

## Palestine commercial microgrids

The United Nations Development Program (UNDP)'s "Renewable Energy Generation through Solar Panels for Public Education, Health and Water Facilities" supports the Palestinian Solar Initiative through a half-million-dollar project funded by the The OPEC Fund for International Development (OFID). According to a story last year in PV-Magazine, UNDP estimates that installing solar for schools and hospitals would benefit more than 100,000 Gazans.

"The electricity shortage hindered the educational process, especially in winter," Maha El Tawil, headmistress at the Bashir El Rayyes High School, says in the 2015 story. Due to Gaza's severe school shortage, her 1,800 students attend school in two shifts. "This was a challenge for teachers and students operating the second shift. We used to teach in the dark; unable to read what was written on the board nor in the books," she says. "We needed a better alternative."

Installed solar systems have brought light to the classrooms and enabled reinstatement of regularly scheduled computer classes. The completed project is estimated to benefit more than 100,000 people. The Palestinian government, international organizations, and private investors are all involved in other Gaza projects, from those helping several hundred people to one designed to bring the area 200 MW of solar power. With the area's dire electricity and water shortages, their success may literally mean the difference between life and death.

Yosef Abramowitz, CEO of Energyia and founder of Israel's solar sector was frustrated with "lackluster" progress of infrastructure plans from the U.K. and the U.S. Two years ago he published a plan for a Palestinian energy infrastructure based on solar energy. Abramowitz envisions Palestine, Israel, and surrounding energy-poor countries becoming the greenest region in the world. As he told the Jerusalem Post, "solar energy is the energy of peace, for the sun known no borders."

Palestinians living in the South Hebron Mountains in "Area C" which comprises approximately 60% of the West Bank live off-grid. They lack electricity or use cost-prohibitive diesel generators. The Israeli government, which controls the area, does not provide Area C's Palestinians the electricity available to Israeli settlers in close vicinity.

"Our systems range from small-scale family-based solar energy systems that serve a single family to microgrids that serve an entire community that can be up to 30-40 families or 200-300 individuals," Tamar Cohen, who handles organizational development for Comet-ME, tells Microgrid News & Insight. "The microgrids range from all solar to hybrid solar/wind to solar with an integrated backup genset."

"Our continued presence in the field enables us to respond in a timely manner to any technical or social issues that arise," explains Cohen. "We also conduct system upgrades and grid extensions as needed to

accommodate the expansion and growing energy needs of communities."

Cohen says Comet-ME's biggest challenge is working in an area "where any construction, including of humanitarian facilities, faces the threat of demolition." At this time, however, all of Comet-ME systems installed in the past eight years are currently operational and continue to reliably serve the communities, and the organization oversees ongoing maintenance and management of the systems as well as training of community representatives.

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