

Bolivia Begins Leap into the Future

by Gretchen Small

Sept. 29—Bolivian President Evo Morales and his Vice President, Alvaro García Linera, are criss-crossing the nation, mobilizing citizens for the great task before them: transforming their nation of nearly 11 million people into a world-class scientific and industrial powerhouse. Their message is that Bolivia is now poised to industrialize, triple the amount of land under cultivation, master nuclear power, and become a space-faring nation.

García Linera, in a Sept. 25 interview on the “Rise Up, Bolivia” TV program, summed up the mission: “Bolivia spent 500 years in a raw materials economy (minerals, rubber, quinoa, and natural gas), and we are beginning to enter into an industrial economy, with the industrialization of natural gas and smelting of minerals, and we decided to advance in parallel to a knowledge economy.”

The nation’s future lies in its “scientific liberation,” President Morales told students in Santa Cruz on Sept. 18. “We have the task of liberating ourselves in the area of science. That is the huge responsibility we have, and we have plans to build science cities to which people will come to get their masters and doctoral degrees.” Bolivia needs men and women who possess scientific knowledge and who can contribute to the nation’s industrialization, he said. Morales argues that it is a “duty to add value to our natural resources for future generations.”

The government has created a Bolivian Space Agency, is finalizing work on creating an Atomic Energy Commission by the end of 2014, and is putting together education facilities and scholarship programs to train the hundreds of thousands of scientists, engineers, teachers, and qualified labor needed to industrialize the country.

It is an audacious leap for a nation which still has much to do to meet what President Morales called the “basic human right” to electricity, telecommunications, water, and basic sanitation services, as well as education and health care, in his Sept. 24 speech to the United Nations General Assembly.

Bolivia historically has been one of the poorest na-

tions in the Americas, looted by foreign powers for centuries, of its raw materials, stripped of its access to the Pacific Ocean in the 1880s by a British-instigated and -directed war, and then seized upon as a drug-producing center by London and Wall Street interests in the 1970s, in their New Opium War. In their arrogance, Wall Street and London were so confident that drug-pushing speculator George Soros had secured control over Bolivia, that their minions proclaimed Bolivia would soon be torn apart by separatist insurgencies, an intention once celebrated, prematurely, by City of London mouthpiece *The Economist*, in a map of South America with a large eraser wiping Bolivia off it.

The British Empire, Wall Street included, has never understood the power of the human mind. Adopting the development of the nation’s entire territory and its people as its mission, the Morales government first demobilized, and then defeated the British separatist trap.

Then, the global drive for development exploded, beginning with the July 2014 BRICS Summit in Brazil, and Bolivia recognized that it now has the international allies it requires to realize its long-sought dream of becoming an industrial nation. Far from disappearing, Bolivia is playing a prominent role in the concert of nations acting to ensure that “the empire of finances, the empire of the markets, the empire of the armaments industry, must perish, to clear the way for Life’s wisdom and Life in harmony and peace,” Morales said in concluding his Sept. 24 UN speech.

General Welfare Before Markets

President Morales’s re-nationalization of Bolivia’s hydrocarbons industry in May 2006 was the necessary precondition for today’s industrialization program, an assertion of sovereignty which Lyndon LaRouche greeted with “great pleasure,” at the time. Privatization castrates nations, and Bolivia has just ended its castration, LaRouche said. With Argentina, Brazil, Chile, Colombia, and Venezuela defending Bolivia’s sovereign rights, Bolivia survived—and grew.

Before the nationalization, private international oil and gas companies bled the country of 82% or more of

the industry's profits, while the government received only 18%. Since nationalization, the government receives 75%. Over the years since, the State has earned \$20 billion from the oil and gas industry, which it was able to use to provide social services and invest in other areas of production, such as agro-industry, cement, and lithium, while reinvesting in expansion and improvement of the oil and gas industry.

Public investment in 2005 was a piddling \$600 million, almost 70% of it provided by foreign credits or grants; in 2014, the government is investing more than \$6 billion.

Other critical sectors that had been sold off in the 1990s and early 2000 under neoliberalism's "piratization" dictate, were also re-nationalized, including electricity, telecommunications, and part of mining and water sectors, in which private initiative cannot provide adequately for the nation's needs.

The preparatory stage completed, now comes take-off. The perspective is that of developing Bolivia, a large country located in the center of the continent, as an industrial energy and transport hub for South America, which, in turn, Bolivian officials argue should conceive of itself as a crucial passage between Europe and Asia.

With China, Russia, and Argentina, in particular, taking the lead in providing financing, construction, and training for the national endeavor, construction of natural gas liquefaction plants, petrochemical plants (urea and ammonia, and polypropylene, to start), lithium ion battery production (Bolivia has the world's largest lithium reserves) are in various stages of production or planning. Cement, steel, and other industrial plants are on the drawing boards, or under construction.

Enormous infrastructure needs must be met to sustain even this initial phase. Electricity generation is currently barely over 1,200 megawatts, near current total national demand. The government goal is to triple electricity production by 2020, in order to extend electricity to the entire population (the 2012 census reported 78%



UN/Devra Berkowitz

The nation's future lies in its "scientific liberation," President Morales told students in Santa Cruz on Sept. 18. Here, he addresses the UN in September 2013.

access), and then export it to neighboring countries.

Major road and rail projects, both international, inter-urban, and intra-city, are needed to integrate the nation. Last May, the government inaugurated the first segment of the world's highest cable-car railway line, connecting the capital, La Paz, elevation 12,000 feet, with the even higher adjoining city of El Alto; similar cable lines are planned for other cities such as Oruro and Potosi.

Bolivia has asked China for help, including financial assistance, in building the Bolivian portion of a much-needed South American transcontinental railway, as well as for the development of its enormous Mutún iron mine (see following article).

Scientific Liberation

President Morales declared last Jan. 22 that the development of nuclear energy is a "strategic priority" for Bolivia.

Plans for exactly how, and how fast, Bolivia will proceed in developing the peaceful use of nuclear power are still being worked out, but the commitment to do so has been made. The government has been mobilizing Bolivians behind the program, as García Linera did so beautifully in his Aug. 21 declaration that Bolivia will seize its right to master "knowledge of the atom . . . the sacred fire of the 20th and 21st centuries. . . . It doesn't matter how long it takes us. We are going to

do it, because we are convinced that that is how we will cement the conditions for the technological development of Bolivians for the next 400 to 500 years.” (See “The World Land-Bridge: Rediscovering the Americas, *EIR*, Sept. 12, 2014.)

Bolivians are studying at Argentina’s Balsiero Institute, the premier educational facility in Ibero-America for training nuclear engineers and physicists; Bolivian doctors are studying nuclear medicine in Argentina.

Morales announced on May 19 that a nuclear engineering program was being established at the Armed Forces School of Military Engineering (EMI), and in his bilateral meeting with Russian President Vladimir Putin during the July BRICS Summit, Morales requested, and received, a commitment for Russian aid in the nuclear field.

In 2010, the Morales government created the Bolivian Space Agency (ABE), with its first mission being to manage the country’s first telecommunications satellite, the Tupak Katari, which China’s Great Wall industry was to build. Launched in December 2013 by China, commercial service from the satellite began on April 1, 2014, enabling the Bolivian government to begin the process of providing telecommunications to every part of the country. As of this month, 1,000 new telecenters had been installed in isolated rural areas that had never before had access to radio, television, telephones, or the Internet; another 1,500 are to be built by the end of 2014.

“Hundreds of thousands of Bolivians, many for the first time, now have a window on the world through which they have begun to look at current national life and that of the rest of the world,” the ABE reported this month.

Bolivian officials and a delegation of top officials from Argentina’s National Space Activities Commission, the ARSAT satellite company, and the space division of the high-tech INVAP company, met at the end of August to map out perspectives for joint work on space projects. ABE director Iván Zambrana believes that regional alliances may be the best way for Ibero-America to develop its space programs, citing the European Space Agency as an example. The ABE has established a “solid alliance” with Venezuela on this, has contacted Ecuador and Peru to discuss collaboration, and will soon establish contacts with the Brazilian space program, Zambrana reported.

Training is also underway on this front, with the ABE providing the first college course on satellites at

La Paz’s Universidad Mayor de San Andrés, taught by Bolivians trained in China under its satellite program. Opening that course in mid-September, Zambrana told the students never to stop dreaming, since every great project begins with a dream. Now everything is possible, he said. “We Bolivians have discovered that we have the ability to transform reality, and to do great things. We are now thinking about a second satellite, and as needs arise, new space projects will take shape.”

Youth Are the Future

“It is not possible to develop a country without a gigantic intellectual base, capable of supporting with technology and knowledge this diversification of the economy,” García Linera noted, in opening a conference of the Panamerican Union of Engineering Associations on Aug. 14. “Bolivia needs 150,000 highly trained engineers capable of carrying on their backs such great objectives as those of advancing to an industrial economy.”

Public and private schools, from junior high school through university levels, are working with the government to develop the educational programs required for this transformation. Junior and senior high school students participated this year in the 4th Scientific Olympiad, sponsored by the Ministries of Education and of Science and Technology, in order to “motivate the creativity and interest of the students in science and technology.” The subjects ranged from astronomy and astrophysics, to robotics and chemistry.

The Bolivia of the 21st Century “is a scientific and technological Bolivia,” García Linera told an audience of students and professors on Sept. 18. Warning them against the mediocrity “which kills us,” he told them that if they do their part and study, “our Fatherland will be great. The wealth of a nation has two names: production and education. If we produce and study, we are strong. . . . Bolivia needs the best. We’re tired of being last. . . . President Evo’s goal is Bolivia as an industrial, productive, and energy center for Latin America, and we’re going to do that because our students will study.”

Two weeks earlier, in addressing students at Cochabamba’s Universidad del Valle, the Vice President had encouraged those young people to begin planning their long-term futures, because their nation, at last, has the economic conditions that allow it to prepare Bolivia’s future, which no previous generation could.