



Tools, Models and Networking

2019 International Forum on Long-term Energy Scenarios for the Clean Energy Transition

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Nos une la **energía**
Energy joins us

Latin American Energy Organization (OLADE)



OLADE is an intergovernmental public body constituted on 1973.

The Organization is a body of cooperation, coordination and technical assistance.

Members: 27 countries of Latin America and the Caribbean.

Mission:

Contribute to the integration, sustainable development and energy security of the region, advising and promoting cooperation and coordination among our members.

OLADE's input as support for Energy Planning

TOOLS



INFORMATION





The planning process

In the energy planning process, the analysis must travel a reverse path to the energy flows, starting from the final demand, both primary and secondary energy, through the transformation centers and the primary energy demands that feed them, until the evaluation and quantification of the resources available in the country.



Diagnosis

Involves a comprehensive analysis of the energy sector. It consists of a series of partial analyzes of energy production chains and their interrelations at different levels



Information management

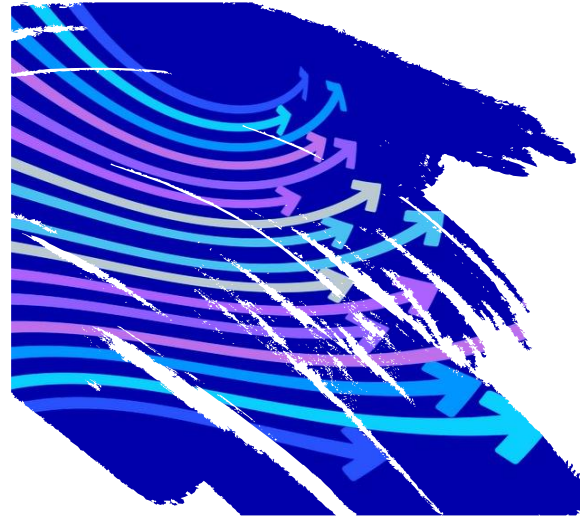
Dimensions: Physical, Economic, Environmental, Social, Political, Technological, Legal/Institutional



Scenario building

It is the imaginative construction of the relevant structural context that will frame the energetic reality under study, in a certain future horizon.

It requires the identification of causality relationships, dependent and independent variables and hypotheses (of the global, regional and national context).



The Prospective

Prospective analysis is understood as the operation that makes possible an exploration of possible futures.

Electric sector/Oil sector and natural gas/Renewable energy supply

It is instrumentalized through: Econometric methods, Analytical methods, Optimization methods, Simulation methods.



Use of models

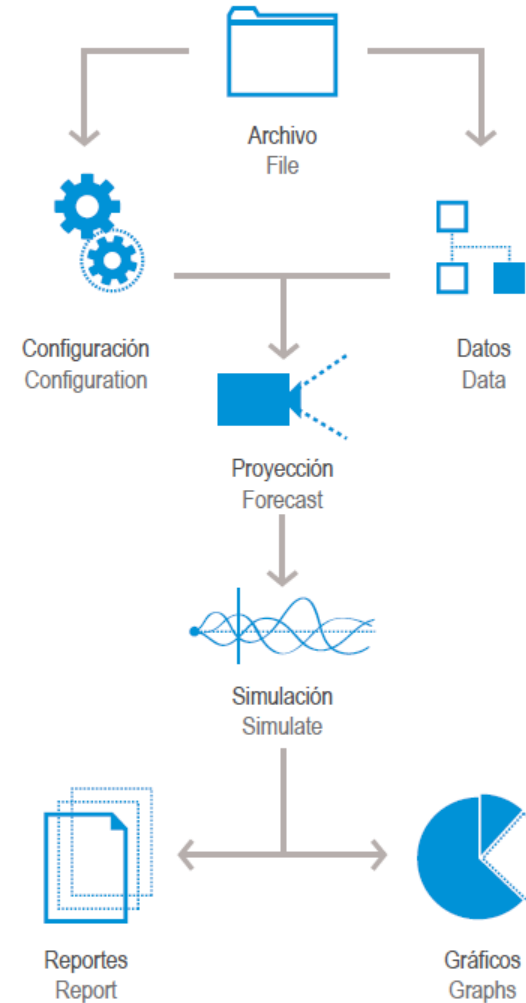
The numerous models used for energy planning are presented and the potentialities of the most used among them are described: RETScreen / SAM / HOMER / WASP / EEPSS / LEAP / MESSAGE / ENDEP / SUPER-OLADE / SAME-OLADE

The OLADE energy prospective model



The **SAME** is a simulation model of technical coefficients that allows the construction of prospective energy demand and supply scenarios for a given study horizon.

It provides an executive view of the impact of the application of a specific energy development policy on the different sustainability indicators of the energy matrix.



Energy Policy and NDCs in Latin America and the Caribbean

- Forecast Study for the 2030.
- Analyzes the current energy policies and national expansion plans in order to develop different scenarios for the development of the energy matrix in the LAC sub-regions.
 - Business as usual scenario (based on historical data)
 - Current Policies scenario (based on national expansion plans from the countries)
 - NDCs compliance scenario (with a major diversity of energy sources in the matrix).
- Main lessons learned:
 - The current policies scenario is not able to comply with the NDC's commitments made when ratifying the Paris Agreement.
 - Need of a broader intake of renewable energy sources and stimulus to energy efficiency.
 - Oil and derivatives experience to decline in the matrix, although they continue to have significant weight in the BAU and CPS scenarios.



<http://biblioteca.olade.org/opac-tmpl/Documentos/old0423.pdf>



- OLADE's annual publication holding energy statistics of each of its 27 Member Countries.
- Since 2018, this publication includes a new section on energy forecast and scenarios.
 - 2040 Horizon:
 - This section concludes that electricity has the greatest growth in the end of all sub-regions (except for the Andean Zone)
 - Increasing tendency to use renewable energy sources.
 - Eventhough NCRE have an increased uptake in the energy matrix, they are still marginal.
 - 24 years are still short to foresee that alternative energies will offset fossil sources in an important way.



Redes especializadas de Latinoamérica y el Caribe

Is the platform of technical networks of the Energy Sector of Latin America and the Caribbean, is a space for dialogue and exchange between specialists in eight sectors: Hydrocarbons,, Energy and Access, Gender and Energy, Renewable Energy, Energy Efficiency, Climate Change, Electricity, and recently, Planning and Energy Integration.



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Regional Technical Forum for Energy Planners



UNITED NATIONS



The "Planning and Energy Integration" network was created in the context of the Regional Technical Forum of Energy Planners convened by ECLAC with the aim of generating a technical exchange platform to strengthen cooperation among countries on issues related to regional energy planning, integration and scenarios building.



ORGANIZACIÓN LATINOAMERICANA DE ENERGÍA | LATIN AMERICAN ENERGY ORGANIZATION | ORGANIZAÇÃO LATINO-AMERICANA DE ENERGIA | ORGANISATION LATINO-AMERICAINE D'ENERGIE

Thank you

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A decorative graphic in the bottom right corner consisting of a grid of blue and green dots that forms a wavy, upward-sloping shape.