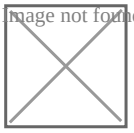
Publicado en *Ministerio de Energía y Minas* (https://www.minem.gob.cu)

Goals and Indicators



Goals until 2030

- Reach 24% electricity generation using renewable energy sources.
- Install 755 MW of sugarcane and forest biomass, from the construction of 19 bioelectric plants.
- Install 633 MW in 13 wind farms.
- Install 700 MWp in photovoltaic solar parks.
- Install 56 MW from the construction of 74 small hydroelectric plants.
- Install 800 MW of thermal generation.
- Generalization of the free sale of LPG to 100% of the provincial and municipal capitals.
- Increase the resources and reserves of mineral raw materials that the productive sector demands and their efficient use.
- Increase the geological knowledge of the national territory.
- Create the National Council of Geology.
- Increase the production of nickel plus cobalt with the execution of new projects: Cajalbana in Pinar del Río, San Felipe in Camagüey, Black and Red Colas of Moa and Nicaro and management and transportation of mineral from Pinares de Mayarí to Moa.

Indicators

Starting with the events of the first years of the 70's with the reduction of oil supplies and the doubling of the price of crude oil, it acquired a new interest that is evident in the development of what has come to be called the "energy analysis".

In energy studies they have paid greater attention to assessing future supply possibilities and the use of all forms of energy as a whole. Sustainable development, as a new concept of economic advance, is presented as a process where energy policy must be formulated in a way that achieves development that is sustainable and sustainable from an economic, social and ecological point of view.

The foregoing has repercussions on all aspects related to energy resources and in particular on the statistics related to this issue.

Having and properly using the main variables related to the energy economy is decisive to face the challenges of the present and the future. At the national level, the characteristics and structures of the country's Energy Balance, with its high dependence on imports, the significant participation of fossil fuels in the national energy supply and the problems of efficient use and conservation of energy, among others, they affect the development goals that the country supports.

Below is the methodological definition of the main indicators that appear in the chapter.

Exploitation of Mines and Quarries: Includes the extraction and benefit of minerals that are found in the earth's crust in their natural state, such as: oil and natural gas, metallic minerals and other non-metallic minerals. It includes the exploitation of underground and open-pit mines, the operation of wells and all complementary activities to prepare the raw minerals, such as crushing, preparation and beneficiation, which are generally carried out at the extraction site or in its vicinity to improve quality and facilitate transportation and storage.

Ore: Mineral from which a metal is extracted, as it is found in the deposit.

Mineral: It is defined in Mineralogy and Geology, as the chemical compounds and elements formed by chemical and physical processes and that are generally found in a solid state in nature, except for some that, like mercury and water, are in a liquid state. All the rocks that make up the earth's crust are made up of minerals. More than 3 000 species of minerals are currently known, most of which are characterized by their chemical composition, crystal structure and physical properties. They can be classified according to the chemical composition, type of glass, hardness and appearance (color, brightness and opacity).

Deposit: A mineral deposit of economic value suitable for exploitation.

Energy
National production of primary energy: It refers to the process of extraction, capture or production (as long as it does not involve energy transformations) of natural (or primary) energy carriers, regardless of their characteristics.
Natural energy carriers are those "provided by nature", either directly, such as hydroelectric, wind and solar energy, or after going through a mining process, such as oil, natural gas, mineral coal, minerals. fusing and geothermal energy, or through photosynthesis, as is the case with firewood and other plant and animal fuels.

The natural carriers that occur in Cuba and for which compiled and systematic statistical information is available are:

- Petroleum
- Natural gas
- Hydropower
- Firewood
- Cane products (basically bagasse)
-

In the particular case of Hydropower, its production levels are estimated from the Electric energy produced by the country's hydroelectric plants, currently operated by the Electric Union.

Regarding firewood, only the commercial flows of this carrier are included, absent the volumes that, due to irregular and uncontrolled appropriation, originate in practice.

Secondary energy production: The products resulting from the transformations or elaboration from natural energy carriers (or in certain cases from another already elaborated carrier) are called elaborated (or secondary) carriers.
Manufactured energy carriers are electricity, the wide range of petroleum derivatives, charcoal, denatured alcohol and manufactured gas (or city gas).

The group of petroleum derivatives includes a wide variety of useful energy products obtained from the processing of petroleum in refineries, among which are gasoline, turbo fuels and diesel fuels (diesel) of extraordinary universal demand.

The main products obtained in Cuba from oil refining are the following:

- Asphalt
- Oil and gas refinery coke

- Diesel
- Fuel oil
- Liquefied gas (LPG)
- Gasolines and naphtha (different types)
- Kerosene
- Solvents
- Turbo fuel

Most lubricants are produced from imported base oil processing and not from petroleum as such. There are national capacities that make it possible to obtain certain cuts of basic oils from petroleum refining.

Consumption: It refers to the total consumption (or gross consumption) regardless of the use to which they are destined; In other words, the amounts used properly to obtain energy (final energy use), those used to be transformed into other fuels (use in transformation) and those used for non-energy purposes are included. They contain, except in electricity, the losses in transportation and storage.

Consumption covers all sectors of the national economy, including the private sector and households. Also included in consumption is that acquired by Cuban ships and aircraft in international transit.

Gross generation of electrical energy: Refers to the generation of electrical energy, including the input, from all public service power plants or generating facilities from other producers.
Public service plants are those whose objective is the production, transmission, block sale or commercialization of electricity.
Autoproducers are entities that produce electricity as a by-product of another activity, with the aim of covering their own consumption. Basically, they are plants designed for cogeneration belonging to entities in the industrial sector. The largest self-producer of electricity is the sugar industry from cane bagasse.

Generators: Equipment made up of a primary internal combustion engine and a synchronous alternating current generator mechanically coupled to produce electrical energy. They can consume fuel oil, diesel or natural gas. These devices can be synchronized with the National Electro-Energy System (SEN) to solve power deficits and contingencies, isolated (belonging to the Electricity Union (UNE)) to supply electricity in places where the National Electricity Network or emergency does not reach , located in an entity to operate in case of failure, disconnection or insufficiencies of the electric fluid coming from the National Network.
Specific fuel consumption (base 10 000 kcal / kg.): It refers to the fuel consumption per unit of electrical energy generated in public service companies, considering all the fuels used in this production.

Installed power: It refers to the maximum continuous active power that a generating block or unit is capable of delivering measured at the generator terminals.
The installed capacity of a power plant or a company is determined by the sum of the capacities installed in all its generating units.

Electricity consumption: It refers to the electricity consumption registered by all sectors of the economy (including private) and regardless of the source of origin (public service or autoproducers). It also includes the input in generation and the losses, therefore, the total consumption is equal to the total gross generation of the country.

Average monthly consumption: It is the average consumption per month that public entities or the residential sector have, based on what is billed to consumers by the Electricity Union in the year.

Electrification level: Represents the percentage of users with electricity, regardless of the access road.

Selected Indicators 2018 in the 2019 edition by the ONEI

URL: https://www.minem.gob.cu/en/goals-and-indicators