

Renewable Energy Policy Brief

PARAGUAY

JUNE 2015

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This publication should be cited as: 'IRENA (2015), *Renewable Energy Policy Brief: Paraguay*; IRENA, Abu Dhabi'.

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Acknowledgement

This brief benefited from valuable comments by the Vice-ministry of Mines and Energy at the Public Works and Communications Ministry of Paraguay.

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1. Policy

In November 2014 Paraguay launched a process to design the National Energy Policy. The process, which is expected to last until November 2015, will define Paraguay's energy mix in the short, medium and long-term (25 years) and considers electricity, oil, gas and "all alternative energies".

Electricity

Electricity generation in Paraguay is dominated by the large binational hydropower projects of Itaipu (Brazil-Paraguay, 7000MW¹ for Paraguay) and Yacyreta (Argentina-Paraguay, 1600MW for Paraguay), which provide over 99% of the country's electricity and generate a large electric surplus for export. The treaties for those projects are reflected in Law 389/1973 (Itaipu) and Law 433/1973 (Yacyreta).

The national public utility (ANDE) had the monopoly for electricity in Paraguay (Law 966/64) until 2006, when Law 3009/06 on independent producers allowed for independent generation and transport of electricity for national consumption or export. This included generators from renewable energy resources except from hydropower plants larger than 2MW. Independent producers need to apply for a generating license. The **tariff** is determined on a case-by-case basis during the licensing process.

Non-discriminatory **grid access** was established by Law 3009/06, which set transport fees at USD 0.01 per km per MWh² of capacity contracted. Self-generators can sell excess electricity at 70%³ of their prevailing electricity purchase tariff. Decree 9829/2012 regulated Law 3009/06.

Environmental impact assessment is regulated by Law 294/93 and, where relevant, Law 352/94 of 2009 on protected areas.

Transport

The legal framework for biofuels in Paraguay is the 2005 *Biofuels Promotion Law* (Law 2748), regulated by Decree 10703 of 2013⁴. The law established **blending mandates** for biofuels. Currently, Paraguay has blending mandates of 24% in volume for bioethanol⁵ and 1% for biodiesel.⁶ The mandate must be fulfilled with local biofuel except in case of officially declared shortage. Previously, Decree 2162 of 1999 allowed for blending of bioethanol up to 20%

Fiscal incentives provided by the *Biofuels Promotion Law* include reduced VAT and exemption from import duties on equipment⁷. Additionally, the government is prohibited from levying any fees to biofuel producers for measurement, production, distribution, sale or other concept. Decree 12240 of 2008 regulated the reduced VAT, exempted flexi-fuel cars from import duties and exempted biofuels from an internal fuel tax.⁸ Decree 3667 of 2010, superseding Decree 12240 of 2008, eliminated the internal fuel tax exemption. Decree 10761 of 2013 further reduced VAT for bioalcohol.

Decree 10762 of 2013 established a **biodiesel fund** dedicated to the promotion of biodiesel. The fund, financed by a levy of <0.01¢USD/liter⁹ on sales of diesel, was intended to support, until 31 December 2014, the purchase of biodiesel at the reference prices established by Decree 10703 of 2013.

Technical specifications for biofuels were established by Decree 7412 of 2006 and later amended by Decree 4952 of 2009 to allow for E85 biofuel. Both decrees were consolidated in Decree 10703 of 2013.

Public procurement of flex-fuel cars was promoted by Decree 3667 of 2010.

Biofuel production was initially exempted from **environmental impact assessment** by the

¹ <http://www.ande.gov.py/generacion.php>

² Established in USD in the law

³ 60% if interruptible power

⁴ Initially Decree 7412 of 2006, later superseded.

⁵ Ministerial Resolution 162 of 2009

⁶ Ministerial Resolution 326 of 2009

⁷ Art. 15 grants the benefits from the general fiscal incentive laws Law 60/90 and Law 2421.

⁸ Impuesto Selectivo al Consumo

⁹ 4 PYG/liter

Biofuels Promotion Law, although that exemption was later eliminated by Law 3163 of 2007.

Heating

The heating and cooling sector in Paraguay, including at the domestic, commercial and industrial¹⁰ levels, is dominated by biomass, mostly firewood, wood chips and charcoal.¹¹ Despite biomass accounting for about half of primary energy consumption in Paraguay¹², development has happened mostly on a commercial and least-cost-option basis.

The formulation of the National Energy Policy seeks, among others, to develop a reference framework for the determination of the

actions allowing the sustainable and efficient use of bioenergy sources in Paraguay.

Energy Access

In 2008, the Law 3557 approved the Euro Solar project, financed by the European Union, which aimed to supply 45 communal centers (more specifically public schools in isolated communities) with electricity through photovoltaic panels.

In 2011 Decree 6417 provided public financing for a project of Energy Access with solar energy for isolated indigenous settlements. This project resulted in the electrification of 35 indigenous communities¹³.

¹⁰ Including steel-making, brick and ceramic manufacturing, and agro-industry.

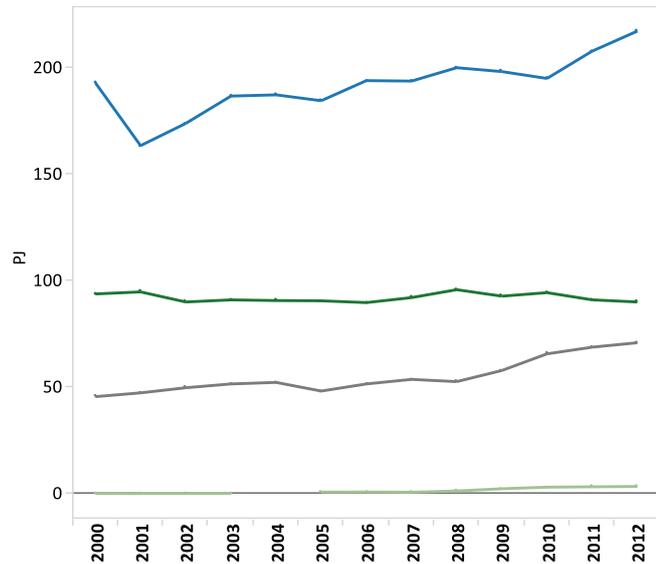
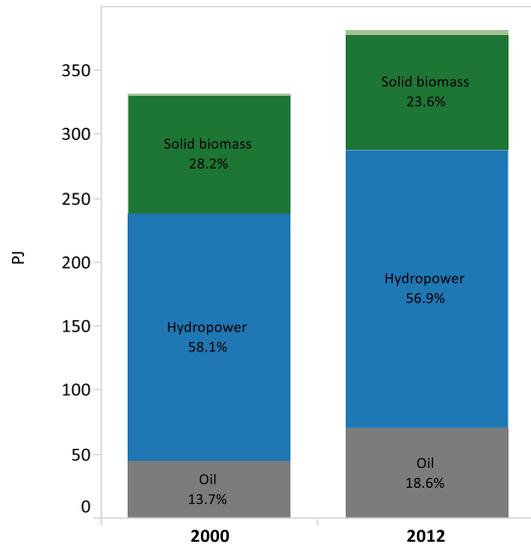
¹¹[http://www.ssme.gov.py/vmme/pdf/biomasa/base/37.%20Produccion%20y%20Consumo%20Biomasa%20\(1\).pdf](http://www.ssme.gov.py/vmme/pdf/biomasa/base/37.%20Produccion%20y%20Consumo%20Biomasa%20(1).pdf)

¹² http://www.ssme.gov.py/vmme/index.php?option=com_content&view=article&id=1254&Itemid=747

¹³http://www.ssme.gov.py/vmme/index.php?option=com_content&view=article&id=1629&Itemid=748

2. Statistics

Total Primary Energy Supply



Excludes electricity trade

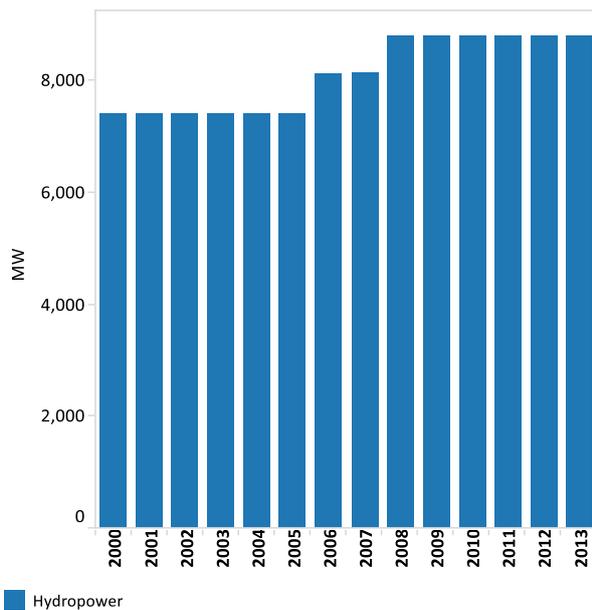


		Total Primary Energy Supply	Share of renewables
2000	Total	161.2 PJ	
	Of which renewables	286.3 PJ	177.6%
2012	Total	209.2 PJ	
	Of which renewables	310.1 PJ	148.2%

	Total Primary Energy Supply	Share in total renewables
2012	Liquid biofuels	3.4 PJ 1.1%
	Solid biomass	89.9 PJ 29.0%
	Hydropower	216.9 PJ 69.9%

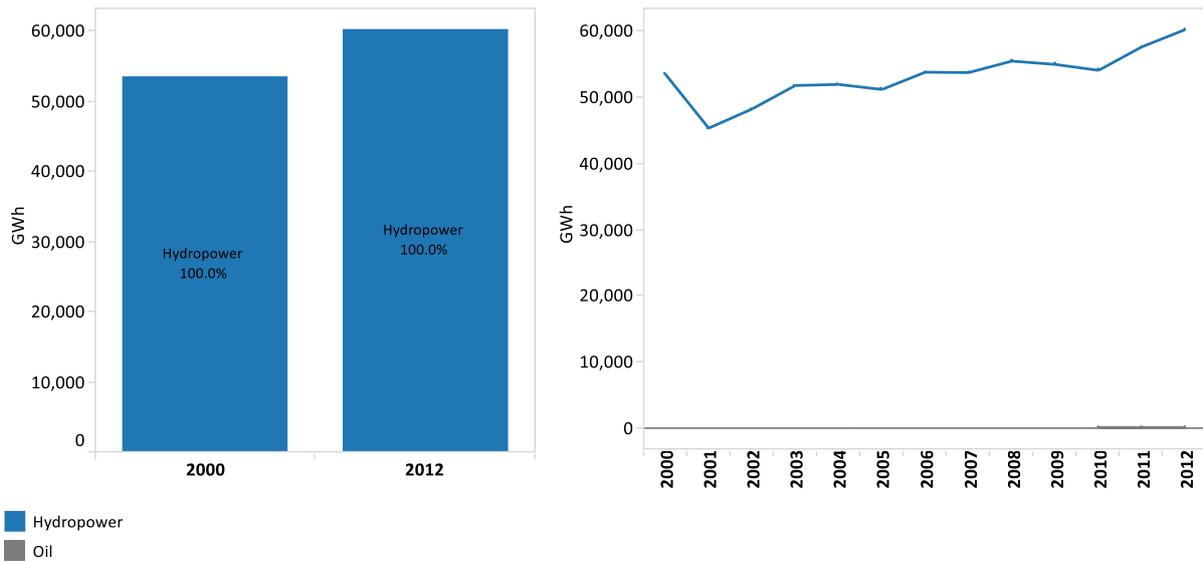
Total includes electricity trade

Renewable Power Capacity



Hydropower

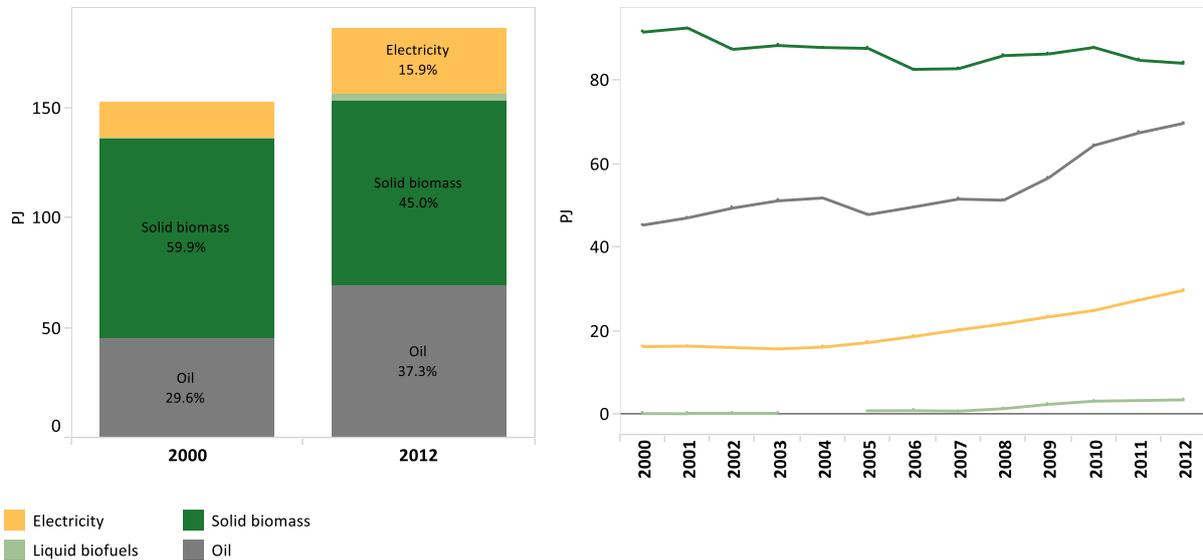
Electricity Generation



		Electricity generation	Share of renewables
2000	Total	53,492.0 GWh	
	Of which renewables	53,492.0 GWh	100.0%
2012	Total	60,234.0 GWh	
	Of which renewables	60,231.0 GWh	100.0%

		Electricity generation	Share in total renewables
2012	Hydropower	60,231.0 GWh	100.0%

Total Final Energy Consumption



		Total Final Energy Consumption	Share of renewables
2000	Total	152.6 PJ	
	Of which renewables	91.4 PJ	59.9%
2012	Total	186.5 PJ	
	Of which renewables	87.3 PJ	46.8%

		Total Final Energy Consumption	Share in total renewables
2012	Liquid biofuels	3.4 PJ	3.8%
	Solid biomass	83.9 PJ	96.2%

Sources for these statistics: IRENA, IEA, UN

Renewable Energy Policy Briefs

This brief is part of an IRENA series providing a comprehensive and timely summary of renewable energy policies in Latin America (including Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Uruguay, and Venezuela).

The brief brings together the most up-to-date information on renewable energy public policies for the power, heating and transport sectors, and also includes a section on energy access policies. The objective of this brief is not to provide an assessment of the reported policies. The brief is primarily based on the information contained in the [IEA/IRENA Joint Policies and Measures Database](#), complemented with information drawn from: (i) additional existing legislation, (ii) official government sources such as plans, reports and press releases, and (iii) input from country policymakers and experts. While the brief focuses on policies at the national level, sub-national policies are also included where relevant. Specific projects or programmes implemented by actors such as international organisations, development partners and the private sector are beyond the scope of this brief.

The information contained in this document is posted on IRENA's [REsource](#) web portal, will be used to update the [IEA/IRENA Joint Policies and Measures Database](#), and will form the basis of IRENA's future policy work in Latin America.



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