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Binga Battery Energy Storage System Project Description

Project Background

SN Aboitiz Power-Benguet, Inc. (SNAP-Benguet) is proposing to develop the 40 MW Binga Battery Energy Storage System ("Binga BESS") at the Point of Coupling (POC) co-located with the Binga Hydroelectric Power Plant ("Binga HEPP") in Barangay Tinongdan, Municipality of Itogon, Province of Benguet. The Binga BESS is a standalone energy storage system type of project.

The main purpose of the Binga BESS is to provide primary frequency regulation ancillary services to the Luzon grid. It can help maintain the system frequency as close to 60 Hz as possible by changing its energy output or charging (loading) levels. It consists of three systems: (a) battery storage system, i.e., lithium-ion batteries, battery racks and battery management system; (b) power conversion system (PCS), i.e., DC/AC inverters, low to medium voltage transformers; and (c) grid interconnection system, i.e., step up transformer, protection, SCADA, telecom and metering.

Basic Concept Development

The Battery Energy Storage System (BESS) is considered a new source of frequency control ancillary services, according to the Energy Regulatory Commission Resolution No. 09 (Series of 2015). Ancillary services are used by the System Operator to balance real-time system demand and supply, hence, maintaining the quality and reliability of the delivery of electric power to load customers.

BESS can help maintain the system frequency as close to 60 Hz as possible by changing its energy output or charging (loading) levels (*Note: The system frequency is the indication of balance of supply and demand in the grid*).

In particular, lithium-ion BESS is currently the dominant battery technology due to its high efficiency and experiencing a very high growth rate, driven mainly by the declining cost of batteries and a vast spectrum of applications. Driving the BESS for one cycle per day over a 10-year life relates to 3,000 cycles, setting this as an industry standard performance expectation.

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Project Information

Item	Description
Official Name of the Power Generating Facility	Binga Battery Energy Storage System
Gross Capacity	40 MW
Exact Location	Co-located with Binga Hydroelectric Power Plant Barangay Tinongdan, Municipality of Itogon Province of Benguet
Target Commercial Operation	1st Quarter 2026
Commissioning Date	4th Quarter 2025
Off-taker of the Electricity Output with Corresponding Capacity	NGCP (Ancillary Services) 40 MW