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Alternative Energy & Power 2021

Japan
Law & Practice
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JAPAN

Law and Practice

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1. GENERAL STRUCTURE AND OWNERSHIP OF THE POWER INDUSTRY

1.1 Principal Laws Governing the Structure and Ownership of the Power Industry

General Structure and Ownership

The structure of the Japanese power industry was established during the occupation period after the Second World War when nine vertically integrated companies, each covering a different geographical region in Japan, were incorporated on 1 May 1951, pursuant to a directive from General Headquarters (GHQ). Each of these nine companies were granted a monopoly over all electricity business (generation, transmission, distribution and retail sectors) in their specific region. Those nine companies were:

- Tokyo Electric Power Company, Inc;
- Chubu Electric Power Company, Inc;
- the Kansai Electric Power Company, Inc;
- Tohoku Electric Power Company, Inc;
- Kyushu Electric Power Company, Inc;
- the Chugoku Electric Power Company, Inc;
- Hokkaido Electric Power Company, Inc;
- Hokuriku Electric Power Company, Inc; and
- Shikoku Electric Power Company, Inc.

In 1972, when Okinawa was returned to Japan from the USA, Okinawa Electric Power Company, Inc was incorporated and granted a monopoly over electricity business in Okinawa.

These nine companies and Okinawa Electric Power Company, Inc are referred to as "major utilities".

There were two exceptions to this vertical integration. They are both wholesale electricity generators: (i) Electric Power Development Co, Ltd (also known as "Denpatsu" or, since 2002, "J-Power"), which was incorporated in 1952 as a state-owned corporation (with 40% of its shares held by major utilities) to supplement the generation capacity of the original nine companies, and (ii) Japan Atomic Power Company, which was incorporated in 1957 to promote the development of nuclear power plants by major utilities and J-Power.

Power industry liberalisation

This vertical integration and the regional monopolies over the generation, transmission, distribution and retail sectors have been gradually relaxed and liberalised since 1995.

In the generation sector, an Independent Power Producer (IPP) scheme was introduced in 1995, which liberalised the generation and wholesale of electricity.

In the retail sector, a Power Producer and Supplier (PPS) licensing regime was introduced in 2000, which partially liberalised retail sales of electricity. A PPS licence holder could sell its generated electricity to large-volume purchasers (meaning purchasers of 50 kW or more). However, the PPS licence scheme was abolished in 2016 when all electricity retailers were folded into a single category for regulatory purposes.

In the transmission and distribution sectors, a Specified Electricity Business operator licence scheme was established in 1995 under which the holder of such licence may sell its generated electricity to consumers in a very limited geographical area through a transmission and distribution network that it operates and maintains on its own in such area. As such, this scheme also dilutes the regional monopolies and vertical integration that were established under the GHQ directive in 1951.

In 2003, an electricity wholesale market, the Japan Electric Power Exchange (JEPX), was established to provide a liquid market of elec-

tricity. In 2004, J-Power was privatised through being listed on the Tokyo Stock Exchange.

Since 2013, the power industry has been undergoing further structural reform that consists of:

- establishing a system to efficiently manage electricity across the transmission networks in Japan;
- full liberalisation of the retail sector; and
- "legal unbundling" of the transmission and distribution sectors from the generation and retail sectors (see **1.6 Recent Material Changes in Law or Regulation**).

Principal Laws

The Electricity Business Act (Act No 170 of 1964, as amended) is the principal law governing electricity business in Japan. Under this Act there are five types of regulated business, as follows.

Electricity Generation Business (hatsuden jigyo)

This is the business to generate and sell electricity to retail sellers and General Electricity Transmission and Distribution Business operators.

General Electricity Transmission and Distribution Business (ippan sohaiden jigyo)

This is the operation and maintenance of an electricity transmission and distribution network. General Electricity Transmission and Distribution Business corresponds to the electricity transmission and distribution segment of the business that each of the major utilities (including their wholly-owned subsidiaries) have conducted and continue to conduct since their inception under their regional monopolies. Those who engage in General Electricity Transmission and Distribution Business are also required to provide ancillary services such as supply-demand adjustment and frequency control in their region.

Electricity Transmission Business (soden jigyo)

This is an exception to the principle of non-separation of transmission and distribution services and is the business to transmit electricity to a General Electricity Transmission and Distribution Business operator through transmission lines that the Electricity Transmission Business operator operates and maintains on its own. Unlike a General Electricity Transmission and Distribution Business operator, an electricity transmission business operator is not responsible for providing the ancillary services as described in the previous paragraph.

Specified Electricity Transmission and Distribution Business (tokutei sohaiden jigyo)

This is a form of electricity business which allows the Specified Electricity Transmission and Distribution Business operator to sell electricity on its own network to consumers within certain limited geographical area.

Retail Electricity Business (kouri denki jigyo)

This is the business that sells electricity to consumers.

1.2 Principal State-Owned or Investor-Owned Entities

All major utilities are investor-owned companies with one exception: Tokyo Electric Power Company Holdings. This major utility has more than 50% of its shares held by the Nuclear Damage Compensation and Decommissioning Facilitation Corporation – this is a quasi-governmental institution having half of its capital funded by the government, established in response to the Fukushima nuclear incident in 2011. All major utilities are listed on a stock exchange in Japan and their stock is freely traded in the market.

Generation

As of the end of April 2021, there are 974 Electricity Generation Business licence holders.

The principal Electricity Generation Business operators are the major utilities or their wholly-owned subsidiaries and J-Power.

Transmission and Distribution

As of October 2020, there are ten General Electricity Transmission and Distribution Business licence holders, three Electricity Transmission Business licence holders and 34 Specified Electricity Transmission and Distribution Business licence holders.

The main transmission and/or distribution network operators are the major utilities or their wholly-owned subsidiaries (and J-Power Transmission Network Co, Ltd).

Retail

Since 1995, Retail Electricity Business has been gradually liberalised. After full liberalisation of the retail electricity market in 2016, the number of Retail Electricity Business licences has grown significantly from 57 in August 2015 to 721 in May 2021. Although most of them are investor-owned companies, there are some retail electricity suppliers owned by municipal governments.

While major utilities or their wholly-owned subsidiaries in aggregate supply most of Japan's electricity, new entrants are expanding their market share in the retail sector. As of December 2020, the share by sales volume of the electricity supplied by the new entrants was approximately 20%.

1.3 Foreign Investment Review Process

The Electricity Business Act does not provide any nationality requirement to obtain an electricity business licence or any restriction with respect to foreigners owning shares in an electricity business licence holder.

However, under the Foreign Exchange and Foreign Trade Act (Act No 228 of 1949, as amended), a foreign investor may not invest in an unlisted power company or own 1% or more of the shares in a listed power company unless the foreign investor gives prior written notice through the Bank of Japan (BOJ) to the Ministry of Finance (MOF) and the Ministry of Economy, Trade and Industry (METI) of the foreign investor's intent to do so or complies with the exemption scheme.

If the foreign investor gives such notice, it may invest only after the required waiting period elapses, assuming the notification is not questioned or objected to by MOF and METI. The required waiting period is usually 30 days but it may be shortened to two weeks or extended up to five months at the discretion of MOF and METI. Also, the waiting period will be shortened to five business days if the investment falls within one of the following categories:

- incorporation of a wholly-owned subsidiary in Japan or acquisition of equity or debt in a wholly-owned subsidiary in Japan, or the opening of a branch in Japan (ie, "greenfield investment");
- acquisition of additional equity in a Japanese company without the foreign investor changing its shareholding in the Japanese company and with no change in the management structure of the Japanese company, within six months from the most recent acquisition of equity in the Japanese company by the foreign investor for which a notification to the Minister was made (ie, "rollover investment"); or
- acquisition of equity or debt in a Japanese company as a passive investor having no voting rights on material management matters regarding the Japanese company (ie, "passive investment").

The exemption scheme is applicable to investments which result in the investor owning less

than 10% of the shares in a listed company that operates in the core sectors and investments which result in the investor owning any shares in a listed or unlisted company that operates in the non-core sectors. With regard to power companies, "core sectors" means General Electricity Transmission and Distribution Business, Electricity Transmission Business and Electricity Generation Business owning a power plant with maximum capacity of 50,000 kW or more; "non-core sectors" are simply those that are not core sectors, as previously defined.

Further, under the Foreign Exchange and Foreign Trade Act, a foreign investor is also required to give prior written notice through BOJ to MOF and METI if it proposes and consents to transfer the company's business or dissolve the company's business, or consents to appoint itself or a closely related person as a director or other material officers required to be appointed at a shareholders meeting.

Notifications in Practice

In practice, most notifications fall within one of the three categories above. For example, in 2015, approximately 90% of the notifications made with respect to investments over which METI held jurisdiction (which includes investments in the energy sector) fell into one of these three categories and thus were cleared within five business days.

If, during the waiting period, MOF or METI decides that the investment may undermine national security, public order or public safety, or adversely affect the national economy, MOF and METI may issue a warning to change the terms of, or cancel, the investment. If the foreign investor does not adequately respond to the warning or the foreign investor expresses an intention to disobey the warning, MOF and METI may issue an order to change the terms of, or cancel, the investment.

At the time of writing, the only examples of a warning to cancel an investment and an order to cancel an investment were those issued by MOF and METI against the Children's Investment Fund in 2008 when it attempted to increase its shareholding in J-Power from 9.9% to 20%.

1.4 Principal Laws Governing the Sale of Power Industry Assets

The Electricity Business Act regulates the sale of an entire business, an amalgamation or merger and a corporate split (collectively "business transfer"), made by an operator of an electricity business.

Under the Electricity Business Act, an operator of an Electricity Generation Business, Specified Electricity Transmission and Distribution Business or Electricity Retail Business may implement a business transfer at its own discretion. However, an operator of a General Electricity Transmission and Distribution Business or an Electricity Transmission Business may not implement a business transfer without the prior written approval of METI, without which the business transfer will be deemed to not take effect.

Further, the Electricity Business Act requires an operator of a General Electricity Transmission and Distribution Business or an Electricity Transmission Business to make a prior written notification to METI if the operator sells or disposes of the facility used to conduct that business. If METI considers that such sale or disposition adversely affects the operation of that business, METI may issue an order to change the terms of or prohibit such sale or disposition.

A person who has acquired facilities used to conduct an electricity business must submit a written notification after the acquisition to METI under the Electricity Business Act.

Nuclear Power Plant and Monopolisation

The Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors (Act No 166 of 1957, as amended) provides that an operator of a nuclear plant may not implement an amalgamation or merger or a corporate split without the prior written approval of the Nuclear Regulation Authority (NRA). In addition, a person who intends to acquire a nuclear power plant must obtain the permission of the NRA before the transfer.

More generally, under the Act on Prohibition of Private Monopolisation and Maintenance of Fair Trade (Act No 54 of 1947, as amended), if a merger, amalgamation, company split or transfer of business substantially restrains competition in a particular field of trade, the Japanese Fair Trade Commission (JFTC) may issue an order forbidding such actions or to change the terms of such actions.

1.5 Central Planning Authority

METI and ANRE

The ministry responsible for energy policy is METI. The Agency for Natural Resources and Energy (ANRE), a government organisation under METI, is in charge of proposing and implementing the energy policies adopted by the government. ANRE also has independent authority to promulgate rules to implement those policies. As such, except for safety regulations, most regulatory aspects of the electricity industry are delegated to ANRE.

OCCTO

As a part of the ongoing reform of the electricity industry, the Organisation for Cross-regional Co-ordination of Transmission Operators (OCCTO) was established in 2015. All licensed operators of electricity businesses must join OCCTO, which has the power to give directions to operators in order to achieve its mission.

While OCCTO has been expanding its mission since its establishment (eg, monitoring the demand and supply of electricity at the country level, operating the capacity market, providing access to the power grid network, managing the FIT surcharge, etc), the fundamental purpose of OCCTO is to co-ordinate the transmission networks in Japan in accordance with the Network Codes (which are issued by OCCTO and approved by METI), so that the transmission networks are integrated and operated, maintained and developed in a consistent manner.

The Network Codes provide the rules on how network operations are to be performed (including the procedures required by a network user in relation to accessing the networks). All electricity business operators, as members of OCCTO, are required to operate their business in accordance with the Network Codes and directions from OCCTO.

EGC

The Electricity and Gas Market Surveillance Commission (EGC) was established on 1 September 2015. EGC's primary mission is to monitor the energy market and propose better regulations to promote competition.

In order to achieve its mission, EGC, as an advisory body to METI, has the power to issue warnings to operators of electricity business and to propose solutions to METI. EGC detects improper trades through daily market surveillance, examines and reviews the rate of transmission and distribution tariffs and regulated retail tariffs set by major utilities, and proposes regulations to promote competition or protect consumers.

1.6 Recent Material Changes in Law or Regulation

As described in **1.1 Principal Laws Governing the Structure and Ownership of the Power Industry**, the vertical integration and regional

monopolies in the generation sector and the retail sector have been gradually relaxed and liberalised since 1995.

Since then, and continuing into 2020, the electricity industry has undergone structural reform in stages that consist of:

- establishing a system to efficiently manage electricity across the transmission networks in Japan;
- full liberalisation of the retail sector; and
- a "legal unbundling" of the transmission and distribution sectors from the generation and retail sectors.

As noted in **1.5 Central Planning Authority**, OCCTO and EGC were established in 2015. Subsequently, the retail sector was fully liberalised in 2016. However, as major utilities and their affiliates have still dominated the market, their existing basic retail tariffs of electricity have continued to be regulated to secure fair competition with other retailers. The regulation is expected to be lifted at such time when the government considers that a sound competitive market has been established.

Legal Unbundling

"Legal unbundling" occurred in April 2020 when new rules were introduced prohibiting an operator of a General Electricity Transmission and Distribution Business – except for Okinawa Electric Power Company, Inc – from operating an Electricity Generation Business (for the purpose of supplying electricity to retailers) or Retail Electricity Business (except for such business in certain isolated Japanese islands).

Under this prohibition, General Electricity Transmission and Distribution Business operators are required to create a separate entity if they also want to conduct Electricity Generation Business or Retail Electricity Business within its group. This new rule aims to secure the impartiality of the major utilities as operators of transmission and distribution networks so that every electricity retailer and electricity generator may be given equal access to their networks under fair and equal conditions.

In order to achieve this goal, new regulations were also promulgated to prevent the transmission and distribution network operators from exercising influence on the operations of their affiliate retailers. See **5.1.3 Terms and Conditions Imposed in Approvals to Construct and Operate Transmission Facilities**.

New Electricity Markets and Offshore Wind Promotion

In order to respond to new entrants' needs after this structural reform, the government has established several new electricity markets:

- the futures market;
- the base-load market;
- the capacity market;
- the balancing market; and
- the non-fossil fuel energy certificates trading market.

In order to promote offshore wind electricity generation in Japan, the Japanese Diet passed the Act for the Promotion of Use of Marine Areas for Development of Marine Renewable Energy Generation Facilities (Act No 89 of 2018, as amended). See **2.1 Structure of the Wholesale Electricity Market** and **3.3 Principal Laws and/or Policies to Encourage the Development of Alternative Energy Sources**.

1.7 Announcements Regarding New Policies

Changes to the Electricity Business Act

In recent years, Japan has suffered a number of natural disasters that damaged stable power supply. In 2018, the Hokkaido Eastern Iburi

earthquake caused the first large-scale blackout in Japan in living memory. In 2018 and 2019, large and powerful typhoons hit the main island of Japan and caused widescale destruction of electricity distribution infrastructure. Faced with these situations, in early 2020 the government submitted a bill to the Diet to amend the Electricity Business Act which became law on 5 June 2020 ("Amendment"). Except for certain limited matters, the Amendment will come into force on 1 April 2022. The Amendment introduces three main changes to the Electricity Business Act:

- enhancement of co-operation amongst electricity companies in the case of emergencies;
- strengthening of the power grid network; and
- establishing a resilient power distribution system.

More specifically, General Electricity Transmission and Distribution Business licence holders will be required to both prepare co-operation plans and establish reserves to cover the costs of dealing with emergencies. OCCTO will be required to prepare power grid network development plans, taking into consideration the potential generation capacity of electricity generation sites as well as mid-term and long-term network formation (ie, "push-type network formation"). In addition, all transmission and distribution business licence holders will be required to replace their facilities in a planned and structured way and transmission and distribution tariff regulations will be changed from full cost base to revenue cap base.

Further, two types of electricity business will be newly regulated: Electricity Distribution Business and Electricity Aggregation Business. The Electricity Distribution Business is the operation and maintenance of a certain portion of the electricity network in the service area of a General Electricity Transmission and Distribution Business operator (Electricity Distribution Business). In order to enhance efficiency of the power system, dispersed power sources in specific regions and power supply resilience, the Amendment allows a general electricity transmission and distribution business operator to transfer or lease a part of its facilities in its service area to a licensed third party (ie, electricity distribution business operator). Local electricity companies, infrastructure companies and IT companies are expected to be Electricity Distribution Business operators. To operate an Electricity Distribution Business requires the approval of METI.

Electricity aggregation business is the aggregation of small power sources including demand response (ie, "DR" – a change in power demand by controlling demand-side resources) and then providing wholesale sales of the aggregated power (Electricity Aggregation Business). While this business is not regulated under the current Electricity Business Act, the Amendment will newly regulate it as this business has much in common with Electricity Generation Business in that the aggregated power is also an important power source for the national power system. An Electricity Aggregation Business operator is required to file a notification with METI.

Changes to the FiT Act

The Amendment also amends the Act on Special Measures Concerning Procurement of Electricity from Renewable Energy Sources by Electricity Utilities. In order to harmonise the renewable energy market with the conventional energy market, the Amendment introduces a feed-in premium regime to complement the existing feed-in tariff regime.

Severely tight supply-demand balance and sharp price spike

In December 2020 and January 2021, Japan experienced a severely tight balance between the supply and demand of electricity. This caused an historic price spike in the JEPX spot market

(the new record of JPY251.0/kWh was set on 15 January 2021, the highest price since JEPX foundation) and also triggered a high imbalance fee (under the current regulations an imbalance fee is determined by the JEPX price). This, in turn, caused a financial crisis for a number of retailers and some are undergoing bankruptcy procedures.

According to a government assessment, the main reasons for this serious situation were a significant increase in the demand for electricity due to severe cold weather and the curtailment of electricity production by LNG power plants arising from an LNG shortage caused by accidents at LNG production plants in LNG-producing countries which decreased the supply of LNG in Japan. The government has also stated that the growing dependence on LNG power plants due to the recent abandonment of many oil power plants, the suspension of nuclear power plants, the expansion of photovoltaic and wind power which have fluctuating supply, and the accidental suspension of coal power plants are further contributing factors.

Learning from these lessons, the government is planning to introduce "preventive measures", "contingency measures" and "structural measures".

As "preventive measures", the government will improve and extend the governmental forecast of supply and demand conditions, prepare guidelines in order for electricity generators to demonstrate good practice in fuel procurement, and promote hedge trading such as forward market, futures market and base-load market (see **2.1 Structure of the Wholesale Electricity Market**).

As "contingency measures", the government will prepare a framework for the relevant parties (ie, electricity companies, OCCTO and the government) to deal with the tight supply and demand balance such as power and fuel interchange, public announcements, as well as emergency communication and instruction. On 17 January 2021 the government set JPY200/kWh as the ceiling price on the imbalance fee which is expected to work as a price limit in the JEPX market (since the imbalance fee is charged when retailers cannot procure sufficient electricity on the JEPX market). On 1 July 2021, the government further changed this to a two-tiered imbalance fee (JPY80/kWh in normal conditions, and JPY200/kWh in emergency conditions). Furthermore, after 2022 the calculation of the imbalance fee will be linked to a balancing market instead of the JEPX market; with regard to the balancing market, see **2.1 Structure of the Wholesale Electricity Market**.

As "structural measures", the government will improve predictability for power plant investments to promote the establishment of new power plants and maximise the existing power grid network. The government also plans to prepare risk management guidelines to explain and demonstrate basic risk assessment methodology and good practices for risk management in the electricity business.

Carbon-neutral target in 2050 and raising the 2030 GHG emissions reduction target

In response to the increased global interest in sustainability and the potential for economic growth, the Japanese Prime Minister declared in October 2020 that Japan would aim for net-zero greenhouse gas (GHG) emissions and seek to become a carbon-neutral society by 2050. Moreover, the Japanese Prime Minister declared at the virtual climate summit held in April 2021 that Japan aims to reduce GHG emissions by 46% from 2013 levels, which is a sharp increase from the previous target of 26%.

In order to achieve these goals, Japan needs to firmly implement concrete measures, while creating a positive cycle that links the economy and environment, including best use of renewable energy power sources, incentive packages for investment in decarbonisation, support for regional and global decarbonisation programmes, and the establishment of a green international financial centre.

The government is discussing a variety of measures including promotion of renewable energy power plants as well as investment and innovation in the power industry. As a part of these measures, on 26 May 2021 the Japanese Diet passed a bill to amend the Act on Promotion of Global Warming Countermeasures which includes achieving carbon neutrality in 2050 as a guiding principle. The amendment will become law in 2022.

1.8 Unique Aspects of the Power Industry

As the vertically integrated major utilities enjoyed a regional monopoly for nearly 50 years, the reality is that these major utilities (and their affiliates) continue to possess the dominant share of the retail market in their region.

Consequently, from the beginning of the liberalisation of the retail sector, the question of how to secure an environment where new entrant electricity retailers can compete with major utility retailers has been an important issue. Among the unique aspects of Japan's power industry is that while the government continues to establish regulations to address that issue, it also requires the major utilities to voluntarily develop solutions to support new entrant retailers. One example of these solutions is that major utilities voluntarily commit themselves to supplying their surplus electricity to JEPX at marginal cost and to perform wholesale transactions without discriminating between their group companies and others.

Other unique characteristics of Japan's power industry include the following:

- the transmission sector and the distribution sector are covered by a single licence (except for Electricity Transmission Business, as defined in **1.1 Principal Laws Governing the Structure and Ownership of the Power Industry**) – this will change on 1 April 2022 as the Amendment creates a new licence for distribution business from that date;
- there is no interconnection with other countries, which means that the electricity demand must be satisfied by electricity generated by power generation facilities in Japan; and
- there are two types of electric frequency in Japan (50 Hz in Eastern Japan and 60 Hz in Western Japan) and thus a frequency conversion facility is necessary to transmit electricity between Eastern and Western Japan.

2. MARKET STRUCTURE, SUPPLY AND PRICING

2.1 Structure of the Wholesale Electricity Market

In Japan, an electricity retailer procures electricity by entering into a power purchase agreement with an electricity generator or through the electricity wholesale markets. JEPX is a main electricity wholesale market in Japan. Trades available in JEPX as wholesale of electricity are:

- spot market trading;
- forward market trading;
- intraday market trading; and
- OTC trading.

Market Trading in JEPX

Spot market trading is trading of electricity supplied on the next day after a trade date, where the minimum trading unit is 30 minutes and 50 kWh, and the trading price is determined through

a "blind and single price auction". Under this auction, wholesale market participants submit a bid for purchasing or selling electricity and the trading price is fixed at the crossing point of all purchasing bids and selling bids.

Forward market trading is trading of electricity supplied for a certain period starting on a day that is three or more days from the trade date, where traded time periods are one week, one month and one year, and orders are continuously executed in strict price and time priority (an order entered into the system at an earlier time must be executed in full before an order at the same price entered at a later time is executed).

Intraday market trading is trading of electricity supplied on a day for which spot trading is closed, where the minimum trading unit is 30 minutes and 50 kWh, and orders are continuously executed in strict price and time priority.

OTC trading is usually employed for trading a small amount of electricity that does not satisfy the thresholds for spot or intraday trading.

New Electricity Markets

In addition to the above, several new electricity markets have opened with the aim of meeting the needs of new entrants after full liberalisation of the retail sector. The base-load market began in July 2019, which is a wholesale market of electricity generated by a nuclear power plant, a traditional large-scale hydro power plant, a coal-fired power plant or a geothermal power plant (also known as "base-load electricity") to electricity retailers. Major utilities and J-Power are required to offer base-load electricity to the base-load market by no less than a certain amount calculated by a prescribed formula to secure retailers' access to base-load electricity for no more than a certain price which is not to be unduly higher than their intra-group price.

The capacity market held its first auction in July 2020. While electricity companies trade in kWh in the wholesale JEPX market, the capacity market auctions the future value of generation capacity in kW. The capacity market is expected to provide predictability to recover certain fixed costs in the generation business in which such fixed costs have been difficult to recover due to the liberalisation of the retail sector (ie, "stranded costs"). If a generator places the successful bid at a capacity market auction it may receive a certain amount of fixed income from OCCTO for four years after the auction, which is funded by a capacity surcharge that OCCTO levies from retailers. As the capacity surcharge became very expensive when the first auction was held in 2020, the government is discussing how to reform the capacity market to reduce the financial burden of the retailers.

In September 2019, a futures market was commenced by Tokyo Commodity Exchange, Inc (TOCOM) which allows buyers to hedge the volatility risk of the JEPX spot market trading price. TOCOM initially operates this futures market for a three-year trial period. The European Energy Exchange (EEX) and New York Mercantile Exchange (NYMEX) also launched a Japanese futures market in May 2020 and February 2021, respectively.

In 2021, a balancing market (also referred to as a real-time market) has started to be operated by the Transmission and Distribution Grid Council (TDGC), which is comprised of General Electricity Transmission and Distribution Business licence holders. Through this market, General Electricity Transmission and Distribution Business licence holders are able to procure control reserves by auction in order to economically and efficiently make supply-demand adjustments and maintain frequency control in their region. This also allows generators and demand response aggregators

to make profits by making use of their balancing functions.

In general, there are no price regulations on wholesale electricity prices. However, as described in **1.7 Announcements Regarding New Policies**, METI has placed a ceiling on the imbalance fee, which in effect functions as a price cap on the JEPX market price. Moreover, in order to secure competition on an equal footing between major utility retailers and other retailers, wholesale trading of electricity by major utilities is monitored so that the price will not be manipulated or unduly expensive.

2.2 Imports and Exports of Electricity

At the time of writing, Japan has no international interconnection. There is no legal restriction against imports and exports of electricity, although in practice this does not occur.

2.3 Supply Mix for the Entire Market

According to ANRE, the supply mix of electricity in 2019 was as follows:

- natural gas – 37.1%;
- coal – 31.9%;
- oil – 6.6%;
- nuclear – 6.2%;
- hydro – 8%;
- solar – 6.7%;
- wind –0.7%;
- biomass – 2.6%; and
- geothermal – 0.3%.

As of the time of writing, Japan's target for the supply mix in 2030 is: natural gas 27%; oil 3%; coal 26%; nuclear 20–22%; hydro 8.8%–9.2%; solar 7.0%; wind 1.7%; biomass 3.7%–4.6%; and geothermal 1.0%–1.1%, which may be revised during 2021.

2.4 Principal Laws Governing Market Concentration Limits

There are no concentration limits in Japan.

2.5 Agency Conducting Surveillance to Detect Anti-competitive Behaviour

Under the Electricity Business Act, EGC has responsibility for market surveillance to secure the soundness and fairness of the electricity market. If any anti-competitive behaviour by an electricity business operator is detected, EGC may give a warning to such electricity business operator to improve its business, and advise the Minister of Economy, Trade and Industry to issue an order to such electricity business operator to improve its business.

In addition, under the Act on Prohibition of Private Monopolisation and Maintenance of Fair Trade, JFTC oversees the power industry. If any anti-competitive behaviour is detected, JFTC has the power to issue an order to any person engaging in anti-competitive practices to take specific actions to eradicate such practice.

3. CLIMATE CHANGE LAWS AND ALTERNATIVE ENERGY

3.1 Principal Climate Change Laws and/or Policies

The Act on Promotion of Global Warming Countermeasures (Act No 117 of 1998, as amended) requires all business operators to endeavour to take actions to reduce greenhouse gas emissions.

Pursuant to the Act, the Japanese government initially adopted a Plan of Global Warming Countermeasures in 2016 under which Japan was to target a 26% reduction in its greenhouse gas emissions below 2013 levels by 2030 and an 80% reduction by 2050. On 31 March 2020

Japan subsequently submitted its Nationally Determined Contributions (NDC) in accordance with the Paris Agreement that refers to the same target for 2030. However, as described in **1.7 Announcements Regarding New Policies**, pursuant to the Japanese Prime Minister's declaration, the Japanese government now aims for a 46% reduction by 2030 and net-zero emissions by 2050.

The Japanese Diet has also passed a bill to amend the Act on Promotion of Global Warming Countermeasures. The amended Act states that achievement of a carbon-neutral society by 2050 is a fundamental principle and obliges Japanese prefectures and large cities to set the carbon reduction targets to promote renewable energy. Under the amended Act, developers of decarbonisation projects such as renewable energy power plant projects will be able to perform all of the relevant permission procedures at a single government authority if the local government certifies that the project complies with the local government's decarbonisation policy.

3.2 Principal Laws and/or Policies Relating to the Early Retirement of Carbon-Based Generation

In Japan, thermal power plants, including coal-fired generators, are still considered an important source of energy and are classified as a "base-load" electricity source, as shown in the 2030 energy mix target (see **2.3 Supply Mix for the Entire Market**). However, in order to reduce the amount of carbon dioxide emissions, the power industry in Japan strives to develop and introduce high-efficiency and low-carbon coal-fired power plants under the Act on Rationalising Energy Use (Act No 49 of 1979, as amended).

As an action taken by the government to facilitate the retirement of aged coal-fired power plants, the government issued a guideline in 2012 under which a simpler and less time-consuming environmental impact assessment procedure will be available to new coal-fired power plant operators if it is confirmed that the new coal-fired power plant will reduce carbon dioxide emissions compared to the old plant. Moreover, in July 2020, METI declared that it will introduce other concrete measures so that inefficient coal-fired power plants will fade out. Such potential measures included the tightening of regulations under the Act on Rationalising Energy Use, reducing potential income from the capacity market and imposing an obligation on certain coal power plant operators to prepare fade-out plans for their inefficient coal power plants to cease power production by 2030. However, after the severely tight balance of supply and demand of electricity in December 2020 and January 2021, how to satisfy both a stable supply of electricity and the retirement of inefficient coal power plants has become an issue (see **1.7 Announcements Regarding New Policies**).

3.3 Principal Laws and/or Policies to Encourage the Development of Alternative Energy Sources

The Act on the Promotion of Use of Non-fossil Energy Sources and Effective Use of Fossil Energy Materials by Energy Suppliers (Act No 72 of 2009, as amended, the "Promotion Act") was promulgated in recognition of the importance of developing non-fossil energy sources.

Pursuant to the Promotion Act, the government published a basic policy outlining its goals for non-fossil fuel development. Under the policy, the government targets increasing the share of non-fossil energy sources to 44% by 2030, and electricity suppliers of 500,000 MWh or more are required to prepare and submit an implementation plan to achieve such target and a progress report every year.

The FiT Regime

In furtherance of achieving this target, the Act on Special Measures Concerning Procurement of Electricity from Renewable Energy Sources by Electricity Utilities (Act No 108 of 2011, as amended, the "FiT Act") was promulgated in 2011, and a corresponding feed-in tariff regime ("FiT Regime") was introduced in 2012. The FiT Act encourages the development of alternative energy sources by offering a very generous feed-in tariff to renewable energy generators.

Under the FiT Act, renewable energy that meets the statutory and regulatory requirements is sold at a fixed price for a specified number of years (20 years, in many cases) to transmission and distribution network operators, and transmission and distribution network operators are not allowed to refuse to purchase such renewable energy, with very limited exceptions. Moreover, under the FiT Regime, renewable energy generators do not have an obligation to supply energy (it is a right of renewable energy generators to supply energy) and are exempted from imbalance risks.

The renewable energy that can benefit from the FiT Regime is electricity generated by solar, wind, hydro, geothermal or biomass methods.

In order to promote investment in renewable energy, the feed-in tariff – ie, the price of renewable energy – is set at a rate generally higher than the market rate and any additional cost incurred by transmission and distribution network operators in relation to the purchase of the renewable energy is transferred to and assumed by consumers through a surcharge. Electricity retailers are required to transfer such surcharge amount to the Green Investment Promotion Organisation (GIO), and GIO pools these funds. GIO then distributes those pooled funds to the purchasers of energy sold in the FiT regime so that additional costs incurred by those purchasers will be compensated. OCCTO is scheduled to succeed to this role of GIO in April 2022.

The FiP Regime

In order to improve the FiT regime and harmonise it with the conventional energy market, the Amendment introduces, with effect from 1 April 2022, the feed-in premium regime ("FiP Regime"). The FiP Regime will grant to renewable energy generators the balance obtained from subtracting the reference market rate price of supplied electricity from a fixed rate (which will generally be set at higher than the market rate), assuming that the generators will sell their electricity to the market. Under the FiP Regime, renewable energy generators will need to consider the volatility risks of the market price and the off-taker risks of the energy they generate to a certain extent. Moreover, under the FiP Regime, as with conventional power plants operators, renewable energy generators will need to manage their imbalance risks.

The Non-Fossil Fuel Energy Certificate Trading Market

As an additional measure to achieve the non-fossil energy source target, another new market was established in May 2018: the non-fossil fuel energy certificates trading market. In this market, each non-fossil fuel energy certificate represents an amount of non-fossil fuel energy as specified under the Promotion Act and has a corresponding CO_2 emissions reduction value under the Act on Promotion of Global Warming Countermeasures. Against the background that retail electricity suppliers are obligated under the Promotion Act to target 44% or more of their electricity supply coming from non-fossil fuel energy by 2030, the non-fossil fuel energy certificates and this market are expected to encourage retail electricity suppliers to achieve that target and the transactions in this market have actually been expanding. In addition, as retail electricity suppliers may deduct the amount of CO_2 represent-

ed by the certificates from their CO_2 emissions, they can promote themselves as a CO_2-neutral supplier by purchasing the certificates.

From a consumer's perspective, those who purchase electricity from such CO_2-neutral supplier may claim that they purchase CO_2-neutral electricity for the purposes of the Act on Promotion of Global Warming Countermeasures. Also, under growing global initiatives such as the Carbon Disclosure Project (CDP), Science Based Target (SBT) and RE100, those who purchase electricity from a supplier with a non-fossil fuel energy certificate derived from renewable energy may claim that they purchased renewable energy sourced electricity. From a non-fossil fuel power producer's perspective, they may earn additional income by selling the certificate. This new market is expected to incentivise the development of non-fossil energy sources.

Further Promotions

To further promote the development of renewable energy, under the Network Codes curtailment rule, renewable energy power plants are prioritised over fossil fuel power plants in that renewable energy power plants are curtailed only after fossil fuel power plants have reached their curtailment limit. Also, the government has introduced a reduced rate of property tax for certain qualified renewable energy facilities for three years commencing from the date when such facilities become taxable.

4. GENERATION

4.1 Principal Laws Governing the Construction and Operation of Generation Facilities

The principal laws governing the construction and operation of electricity generation are:

- the Electricity Business Act;
- the Environmental Impact Assessment Act (Act No 81 of 1997, as amended);
- the Act on Rationalising Energy Use; and
- the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors.

4.2 Regulatory Process for Obtaining All Approvals to Construct and Operate Generation Facilities

Electricity Business Act

Unless the electricity capacity is below 10 MW, any person who intends to generate electricity for sale must first submit to OCCTO an application for OCCTO membership. Next, under the Electricity Business Act, that person must submit to METI a notification form containing certain prescribed information such as the location of the generation facility and its power source.

Operators are also generally required to file a construction plan of the generation facility with METI no less than 30 days prior to commencing construction if the intended electricity production capacity of the facility is over a prescribed level or the intended facility meets certain specifications.

The generation facility must also pass a pre-use inspection conducted by METI before it starts commercial operation.

Environmental Impact Assessment Act

The operator must perform an environmental impact assessment in accordance with the Environmental Impact Assessment Act whenever the operator intends to construct a generation facility that falls within a prescribed category. Preparation of the environmental impact statement requires the following steps. (Some regional governments also have their own additional environmental impact assessment process for the construction of certain prescribed generation facilities.)

Consideration statement
The operator prepares a statement on the environmental impact that the operator expects the construction to have and submits it to METI for review. The operator is expected (but not obliged) to publish it to seek feedback from the public.

Scoping statement
Based on the consideration statement, as revised to reflect METI's comments and public feedback (if any), the operator prepares a statement defining the scope and methodology of the environmental impact assessment that the operator proposes to implement, submits it to METI and the relevant local government for review and publishes it to seek feedback from the public.

Environmental impact assessment
Based on the scoping statement, as revised to reflect the comments of METI, the relevant local government and public feedback (if any), the operator performs the environmental impact assessment.

Draft environmental impact statement
Based on the completed environmental impact assessment, the operator prepares a draft of the environmental impact statement, submits it to METI and the relevant local government for review and publishes it to seek feedback from the public.

Environmental impact statement
Taking into account the comments from METI, the relevant local government and public feedback (if any), the operator prepares an environmental impact statement, submits it to METI for review and, based on METI's feedback (if any), finalises the environmental impact statement, submits it to the relevant local government and publishes it. METI has authority to issue an order to further revise the environmental impact statement if it thinks revision is necessary to ensure due consideration of environmental impact.

Act on Rationalising Energy Use
With respect to the construction of thermal power plants with a fossil fuel energy source, the Act on Rationalising Energy Use requires the operator to endeavour to ensure that the thermal power plant satisfies the standards of power generation efficiency stated in this Act and its related regulations.

Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors
Under the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors, the operator may not install a nuclear reactor without obtaining permission from NRA and approval of the nuclear reactor construction plan from NRA. Further approval from METI for the construction plan of a nuclear reactor is required under the Electricity Business Act.

Other
Additional national or local permits may be required to construct or operate an electricity generation facility depending on its location.

4.3 Terms and Conditions Imposed in Approvals to Construct and Operate Generation Facilities
In addition to the requirements to obtain construction and operation approvals as summarised in **4.2 Regulatory Process for Obtaining All Approvals to Construct and Operate Generation Facilities**, an operator of an Electricity Generation Business is, in particular, obliged to do the following, pursuant to the Electricity Business Act and its secondary regulations:

- supply electricity, as directed by the transmission and distribution network operators to balance the demand and supply of electricity within the network;

- supply electricity in accordance with any orders that METI may issue in the case of an emergency (such orders have never been issued to date);
- prepare and submit a supply plan to OCCTO;
- submit its financial statements to METI;
- submit a report on its performance and operation results to METI; and
- comply with the Network Codes of OCCTO.

4.4 Proponent's Eminent Domain, Condemnation or Expropriation Rights

The Expropriation of Land Act (Act No 219 of 1951, as amended) empowers an operator of electricity business under the Electricity Business Act to expropriate a piece of land for its business in exchange for paying just compensation to the land right-holder, following the procedures set out in the Electricity Business Act.

In order to expropriate land, the operator must first obtain approval from the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and/or the relevant local government, as the case may be, on any undertaking that necessitates expropriation. After obtaining such approval, the operator files for expropriation with the Expropriation Committee of MLIT, which will grant to the operator an award of expropriation unless the undertaking is found to be materially different or materially differently implemented than as explained to MLIT and/or the relevant local government.

4.5 Requirements for Decommissioning

If an operator of an Electricity Generation Business intends to suspend or terminate the whole or a part of its generation business, it must submit a notification to METI in advance. In addition, if the operator decommissions a generation facility that has an installed capacity of 100 MW or more, such operator must also submit a notification in advance to OCCTO in accordance with the Network Codes.

With respect to a nuclear power plant, the operator must prepare a decommissioning plan and obtain approval from NRA for the plan under the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors.

Further, in response to public concern about illegal abandonment of solar power plant facilities, under the Amendment operators will be required to establish a mandatory reserve to cover decommissioning costs.

5. TRANSMISSION

5.1 Regulation of Construction and Operation of Transmission Lines and Associated Facilities

5.1.1 Principal Laws Governing the Construction and Operation of Transmission Facilities

The Electricity Business Act governs the licensing arrangements for the construction and operation of transmission and distribution networks, as well as the procedures for the construction of such networks and associated facilities.

In general, METI controls the development of transmission and distribution networks by requiring General Electricity Transmission and Distribution Business operators and Electricity Transmission Business operators to submit a development plan of their major network assets (major transmission lines and transformer stations) for the forthcoming ten years. With respect to individual construction work, the operator is required to file a construction plan with METI no less than 30 days prior to commencement of the work if it involves the construction of a transmission line or transformer substation of 170 kV (in some cases, 100 kV) or more. Such transmission lines or transformer substations must pass a pre-use investigation conducted by METI.

5.1.2 Regulatory Process for Obtaining Approvals to Construct and Operate Transmission Facilities

Notwithstanding the general trend and significant government activity towards liberalisation of the electricity market since 1995, the transmission and distribution network sector has seen the least structural change and on an organisational level remains largely unaltered. The ten major utilities continue their regional monopolies in their respective service areas for this sector. As METI's position is to maintain these regional monopolies for the transmission and distribution sector, it is unlikely that METI would issue a new licence to conduct General Electricity Transmission and Distribution Business to any person.

There are, however, two exceptions to this monopoly (a further exception will be added on 1 April 2022 as the Amendment creates a new licence for the distribution business from that date).

Electricity Transmission Business Licence Holders

When the current licence regime was introduced, J-Power was the only electricity transmission business licence holder. At the time of writing, two more operators have obtained an Electricity Transmission Business licence. They are expected to supplement the transmission services conducted by the operators of General Electricity Transmission and Distribution Businesses within the respective monopoly regions of those operators by constructing transmission lines in areas that the existing transmission network does not cover and will not cover in the near future. To operate an Electricity Transmission Business requires the approval of METI.

Specified Electricity Transmission and Distribution Business Licence Holders

The transmission and distribution networks of Specified Electricity Transmission and Distribution Businesses have been constructed to serve consumers within a limited geographical area. As such, these networks are more akin to distribution networks than transmission networks in respect of length and capacity. As the impact that such networks may have on the transmission and distribution networks of General Electricity Transmission and Distribution Businesses is insignificant, Specified Electricity Transmission and Distribution Businesses can be conducted with notification to METI of the services to be provided such as geographical area of service, layout of transmission and distribution lines, and the specifications thereof.

5.1.3 Terms and Conditions Imposed in Approvals to Construct and Operate Transmission Facilities

An operator of a General Electricity Transmission and Distribution Business is obliged to perform the following pursuant to the Electricity Business Act and its secondary regulations. These obligations became more stringent after the legal unbundling in 2020:

- accept access to its transmission and distribution networks located within its service area, and apply the terms and conditions (approved by METI) to all electricity business operators equally;
- provide last-resort services and electricity retail services in isolated islands within its service area;
- their directors cannot assume an office of its parent holding company or any of its affiliates that operate a Retail Electricity Business or an Electricity Generation Business (such parent holding company and affiliates being "interested parties");
- not to trade with interested parties except where permitted under the secondary regulations;
- not to use proprietary information of electricity business operators or consumers for

purposes other than its transmission and distribution business;
- not to engage in discriminatory treatment;
- install an appropriate information protection;
- endeavour to maintain the voltage and frequency of the electricity in its service area at the prescribed level;
- measure and record the voltage and frequency of the electricity in its service area;
- submit its financial statements to METI;
- submit its segmental financial statements regarding its transmission and distribution services to METI;
- submit to METI a report concerning the occurrence of any imbalance in its transmission and distribution network;
- join OCCTO;
- prepare and submit a supply plan to OCCTO; and
- comply with the Network Codes of OCCTO.

5.1.4 Proponent's Eminent Domain, Condemnation or Expropriation Rights

See **4.4 Proponent's Eminent Domain, Condemnation or Expropriation Rights**.

5.1.5 Transmission Service Monopoly Rights

Each General Electricity Transmission and Distribution Business operator is assigned a regional service area and is granted de facto exclusivity within such service area by METI since METI does not grant two General Electricity Transmission and Distribution Business licences in relation to any service area. Electricity Transmission Business licences and Specified Electricity Transmission and Distribution Business licences are exceptions to these monopoly arrangements as described in **5.1.2 Regulatory Process for Obtaining Approvals to Construct and Operate Transmission Facilities**. (Further, one more exception will be added on 1 April 2022 as the Amendment creates a new licence for the distribution business from that date.)

5.2 Regulation of Transmission Service, Charges and Terms of Service

5.2.1 Principal Laws Governing the Provision of Transmission Service, Regulation of Transmission Charges and Terms of Service

Pursuant to the Electricity Business Act, the terms and conditions of transmission and distribution services need to be approved by METI. The matters to be described in the terms and conditions and the methodology to compute service charges are set out in the regulations listed below:

- executive rules of the Electricity Business Act (*denkijigyoho shikokisoku*);
- rules on the methodology to compute tariffs for transmission and distribution services (*ippan sohaiden jigyo takusokyokyutoyakkan ryokin santei kisoku*);
- rules on the methodology to balance income and loss from transmission and distribution services (*denkijigyo takusokyokyuto shushi-keisan kisoku*).

5.2.2 Establishment of Transmission Charges and Terms of Service

Tariff rates and the terms and conditions of transmission and distribution services are first proposed by the General Electricity Transmission and Distribution Business operator and then fixed upon the approval of METI based on the advice of EGC. METI's standard review period is four months.

The terms and conditions of services are reviewed to see if the following requirements are satisfied:

- the tariff rate is the sum of the efficient cost of services plus a fair profit margin, with the assumption that the business is operated in an efficient manner;

- the terms and conditions do not significantly undermine accessibility to the transmission and distribution services;
- the method of computing the tariff is clearly and fairly stated;
- the allocation of responsibility as well as cost sharing between the General Electricity Transmission and Distribution Business operator and users of the transmission and distribution network are clearly and fairly stated;
- the terms and conditions do not discriminate against any specific person; and
- the terms and conditions do not hinder public interest.

At the time of writing, the tariff rate is computed based on the fully distributed cost method. Under this method the tariff is determined such that projected revenues of the tariff for the forthcoming three years will balance with the sum of: (i) the efficient and necessary costs (including depreciation cost and capacity charges for balancing power supply) of providing services for the forthcoming three years; and (ii) the capital costs of the forthcoming three years.

Under the Amendment, the method of determining the tariff rate will be changed to a "revenue-cap" method (the date of this change is yet to be determined but it is scheduled to take effect sometime in the 2023 fiscal year). After this change, METI and EGC will review only the total revenues of wheeling charges, instead of its breakdown. It is believed that this will incentivise General Electricity Transmission and Distribution Business operators to reduce costs for transmission and distribution services.

Further, while the tariff rate is currently only charged to the demand-side (ie, retailers), METI has decided that it will introduce a generation-side tariff in order to incentivise generators to select its power plant site in a location beneficial to effective power grid operation and formation. METI currently aims to introduce the generation-side tariff from the 2023 fiscal year.

5.2.3 Open-Access Transmission Service

Pursuant to the Electricity Business Act, General Electricity Transmission and Distribution Business operators are obliged to provide access to their transmission and distribution network on a non-discriminatory basis.

6. DISTRIBUTION

6.1 Regulation of Construction and Operation of Electricity Distribution Facilities

6.1.1 Principal Laws Governing the Construction and Operation of Electricity Distribution Facilities

See **5.1.1 Principal Laws Governing the Construction and Operation of Transmission Facilities**.

6.1.2 Regulatory Process for Obtaining Approvals to Construct and Operate Distribution Facilities

See **5.1.2 Regulatory Process for Obtaining Approvals to Construct and Operate Transmission Facilities**.

6.1.3 Terms and Conditions Imposed in Approvals to Construct and Operate

See **5.1.3 Terms and Conditions Imposed in Approvals to Construct and Operate Transmission Facilities**.

6.1.4 Proponent's Eminent Domain, Condemnation or Expropriation Rights

See **4.4 Proponent's Eminent Domain, Condemnation or Expropriation Rights**.

6.1.5 Distribution Service Monopoly Rights

See **5.1.5 Transmission Service Monopoly Rights**.

6.2 Regulation of Distribution Service, Charges and Terms of Service

6.2.1 Principal Laws Governing the Provision of Distribution Service, Regulation of Distribution Charges and Terms of Service

See **5.2.1 Principal Laws Governing the Provision of Transmission Service, Regulation of Transmission Charges and Terms of Service**.

6.2.2 Establishment of Distribution Charges and Terms of Service

See **5.2.2 Establishment of Transmission Charges and Terms of Service**.

Nagashima Ohno & Tsunematsu is one of the foremost providers of international and commercial legal services based in Tokyo. The firm has over 498 lawyers, including over 43 experienced foreign attorneys from various jurisdictions (as of April 2021). Its overseas network includes offices in New York, Singapore, Bangkok, Ho Chi Minh City, Hanoi and Shanghai, and collaborative relationships with prominent local law firms throughout Asia, Europe, North and South America and other regions. The firm regularly advises leading power utilities, trading companies and investors on their energy projects, including all associated regulatory matters, as well as financial institutions on financing for these projects. The firm has dealt with a number of renewable power projects since the introduction of the feed-in tariff in Japan. The firm represented Tokyo Electric Power Company Group on establishing an alliance platform with Chubu Electric Power Co, Ltd in the fuel and power business (including establishment of the joint venture company JERA to operate the alliance).

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