

“We have been able to make a significant contribution toward creating a green society by engaging in a verification project with Fujitsu and implementing ICT infrastructure to remotely monitor solar installations dotted throughout the country.”

Shigeru Ashida, Executive Director
Leopalace21 Corporation

FUJITSU Venus Solar monitors the management and maintenance needs, as well the operational status of solar panels, to improve efficiency and identify issues.

At a glance

Country: Japan
Industry: Real Estate
Founded: 1973
Employees: 5,780
Website: www.leopalace21.com

Challenge

Leopalace21 is committed to deploying mega-solar power generation systems across its wide property portfolio. However, for many tenants, the upfront installation cost was daunting and it was difficult to accurately monitor performance.

Solution

Together with Fujitsu, the company devised a 'roof-lease' concept, which removed the need for initial investment, while deploying FUJITSU Venus Solar to remotely monitor performance and efficiency.

Benefit

- Apartment owners and tenants can earn extra money by selling excess energy back to utility companies
- Remote monitoring system improves efficiency of operations
- Monitoring service leads to stable business
- Promotes the deployment of renewable energy

Customer

Leopalace21 is a leading Japanese real estate leasing firm, which builds condominiums and apartment blocks, then bulk-leases and manages each building on completion. The company is also engaged in leasing individual apartments to tenants throughout Japan and has recently begun to actively pursue opportunities overseas, establishing local offices in Southeast Asia, including Thailand, Vietnam, and the Philippines.

Products and services

■ FUJITSU Venus Solar



Challenge

Leopalace21 uses the rooftops of some of its leased apartments as 'power plants' to harvest solar power as a source of eco-friendly renewable energy. As of September 2015, the company has installed PV systems on the rooftops of 4,500 apartment buildings, with a total generating capacity of 70 Megawatts.

However, installing PV systems was not as attractive to apartment owners as the company had hoped. Some were already receiving stable rental income and were not necessarily keen to invest extra funds for the installation of power generating facilities. Furthermore, even with the consent of owners, no substantial operation and maintenance service existed to cater for small-to-medium scale apartment rooftop installations.

"The breakthrough came when a Fujitsu employee, who happened to be living in an apartment managed by our company, devised the 'roof-lease' idea, which entails leasing roof space from apartment owners in order to generate power," explains Shigeru Ashida, Executive Director, Leopalace21 Corporation.

Solution

The business model jointly developed by Leopalace21 and Fujitsu was launched as a pilot project in 70 apartments in Fukushima Prefecture. The project was designed to help staff acquire expertise in using technology to bring together small-to-medium scale PV systems installed on disparate rooftops and run them as a virtual mega-solar power generation system. At the same time, the project confirmed that the 'roof-lease' model is conducive to reducing the environmental footprint.

Fujitsu provides the infrastructure support as well as a remote PV monitoring solution, known as Venus Solar. This was developed by Fujitsu based on its understanding of Leopalace21's needs, the experience accumulated through many years of remote monitoring and control of plants and buildings, and the knowledge acquired through the Fukushima Prefecture Pilot Project.

Building on the pilot's results, Leopalace21 launched its roof mega-solar project nationwide. The group company established to drive this initiative has so far installed 4,500 PV systems over three years, increasing year-on-year the amount of power generated and sold.

Each apartment complex has four or five power conditioners for PV power generation, and the power output by each is collected at

one-minute intervals for monitoring at a data center. FUJITSU Venus Solar remotely records the management and maintenance needs as well as monitoring the operational status of solar systems.

Benefit

Now, apartment owners can earn extra income by selling energy back to the major utilities without having to bear the upfront investment costs of solar installation. In addition, the cooperation of multiple apartment owners in each venture promotes the deployment of renewable energy, bringing Japan a step closer to a green future.

"We have been able to make a significant contribution toward creating a green society by engaging in this verification project with Fujitsu and implementing the ICT infrastructure to remotely monitor solar installations dotted throughout the country," adds Ashida.

Meanwhile, Fujitsu's remote monitoring system improves the efficiency of these mega-solar operations by identifying the cause of any drop in output, thereby ensuring that every opportunity to generate power is harnessed and issues can be quickly resolved.

"We are now able to accurately monitor the status of each facility's power generation throughout Japan from the data center and we can see whether any drop in output is due to changes in weather, shadows cast by surrounding buildings, or technical problems," says Ashida. "Because identical equipment is installed on the apartment building rooftops, if there are noticeable differences in the power delivered by each power conditioner, we are able to conclude that it is most likely caused by a technical fault."

In describing the results produced by the detailed monitoring service provided by FUJITSU Venus Solar, Mr. Ashida continues, "The monitoring service leads to stable business income because it guards against the loss of energy generation opportunities caused by system failures."

Leopalace21 is continuing to accelerate its program of initiatives that contribute to society. For example, the company is considering public disclosure of energy production figures from its rooftop mega-solar installations. This will allow apartment owners who are considering installing solar PV to gain an accurate understanding of the generating capacity and economic viability of solar system.

Mr. Ashida concludes, "We ask Fujitsu to provide ongoing support and look forward to further innovative proposals for our next new project."

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Contact a representative at: +81-3-6252-2220

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