

Commencement of the Feasibility Study for Extended Use of Distributed Energy Resources

29th June, 2020

Mitsubishi Research Institute Inc.
Kansai Transmission and Distribution, Inc.
TEPCO Power Grid, Inc.
Waseda University

Mitsubishi Research Institute Inc., Kansai Transmission and Distribution, Inc., TEPCO Power Grid, Inc., and Waseda University were appointed by the New Energy and Industrial Technology Development Organization (NEDO) to commence the “Next-Generation Power Network Stabilization Technology Development for a Large-Scale Integration of Renewable Energies: The Feasibility Study for Extended Use of Distributed Energy Resources” (“the Study”).

In Japan, various measures including the “Japanese Connect & Manage” scheme that allows for flexible use of available grid capacity are being implemented to increase the uptake of renewable energy. Outside of Japan, handful of countries actively control their distributed energy resources (“DERs”) to mitigate grid congestion and thus allow for more renewable energy to be connected to the grid. Japan too may be able to increase its use of renewable energy through the active control of its DERs.

The Study will examine leading examples of DER management systems, DER control systems, and related services overseas. The Study will also analyze the potential benefits and challenges in developing similar systems and services in Japan. The Study will come to a close in March 2021.

The above four institutions will work in unison to establish a mechanism that maximizes the benefits of DERs and enables the increased use of renewable energy in Japan.

END

Attachment: General Information on the Feasibility Study for Extended Use of Distributed Energy Resources

General Information on the Feasibility Study for Extended Use of Distributed Energy Resources

1. Scope of Work

In order to achieve increased use of renewable energy in Japan, the study will examine leading examples of DER management systems, control systems, and related services overseas. The study will also analyze the potential benefits and challenges in developing similar systems and services in Japan. The scope of the study is as follows.

- Domestic Survey
Survey of potential impacts of renewable energy to grid operations; survey of actual cases utilizing DERs; assessment of possibility of further utilization of DERs in the context of solving grid issues
- System & Solution Survey
Survey of solutions and systems for DER management and control; analysis of potential benefits and challenges of developing such solutions and systems in Japan
- Overseas Business Survey
Survey of leading commercial projects or demonstration projects in selected countries utilizing DER for solving grid issues
- Identification of Necessary Research & Development
Development of DER use cases with potential to solve grid issues in Japan; identification of research and development (R&D) agenda necessary for realizing those use cases; consideration of an R&D timeline

2. Study Period

From July 2020 to March 2021

3. Project Team

Mitsubishi Research Institute Inc. (Representative)

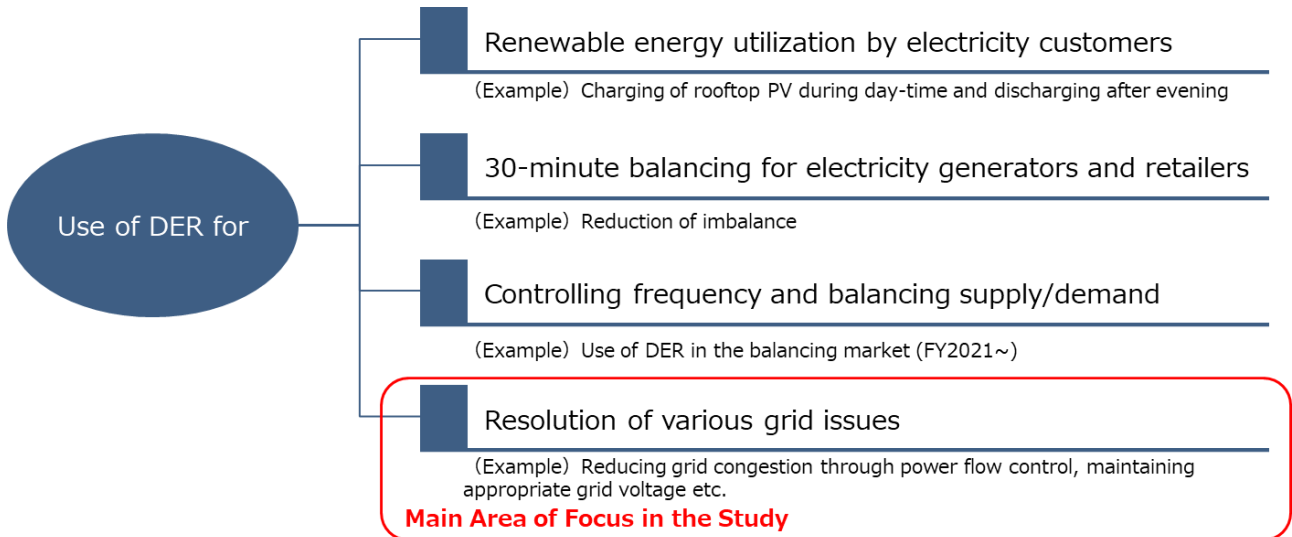
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<Main Area of Focus in the Study>

The study focuses on the possibility of resolving various grid issues (e.g. reducing grid congestion through power flow control, maintaining appropriate grid voltage), through active DER (e.g. battery, on-site generation) management and control, thus allowing more grid connection of renewable energy generation.



<Vision of Distributed Energy Resources Utilization>

Maximized DER utilization through a newly developed DER management, matching, and dispatch platform in which transmission & distribution system operators communicate with various DER aggregators.

