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Sun4All *solare per tutti*

S.P.Q.R.
ROMA CAPITALE

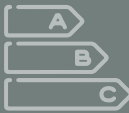# Let's use energy better at home.

We produce our own clean energy in the neighborhood!

Information sheets/cards for home energy efficiency.

Informations and advices towards Renewable Energy Communities.

4 tips to improve your behaviors

Consume electricity less and better at home with the actions recommended in these sheets/cards.

The more you know, the more you save

What do I use best?

Where do I save?

How do I save?

Create a Renewable Energy Community with your cell phone

Citizens, commercial activities, businesses, and other entities in the area can produce, consume, and exchange energy generated from renewable sources in a logic of self-consumption and collaboration.

The Renewable Energy Communities (REC) can self-produce and supply renewable energy, obtaining incentives for 20 years on the exchanged energy, leading to a reduction in energy costs for the members.

The SUN4U app guides users towards Renewable Energy Communities, facilitating connections with other consumers and prosumers in the same area. It supports them with a network of expertise and financial solutions, promoting fair access to renewable sources.
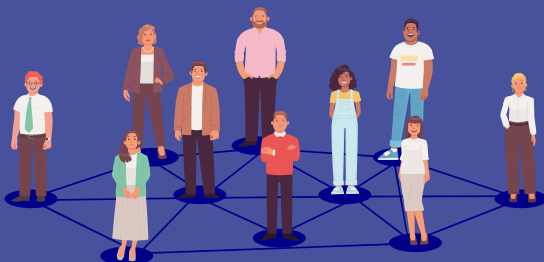
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Use the free SUN4U App to create your Renewable Energy Community.

To know more and download the App

www.sun4u.it - info@sun4u.it

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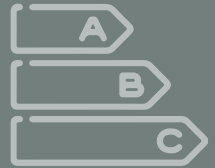Sun4All solare
per tutti

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The more you know, the more you save

*The cards provide tips that will help you
lighten the cost of bills.*

- Glossary.
- Energy labels for appliances.
- Electric tariffs and slots.
- Understanding electric bills.
- What are Electric, Gas, and Water Bonuses.
- Solidarity Renewable Energy Communities (sREC).

What do I use best?

*The cards describe small actions that allow you to use devices
in your home more efficiently.*

- Heating system.
- Boiler and radiators.
- Dishwasher.
- Washing machine.
- Electric oven.
- Refrigerator.
- Air conditioner.

Where do I save?

The cards describe small insulation interventions/measures that allow you to make your home more efficient.

- Reducing heat loss.
- Improving the airtightness of windows.
- Reducing drafts at the entrance door.
- Sealing shutters' compartments.

How do I save?

The cards describe behaviors that allow you to consume less energy.

- Efficient use of appliances.
- Timers for appliances.
- Power strips with switches.
- Natural and artificial lighting.
- Water conservation.
- Thermostat for regulating room temperatures.

Self-consumption: It refers to the ability to generate energy with one's own photovoltaic solar modules and consume it on-site and at the same time.

Bill Bonus: It is a financial help that the state and local administrations provide to families in specific socio-economic conditions.

Coibentazione/thermal insulation: It retains heat in winter and coolness in summer within the apartment, allowing for a reduction in energy consumption for heating and cooling by preventing heat loss.

Renewable Energy Community (REC): A group of people who organize themselves to locally produce and share energy generated from renewable sources.

Solidarity Renewable Energy Communities (SREC): A group of people who organize themselves to locally produce and share energy generated from renewable sources and reinvest the benefits for social and solidarity purposes.

Consumer: Consumer and final user of electrical energy.

Distribution of electrical energy: The final phase in the process of delivering electrical energy to the user.

Energy efficiency: The ability to use the right amount of energy to meet a specific need, avoiding waste.

Energy from fossil sources: Energy obtained through the combustion of fossil sources such as methane gas, oil, and coal.

Energy from renewable sources: such as wind, solar, and hydroelectric (derived from wind, sun, and water).

Energy consumption: the amount of energy consumed annually to meet various needs (heating and cooling or use of appliances).

Time slots F1, F2, F3: Time periods corresponding to different prices for electrical energy.

kW – kilowatt: Unit of measurement for power. It measures, on the bill, the contracted power with the supplier.

kWh – kilowatt-hour: Unit of measurement for electrical energy. It represents the energy absorbed over time by electrical appliances.

Eco 40-60 Program: A program found on washing machines and dishwashers designed to wash moderately dirty items at temperatures between 40 and 60°C, optimizing water and electricity consumption.

Prosumer: Producer and consumer of electrical energy. In a Renewable Energy Community (REC), they consume the electrical energy produced by the REC's photovoltaic panels.

What is it and how to read the label energy of household appliances?

When you need to purchase an appliance, compare the energy labels and choose the device that, at the same performance level, consumes less energy

QR Code: Provides access to information about the product in the European Product Registry for Energy Labeling (EPREL)

Scale: Colored from green to red, it indicates the energy efficiency of the model, helping consumers choose the most suitable one

Energy consumption: It is the energy consumption of the specific model of the product

Pictograms: Graphically depict the specific technical features and performance of each product

Duration of the Eco 40-60 program in hours:minutes

Capacity in kilograms of the Eco 40-60 program

Consumo di acqua per ciclo in litri

Efficiency class of the centrifuge

Airborne noise emissions during the spin phase, expressed in decibels

ENERG⚡

SUPPLIER'S NAME   MODEL IDENTIFIER

A
B
C
D
E
F
G

XYZ kWh / 100

XY,Z kg   **X:YZ**   **XY** L

ABCDEFG   ABCD

In Italy, the energy label was introduced starting from 1998. Over the years, the regulations have undergone some modifications, and today, it is mandatory for the following appliances placed on the European market: **refrigerators** and **freezers**, **washing machines, washer-dryers**, **dryers**, **dishwashers**, **ovens**, **kitchen hoods**, **light sources**, **air conditioners**, **televisions** and **monitors**, **boilers** and **water heaters**, **stoves** and **fireplaces**, **refrigerators** and **freezers** with **direct sales function**, **professional refrigerated cabinets**, **residential ventilation units**.

The more you know, the more you save

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Electricity prices and tariffs. It is important to choose the supply contract and electricity tariff that best suits our consumption. Knowing how to choose between the Monoraria (single-rate) and Bioraria (two-rate) tariff can lead to savings on the bill.

Electricity tariffs

- For those who are always at home and use electricity every day and at all hours, a single-rate tariff contract is more convenient.
- On the other hand, for those who spend little time at home due to work or study and mainly use electricity in the evening or during the weekend, a two-rate tariff is more advantageous.

Hourly electric time slots

- These are periods of time to which different energy prices correspond.

⚡ **Hourly electric time slots**

Hours of the day	Mon-Fri	Saturday	Sunday (holiday)
7:00 - 8:00	F2	F2	F3
8:00 - 19:00	F1	F2	F3
19:00 - 23:00	F2	F2	F3
23:00 - 7:00	F3	F3	F3

🔴 Higher price   🟠 Mid-price   🟢 Lower price

- With electric time slots, it is possible to manage consumption by using electricity based on personal needs during the periods when it is less expensive.

The more you know, the more you save

The electricity bill contains a lot of information, but never too much! You just need to know how to read it. If you have any doubts, contact us on the Sun4All chat.

Electricity bills

On the website
https://www.servizioelettriconazionale.it/it-IT/bolletta/leggi
you can consult the guide to Bolletta 2.0, as mandated by the Regulatory Authority for Energy Networks and the Environment (ARERA). It is a useful tool to clearly and synthetically present the expense items related to your supply.

- Prefer a two-rate supply contract (F1, F2, F3).

- For appliances that consume more, use the cheaper time bands.

- Visit the ARERA Offers Portal (by scanning the QR code on the side), the website where domestic customers, families, and small businesses can compare and choose electricity and natural gas offers immediately, clearly, and for free.

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The bill bonus is an economic aid provided by the state to families in specific socio-economic conditions. The bonuses are provided at the national, regional, and municipal levels.

Bonus for electricity, water, and gas

WHO CAN HAVE IT?

- Those with an ISEE (Equivalent Economic Situation Indicator) below 15,000 euros.
- Those with an ISEE up to 20,000 euros and 4 or more children.
- Those entitled to the Citizenship Income.
- Those in serious health conditions using electrical equipment for treatment.

HOW TO GET IT?

- Just request it from the CAF (Tax Assistance Centers) or INPS (National Institute of Social Security).
- Ask to fill out the DSU (Unique Substitute Declaration) after declaring your ISEE.
- The INPS or CAF will process the request based on your ISEE to activate the discount on electricity, gas, and water that will be applied directly to your bill.

For more information, visit the links below or scan the QR codes

- National level (ARERA)
  https://www.arera.it/it/bonus_sociale.htm

- Local level of Regions and Municipalities
  https://www.sgate.anci.it/

The more you know, the more you save

The Renewable Energy Community is a union of users (citizens, businesses, enterprises, and other entities in the area) who, through voluntary participation, collaborate with the goal of producing, consuming, and managing energy generated by one or more facilities powered by renewable energy sources in a specific area.

Renewable Energy Community (REC)

- The **REC** brings economic, environmental, and social benefits to its members: consuming and managing electrical energy through one or more local facilities using renewable energy sources:

  - **Savings on bills**: the more energy is consumed directly, the more the costs of variable components (distribution fees) of the bill are reduced.

  - **Gain on shared energy among community members**: producing energy with a photovoltaic system and sharing it with community members can be a source of income through incentives provided by the Energy Services Manager.

  - **Tax benefits**: 50% recovery of implementation costs for individuals installing a photovoltaic system on a building's roof.

  - **Reduction of CO_2 emissions**.

If you want to start a Renewable Energy Community, download the SUN4U app on your mobile phone.
You will find all the necessary information.

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It is unnecessary to keep the heating system on all day or night. The maximum daily operating time varies by law, ranging from 8 hours (in Southern Italy) to 14 hours (in Northern Italy). The regulations also specify a maximum temperature of up to 22 degrees.

What do I use best?
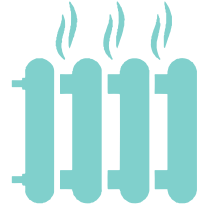
Heating system

- Install a temperature control unit.

- Install thermostatic valves.

- Bleed the radiators (i.e., remove air inside) at the beginning of the cold season.

- Do not cover them; heat should spread freely in the rooms.

- Clean them from dust.

- If the air in the rooms is too dry, lower the temperature for heating on the boiler and place trays on the radiators to humidify the air.

Equipping your radiators with a thermostatic valve allows you to save up to 20% of methane gas. In a year, you can save up to:

- 133 euros;
- 350 tons of CO_2.

The gas boiler produces hot water for sanitary use and heat for the radiators. Properly setting the temperatures allows for significant savings.

Boiler and Radiators

- Replace your traditional boiler with a condensing one and apply for state incentives.

- Adjust the hot water temperature to a maximum of 42 degrees.

- Adjust the heating temperature to a maximum of 65-70 degrees.

- Perform regular maintenance on the boiler as Rome's water is highly calcareous and increases maintenance costs.

Delaying the activation of radiators by 15 days can save up to:

- **179 euros per year;**
- **264 ttons of CO_2 per year.**

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What do I use best?

Appliances absorb electrical energy based on two factors: power in watts (1 kilowatt = 1000 watts) and usage time in hours (h). An appliance in Class A is one that consumes the least energy (kWh) and water. The cost of the electricity bill is calculated by multiplying the consumption of kWh of electrical energy by the cost in cents of euros (c€/kWh). The fewer kWh you consume, the lighter the bill. Always use the ECO program on your washing machine and dishwasher and take advantage of time bands.

Dishwasher

- Use the dishwasher only when it is fully loaded.
- Load the dishwasher correctly: glasses and cups in the upper basket, plates, pots, and pans go in the lower basket.
- Do not rinse the dishes beforehand, just remove food residues.
- Clean the filter frequently.

Washing Machine

- Use the washing machine only when it is fully loaded.
- Avoid washing at high temperatures, such as pre-washing when not necessary.
- Clean the filters every two months.

- Use liquid detergents that reduce limescale formation.
- Use powder detergents only for tablecloths and sheets, paying attention to the dosage.
- The addition of a specific limescale prevention product can be useful only if you live in an area with very hard water.

Electric Oven

- Avoid preheating it when not necessary or more than necessary.
- Do not open the door often during cooking.
- Prefer the convection cooking mode (it saves time and about one-third of the energy compared to static mode).
- Turn it off about a quarter of an hour before the end of the cooking time, leaving the food in the oven, which will continue to cook thanks to the retained heat.

Refrigerator

- Never place the refrigerator near a heat source (oven, stove, radiator) or in direct sunlight.
- The ideal temperature is 5°C for the refrigerator and -18°C for the freezer. In general, for each additional degree of cooling, electricity consumption increases by 6%.
- Avoid opening the door if not necessary or leaving it open for too long.
- Always let hot foods cool to room temperature before putting them in the fridge.
- Regularly defrost the freezer.
- Check the door seal regularly.

Air Conditioner

- Choose the air conditioner based on the volume of the room.
- Cool only the areas strictly necessary.
- Avoid air leaks from air-conditioned spaces.
- Do not place the external unit in direct sunlight to properly dissipate the produced heat.
- Perform regular maintenance and check the insulation of the refrigerant pipes from the external unit to the internal ones.

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Improving the insulation level of the house reduces winter and summer energy needs, making the bill lighter. Small interventions that do not require special technical skills prevent heat loss, especially in winter.
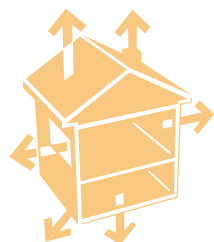
Where do I save?

Insulation

Remember that all the energy you produce at home for heating and cooling has a cost and an impact on the environment. Reduce the energy demand for your comfort by turning on the boiler and air conditioner only when necessary.

The thermal insulation of homes depends on two components: the walls and the fixtures.

It is possible to carry out simple local interventions on walls and fixtures to reduce energy loss, especially in winter:

- On the perimeter walls of the house, insulate the wall behind the radiators;
- On fixtures in good condition, work on the frames without resorting to their replacement.

Place thermal reflective foils behind the radiators located on the external perimeter walls of the apartment to prevent heat dispersion towards the outside.

Seal the gaps between fixed elements and walls in your home with silicone.

Install weatherstrips at the base of the entrance door of the house.

Seal the window shutter casings with adhesive strips or polyurethane foam.

Where do I save?

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Using household appliances correctly allows you to save electricity and money.
Here is a series of actions that make your behaviors more virtuous.

How do I save?

Efficient Use of Appliances

- Purchase appliances in energy class A.

- An efficient appliance saves energy and has less impact on the environment.

- The purchase of high-energy-efficiency appliances can be amortized through tax deductions **only if renovation works are also carried out**.

- To obtain the deduction:

  - Ovens must have a class not lower than A;

  - Washing machines, washer-dryers, and dishwashers must belong to classes E or higher;

  - Refrigerators and freezers must belong to classes F or higher.

The microwave consumes 40% less electricity compared to the electric oven. In one year, you can save up to 30 euros and 25 kg of CO_2.

Use electricity when it costs less.
The timer allows you to optimize the electricity consumption of household appliances.
For example, it allows you to set the operating time of the electric water heater during the time periods when electricity is cheaper.

Appliance Timers

- To cut costs on your bill, you should reduce the usage time of the most energy-intensive appliances such as the electric water heater.

- Set schedules for the use of appliances equipped with timers.

- Schedule the start of the electric water heater with a timer.

- Use the timer on the washing machine and dishwasher.

Using a timer
for the electric water heater
can save you:

- up to 350€ per year;
- 280 kg of CO_2 per year.

How do I save?

Appliances like the TV, when turned off, still consume electricity if the red light is on. Using a power strip with a switch allows you to disconnect multiple devices simultaneously, avoiding unnecessary consumption and also extending the life of the devices.
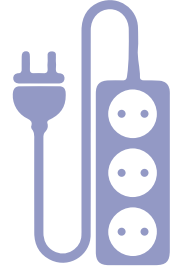
Power Strip

- By using a power strip (extension cord) with a switch, you can save

- from 8 to 10% on your annual bill.

- Turn off the TV if no one is watching it.

- Unplug chargers for phones and computers when no one is using them.

- All devices, if not unnecessarily powered, last longer.

- Turn off the WiFi router at night.

Using a power strip and turning off the switch can save you annually:

- up to 157 euros;
- up to 300 kg of CO_2.

Lighting your home contributes to your electricity bill. Therefore, use light only when needed.

Natural and Artificial Lighting

- Use sunlight as much as possible.
  It's natural, free, and improves your well-being.

- Arrange furniture to make the best use
  of natural light in rooms.

- Use only LED light bulbs
  (they can save up to 85% of electricity).

- Avoid leaving lights on unnecessarily.

- Learn to use light only in the room you are in
  and turn off bulbs and electronic devices
  as you move around.

How do I save?

By using LED bulbs,
you can save 85% of
electricity and:

- up to 25 euros per year;
- up to 22 kg of CO_2 per year.

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**First rule: do not waste water.
In addition to reducing the cost of the water bill, it reduces pollution.
Bringing drinking water into homes requires energy. The less water is wasted, the less pollution occurs.**

How do I save?

Water saving

- Prefer a shower over a bath.
- Turn off the tap while soaping up.
- Close the tap tightly to prevent water from flowing unnecessarily.
- Repair all water leaks: flush tanks, faucets, etc.
- Prefer faucets that regulate water flow.
- In the kitchen, for food preparation or washing vegetables, use basins instead of running water.
- If possible, collect and recycle water for watering plants or flushing the toilet.

When brushing your teeth, it's a good habit to turn off the water once the toothbrush is wet.

Leaving the tap open wastes five liters of water per minute, which amounts to an expense of about 50 euros per year.

The thermostat is a device that contains a thermometer and a clock inside. It allows for optimal adjustment of the operating temperature of electrical or gas appliances, reducing energy consumption on the utility bill.

Thermostat

- Adjust the desired temperature in each room of the house, at every time of day.

- Multiple thermostats can be installed in different zones or rooms of the house to optimally regulate individual spaces: 20-22 degrees Celsius in winter, 24-26 degrees Celsius in summer.

- Adjust the thermostat of the boiler or water heater.

- For hot water, 40-42 degrees Celsius are sufficient.

By lowering the thermostat temperature by 1 degree, you can save up to:

- 179 euros per year;
- 264 tons of CO_2 per year.