



Hawai'i Natural Energy Institute Research Highlights

International Support

Support to the Philippines Department of Energy

OBJECTIVE AND SIGNIFICANCE: HNEI's Grid System Technologies Advanced Research Team (GridSTART) provided technical and capacity building to the Philippines Department of Energy (PDOE) for the development of a department circular (DC) aimed at strengthening the national net metering framework to encourage wider adoption of distributed solar generation.



Figure 1. Rooftop solar PV system.

BACKGROUND: Beginning in 2017, HNEI has collaborated with the Clean Power Asia (CPA) program. This robust partnership included activities in Thailand and Laos, which led to this work with PDOE. Additional efforts continued with the regional successor program to CPA, South East Asia's Smart Power Program, from 2022 to 2025 as well.

PROJECT STATUS/RESULTS: In collaboration with CPA, GridSTART provided technical and capacity building support to assist PDOE in preparation of its DC for "*Promulgating Policies to Enhance Customers' Participation in the Philippines' Net-Metering Framework.*" These policies include the revision of the existing 100 kW system size cap, enumerating compensation mechanisms to inform decision making by the Energy Regulatory Commission, and simplifying and streamlining net-metering interconnection and tools.

The team developed and delivered: 1) guidelines for distribution utilities on distribution impact study screening criteria, including the identification of technical requirements and fast-track processes based on tailored industry best practices and recommendations for distribution grid code improvements to accommodate higher distributed photovoltaic (PV) penetrations; and 2) capacity building for distribution utilities via webinars, workshops, in-person trainings, and expert

consultations in events hosted by relevant Philippines energy stakeholders.

At the request of PDOE, HNEI delivered expert in-person training and messaging support in public consultation meetings. These meetings were held in several major Philippines cities in October 2019 to engage stakeholder input with regards to proposed net-metering program changes. GridSTART also conducted a series of six 1.5-hour virtual training sessions from July through October 2020 for distribution utilities in the Philippines. The training series sought to improve distribution utilities' understanding of the hosting capacity analysis that informs the system impact of distributed PV integration, and the means to minimize the cost to conduct the hosting capacity analysis. The sessions covered basics, approaches, and case studies to guide technical impact analyses, including essentials of technical standards and grid codes, and discussions of practical challenges faced by distribution utilities.

Following the issuance of the updated policy in 2020, the team continued to deliver technical assistance in areas such as equipment standards, supplier accreditation, and distribution impact study screening. PDOE requested further technical support to assist with the development of standards for solar equipment and supplier accreditation, guidelines for distribution impact study (DIS) screening, and targeted capacity building for utilities and regulators. While the main accomplishments centered on capacity building activities addressing PDOE's immediate needs, technical support later expanded to include developing a set of rules for an "off-grid" net energy metering program designed for rural and island grids not connected to the country's main transmission network.

These efforts contributed to a measurable increase in participation in the net metering program, with engagement rising by nearly 15 percent and the sector showing improved capacity for integrating distributed solar systems nationwide.

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