



Agile Energy X, Inc. Launches Demonstration of Effective Utilization of Renewable Energy through "Solar-Power-Tracking Containerized Data Center"

December 6, 2023
Agile Energy X, Inc.

Agile Energy X, Inc., a 100% subsidiary of TEPCO Power Grid, Inc., is a "Solutions Integrator" that solves energy-related social issues by creating digital values and environmental values from electric power through the integration of advanced technologies centered around distributed computing.

Agile Energy X has built a container-type data center in Showa-mura, Gunma Prefecture in Japan, that tracks and runs on renewable energy, and started operation in August 2023.

Through this project, Agile Energy X aims to establish a solution that contributes to avoiding interconnection delays of renewable energy due to grid congestion and opportunity cost caused by curtailment.

Agile Energy X is committed to developing innovative solutions that would help make renewable energy one of the main sources of power generation in Japan.

■ **Realization of a distributed energy resource capable of tracking variable renewable energy, contributing to mitigation of interconnection delays and curtailment of renewable energy.**

Agile Energy X focused on "Bitcoin Mining," a type of distributed computing, as one of the most effective distributed energy resources (DER) capable of flexibly creating power demand, that can contribute to mitigating interconnection delays and curtailment of renewable energy.

This is a solution based on reverse thinking—taking advantage of the characteristics of bitcoin mining that consumes a lot of power executing cryptographic calculations in order to create digital value—enabling maximum use of "wasted" renewable energy. Agile Energy X built a containerized data center with an Adaptive Mining Control system onsite of a new solar power station in Showa-mura, Gunma Prefecture, built by TEPCO Renewable Power, Inc. (TEPCO RP, a 100% subsidiary of Tokyo Electric Power Company Holdings, Inc.)

The system monitors the amount of PV power generation, which changes from moment to moment throughout the day, in real time, and remotely and automatically controls the number of active bitcoin mining devices (load capacity) in accordance with

the amount of power generated, making it possible to use all of the PV power for in-house consumption without reverse power flow into the grid.

The development and installation of this data center facility was made possible with the technical cooperation of TRIPLE-1, Inc., a Japanese startup that specializes in the development of advanced semiconductors and distributed data centers.

By combining a containerized data center with bitcoin mining devices and renewable energy power sources, the containerized data center will be able to maximize the use of its power generation assets by consuming its own renewable energy power even in cases of interconnection delays due to long lead time for grid upgrade and curtailment after interconnection to the grid is completed.



Containerized Data Center (Agile Energy X, TRIPLE-1)



Solar Power Station (TEPCO RP)

■ **Development towards "distributed computing" to support the digital society.**

Solar-Power-Tracking Containerized Data Centers will become the technology base for the future digital society that enables the combination of renewable energy with distributed computing technologies, such as bitcoin mining, AI/deep learning, and computer graphics rendering processes, to be used as flexible demand response resources.

Agile Energy X will continue its innovative efforts as a Solutions Integrator with the mission to solve social issues related to energy and contribute to the realization of an ideal energy infrastructure for the future.