



ORIX Environmental Resources Management to Construct Japan's Largest Dry Biogas Power Generation Facility

TOKYO, Japan - September 19, 2019 - ORIX Environmental Resources Management Corporation ("OERM") announced today that it will construct a dry biogas power generation facility in Yorii, Saitama Prefecture. It will use general waste for fuel and have a capacity of 1.6 megawatts, making it the largest facility of its kind in Japan^{*1}. Construction work is scheduled to start in January 2020 and finish in autumn 2021, with operations set to commence shortly after. This will be the first dry methane fermentation biogas power generation facility in the Kanto region.

In this renewable energy power generation facility, general waste such as food and paper waste will be fermented using methanogens to generate biogas, which will then be used to fuel power generation. Wet methane fermentation technologies are now widely used in biogas power generation facilities, but they are suited to processing organic matter with high moisture content, such as livestock excrement and food leftovers. In contrast, the Yorii facility will use dry methane fermentation technologies, which are capable of extracting biogas in a highly efficient manner from organic matter with low moisture content—which had previously been difficult to process. Dry biogas power generation facilities make it possible for food retailers and restaurants, which generate waste containing foreign matter such as paper and plastic, to recycle food and non-food waste without having to separate them.

The Food Recycling Law has set goals for the reduction and reuse of food waste in each industry. According to results for fiscal 2014 announced by the Ministry of the Environment, it was relatively easy for the food manufacturing industry to discharge pure food waste; as a result, the industry's food waste was increasingly re-used as fertilizers and feed, with 95 percent of its food waste now being recycled. On the other hand, the difficulties presented by waste separation in the restaurant industry has meant that little of its food waste is sent for processing either in wet methane fertilization facilities, or in facilities that turn food waste into fertilizer and feed; indeed, it is a problem that not much more than 20 percent of the industry's food waste is recycled. When it enters operation, the Yorii facility will help increase the percentage of food waste recycled by downstream businesses, even in food industries.

Since 2006, OERM and Saitama Prefecture have jointly operated a zero-emission^{*2} advanced waste processing facility at the Sainokuni Resource Circulation Plant in Yorii, Saitama Prefecture. The facility, which is run as a Private Finance Initiative (PFI), uses cutting-edge thermal decomposition and gasification and reforming methods, and is capable of processing 450 tons of waste per day, making it one of the largest private-sector facilities of its kind in Japan. The dry biogas power generation facility is scheduled to be constructed in Yorii's Second Stage Business District, which is situated close to the Sainokuni Resource Circulation Plant. OERM intends to use the knowhow and networks it has cultivated via the operation of its own facilities and manage the facility in an integrated manner.

The ORIX Group is also actively expanding its power generation business, which makes use of renewable energy sources such as solar, geothermal, wind, and biomass. Its solar power generation business develops and operates power plants with a total capacity of approximately 1,000 megawatts^{*3}, while its geothermal and wind power generation businesses are in the process of developing multiple plants across Japan. The Group also operates the Agatsuma Biomass Power Plant, a wood chip-fired thermal power plant, in Gunma Prefecture. Using the knowledge it has accumulated thus far, the ORIX Group will continue to contribute to the spread of renewable energies.

*¹ According to in-house research.

*² A facility that achieves 100% recycling by recycling melted solids, metals and other generated matter such that it does not rely on final disposal sites.

*³ As of March 31, 2019, including facilities currently under construction

■ Business overview

Planned site	Second Stage Business District, Sainokuni Resource Circulation Plant, Saitama Prefecture Environmental Management Center
Maximum processing capacity	100 tons per day
Generation capacity	1,600 kW
Annual power generation	Approximately 9,800,000 kWh Equivalent to the annual power consumption of approximately 3,140 households* ⁴
Start of construction	January 2020 (planned)
Start of operations	Autumn 2021 (planned)

*⁴ Calculation based on consumption of 3,120 kWh per year per household; Source: *Electricity Rate of the Average Model*, Tokyo Electric Power Company Holdings, Incorporated.

■ Image of the completed facility



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About ORIX:

ORIX Corporation (TSE: 8591; NYSE: IX) is a financial services group which provides innovative products and services to its customers by constantly pursuing new businesses.

Established in 1964, from its start in the leasing business, ORIX has advanced into neighboring fields and at present has expanded into lending, investment, life insurance, banking, asset management, automobile related, real estate and environment and energy related businesses. Since entering Hong Kong in 1971, ORIX has spread its businesses globally by establishing locations in 37 countries and regions across the world.

Going forward, ORIX intends to utilize its strengths and expertise, which generate new value, to establish an independent ORIX business model that continues to evolve perpetually. In this way, ORIX will engage in business activities that instill vitality in its companies and workforce, and thereby contribute to society. For more details, please visit our website: <https://www.orix.co.jp/grp/en/>
(As of March 31, 2019)

Caution Concerning Forward Looking Statements:

These documents May contain forward-looking statements about expected future events and financial results that involve risks and uncertainties. Such statements are based on our current expectations and are subject to uncertainties and risks that could cause actual results that differ materially from those described in the forward-looking statements. Factors that could cause such a difference include, but are not limited to, those described under “Risk Factors” in the Company’s annual report on Form 20-F filed with the United States Securities and Exchange Commission and under “(4) Risk Factors” of the “1. Summary of Consolidated Financial Results” of the “Consolidated Financial Results April 1, 2018 – March 31, 2019.”