

Health & Science

Bolivia, with huge untapped reserves, gears up for soaring lithium demand

President Morales counts on lithium to lift country out of poverty

SALAR DE UYUNI, Bolivia: Over 3,600 meters above sea level on the blinding white plain of the world's largest salt flat, landlocked Bolivia is dramatically ramping up production of lithium to cope with soaring global demand for the prized electric-battery metal. Bolivia, among the poorest countries in South America, sits on one of the world's largest lithium reserves, at the Salar de Uyuni-or Uyuni Salt Flats-ready to take full advantage in the coming age of the electric car.

But while it sits at the apex of South America's "lithium triangle," along with Chile and Argentina, Bolivia has not had the capacity to produce the metal on a commercial scale. That will change when its Llapi plant comes online in 2020. The factory, guarded by the army because of the metal's value, will have an annual production capacity of 15,000 tons of lithium carbonate, project manager Marco Antonio Condorety told AFP. State company Yacimientos de Lito Bolivianos (YLB), established by the government of President Evo Morales in 2008 to exploit lithium in the salt flats, aims to make Bolivia the fourth-largest producer by 2021. Morales, a leftist and former coca farmer, is counting on lithium to serve as the economic engine that lifts his country out of poverty.

Joint ventures

YLB teamed up last year with German company ACI Systems to help develop the Uyuni complex. It's part of a plan to form strategic partnerships that "bring their technology and guarantee outlets," said Condorety. The joint

venture will manufacture electric-vehicle batteries in Bolivia for the growing European market. China's Xinjiang TBEA Group came on board with YLB in another joint venture in February to help extract lithium from Bolivia's two other salt flats, in Coipasa and Pastos Grandes. Bolivia said earlier this year that Uyuni alone likely has at least 21 million metric tons of lithium, more than double previous estimates. Until now, the Salar de Uyuni has been a major tourist attraction, and environmentalists have raised concerns about the landscape being irreparably altered by exploiting the lithium deposits underneath. But Condorety insisted that lithium exploitation would use "clean technologies" and affect only about three percent of the salt flat.

Chinese demand

China is the world's biggest consumer of lithium, with 63 percent of the market, according to Ingrid Garces, professor of engineering at Chile's Antofagasta University. With its voracious appetite for lithium, the Asian giant has positioned itself at the center of the world's main deposits of the metal. By 2025, China will need 800,000 tons of lithium carbonate per year to meet the growing demand for electric vehicles.

China's Tianqui Lithium Corp. took a 24 percent stake in Chilean producer SQM last December, placing itself inside the "Lithium Triangle," which has 80 percent of the globe's known deposits. Worldwide production grew 23 percent in 2018 to more than 85,000 tons. Australia is the world's biggest producer, with 51,000 tons annually, fol-



SALAR DE UYUNI, Bolivia: Aerial view of piles of salt, a byproduct from lithium extraction, at the new state-owned lithium extraction complex, in the southern zone of the Uyuni Salt Flat, Bolivia. — AFP

lowed by Chile with 16,000 tons, China with 8,000 and Argentina with 6,200. As recently as 2016, Bolivia produced only some 20 tons of lithium carbonate, according to the Lithium Today website. —AFP

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