



STATISTICHE

figures and graphs to understand Veneto

Flash

This issue of 'Statistiche Flash' sets out the situation with regard to the strategic objectives set by the European Union for 2020, focusing attention on energy efficiency and, following this, examines the evolution over time and the current situation with regard to the electricity sector in Italy and Veneto. Finally, returning to energy efficiency, it introduces the project AlpBC – Alpine Building Culture, which is co-funded by the European Territorial Cooperation 'Alpine Space' 2007-2013. The Urban Planning Section of Regione Veneto participates in this project along with a group of international partners, with the aim to define and implement strategies and measures to protect and promote the Alpine building and energy saving culture in the wider context of territorial development and ecological sustainability.

THE WAY TOWARDS SUSTAINABILITY

The Directive 2009/28/EC has formalized the so-called '20-20-20' strategy, which is based on three targets that the European Union has set itself for 2020:

- 20% reduction in greenhouse gas emissions compared to 1990;
- 20% of the energy consumed coming from renewable sources;
- 20% increase in energy efficiency compared to 1990.

As this issue of Statistiche Flash deals with energy, greater emphasis is placed on the latter two objectives. In particular, as regards energy efficiency, the direction taken by Italy is that of promoting an energy system characterised by lower consumption and able to take advantage of renewable energy sources.

THE SLOW BUT STEADY EVOLUTION OF RENEWABLE RESOURCES IN EUROPE

greenhouse gas emissions
-20%



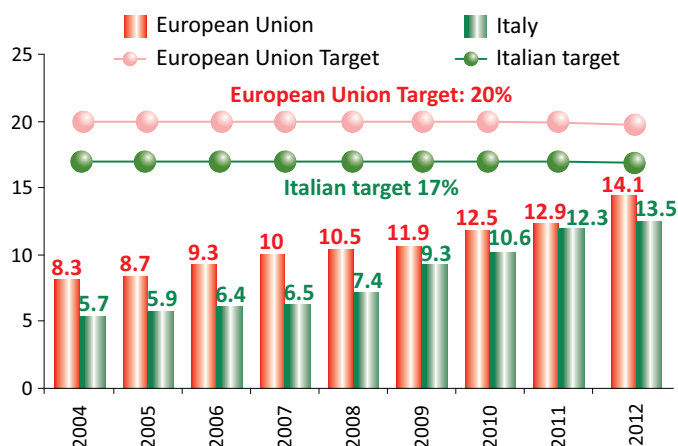
energy efficiency
+20%



renewable energy
out of the total
=20%



Percentage of renewables in gross final consumption of energy (% values). EU28 and Italy - Years 2004 : 2012



Following the trend in the development of renewable energy sources, in the period 2004-2012 there has been a slow but steady growth that has brought the weight of renewable sources in gross final consumption of energy from 8.3% in the first year up to 14.1 in 2012.

The European average is the result of a combination of values achieved by Member States that are experiencing very different situations, and the figures therefore range from a minimum of 1.4% up to a maximum of 51%. Of course the targets set for each single countries are different from each other, as they were fixed based on the economic, social and geographical characteristics of each country.

For Italy, a target of 17% for 2020 was set. The indicator is steadily growing and, in 2012, it went up to 13.5%, allowing Italy to reach a percentage of target achievement equal to 79.4%, above the European average value of 70.5%.

Source: Regione Veneto - Sezione Sistema Statistico Regionale on Eurostat data

THE FOLLOWING ARE AVAILABLE:

- Tourism - final data as of July 2014
- Statistical report 2014: Paths of growth
- Demographic trends 2013

<http://www.regione.veneto.it/web/statistica>

We have already mentioned the topic of energy efficiency, for which the European Union has set the overall target of a 20% saving by 2020 compared to 2005. To count up these savings, the actual consumption and the theoretical ones estimated based on recent years' trend are compared to each other, assuming stability of the economic environment and absence of measures aimed at reducing

ENERGY EFFICIENCY

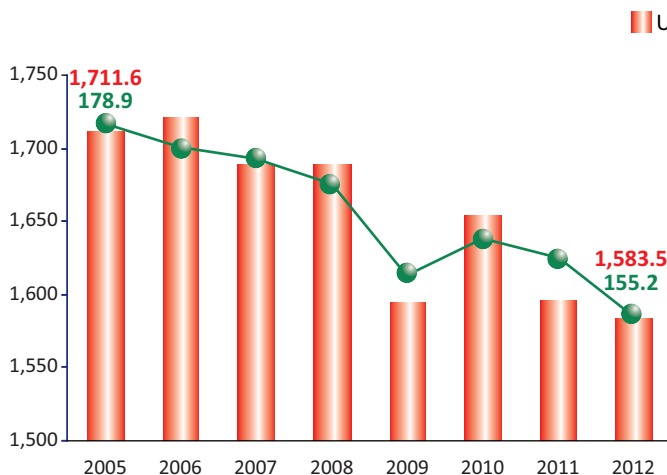
consumption. The goal for 2020 consists in achieving a differential between actual consumption and theoretical consumption equal to 20%. This count is made by both considering consumption of primary energy and final energy. The base year is 2005 for which the indicator is set to zero. It was estimated that at a European level, to achieve primary energy savings of 20% in 2020, consumption should fall to 1,483 million

TOE compared to 1,711.6 in 2005 in absolute terms, i.e. 87%. The most recent figure is from 2012 and shows a consumption of 1,583.5 million TOE, that represent 92.5% of the consumption totalled in 2005, which means an energy saving of 10.5% according to the adopted methodology. The same count is also carried out with regard to the consumption of final energy. In this case, starting from 1,189.3 million TOE in 2005, reaching the target requires a reduction of up to 1,086 million TOE, equal to 91%, which should bring a saving of 20% compared with the standard scenario. The 2012 figure in this case indicates an actual consumption amounting to 1,103.4 million TOE, equal to 92.8% of the consumption totalled in 2005, with savings equal to 12.1%. At a national level, the available figures are only those related to the 'indirect' indicator, i.e. the absolute values and the indices referred to the total consumption of primary and final sources, with 2005 as the base year. According to Eurostat, primary energy consumption decreased from 178.9 million TOE in 2005 to 155.2 (86.7%), whilst final energy consumption decreased from 134.5 to 119 (88.5%).

On a regional scale, there are still criticalities affecting the punctual and systematic collection of the data on consumption. Availability of this data is limited to the three year period from 2008 to 2010 and to the calculation of the ideal trajectory from 2010 to 2020 in line with the National Action Plan aimed at achieving the energy consumption reduction target.

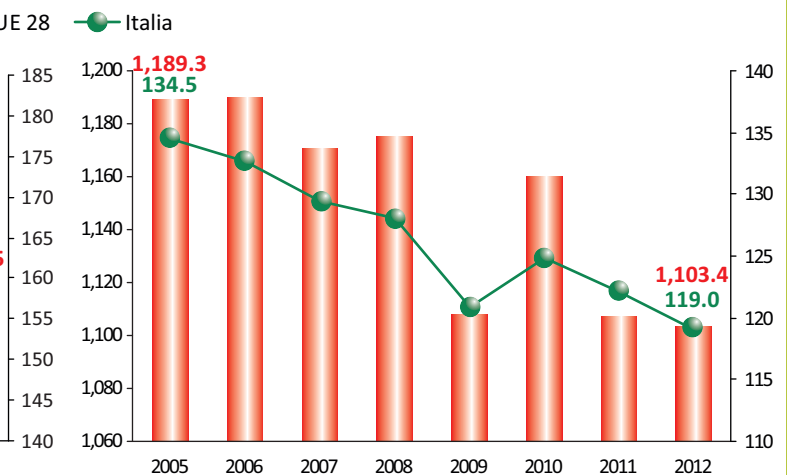
ENERGY CONSUMPTION IS A MIRROR OF THE PERFORMANCE OF THE ITALIAN AND EUROPEAN ECONOMY

Trend of primary energy consumption in Europe* and in Italy (figures in thousand TOE**) – Years 2005: 2012



*Ue28 **Tonnes of Oil Equivalent

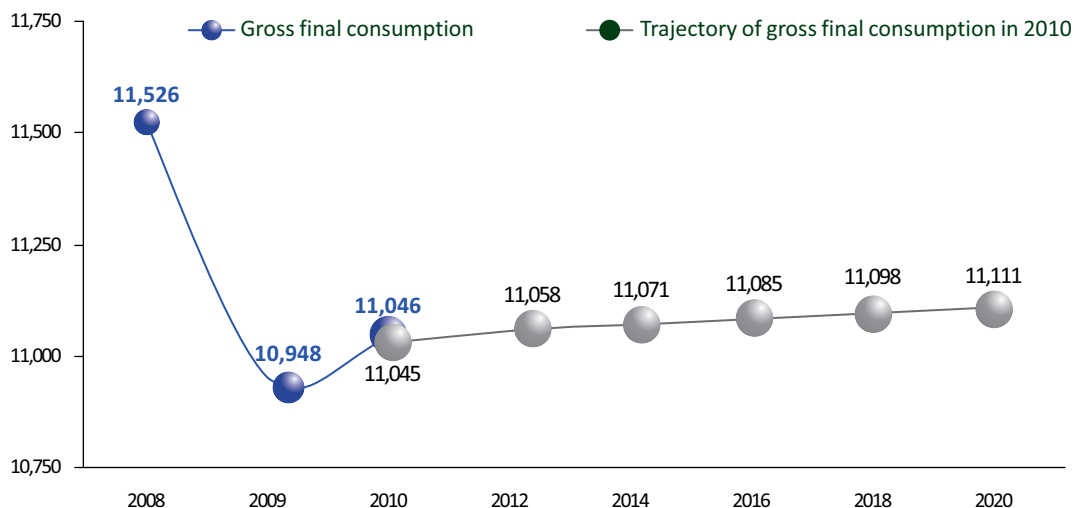
Trend of final energy consumption in Europe* and in Italy (in thousand TOE**) – Years 2005: 2012



*Ue28 **Tonnes of Oil Equivalent

... AND VENETO FOLLOWS THE SAME TREND

The gross final consumption of energy in Veneto in 2008-2010 and their theoretical trajectory from 2010 to 2020 (thousand TOE*)



*Tonnes of Oil Equivalent

Source: Regione Veneto - Sezione Sistema Statistico Regionale on data from Dipartimento Ingegneria Industriale - UNIPD, Mi.SE, PAN and Eurostat.

Data on the production of electrical energy in the period from 2000 to 2013 shows two different situations in Veneto and Italy: the latter saw a progressive growth culminated in 2008, a reduction in 2009, a recovery at the turn of 2010 and 2011 and a new decline in the last two years. For Veneto, production has started to decline since 2002, reaching a record low in 2011. Only in the last two years there has been a recovery in the regional production of electricity. Consumption, contrary to production, have mirrored the general trends both in Italy and the Veneto, growing up until 2008, declining in 2009, with a recovery in 2010 and 2011 and then a new downturn in 2012 and 2013. As far as the coverage of energy needs is concerned, the national situation remains deficit throughout the period: in 2013, despite the drop in

THE ELECTRICAL SECTOR

consumption, amounting to 297,000 GWh compared with a net production of approximately 279,000 GWh.

The situation in Veneto is even more difficult because of the decline in production since more than ten years: in 2013, compared with a final consumption of 28,982 GWh, production stopped at 16,877 GWh, therefore only covering 58.2% of consumption. Going into detail of the various sectors, both in Italy and the Veneto the main consumers were the industry sector (42% and 49.3%) and the tertiary sector (29.3% and 33.6%). The provinces can be classed into three groups based on the trend of consumption over time: the first group consists of Padua, Treviso, Verona and Vicenza, with present a steady increase from 2000 until 2008, a contraction in 2009, a recovery in 2010 and 2011 and finally a drop in the last two years, faithfully reflecting the average regional trend; the second group consists of Rovigo and Belluno, where final consumption was on average lower than in the other provinces and rather stable over time; finally is Venice, which in 2000 was the province with the highest demand in the region and then gradually reduced consumption to below all four provinces of the first group, as a result of the decline in production of Porto Marghera.

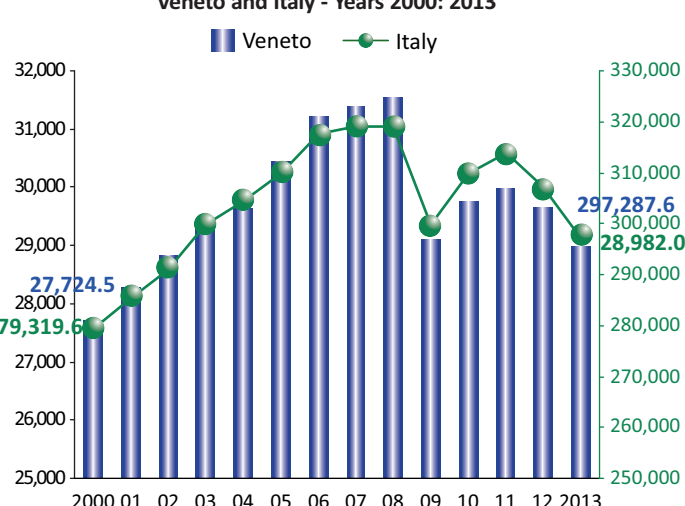
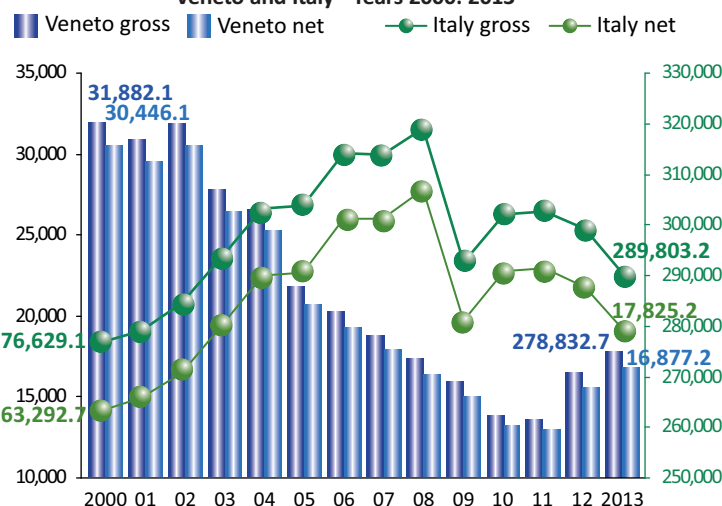
ITALIAN ELECTRICITY PRODUCTION REFLECTS THE TREND OF CONSUMPTION, CONTRARY TO THAT OF THE VENETO WHICH FOLLOWS AN ATYPICAL TREND

Gross and net production* of electricity (Gwh).

Veneto and Italy - Years 2000: 2013

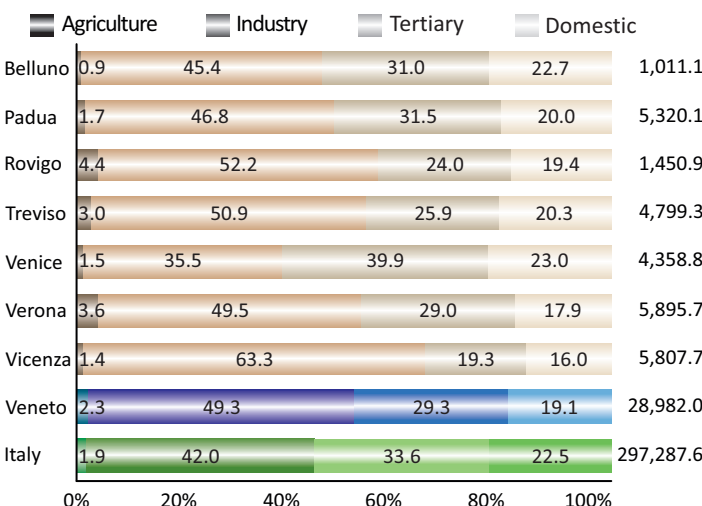
Final consumption of electricity (Gwh).

Veneto and Italy - Years 2000: 2013

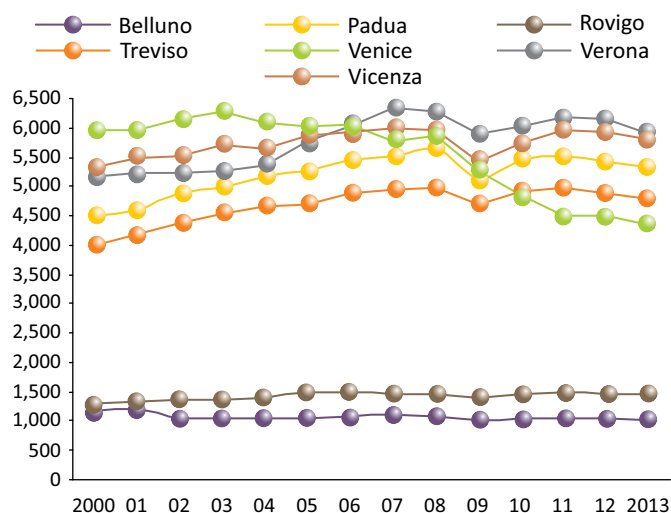


(*) Net production corresponds to gross production net of auxiliary services of production

Final consumption of electrical energy by sector (percentages and Gwh) in Italy, in the Veneto - Year 2013



Final consumption of electrical energy (Gwh) by province. Year 2000:2013



STATISTICHE *Flash*

Resuming the discussion on energy efficiency, we wish now to introduce the project AlpBC – Alpine Building Culture, In Veneto, special attention is given to the harmonization and integration of objectives and instruments of urban and energy planning. The project includes the 5 municipalities of the 'Alto Agordino' area: Alleghe, Colle Santa Lucia, Livinallongo del Col di Lana, Rocca Pietore, and Selva di Cadore. The aim is to equip the administrations with tools (guidelines and GIS Geomedia verticalizations) that allow the energy

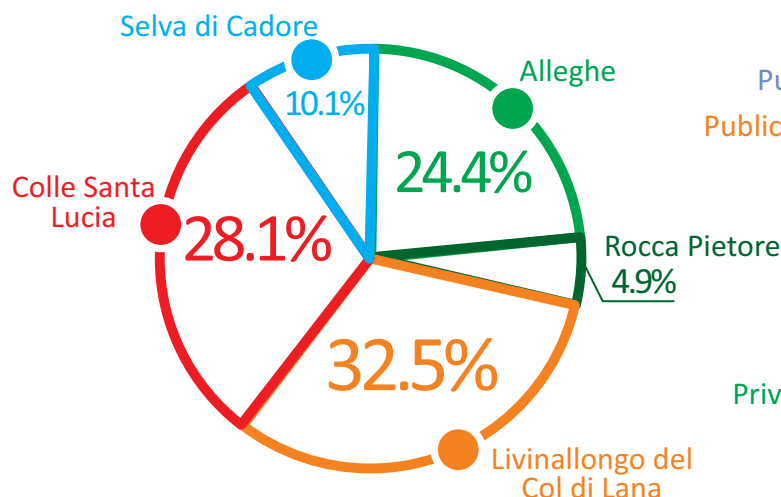
THE ENERGY FACTOR IN LOCAL DEVELOPMENT

factor to be taken into account in the local development strategies and to evaluate the options of urban and territorial development also in consideration of the targets of reducing greenhouse gas emissions and use of renewable energy sources. A first estimate of energy consumption in the studio area allows to understand the relevance of

consumption related to both residential and tertiary sector buildings: the geographic distribution of demand, the potential of exploitation of renewable sources, and infrastructures related to energy services, are some of the elements that are analysed to build the basic framework of the current situation and to assume development scenarios, which take into account changes of the built assets over time, both in terms of redevelopment and new (although very limited) construction. This will make it possible not only to define development scenarios related to the settlement characteristics typical of the area, but also to have a monitoring tool enabling to follow this transformation. Further information about the project is available on the website of Regione Veneto, at the following address: www.regione.veneto.it/web/ambiente-e-territorio/alpbc e www.alpbc.eu

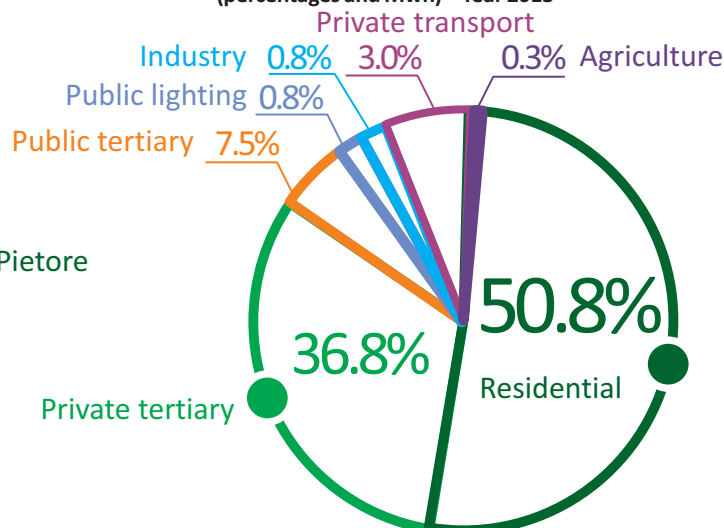
ESTIMATES OF ELECTRICITY CONSUMPTION OF 5 MUNICIPALITIES OF ALTO AGORDINO BRING TO LIGHT THE RELEVANCE OF BUILDINGS AND PROVIDE USEFUL PROGRAMMING TOOLS

Estimate of final consumption in the area of Alto Agordino (percentages and Mwh) – Year 2013



| Municipality | Consumption |
|------------------------------|----------------|
| Alleghe | 31,542 |
| Colle Santa Lucia | 6,381 |
| Livinallongo del Col di Lana | 41,909 |
| Rocca Pietore | 36,273 |
| Selva di Cadore | 12,032 |
| Total | 129,138 |

Estimate of final consumption of electricity by sector (percentages and Mwh) – Year 2013



| Sector | Consumption |
|-------------------|-------------|
| Residential | 69,798.0 |
| Private tertiary | 47,902.1 |
| Public tertiary | 3,367.0 |
| Public lighting | 1,240.2 |
| Industry | 747.0 |
| Private transport | 5,051.8 |
| Agriculture | 1,031.5 |

Source: Ambiente Italia

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