

SITUATION AND PERSPECTIVES ON ENERGY EFFICIENCY IN LATIN AMERICA AND THE CARIBBEAN



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AMERICA AND THE CARIBBEAN**

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Executive Summary

The purpose of the present study is to analyse the situation and perspectives for actions and instruments associated with energy efficiency in the 26 Latin American and Caribbean countries that are members of the Latin American Energy Organization (Organización Latinoamericana de la Energía, or OLADE).

The study focused on determining the following aspects of each country's national energy programmes: (i) recent advances in policy, regulatory and institutional frameworks; (ii) key actors in energy efficiency and their effective roles; (iii) resources and funding mechanisms for energy efficiency programmes; (iv) results of energy efficiency programmes to date; and (v) lessons learned.

In evaluating *recent advances in policy, regulatory and institutional frameworks*, it would be unrealistic to compare the results of energy efficiency programmes in Latin America and the Caribbean with those successfully executed in countries that are more highly developed and/or that have a history of energy efficiency policy dating back to the first oil shock in the 1970s. Thus, programmes in Latin America and the Caribbean should not be measured against those of countries like Germany, the Netherlands, the United States, Japan, Australia.

Analysis of the 26 countries shows differences, from one country to another, among the regulatory frameworks associated with energy efficiency. Thus, it is difficult to establish “common denominators” for this parameter in the region. In many of the countries, however, there is a trend toward creating (or, in cases where they already exist, strengthening) national energy efficiency programmes, and providing them with the legal and regulatory support necessary to further the government's policy decisions in this area. These programmes are the result of public leadership, with the degree of private sector participation varying from country to country.

Analysis of the *key actors in energy efficiency and their effective roles* shows that public sector activities, projects and programmes for promoting and developing energy efficiency are overseen by ministries, national commissions and/or energy management secretariats, which have varying degrees of visibility and influence, depending on the particular country.

In Brazil, the principal programmes in operation are managed by energy companies (PROCEL-Elektrobras and CONPET-Petrobras), though they coordinate their activities to conform to the policies of the country's Ministry of Mines and Energy. Energy regulators in the region responsible for electricity or fuels—with the exception of Brazil's ANEEL—have practically no role in promoting energy efficiency. Moreover, in only a very few cases do energy distribution firms promote energy efficiency among their

clients, and when they do, their efforts are aimed at reducing peak demand. Few firms have a corporate policy that calls for demand management.

The wide range of public and private actors involved in the region's energy efficiency programmes appears to be the result of four main factors: (a) political support from government; (b) continuity of efforts and institutional structures; (c) access to funding; and (d) capacity for promoting and providing information on energy efficiency measures.

With regard to *resources and funding mechanisms for energy efficiency programmes*, in the vast majority of countries funds for promoting and developing energy efficiency come from national budgets. This means that, except in countries with active energy efficiency policies, there are serious limitations on the mission.

Most of the 26 countries covered in this study face major challenges in obtaining resources to promote energy efficiency. Chile, which recently saw a large increase in the budget of its national programme—the National Energy Efficiency Programme (Programa País Eficiencia Energética, or PPEE)—has been an important exception.

The study also attempts to analyse the *results of energy efficiency programmes* to date. For each country, the depth at which the results could be evaluated depended on the quantity and quality of available information. Within those constraints, information from the parties involved, whether direct (from interviews or reports) or from relevant websites, was assumed to be accurate.

Analysis of the available information suggests that the quality of the statistics and performance indicators that make it possible to quantify results is still inadequate (except, with some limitations, in the cases of Mexico and Brazil). Due to these shortcomings in quantity and reliability of information regarding specific results, it is impossible to draw concrete, accurate conclusions (excepting, again, with regard to Mexico and Brazil).

In terms of *lessons learned*, except for Mexico and Brazil no evaluation documents were found for the countries whose energy efficiency programmes have compiled lessons learned. There has been little systematization—indeed, no institutionalized systematization at all, in some cases—of the lessons emerging from national experiences and initiatives.

Reports and records of consultants' personal experiences working on energy efficiency in the various countries are somewhat haphazard. While these documents provide some indications of the results of the programmes, they do not constitute a well-organized and institutionally reliable set of national statistics. This appears to be one of the weakest points in the countries' institutions, in terms of energy efficiency efforts undertaken within the national policy framework.

One lesson that does emerge clearly from the region's experience is that the mere existence of energy efficiency legislation in no way guarantees that there will be positive effects on (a rational reduction of) energy demand. This will not occur unless energy efficiency activities, projects and programmes that are adapted to national realities are developed and systematically implemented. The State has difficulty monitoring—and, where the law provides, sanctioning—behaviours that do not conform to legal requirements. Economic and cultural barriers in Latin American and Caribbean societies hinder the full enforcement of energy efficiency standards, while a lack of human resources (due to budgetary constraints) means that monitoring and enforcement systems are inefficient.

The present study compiled the following lessons learned. While these do not correspond to specific countries, they are certain to have broad applicability in many of the region's countries:

- Achieving concrete results in rational and efficient energy use requires institutions capable of designing, implementing and operating programmes on a stable, ongoing basis.
- There continues to be great potential for energy saving. Overall, 20-25% of energy consumption could be eliminated, through measures that would rapidly pay for themselves.

- Policy signals have been insufficient to induce energy-saving behaviours and actions among users.
- Capacity building efforts should be undertaken to strengthen institutions that are already operating, before creating new institutions.
- Efforts are needed to promote the development of decentralized institutional capacities (at the state, provincial and municipal levels) for formulating energy efficiency programmes.
- Private funding must be more closely articulated with energy saving opportunities.
- Efforts to educate, train and inform the public should be increased.
- Implementing efficiency standards increases the potential for saving, by providing information to consumers.
- On average, 75% of the refrigerators in use today are approximately half as efficient as new refrigerators entering the market. This represents a great opportunity for energy saving through replacement of these older products.
- Cogeneration for industry and large tertiary-sector facilities has huge potential that has remained unexploited due to the lack of regulatory incentives.
- National energy efficiency programmes require funding mechanisms designed specifically to address and coordinate the massive number of investment decisions required by these programmes.
- It is essential to know how to quantify opportunities, without spending more, in doing so, than is saved in the process.
- Regulatory frameworks are lacking and/or weak.
- There need to be more strategies for providing education—and for building awareness and promoting energy saving—for people in government and in the education and business sectors, as well as for individual users.
- There is a scarcity of national/regional technical personnel dedicated to energy efficiency.
- There is a lack of funding for equipment and project development.
- The market for energy services firms remains under-developed.
- There is little involvement on the part of electricity and fuel providers.
- Programmes for institutional strengthening are lacking.
- Supply-side efficiency has been shown to work: the sector's deregulation created

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