



Country Report 2012 URUGUAY

Secretary of Energy (DNE) -
Ministry of Industry, Energy and Mining

Eng. Pablo Caldeiro Sarli





OVERVIEW OF URUGUAY



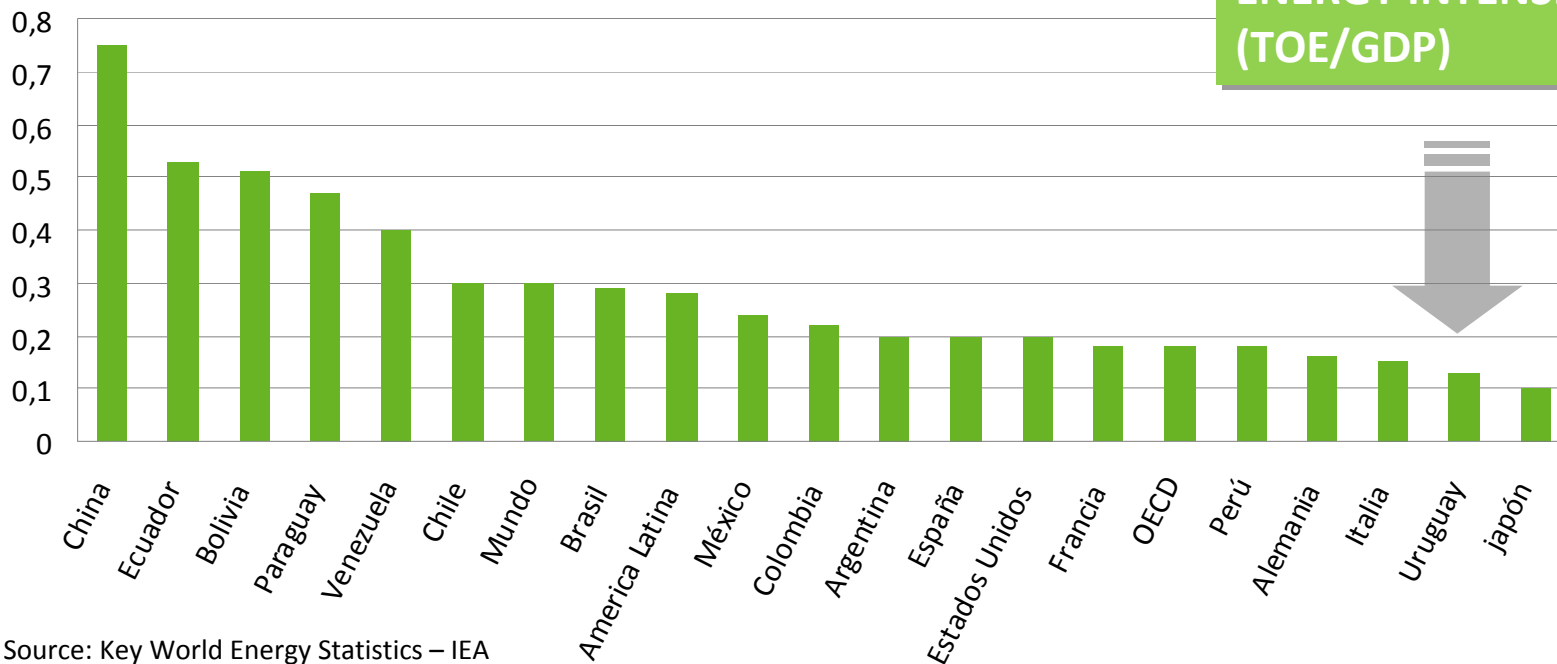
Country name:	República Oriental del Uruguay
Land area:	176,215 km ²
Population:	3.4 million inhabitants
Annual growth rate:	0.3 %
Density:	19 inhabitants/km ²
GDP:	USD 12.117/inhabitant (2010)
Life expectancy:	76 years
Infant mortality rate:	7.7/1000



ENERGY FIGURES

Total Energy Consumption (2010)	3,571 ktoe
Energy Consumption / inhabitant	1,06 toe/inhab
Electrification	98,7 %
Mean annual power demand	1,050 MW
Peak power demand (2010)	1,698 MW

ENERGY INTENSITY (TOE/GDP)



Source: Key World Energy Statistics – IEA



ENERGY POLICY 2030



2008: Approval by Council of Ministers

2010: Ratified by actual Government & Special Committee including all Political Parties

- 4 strategic guidelines
- Short, medium and long term goals
- Over 30 action lines

Multidimensional and integrated vision, including technological, economic, environmental, ethical and social issues



STRATEGIC GUIDELINES

Institutional

Directive role of the Government with a stable and transparent regulatory framework for both state-owned and private companies.



Supply

Energy mix diversification, reducing share of oil and increasing the participation level of non-traditional renewable energies, with incentives but no subsidies.



STRATEGIC GUIDELINES

Demand

Energy Efficiency in all energy sectors, all economic activities (transport, building, industry) and at all educational levels.



Social

Adequate energy access to all citizens, as a tool to promote social integration.



SHORT TERM GOALS 2015

SUPPLY Guideline:

- 50% OF RENEWABLE ENERGY IN THE GLOBAL PRIMARY ENERGY MIX

DEMAND Guideline :

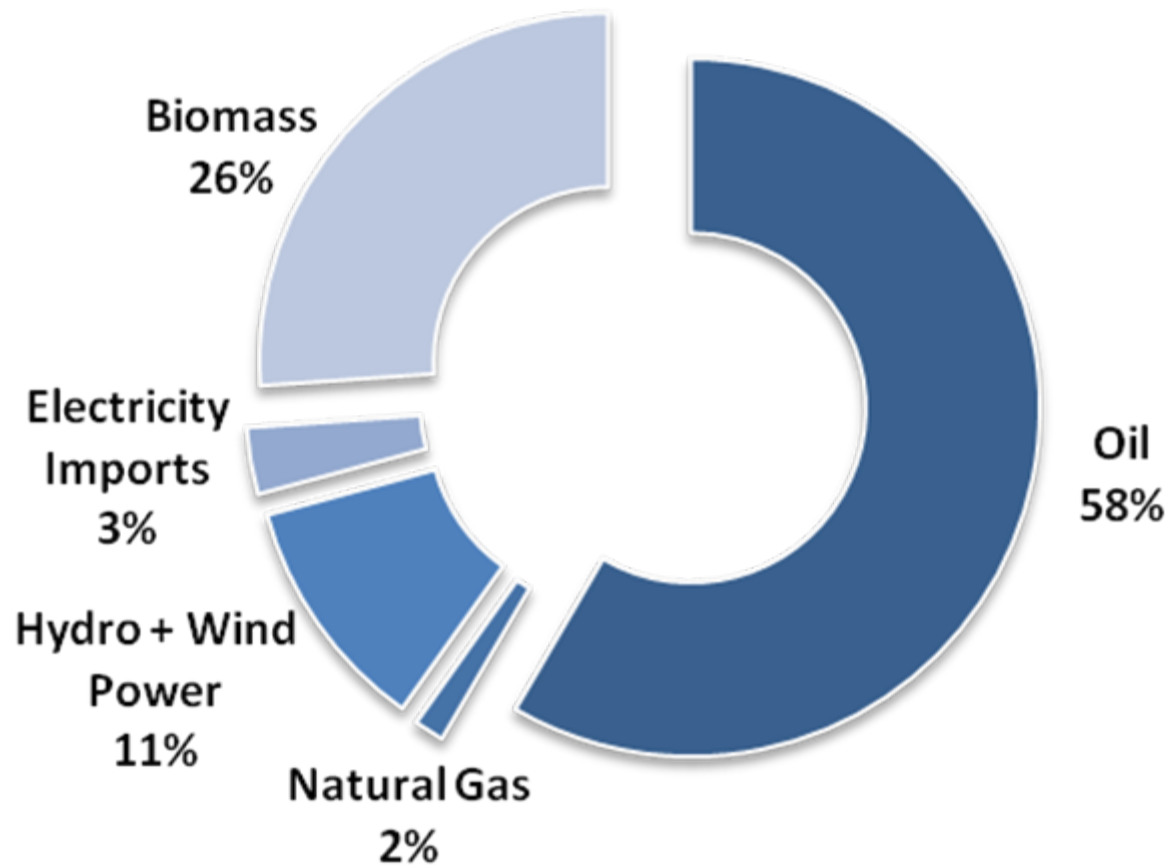
- 15% decrease of oil in transport (according to trend)

SOCIAL Guideline :

- 100 % electrification



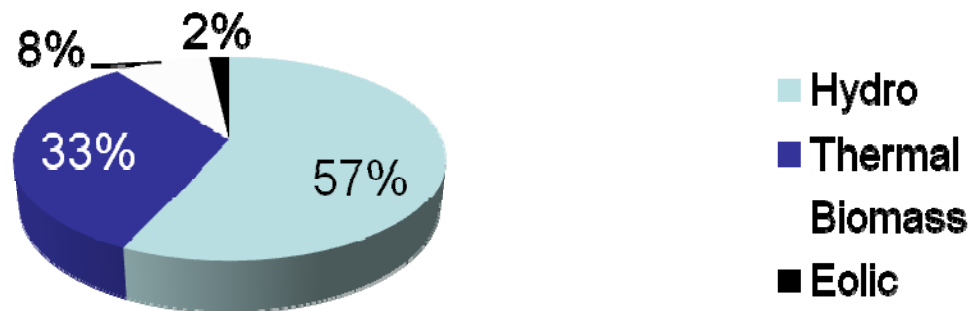
Energy Supply by source



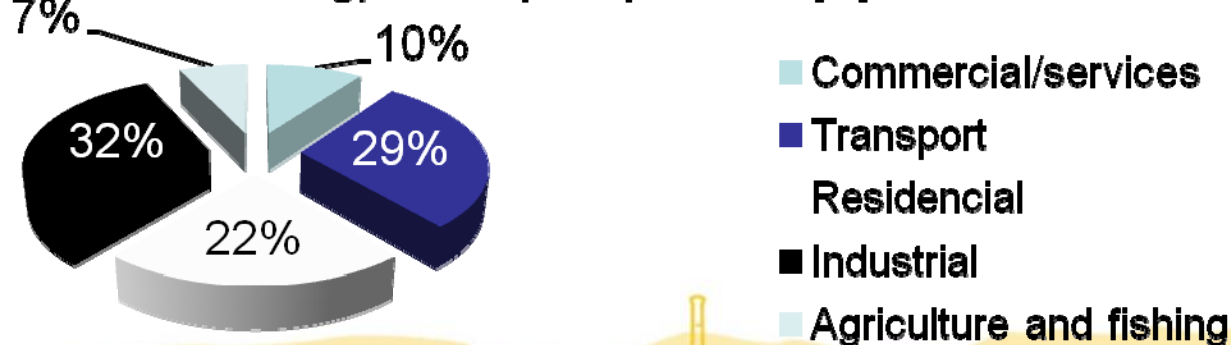
Energy Supply

PONER ESTA INFO DEL BALANCE ENERGÉTICO ACTUALIZADA AL 2010

2009 – Share of installed capacity - electricity



2009 - Energy consumption per sector [%]



Main laws & decrees regarding renewables and efficiency

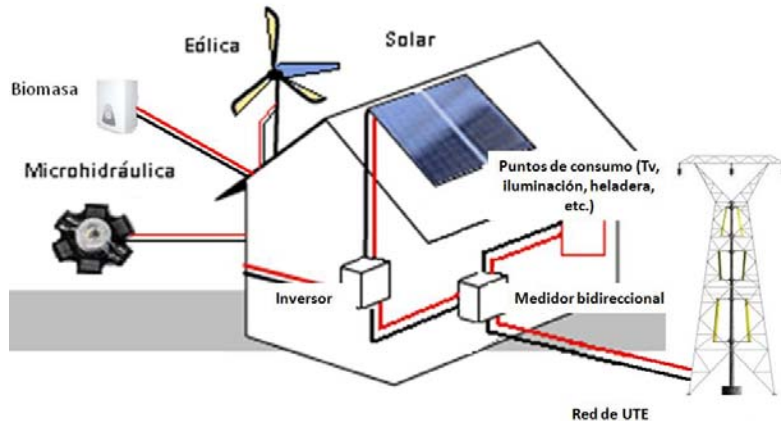
Source	Policie	Laws, decrees, acts, etc.	Status	
Wind energy	Public competitive bidding	Decree 77/006	2006-2009 (closed)	
Wind energy	Public competitive bidding	Decree 403/009	2010 (closed)	
Wind energy	Public competitive bidding	Decree 159/011	2011 (closed)	
Wind energy	Public competitive bidding	Decree 424/011	2011 (in progress)	
Biomass	Public competitive bidding	Decree 77/006	2006-2009 (closed)	
Biomass	Feed-in-tariff	Decree 367/010	2011 (closed)	
Microgeneration	Net-metering	Decree 173/010	Opened	
Biofuels - Bioethanol	Biofuels mandate	Law 18.195	2007	
Biofuels - Biodiesel	Biofuels mandate	Law 18.195	2007	
Solar thermal	Heat obligation	Law 18.585	2009	
Solar thermal	Public loans	-	2011 (in progress)	Plan solar
Solar thermal	VAT reduction	Law 18.585	2009	
Renewables	Fiscal incentives - VAT reduction & other taxes	Law 16.906, Decree 455/007, Decree 354/009	1998, 2007, 2009	
Renewables	Capital subsidy - loans	Act 1126/08	2008	Fideicomiso EE
Transport	Tax reduction	Decree 411/010	2010	Hybrid & electric cars



Related Laws or Decrees

Renewable Energy

- Law No. 18.585 “Solar Thermal energy law”
- Decree N° 173/010 “Microgeneration” in low voltage distribution network – only renewable (wind, solar, biomass and small hydro power)



Related Laws or Decrees

Renewable Energy

- **Law No. 17.567 Biofuels** - enables mix biofuels with petroleum derivatives. Tax exemptions.
- **Decrees No. 367/10 FIT for biomass.**
- **Decrees Nos. 403/009, 159/011 and 424/011** power purchase about 800 MW from **wind energy**

Energy efficiency:

- **Law No. 18.587:** Efficient Use of Energy.
- **Decrees 428/09, 429/09 and 430/09:** Energy efficiency labeling.



Related Laws or Decrees

Electricity regulatory framework

- **Law No. 14.694** "National Electricity Law"
- **Law No. 15.031** "Law of the National Electric Power Plants and Transmission",
- **Law No. 16.832** "Updating the National Electric Regulatory Framework and Establishment of the Regulatory Unit of Energy-UREE"
- **Decrees N° 77/006, 397/007, 925/009, 403/009, 159/011, 424/011**
- Distributed Generation

Rural Electrification

- Goal: 100 % of houses with electricity – solutions include new distribution grid and isolated solutions(Solar PV, Wind, SHP & Biomass)



Related Laws or Decrees

Subsidy scheme, incentives for private sector and human resource development:

No subsidies → tax exemptions

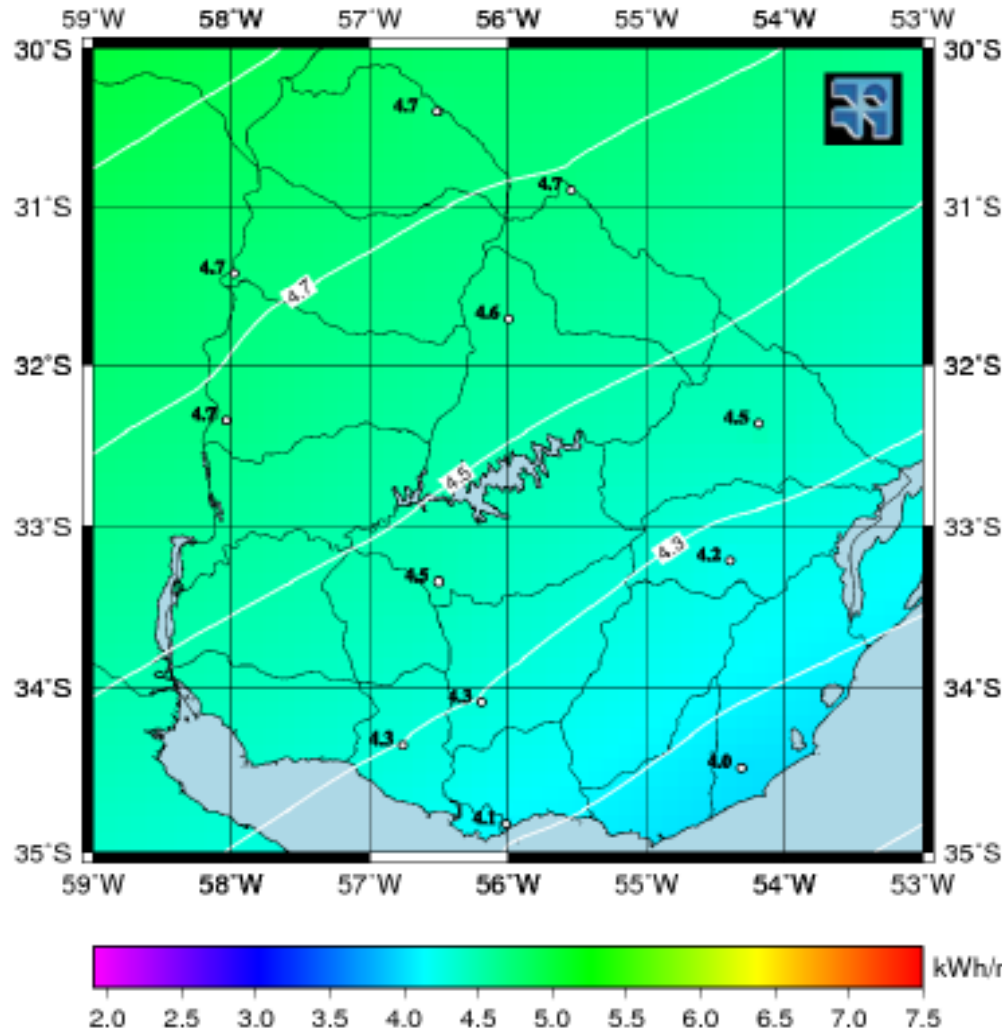
Law 16 906: Promotion for Investment

- **Decree 354/009** “Promotional benefits act for renewable energy”
- **Decree 455/007 & 002/012** benefits companies that contribute to achieve aims of economic policy (cleaner energy & energy efficiency included). Tax and Import Fees exemption.
- **Decree 59/998**, VAT exemptions and VAT refund under certain conditions.

Law No. 18.585: Solar thermal law → tax exemptions

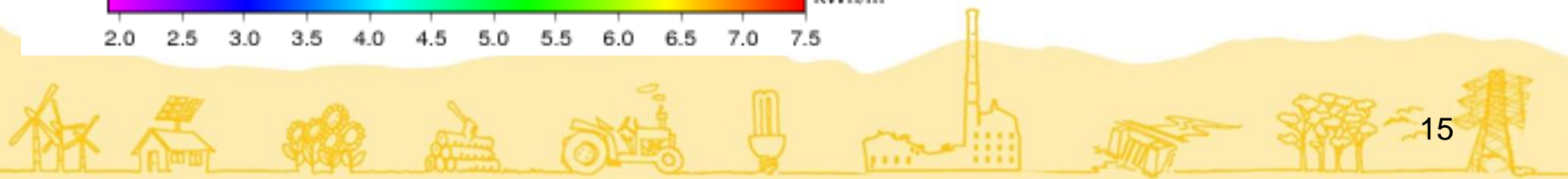


Solar Energy



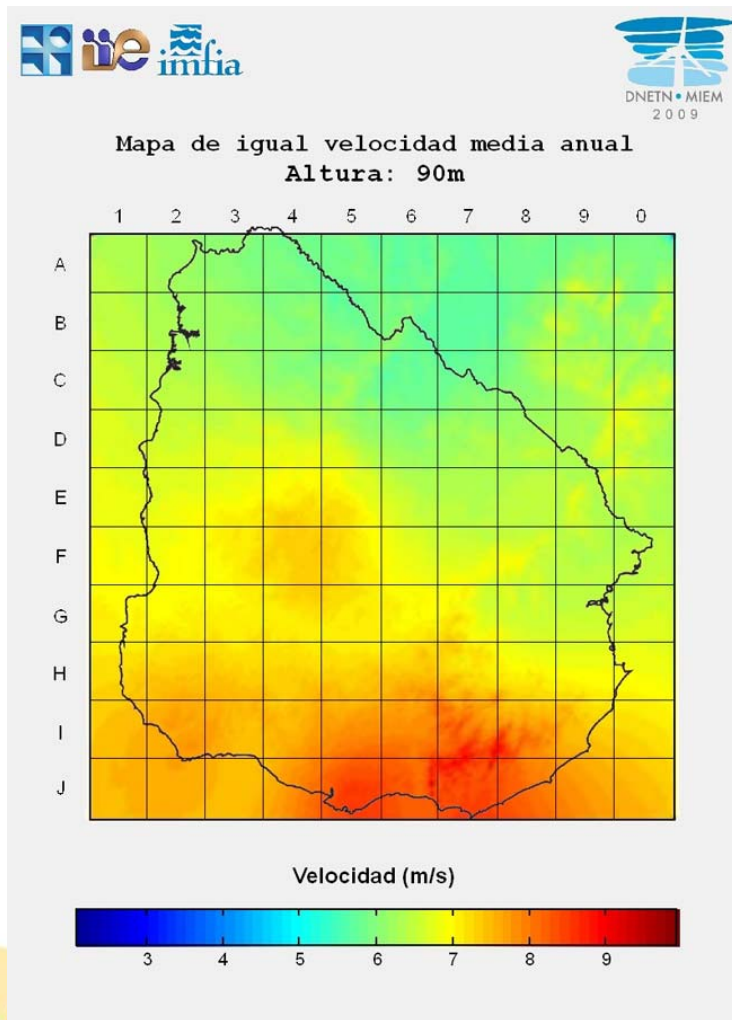
Spatial variation in annual average - daily global radiation varies between **4.0 and 4.7 kWh/m²**.

Mean daily irradiation averaged in one year. ←

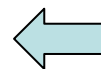


Wind Energy

Wind speed map



Capacity factors between 35 and 40 in installed and future wind farms.



Average speed in Uruguay at 15, 30, 50 and 90 m height.

Major bottlenecks and subjects to analyze



Social acceptance of renewable energies, wind energy in particular. How can “community energy” projects can help?

**Small scale generation of electricity – how to foster it?
Different tools that can be developed beyond incentives.**

Development of renewables together with local technology & services. Which are the most convenient industry areas to focus in small markets?



Eng. Pablo Caldeiro Sarli

Secretary of Energy – Ministry of Industry, Energy and Mining

www.dne.gub.uy

Renewable Energy Department

- ✓ **Wind Energy Development**
- ✓ **Microgeneration**



Contact : report@tky.ieej.or.jp