
AMT/NEWSLETTER

Energy

December, 2024

Recent Discussions in Japan over New System for Disposal and Recycling of Solar Panels

Yoshiaki Otsuki / Sakiko Fukuda

Contents

1. Introduction
2. Current Legal Issues Related to Disposal and Recycling of Solar Panels
3. Recent Discussions in the Government on the Disposal and Recycling System for Solar Panels
4. Conclusion

1. Introduction

The current Japanese laws do not require recycling¹ or resource recovery² of any used solar panels, although disassembly method of used solar panels for the purpose of reuse of separated materials have been technically developed. Instead, under the current law used solar panels must be disposed under the responsibility by a waste producer in accordance with the relevant regulations of the Waste Management and Public Cleansing Act (the “Waste Management Act”). It is said that under such current legal obligations imposed PV operators, not so much progress has been made with respect to recycling and resource recovery of used solar panels.

Having said that, the necessity for recycling and resource recovery has been discussed in the Japanese society in preparation of the forthcoming era of mass disposal of used solar panels.

In response to the above arguments, a working group of the Ministry of Economy, Trade and Industry (“METI”) and the Ministry of the Environment (“MOE”) has been discussing the institutionalization of mandatory recycling of PV facilities.

This newsletter sets out an overview of the current laws and regulations regarding disposal and

¹ It means to disassemble into individual materials and reuse them as material.

² It means to make effective use for other purposes.

recycling of solar panels, together with a summary of the most recent discussions within the government.

Please note that this newsletter will only cover the so-called mega solar power plants with output exceeding one (1) megawatt.

2. Current Legal Issues Related to Disposal and Recycling of Solar Panels

2.1. Overview

Under the current laws, PV operators have no obligation for recycling or resource recovery when they dispose of solar panels.

As described below, the current laws prescribe: an obligation to notify upon termination of the PV business itself; various regulations pertaining to the disposal and removal of solar panels; regulations applicable to the collection and transportation of panels for the purpose of disposal; and regulations applicable to recycling and reuse on a voluntary basis by the PV operator, however. The regulations are typically the Waste Management Act, the Act on Special Measures concerning the Promotion of Use of Electricity from Renewable Energy Sources (the “Renewable Energy Act”), the Electricity Business Act, and the Labor Contracts Act.

Just as an introductory notes:

- The Renewable Energy Act provides for the so-called feed-in tariff (FIT) system with a view to promoting spreads of renewable energy in Japan. All PV businesses using the FIT system are subject to the regulations of the Renewable Energy Act.
- The Electricity Business Act regulates electric facilities³. With certain exceptions, PV facilities are subject to regulations under the Electricity Business Act.
- The Labor Contracts Act sets forth the basic matters such as working conditions of workers that must be determined in advance when a labor agreement is made. The Labor Contracts Act applies to almost every business sector with labor contracts, not only to disposal and recycling of solar panels. Accordingly, we will not discuss in detail this act in this newsletter.

2.2. Termination of PV Business, i.e., Termination of Use of PV Panels

Mega-solar PV operators are obligated to notify under the Renewable Energy Act when they terminate the PV business.

Furthermore, PV operators of mega-solar power plants are subject to notification requirements under the Electricity Business Act upon the termination of their PV business⁴. Specifically, PV operators of mega-solar power plants must notify METI of the termination of the PV business and to

³ Structures installed for the generation, storage, transformation, transmission, distribution, and use of electricity.

⁴ These obligations are separate from, and additional to, the notification obligation under the Renewable Energy Act.

report the closure of a specific PV operation site to the competent Director of the Industrial Safety and Inspection Department, as well.

2.3. Disposal and Removal of Solar Panels

The construction works for disposal and removal of solar panels fall under the category of “construction work for civil engineering and construction” under the Waste Management Act. In the case that such “construction work for civil engineering and construction” is carried out through multiple subcontractors, the master contractor is deemed to be the regulated person as a “waste producer” in the context of the Waste Management Act. As such, for instance, the master contractor must deliver the industrial waste control sheet when the disposal of waste is outsourced to a subcontractor.

In addition, in certain cases, a permit under the Construction Business Act is required for disposal and removal of mega solar panels. The Construction Business Act is a regulation with the objective of improving the qualifications of workers engaged in a construction works and ensuring the appropriateness of contracts of construction workers, which typically applies to the construction of houses and buildings. However, the Construction Business Act also applies to PV facilities in certain cases, as well.

2.4. Collection and Transportation of Disposed Solar Panels

In addition to the obligations imposed on PV operators of mega solar power plants under the Waste Management Act as mentioned above, the Waste Management Act also apply to collecting and transporting of the used solar panels for the purpose of its disposal. For instance, collection and transport service contractors must send a copy of the control sheet under the Waste Management Act once they complete the transportation.

2.5. Recycling and Reuse of Disposed Solar Panels

As stated above, there is no obligation of PV operators to recycle or reuse solar panels under the current laws. Nonetheless, the Waste Management Act may be applied to recycling or reuse of discarded solar panels in some cases. However, given that the purpose is recycle or reuse of the used solar panels, then the issue would be whether or not the used solar panels are “waste” in the first place, because if they are not “waste”, they fall outside the Waste Management Act. As a general principle in this respect, whether something is “waste” or not is judged in consideration of the comprehensive factors, such as the nature of the item, the circumstances where it was generated, the normal treatment method, marketable value, and the intent of the owner.

Given that solar panels fall under the category of “industrial waste,” for the purpose of transportation of such solar panels as “industrial waste” with a view to recycling or reuse thereof, and when the transportation is entrusted to the third party, it must be carried out by a third party qualified as an “industrial waste collection and transport service contractor” under the Waste Management Act.

3. Recent Discussions in the Government on the Disposal and Recycling System for Solar Panels

The working groups of METI/MOE mentioned at the beginning of this newsletter mainly discuss and consider the following issues:

- (a) Issues on “things”
 - To impose obligations of delivery and that of take-over on (i) contractors of disposal and removal, and (ii) contractors of resource recovery, respectively.
- (b) To require certain qualification under the law to the contractors if they carry out the business for resource recovery of PV panels.

In addition to the cost for disposal, removal, transportation, and landfill disposal of PV facilities, the cost of resource recovery (cost of resource recovery in the narrow sense) will also need to be considered if recycling is mandated.

- (c) Issues on “information”
 - To interconnect the information which is already collected by the existing infrastructure as
 - much as possible.
 - To establish a system whereby each party registers the information on “costs” and “things.”

4. Conclusion

As mentioned at the beginning of this newsletter, the disposal and (mandatory) recycling of solar panels has become an urgent social issue, and there is a need to establish a legal system as soon as possible. We will continue to monitor the discussions of the government for the upcoming institutionalization.

-
-
- This newsletter is published as a general service to clients and friends and does not constitute legal advice. Should you wish to receive further information or advice, please contact the authors as follows:

 - Authors:
[Yoshiaki Otsuki \(yoshiaki.otsuki@amt-law.com\)](mailto:yoshiaki.otsuki@amt-law.com)
[Sakiko Fukuda \(sakiko.fukuda@amt-law.com\)](mailto:sakiko.fukuda@amt-law.com)

 - If you wish to unsubscribe from future publications, kindly contact us at [General Inquiry](#).

 - The back issues of the newsletter are available [here](#).