



ENERGY EFFICIENCY IN BUILDINGS

In 2018, the residential energy consumption in Italy was 32,1 Mtoe, 2,6% less than the previous year.

The use of solid biofuels is the only decreasing renewable energy source (-7,6%), on the other hand, all the others are increasing (+3,6%). Natural gas (-4,4%) and LPG (-2,8) are lowering, while the use of diesel oil, has a plus sign (+15,5). [District] Heating raises of +37,2%.

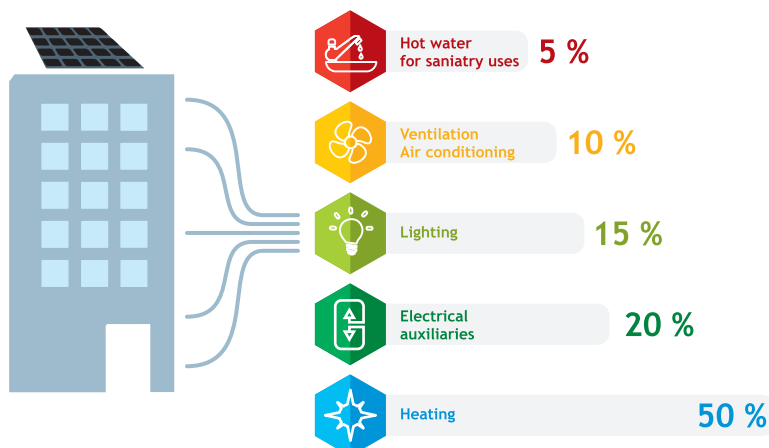
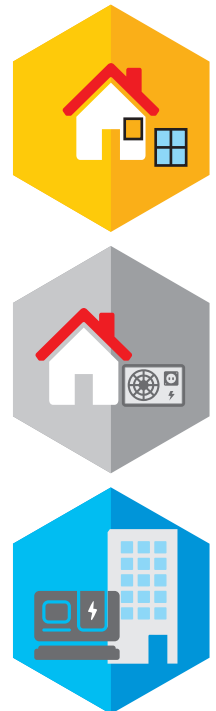
Natural Gas is still the principal energy source covering more than 50% of the demand, then there are solid biofuels (19,4%) and Electric Energy (17,5).

In 2018, the share of consumption dedicated to heating & cooling is almost 70%: after a considerable reduction between 2016 and 2017 (-4,12%), in 2018 begins to raise again (+1,5%). Similarly, the uses for cooking & hot water production are growing (+1,6%): their total weight give them the second place in terms of weight (17,7%). Energy consumption for illumination and electric appliances (13% of the total) is lowering (-1,3%).

In Italy, a specific incentive is encouraging the energy refurbishment of the structures or renewal of the thermal systems it is called *Ecobonus* and it refunds to the citizen from 50% up to 65% of the investments in 10 years. After the COVID-19 Pandemic, for some project it is possible to have 110% refund. The *Ecobonus* incentive between 2014 and 2018 financed more than 1.700.000 projects. In 2019 have been subsidized more than 395.000, of which more than 145.000 included both the substitution of windows and the replacement of the thermal generator. During the period 2014-2019 the total energy saved was almost 7.100 GWh/year. The 2019 savings are mainly due to the insulation of the building envelope (more than 33%), to the increased energy efficiency of the thermal system (30%) and the substitution of the windows (almost 25%). The number of interventions incentivized through the *Ecobonus* is less than the total of the national market, because several other projects have been funded by other incentives. The *Bonus casa* [*Home Bonus*] is an incentive for larger projects which deal only partially with the energy issues and covers roughly the 60% of the market of such kind of refurbishments; among the requests of *Bonus casa* incentive in 2019, 600.000 concerned mainly energy savings intervention, in particular heat pumps and condensation generators contribute for almost 66% to the total savings.

Analysing the national market data of 2019, the total sells of condensation generators (716.000), heat pumps for a principal heating system (150.000) and new windows produced to replace old ones (4,27 millions) show that the requests of incentives concern on the average the 15% of the market offer.

The average of the savings achieved in 2019 thanks to *Ecobonus* and *Bonus casa* is respectively 0,10 Mtoe/year and 0,29 Mtoe/year.



Source: Annual Report on Energy Efficiency - ENEA

Link: <https://www.enea.it/it/seguici/pubblicazioni/edizioni-enea/2020/rapporto-annuale-efficienza-energetica-2020/>