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**Country paper:**

**PARAGUAY**

English version



UNITED NATIONS  
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## TRADE IN ENERGY SERVICES IN PARAGUAY AND OBJECTIVE FOR SUSTAINABLE DEVELOPMENT 7

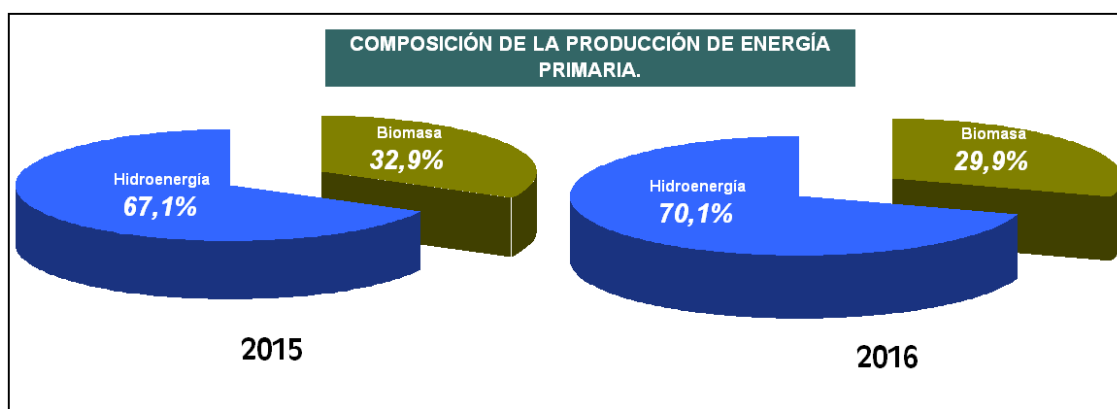
### *GUARANTEE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL RENEWABLE ENERGY RESOURCES*

The country is one of the main producers of renewable energy, in 5th place with 9 kWh per capita; and currently has the highest per capita surplus in the world in electricity production, with 6.4 kWh per person. In total, 53 GWh produced in renewable energies, with an internal consumption of only 8.5 GWh.

Renewable energy in Paraguay has a significant weight in the composition of its energy matrix.

The 100% of the primary energy produced in Paraguay corresponds to renewable energy. It is also remarkable that 100% of the energy exports in Paraguay originate from renewable sources of energy: electricity generated in hydroelectric plants and charcoal produced in coal bunkers. This means that around 70% of the energy supply nationwide constituted by renewable energy sources.

Hydro energy is the main national energy resource. The power generation capacity from hydropower surpasses 45,000 GWh / year, and is one of the largest in the world, in terms of electricity generation per inhabitant (9,000 kWh per inhabitant).



FUENTE: Elaboración DPE-DRE en base al Balance Energético Nacional 2015 y 2016

According to estimates of the Vice Ministry of Mines and Energy, our country will use all of its available energy around 2023, which places the urgent need to plan and encourage the identification of new energy sources with a long-term vision.

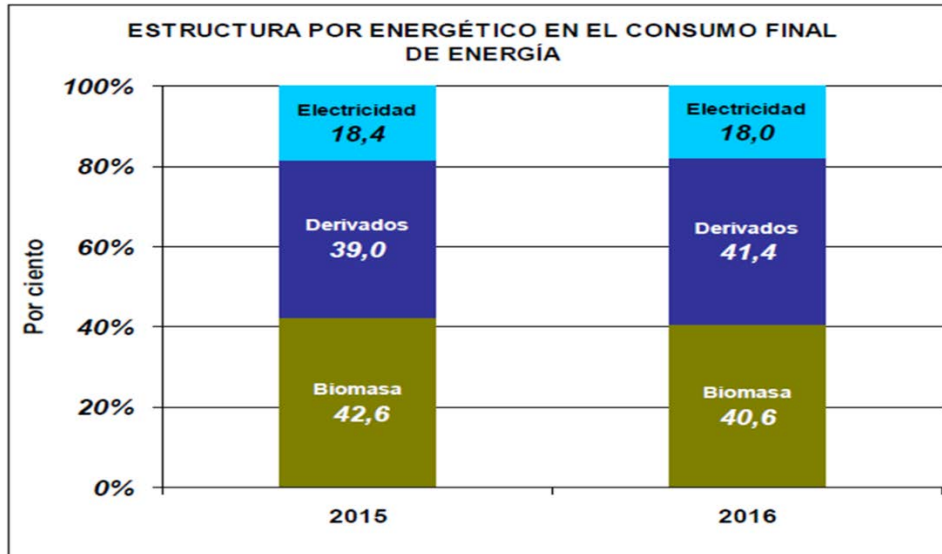
#### ENERGY OFFER

The supply of energy nationwide in 2016 had a growth of 8.7% over 2015. The behavior observed in the supply of energy nationwide determined by the growth of almost 19% in the production of hydropower and a striking fact is the growth of 7.8% in imports of petroleum products.

On the other hand, the production of primary biomass grew by 3.8% because of higher requirements in the availability of sugar cane products for the production of alcohol for use in mixtures in the transport sector.

## ENERGY CONSUMPTION - ENERGY MATRIX

On the side of final consumption, renewable energy represents a share of almost 59% of total final consumption. However, since Paraguay is a producer of renewable energy, there is a high dependence on oil derivatives, including LPG (Petroleum liquid gas) and liquid fuels.

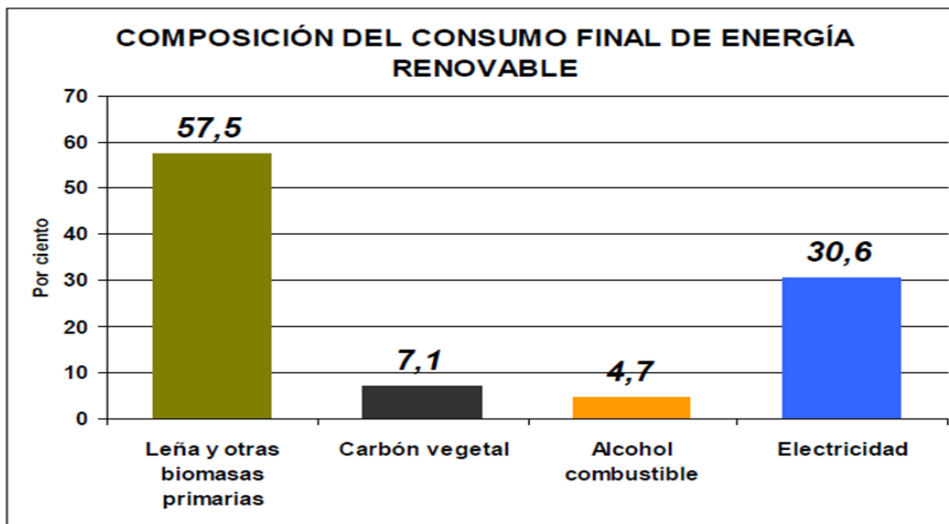


FINAL

FUENTE: Elaboración DPE - DRE en base al Balance Energético Nacional 2015 y 2016.

## CONSUMPTION OF RENEWABLE ENERGY

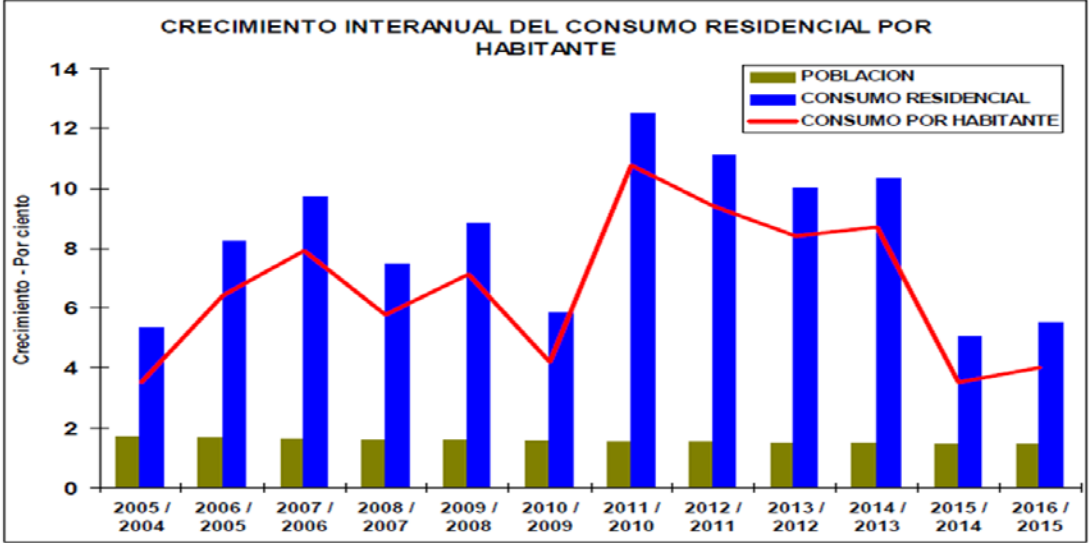
Of the total final consumption of renewable energy, 30.6% corresponds to electricity and the rest to primary biomass and products derived from biomass such as charcoal and fuel alcohol, mixed either with motor gasoline or in direct use. The production and consumption of biodiesel is incipient, but with great perspectives.



FUENTE: Balance Energético 2016.

## ELECTRICAL ENERGY CONSUMPTION

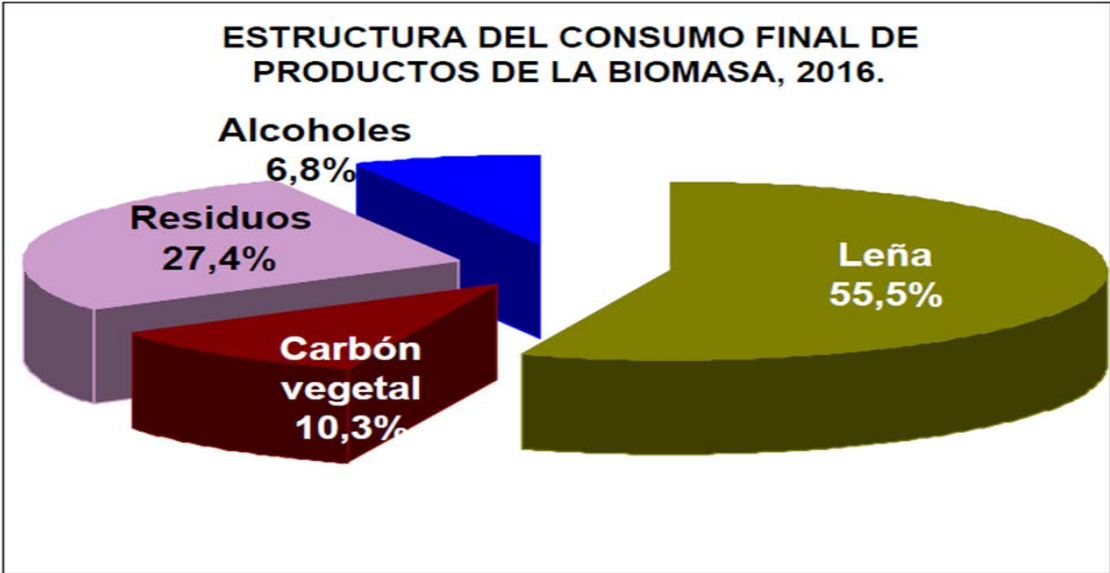
The consumption of electricity in the residential sector is 43.5% having high participation of the total of the structure and therefore, which determines the pattern in the behavior of the same one, recorded a growth of 4.0% in the electric power consumption index residential per inhabitant, slightly higher than that observed in the previous year (3.5%).



FUENTE: Elaboración DPE-DRE en base al Balance Energetico Nacional serie 2004 - 2016. Datos de poblacion: Paraguay Proyección de la Población Nacional, Areas Urbana y Rural por Sexo y Edad, 2000-2025. Revision 2015. DGEEC.

**CONSUMPTION OF ENERGY FROM BIOMASS**

Estimates of consumption of biomass products (firewood, charcoal, agro - forestry residues and alcohols including those destined for gasoline blends) grew by 1.7%, a behavior slightly higher than that recorded in the previous year.



FUENTE: Elaboración DPE - DRE en base al Balance Energético Nacional 2016.

The consumption of 6.8% of Alcohol that is observed in the graph, corresponds to what is used for the automotive sector, which includes the quantities destined to the mixtures with motor gasolines.

## **PERSPECTIVES OF THE ENERGY SERVICES SECTOR TO REACH THE OBJECTIVE FOR SUSTAINABLE DEVELOPMENT 7**

### **ENERGY POLICY OF PARAGUAY**

#### **DECREE No. 2794/2014**

"By which approves the NATIONAL DEVELOPMENT PLAN PARAGUAY 2030"

Within Strategy 24, VALUATION OF ENVIRONMENTAL CAPITAL

Promotion of the environment as economic value and cultural heritage within the framework of a sustainable economy.

Objective: Increase the consumption of renewable energy by 60%. (Annual% of total national energy consumption) and Reduce fossil fuel consumption by 20% (annual% of total national energy consumption)

**DECREE Nº 6092/2016** "By which the Energy Policy of the Republic of Paraguay is approved."

It includes a "STRATEGIC VISION" with "Superior Objectives" and "Specific Objectives" by Sector:

1. ELECTRICAL with the Subsector "Bi-national Hydroelectric Entities and Electric Integration";
2. BIOENERGY AND OTHER ALTERNATIVE SOURCES (a) Contribute to energy security, development and diversification of national sources, b) Promote the use of bioenergy and other alternative sources in a sustainable manner and with criteria of efficiency, competitiveness and quality, and c) Promote the generation of jobs and economic value linked to the subsector. "); and
3. HYDROCARBONS reduce dependency and consumption of fossil fuels.

Five are the Superior Objectives contained in the Energy Policy of the Republic of Paraguay:

1. Guarantee energy security with criteria of self-supply, efficiency, minimum cost, with socio-environmental responsibility, which accompanies the productive development of the country.
2. Ensure access to quality energy for the entire population with attention to consumer rights.
3. Use national energy sources - hydroelectricity, bioenergy and other alternative sources, as strategic resources to reduce external dependence and increase the generation of greater national benefit.
4. Consolidate the position of Paraguay as the axis of regional energy integration based on the sustainable use of its natural resources and its strategic geographic location.
5. Promote, in the population, the understanding of the importance of energy and its sustainable use as a factor of integral development.

#### **LAW Nº 4601/2012 "OF INCENTIVES TO THE IMPORTATION OF ELECTRIC AND HYBRID VEHICLES AND FOR THE INSTALLATION OF RECHARGING SERVICE STATIONS"**