Newsletter

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Battery Storage Subsidies in Japan

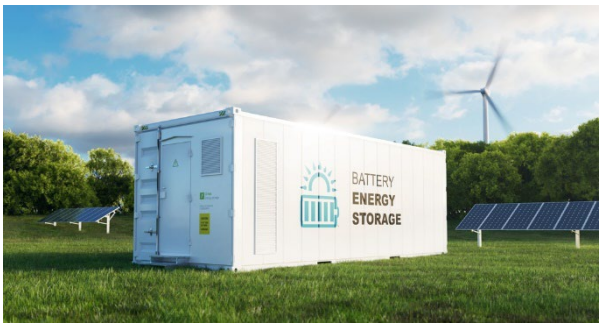
Introduction

In the Sixth Strategic Energy Plan,[1] published by the Japanese Government in October 2021, targets are set to (a) achieve carbon neutrality by 2050; (b) increase the share of renewables as part of Japan's total electricity generation to 36-38% by 2030 (including 19-21% from solar and wind) compared to an 18% share in 2019; and (c) reduce greenhouse gas emissions by 46% in 2030.

Solar and wind power generation are heavily dependent on weather conditions and other factors. Therefore, in order to stabilise the fluctuating supply of electricity from such sources, the Government recognises that it is essential for Japan to develop large-scale battery energy storage systems (**BESS**), which allows the storage of energy for utilisation at appropriate times.

In the last month, details of at least two subsidy schemes which relate to battery storage have been announced by the Government. This includes the 2023 BESS subsidy scheme (which seeks to increase subsidy support for BESS installation projects following on from a similar scheme in 2022), together with a subsidy scheme with a more specific focus on large scale battery production and supply.

The subsidy schemes are open for applications from companies and special purpose companies (**SPCs**) registered in Japan. As this includes Japanese subsidiaries of foreign registered companies, it will be of interest to foreign investors in Japan. We have therefore prepared this newsletter to set out details of these subsidy schemes, together with a brief analysis of the 2022 BESS subsidy scheme which might be helpful for prospective applicants. In addition, details of a third battery subsidy scheme, which is currently Tokyo-specific, is considered.



The 2023 BESS Subsidy Scheme

Introduction and Key Dates

The 2023 round of subsidies for battery storage (announced on 31 January 2023)[2] will utilise around JPY 17 billion of the JPY 25 billion allocated by the Government as part of its 2022 supplementary budget

[1] See for example the following summaries:
https://www.enecho.meti.go.jp/en/category/others/basic_plan/pdf/6th_outline.pdf
https://www.meti.go.jp/english/press/2021/1022_002.html

[2] Subsidy for the Project to Support the Introduction of Distributed Energy Resources that Contribute to the Expansion of Renewable Energy Introduction (再生可能エネルギー導入拡大に資する分散型エネルギーリソース導入支援事業)

(**2023 Scheme**). The 2023 Scheme is being implemented by the Sustainable open Innovation Initiative (**SII**)[3], together with Dai Nippon Printing Co., Ltd.

The 2023 Scheme aims to subsidise projects which install new BESS facilities (or alternatively the installation of water electrolyzers[4]) that meet certain requirements, including providing adjustment capacity via various electricity markets (essentially markets where energy is traded in Japan – including the supply and demand adjustment market, wholesale electricity market, capacity market and via individual trading).

The first Application Period for the 2023 Scheme recently opened on 6 February 2023, and the key dates to note for the remainder of the scheme are as follows[5]:

1. Application Period: From Monday 6 February 2023 until [X] (date yet to be determined)
2. First Application Round Deadline: Monday 27 February 2023 (applications must arrive by 12:00)
3. Second Application Round Deadline: [X] (date yet to be determined)
4. Third Application Round Deadline: [X] (date yet to be determined)

Potential applicants should note that where the total grants reach the JPY 17 billion limit in the first round of applications, there would not necessarily be a second or third application round. Therefore, it might be advisable for applications to be made in the earliest application round possible.

Requirements

1. BESS Requirements

   a. The proposed BESS facility should be directly connected to the power grid; and
   b. The system should contribute to the effective use and expansion of renewable energy together with improving the power balance in Japan (e.g., charging when surplus power is expected to be generated and discharging when power is in short supply).

2. Operator Requirements

   Requirements for operators include the following:

   a. Operators should be entities that conduct business activities in Japan (note that "General Electricity Transmission and Distribution Operators" (*ippan-sohaiden-jigyosha*) such as TEPCO Power Grid are not eligible to apply for the subsidies) – foreign companies with Japanese subsidiaries are eligible to apply for the subsidies;
   b. The operator should be the owner and user of the equipment for the project[6]; and
   c. Operators need to have the necessary management structure in Japan to ensure the project's success[7].

3. Facility Requirements

   All of the following should be met:

It is anticipated that the remaining JPY 8 billion of supplementary budget allocation will be used to support (i) the installation of energy storage systems for households together with commercial industrial use that can be used to address electricity supply and demand crises; and (ii) promotion of the Internet of Things (**IOT**) to expand demand response to electricity supply and demand constraints, etc.

[3] SII is a private entity selected by the Government to manage and implement the Subsidy project.

[4] Note: This article does not focus on subsidies available for water electrolyzers. Please reach out if you have a particular interest in these subsidies.

[5] https://sii.or.jp/chikudenchi04r/public.html

The Application Guidelines can be found below (Japanese only)

https://sii.or.jp/chikudenchi04r/uploads/R4r_k_ess_kouboyouryou.pdf

[6] Where the owner and operator of the equipment will be separate entities, a joint application needs to be made. If the owner does not intend to use the equipment itself, it is recommended to consult in advance with SII.

[7] With respect to an SPC, a written assurance confirmation regarding performance of the project must be submitted by the principal investor. While the guidelines are not entirely clear as to how non-SPC companies satisfy this requirement, considering the fact that the assurance letter is sufficient for an SPC, an equivalent letter would seemingly satisfy the requirements for other companies.

a. The system should be a new installation;
b. The output capacity of the system must be 1,000 kW or more;
c. The facility needs to meet certain requirements applicable to each type of storage battery (including requirements such as security/safeguards, education and training, etc.);
d. Appropriateness of proposed development and supply will be assessed and confirmed; and
e. The facility must comply with all applicable laws and regulations.

Subsidy Rate and Maximum Amount

Category		Subsidy Rate	Maximum Amount (per Application*)
Design, equipment and construction costs of BESS which falls under the following: (a) BESS manufactured using new technology (such as bipolar batteries); or (b) Energy storage systems assembled via the secondary use of storage battery modules used to drive electric vehicles		up to 1/2	JPY 2.5 billion
Design, equipment and construction costs of BESS other than the above	Output capacity of 1,000 kW or more but less than 10,000 kW	up to 1/3	JPY 1.0 billion
	Output capacity of 10,000 kW or more	up to 1/2	JPY 2.5 billion

* A separate application can be made for each lead-in line from the power grid.

Only the minimum necessary costs for design, equipment supply and/or construction will be subsidised.

Application and Evaluation Process

1. Application Process

   a. Registration and application is made through jGrants.[8] Registration should be completed by applicants in advance using gBizID's website[9] and these details are then used to log into jGrants. The application form can be downloaded from the SII website, and once filled in, should be uploaded onto jGrants.
   b. Two duplicate copies of the application documents need to be prepared; one to be submitted to SII and the other to be retained by the applicant. SII may request that the applicant submit additional information following SII's review of the application.
   c. Proxy applications are not permitted.

2. Evaluation Process

   a. SII will conduct interviews with applicants in relation to the details of the project described in their application. Following this interview, and after consultation with a review committee comprised of external experts, SII will determine whether the applicant is entitled to receive a subsidy.
   b. Details of subsidy awards will be published and applicants notified.

Payment of the Subsidy

Following completion of the project, a successful applicant is required to submit a performance report to SII for review. Once SII has reviewed and confirmed that the project has been carried out in line with the original application, SII will notify the successful applicant of the fixed amount of subsidy that it will receive. However, if the operator needs the subsidy prior to completion of the project, it should submit a request to SII explaining why prior payment is required.

[8] https://www.jgrants-portal.go.jp/

[9] https://gbiz-id.go.jp/top/index.html
Below sets out the detailed procedure for obtaining gBizID (Japanese only):
https://sii.or.jp/chikudenchi04r/uploads/R4r_k_ess_gBizID.pdf

Once this process is complete, the applicant submits an invoice and the subsidy is received.

Overview and analysis of the 2022 BESS Subsidy Scheme

For the 2022 BESS subsidy scheme (**2022 Scheme**), the Government earmarked a lower amount of JPY 13 billion as part of its 2021 supplementary budget[10] to support standalone BESS construction, with the application process held between February and March 2022. Applicants were able to apply for subsidies to install BESS, or alternatively for the installation of water electrolyzers.

The application process for the 2022 Scheme closed on 31 March 2022, as the total budget allocated to the scheme had already been reached for applications then received. Parties interested in bidding in the 2023 BESS Subsidy Scheme should continue to bear this in mind when determining which Application Period they apply for.

A total of 13 projects[11] were awarded subsidies under the 2022 Scheme (with some operators receiving subsidies for more than one project). Of these, 12 projects were granted subsidies for installing BESS, while one operator received a subsidy for installing water electrolyzers.

Subsidy for a Stable Supply of Batteries

In mid-January 2023, the Government announced a new additional subsidy scheme to ensure a stable supply of storage batteries, based on the "Act on the Promotion of National Security through Integrated Economic Measures".[12] This subsidy is promoted by METI but it is understood that the subsidies will be provided by the New Energy and Industrial Technology Development Organization (**NEDO**).[13] This scheme focuses more on battery production and supply, rather than (in the case of the 2023 Scheme) the installation of BESS.

The following is a brief summary of the scheme:

1. Targeted Products: The aim of the subsidy is to develop production of (a) storage batteries (advanced lithium-ion batteries used as either vehicle-mounted storage batteries or stationary storage batteries); and (b) battery materials (advanced lithium-ion battery component materials, produced as component materials for the manufacture of storage batteries as specified in (a)). In the case of both (a) and (b), the developed products must be of a more advanced standard than products currently under development (e.g., offers better performance and cost competitiveness compared to products currently in production).

2. Targeted Initiatives: It aims to improve manufacturing infrastructure for targeted products, including (a) the installation of production facilities and production equipment; and (b) further technological developments which relate to (a), which are conducted to establish technological leadership and security, decarbonize the manufacturing process, and/or utilise digital technology.

3. Requirements:
   a. Storage batteries: Production capacity should be 3 GWh/year or more for vehicle-mounted storage batteries and 300 MWh/year or more for stationary storage batteries; and

[10] "Subsidy for the Project to Support the Introduction of Grid Storage Batteries, etc. to Accelerate the Introduction of Renewable Energy (再生可能エネルギー導入加速化に向けた系統用蓄電池等導入支援事業費補助金)"
https://sii.or.jp/chikudenchi03r/public.html

[11] https://sii.or.jp/chikudenchi03r/uploads/ess_koufukettei.pdf

[12] The Act was approved on 11 May 2022.

[13] https://www.meti.go.jp/policy/economy/economic_security/battery/index.html

b. Battery materials: Storage batteries (other than recycled materials) should have a production capacity of at least the equivalent of 3 GWh/year of storage batteries. For recycled materials, the operator needs to process at least 1,000 tons/year of waste battery (pack) equivalent.

In 2022, a more general subsidy scheme was provided by the Government, which sought to support capital investment and R&D for technology production. However, the Government has clearly perceived a potential risk of losing manufacturing capacity and technical knowledge for storage batteries to overseas competitors. As such, the Government sees the need to provide further support to maintain and improve Japan's domestic manufacturing capacity and technology. This battery production and supply subsidy focuses on supporting this domestic industry. With a 300 MW minimum limit, the subsidy may be of interest to a more limited group of battery producers compared to the 2023 BESS Subsidy Scheme. That said, it does further demonstrate the Government's intention and willingness to protect the domestic battery storage industry.

Tokyo's own battery subsidy scheme

As well as the nationwide subsidies described above, the wider Tokyo Metropolitan area also seeks to provide certain subsidies for grid storage batteries.[14] This particular subsidy scheme will support energy storage systems of 1,000 kW or more and will be open to applications from 1 March 2023 to 10 April 2023.

For this scheme, applicants must be companies with a head office or branch office in Tokyo and the system must be installed within the service area of The Tokyo Electric Power Company (**TEPCO**). At present, TEPCO covers the Kanto area (being Tokyo, Kanagawa, Saitama, Chiba, Tochigi, Gunma, Ibaraki, Yamanashi and certain Eastern parts of Shizuoka).

The subsidy rate is 4/5 of the project cost (i.e., eligible expenses), with an upper limit of JPY 2.5 billion for each eligible application (although the published guidelines do not make clear whether this is JPY 2.5 billion per application). However, if the number of applications exceeds the total budget of JPY 4.8 billion, the subsidy amount would be prorated among all applicants that meet the requirements.[15]

The subsidy can be used together with the subsidies provided by the Government (as discussed above). Where both subsidy schemes are applied for by an applicant in relation to the same project, the amount that will be subsidised is calculated as follows:

4/5 of the "eligible expenses" minus the subsidy provided by the Government

At the moment, this is a unique scheme for Tokyo and equivalent projects have not been announced for other cities or prefectures in Japan.

Further Developments – designation of 10MW Plants

As well as the various subsidies described above, there are further attempts by the Government to expand the use of grid-scale batteries.

Of note, the Electricity Business Act was amended in May 2022, stipulating that from April 2023 grid-scale batteries (defined as those with capacity of 10MW and above) would be classified as "electricity generating". As a result, if a grid-scale battery operator requests, in principle it should be possible for the battery to be connected directly to the electricity grid.

[14] Project to Promote the Introduction of Large-Scale Storage Batteries for the Grid (系統用大規模蓄電池導入促進事業) https://www.tokyo-co2down.jp/subsidy/grid-connect

[15] https://www.tokyo-co2down.jp/wp-content/uploads/2023/01/grid_connect_gaiyo_2301.pdf

Conclusion

The Government's focus in 2022 and 2023 on providing these different subsidies for battery production and BESS installation demonstrates a genuine commitment to the support of companies that will provide innovative solutions to stabilising energy supply.

It remains to be seen how the 2023 subsidies will be allocated, and whether further subsidies will be provided in 2023 or beyond, but even these subsidies will help continue to accelerate the development of battery storage and related technologies in Japan.

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