

Energy and Development in South America: Conflict and Cooperation

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With Jessica Varat*

First South American Energy Summit © Eduardo Morales/epa/Corbis
Front Row L-R- Colombian President Álvaro Uribe, Chilean President Michelle Bachelet,
Bolivian President Evo Morales, Venezuelan President Hugo Chávez,
Brazilian President Luiz Inácio Lula da Silva

Back Row L-R- Uruguayan Vice-President Rodolfo Nin Novoa,
Ecuadorian President Rafael Correa, Guyanan Prime Minister Samuel Hinds

Oil Rig in Stormy Sea © Steve Bloom/Getty

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Energy and Development in South America

José Miguel Insulza

The discussion of energy in Latin America departs from three basic and shared premises. The first is that energy is a central concern of every country in the world, regardless of its size or importance in global affairs. The second is that energy is an essential component of development. The third is that there has also been a strong relationship between energy and politics, especially oil and politics.

Beginning in the late 1960s, powerful interests in small energy supplying countries began to exert greater control of their energy resources. In the early 1970s, Latin America, along with the rest of the world, experienced the first major increase in oil prices and had the beginning of a discussion about its implications. The issues are not very different today than they were forty years ago. By any measure, the region does not lack energy resources; in fact, an analysis of the Americas as a whole or of Latin America and the Caribbean reveals that energy resources are abundant. Latin America possesses 9.7 percent of the world's proven reserves of oil, and contributes 13.8 percent of world output. At the same time, Latin America consumes only 8.1 percent of world oil production, making the region a net exporter of 3.3 million barrels of oil a day. These figures, of course, are due to increase in light of the recent discoveries of major oil and gas deposits in Brazil's Bacia de Santos (Santos Basin).

In other areas of energy production, there is also an abundance of hydroelectric power and natural gas in the region. New gas deposits have been discovered at a high rate in the past few years. Why, then, should Latin America be so concerned about energy? What are the threats and the problems associated with its production and use? Why should the region not simply be satisfied with the surplus it produces? For despite Latin America's apparently advantageous situation with respect to energy, all countries—whether suppliers or consumers—face problems; there is concern throughout the Americas about the inability to supply reliable and affordable energy to meet national and regional needs.

Today there are still around 50 million people in the region—the majority of them poor and living in remote and isolated areas—who do not have reliable or affordable access to electricity. Approximately 85 percent of the population in Latin America has access to electricity; now, however, in addition to the growing demand for energy by the traditional economic powers in society, there is strong pressure to deliver energy to the 15 percent of the poor who have no access. Over the medium term, the region's economies must also find a solution to the projected increase in demand for energy. According to the Inter-American Development Bank, energy demand will have increased 75 percent by the year 2030. The capacity to generate electricity will need to increase by 145 percent in order to satisfy this new demand. But can the region produce that much energy? Doing so requires increased investment and improvements in quality, capacity, training, and efficiency in energy production.

Latin America's demand for energy is very high relative to the region's rate of growth, meaning that the region is not efficient in its use of energy. Production in Europe uses only half as much energy as in Latin America. What this means is that one unit of production uses twice as much energy in Latin America as it does in Europe. This demonstrates the lack of efficient energy use in the region.¹

There is a serious imbalance between countries that produce and countries that import energy resources. Countries live in different circumstances and at times in completely opposite ways vis-à-vis world energy markets. This is especially true concerning the effects of energy price increases and price volatility. Only three or four countries in Latin America are significant oil producers, and rising prices for oil create problems among Latin American countries.

On the other hand, more than 80 percent of global oil resources are publicly owned. Companies produce and profit from oil, but the countries themselves own the resource; hence, governments are able to manipulate public policy, not only regarding oil but also natural gas. Furthermore, energy producers can use times of abundance to exert political pressure on importing countries, seeking to create an area of influence or to obtain concessions, with the predictable result that intraregional political tensions are generated. The relationship between oil and politics cannot be avoided.

An additional political issue concerns the environment. The provision and use of energy must go hand-in-hand with a search for ways to diminish the environmental impact of energy consumption. This point cannot be overstated, as there is broad recognition that the principal source of air pollution—with sulfur dioxide, carbon, mercury, and other substances—is the energy sector. The sector's contribution to global warming is also no longer in doubt. Recent

reports by the United Nations establish with certainty not only the existence of global warming but also the energy sector's contribution to it. The burning of fossil fuels is the principal source of greenhouse gases. One-fourth of the global emission of greenhouse gases comes from the generation of energy and heating used by buildings and industries. Global warming is thus another constraint to increases in energy production; future production must be much cleaner.

The agenda for dealing with this complex energy situation has at least four aspects. First is the promotion of rational and efficient use of conventional energy sources, principally hydrocarbons. Second is to take advantage of mechanisms for emissions trading, such as those envisioned in the Kyoto Protocol, in order to attract the investment and technology necessary for "clean" industrial production in the countries of the region. Third is the diversification of the energy matrix, in order to obtain an adequate equilibrium among different sources, thereby enhancing energy security and eliminating the possibility that resources will be used for political ends. Fourth, there should be incentives for using alternative and renewable energy sources which have minimal environmental impact (for example, bio-fuels, geothermal energy, wind power, and solar and nuclear energy).

The first two items on this agenda are self-explanatory. With respect to the third, the diversification of the energy matrix, the cases of Brazil and Chile are interesting to consider. The two countries are the largest consumers of gas in the region and have opted to broaden their energy matrix by incorporating liquefied natural gas (LNG), which can be imported from many sources internal and external to the region.

Regarding the use of alternative and renewable energy sources, it is important to remember that Latin America is endowed with a great diversity of renewable natural resources: solar, wind, geothermal, biomass, oceanic, etc. These can be converted into clean energy in the form of electricity or liquid fuels such as ethanol and bio-diesel. The use of renewable energy is not new to the hemisphere, and the search for diversification of the energy matrix does not represent a great risk or adventure. One need only mention hydroelectric power, which has been part of the energy matrix of the region for many years and supplies approximately 90 percent of the total electricity needs for a country as important as Brazil.

As I have insisted on previous occasions, nuclear energy constitutes an important option. Our peoples have the right to research, develop, and produce nuclear energy for peaceful ends, and to have access to nuclear fuels at reasonable prices to supply reactors destined for civilian use and particularly for the generation of electricity. The electricity generated by nuclear plants does not

produce emissions laden with sulfur or mercury, nor do such plants emit gases that contribute to global warming, particularly carbon dioxide. Considering the current prices for solid fuels, it is very possible that energy from nuclear plants would be cheaper than energy produced by oil, natural gas, and even renewable sources such as solar, wind, and bio-mass. Nuclear energy constitutes an option available to countries that do not have sufficient sources of energy and are not likely to have them in the future. Nuclear energy can lead to energy self-sufficiency for medium and large countries and foster integration in smaller countries, such as those of the Central American region.

Without energy security there can be no security for development. Energy security, in turn, is associated with the diversification of the energy matrix and especially the use of renewable energy. In pursuing energy security in Latin America, there is no substitute for cooperation and integration. While some leaders in Latin America and the Caribbean seek integration and the complementarities of their energy matrices, there is also ample discussion of the notion of self-sufficiency. But self-sufficiency and integration are, to a certain extent, contradictory, and at some point countries must choose between these two paths. The tools to advance energy cooperation and integration are well known. They include developing interconnectedness among countries to deliver energy resources and electricity.

Finally, I must say that the integration schemes themselves must be plausible. One does not start, for example, by proposing a pipeline that will take at least fifteen years to build or by making promises that are impossible to keep. The success of integration requires taking all the necessary steps, starting with the initial yet fundamental ones, including investments and the harmonization of policies, codes, and standards, that would make Latin America more competitive in world energy markets.

NOTES

1. The United States is not efficient either: Europe has more or less the same economic output as the United States, but a unit of production in Europe requires less than 75 percent of the energy used in the United States.