



Visualization of power generation efficiency and productivity for power plants Launch of report service for mega solar power plants

TOKYO, Japan - March 11, 2022 - ORIX Renewable Energy Management Corporation (“OREM”) announced that it will commence a turnaround support service, evaluating and analyzing the operational status of large-scale (mega) solar power plants from a third-party perspective and proposing effective management strategies.

As the movement toward decarbonization accelerates, the development of new mega solar power plants is faced with the challenge of securing new installation capacity due to the limited availability of suitable sites^{*1}. In contrast, interest in mega solar power plants is increasing among investors and others, and sales transactions in the secondary market are increasing^{*2}.

At power generation facilities where OREM has carried out its solar diagnostic services—covering a total of approximately 2 GWp—the average yearly deterioration rate has been approximately 1%, which is short of the guaranteed panel output provided by panel manufacturers (deterioration rate of 0.5% per year). In addition, the number of accidents at power generation facilities, such as inadequate safety systems, is increasing year by year^{*3}, and unless proper operation and maintenance is carried out, there is a risk of the future value of solar energy being impaired.

The turnaround support service combines fieldwork conducted by highly experienced engineers with data analysis using artificial intelligence (AI) and other state-of-the-art digital technologies to provide reports on management strategies for maximizing electricity sales revenue. The reports identify the cost effectiveness of operation and maintenance (O&M) and specific measures to prevent reductions in the performance of power generation facilities and minimize failure risks.

Cash flow projections associated with the sale of electricity are also evaluated and analyzed. Investors considering purchasing an operating power plant will be able to clearly ascertain actual and potential risks and potential involved in mega solar power plants.

Since its establishment in 2018, OREM has provided O&M for 84 mega solar power plants operated by ORIX Group, with a total power generation capacity of 436 MW, and since 2021, it has also been contracted to provide external services^{*4}. By conducting O&M using AI and other advanced digital technologies, OREM is maximizing power generation, including improving PR value^{*5} by more than 4% in the first year of starting a contract. OREM is contributing to promoting the uptake of renewable energies by assessing conditions at each power plant and achieving highly efficient operations through optimal O&M.

ORIX Group will continue to expand its renewable energy power generation and asset management businesses, with the goal of growing the uptake of renewable energies worldwide.

*1 According to “Reference Materials for Hearing,” Ministry of Economy, Trade and Industry

*2 According to “Solar PV Power Plant Secondary Market in Japan: Key Research Findings,” Yano Research Institute

Report contents

- Discriminant analysis using OREM's big data
- Document preparation status
- Field assessment
- Recommended asset management plan
- Revenue simulation with stronger asset management

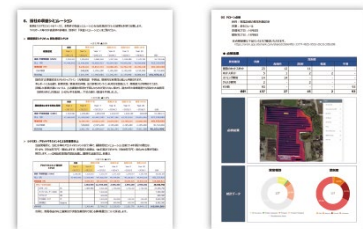


Figure: Main contents of report

- *3 According to the Outline of “Current Initiatives for Institutionalization and Important Issues for the Future in the Field of Industrial Safety,” Ministry of Economy, Trade and Industry
- *4 [“ORIX Group subsidiary OREM to Launch Solar Power Plant O&M Service Fusing AI and Other Digital Technologies” \(May 12, 2021\)](#)
- *5 Performance ratio refers to the percentage of solar energy that is converted to electricity. It is a standard index in the industry that quantifies the productivity of a power plant, and excludes external factors such as solar radiation volumes and system controls.

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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 28 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 September 30, 2021)

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, 2020 – March 31, 2021.”