

## European Solar and Energy Storage Solutions

# Japan Microgrid Demonstration Project



## Overview

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When did microgrids start in Japan?

The first microgrids in Japan were New Energy and Industrial Technology Development Organization-financed projects initiated in Aichi, Kyoto and Hachinohe in 2003. A variety of energy sources were tested, in particular gas engines, and their success was demonstrated in the years that followed.

Why are microgrid systems becoming more popular in Japan?

The success of projects such as Higashi Matsushima eco city has increased the popularity of microgrid systems in Japan. In August 2017, the Cabinet Office announced it would be increasing National Resilience Programme funding by 24%, as of April 2018.

How will microgrids impact Japan's Energy Future?

As microgrids appear across the country, they will play an increasingly important role alongside the grid system to deliver clean and reliable power. Japan is currently aiming for 22%-24% of its energy to be produced by renewable sources by 2030, which will include 64GW of solar power.

Does Japan need a microgrid?

The 9.0 magnitude earthquake, which hit off the coast of Sanriku, caused vast amounts of damage to Japan's energy infrastructure, increasing the need for the project roll-out. "It has been accelerated due to the 2011 Great East Japan disaster, and about JPY45bn of funding has been granted" for further development of microgrids, says Kashiwagi.

What is the Sendai microgrid?

The Sendai Microgrid was initially designed in 2004 as a test bed for a demonstration project of NEDO. After the study was completed in 2008, the microgrid system has continued in operation under the management of NTT Facilities, Inc.

Which microgrid project is supported by Nedo?

The other well-known microgrid demonstration project is the Tohoku Fukushi University Microgrid Project in Sendai city, which was also supported by NEDO. The feature of this microgrid is the six levels of power quality, normal, high-A, B1, B2, B3 and DC supplied on various circuits as shown in Fig. 35.

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### Self-Reliant Energy Enhances Local Resilience , The ...

The Great East Japan Earthquake of 2011 triggered power blackouts all over northeast Japan, exposing the weakness of an electric power system relying exclusively on macro-scale power networks. To safeguard ...

### MICROGRIDS FOR ELECTRICITY GENERATION IN ...

YANG DECHANG DECEMBER 2, 2020 . I. INTRODUCTION In this Special Report, Yang Dechang summarizes current research on and deployment of microgrids in China, including an overview of the history of microgrids in ...



**2MW / 5MWh  
Customizable**

### Demonstration projects for grid-connection issues in Japan

Demonstration projects for grid-connection issues in Japan S. Morozumi, H. Nakama, N. Inoue This paper provides an overview of grid-connection-related demonstration projects of the New ...

### The Resilience Programme: Changing Japan's grid

One of the most notable projects to rise from the

devastation of 3/11 is the decentralised microgrid in Higashi Matsushima. Situated on the north-east coast of Japan, in the Miyagi Prefecture, Higashi Matsushima was badly ...



## **Noresco Lands 10-MW Microgrid Project for Air Force**

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The microgrid includes numerous resources, among them 1.3 MW of solar PV, a 3.2 MW landfill gas project, a 6.45 MW diesel and natural gas plant, 1.6 MW HVAC demand response, 157 kW thermal energy storage, EV ...

## **A Demonstration Project in Hachinohe: Microgrid with Private**

The basic concept of a microgrid will be outlined, and the results from a field test of a "regional power grid" will be discussed, with emphasis on the energy management ...



## **Distribution technology development and demonstration projects in Japan**

In the aspect of distributed generation and control technology, Morozumi et al. studied the problems of distributed generation, and used a micro-grid demonstration project as ...



## Microgrids: An Overview of Ongoing Research, Development, ...

The EU More Microgrids Research Project A follow-up project titled More Microgrids: Advanced Architectures and Control Concepts for More Microgrids within the 6th Framework Programme

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## A Demonstration Project in Hachinohe: Microgrid with Private

Dispersed generators have been expected to provide effective measures for tackling issues such as energy cost reduction, environmental preservation, and or energy security. Against this

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