



Focussing on Latin America's energy development needs

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More than four decades ago, CAF was set up as a small financial institution by six countries from the Andean sub-region. Through the years it has become a leading Latin American multilateral development bank, expanded to 18 countries (16 belonging to the region plus Spain and Portugal). During the last five years it has approved operations in the amount of US\$47 billion and today it is one of the principal sources of multilateral financing for Latin America and the main source for infrastructure and energy development.

The substantial increase in its operations has made possible the financing of initiatives considered strategic by its shareholder countries, as well as those initiatives that strengthen regional integration. Based on a comprehensive development agenda, the Institution works hand in hand with countries to give them support, not only through loans and other financial products, but also through advisory services, sharing with them the knowledge and expertise attained over the last 40 years.

Thus CAF's comprehensive development agenda seeks to achieve sustainable and good quality growth, fostering social inclusion and reducing inequality, while respecting cultural diversity and protecting the environment.

Without a doubt, macroeconomic stability is a necessary condition for everything else to work. But it is not enough if structural changes based on the transformation of the manufacturing base of the country are not also introduced. This implies a transition from a development model that emphasises exploitation of raw materials to one that incorporates technology and innovation to create added value and, consequently, better jobs, better salaries and a better quality of life.

From CAF's perspective, this transition requires, in turn, intelligent international integration; the strengthening of the quality and transparency of institutions, and investment in all forms of capital, including physical infrastructure, social and natural capital.

CAF's approach to energy is derived from these directives and principles, as well as from its unique condition of being a development bank of Latin America and for Latin America, with an important and growing role in the promotion of the region's social and economic development.

These guidelines are aligned with CAF's effort to produce a catalytic effect, through mobilisation of financial resources, organised along strategic lines of action to support countries in energy matters.

Latin America has an abundance of energy resources, both renewable and other, which makes the region especially attractive for investment. However, its energy resources are distributed unevenly among its countries and sub-regions. Regional integration and source diversification, therefore, are important issues in this context. There are important achievements in regional integration. The electrical interconnection, for example, in 20 years has experienced a growth from 500 MW to 5,000 MW. But there is still a lot more to be done in integration.

To give an idea of its energy achievements, challenges and potential, Latin America has 20 per cent of the world's proven oil reserves, four per cent of its natural gas reserves and two per cent of its coal reserves. Venezuela, Mexico and Brazil are the leaders in oil production; Bolivia and Peru in gas; and Colombia in coal.

Half of Latin American electricity output is hydroelectricity. Hydroelectric energy is dominant in most countries, with a total of around 320 GW of installed power, and its development potential is still high. It has been estimated that only 23 per cent of overall potential has been developed, but environmental considerations may hinder its exploitation.

The region has one of the cleanest energy mixes in the world, having, besides hydroelectric energy, great potential in other renewable sources. Biomass is highly relevant in Brazil, both in transportation and in the electricity sector. According to some estimates, the biomass cogeneration potential in Brazil would be enough to feed half of the required increase in the country's generation power for the next ten years. Other countries like Uruguay, Ecuador and Colombia have also shown significant advances in biomass development.

Wind energy has recently been experiencing tremendous growth, led by Brazil, with the execution of successful lease auctions. Mexico and Uruguay have also announced major projects in this area. Other countries may follow their lead. Very conservative forecasts estimate that the wind potential is around 330 GW.

Solar energy has high potential for the medium- and long-term potential, but is still little used. Cost reduction would increase its usage, starting especially in remote and isolated communities and spreading later to cities.

Geothermal energy has been used primarily in Central American countries, but also shows potential in countries such as Bolivia and Chile. Nuclear power, especially new generation reactors, can in the future assume central importance in some countries.

In summary, hydroelectricity, natural gas and oil will be, in the medium term, the driving force of energy supply expansion. The new renewable sources, led by biomass and wind, will gain increasing significance. It is important to stress that no single energy source will solve the energy expansion needs. Access to energy services is good in the region, although not in the rural areas of some countries. So, universal coverage and quality remain a major challenge.

Multiple forecasts indicate that the region faces growing energy demand. Energy demand grew by 31.36 per cent during 1990-2000, and 34.23 per cent during the decade of 2000-2010. Given this situation, there is a need for several countries within the region to increase their energy supply, especially in electricity, natural gas and petroleum products. The region will require significant investment in energy infrastructure over the next 20 years of between US\$1-2 trillion, according to some estimates. Various sources of funding will be needed. Social policies, regulation and tariffs should be coordinated to attend to the payment capacity of users. In the case of subsidies, transparency and targeting resources to specific segments of the population should be promoted. The energy issue also plays an important role in environmental challenges, where it appears both as part of the problem and as part of the solution.

CAF's proactive role in energy

CAF has reserved an important role for the energy sector in its projects and investments. Over the last 15 years, CAF has approved 135 projects, for a total of US\$11.6 billion dollars. In many Latin American countries, CAF is the main financial source for the sector and, overall, it is the main multilateral source of energy financing in the region.

In CAF's portfolio, energy projects are in excess of almost US\$5 billion dollars, which represents around 28 per cent of its total portfolio. Around 50 per cent of the projects are related to electrical generation, among these projects the

majority (65 per cent) are for renewable energy sources, with hydropower in the lead.

According to CAF's forecasts, based on national energy development plans and investment announcements from the private sector, the region requires around US\$71 billion dollars a year in energy infrastructure investment. Within this total the oil sector demands a yearly amount of around US\$39 billion dollars, followed by US\$26 billion for gas and US\$6 billion for the electricity sector.

These increasing requirements of energy supply underline the relevance of a development bank with CAF's credibility. The use of its resources, based on its knowledge of the energy situation of Latin American countries, anticipating demands without imposing an agenda, and stimulating, whenever possible, regional integration, are, in a nutshell, CAF's main challenges in this field. □

Half of Latin America's electricity is hydroelectricity

