



GOVERN
DE LES ILLES BALEARS

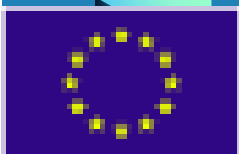
Conselleria d'Economia, Hisenda i Innovació
Direcció General d'Economia

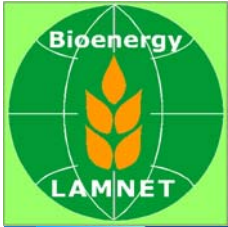
The situation of Biofuels in Spain. The situation of Renewable Energies in the Balearic Islands

M^a Dolores Ordóñez

Government of the Balearic Islands

Beijing, 22th April 2004





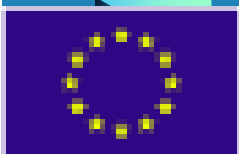
ENERGY IN SPAIN



GOVERN
DE LES ILLES BALEARS

Conselleria d'Economia, Hisenda i Innovació
Direcció General d'Economia

The Spanish policy on Renewable energy is set out in the “*Spanish Renewable Energy Promotion Plan (2000-2010)*”, approved by decision of the Council of Ministers on the 30th of December 1999.





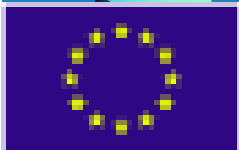
Spanish Renewable Energy Promotion Plan (2000-2010)



GOVERN
DE LES ILLES BALEARS

Conselleria d'Economia, Hisenda i Innovació
Direcció General d'Economia

- ∞ Objective: in 2010, renewable energy must cover at least 12% of the total energy demand in Spain
- ∞ Renewable energy:
 - Electricity generation: wind power, hydroelectric, solar-thermoelectric, photovoltaic-solar
 - Thermic use: low temperature solar-thermic, biomass, biogas, biofuels, energetic assessment of solid urban waste
- ∞ Biomass energy is expected to take-off much more than the others





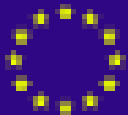
IDAE PROJECTS



GOVERN
DE LES ILLES BALEARS

Conselleria d'Economia, Hisenda i Innovació
Direcció General d'Economia

- ∞ In 2001. the IDAE (Institute for the diversification and saving of Energy - Spanish Ministry of Economy) made an investment of €6,6 million in biomass, receiving 1,9 million from the ERDF-IDAE programme for SME's
- ∞ The IDAE invested €4.06 million in 2 systems that were put into operation, substituting 27.700 tep/year of conventional energy with renewable energy.
- ∞ At the end of 2001 a project for bioethanol production was carried out and 2 projects on biodiesel production are presently being carried out.





ELECTRICITY IN SPAIN



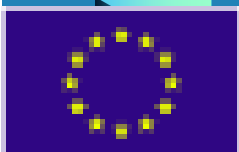
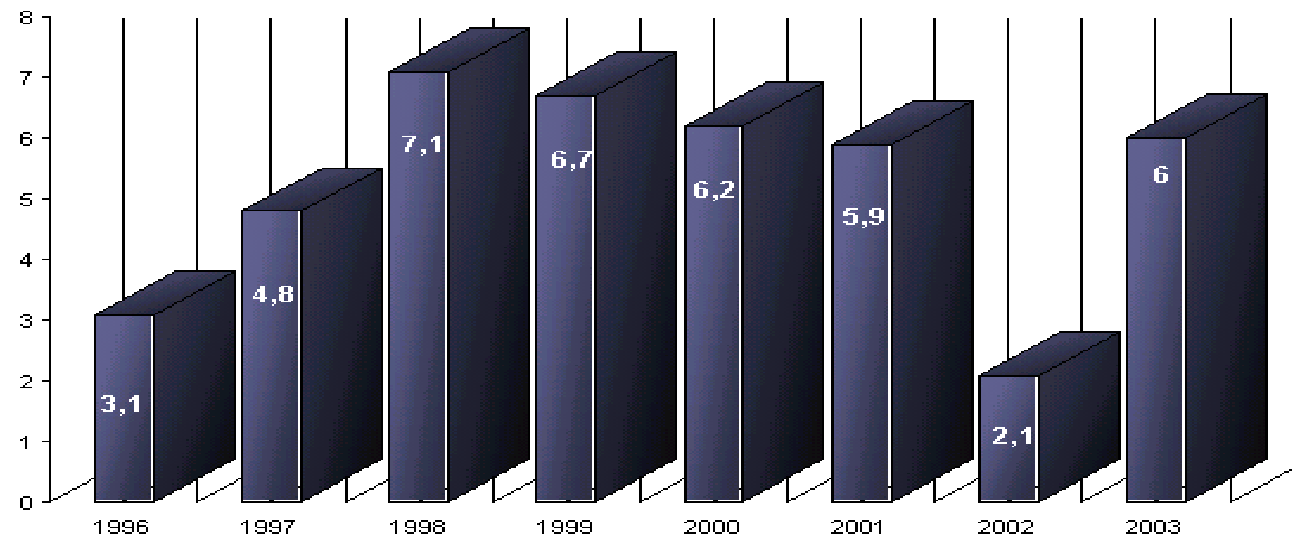
GOVERN
DE LES ILLES BALEARS

Conselleria d'Economia, Hisenda i Innovació
Direcció General d'Economia

∞ The demand for electricity has doubled in the last 7 years reaching a peak of 7,1 in 1998

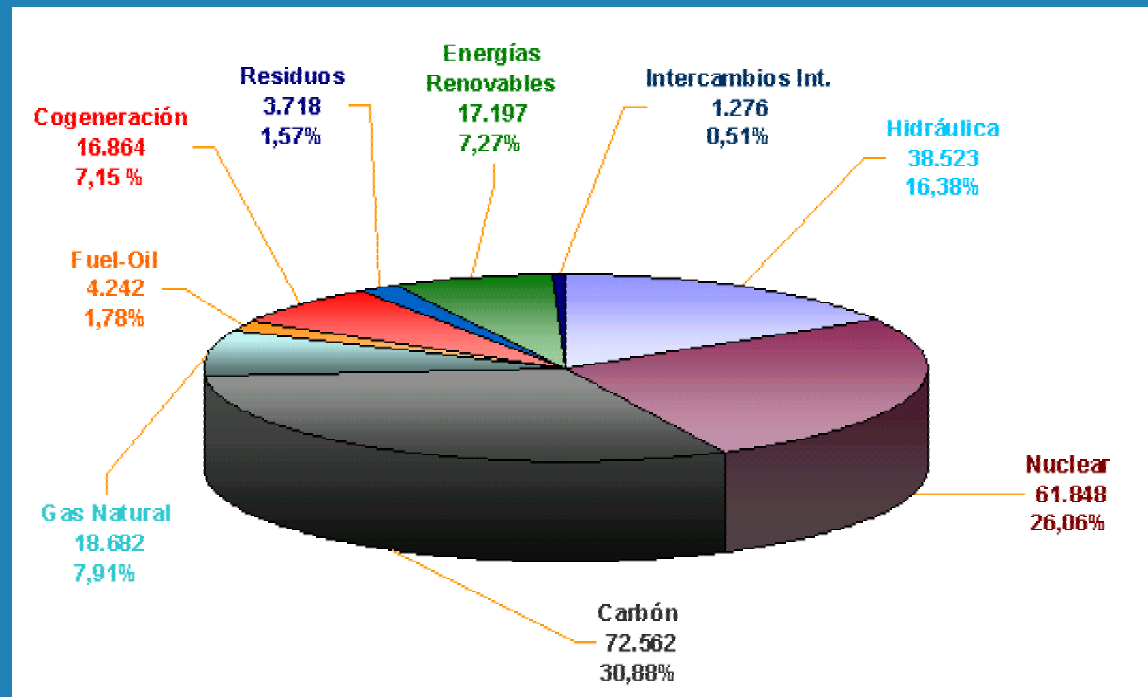
∞ Source:CNE

Crecimiento de la Demanda Eléctrica 1996- 2003

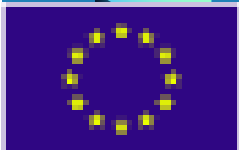


Structure of the electricity generated in 2003

Source: CNE



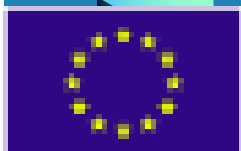
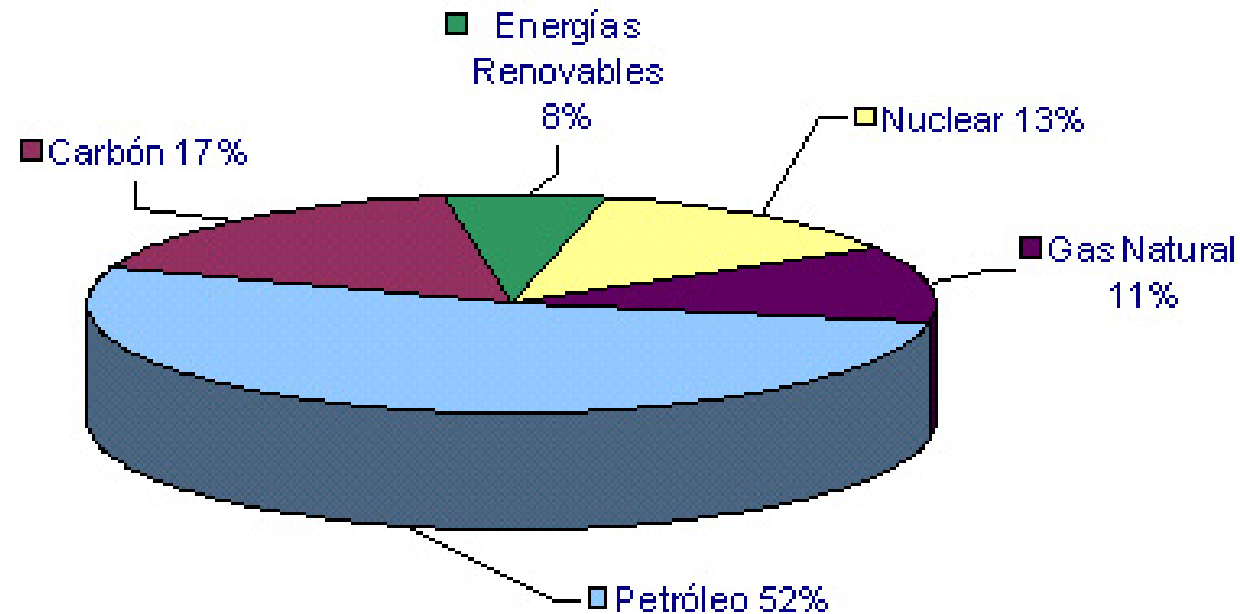
Renewable energies include: hydraulic/Gas includes the combined cycle and cogeneration



Primary energy consumption in 1999

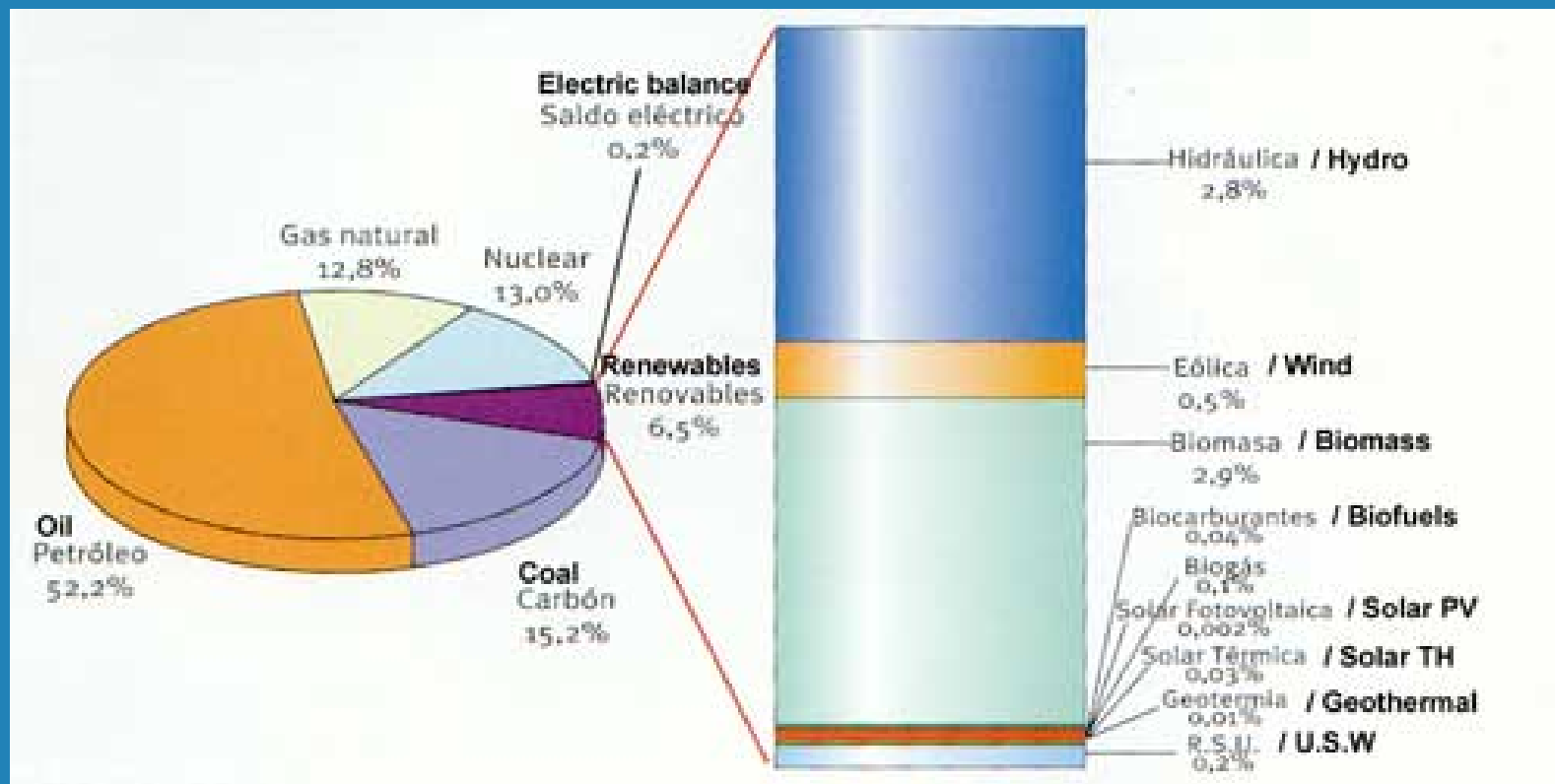
- Source: General Directorate of Energy and Mines policy

1999



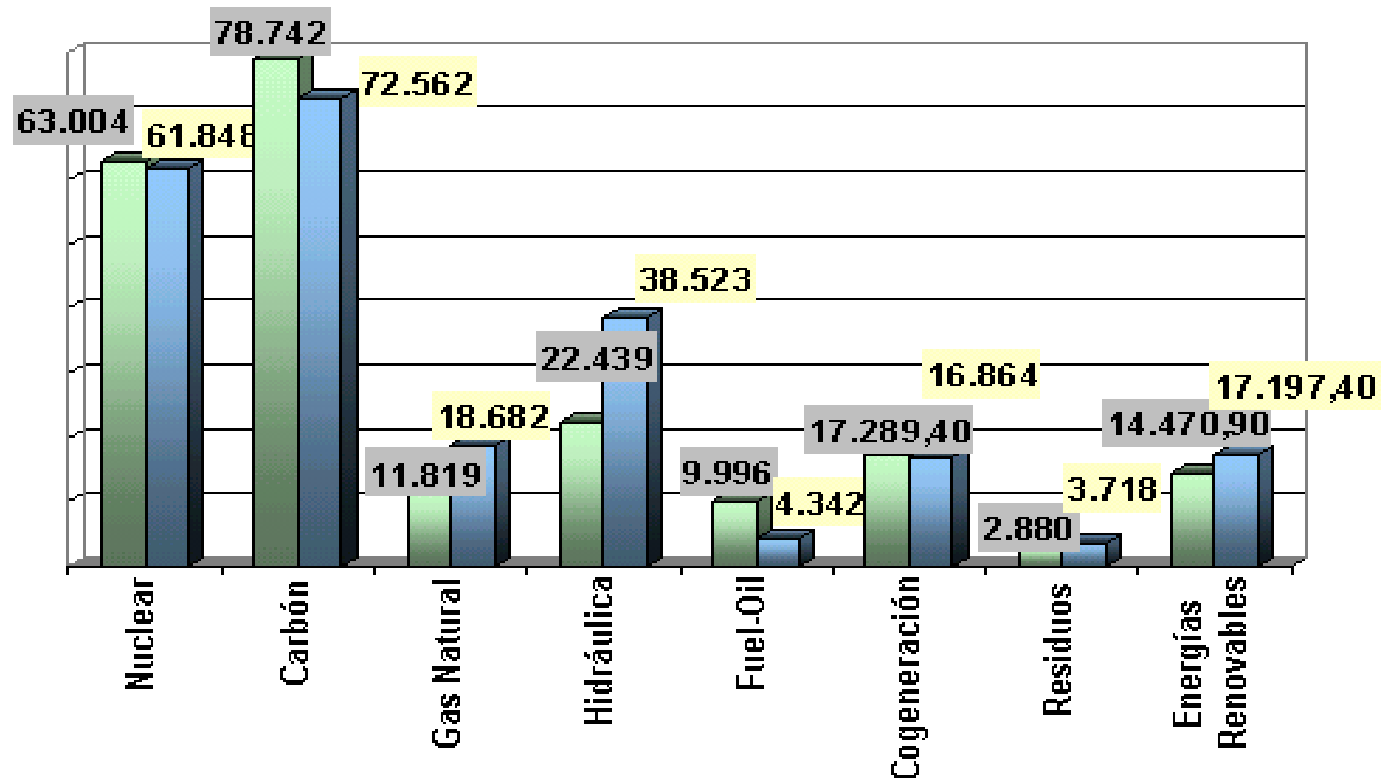
Primary energy consumption in 2001

Source: IDAE

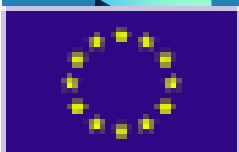


Comparison of electricity production 2002-2003 (GWh)

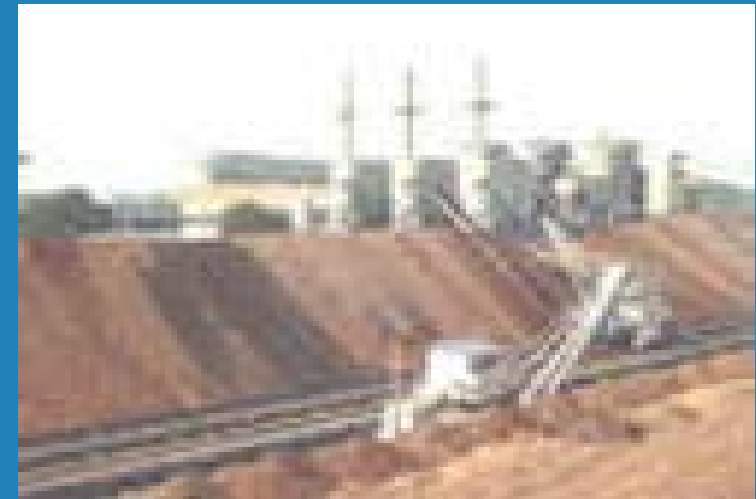
Comparativa de la producció de electricitat per fonts 2002-2003 (GWh)

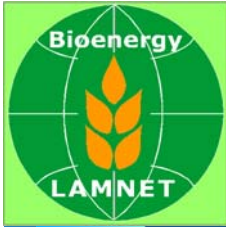


Source: CNE



- ∞ Biomass is becoming more and more significant due to its economic potential, because of the high volumes of agriculture and forest resources and because of the wood and agrofood industries.





PRESENT SITUATION AND PREVISIONS FOR THE "PROMOTION PLAN" FOR 2010

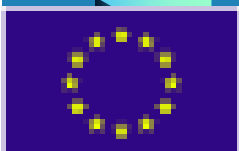


GOVERN
DE LES ILLES BALEARS

Conselleria d'Economia, Hisenda i Innovació
Direcció General d'Economia

∞ source: IDEA

	2001	2010
Hydraulic	415	594
Wind	623	1.852
Biomass	3.664	9.465
Biogas	114	150
Biofuels	51	500
Solar Photovoltaic	2	19
Solar Thermic	35	336
Solar Thermoelectric	0	180





POWER AND ELECTRICITY PRODUCTION

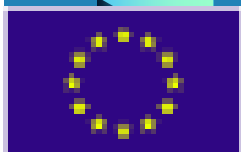


GOVERN
DE LES ILLES BALEARS

Conselleria d'Economia, Hisenda i Innovació
Direcció General d'Economia

- Source: IDAE

	2001		2010	
	Power (MW)	Production (GWh/year)	Power (MW)	Production GWh/year
Minihydraulic (≤ 10 MW)	1575	4.491	2.229,7	6.912,1
Wind	3.337	6925	8.974,1	21.537,8
Solar Photovoltaic	18	1,66	143,7	217,8
Biomass	240	823	1.896,8	13.949,1





BIODIESEL



GOVERN
DE LES ILLES BALEARS

Conselleria d'Economia, Hisenda i Innovació
Direcció General d'Economia

- ∞ Biodiesel is now sold in Spanish petrol stations as a substitute for diesel
- ∞ The first Spanish biodiesel plant started up in Catalonia in 2002: Stocks del Valles
- ∞ At the moment there are 25 petrol stations selling this product in Catalonia.
- ∞ In Spain biodiesel is mainly made out of used cooking oil: picked up from hotels, catering companies, industrial kitchens, hospitals...





GOVERN
DE LES ILLES BALEARS

Conselleria d'Economia, Hisenda i Innovació

