

# Supporting the digital energy transition in your municipality or local authority.



## Citizen action: plug and play solar panels

Plug and Play solar panels are compact photovoltaics (PV) with built-in micro-inverters, allowing direct connection to a household socket.

These systems typically consist of 1–2.5 panels (up to 800W) and are designed for easy installation on balconies, in gardens, or temporary structures.

Plug and play solar panels are a new, affordable and accessible way to produce your own energy and get involved in the digital energy transition. However, their roll out across Europe is dependent on addressing a range of safety and regulatory concerns.

### Did you know?



In some European Countries (e.g. Belgium) you can now generate your own renewable energy from your balcony using plug-and-play solar panels... No roof access or complex installation required!



Photo credit: [Jackery Power Station](#) on Unsplash

## Three benefits of plug and play solar panels

- Democratises energy production: no installation required and relatively affordable.
- Bypasses complex regulations: More likely to be suitable for apartment buildings and blocks of flats.
- Supports urban sustainability: Underused spaces like balconies can be used for energy generation.



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# Supporting the digital energy transition.



## Plug and play solar panels in Belgium

In 2025 Belgium legalised the use of plug and play solar panels after overcoming safety and regulatory barriers.

- Plug and play was previously banned in Belgium due to concerns about amateur interference with grid infrastructure.
- New rules now permit systems under 800W, provided administrative steps are followed.
- Citizens can now legally contribute to their energy supply - even in restrictive building settings.

This move is part of a broader push to make solar energy accessible and affordable, with Flanders recently reaching one million solar panel installations and targeting further expansion, including support for apartment buildings and social housing.

## Current barriers to solar plug and play use

### Legal restrictions

In some regions, small inverters or plug-and-play systems were not previously approved due to safety standards or regulatory gaps. These rules are gradually changing, but requirements (such as wattage limits or permits) may still apply.

### Collective housing rules

Apartment or building committees can restrict even small personal solar setups, especially on shared or visible spaces like balconies. Approval often depends on local building agreements.

### Lack of public awareness

Many citizens don't know that plug-and-play systems exist, how they work, or that they can be installed without professional help. This limits uptake despite the technology's accessibility.

### Grid integration challenges

If not properly declared or limited in capacity, small systems can risk overloading local grids or causing technical issues. Utilities may require registration or technical safeguards to ensure safe integration.