

## EL-EFF REGION

**WP2: Regional summary report prepared by: GOVERNMENT OF NAVARRA**

### Overview Table

Region of: NAVARRA		Year	Remark /Explanation
Electricity consumption <u>Households</u> (domestic sector)	804,7 GWh	2005	
Electricity consumption <u>Service Sector*</u> (commerce & trade & public sector)	575,2 GWh	"	
Electricity consumption <u>Industry**</u>	2.747,9 GWh	"	
Electricity consumption Agriculture	85,3 GWh		
Electricity consumption <u>other sectors***</u>	486,1 GWh	"	
<b>Total Electricity consumption in the region</b>	4.613,9 GWh	"	
Total Energy Consumption in the region	23.738,8 GWh	"	
Share of electricity in total energy consumption	19,4 %		
<b>Data on the region</b>			
Number of inhabitants	601.874	2006	
Number of households (most recent data)		202.601	
Number of 1-person householders (most recent data)		40.527	
Number of 2-person householders (most recent data)		48.915	
Number of 3-person householders (most recent data)		43.327	
Number of 4 or more-person householders (most recent data)		69.832	
Number of households (predicted for 2010)		-----	
GDP	Euro	14.804.827.000	
GDP/inhabitant	Euro	24.761	

\*\*\* It includes the sectors of :  
 Collection, treatment, distribution of water.  
 Railway transportation.  
 Other transport companies.

Administration and public services, and street lighting.

## Introduction



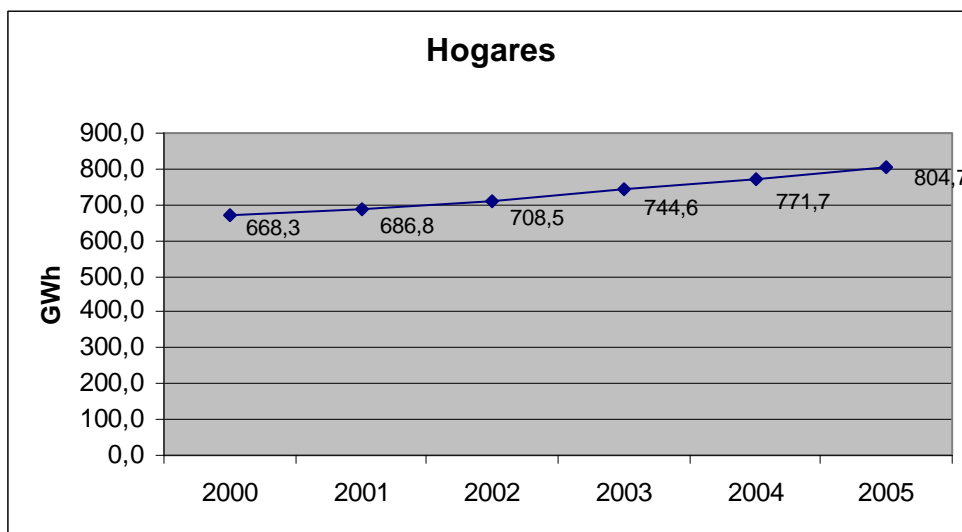
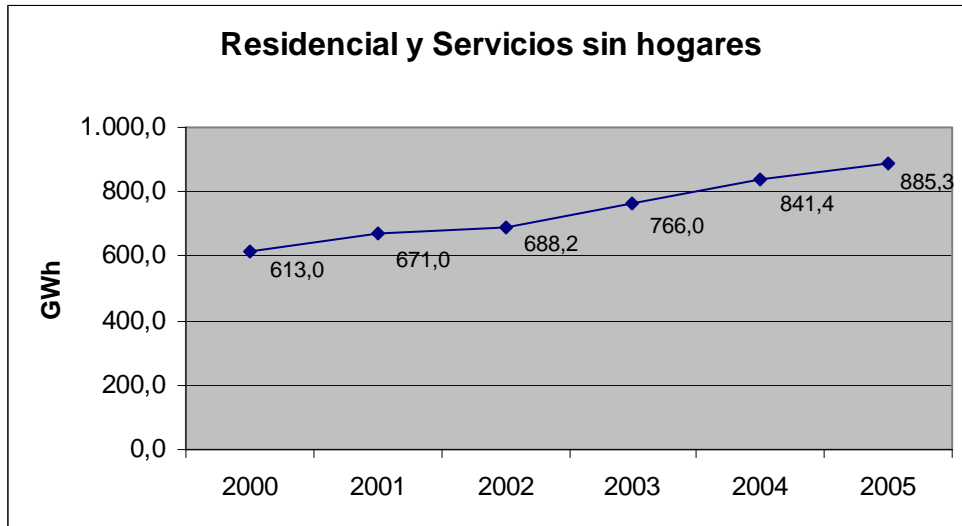
Navarre is located in the north of Spain. It is a highly industrialized region; Gross Added Value for the industry sector is 32.3%, as opposed to 21.5 % for the national level. The unemployment rate in Navarre is 6.30%. Spain's is 10.20%.

Navarre has the goal of reducing electricity consumption for the period 2005-2010 on a figure equivalent to 1.89% of the forecasted consumption for this period on a no change scenario.

The Government of Navarre through the implementation of Energy Plans is carrying out suitable policies on the saving and efficient use

of energy and on the use of renewable energies with the maximum respect for the environment. It contributes so to the fulfilment of the objectives set by Spain and the European Union.

### Electricity consumption in households



Average electricity consumption rate per household is around 3.200 to 3.500 hWh/year.

The main reason for the increase of the consumption of electricity in households is the improvement of life standards of the population. The region has one of the highest income per capita rates of Spain, above the European Union average.

As a consequence households have more and more electronic appliances that demand a higher energy consumption. Furthermore, in 2002 3% of households had air conditioning systems even though Navarre's climate does not demand such equipments, except on the South of the region.

The "*Centro de Recursos Ambientales de Navarra (CRANA)*" Center of Environmental Resources of Navarre, depending on the Department of Environment of the Government of Navarre, has the mission of sensitizing and raising public awareness on the efficient use of energy.

CRANA develops actions aimed at households such as informative conferences, distribution of energy saving guides or educational competitions.

Besides, any citizen can go to the Department of Industry, and ask for any question related to energy saving and efficiency.

Furthermore and due to the development of the renewable energy sector in Navarre, articles can be read often in local newspapers thanks to which citizens may get a wide and diverse information on issues related to energy production and consumption.

One of the objectives of the Energy Plan of Navarre 2005-2010 is to foster the efficient use of energy. In order to achieve this objective several saving measures have been implemented in households.

Since 2006 public calls for proposals aimed at the "Restoration of thermal insulation on buildings" are published, with the objective of reducing the energetic demand in heating and refrigeration in buildings, through the implementation of energy efficiency criteria's in the rehabilitation of thermal insulation.

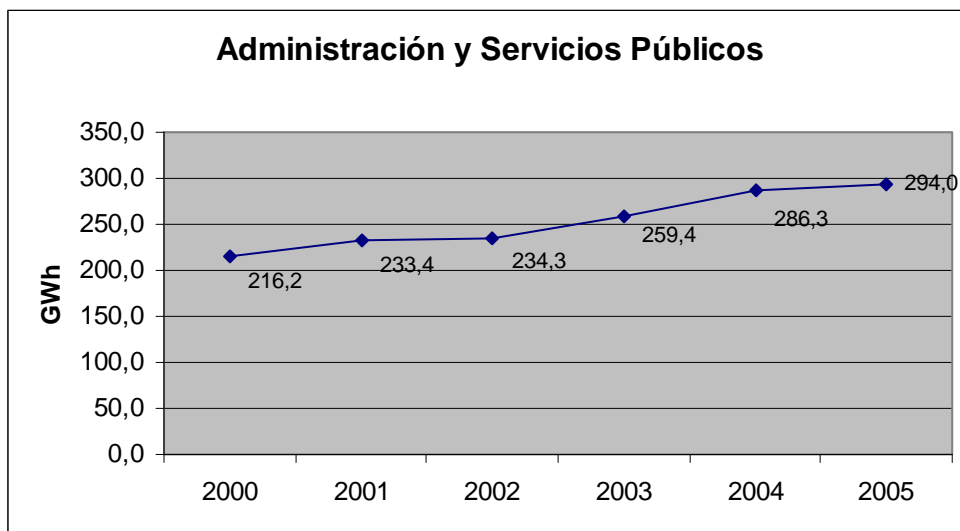
There is also another Call aimed at the "Improvement of the energetic efficiency of the thermal installations in buildings" with the objective of reducing the energy consumption of buildings' thermal installations: heating, refrigeration and production of sanitary water.

Last year there was also a Call named "*Plan Renove de Electrodomésticos*", *Plan for the replacement of electronic appliances*, with the objective of reducing the consumption of electricity in the household sector, through the replacement of old fridges, freezers, washing machines and washing dishes by new energetic label class A or higher appliances. As a result of this initiative more than 8.260 obsolete electronic appliances were replaced by more efficient ones.

These saving and energy efficiency policies will continue on the following years.

Last year the New Technical Code for Building came into force on Spain, establishing new energetic certifications for new buildings, and the compulsory installation of solar panels and collectors for the production of sanitary water. Sunny weather on Spain is going to allow important savings on energy, thanks to the promotion of solar energy.

### Electricity consumption in the public sector



The main reason for the increase of energy consumption on the Administration and public services is the increase on the use of computers in all activities of the sector, and the increase on equipments on Navarre's Health system. HVAC (Heating ventilation and air conditioning ) systems are also in the increase on this sector.

The above mentioned Center for Environmental Resources of Navarre (CRANA) carried out several years ago the "Adding energies" Forum. In this meeting the constitution of an Administration's "Energy Panel" was agreed, aimed at the reduction of the energy - electricity specifically - consumption on the Administration.

The Center for Environmental Resources of Navarre has also published the following guides:

- Guide for the efficient use of energy on Public Administration buildings.
- Energy Guide for schools.
- Energy Efficiency Guide for Navarre's households.
- Data base of efficient technologies.

Each of these guides make part of comprehensive Programmes with additional reports, training courses, and energy and consultancy plans.

Other programs:

“Energetic Bet”. Voluntary commitment of private and public entities for the reduction of energy consumption.

“Kyoto Households”. Voluntary commitment of household population for the reduction of energy consumption.

“Bicycles Strategic Programme”. Commissioned by the Navarre Parliament turned out to be a participatory process for the agreement on bicycle itineraries and paths.

“NIRSEPES European Programme”. Aimed at energy saving and efficiency on building rehabilitation.

Public Sector can also apply to the already mentioned *Restoration of thermal insulation on buildings* Call.

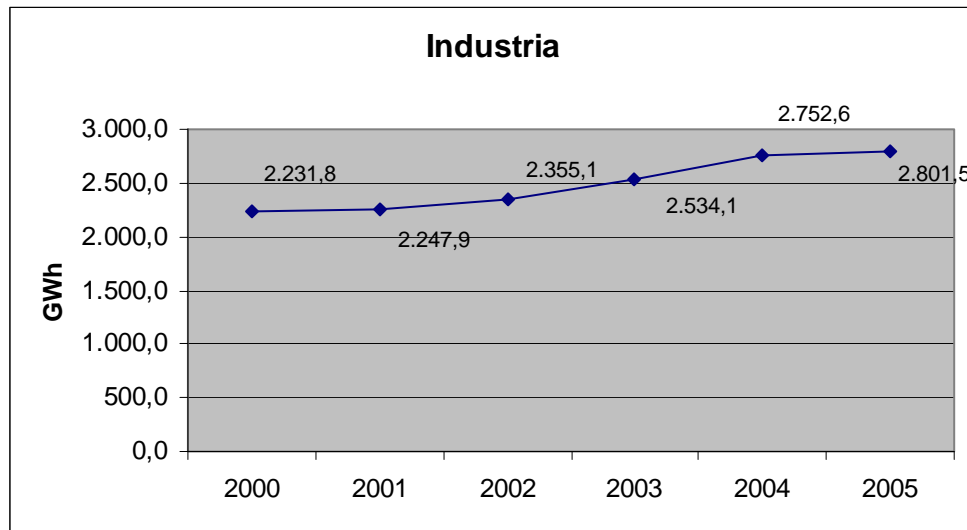
Navarre Municipalities can also participate in the Call for the *Replacement of street lighting equipment*, aimed at the reduction of energy consumption in the street lightning and in the Call for the *Implementation of Street Lighting studies, feasibility analysis and audits*.

Municipalities investing on solar energy, small wind power, biomass and other renewable energies can also take part on a Call for the provision of small installations of renewable energies.

### **Electricity consumption in SMEs**

Small and Medium Enterprises (SMEs) are involved in a wide number of economic activities, so it is not an easy task to talk about electricity consumption on such a wide field. It is more useful to address different sectors, as the Commercial one, as it is mostly composed of SMEs and for which it is possible to provide accurate data.

## Electricity consumption in industry



The consumption of electricity in the industry sector represents 59,5% of the total consumption of electricity in Navarre.

Analysing the different subsectors we can conclude that for the 2000-2005 period, increases in consumption were the following:

Increases  $\leq 10\%$

Chemical Industry  
Cars and other transport means manufacturing  
Non railway metallurgy

Increases  $\geq 10\% \leq 30\%$

Concrete, limes and plasters  
Graphic arts and edition  
Other construction materials  
Rubber and their derivatives

Increases  $\geq 30\%$

Equipments and metallic derivatives  
Equipments and electric devices  
Food, Drink and Tobacco  
Other non specified industries  
Mineral and rock extraction except energetic substances  
Paper paste, paper, cardboard and derivatives.

In the reported period there was a high activity in the industrial sector, increasing energy – electricity mainly - consumption.

## Electricity prices & market liberalisation

	Price per kWh in Euro	Year	Remark
Typical electricity price household including all taxes ( <u>not</u> "special" tariffs for domestic hot water/heat pumps/electric heating etc.)	0,124	<b>2006</b>	
This price consists of:			
Energy costs (Power term)	0,088		
Grid Charges /Energy term)	0,012		
Charges/levies for green electricity/CHP etc			
VAT	16%		
Other taxes (CO2 etc.) (Tax over electricity)	0,005		
Others :.....	0,002		
Typical electricity price household	0,1312 €/kWh	<b>2007</b>	
Typical electricity price household	0,1257 €/kWh	<b>2006</b>	
Typical electricity price household	0,1203 €/kWh	<b>2005</b>	
Typical electricity price household	0,1182 €/kWh	<b>2004</b>	
Typical electricity price household	0,1178 €/kWh	<b>2003</b>	
Typical electricity price <u>service sector</u> (price range for commerce & public sector), including all taxes	0,1190 €/kWh	<b>2006</b>	
Typical electricity price <u>industry</u> (price range), including all taxes	0,1311 €/kWh	<b>2006</b>	
Relevant special tariffs (e.g. heat pumps, electric heating) - please specify:....		<b>2006</b>	

## **Stakeholders**

The main distribution company in Navarre is IBERDROLA. Other company present in the northeast area is ENDESA.

There are also other small distribution companies like Electra Berruela, Electra Valdizarbe and Electra Saltega.

Public bodies:

The Industrial Security Service from the Industry, Technology, Commerce and Labour Department of Navarre Government concedes the administrative authorization both for the production of electric energy and for the use of consumer equipments.

When the infrastructures for the production and consumption of electricity are shared by Navarre and other regions, administrative authorization is agreed by the Energy and Industry Department from the Spanish Central Government Delegation in Navarre.

Pamplona's Energy Agency carries out energy consultancy works and other activities linked to the efficient use energy in the capital city of Navarre, like for example the regulation for the installation of solar equipments in both new buildings and rehabilitated ones.

National Centre of Renewable energies (CENER).

Consumers and users associations, business associations, trade and professional associations from Navarre also participate in the saving and efficient use of electricity.

Chambers of Commerce and Agricultural Chambers.

Professional Associations.