

# KGHM's Carlota Solar project receives special use permit from US Forest Service



**Carlota Copper Co., a subsidiary of KGHM, would create a solar project on its main rock pile that could generate 10 MW's of energy.**

On Feb. 23, 2016, the U.S. Forest Service (USFS) signed the special use permit for Carlota Copper Co. Mine Solar project located in Miami, AZ. This permit approves the development of the first solar photovoltaic array ever built on USFS land. Specifically, the solar project, if it proceeds, would be located within the Tonto National Forest, part of the public lands managed by the USFS. This solar initiative has been in the process of development for almost two years and is the result of a collaborative effort between the USFS, Carlota Copper Co., which is an indirect subsidiary of Poland-based mining company KGHM Polska Miedz S.A. (KGHM), and the brownfield solar developer, Brightfields Development.

Openpit extraction at Carlota Mine was in full operation until 2014. Currently, the company is undertaking residual heap leaching through an innovative subsurface leaching technique along with concurrent reclamation activities. Looking to create a purpose for the site beyond metal extraction, the Carlota team has found a way to go above and beyond the required reclamation measures with this new renewable energy project. One of the unique attributes of the solar project is that no new land disturbance will be required, as existing infrastructure, including Carlota's electrical substation, power lines, roads, etc., will be utilized. The team at Carlota enlisted the help of

Brightfields Development to find a clean energy addition to the future closure process.

The solar project would represent 10 MW of solar energy production atop the Carlota Mine's main rock stockpile, ultimately repurposing the disturbed land for clean renewable energy production. The array is expected to span across the 19 ha (48 acres) of the stockpile, utilizing single-axis tracking technology to maximize its solar output. Annually, the project would produce approximately 25 million kWh or the equivalent of 2,371 homes' electricity for a year. In addition, this project is in furtherance of the President Obama's "Climate Action Plan" goal of 20,000 MW of power from renewable energy sources on federal lands by 2020.

The semi-arid and mostly sunny climate of central-eastern Arizona provides the ideal conditions for a solar array. The mine sits at a 1,200-m (4,000-ft) elevation with cooler temperatures allowing for better efficiency of the solar arrays. Additionally, due to Arizona's long-term drought, a solar energy array in the area would have significant positive impacts, offsetting water usage and CO<sub>2</sub> emissions from other forms of fossil fuel energy production.

The special use permit is the product of extensive engineering and environmental reviews to ensure that the project meets rigorous construction standards and that all potential impacts to natural resources are mitigated to the greatest extent possible. Due

to the extensive work that was performed and the knowledge base that was developed as part of the Carlota Mine's environmental impact statement completed in 1997, the Solar Project received a categorical exclusion of the federal government's requirements under the National Environmental Policy Act (NEPA). Therefore, all necessary permits and approvals are in place for the project to move forward.

Additionally, the solar project has applied for, and received, its precertification from the California Energy Commission, qualifying the project to sell its renewable energy credits (RECs) into the California market once it is commercially operating.

The project has also completed a system impact study and facility study with Salt River Project, the utility serving the site.

This pioneering solar project reflects KGHM's commitment to sustainable development and corporate social responsibility. Working with the USFS since inception, and engaging various stakeholders along the way, the solar array is expected to meet the growing demand for clean, renewable energy, while providing economic, social and environmental benefits to the region. The project is in the final stages of development and will be construction-ready in mid- 2016.

Carlota Copper Co. is currently considering



multiple avenues forward for sale of its energy and RECs. If this project is successful, it would set a precedent for other closing mines with similar climate conditions and make a lasting impact in best sustainable practices in the mining industry and the local community.

For more information regarding this project, please contact Julia Chase at Brightfields Development: [jchase@brightfieldsllc.com](mailto:jchase@brightfieldsllc.com). ■

**The solar project at Carlota Copper will repurpose the mine's rock pile.**