



HOME RENOVATION ROADMAPS TO ADDRESS
ENERGY POVERTY IN VULNERABLE RURAL
DISTRICTS

Consumption habits to be adopted after renovation



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List of Arguments



Cooling



**Internal
comfort**



**Photovoltaic
system**



Energy label



Cooling





Cooling



Do not cool the environment excessively and pay attention to humidity

Activating the "dehumidification" function can help alleviate the perceived heat by addressing humidity, making the temperature feel higher than it truly is.



Do not leave doors and windows open

Air conditioners cool and dehumidify the environment they are installed in by transferring heat and humidity outside. The entry of "new" hot air into the room forces the unit to perform additional work to restore the temperature and humidity to the required levels, resulting in extra energy consumption.



Cooling



Close shutters during the hottest hours

Closing shutters, lowering blinds, or using window screens during the peak hours of summer days decreases solar heat gain, thus reducing the energy needed by air conditioners.



Use the timer and “night” function

These functions help minimize the device's operating time and increase comfort. They also allow you to turn the air conditioner on and off remotely and keep it running only when needed. The "night" or "sleep" function adjusts the room temperature at night to respond to changes in body temperature.



Cooling



Each room needs its air conditioner

Installing a powerful air conditioner in the hallway, hoping it cools the entire home, is futile. The result will be feeling cold every time you cross the hallway, as it will be the only area cooled.

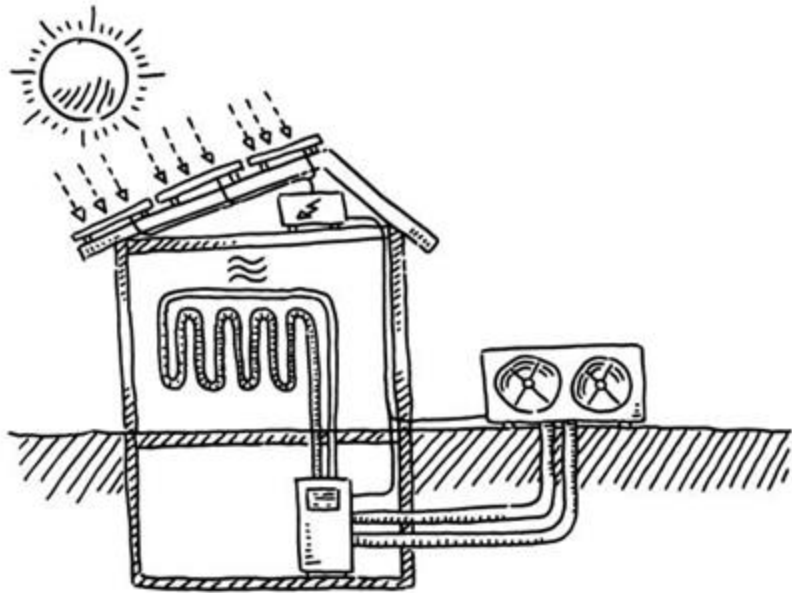


Pay attention to cleaning and proper maintenance

Air filters and fans should be cleaned at the beginning of each season and at least every two weeks. This is crucial as molds and harmful bacteria, including the potentially lethal Legionella bacteria, often accumulate in these areas. It's also essential to check the tightness of the gas circuit.



Cooling



If you decide to purchase a cooling device, choose a **heat pump**. It allows to reduce consumption and optimize expenses by using it for heating in winter. Consider the climatic characteristics of the installation location, especially if the cold air source is external. Heat pumps are **recommended in areas with mild winters**, where temperatures rarely drop below 7 degrees Celsius.



Cooling

While there are highly efficient heat pumps at low temperatures, their use is **not recommended in very cold winter regions** due to frost formation on the evaporator, compromising efficiency.

Additionally, it's advisable to install a heat pump when the area to be air-conditioned is sufficiently small, max 50m², so as not to require a change in the electrical supply contract.



Internal comfort





Internal comfort

To **maximise the benefits** of living in an energetically efficient building, it is necessary to:



Adjust and control the room temperature



Manage variations in indoor air humidity, ensuring proper air exchange

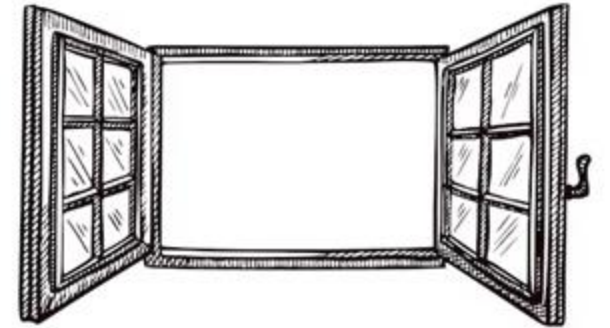
Controlling these two parameters, **temperature and humidity**, which are closely related, helps minimize energy consumption, costs, and maximize living comfort, making the living environment healthier. In closed environments well-isolated from the external environment, additional water vapor may be generated due to various activities, risking exceeding the ideal value and leading to condensation and mold formation. Activities like cooking, washing dishes, clothes, floors, showering, and even breathing release water vapor into the air. Plants, if present, also contribute a significant amount of water vapor.



Internal comfort

Do not underestimate condensation on windowpanes; it is an initial signal. Dehumidify by opening windows. Contrary to common belief, even on the coldest and most humid winter days, the amount of water vapor indoors is always greater than that in the external environment.

Regularly open windows for at least 5 minutes, multiple times a day, especially after using cleaning products. In winter, do this during the warmer hours of early afternoon, and in summer, during the cooler hours of the night and early morning. Leaving windows slightly open all day does not yield the desired results but only slowly cools indoor spaces.





Internal comfort

In addition to preventing humidity formation, it's crucial to expel excess vapor:



Don't dry laundry indoors



Open the window after showering and
keep the bathroom door closed to prevent
vapor from spreading to other rooms



Open windows during domestic chores like
cleaning, washing and ironing



Internal comfort

In addition to preventing humidity formation, it's crucial to expel excess vapor:



Open the window while cooking and always use the extractor hood, especially when boiling water for pasta or boiling vegetables



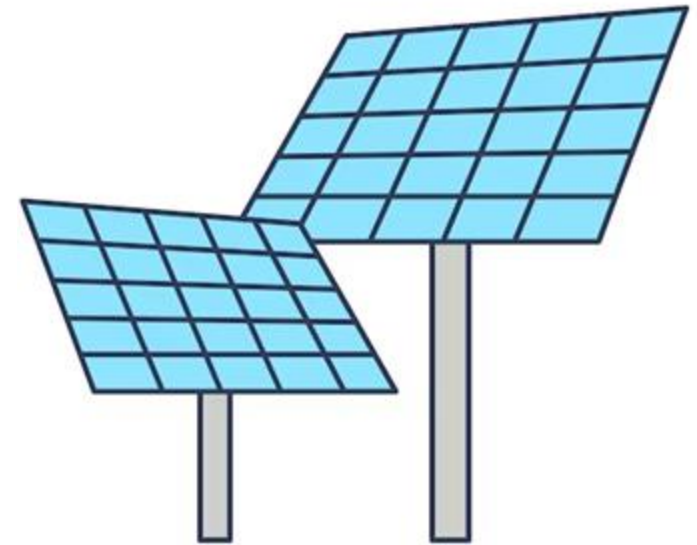
During cooking, **use lids** and reduce the flame to a minimum when the water starts boiling



Properly operate the hood during food cooking, especially for induction plates; suitable hoods are needed to neutralize condensation effects. Inadequate ventilation can lead to undesired effects like condensation formation, worsened air quality, and deformation of cabinet doors.



Photovoltaic system





Photovoltaic system



Regular maintenance is recommended annually



Inverter maintenance should follow the instructions in the use and maintenance manual



Consume energy when available



Use a device to monitor consumption and performance



Energy labels





Energy labels

As of March 1, 2021, the new energy label has come into effect:

-  The main scale, always referring to energy efficiency, remains color-coded from green to red, but a return to the initial classification from A to G has been implemented, with periodic updates expected approximately every 10 years;
-  Where appropriate, a secondary scale from A to D has been introduced for emitted noise;
-  Linguistic neutrality has been further emphasized, and pictograms informing consumers about the characteristics and energy and functional performance of appliances have been strengthened, eliminating the need for text.



Energy labels



The electricity consumption, expressed in kWh, is generally annual but can also be correlated to consumption per cycle



Class A – and for some products, also B – has been left empty at the time of the first application to encourage technological innovation and make room for new, more efficient models entering the market



A "quick access code" or QR code is present, providing access to product information readable through smartphone scanning



Energy labels

Depending on the type of product and the applicable label, the **letters can vary** on a scale from **A+++** to **G**, **A++++** to **D**, and **A** to **G**, progressively replacing other scales and becoming the only one for all products. During the "transition" period, **dual labeling** is present to demonstrate that the specific appliance simultaneously meets the requirements of both labels.





Energy labels

Attention to the Energy Class - The choice of the appliances is a key requirement to reduce consumption and avoid unpleasant surprises on the bill. Regardless of the technology, models in a higher energy class are always preferable because, in addition to reducing CO2 emissions into the atmosphere, they consume much less.

The annual energy consumption indicated on the energy label is based on 1400 hours of operation in heating mode and 350 in cooling mode, to which the energy consumption in other modes such as standby is added. By choosing, for example, a model in class "**A+++**", we could spend about 30-40% less on electricity than we would with a model in class "**B**".



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Thank you for your attention

