

# **Ecuador Microgrid Power Station Generator BESS**





## Overview

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How does a Bess microgrid work?

The behavior of the BESS is directly influenced by the availability of PV solar energy (see Fig. 5). During the first hours of the day, i.e., in the time interval 1 to 8, when energy generation by the PV generators is below 20%, the BESS inject power into the microgrid to satisfy part of the demand.

How does a microgrid control a diesel generator?

The Microgrid will then turn off the diesel generator (genset-off) once the BESS reaches a certain level of SOC defined by the client. For large Microgrid systems, the control solution is done through Elum's ePowerControl PPC (Power Plant Controller) which in addition to a controller, also provides monitoring capabilities (SCADA).

Can Bess energy storage systems be used in microgrids?

This research paper addresses the issue of placement, technology selection and operation of BESS energy storage systems (BESS) in microgrids under a variable distributed generation (DG) and energy demand scenario for an average year of operation. To address this issue, a mixed-integer nonlinear programming (MINLP) model was formulated.

What systems can a Bess/microgrid PMS controller interface with?

The BESS/ microgrid PMS controller interfaces with multiple systems such as ABB Ability zenon, Relion protection relays, Remote IO RIO600, Ekip Up protection units, PCS100/3rd party BESS, as well as 3rd party products such as tariff and energy meters, governor and AVR systems, battery management systems, fire safety systems, HVAC systems etc.



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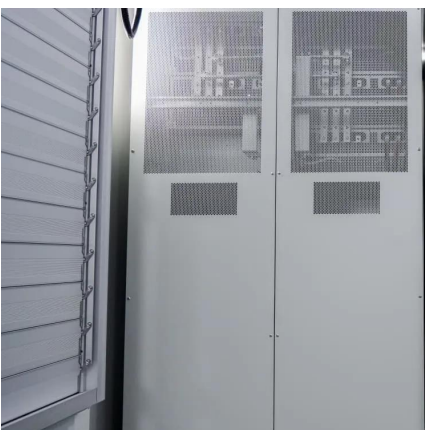
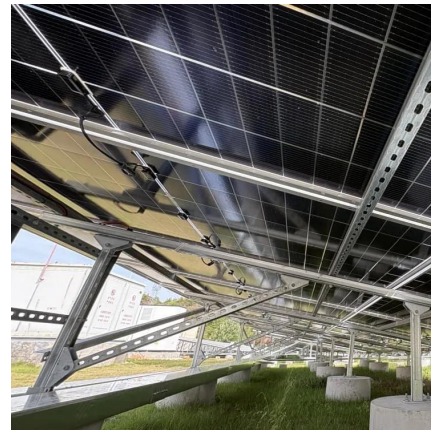


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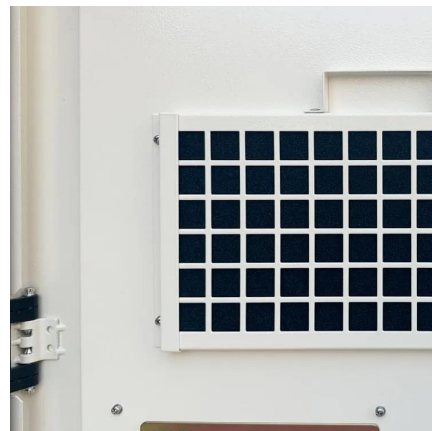
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