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Hybrid Power Integration for Base of Operations

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One challenge of On-Site Inspection (T2.2) is preparing for deployment to unknown locations with unknown resources. A critical element of a functional Base of Operations is stable and reliable electricity. The current diesel generators and UPS system has been enhanced with a hybrid power system that adds the ability to accept power from other generation sources, such as solar. An increased battery bank allows for more quiet time without the diesel generators reducing fuel usage and CO₂ production.

Compact, foldable 100w solar panels have been designed to fit the air transportation containers connecting to inverter hubs that assist the hybrid power unit to supply power to the BOO. Excess energy is stored in battery banks for later use and the design of the system allows for immediate use of solar power anywhere along the distribution network. The smart controller and control screen allow for efficient management of available power, auto-starting generators as a last resort if required.

Deployable solar units for smaller field equipment such as samplers or pumps complement smaller fuel generators, and small solar mats and converters that clip directly to existing battery terminals provide trickle charge to remotely deployed field equipment (such as SAMs) during sunlight hours.

Promotional text

Stable and reliable electricity is critical for a functional OSI. The integration of solar power into the OSI field power distribution is an opportunity to enhance flexibility in the field and harness renewable energy at the Base of Operations and to deployed field equipment.

Primary authors: Ms CAMPBELL, Alana (CTBTO Preparatory Commission, Vienna, Austria); Mr NASRI, Mohamed Ali (CTBTO Preparatory Commission, Vienna, Austria)

Presenter: Ms CAMPBELL, Alana (CTBTO Preparatory Commission, Vienna, Austria)

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