

# Biomass power generation: supply and sustainability

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## **Introduction**

Biomass-fuelled power generation facilities continue to play an important role in Japan's renewable energy portfolio. As of March 2019, Japan's biomass facilities represented a power generation capacity of approximately 11.3 million kilowatts.

Biomass power generation projects are entitled to participate in Japan's feed-in tariff (FIT) regime, provided that the various eligibility criteria are met. Notably, in addition to the eligibility requirements broadly applicable to all renewable energy generation projects seeking to participate in the FIT regime which are set out under the Implementing Rules of the Act on Special Measures Concerning Procurement of Electricity from Renewable Energy Sources by Electricity Utilities (eg, obtaining interconnection rights and securing the required project site), biomass energy production facilities must demonstrate that they have procured a stable supply of biomass fuel, manufactured in a manner compliant with the applicable sustainability rules, for the duration of the 20-year FIT term.

This article provides an overview of the sustainability rules applicable to biomass power generation facilities in Japan.

## **Supply and sustainability**

### ***Regulation***

In order for a biomass power generation facility to be eligible for the FIT regime, the implementing rules require the biomass facility developer or operator, as applicable, to secure a stable supply of biomass fuel which has been certified as sustainable.<sup>(1)</sup>

### ***Sustainability standards for woody biomass fuels***

Woody biomass fuels must be certified as sustainable in accordance with the Guideline for Verification on Legality and Sustainability of Wood and Wood Products issued by the Ministry of Forestry (MOF) in 2006 (MOF guideline). The MOF guideline provides that sustainability certification pursuant to any of the three approaches discussed below is acceptable for the purpose of satisfying the sustainability criteria of the FIT regime.

For all three types of sustainability certification method, business operators must retain copies of all certificates issued to purchasers, certificates issued by suppliers and other related documents for a minimum of five years from the date of issuance. Business operators must also be able to produce such documents upon reasonable request.

### ***Third-party certification***

A biomass energy producer can prove the sustainability of its woody biomass fuel with certification from an independent third-party institution confirming that:

- said woody biomass originated from a forest that implements sustainable forestry management procedures; and
- each entity within the supply chain (the chain of custody) has confirmed that the applicable woody biomass has been identified as sustainable and, where applicable, separated from any woody biomass not certified as sustainable.

#### *Industry certification*

The sustainability of woody biomass fuel can also be certified by industry associations, such as forestry or wood industry associations, which have established sustainability criteria and regulations. The MOF guideline advises that where an industry certification is sought to be relied upon, the relevant criteria and regulations should be publicly available and described as a reliable method to guarantee that the certified woody biomass fuels have been produced in a sustainable manner. Each entity within the supply chain to the end user of the woody biomass fuel will also need to certify that the sustainable woody biomass fuel has been separately managed and maintained.

#### *Self-certification*

Individual companies are also permitted to rely on internally developed certification standards to certify the sustainability of manufactured woody biomass fuels. In such cases, the MOF guideline provides that the self-certification process must reasonably be understood to ensure the sustainability of said woody biomass throughout the supply chain – from harvest to delivery – and that the standards must generally be commensurate with the certifications provided by forestry or wood industry associations.

### **Sustainability standards for agricultural biomass fuels**

#### ***Current situation***

For agricultural biomass fuels (eg, palm oil, palm kernel shell (PKS) and palm trunk), the Business Plan Implementation Guideline (Biomass) of the Ministry of Economy, Trade and Infrastructure (METI) (METI guideline) provides that sustainability is to be certified by third-party certification, such as the Roundtable on Sustainable Palm Oil (RSPO) for palm oil and the Roundtable on Sustainable Biomaterials (RSB) for PKS and palm trunk, in addition to supply chain certification to verify that certified and non-certified fuels have not been commingled along the supply chain. Similar to the case with woody biomass, certification of sustainability and documentation certifying the chain of custody throughout the supply chain must be obtained and maintained throughout the FIT period and be available for production upon request.

#### ***Developments and outlook***

METI's Biomass Sustainability Working Group is assessing whether the sustainability criteria for agricultural biomass fuel under the FIT regime requires any amendments. The working group is studying various international biomass sustainability standards and comparing them against the RSPO standards, which are the evaluation benchmark in place under the METI guideline. Based on the investigation to date, the working group has approved RSPO certification (2013 or 2018 version) as an accredited method for FIT certification of biomass power generation using palm oil. The working group has also approved RSB certification as an accredited method for FIT certification for PKS and palm trunk biomass fuels. The working group is also considering whether the Green Gold Label standard can be acceptable as an accredited third-party certification for PKS and palm trunk biomass fuels under the FIT regime.

#### ***Compliance with sustainability requirements***

Prior to April 2018, METI had not approved any third-party certification for sustainability standards for agricultural biomass fuels; however, from April 2018, METI has required third-party certification for new biomass projects using palm oil (RSPO certification). Projects that obtained FIT certification prior to April 2018 were required to obtain the RSPO certification within one year (ie, before April 2019). With respect to RSB certification for PKS and palm trunk biomass fuels, sustainability accreditation will be required for new biomass projects from April 2022.

However, given the difficulty of obtaining third-party certification within the contemplated timeframe, certain biomass projects using palm oil that commenced operations before 19 December 2018, and had a supply arrangement in place before 7 February 2018, have been given a grace period until 31 March 2021 to obtain third-party RSPO certification, on the condition that the business operator has policies in place aimed at securing sustainability which

are publicly available. Projects that commenced operations after 19 December 2018 have been provided with the same grace period to obtain said third-party RSPO certification, on the condition that the project will not commence operations until the sustainability programme and publication requirement discussed above has been satisfied.

For biomass projects using PKS and palm trunk biomass fuels, METI will confirm approved third-party RSB certification for new projects which commence after 1 April 2022. A grace period is in place until 31 March 2020 for projects that commenced operations before 31 March 2022, on the condition that the business operator has developed its own internal policies aimed at securing sustainability and made these publicly available.

The working group acknowledged that these contemplated timelines are ambitious and may not be feasible for all biomass generation facilities, whether due to:

- a delay in confirming the approved third-party certification procedures; or
- the impact of COVID-19.

As such, the working group has proposed that an additional one-year grace period be provided for such biomass facilities to obtain the relevant sustainability accreditation.

### **Comment**

Since the sustainability requirements are not concrete and may be amended in the near future, which party will bear the costs for a change in law is often a material issue in fuel-supply contracts. However, biomass renewable energy is expected to continue to play a major role in the Japanese energy sector. While the requirements are complex, interest in biomass renewable energy remains strong. Further, it is anticipated that as the sustainability rules applicable to woody and agricultural biomass fuels are settled, interest and investment in the biomass industry will continue to accelerate.

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### **Endnotes**

(1) Paragraphs 11(11) and 11(14), Section 1, Article 5 of the Implementing Rules of the Renewable Energy Act.

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