

CleanSpark Completes Military Microgrid Offering Perpetual 100% Renewable Driven Energy Security

2019-05-03

SALT LAKE CITY, May 3, 2019 /PRNewswire/ -- CleanSpark, Inc. (OTC: CLSK), a microgrid company with advanced engineering, software and controls for innovative distributed energy resource (DER) and microgrid deployments today announced it has achieved government acceptance of its solar plus storage microgrid located at the Marine Corps Base Camp Pendleton.

Camp Pendleton is the major West Coast base of the United States Marine Corps and is one of the largest Marine Corps bases in the US. It is located on the Southern California coast, in San Diego County. Completed by general contractor Bethel-Webcor JV, the Communications Information Systems (C.I.S.) Operations Complex includes a data center, headquarters facility, maintenance and supply warehouse, and related communications infrastructure. The complete project receives backup power from UPS and traditional standby generators provided by other contractors. A subset of the critical loads are served by CleanSpark's advanced solar plus storage microgrid offering perpetual off-grid 100% renewable driven energy security through an all iron flow battery DC coupled with solar photovoltaic generation located on both carport shade structures and the buildings' roofs. CleanSpark was responsible for the optimization, design, engineering, and deployment of the solar plus storage microgrid which shows grid as backup can be a reality.

CleanSpark is in the process of evaluating several solar plus storage microgrid projects for defense, municipal, commercial and industrial use cases to provide benefits including energy savings, energy security, and sustainability. Recently, CleanSpark secured \$20 million in financing to support Energy Savings Agreements on similar projects. Project developers and property owners with late stage developments are encouraged to inquire about financing opportunities by emailing info@cleanspark.com.

The Problem

The defense community has well developed specifications for critical power support at important facilities. Just as technology continues to develop, these specifications for traditional fossil fuel driven standby systems continue to evolve. The C.I.S. Operations Complex has deployed a 100% renewable critical power microgrid to support critical loads and unlock many benefits including:

- Eliminate expensive UPS and standby generation systems.
- Make distributed resources available in normal operation in lieu of stand-by systems.
- Provide perpetual renewable driven energy security.
- Improve power quality to sensitive equipment.
- Reduce both first cost and operational expenses.

The Solution

CleanSpark's innovative team of cross-functional disciplines collaborated with ESS Inc. to deliver the first Solar PV, DC Coupled, Iron-Flow battery deployment in history. This solution operates in off-grid mode by default with the grid serving as backup. The configuration maximizes:

- Generation to storage efficiency
- Harvesting previously unusable solar power at early and late points in the day through DC charging
- System lifetime through non-degrading, non-toxic, and non-flammable battery chemistry

Anthony Vastola, SVP of Projects for CleanSpark, said, "There have been quite a few technology achievements on this project, but what excites me the most is the functional outcome. This is a hybrid Zero Net Energy facility incorporating both off-grid and grid connected renewable generation that work together to support project economics while also providing energy security. With strong system modelling, innovative engineering expertise, and effective microgrid control, we believe economics and energy security should go together."

The Configuration

The first project to receive CleanSpark's latest mPulse DER Energy Manager, operational intelligence is co-located with the microgrid offering resilient communications disconnected operation and increased cyber-security leveraging its hybrid-cloud configuration. The on-site generation solution includes separating the building loads so that the priority loads are on the islanded system and non-priority loads are served from the utility with each renewable asset interacting with the grid based on mode of operation.

The System

Location:	Marine Corps Base Camp Pendleton
Description:	Renewable Microgrid
Features:	Microgrid Controller - mPulse DER Energy Manager Automated Monitoring and Control Dynamic Data Visualization Measurement and Verification Alerts and Alarms Analysis View Power Quality Monitoring of both Islanded Microgrid and Utility Grid Cyber-security hardening
Modes:	Islanded, Grid Connected
Renewable:	90 kW Solar PV (Islanded Operation) 60 kW Solar PV (Grid Connected) Zero Net Energy (ZNE) Facility
Storage:	400 kWh Iron-Flow Battery - ESS Inc.

Matthew Schultz, CleanSpark's Chief Executive Officer, said, "This new project builds upon our previous successes at Camp Pendleton including the Critical Power Fractal Grid commissioned in 2014 in partnership with the California Energy Commission. CleanSpark answered the call to deploy our innovative system and is honored to support the mission of our brave service members while continuing to build value for our shareholders."

About CleanSpark, Inc.

CleanSpark provides advanced energy software and control technology that enables a plug-and-play enterprise solution to modern energy challenges. Our services consist of intelligent energy monitoring and controls, microgrid design and engineering, microgrid consulting services, and turn-key microgrid implementation services.

CleanSpark's customers include not only energy consumers but the distributed energy ecosystem at large: developers, installers, EPCs, IPPs, and energy storage vendors. CleanSpark's software allows energy users to obtain

resiliency and economic optimization. Our software is uniquely capable of enabling a microgrid to be scaled to the user's specific needs and can be widely implemented across commercial, industrial, military, agricultural and municipal, deployment.

For more information on CleanSpark, please visit <https://www.cleanspark.com>.

Safe Harbor Statement:

Statements in this press release relating to plans, strategies, testing and operational performance, projections of results of specific activities and other statements that are not descriptions of historical facts may be forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. This release contains "forward-looking statements" that include information relating to future events and future financial and operating performance. The words "may," "would," "will," "expect," "estimate," "can," "believe," "potential" and similar expressions and variations thereof are intended to identify forward-looking statements. Forward-looking statements should not be read as a guarantee of future performance or results, and will not necessarily be accurate indications of the times at, or by, which that performance or those results will be achieved. Forward-looking statements are based on information available at the time they are made and/or management's good faith belief as of that time with respect to future events, and are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in or suggested by the forward-looking statements. Important factors that could cause these differences include, but are not limited to: fluctuations in demand for the Company's products, the introduction of new products, the Company's ability to maintain customer and strategic business relationships, the impact of competitive products and pricing, growth in targeted markets, the adequacy of the Company's liquidity and financial strength to support its growth, and other information that may be detailed from time-to-time in the Company's filings with the United States Securities and Exchange Commission (the "SEC"). For a more detailed description of the risk factors and uncertainties affecting the Company, please refer to the Company's recent SEC filings, which are available at <https://www.sec.gov>. The Company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Contact - Investor Relations:

Brett Maas, Managing Partner

Hayden IR

(646)536-7331

brett@haydenir.com

View original content to download multimedia:<https://www.prnewswire.com/news-releases/cleanspark-completes-military-microgrid-offering-perpetual-100-renewable-driven-energy-security-300843448.html>

SOURCE CleanSpark, Inc.

News Provided by PR Newswire via QuoteMedia