

ENERGY
ENVIRONMENT
DEVELOPMENT

LATIN
AMERICA

Latin America has significant conventional and nonconventional energy resources. In terms of conventional resources, the region has the second largest reserve of petroleum in the world. There are also significant natural gas deposits and enormous potential for hydroelectric power. There are also important opportunities for exploiting nonconventional renewable energy sources such as solar, wind, biomass and geothermal energy, still hardly being used.

The exploitation of conventional energy resources has been a very important factor in the accelerated growth the region experienced in the last 15 years and will continue to be so in the future. Greater access to reliable energy supplies at competitive prices is not only a key factor to increase the productivity of industrial and service sectors, but also has direct effects on basic indicators of poverty and household welfare. The exploitation of these reserves represents a source of public income that can be used for critical investments in human capital and infrastructure that can promote the growth and diversification of economies.

Despite these benefits, citizens, governments and the international community have been concerned about the possible environmental costs of exploiting some of these resources, fossil fuels in particular. In effect, the production and consumption of energy generate local, regional and global externalities that must be taken into consideration. International negotiations on climate change, in which the countries of the region are active participants, have reactivated these concerns highlighting the fact that the energy sector, both on production and demand side, is one of the main source of Greenhouse Gas (GHG) emissions. Latin America has a relatively clean energy matrix, mainly thanks to the significant role of hydroelectricity. However, the increasing energy demands of the transportation sector, which is mainly fed by fossil fuels, is a challenge facing the region. But beyond the global negative externalities, there are also potential local and regional costs on the environment that varies from air pollution to contamination of ground waters, as well as social and economic consequences owing to changes in land use resulting, for example, from population displacement.

This is why the development of energy resources in the region must be framed within a Low-Carbon Climate-Resilient Development (LCCRD) strategy, seeking to promote production with added value, in a safe way and keeping the environmental impact as low

as possible. This strategy should include policies that promote energy efficiency on the demand side (energy use in industries, homes, shopping centers, hospitals, hotels, schools and universities, among others) and the supply side (energy generation, transmission lines and interconnection), giving a strong impulse to the production of clean renewable energy sources (e.g. hydroelectricity, solar, wind, biomass and geothermal energy). In the specific case of hydroelectricity it is appropriate to take into consideration the effects of climate change on the water supply of existing hydroelectric plants and new projects, identifying and managing risk and vulnerability to ensure the useful life of the investment.

Taking into account these considerations and the importance of the energy sector for Latin America, CAF-development Bank of Latin America invites the community of academics and experts in this area to present research proposals that analyze the role of energy as a sustainable development factor, addressing some of the themes that are described in detail below:

1. Analysis of energy consumption patterns in Latin America and challenges of energy self-sufficiency and integration. The dynamic of different energy sources for home and industrial consumption. What have been the determinants of these consumption patterns? Economic growth, prices, subsidies, technological change, better access to investment capital, etc. Analysis of policies, regulations and institutional frameworks for energy efficiency in diverse sectors: electricity, transportation, and industrial and home use. The role of taxes, quantitative regulations, policies that emerge from a focus on behavioral economics. The consequences of changes in energy-related taxes/subsidies on the poor and income distribution, and its effects on energy consumption. Analysis of successful cases of policies and/or programs to encourage energy efficiency. Energy efficiency policies and commitments to reduce GHG emissions assumed through international agreements, such as the Nationally Determined Contributions (NDC) and the COP21 Paris agreement. The role of the private sector and the supply of technology in different sectors for energy efficiency.
2. The promotion and use of renewable and clean energy sources (e.g. solar, wind, biomass, and geothermal). The impacts of financial and tax incentives on production. The market for green bonds. Possible trade-offs between the use of biomass for energy production and food costs and deforestation. Analysis of successful cases of policies and/or programs to promote renewable energy sources. Public-private cooperation to promote technological innovation in this sector. The transition to cleaner production matrix and regional commitments to reduce greenhouse gas emissions (Nationally Determined Contributions (NDC) and Paris agreement). Local and regional environmental impacts of using conventional versus renewable energy sources.

The above indicated list of themes is not exhaustive, and other question/aspect of relevance for the themes of energy and climate change, environment and development in Latin America will also be considered. **The proposal should be sent to**

concursoenergia@caf.com no later than June 30, 2016. The authors of the selected proposals will be notified of our decision on July 20, 2016, and will have until November 30 to send the first working draft. A seminar will be held in December 15 to discuss the preliminary versions of the selected works. The seminar will take place in a city to be determined within the region. A maximum of four research proposals will be awarded with funding and each one will receive \$US 15,000 to fund their research. The final version should be sent by March 1, 2017, and will be part of CAF series working papers, but the authors will also be free to publish their works in academic journals.

There is no specific format required to present the proposal, nor limits to its length, but the authors have to try to keep it around 5 pages. Clarity is required in presenting the research question and the methods and data to be employed in the analysis. Proposals should include an executive summary, methodological approach, description of the data and sources. Priority will be given in the selection of proposals to the novelty of the work, its methodological rigorousness and policy relevance for Latin America. The jury that will assess the proposals will be composed of Fernando Navajas, Francisco Monaldi, Fernando Tudela, Osmel Manzano, Ligia Castro, Mauricio Garrón, Pablo Sanguinetti and Hamilton Moss. The evaluators may require clarifications or further information on the proposal before taking a final decision.