recycling Div. under Environmental Regeneration and Material Cycles Bureau Office of Policies against Marine Plastics Pollution, Marine Environment Div., Environmental Management Bureau
18	Project to promote dissemination and expansion of green finance	0.70	**0.67**	Environmental Finance Office, Environment and Economy Div., Director-General's Group for Comprehensive Environmental Policy, Minister's Secretariat
19	Project to improve infrastructure for information related to greenhouse gases	Included in 0.708	**Included in 0.599**	Office of Market Mechanisms, Environment and Economy Div., Minister's Secretariat

	Item	FY 2025 budget (FY 2024 supplementary budget)	**FY 2026 budget** (FY 2025 supplementary budget)	Responsible MoE section
20	Project for advancing decarbonized management across the entire value chain, including small and medium-sized enterprises (SMEs)	-	**1.651 (new)**	Office for Decarbonization Business Promotion, Climate Change Policy Div., Global Environment Bureau, Environmental Finance Office, Environment and Economy Div., Director-General's Group for Comprehensive Environmental Policy, Minister's Secretariat Office for Mainstreaming Biodiversity, Natural Environment Planning Div., Nature Conservation Bureau
21	Project to promote the decarbonization and resilience enhancement of public facilities serving as local disaster prevention bases and evacuation centers	2.00 (2.00)	**2.00** **(2.00)**	Local Decarbonization Projects Promotion Div., Councilors' Group for Local Decarbonization, Minister's Secretariat Office for Promotion of Johkasou, Proper Waste Disposal Promotion Div., Environmental Regeneration and Material Cycles Bureau
22	Project to support the implementation of concrete measures for achieving local decarbonization	-	**0.63** **(0.70)**	Office for the Senior Counsellor for Local Decarbonization Policy Coordination, and Regional Policy Div. under Minister's Secretariat
23	Expenses, etc. for projects of natural parks, etc.	8.234 (4.79)	**8.274** **(5.24)**	Natural Environment Div., Policy Planning Div., National Parks Div., Natural Environment Planning Div. & Wildlife Div. under Nature Conservation Bureau
24	Project to promote social implementation of advanced system toward decarbonization of the transportation sector, etc. (partly in partnership with MAFF/MLIT)	1.415	**1.415**	Office of Decarbonized Mobility, Mobility Environmental Policy Div., Environmental Management Bureau
25	Project to promote the Joint Crediting Mechanism (JCM) toward transition to decarbonization	14.257 (0.15)	**13.903** **(0.55)**	JCM Promotion Office, Office of Director for International Cooperation for Transition to Decarbonization and Sustainable Infrastructure, and Office of Counsellors' Office for Environmental Infrastructure under Global Environment Bureau
26	Expenses to promote international cooperation on the environment and infrastructure strategies	0.463	**0.483**	Office of Director for International Cooperation for Transition to Decarbonization and Sustainable Infrastructure, Global Environment Bureau
27	Project to accelerate social implementation and dissemination of components and materials to realize innovative reduction of CO_2 emissions	3.70	**3.70**	Office of Strategy on Climate Change, Climate Change Policy Div., Global Environment Bureau
28	Technology development and demonstration project on community co-creation and cross-sectoral carbon neutrality (partly in partnership with MLIT/ MAFF)	4.98	**4.98**	
29	Project to develop an information provision system for the identification and creation of renewable energy resources	0.553	**0.321**	
30	Project to promote decarbonization of septic tank (johkasou) systems	1.80	**1.80**	Office for Promotion of Johkasou, Waste Management Promotion Div., Environmental Regeneration and Material Cycles Bureau
31	Project to promote and accelerate "decarbonization x reconstruction town development"	0.50	**0.50**	Office for Promotion of Fukushima Regeneration and Future-Oriented Project, Environmental Regeneration and Material Cycles Bureau

*1: Only the confirmed items are listed.

*2: 1 JPY = 0.00638 USD (as of January 1, 2026)

Source: Ministry of the Environment (MoE), compiled by RTS Corporation

(3) Budget proposals for PV power generation and renewable energy by other ministries and agencies

Table 3 FY 2026 budget proposals for renewable energy by MLIT, MEXT, MAFF, MIC and Cabinet Office [*1] (Unit: billion Yen)

	Project name		FY 2025 budget (FY 2024 supplementary budget)	**FY 2026 budget** (FY 2025 supplementary budget)
MLIT [*2]	City Bureau	GX for town development - Area-wide use of energy, and support for promoting renewable energy and energy creation	Unknown, included in various development projects	**Unknown, included in various development projects**
	Housing Bureau	Project to comprehensively promote carbon neutrality for housing and buildings - Project to promote energy-saving renovation of housing and buildings	Included in 37.34 (225.0)	**Included in 30.86**
		Project for comprehensive improvement of specified rental housing stock	Unknown	**Amount unknown**
		Project for developing serviced housing for the elderly	Unknown	**Amount unknown**
		Project for leading sustainable buildings, etc. (leading in CO_2 reduction)	Unknown	**Amount unknown**
	Civil Aviation Bureau	Promotion of decarbonization in the airport sector - Establishment of production bases of renewable energy (introduction of PV power generation)	Included in 6.8	**Included in 8.2**
	Road Transport Bureau	Promotion of road decarbonization to realize carbon neutrality by 2050 - Creation of road spaces to support greening of road traffic - Demonstration project for renewable energy power reusing batteries from commercial electric vehicles (EVs)	Yes Amount unknown	**Yes** **Amount unknown**
		Creating safety, security, and liveliness in road spaces - Promoting the third stage of “Michi no eki” (roadside rest areas)	Yes Amount unknown	**Yes** **Amount unknown**
	Railway Bureau	Acceleration of investment in GX and DX in the railway sector - Study on the acceleration of carbon neutrality, including the introduction of renewable energy - Support for the survey on implementation of railway decarbonization facilities, etc. - Promotion of the development of decarbonized railway facilities	Included in 0.189 0.012 In partnership with MoE	**Included in 0.189** **Included in 0.004** **In partnership with MoE**
	Government Buildings Dept.	Promotion of the improvement of governmental office buildings toward realization of a decarbonized society - Promotion of ZEB, etc. at governmental office buildings	Yes Amount unknown	**Yes** **Amount unknown**
	National Spatial Planning and Regional Policy Bureau	Support for revitalization of remote islands - Demonstration research for promotion of smart islands	0.111	**0.087** **(0.02)**
	Water and Disaster Management Bureau	Promotion of GX in dams and sewage systems - Expansion of renewable energy use	Included in 6.4	**Included in 8.8**
	Hokkaido Bureau	Deployment of measures toward realization of Zero Carbon Hokkaido, etc. - Activities to expand introduction of renewable energy and decarbonization, etc.	Yes Amount unknown	**Yes** **Amount unknown**

MEXT *3	Dept. of Facilities Planning and Administration, Minister's Secretariat	Improvement of public school facilities (including renovation of school facilities into ZEB)	Included in 69.1 (207.6)	**Included in 67.8** **(252.2)**
		Improvement of facilities of national universities and technical colleges (including establishment of ZEB and energy generation)	Included in 36.4 (62.4)	**Included in 36.4** **(80.2)**
		Promotion of improvement of private school facilities and equipment	Included in 9.10 (12.9)	**Included in 9.1** **(14.6)**
	Science and Technology Policy Bureau	R&D contributing to the realization of carbon neutrality - Development of advanced technologies for carbon neutrality - The area of "Realization of a low-carbon society," a global issue - Advanced research programs for climate change prediction	 2.20 0.732 0.548	 **2.59** **0.314** **0.548**
MAFF*4	Minister's Secretariat, etc.	Comprehensive measures for promoting the Green Food System strategy - Model initiative for Agro PV and next-generation solar cells	Included in 0.612 (3.80)	**0.574** **(4.00)**
		Project to enhance the function of fishing ports - Support for facilities contributing to greening of fishing ports	0.15 (0.50)	**0.10** **(1.657)**
		Project to develop agriculture and rural areas - Promotion of energy conservation and use of renewable energy	Included in 333.1 (included in 203.7)	**Included in 336.5** **(Included in 216.5)**
MIC*5	Strengthening the resilience of communication and broadcasting infrastructure - Strengthening the resilience of mobile phone base stations		2.59 (new)	**2.55**
Cabinet Office	Project to promote Okinawa model of clean energy introduction - Support for clean energy demonstration projects		0.919	**0.862**

*1: Only the confirmed items are listed.
*2: Ministry of Land, Infrastructure, Transport and Tourism
*3: Ministry of Education, Culture, Sports, Science and Technology
*4: Ministry of Agriculture, Forestry and Fisheries
*5: Ministry of Internal Affairs and Communications
*6: 1 JPY = 0.00638 USD (as of January 1, 2026)
Source: Materials obtained from relevant ministries, compiled by RTS Corporation

3. The 1st meeting of the Ministerial Council concerning Large-scale PV Projects (December 23, 2025)

<Key points 1>

- ✓ The government held the first meeting of the Ministerial Council concerning Large-scale PV Projects, and decided on a package of measures for large-scale PV projects (so-called "mega solar")
- ✓ The package consists of three pillars: 1) strengthening legal regulations for inappropriate projects; 2) strengthening coordination with local initiatives; and 3) prioritizing support for the project development in harmony with local communities
- ✓ In addition to strengthening regulations based on laws and regulations under the jurisdiction of relevant ministries and agencies, how to support the FIT/FIP programs, strengthen next-generation solar cells, and prioritizing support for the introduction of PV power generation in harmony with local communities will be discussed
- ✓ The policy of strict response to inappropriate projects will be presented, and at the same time, expansion of PV introduction will continue to be vigorously promoted for the projects that have been designed to ensure harmony with local communities

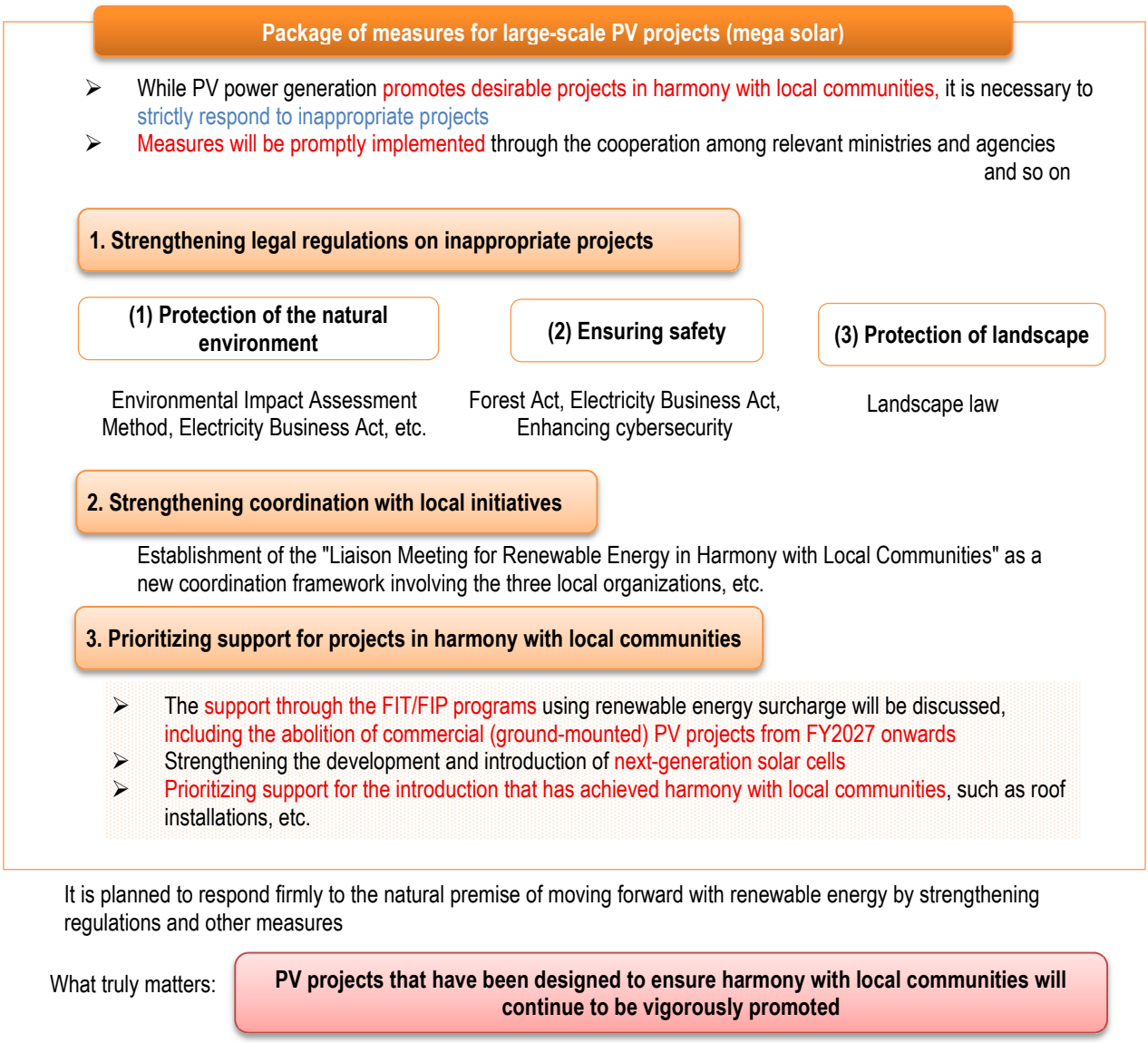


Figure 1 Overview of the package of measures for "mega solar" large-scale PV projects

Source: Materials from the 1st meeting of the Ministerial Council concerning Large-scale PV Projects (December 23, 2025), compiled by RTS Corporation

<Key points 2>

- ✓ The policy for responding to relevant laws and regulations regarding strengthening legal regulations against inappropriate project will be sorted out
- ✓ Relevant ministries and agencies will work together to review and strengthen the effectiveness of environmental impact assessments, strengthen safety regulations, and enhance cybersecurity
- ✓ Regarding strengthening cooperation with local initiatives, the Liaison Meeting for Renewable Energy in Harmony with Local Communities will be established to share necessary information on advanced initiatives by local governments. Non-FIT/non-FIP projects are also obliged to report violations under the Reporting System for Violations of Relevant Laws and Regulations

1. Strengthening legal regulations on inappropriate projects

Review and strengthening of the effectiveness of projects subject to Environmental Impact Assessment based on the Environmental Impact Assessment Act and the Electricity Business Act — MoE, METI

- ➢ Review the scale of the target PV projects and promote environmental considerations among project developers
- ➢ After the review, the concept of the review will be disseminated to local governments and necessary coordination will be ensured, etc.

After compiling the results of the review during the next ordinary session of the Diet, the Enforcement Order for the Environmental Impact Assessment Act is scheduled to be revised

Strengthening safety regulations under the Electricity Business Act — METI

For all 10 kW or larger PV systems, a system where third-party organizations with expertise in civil engineering and construction confirm the conformity of these systems to technical standards related to structures, before starting construction

Agreed on a draft report at the Electric Power Safety Subcommittee

It is aimed to submit a bill to the 2026 ordinary session of the Diet

Enhancing cybersecurity in PV systems — METI

Technical requirements for connecting PV equipment to the transmission and distribution network will be revised, requiring the use of equipment that has obtained "JC-STAR*"

* Labeling to prove compliance with certain cybersecurity standards

Agreed at the Grid Code Study Committee, etc.

Policy decided in December 2025

Other content:

Ensuring the appropriate disposal and recycling of PV modules including the following:

- Considering the ideal state of the Species Conservation Act,
- Issuing administrative communications regarding the Cultural Properties Protection Act
- Expanding the area of Kushiro Shitsugen (Wetland) National Park based on the Natural Parks Act
- Strengthening regulations of the forest land development permit system based on the Forest Law
- Promoting the use of the Landscape Act
- Appropriate setup of areas related to land use regulations
- Appropriate operation of relevant laws and regulations.

2. Strengthening coordination with local initiatives

- ➢ The "Liaison Meeting for Renewable Energy in Harmony with Local Communities" will be established to build a new coordination framework with three local organizations to share necessary information, including advanced initiatives by local governments
- ➢ Operation guidelines of the Landscape Act will be revised and the manual for utilizing the Landscape Act will be created and publicized
- ➢ Non-FIT/non-FIP projects have been newly added to be subject to the reporting in the "Reporting System for Violations of Relevant Laws and Regulations" and investigations by "Renewable Energy G-Men"

Figure 2 Strengthening coordination with local initiatives, such as strengthening legal regulations on inappropriate projects

Source: Materials from the 1st meeting of the Ministerial Council concerning Large-scale PV Projects (December 23, 2025), compiled by RTS Corporation

<Key points 3>

- ✓ Regarding commercial (ground-mounted) PV projects, the Procurement Price Calculation Committee will consider and make a decision by the end of FY 2025 ending March 2026, including the abolition of support under the FIT/FIP programs from FY 2027 onwards
- ✓ The development and introduction of next-generation solar cells will be strengthened, and support for the introduction of PV projects in harmony with local communities will be prioritized
- ✓ Regarding Agro PV, projects that are not compatible with agriculture will face a strict response, while clarifying desirable projects and promoting them in a way that leads to local revitalization
- ✓ Measures will be taken to respond to the procurement of renewable energy electricity by the government and other organizations, and to promote the consolidation of projects into responsible entities

3. Prioritizing support for projects in harmony with local communities

Support through the FIT/FIP programs using renewable energy surcharge — METI

Regarding commercial (ground-mounted) PV projects from FY2027 onwards, the status of cost reduction due to technological advancements and the direction of prioritizing support measures based on the issues and characteristics of PV power generation will be considered, including the abolition of support

Details are examined by the Procurement Price Calculation Committee

Policy to be decided by the end of FY 2025

Strengthening the development and introduction of next-generation solar cells — METI, MoE, MIC

- ➢ Support for R&D and demonstration of perovskite solar cells will be strengthened in anticipation of deployment in public infrastructure spaces. Support for tandem solar cells will also be strengthened and early social implementation will be promoted
- ➢ New local financial measures will be taken for the project to introduce perovskite solar cells in public facilities, etc.

Prioritizing support for the introduction of PV projects designed to ensure harmony with local communities, such as rooftop installations — METI, MoE, MLIT, MAFF

Prioritizing support on the introduction of PV projects in harmony with local communities (installation on public facilities, public infrastructure spaces, etc.), such as rooftop installations will be considered and so on

Policy to be decided in FY 2026

Clarifying desirable Agro PV projects and strict response to inappropriate projects — MAFF

- ➢ Desirable projects will be clarified and promoted in a way that leads to local revitalization with the involvement of local governments
- ➢ Strict response will be taken to inappropriate projects such as incompatibility with agriculture

Measures in the procurement of renewable energy electricity by the national government and other bodies — MoE

Regarding power supply contracts for the national government, etc., it is positioned as a basic policy of the Environmental Consideration Contract Act to avoid procuring electricity generated at power generation facilities that violate laws and regulations.

Promoting consolidation of projects into responsible entities that can earn the trust of local communities — METI

Responsible entities that have the ability to carry out appropriate projects including maintenance and repowering and gain the trust of the local community will be certified as "Long-term Stable Qualified PV Power Producers" and projects will be consolidated to these responsible entities

Figure 3 Prioritizing support for projects in harmony with local communities

Source: Materials from the 1st meeting of the Ministerial Council concerning Large-scale PV Projects (December 23, 2025), compiled by RTS Corporation

4. The 1st meeting of the Working Group on Strategies for Promoting Distributed Energy Resources (December 19, 2025)

<Key points>

- ✓ The Ministry of Economy, Trade and Industry (METI) established and held the first meeting of the Working Group on Strategies for Promoting Distributed Energy Resources to consider measures to promote the introduction of distributed energy resources (DERs)
- ✓ As a cybersecurity measure for PV and storage batteries, in the April 2027 revision of the technical requirements for grid connection, METI presented its policy such as making it mandatory to use products that have obtained JC-STAR★1
- ✓ As matters for future consideration, business discipline that requires safety, including storage batteries that are not depend on support systems, and analysis of the future introduction of storage batteries in response to the energy supply and demand outlook for FY 2040 were listed. It is planned to consider measures to promote long-term stable business continuity

Purpose of the establishment of the working group

- The working group was established for the purpose of considering measures to promote the introduction of DERs
- In addition to examining individual issues of demand-side resources* and supply-side resources**, a comprehensive consideration will be made, including what kind of resource allocation is optimal from the perspective of optimizing the social cost of the power system

* Storage batteries for residential and commercial applications, cogeneration, heat pump water heaters, power data, etc.
** Grid-scale storage batteries, storage batteries annexed to renewable energy generation systems, LDES or long duration energy storage (liquefied air storage, compressed air storage), etc.

Status of efforts to expand DERs

Report on subsidies for the introduction of grid-scale storage batteries, etc.

Making it mandatory to take cybersecurity measures in the grid connection technology requirements

- ➢ For PV and storage batteries, in the April 2027 revision of the technical requirements for grid connection, it will become mandatory to use products that have obtained JC-STAR★1
- ➢ For low voltage (less than 50kW) projects, there will be a transitional period of about half a year, and the requirement will take effect in October 2027
- ➢ The timing of the start of application to wind power and fuel cells will be considered hereafter based on the results of confirmation with the industry

Matters for future considerations in the working group

Demand side resources	➢ Demand-side resources such as storage batteries can reduce grid enhancement and expand the introduction of renewable energy ➢ How to support the introduction of demand-side resources and response to various issues in demand response (DR) (identification of performance, incentives for DR, etc.) will be considered
Supply side resources	➢ Business discipline that should be required for safety will be considered, including storage batteries introduced outside of various support systems ➢ Regarding storage batteries, based on an analysis of future installations corresponding to the energy supply and demand outlook for FY 2040, measures to promote long-term stable business continuity will be considered

Figure 1 Overview of deliberations of the Working Group on Strategies for Promoting Distributed Energy Resources

Source: Materials of the 1st meeting of the Working Group on Strategies for Promoting Distributed Energy Resources (December 19, 2025), compiled by RTS Corporation

5. Updates on approved and commissioned capacities of PV projects

<Key points>

- ✓ As of June 30, 2025, cumulative approved capacity of PV projects was 74.4 GW, a 0.1 GW drop from the data as of March 31, 2025, as the approval cancellation of the projects under the approval cancellation scheme has continued. Cumulative commissioned capacity as of June 30, 2025 was 71.3 GW, with a slower growth of 0.3 GW. The overall commissioning rate increased to 96%
- ✓ For the quarter from April to June 2025, by capacity range, commissioned capacity of < 10 kW projects was the largest with 168 MW, followed by 10 - < 50 kW PV projects with 53 MW, 1 - < 2 MW projects with 42 MW, and 50 - < 500 kW projects with 32 MW
- ✓ In the first six months of 2025, from January to June 2025, the commissioned capacity was 1,346 MW. If this pace continues, it is estimated that the PV installed capacity in Japan under the FIT/FIP programs in 2025 will be around 2 GW
- ✓ The expansion of PV deployment via PPAs or other models, independent of the FIT/FIP programs, is required

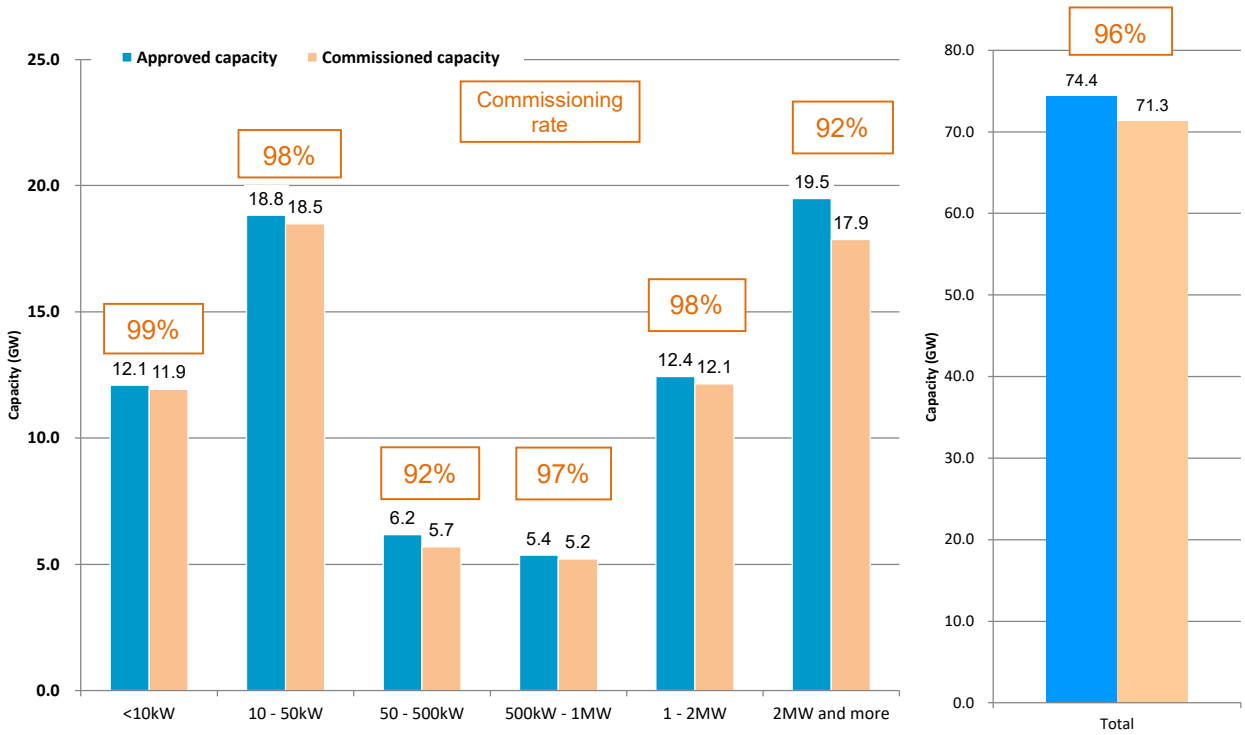


Figure 1 Approved and commissioned capacities of PV projects as of June 30, 2025 (by capacity range)

Table 1 Approved and commissioned capacities of PV projects as of June 30, 2025 (by capacity range) (Unit: MW)

		< 10 kW	10 - < 50 kW	50 - < 500 kW	500 kW - < 1 MW	1 - < 2 MW	≥ 2 MW	Total
Approved capacity	Mar. 31, 2025	11,951	18,812	6,207	5,363	12,433	19,755	74,520
	Jun. 30, 2025	12,090	18,835	6,174	5,357	12,435	19,491	74,381
Commissioned capacity	Mar. 31, 2025	11,769	18,439	5,658	5,199	12,107	17,865	71,038
	Jun. 30, 2025	11,937	18,491	5,690	5,209	12,149	17,859	71,334

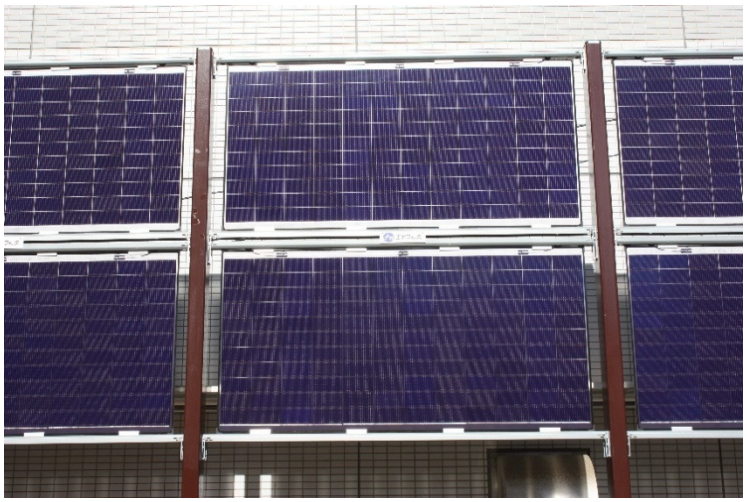
Source: Materials from METI, compiled by RTS Corporation

Monthly PV Photo Gallery

Vertical PV system for parking lots: Times Minami Honmachi No. 1 Parking PV System

Times Minami Honmachi No. 1 Parking PV System (1)

Times Minami Honmachi No. 1 Parking PV System (2)



Times Minami Honmachi No. 1 Parking PV System (3)

Location:

1-8, Minami Honmachi, Chuo Ward, Osaka City, Osaka Prefecture, Japan

Capacity

PV module capacity: 6.3 kW

Power genertion capacity: 5.5 kW

Start of operation:

May 9, 2025

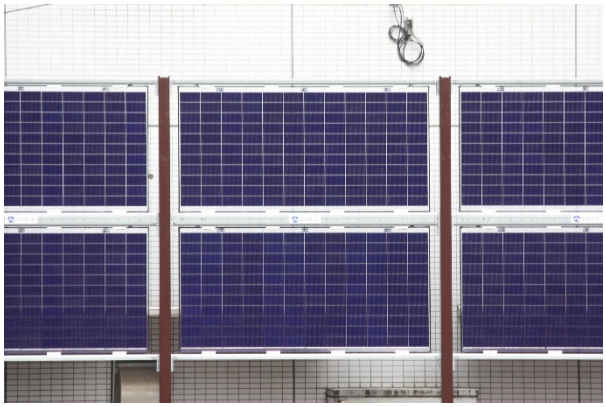
Overview:

Air Water delivered and commenced operation of the vertical PV system “VERPA” at the Times Minami Honmachi No. 1 Parking Lot, located in Chuo Ward, Osaka City, which is operated by Times 24. The system was jointly developed with Germany-based Next2Sun and can be installed with a width of just 30 cm. Bifacial PV modules are installed at a height of more than 2 meters above ground level, allowing the space beneath to be used for parking and other purposes.

The PV system consists of six units, with a PV module capacity of 6.3 kW and an inverter capacity of 5.5 kW. The projected annual power generation is 4,000 to 4,500 kWh, and the estimated CO_2 emissions reduction is 1.7 to1.9 tons per year. The system is mainly used to supply electricity to parking facilities, such as payment machines and cameras used to manage parked vehicles.

The PV modules feature embossed glass surfaces designed to reduce glare and prevent dirt adhesion, thereby lowering the risk of problems caused by reflected light. This project represents the first case in Japan of installing a vertical PV system with bifacial PV modules in an urban city-center area densely lined with commercial buildings.

Times Minami Honmachi No. 1 Parking PV System (4)

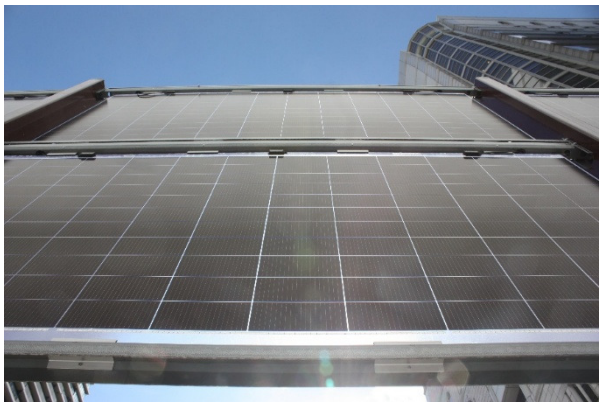


Times Minami Honmachi No. 1 Parking PV System (5)

Times Minami Honmachi No. 1 Parking PV System (6)

Times Minami Honmachi No. 1 Parking PV System (7)

Times Minami Honmachi No. 1 Parking PV System (front)



Times Minami Honmachi No. 1 Parking PV System (back)

Topics from Japan

1. Government

☼ **The national government** held the first meeting of the Ministerial Council concerning Large-scale PV Projects, and decided on the Package of Measures on Large-scale PV Projects (Mega-solar) to strengthen related laws and regulations, promote regional cooperation, and focus on support in harmony with local communities. In addition to strengthening electrical safety regulations based on the Electricity Business Act, performing prior confirmation by third-party organizations, and suspending subsidies in the case of violating the laws and regulations, PV module recycling, the support of R&D of perovskite solar cells (PSCs), and the review of the FIT and FIP programs will be conducted.

The national government held the 16th meeting of the Green Transformation (GX) Implementation Council and announced the details of the support for GX Strategic Areas. The government presented its policy to divide the areas into three categories, 1) reclamation of land at industrial complex, etc.; 2) integration of data centers; and 3) GX industry parks, and to select the project developers through a public call for proposals and a two-stage screening procedure. As for GX industry parks, on the condition of 100% utilization of decarbonized electricity in the areas, consumers in the area are supported by subsidies and tax incentives against rising electricity costs. The government will invest 210 billion yen ($ 1.34 billion) for five years from FY 2026 to support capital investment and infrastructure development by companies, aiming to expand the utilization of renewable energy.

☼ **Agency for Natural Resources and Energy (ANRE)** under **the Ministry of Economy, Trade and Industry (METI)** held the 109th meeting of the Procurement Price Calculation Committee and presented its direction to support ground-mounted commercial and industrial (C&I) PV systems from FY 2027 onward. The committee will make a final decision based on the power generation costs, etc. and plans to focus on supporting PV modules in harmony with local communities, such as rooftop installations and perovskite solar cells (PSCs).

☼ **METI** held a meeting of the Electric Power Safety Subcommittee and presented its plan to strengthen security measures by revising the Electricity Business Act, following the frequent occurrence of electrical accidents of PV systems. The manufacturers and contractors will be obliged to cooperate to investigate the cause of accidents, and the installers are required to confirm compliance with technical standards by third-party organizations before starting construction works. METI will also consider establishing a safety confirmation method for perovskite solar cells (PSCs), looking ahead to social implementation.

☼ **METI** will mandate manufacturers to take cyber security measures for PV and storage battery control systems from FY 2027, and introduce a mechanism that grid connection cannot be accepted until safety certification designated by the national government (JC-STAR Level 1) is obtained. Newly installed commercial and residential systems will be subject to the mechanism, and METI will strengthen preventive measures against cyberattacks by applying this mechanism to existing equipment at the time of renewal.

ANRE under **METI** presented its plan to strengthen the grid connection regulations of grid-scale storage batteries at the sixth meeting of the Working Group on the Next-generation Electric Grid. A deposit paid upon applying for the contract will be doubled from the current 5% to 10% of the approximate construction cost for grid connection and the payment of a certain amount of the construction cost will be mandated at the time of initial payment. An increase of the deposit will be applied to grid-scale storage batteries as a preventive measure for grid capacity hoarding upon applying for the contract. The deadline for submitting site related documents will be set at the time of contract application.

ANRE under **METI** established a Working Group for the utilization of distributed energy resources (DERs), and started discussion, aiming for the cost curtailment of entire power systems associated with the expansion of renewable energy introduction. Measures for utilizing DERs from both demand and supply sides will be discussed, and the interim report will be compiled in the spring of 2026.

The Ministry of the Environment (MoE) selected the 43 MW Solar Power Project in Geogia by Sharp Energy Solutions and the 14 MW Solar Power and 40 MWh Storage Battery Project in Chile by Farmland for the Joint Crediting Mechanism (JCM), and will promote greenhouse gas emission reduction overseas.

MoE presented its plan to expand the targets of environmental impact assessment (EIA) of MW-scale PV power plants and reduce the standard output capacity of new facilities. Accordingly, MoE will revise relevant ministerial ordinances concerning the Environmental Impact Assessment Act and the Electricity Business Act.

☼ **The Ministry of Land, Infrastructure, Transport and Tourism (MLIT)** and **MoE** will set the subsidy amount for houses with ultra energy-saving performance equipped with PV modules, etc. at 1.1 million yen/house ($ 7,020 /house), reducing from 1.6 million yen/house ($ 10,200 /house) in FY 2025. By expanding the budget to 1.5 times and providing a broad support through the year, the number of eligible houses is expected to increase to approx. 60,000 houses from approx. 30,000 houses in FY 2025. A new category, which is called GX-oriented houses will also be established.

☼ **MLIT** will start accepting submissions for new road-surface PV technologies, for places where pedestrians use, such as roadside rest areas, toward the introduction of road-surface PV technologies in road spaces. In the demonstration, including the impact on road safety and maintenance, PV modules' bearing capability and durability, power generation performance, and economic efficiency, as well as the disaster resistance and practicality of the entire system will be verified, and social experiments on the utilization of generated electricity will also be conducted.

MLIT compiled the fourth draft of a report concerning the energy-saving measures for housing and buildings, and presented its plan to promote compliance with energy conservation standards and renewable energy utilization of newly built buildings, with the promotion of Life-Cycle Carbon Assessment and further improvement of energy-saving performance as its pillars. The plan is scheduled to be decided in January 2026.

The National Institute of Technology and Evaluation (NITE) analyzed snow and ice damage at PV power plants. Over the five years until FY 2024, 62 electrical accidents occurred, and the damage of PV modules and mounting structures due to accumulated snow is particularly evident. NITE pointed out the importance of compiling the snow-removal plan and conducting the pre-inspection of hardware that fasten PV modules and joint connection bolts of mounting structures.

The Liberal Democratic Party of Japan (LDP) announced that technological progress reduced the necessity of supporting MW-scale PV power plants through the FIT and FIP programs, and plans to include the abolishment of the support in the recommendation. LDP presented its plan to call for prioritizing support on rooftop installation PV systems and next-generation solar cells such as perovskite solar cells (PSCs) from now on.

2. Local governments

Hokkaido Prefecture compiled the third-phase Action Plan to Promote Energy Conservation and New/ Renewable Energy (draft). The prefecture will intensively carry out efforts based on six perspectives, such as utilizing measures by the national government and the prefecture, strengthening measures in cooperation with the national government, and ensuring harmony with local communities. As for the dissemination and utilization of new technologies, perovskite solar cells (PSCs), the utilization of case studies of Energy Conservation Grand Prize Award and New Energy Grand Prize Award, and the dispatch of advisors for the introduction of new and renewable energy by Prefectural Enterprise Bureau, etc. were presented.

As a result of the public call for proposals of the Demonstration Experiment Project of Next-generation Solar Cells, **Sapporo City** of **Hokkaido Prefecture** selected contract candidates for the installation of next-generation solar cells and demonstration experiment; YKK AP for the main building of the city hall, and AGC for Komaoka garbage disposal facility. Next-generation solar cells will be installed and demonstration experiments will be conducted for the evaluation of introduction and PR activities. In addition to the verification of power generation performance, the impact of light reflected from accumulated snow, as well as the difference between vertical installation and ground-mounted installation of PV systems will be compared.

Nemuro City of **Hokkaido Prefecture** enacted the Ordinance concerning the Installation of Renewable Energy Power Generation Facilities in Nemuro City, which is an ordinance to regulate the construction of new power generation facilities. PV systems with a power generation capacity of ≥ 10 kW, as well as wind power generation systems, are subject to the ordinance.

Yamagata City of **Yamagata Prefecture** issued a public call for proposals of the Project to Lease PV Systems for Yamagata International Exchange Plaza through a Lease Scheme, and selected a group with Daiwa Lease as the representative company as the best proposer. As the members of the group, Yamagata Panasonic and TOHOKU DENKA KOGYO will participate in the project. ≥ 325 kW of PV systems and ≥ 10 kWh of storage battery systems will be installed in the Plaza.

Futaba Town of **Fukushima Prefecture** will enact an ordinance to introduce a permission system for installing PV modules by project developers. When installing ≥ 10 kW of PV modules on land within the town, the submission of a draft of the plan to the town will be mandated. The briefing sessions for local residents who live in the administrative area of the project site and those who live within 100 m from the project site will also be mandated. After the sessions, the project developers are required to report the completion of the procedure to the town.

Tokyo Metropolitan Government (TMG) selected four companies, namely TOKYO GAS, Macnica, Iida Group Holdings, and REIKO to receive TMG's support for the development of perovskite solar cells (PSCs). The reliability of installation methods and power generation performance will be evaluated on the vertical wall surfaces, verandas, and interior windows of residential houses, and a method to easily install and exchange PSCs at the houses will also be verified. Iida Group Holdings will provide a model house located in Hino City, Tokyo, and Tokyo GAS will install and analyze PSCs which are developed and manufactured by Macnica and REIKO.

TMG selected two municipalities, Chiyoda and Edogawa Wards, for the Zero Emission District Creation Project for FY

2025. Chiyoda Ward will proceed with the introduction of RE100 and the renovation of buildings into Net Zero Energy Buildings (ZEBs) at the time of large-scale renovation of redevelopment office buildings, and promote the decarbonization of buildings. Edogawa Ward will promote the local production and local consumption of electricity generated in Edogawa Ward and work on the PV introduction in existing houses through a PPA scheme.

☼ **Edogawa Ward** of **Tokyo** will establish a regional Power Producer and Supplier (PPS) called Edogawa Electric Power, together with EDF, which is a private company selected as the project partner through a public call for proposal, UCHIYAMA ADVANCE, Toa Porter Line, and the Komatsugawa Shinkin Bank, and will start the PPA project for residential houses. The PPS will install PV systems on the roofs of residential houses in the Ward, free of charge, and the residents will pay the electricity bills according to their electric power usage. PV systems will be installed to 855 houses in five years, and the sales of 70 million yen ($ 447,000) are aimed at by FY 2031. The revenue will be mainly appropriated to the reinvestment into the PPA project.

Niigata Prefecture started the demonstration project of next-generation solar cells. The business operator is SOLABLE, which conducts the demonstration tests for three years in three locations in the prefecture, including Niigata prefectural government's office, using chalcopyrite solar cells manufactured by PXP, which is a subsidiary of SOLABLE. An installation method on curved roofs, commonly seen in snow regions, as well as the impact of light reflected from the snow surface will be verified to back up the development.

Niigata City of **Niigata Prefecture** will sign a partnership agreement with the Research Center for Advanced Science and Technology, the University of Tokyo, toward the dissemination of next-generation solar cells or perovskite solar cells (PSCs). The prefecture is one of the major domestic production areas of Iodine, a main raw material of PSCs, and aims for developing a local production and local consumption decarbonization model as well as a domestic supply chain, which will generate energy using natural resources in the prefecture, not limited to imports.

Echizen City of **Niigata Prefecture** installed an approx. 31.68 kW PV system at an unused swimming pool in Shirayama Elementary School in the city. The generated electricity will be used for lights and air conditioners in the school, which covers 15% to 20% of the electricity consumed at the entire facility. The shortage of electricity will be covered by non-fossil electricity procured from Hokuriku Electric Power Company, and the school will be operated as a zero carbon school.

Kyoto Prefecture will start a demonstration project for utilizing next-generation solar cells and hydrogen at Kyoto-Maizuru Port International Wharf (Maizuru City) and Osadano Industrial Park (Fukuchiyama City). In Kyoto-Maizuru Port International Wharf, a demonstration of electric power supply by green hydrogen production and pure hydrogen fuel cells utilizing next-generation solar cells will be conducted. The project will be outsourced to Enoah, and perovskite solar cells (PSCs) and pure hydrogen fuel cells will be supplied from AISIN. In Osadano Industrial Park, a portable hydrogen station will be installed in the park to conduct a demonstration to identify hydrogen demand, etc.

Tokushima Prefecture selected GF as a contract candidate as a result of the public call for proposals of the (PPA) Project for Active Introduction of PV Systems to Prefecture-owned Facilities for FY 2025. PV systems will be introduced in four facilities, including a fish handling facility in Tsubaki Domari Fishing Port and high schools, adopting a PPA scheme. GF will supply the generated electricity to each facility and take charge of the operation and maintenance (O&M) services of these PV systems.

☼ **Marugame City** of **Kagawa Prefecture** announced a draft of an ordinance which stipulates the responsibility of administrative bodies and project developers when installing PV systems on reservoirs in the city, and aims to enforce the ordinance on April 1, 2026. The applicable reservoirs are located in 452 sites in the city, regardless of the ownership, and the projects with the total output capacity of ≥ 10 kW are subject to the ordinance. In addition to holding briefing sessions for residents, project developers will be required to give maximum consideration to safety, environmental conservation, and the multifunctional roles of reservoirs.

Fukuoka City of **Fukuoka Prefecture** selected NS Environment Corporation as the best proposer as a result of the public call for proposals of the Outsourcing of the Feasibility Study, etc. for Introducing Perovskite Solar Cells (PSCs). Out of approx. 1,450 city-owned facilities, the city will identify facilities that are qualified for the subsidy administered by the national government for the introduction of PSCs, and conduct the feasibility study. The city will study PV modules, such as conventional crystalline silicon (c-Si)-based PV modules and next-generation solar cells including PSCs, at 156 facilities, such as the Waterworks Bureau and schools.

Yonabaru Town of **Okinawa Prefecture** is proceeding with a plan to develop Solar Sidewalk by installing solar sunshades on the approx. 500-meter-long sidewalk in the Agarihama District. The total project cost will be at least 100 million yen ($ 638,000) and about two-thirds will be covered by the Grant for promoting local decarbonization by MoE, and the remaining will be borne by Okinawa Power Holdings. The generated electricity will be sold in the Agarihama District, and the project cost is expected to be recovered in approx. 15 years.

3. Utilities

Tohoku Electric Power Co., Inc. will introduce offsite corporate PPA services to Kita-Nippon Bank. PV power plants with a total rated output capacity of 297 kW, developed by West Energy Solution at six locations across three prefectures of Iwate, Miyagi, and Fukushima, will be utilized. Supply of power to 18 locations, including the head office and some branches of Kita-Nippon Bank, started in December 2025 for a period of 20 years.

TEPCO Holdings signed a virtual PPA with the Singapore subsidiary of Equinix, a major US data center company. Renewable energy-derived environmental value will be provided to a data center in Singapore for a 20-year period starting in July 2026. This marks the first overseas virtual PPA for TEPCO Holdings Group.

TEPCO Holdings will raise an additional 13.5 million Singapore dollars (US$ 10.5 million) in project financing from Bank SinoPac (Taiwan) for its rooftop PV power generation business in Singapore, operated through a joint venture. The procured finance will be allocated for the development of rooftop PV power generation facilities with a total output capacity of around 20 MW.

Five companies, **Chubu Electric Power Miraiz Company, Incorporated**, **Chubu Electric Power Co., Inc.**, **AISIN CORPORATION**, **MC Retail Energy Co., Ltd.**, and **Lawson, Inc.,** started a demonstration experiment at the reopened Lawson Nakagawa Noda 2-chome store in Nagoya, Aichi Prefecture, where perovskite solar cells (PSCs) provided by AISIN were installed as a part of the renovation. The aim is to simultaneously reduce CO_2 emissions, balance power supply and demand, and strengthen resilience in the event of a disaster. The experiment will continue until around December 2027.

Chugoku Electric Power Co., Inc., **Chuden-Kogyo Co., Ltd.**, and **YKK AP Inc.** started a demonstration experiment of building-integrated PV (BIPV) power generation using PSCs. HIROSHIMA ZERO BOX, a demonstration experiment house, was set at a section of a community square which was developed at the former head office site of Chuden Kogyo. The plan is to evaluate the performance, such as power generation, of interior window-type BIPV systems until the end of March 2027 to verify their suitability for installation on buildings.

Kyushu Electric Power Co., Inc. will supply 100% renewable energy-derived power to the sites of JR Kyushu Group companies, including the stations of Kyushu Railway Company (JR Kyushu) and offices of JR Kyushu Electric System under an offsite PPA framework. PV power plants in Fukuoka, Saga, and Miyazaki prefectures, with a total output capacity of around 4,900 kW or more, will be utilized. The power plants will be provided by GPSS Holdings.

Kyuden International Corporation will participate in a PV power generation and battery storage project in Egypt. The company will construct a 1 GW PV power plant and a 600 MWh battery storage system in Aswan Governorate in southern Egypt. The company will take part in the project jointly with AMEA Power, a renewable energy company based in the United Arab Emirates (UAE).

Kyuden Next Co., Inc. will install rooftop PV systems on the buildings in the cargo zone of Fukuoka Airport, Fukuoka Prefecture, and the generated power will be supplied under a PPA framework. PV modules with a capacity of 1,100 kW will be installed. Operation will begin on January 1, 2026, with a 20-year contract period.

Okinawa Electric Power Company, Incorporated (OEPC) installed Kari Roof (a third-party ownership model for PV literally meaning roof lease) developed by its group company, Okinawa New Energy Development, at two Okinawa FamilyMart stores. Each store was fitted with 16.5 kW of rooftop PV modules and three storage batteries. This marks the first deployment of Kari Roof in a convenience store in Okinawa Prefecture.

4. PV material, component and manufacturing equipment

☼ **Nippon Sheet Glass Co., Ltd.** will enter the business of supplying glass substrates for glass and tandem perovskite solar cells (PSCs). Samples were sent to about 30 companies and organizations worldwide, including research institutes and manufacturers. The company will enable low-cost mass production of glass substrates equipped with conductive films, by adopting the Online Coating technology of Pilkington (UK), the company which Nippon Sheet Glass acquired in 2006.

☼ **Nippon Electric Glass Co., Ltd.** developed G-Leaf, an ultra-thin glass which can be used for film-type PSCs. G-Leaf is 30 μm thick and available in widths of 300 to 800 mm and can be rolled up. A prototype PSC module, in which PSCs were sandwiched between barrier films and sealed on both sides with a G-Leaf and a back sheet, was tested for its durability at 85°C and 95% humidity. Modules, sealed using G-Leaf, maintained up to 60% or more of their initial maximum output after 600 hours.

Shin-ei Electric Measuring Co., Ltd. will release a series of PV module evaluation devices suitable for PSCs. The series of the measuring apparatus can be used in a wide range of processes in development and verification of PV modules, covering from operational verification to shipping inspection.

5. PV cell/ module manufacturing

SEKISUI SOLAR FILM CO., LTD. (SSF), a consolidated subsidiary of **Sekisui Chemical Co., Ltd.**, concluded a Collaboration Agreement for the Realization of a Carbon-Free Society, with Fukuoka City, Fukuoka Prefecture. Based on this agreement, Fukuoka City and SSF will work to accelerate dissemination of perovskite solar cells (PSCs), conduct demonstrations and proactive installation of PSCs in city-owned facilities, promote understanding and raise awareness of decarbonization, etc. The most recent initiative includes installation of about 25 kW of PSCs on a total area of 265 m^2 at three elementary and junior high schools in the city.

☼ **YKK AP Inc.** and **Panasonic Holdings Corporation** started verifying the implementation of building-integrated PV (BIPV) in interior windows using glass-type PSCs developed by Panasonic Holdings at the Tanimachi YF Building, where YKK AP is located. The BIPV interior window, which is being developed by integrating the interior window and solar cells into a single product using a unique sash frame designed specifically for solar cells, will provide both thermal insulation and power generation functions to windows, while offering easy installation and maintenance processes.

AISIN CORPORATION provided PSCs and newly developed solid oxide fuel cells (SOFCs) to the Green Hydrogen Project, led by Kyoto Prefecture. The company will demonstrate the effectiveness of utilizing the company's PSCs to power water electrolysis apparatus and peripheral devices and to manufacture green hydrogen, which can be stored for long periods and used to supply power, in collaboration with Enoah, which has been contracted to undertake the entire project.

☼ **MACNICA, Inc.** will start the project for demonstration of film-type PCSs for residential use, which have been selected for Air Solar Social Implementation Promotion Project by the Tokyo Metropolitan Government (TMG). PCSs, developed and manufactured by MACNICA and REIKO, will be installed, by the method developed by Tokyo Gas, to indoors, on balconies, windows, and mock wall surfaces of a model house in Hino City, Tokyo, provided by Iida Group Holdings, to evaluate the power generation performance depending on the locations and the reliability of the installation method. Methods for easy installation and replacement by the residents will also be verified.

DIC Corporation announced that its wavelength-selective organic thin-film photovoltaic (OPV) technology for agricultural greenhouses has been selected for the Technology Development Project for Expanding the Introduction of PV Power Generation, by the New Energy and Industrial Technology Development Organization (NEDO). The technology was jointly developed with MORESCO, ITEM, and The University of Osaka.

6. Balance of systems (BOS)

Nothing special to report.

7. PV systems

7-1. Residential PV systems (houses/ apartments)

West Japan Railway Company (JR West), in collaboration with JR West Innovations and Hachidori Solar, has launched a leasing service for residential PV systems in Hiroshima and Yamaguchi prefectures, and will implement it for a limited time until February 20, 2026. Initial costs such as the costs of PV modules, storage batteries, and construction are free and the service can be used for a fixed monthly fee. The solar set is available for 1,650 yen/kW ($ 10.5 /kW) per month (tax included), and the large-capacity storage battery is available for "12,100 yen ($ 77.2) per month (tax included) ~ + PV module usage fee".

7-2. PV systems for public and industrial applications

Hazama Ando Corporation installed a PV system at Nirasaki Central Gymnasium using an on-site PPA to sell surplus electricity under the FIT program, and started commercial operation. It is part of Nirasaki City's project, in which the company participates as a representative entity. Hazama Ando 's on-site PPA has reached a total of 10 projects, totaling 6.7 MW.

Obayashi Corporation has embarked on a virtual PPA initiative using the FIP program. On the roof of the logistics facility "OAK LOGISTICS CENTER Kawagoe I," which Obayashi is scheduled to complete in January 2027, Obayashi Clean Energy will install a 811.8 kWdc/600 kWac PV system to supply electricity, sell surplus electricity on the electricity wholesale trading market, and provide environmental value to Obayashi.

Okumura Corporation, in partnership with Iwate University, has started a demonstration test at Okumura's Technical Research Institute in Tsukuba City, Ibaraki Prefecture to verify the power generation performance and slope disaster prevention effect by installing a water-blocking sheet with next-generation solar cells such as perovskite solar cells (PSCs) on the embankment slope for testing. It will use Macnica's film-type PSCs and SOEL's silicon-based rollable solar cells.

TES Engineering Co., Ltd. has started supplying renewable energy power to Kracie's Kyoto Factory using a self-consumption type PV system using an on-site PPA model. The power generation capacity will be approx. 1.012 MW, and

the estimated annual power generation will be approx. 1.13 GWh (including self-consumption: approx. 1.01 million kWh and surplus electricity: approx. 120 MWh), and the generated electricity will be supplied to the factory, covering approx. 30% of the factory's annual electricity demand.

Suzuyo Shoji Co., Ltd. and **Skylark Holdings Co., Ltd.** have installed PV systems for the first time in three restaurants of Skylark HD's Chinese restaurant chain "Bamiyan" that receive low-voltage power using on-site PPA services and started operation. Since they receive low-voltage power, there is no need to install a transformer, and it is planned to build a power supply system that reduces the initial investment by customers and environmental impact. The total estimated annual power generation of the three restaurants is expected to be 46,227 kWh, and the annual CO2 reduction is expected to be about 13 tons.

TSP Co., Ltd. has started offering a new model for corporations that combines thin PV modules and grid-sale storage batteries. Thin PV modules with overpanelling will be installed on buildings where conventional PV modules are difficult to be installed to increase the self-consumption rate, and surplus electricity will be charged and used for monetization in the supply-demand adjustment market, capacity market, and wholesale power market, as well as for BCP measures.

7-3. Ground mounted PV systems

Mitsui Fudosan Co., Ltd. has signed off-site PPA agreements, respectively with Hokkaido Electric Power and Tohoku Electric Power to supply electricity from MW-scale PV power plants developed by Mitsui Fudosan to multiple facilities managed and operated by Mitsui Fudosan. A PV power plant with a capacity of 3,129 kW will be constructed in Kitami City, Hokkaido and Yuri Honjo City, Akita Prefecture, and the renewable energy generated from the two PV power plants will be supplied to Mitsui Fudosan's facilities in the service areas of Hokkaido Electric and Tohoku Electric, respectively. Mitsui Fudosan has set a goal of developing 380 GWh/year of MW-scale PV power plants by FY 2030.

☼ **Taro Hatsuden GK** has put into operation a PV power plant connected to the grid during nighttime. A new PV power plant (PV module capacity: 2.969 MW) and storage battery (storage capacity: 7.98 7MWh) were installed next to the Taro PV Power Plant, which started operation in Miyako City, Iwate Prefecture in 2015. The power grid can be effectively utilized, and power can be supplied at night. In order to make it a citizen participation type project, it is also planned to recruit a citizens' fund.

Nisso Engineering Co., Ltd. will enter the development of PV power plants and other facilities. In order to develop 35 PV power plants in Iwate, Miyagi, Aomori, and Fukushima prefectures, the company plans to establish thirty-five 100% owned development business subsidiaries in Morioka City, Iwate Prefecture. The scale of the PV power plants is expected to be 87.92 MWdc/61.73 MWac.

Toshiba Energy Systems and Solutions Corporation (Toshiba ESS), with the support of Oriental Consultants Global (OCG) and New Energy and Industrial Technology Development Organization (NEDO), has partnered with Saudi Electricity Company, the state-owned power company of Saudi Arabia (SEC) and started the "Hybrid Renewable Energy Power Generation System" demonstration project in Saudi Arabia. Toshiba ESS will install PV systems and storage battery systems at the demonstration site of wind power generation facilities owned by the SEC, introduce an EMS that controls them in an integrated manner, and demonstrate optimal operation control.

Remixpoint, inc. and its subsidiary Seal Engineering will form a business alliance with Blue Sky Solar to install an energy storage system annexed a low-voltage PV power plant to optimize operations, including power generation, storage, and sales. For ten plots each of Kikuchi City, Kumamoto Prefecture and Shibushi City, Kagoshima Prefecture, Remixpoint will be responsible for designing and installing the energy storage system, and Seal Engineering will take charge of optimizing operations. Blue Sky Solar will provide power plants. In the future, it will also consider entering the supply-demand adjustment market.

7-4. Floating PV (FPV) systems

☼ **Kunishitaike Mega Float LLC**, which is wholly owned by OTS LLC, has signed a virtual PPA with Japan Semiconductor, a manufacturing affiliate of Toshiba Electronic Devices & Storage. OTS will provide Japan Semiconductor with a non-fossil certificate of the environmental value generated from a 7.8 MWdc/ 6 MWac floating PV system using the FIP program. This case was matched through the auction site "RE Bridge" operated by DIGITAL GRID.

7-5. Agro PV systems

UPDATER, Inc. will start selling the "Solar Sharing Power Plant Designated Special Contract Plan" for corporations in Tokyo from April 2026, which allows them to purchase electricity from Agro PV power plants at a fixed price for three years. The capacity is scheduled to be 5 MW of contracted power, and the PPA unit price is 20 yen/kWh (12.8 cents/kWh)(excluding tax) fixed for the PPA period of three years (no fuel cost adjustment).

7-6. PV business support service

Green X Inc. has launched a new platform called "G-Connect" that digitally connects renewable energy power producers and corporate consumers for both physical and virtual PPAs. E-Flow acts as an affiliated aggregator to submit power generation plans and bear imbalance costs on behalf of power producers. As of December 3, 2025, about 200 power plants and dozens of consumers have registered.

Chemitox, Inc. has launched a prototype service for perovskite solar cells. According to the customers' request, the component materials are replaced to manufacture the solar cell, and the service covers the processes through to evaluation testing.

7-7. Various products

Yamaha Motor, Co., Ltd., in collaboration with Sojo University and T-PLAN, will conduct a demonstration experiment of mobility support using a low-speed ultra-compact mobility equipped with solar cells in Himejima Village, Oita Prefecture, where transportation for the elderly is an issue. T-PLAN will be in charge of operation management during the demonstration. Sojo University will verify the effectiveness of driving with PV power by utilizing the results of a research on improving the power generation efficiency of vehicles equipped with solar cells.

8. Storage systems

8-1. Storage batteries

Taikisha Ltd. will establish a joint venture, Swiftfab Energy Systems, in April 2026 with eight equipment-related companies that are members of the Battery Association for Supply Chain (BASC), to strengthen the storage battery manufacturing equipment industry. The Swiftfab project will provide a manufacturing base that makes it possible to realize batteries with short delivery times, low cost and high quality by jointly and integrally designing and developing buildings, facilities, production equipment and systems.

8-2. Storage plant

The Chugoku Electric Power Co., Inc. has started construction of its first storage plant, the Kudamatsu Storage Plant, in Kudamatsu City, Yamaguchi Prefecture. The grid-scale storage battery (output capacity: approx. 16,000 kW/ storage capacity: approx. 48,000 kWh) will be installed in the former site of the Kudamatsu Power Plant, which was closed in January 2023. The storage plant will serve as a provider of dispatching ability, which is necessary for expanding the introduction of renewable energy. Commercial operation of the storage plant is expected to start in FY 2028.

Kyushu Electric Power Transmission and Distribution Co., Inc. has started soliciting businesses which will install grid-scale storage batteries on the land that the company owns and leases. The company will rent out land at the Arao substation in Arao City, Kumamoto Prefecture and the Omuta substation in Omuta City, Fukuoka Prefecture, which are easily connected to the grid, aiming to meet the growing need for installing grid-scale storage batteries, which are expected to help balance power supply and demand and serve as dispatching ability in grid congestion where introduction of renewable energy is expanding. This is the first solicitation of this kind for the company.

Tokyo Century Corporation will invest approx. 20 billion yen ($ 128 million) in the development of its own grid-scale storage batteries. Between FY 2028 and FY 2029, the company will start operation of grid-scale storage batteries with a total output capacity of 101 MW at four locations, including Nasushiobara City, Tochigi Prefecture and Isahaya City, Nagasaki Prefecture. The company plans to earn revenue in electricity markets such as the supply-demand adjustment market. The company aims to build and operate a cumulative total of 600 MW of storage batteries by FY 2029, including those at four locations to be developed this time.

KURIHALANT CO., LTD. conducted a demonstration operation ceremony for the operation of an emergency power supply for local governments (part of the Business Continuity Plan (BCP)) at the Daigo Storage Plant (2 MW/ 8.2 MWh) in Daigo Town, Ibaraki Prefecture. Utilizing the plant's independent operation function, the battery will supply electricity to the main evacuation shelter (Daigo Town Training Center) in the event of a power outage. This project has been selected as a FY 2024 subsidized project of the Ministry of Economy, Trade and Industry (METI).

PowerX, Inc. has received an order from MAEDA CORPORATION for three units of the Mega Power grid-scale storage systems, totaling 1.9 MW/ 8.226 MWh. The systems will be installed at the Miyota Town High-Voltage Storage Plant, which MAEDA CORPORATION will build in Miyota Town, Nagano Prefecture and their operation is expected to start in the winter of 2026.

Sumitomo Heavy Industries, Ltd. and **HIROSHIMA GAS Co., Ltd.** have partnered to complete and start operation of a Liquid Air Energy Storage (LAES) plant at HIROSHIMA GAS's Hatsukaichi Plant in Hatsukaichi City, Hiroshima Prefecture. This is the world's first LAES plant that utilizes the cold energy of liquefied natural gas (LNG). Responding to the need for long-term storage and grid stabilization of renewable energy sources such as PV and offshore wind power, the companies

aim to receive orders worth 50 billion yen ($ 319 million) worldwide by 2030.

8-3. Operations of storage systems

TOKYO GAS Co., Ltd. has started providing a service in which the company acts as an agent for generating revenue in the electricity market using high-voltage, grid-scale storage batteries on behalf of its clients. By FY 2028, the installed capacity of the high-voltage, grid-scale storage batteries operated for this new service will be expanded to 200,000 kW. TOKYO GAS will forecast electricity market prices, create operation plans of grid-scale storage batteries and control charging and discharging.

Kinden Corporation and the Kansai Electric Power (KEPCO) have established a new company, K2-BatOM, to promote the maintenance service business for storage plants. By combining Kinden's facility-related experience with KEPCO's operational experience, etc., the new company will provide a one-stop service for storage plants, including safety supervision, maintenance inspections, remote monitoring and battery diagnosis by chief electrical engineers.

Green Growth Inc. has partnered with K2 Holdings Group in the fields of renewable energy and storage battery businesses. They have started FIP conversion and installation of storage batteries at the Miyoshi Foods PV Power Plant owned by K2 Energy. By combining Kyushu Kiden's construction technology of PV power plants with Green Growth's business development and aggregation know-how, they will provide support for increasing the value of other companies' PV power plants, by providing services such as FIP conversion and installation of storage batteries annexed to PV power plants.

Hanwha Japan Co., Ltd. has started offering a new solution that combines the promotion of grid-scale storage batteries with aggregation business. By integrating the resources of its group company, Q.ENEST Holdings, Hanwha Japan aims to realize a scheme, such as creation of revenue opportunities using grid-scale storage batteries, advanced aggregation by Q.ENEST and a one-stop support system.

9. Recycling business

DOWA ECO-SYSTEM Co., Ltd. (DES) has started a demonstration experiment of a power generation business that utilizes reused PV modules in Fukushima Prefecture, aiming to establish a one-stop service system from PV module removal to reuse and recycling. Its subsidiary, GEOTECHNOS will handle removal, collection and transportation of used PV modules. Soso Smart Eco-Company, established with investment from eight companies including DOWA ECO-SYSTEM, will inspect used PV modules delivered through multiple procurement routes to determine whether they can be reused.

NPC Incorporated has developed a PV module recycling machine that can separate broken glass from cell sheets. The machine can process at high speed, about 60 seconds per module, the same speed as existing machines. The machine is scheduled to go on sale on April 1, 2026, for around 30 million yen ($ 191,000) per unit.

Power eee has completed construction of its first rooftop private PV power plant using used PV modules and delivered it to F&G's headquarters in Koshigaya City, Saitama Prefecture. In addition to the PV modules, balance of system (BOS) components including inverters are also reused products, which is expected to reduce installation costs by more than 20% compared to new equipment. The company specializes in developing applications for used PV modules, and its strength is that it can handle not only reuse and recycling, but also the entire process from removal work to silver recovery.

10. PV power generation businesses

10-1. Power producers

TOKYO GAS Co., Ltd. will supply renewable energy to nine stores operated by major supermarket chain Life Corporation in the Tokyo metropolitan area. The company will use an off-site PPA framework to sell electricity generated at a PV power plant with a output capacity of approx. 2,200 kW. The renewable energy supply will start in April 2026, with a contract period of 20 years.

SHIMIZU CORPORATION's wholly owned subsidiary Smart Eco Energy (SEE.) entered into an off-site corporate PPA with Aoyama Gakuin, with Shimizu Corporation as the power producer. The contract period is five years starting in April 2026, supplying seven facilities including Aoyama Gakuin University's Aoyama Campus and Sagamihara Campus.

☼ **RENOVA, Inc.** entered into a project finance loan agreement totaling 22.3 billion Yen ($ 142 million) through its subsidiary Daiichi Taiyokohatsuden GK to fund the development of approx. 1,300 small-scale distributed generation facilities with a combined capacity of 170 MW. The project will focus on developing unused land, such as abandoned farmland. The mid-term management plan through 2030 sets a target of increasing installed capacity to 5 GW, with 0.9 GW of this coming from non-FIT PV power generation.

GLP Japan Inc. acquired operational PV power plants with a total generating capacity of 62.1 MW via its parent company, Ares Management Corporation. These consist of 13 rooftop installations on logistics facilities and two ground-mounted

installations. The company is also considering converting its ground-mounted PV systems to the FIP program and installing battery storage systems alongside them. GLP Japan already installed PV systems on the roofs of 72 logistics facilities it manages and operates, with a total generation capacity of 103.9 MW as of November 2025.

ITOCHU Corporation will invest in the Black Hollow Sun power plant, a 324 MW PV power plant currently under construction in Colorado, USA, in partnership with independent power producer ContourGlobal (UK). Phase 1 (185 MWdc, 150 MWac) was completed and commenced commercial operation in October 2025 and Phase 2 (139 MWdc, 108 MWac), currently under construction, is scheduled for completion by the end of 2026. Once both phases are operational, it will become the largest PV power plant in northern Colorado, with an annual output of approx. 600 GWh.

SUMITOMO CORPORATION will expand its investment in renewable energy projects in India, and commit a total of 200 billion Yen ($ 1.28 billion) in partnership with local joint ventures and financial institutions. The company will advance the development of facilities for PV and wind power generation, aiming to supply over 2 GW of electricity by Fiscal Year (FY) 2027. Sumitomo Corporation will conduct its operations through AMPIN C&I Power, a joint venture established with India's AMPIN Energy Transition in September 2024.

Tokyo Century Corporation will acquire a 49% stake in each of two existing renewable energy projects, one PV project and one onshore wind power project, in the UK. The company signed an agreement to acquire interests in the 67 MW Breach Solar Farm and the 46 MW Crossdykes Wind Farm (onshore), both wholly owned by an asset management fund affiliated with the Octopus Energy Group (UK). Tokyo Century acquired approx. 55 MW of equity capacity through this investment.

TOHO GAS Co., Ltd. will participate in renewable energy projects in Australia for the first time. Through a special purpose company (SPC), it will invest in Yes Group, which is engaged in developing PV projects in Australia. Toho Gas plans to receive a portion of the revenue generated by renewable energy sources while leveraging its expertise in development and markets to establish a foothold for creating local business opportunities.

10-2. PPS

GRID SOLUTIONS Inc. will begin an initiative in April 2026 to transfer electricity generated by PV systems at various stores of a major supermarket chain Beisia to its large-scale store, Beisia Maebashi Minami Mall store, in Gunma Prefecture. The PPA provider is JA Mitsui Energy Solutions, with iGRID managing the supply of surplus electricity and controlling the storage batteries. At the Minami Mall store, 598.7 kW of PV modules were installed in November 2025 using an on-site PPA framework together with two storage batteries with an output of 193.5 kWh each (total 387 kWh).

Global Infrastructure Management Co., Ltd., Tokyu Corporation, and Clean Energy Connect will supply electricity to Tokyu Group facilities under an off-site PPA for PV power generation. The three companies plan to establish a limited liability company (LLC) to develop and operate approx. 800 non-FIT low-voltage PV power plants nationwide (totaling 70 MW). They will begin supplying power sequentially from March 2026 through the end of FY 2027, with the generated electricity supplied to various Tokyu Group facilities via Tokyu Power Supply.

10-3. Green hydrogen

JTEKT CORPORATION installed the “CN Plant” at its Hanazono Factory (Okazaki City, Aichi Prefecture) to generate and supply hydrogen using PV power. The company will establish an integrated framework within its factory capable of handling the entire hydrogen production cycle from generating and storing to transporting and utilizing, and will supply hydrogen to a hydrogen burner-type aluminum melting and holding furnace scheduled to begin operation around the summer of 2026.

11. Finance-related business

☼ **Mitsubishi HC Capital Inc.** has established R Eco Power LLC, a special purpose company to handle low-voltage PV power generation business, with joint investment from its group company, MHC Renewable Networks, and Eco Style. The company aims to acquire approx. 30 MW of capacity by acquiring FIT PV power plants with an output capacity of less than 50 kW and promoting utilization of the FIP program and conversion to corporate PPAs. Eco Style will be responsible for the operation and maintenance of the power plants. The two companies have also signed a basic agreement to develop Agro PV power plants.

12. R&D and technology development

Kanazawa University has started a demonstration experiment using tandem-type perovskite solar cells (PSCs) in a demonstration testing space on its Kakuma Campus in Kanazawa City, Ishikawa Prefecture. Toshiba Energy Systems & Solutions is serving as the lead operator, with Choshu Industry, the University of Electro-Communications and Kanazawa University as joint implementers. The project has been selected for the Technology development and

demonstration project on community co-creation and cross-sectoral carbon neutrality by the Ministry of the Environment (MoE).

The Fukushima Renewable Energy Institute, AIST (FREA) under the National Institute of Advanced Industrial Science and Technology (AIST) is newly constructing a new demonstration base for perovskite solar cells (PSCs) using a subsidy from Fukushima Prefecture. Light-transmitting solar cells integrated into the glass building materials will be used for the facility windows and the interior will be equipped with various measuring instruments. Three long, horizontal mounting structures resembling roofs will be placed on the site south of the building, and up to eight types of next-generation solar cells, including PSCs, will be installed. Related equipment is scheduled to be prepared by the end of February 2026, aiming for the start of its operation in summer 2026.

Nissan Motor Co., Ltd. has started a demonstration experiment of next-generation chalcopyrite solar cells, attaching chalcopyrite solar cells developed by PXP to the glass surfaces and columns of the Nissan Kanagawa Sales R1 Higashi-Totsuka dealership building in Yokohama City, Kanagawa Prefecture. The generated electricity will be used to charge vending machines and smartphones, as well as for an in-store display which indicates power generation amount, allowing customers to experience the presence of next-generation solar cells.

Hanshin Expressway Co., Ltd. has started a demonstration experiment of carbon-neutral technology. It has installed concrete that absorbs and stores CO_2 in the median strip of an elevated bridge for the demonstration experiment. Tandem-type perovskite solar cells (PSCs) have also been introduced, and the experiment has started under elevated roads where sunlight is poorly received and on the vertical surfaces of buildings where sunlight is abundant, to verify the effectiveness of their power generation efficiency which is higher than that of crystalline silicon (c-Si) solar cells. The company also plans to verify their basic performance as a power source, such as power generation amount, efficiency and durability, with the aim of implementing them on expressway facilities.

13. End users and other topics

☼ **Hankyu Corporation** is expanding the installation of PV systems at stations to increase the use of PV electricity in railway operations. PV modules have been installed at three locations, with additional installations planned at Hotarugaike Station in FY 2025 and two more at Hibarigaoka-Hanayashiki Station and Sojiji Station in FY 2026. The company is also considering expanding its corporate PPA, which will procure electricity from dedicated PV power plants outside of its railway lines, planning to receive approx. 9.5 million kWh of PV electricity within FY 2025, to cover 3% of carbon-neutral railway operations.

AIR WATER INC. has started operation of a 3.8-MW PV system installed at its Hofu Factory in Hofu City, Yamaguchi Prefecture. The company adopted TERASEL Solar, a self-consumption PV power generation service provided by ITOCHU ENEX, and installed the PV system through an on-site PPA scheme. AIR WATER group expects to achieve its goal of installing 10 MW of PV systems within FY 2025.

Suzuki Motor Corporation, **de CO., LTD.** and **Chubu Electric Power Miraiz Co., Inc.** have started providing on-site and off-site PPA services as part of the Enshu Decarbonization Project (Enshu: the western area of Shizuoka Prefecture), in which they are participating. A PV system (PV module capacity: approx. 645 kW) which generates electricity in excess of the company's demand has been installed utilizing the rooftop of IO INDUSTRY's headquarters, Arai Factory in Kosai City, Shizuoka Prefecture, through Chubu Electric Power Miraiz's on-site PPA service. Generated electricity is self-consumed by IO INDUSTRY, and Chubu Electric Power Miraiz supplies surplus electricity generated on holidays, etc. to Suzuki Motor's headquarters in Hamamatsu City, Shizuoka Prefecture through the scheme of off-site PPA service.

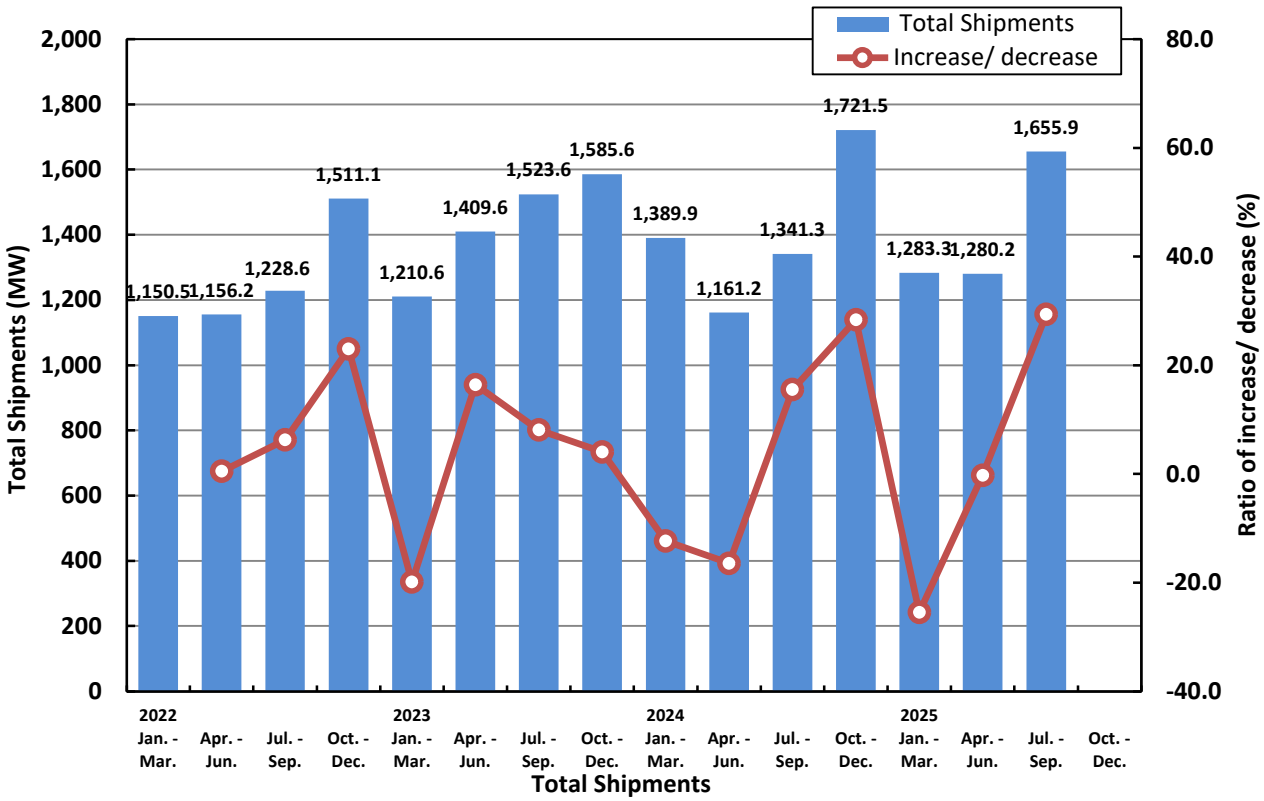
IINO KAIUN KAISHA, LTD. (IINO LINES) has started operation of the Akita Sarukawa Solar Power Plant, which it constructed in Oga City, Akita Prefecture. The plant is owned by a wholly owned limited liability company (LLC) and was developed with support from Japan Petroleum Exploration (JAPEX) using the company's unused land. The plant's output capacity is approx. 500 kW, and it is expected to generate approx. 720,000 kWh of electricity per year. The environmental value obtained will be supplied to IINO LINES' real estate business, which is expected to reduce CO_2 emissions by approx. 291 tons per year. The two companies have signed a basic agreement aiming to develop PV power plants with a cumulative capacity of approx. 30 MW by 2030.

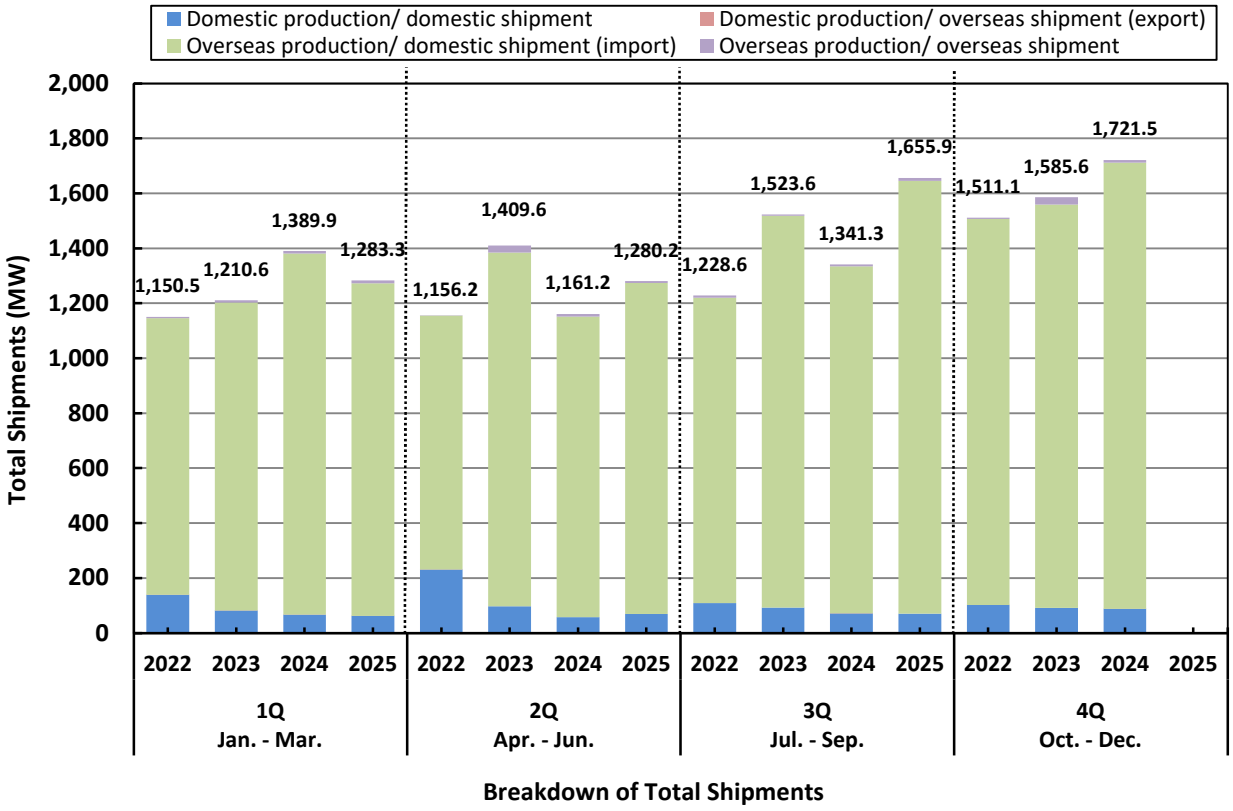
The Fukui Shimbun has signed an off-site PPA with Hokuriku Electric Power Company. A PV power plant newly established by the Hokuriku Electric Power Group in Awara City, Fukui Prefecture (PV module capacity: 1.2 MW) will supply 1,350 MWh of electricity per year to four facilities, including the company's headquarters in Fukui City. The contract is for 20 years, and electricity supply will start on December 1, 2025.

PV Shipments in Japan

As of November 27, 2025

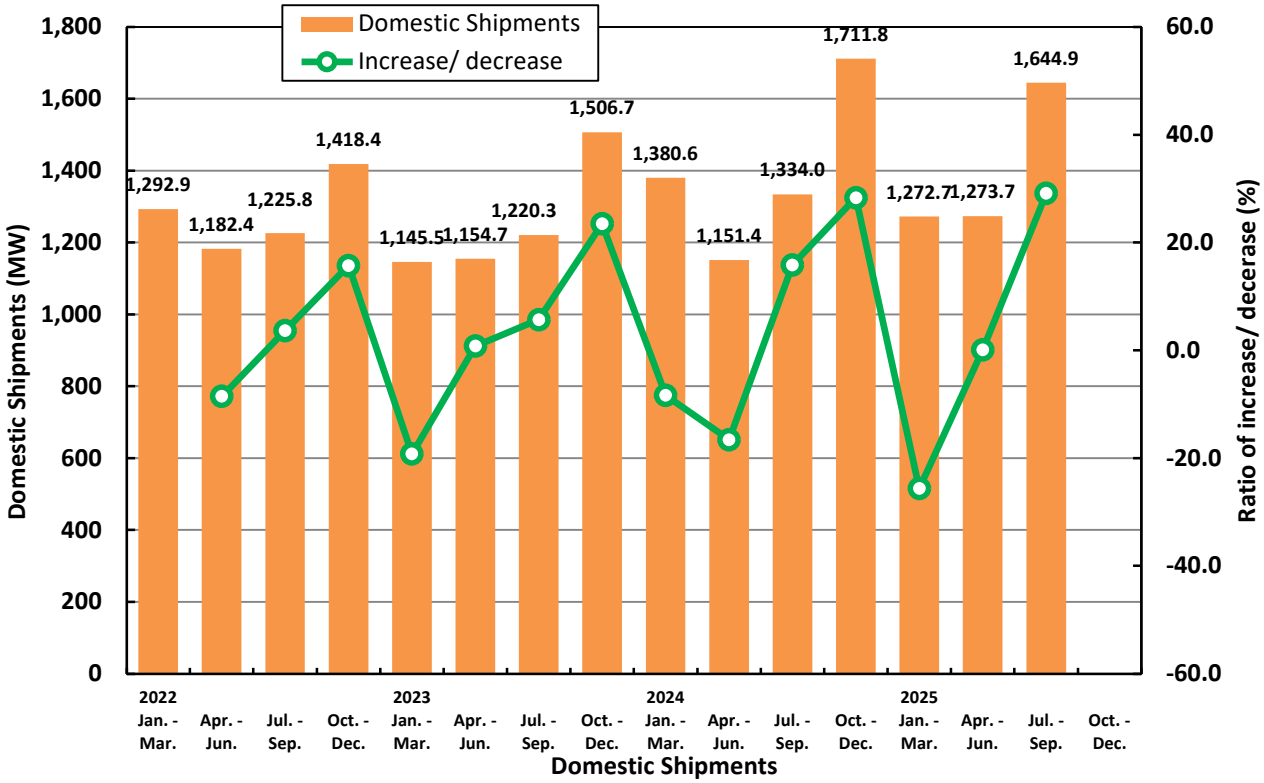
(1) Total Shipments

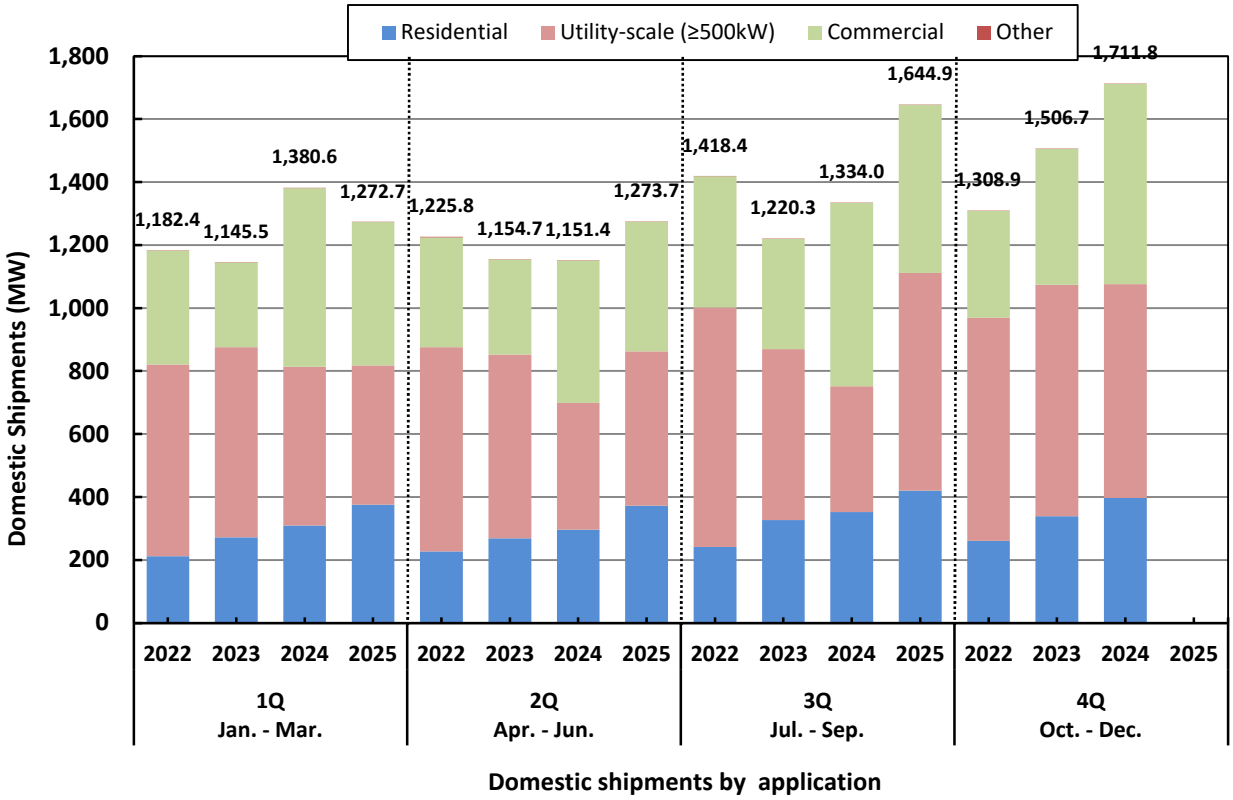




Source: Materials from Japan Photovoltaic Energy Association (JPEA), complied by ©RTS Corporation

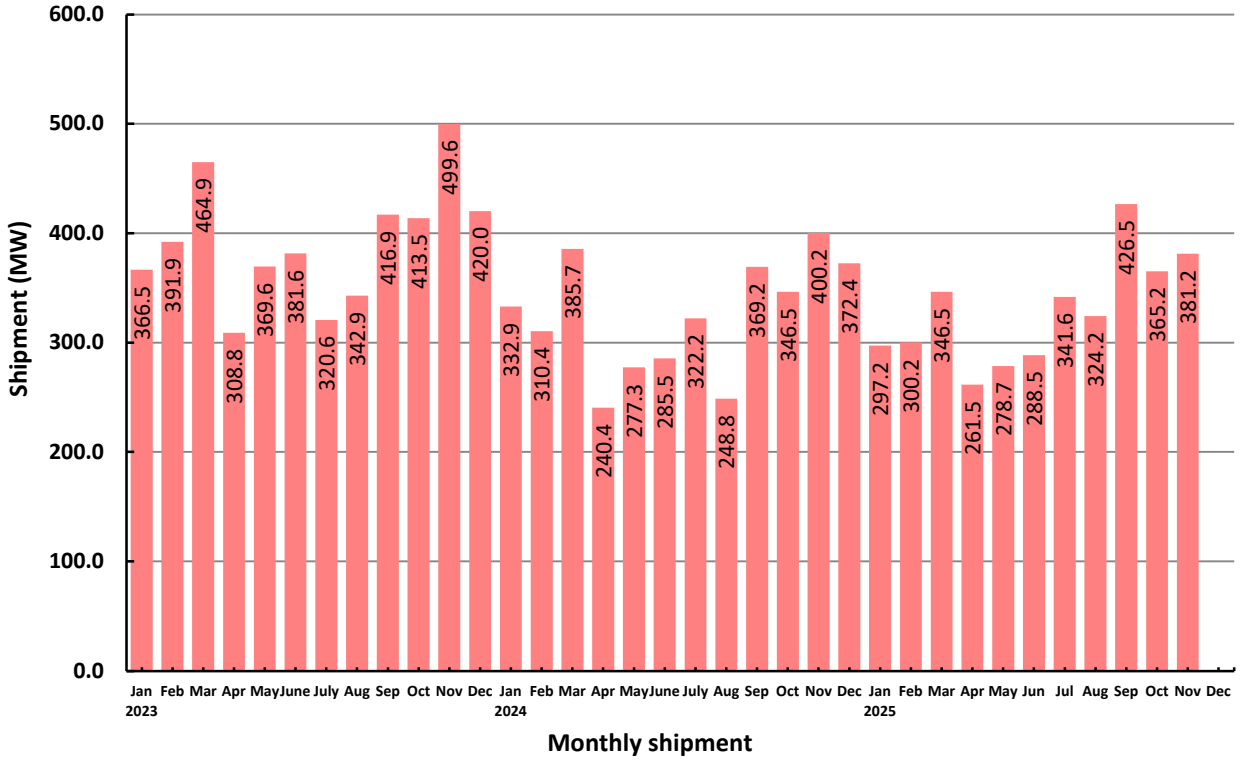
(2) Domestic Shipments





Note: "Commercial" includes PV systems for offices, factories, schools, hospitals, city offices, public facilities, etc. (≥ 500 kW ground-mounted systems included)
"Utility-scale" PV systems are ≥ 500 kW generation equipment designed for power sales
Source: Materials from Japan Photovoltaic Energy Association (JPEA), complied by ©RTS Corporation

(3) Preliminary figures of monthly total shipments of PV modules

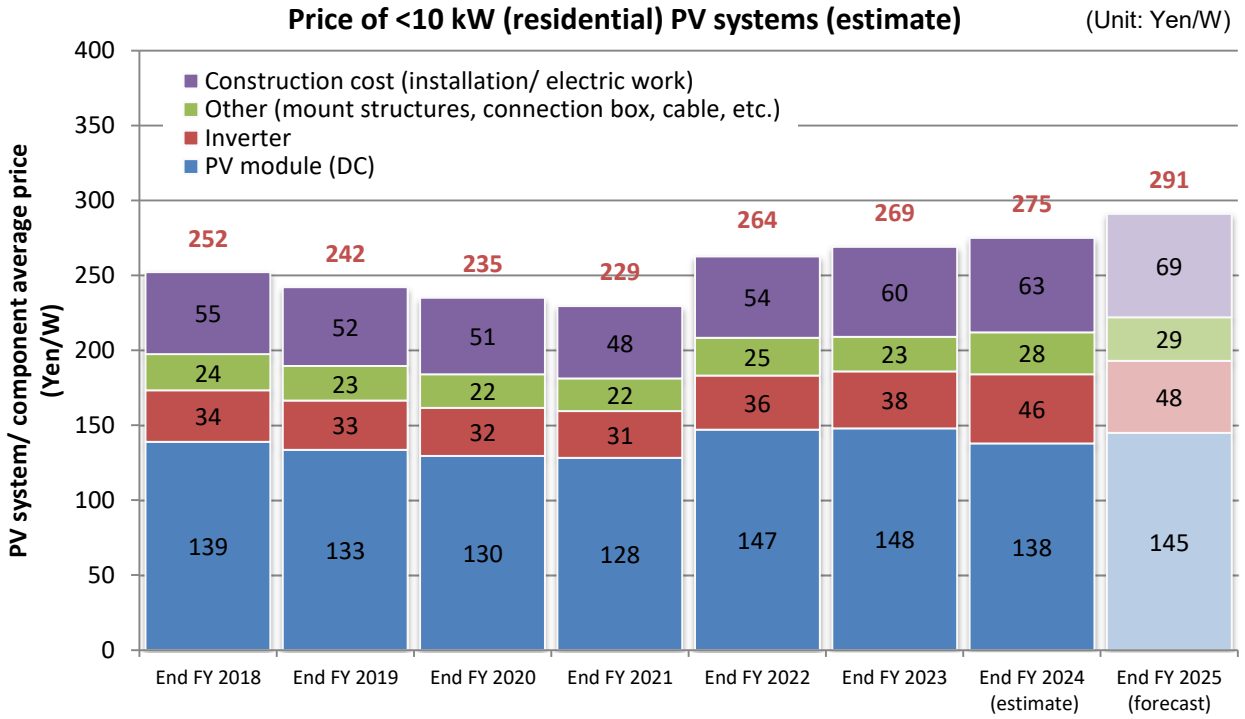


Source: Materials from Japan Photovoltaic Energy Association (JPEA), complied by ©RTS Corporation

PV system prices trends in Japan (tax excluded)

As of October 31, 2025

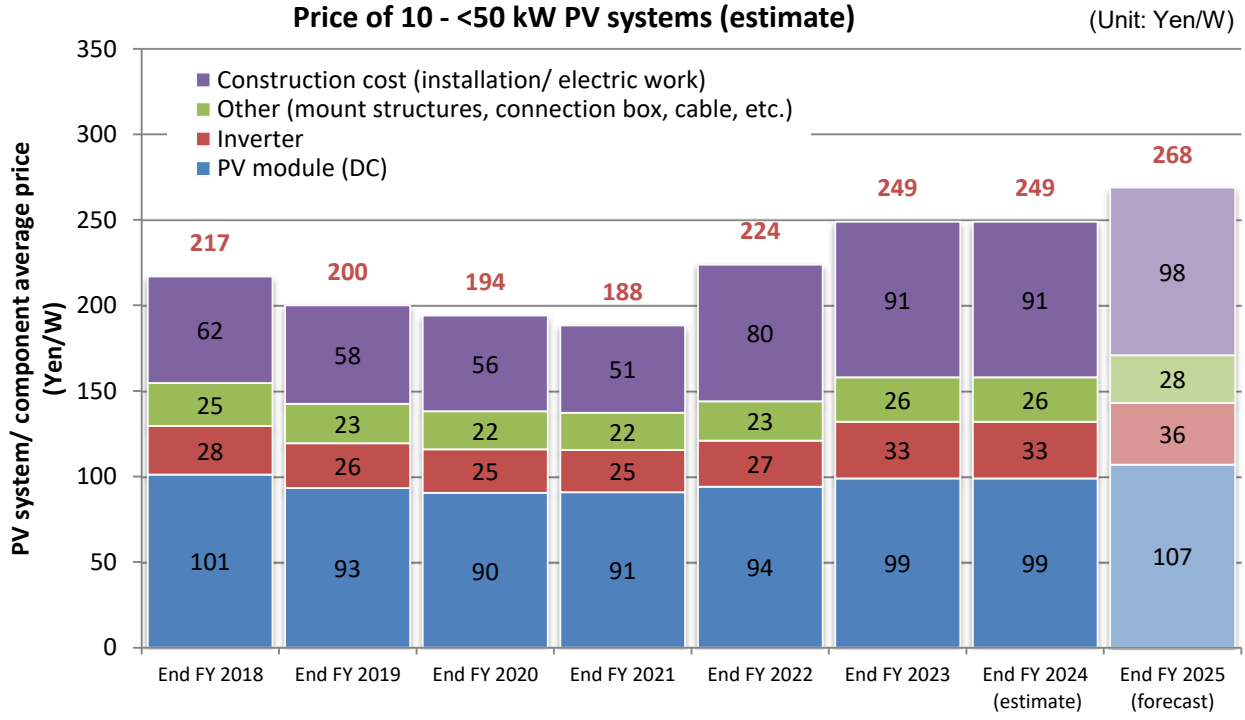
(1) <10 kW (residential)



* Expenses are included in the PV module price.

Source: ©RTS Corporation

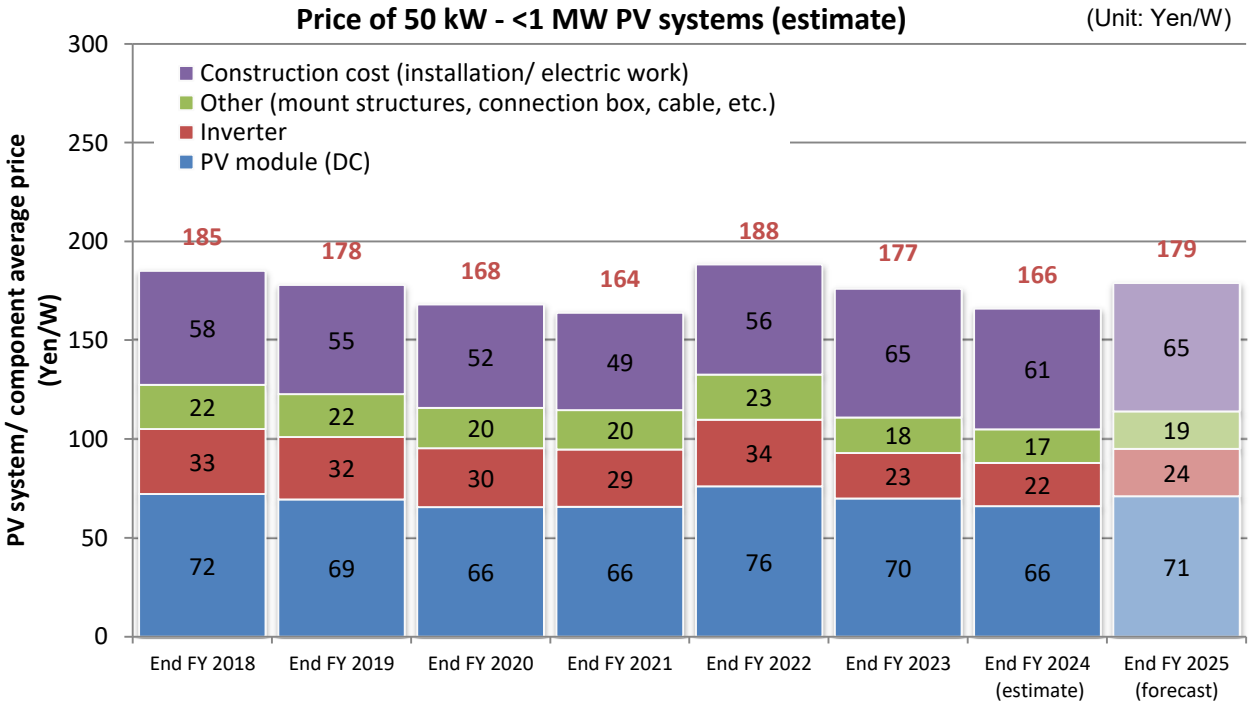
(2) 10 - <50 kW (Low voltage)



* Expenses are included in the PV module price.

Source: ©RTS Corporation

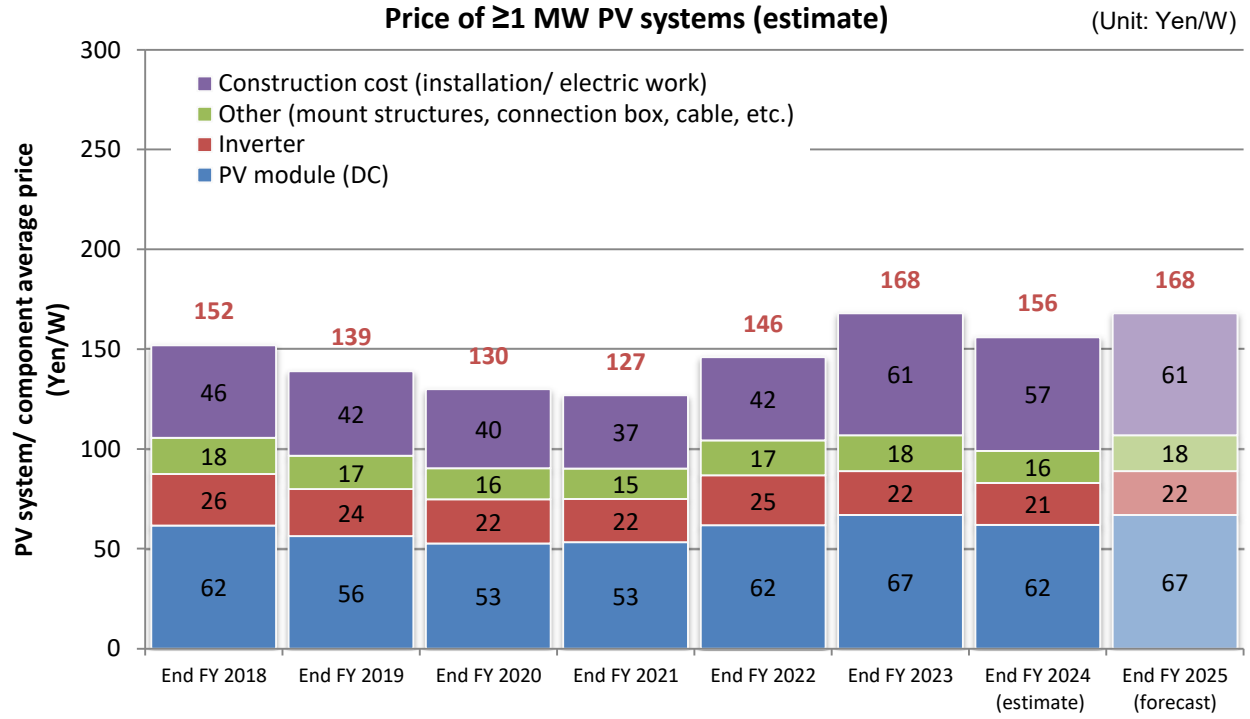
(3) 50 kW - <1 MW



* Cost of substation facilities are included in the inverter price. Grid connection cost is NOT included.

Source: ©RTS Corporation

(4) ≥1MW



* Cost of substation facilities are included in the inverter price. Grid connection cost is NOT included.

Source: ©RTS Corporation

Topics from the World

Topics from Global PV Industry

1. New Entry

Country	Organization	Areas	Activities
India	PVV Infra	Solar cells/ modules (c-Si)	Plans to build an n-type crystalline silicon (c-Si) TOPCon solar cell factory with a production capacity of 1 GW/year
Indonesia	Pertamina Power Indonesia	Solar cells/modules (thin-film and others)	Partners with HyET Solaris (Netherlands), planning to establish a new lightweight and flexible PV module factory
Spain	Sunwafe	Silicon feedstock	Secured a site in the Autonomous Community of Asturias, Spain, to construct a c-Si ingot and wafer factory
China	Beijing Guanghe Qiancheng Technology	Silicon feedstock	Established as a joint venture by ten companies including polysilicon manufacturers, which is expected to become a platform for alleviating oversupply

2. New Technologies Entry

Country	Organization	Areas	Activities
USA	T1 Energy	Solar cells/ modules (c-Si)	Started construction of a 2.1 GW/year solar cell factory in Texas, U.S.
India	Tata Power	Silicon feedstock	Entering the manufacturing of c-Si ingots and wafers in India

3. Expansion of Sites

Nothing special to report.

4. Production Capacity Expansion Plan

Country	Organization	Areas	Activities
USA	SEG Solar	Silicon feedstock	Started construction of a c-Si ingot and wafer factory in Indonesia
USA	Nextpower	Inverters/ mounting structures	Installed a new manufacturing line at a steel processing factory of MSS Steel Tubes USA in the U.S., doubling production capacity for steel-made solar trackers
United Kingdom	Awendio Solaris	Solar cells/ modules (c-Si)	Plans to establish a solar cell and module factory in Canada
India	Vikram Solar	Solar cells/ modules (c-Si)	Commissioned a new PV module factory with a production capacity of 5 GW/year in Tamil Nadu, India
India	Waaree Energies	Solar cells/ modules (c-Si)	Announced that its total production capacity of PV modules reached 22.3 GW/year
India	Emmvee Photovoltaic Power	Solar cells/ modules (c-Si)	Started operation of a 2.5 GW/year PV module factory in Karnataka, India
China	Zhongneng Optoelectronics	Manufacturing equipment (incl. measuring equipment for research and production lines)	Signed a contract with Wenling City, Zhejiang Province, China to establish a solar cell manufacturing equipment factory
China	Shanghai Aiko Solar Energy	Solar cells/ modules (c-Si)	Plans to establish a 5 GW/year back-contact (BC) PV module factory in Guangxi Zhuang Autonomous Region, China, as a joint venture with Skyworth PV (China)
China	Hebei Juhang Energy Technology	Solar cells/ modules (c-Si)	Plans to establish a new PV module factory in Pakistan
China	Guangde Qingna Technology	Battery products	Signed a contract for a 20 GWh sodium-ion battery production project in Suining Economic and Technological Development Zone in Sichuan Province, China

5. Withdrawal/ Restructuring

Country	Organization	Areas	Activities
Spain	Zelestra	Ground-mounted PV system + energy storage	Signed an agreement to sell 3.5 GW of renewable energy projects in Latin America to a Colombian natural gas company Promigas
Germany	Wacker Chemie	Silicon feedstock	Announced a plan of layoffs of more than 1,500 employees worldwide, mainly at German factories
Germany	Glasmanufaktur Brandenburg (GMB)	Module material	Announced that it was not able to secure new investors after bankruptcy
Germany	Solarwatt	Solar cells/ modules (c-Si)	Announced its business restructuring plan, with its French subsidiary Solarwatt France applying for early-warning procedure
China	Hangzhou First Applied Material	Cell material	Postponed start of operation of an encapsulant factory in Zhejiang Province, China to the end of 2026
China	Tianyang New Materials (Shanghai) Technology	Cell material	Announced that it will withdraw from the solar cell encapsulant business

6. Joint Venture/ Business Partnership/ M&A

Country	Organization	Areas	Activities
Italy	Eni	Solar cells/modules (thin-film and others)	Announced that it will establish SunXT (Italy), a joint venture with FuturaSun (Italy), to manufacture perovskite/Si tandem PV modules
Egypt	AH for Industrial Management and Consulting	Solar cells/ modules (c-Si)	Its project to establish a solar cell and module factory in Egypt was joined by JA Solar Technology
Netherlands	Ingka Investments	Ground-mounted PV system + energy storage	Signed a strategic alliance agreement with ib vogt (Germany) for the development of a 210 MW PV project in Rajasthan, India
Kyrgyzstan	Kyrgyzstan National Investment Agency	Government and policies	Partners with Electron Holding (Hungary) for the development of a 300 MW PV power plant
Saudi Arabia	ACWA Power	Ground-mounted PV system + energy storage	Signed an agreement with Bapco Energies (Bahrain) to develop a 2.8 GW PV + storage project in Saudi Arabia
Norway	Energeia	Ground-mounted PV system + energy storage	Signed a transfer agreement with the Norwegian Department of Water Resources and Energy for a 46 MW Agro PV project
France	Carbon	Solar cells/ modules (c-Si)	Partners with LONGi Green Energy Technology (China) to establish a PV module factory in France
Belgium	Virya Energy	Electric power companies and related businesses	Acquired the PV business of BayWa r.e. (Germany) in Japan to officially enter the Japan market, and strengthen power purchase agreements (PPAs)
Europe	Solar Stewardship Initiative（SSI）	NPOs, NGOs, etc.	Partners with Copper Mark (UK) for responsible copper sourcing to enhance transparency and accountability across the value chain, covering from copper to PV products
China	GCL Technology	Silicon feedstock	Plans to acquire 42.469% stake of Inner Mongolia Xinyuan Silicon Material Technology (China)
China	LONGi Green Energy Technology	Battery products	Acquired PotisEdge (Canada), an energy storage system (ESS) integrator

7. Orders/ Supply Agreements

Country	Organization	Areas	Activities
USA	T1 Energy	Solar cells/ modules (c-Si)	Signed a contract to supply more than 900 MW of U.S.-made PV modules to Treaty Oak Clean Energy (U.S.) over three years
Italy	Ecoprogetti	Manufacturing equipment (incl. measuring equipment for research and production lines)	Supplies manufacturing equipment to a 400 MW/year PV module factory in Oman
Sweden	Midsummer	Manufacturing equipment (incl. measuring equipment for research and production lines)	Plans to ship CIGS PV module manufacturing equipment with a production capacity of up to 200 MW/year to Colombia

8. Financing/ Investment

Country	Organization	Areas	Activities
United Kingdom	Gas and Electricity Markets Authority (Ofgem)	Government and policies	Approved to invest £ 10.3 billion in updating the UK's grid
United Kingdom	Great British Energy（GB Energy）	Finance-related business	More than doubled funding for local renewable projects in Scotland, Wales and Northern Ireland, by committing an additional investment of £ 12 million ($ 16 million)
India	Government of India	Government and policies	Secured $ 650 million from the Asian Development Bank (ADB) to fund the rooftop PV system deployment support program
Oman	United Solar Polysilicon（FZC）	Silicon feedstock	Signed an agreement with Oman Arab Bank (OAB) to receive a $ 220 million loan from OAB
Oman	United Solar Polysilicon（FZC）	Silicon feedstock	Signed an agreement to receive a $ 30 million investment from Waaree Solar Americas (U.S.)
Saudi Arabia	ACWA Power	Ground-mounted PV system	Completed financing of seven renewable energy projects totaling 15 GW in Saudi Arabia
Malaysia	Johor State	Local government and measures	Signed a collaboration letter to establish South Johor Renewable Energy Corridor (SJREC), to which the World Bank provides funding for a hybrid PV + battery energy storage system project
European Union (EU)	European Bank for Reconstruction and Development (EBRD)	Finance-related business	Finances Romania's PV portfolio of three PV power plants (531 MW)
China	Trina Solar	Solar cells/ modules (c-Si)	Signed a strategic cooperation agreement with Holosolis (France) and invested in Holosolis' PV gigafactory
North Macedonia	Elektrani na Severna Makedonija (ESM)	Electric power companies and related businesses	Secured a loan of € 87 million to finance the development of the Bitola III PV power plant (134 MWdc)

Trends of Production Capacity of Polysilicon Manufacturers

(Estimated capacity at the end of each year, As of December 31, 2025) (Unit: t/year)

Company	Production Site	2023	2024	**2025 (Current)**	2025 (Plan)	2026 (Plan)	2027 (Plan)
Tier 1 manufacturers (6 companies)							
GCL Technology (formerly GCL-Poly Energy Holdings)	China (Xuzhou City, Jiangsu)	100,000	180,000	**180,000**	180,000	180,000	180,000
	China (Leshan, Sichuan)	100,000	100,000	**100,000**	100,000	100,000	100,000
	China (Baotou, Inner Mongolia Autonomous Region)	100,000	100,000	**100,000**	100,000	100,000	260,000 (Planned)
	China (Hohhot, Inner Mongolia Autonomous Region)	120,000	100,000	**100,000**	100,000	100,000	100,000
	China (Wuhai, Inner Mongolia Autonomous Region)	-	-	**-**	-	-	100,000 (Planned)
	Saudi Arabia	-	-	**120,000**	120,000	120,000	120,000
Wacker Chemie (Wacker Polysilicon)	Germany (Nünchritz) / Germany (Burghausen)	60,000	60,000	**60,000**	60,000	60,000	60,000
	USA (Charleston, Tennessee)	20,000	20,000	**20,000**	20,000	20,000	20,000
OCI	Korea (Gunsan)	4,700	4,700	**4,700**	7,200	10,200	10,200
	Malaysia (Sarawak)	35,000	35,000	**35,000**	35,000	35,000	56,600
Tokuyama Corporation / OCI JV	Malaysia (Sarawak)	-	-	**-**	-	-	10,000 (Planned)
Hemlock Semiconductor Corporation	USA (Hemlock, Michigan)	18,000	18,000	**18,000**	18,000	18,000	18,000
REC Silicon (ASiMI: Advanced Silicon Materials)	USA (Butte, Montana)	1,600	Production stopped	-	-	-	-
REC Silicon (SGS: Solar Grade Silicon)	USA (Moses Lake, Washington)	18,000	16,000	Production stopped	-	-	-
Tokuyama Corporation	Japan (Shunan, Yamaguchi)	8,500	8,500	**8,500**	8,500	8,500	8,500
Other major non-Tier 1 manufacturers							
High-Purity Silicon Corporation (transferred from Mitsubishi Materials Corporation to SUMCO at the end of March 2023)	Japan (Yokkaichi, Mie)	2,800	2,800	**2,800**	2,800	2,800	2,800
High-Purity Silicon America Corporation	USA (Theodore, Alabama)	1,500	1,500	**1,500**	1,500	1,500	1,500
Tongwei Group (included Trina Solar JV, JinkoSolar JV)	China (Leshan, Sichuan)	291,000	341,000	**341,000**	371,000	371,000	491,000
	China (Baotou, Inner Mongolia Autonomous Region)	110,000	310,000	**310,000**	310,000	310,000	310,000
	China (Baoshan, Yunnan)	50,000	250,000	**250,000**	250,000	250,000	250,000
	China (Ordos, Inner Mongolia Autonomous Region)	-	-	**-**	-	200,000	200,000
Daqo New Energy	China (Shihezi, Xinjiang Uyghur Autonomous Region)	105,000	105,000	**105,000**	105,000	155,000	206,000 (Planned)
	China (Baotou, Inner Mongolia Autonomous Region)	100,000	200,000	**200,000**	201,000	201,000	201,000
Xinte Energy (TBEA)	China (Urumqi, Xinjiang Uyghur Autonomous Region)	100,000	100,000	**100,000**	200,000	200,000	300,000 (Planned)
	China (Baotou, Inner Mongolia Autonomous Region)	100,000	100,000	**100,000**	200,000	200,000	200,000
	China (Zhundong, Xinjiang Uyghur Autonomous Region)	100,000	100,000	**100,000**	100,000	100,000	200,000 (Planned)
Qinghai Lihao Clean Energy	China (Xining, Qinghai)	150,000	150,000	**150,000**	150,000	150,000	200,000 (Planned)
East Hope Group	China (Xinjiang Uyghur Autonomous Region)	130,000	130,000	**130,000**	130,000	130,000	1,000,000 (Planned)
	China (Ningxia Autonomous Region)	-	-	**-**	250,000	250,000	400,000 (Planned)
	China (Wuhai, Inner Mongolia Autonomous Region)	-	-	**-**	125,000	125,000	125,000
Jiangsu Runergy New Energy Technology	China (Ningxia Autonomous Region)	50,000	130,000	**130,000**	130,000	130,000	130,000
Asia Silicon (Hongshi Group)	China (Xining, Qinghai)	100,000	100,000	**100,000**	100,000	100,000	100,000
Haidong Hongshi Semiconductor	China (Haidong, Qinghai)	-	-	**-**	140,000	140,000	200,000
HY Solar (formely HOYUAN Green Energy)	China (Inner Mongolia Autonomous Region)	50,000	76,000	**76,000**	100,000	100,000	100,000
Xinjiang Goens Energy Technology (formerly Xinjiang GCL New Energy Materials Technology)	China (Xinjiang Uyghur Autonomous Region)	60,000	60,000	**60,000**	80,000	80,000	80,000
Xinjiang Jinguo New Energy Industry Development	China (Xinjiang Uyghur Autonomous Region)	50,000	50,000	**50,000**	50,000	50,000	100,000 (Planned)
Shaanxi Non-Ferrous Tian Hong REC Silicon Materials (Yulin JV)	China (Yulin, Shaanxi)	18,300	18,300	**18,300**	18,300	18,300	18,300
Risen Energy/ Juguang Silicon Industry	China (Inner Mongolia Autonomous Region)	12,000	12,000	**12,000**	12,000	12,000	12,000
Risen Energy	China (Inner Mongolia Autonomous Region)	-	-	**-**	150,000	150,000	150,000
Erdos Polysilicon	China (Inner Mongolia Autonomous Region)	12,000	12,000	**12,000**	22,000	22,000	22,000
Inner Mongolia Dongli Photovoltaic Electronics	China (Inner Mongolia Autonomous Region)	12,000	12,000	**12,000**	212,000	212,000	212,000
Others (China)		284,700	349,700	**349,700**	979,700	1,079,700	1,179,700
Others (Middle East, India,etc.)		8,000	8,000	**8,000**	108,000	108,000	138,000
Total (Estimate)		**2,483,100**	**3,260,500**	**3,244,500**	**5,247,000**	**5,600,000**	**5,931,600**

* This table includes only the production facilities which are assumed to be in operation and NOT include those out of production.
* Other UMG-Si supplier candidates: REC Solar Norway (formely Elkem Solar (Norway, 5,000 t/y, suspended)), Elkem (Norway, 3,000 t/y)), United Solar Polysilicon (FZC) (Oman, 100,000 t/y, scheduled to start operation in 2025, included in the t
* Other supplier candidates: Aurinka Photovoltaic Group（Spain, UMG-Si, Under constructing), Emirates Global Aluminum (EGA) (UAE), Solquartz (Australia), Highland Materials (USA), GCL Technology (UAE), Indian vertically integrated factories, Qinghai Lihao Semiconductor Materials (Angola), Resilicon (Netherlands)

Trends of PV Module Shipments (Quarterly) by Global Major PV Manufacturers

(As of December 31, 2025) (Unit: MW)

2024 Ranking	PV cell/ module Manufacturer	Country	Technology	2023	2024					2025					Note
				Total	Jan.-Mar.	Apr.-Jun.	Jul.-Sep.	Oct.-Dec.	Total	Jan.-Mar.	Apr.-Jun.	Jul.-Sep.	Oct.-Dec.	Total	
1	**JinkoSolar**	China	c-Si	78,520	19,990	23,822	23,838	25,221	92,873	17,504	24,334	20,014	18,000-33,000**	85,000-100,000**	Outlook includes wafer and cells
2	**LONGi Green Energy Technology**	China	c-Si	67,519	12,890	18,450	19,890	22,250	73,480	39,570		23,860		80,000-90,000***	
3	**JA Solar Technology**	China	c-Si	55,302	16,059		19,000	15,676	72,676	15,650	18,140	18,170			Includes cell shipment
4	**Trina Solar**	China	c-Si	65,215	34,000	0	36,474		70,474	32,000		—		70,000-75,000**	
5	**Tongwei Group**	China	c-Si	31,110	18,670		27,040		45,710	24,520		—			
6	**Chint New Energy Technology**	Canada	c-Si	28,000-30,000***	-	-	-	-	40,200***	8,000***	10,500***	—		45,000***	
7	**Canadian Solar**	China	c-Si	30,700	6,300	8,200	8,400	8,200	31,100	6,900	7,900	5,100	4,600-4,800**	25,000-30,000**	
8	**DAS Solar**	China	c-Si	18,000-20,000***	-	-	-	-	25,000-26,000***	5,100-5,500***	8,500-8,900***	—		25,000-26,000***	
9	**Yingli Solar**	China	c-Si	13,000	-	-	-	-	24,800	4,700-5,000***	6,300-7,300***	—			
10	**GCLSI**	China	c-Si	16,420	10,000**		11414**		21,414	5,500-6,000***	8,000-8,500***	—			Volume in 2024 includes cell shipment

*** Preliminary figure, *** reported unofficial value Compiled by © RTS Corporation*

Trends of Module Production Capacity by Global Major PV Manufacturers (As of December 31, 2025) (Unit: MW/year)

2024 Ranking	PV cell/ module Manufacturer	Country	Technology	Annual Production Capacity					Plan		Manufacturing Site
				End of 2020	End of 2021	End of 2022	End of 2023	End of 2024	End of 2025	End of 2026	
1	JinkoSolar	China	c-Si	31,000	45,000	90,000	120,000	135,000	130,000	130,000	China, Malaysia（suspended operations), Vietnam, USA
2	LONGi Green Energy Technology	China	c-Si	50,000	60,000	85,000	120,000	127,000	130,000	130,000	China, Malaysia, Vietnam, USA
3	JA Solar Technology	China	c-Si	23,000	40,000	50,000	95,000	100,000	103,000	118,000	China, Malaysia, Vietnam
4	Trina Solar	China	c-Si	22,000	50,000	65,000	95,000	100,000	100,000	100,000	China, Thailand, Vietnam, Indonesia
5	Tongwei Group	China	c-Si	1,700	2,966	14,000	75,000	90,000	100,000	100,000	China
6	Chint New Energy Technology	China	c-Si	5,250	6,500	20,000	55,000	76,000	76,000	76,000	China, Thailand, Vietnam
7	Canadian Solar	Canada	c-Si	16,100	23,900	32,200	57,000	60,200	51,300	55,800	China, Canada, Brazil, Vietnam, Thailand, USA
8	DAS Solar	China	c-Si	—	1,100	4,100	14,482	30,000	32,000	33,000	China
9	Yingli Solar	China	c-Si	4,200	13,700	15,000	18,900	30,000	30,000	30,000	China
10	GCLSI	China	c-Si	7,200	22,200	30,000	29,600	30,000	40,000	40,000	China、Malaysia

Source: Press releases, materials from international conferences, companies and interviews, etc., compiled by © RTS Corporation