BRUSSELS, 19 OCTOBER 2022

An EU-solar mandate for energy-positive, system-integrated and efficient buildings, at the core of a resilient energy system

Dear Energy Ministers,

Dear Members of the European Parliament,

Accelerating solar energy (solar PV and solar thermal) deployment in buildings, together with energy savings and demand-side flexibility activation, is critical to support consumer energy security for the upcoming winters and increase the resilience of the European energy system and fight the climate crisis.

Every additional solar kWh reduces European dependency on gas and other fossil fuels, contributing to a secure energy supply. Recent research shows that only from May to August 2022, electricity from solar power generated the equivalent of 29 bn Euro in fossil gas imports.[1] By boosting the installation of PV and solar thermal panels, the EU solar mandate will replace even more gas. Indeed, more should be done towards the strengthening of the European solar industry, inscribed in the spirit of fostering the EU's Strategic Autonomy.

Buildings, if equipped with PV will generate 25 % of the EU's electricity consumption, according to the Joint Research Centre of the European Commission. The potential is even higher if solar PV for facades and windows is taken into account. Solar thermal can provide a direct renewable heating solution and further replace fossil fuels, having the potential to triple its capacity by 2030 according to the European Commission, contributing to reaching the EU's renewable energy targets.

Buildings equipped with solar energy will lower consumers' energy bills. Europe is experiencing record-high energy prices impacting directly European households and industries. Gas and retail electricity prices are going through the roof and are expected to stay high. On the other hand, the costs of solar energy on buildings have steadily

[1] EU's record solar summer helps avoid €29bn in gas imports. 2022

decreased. Payback times ranged between 5 and 15 years already before the crisis, and are estimated to be less than 5 years in some countries with current prices, compared to an average lifetime of 25 years. Furthermore, solar heat and solar PV combined with electric heat pumps or vehicles offer turn-key fossil-free solutions for heating and mobility and can support households in the upcoming winters.

The solar mandate for buildings put forward by the European Commission as an amendment to the Energy Performance of Buildings Directive (EPBD) is critical to accelerate the deployment of such solutions while reducing overall societal costs.

- It will tap into the solar potential on buildings while reducing citizens' and overall societal costs, by reducing companies' soft costs (marketing and sales costs) on each kW installed.
- It will support the smart interaction of buildings into the energy system and their contribution to a more resilient, decarbonized energy system, provided that the building's demand-side flexibility is incentivized and activated.
- In addition, numerous socio-economic benefits can be derived from moving toward an energy model more centred on sharing and pooling resources (through collective self-consumption and energy communities) and participation in demand-side flexibility schemes.[2]
- It will provide a powerful signal to workers and companies to train or reskill into the jobs needed in the renewable energy, renovation, and smart buildings industries.

A powerful solar mandate for buildings will also accelerate the needed integrated deep renovation of buildings. A solar mandate for buildings will incentivise consumers and the construction industry to undertake integrated deep renovations. The installation of a solar system should be coupled with energy renovation works that drastically improve the buildings' envelope, upgrades electrical installations, and equips the building with other energy-efficient heating and cooling systems such as heat pumps, and EV charging infrastructure. This will contribute to the optimisation of on-site solar generation and consumption while enabling the activation of the flexibility potential of buildings.

A solar mandate for buildings also holds opportunities for the EU construction industry. According to the IEA, the rooftop PV segment is the most job-intensive segment of all renewables. In a 45% RES scenario, solar PV on buildings will create a total of 880.000 jobs by 2030, according to a recent jobs report[3]. A solar thermal roadmap[4] foresees that the solar thermal sector will create 250.000 jobs by 2030. The on-site solar sector is SME-heavy and contributes to the creation of local, qualified, and sustainable jobs. When coupled with integrated renovations and the installation of heat pumps, the opportunities for EU-based sustainable jobs increase further.

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[2] Community Energy. 2020
[3] EU Solar Jobs Report. 2022
[4] Solar Thermal Roadmap. 2022

We therefore call on you to support the development of a strong mandate for on-site solar in the EPBD, on the basis of the proposal put forward by the European Commission.

This includes:

1. **The ambition and the scope of the mandate must be increased.**

   Mandatory solar installations on new buildings should be extended to buildings undergoing major renovations which look at the whole envelope and when a roof renovation occurs. This is a low-hanging fruit, no-regret solution, already adopted in several member states.

   While maintaining the ambition on residential buildings, the mandate should apply to all non-residential buildings as well as relevant infrastructure such as carports.

2. **The right regulatory and financing frameworks must be established to support consumer access to solar building solutions.**

   Regulatory frameworks must reflect the value of solar energy compared to cumulated costs from retail electricity or gas. Self-consumption frameworks, individual and collective, must be implemented to maximise the return on investments for consumers and to make solar accessible to tenants in multi-apartment buildings. Barriers to third-party investor modes must be lifted, in line with the Renewable Energy Directive Article 21(5).

   SMEs are at the heart of solar rooftop installations and this acquis must be preserved in view of the ambition to multiply the installation of solar panels across the EU. Construction SMEs, and especially micro companies active in the installation of solar PV panels and solar thermal panels, should be given adequate financial and technical support to ensure a pool of qualified companies and installers to deliver on this ambitious task.

   Financing schemes should be made available to SMEs and low-income and vulnerable households on the European and national level to reduce the CAPEX investment for a solar system, also in combination with other renewable and efficient heating works. These should include grants, innovative funding schemes such as revolving funds and the use of the Recovery and Resilience Facility REPowerEU Chapter and additional EU and national funds. The obligation to deploy solar installations on buildings should not qualify as a “Union standard” within the meaning of State aid rules because it depends on criteria specified by member states. On top of this, member states shall ensure to have sufficient human resources to design financing schemes that fit the requirements at the national and local levels. The deployment of solar installations atop European SMEs could be envisaged in order to promote self-consumption, for example by incentivising SMEs to make use of solar panels on their premises to facilitate the installation of EV charging infrastructure.

   Member states shall have strong regulatory instruments in place (i.e. Minimum Energy Performance Standards) and establish and support schemes to enable renovation works that are prerequisites to solar deployment and

make use of planning tools, such as Renovation Passports, to clearly and coherently define renovation pathways. Relevant renovation works are roof renewals, building extensions, roof renovations, roof insulation, upgrades and digitalization of electrical installations. These building works should be coupled with solar installations.

3. Member states must set the right enabling conditions for the deployment of smart solar buildings.

The additional solar capacity requires a true strategy for grid and heat network integration, including measures to mainstream flexibility services. Member states must finally ensure that grid and heat network operators have the right financial incentives to connect distributed energy resources capacity, through adequate grid and heat network investments. In particular, the procurement of flexibility from electricity DSOs should be enhanced, by implementing the provisions of the Electricity Market Design Directive. Regarding heat networks, proper implementation of the requirements of Art. 24 of RED, namely in relation to third-party supply, is required.

One-stop shops shall be established at the municipal level, to raise awareness and guarantee access to information for citizens. Those one-stop shops must provide comprehensive comparative information about all renewable and energy efficiency technologies, also stressing the benefits of integrating multiple solutions and undertaking comprehensive deep renovations following the steps of a Renovation Passport. In addition, they should inform about energy efficiency and solar support schemes.

The right frameworks must be set up to ensure the availability of sufficient numbers of professionals with the right skills for the decarbonization and smart electrification of the building stock, including solar installations. This can be achieved by leveraging the REPowerEU chapter in the RRF while providing long-term predictability for the construction industry. Member states, in partnership with local authorities, should assess within the framework of their National Building Renovation Plan, the gap between the available and needed workforce and set up training and upskilling programs and facilities accordingly. On top of this, they shall set up enabling frameworks for installers (both at the individual and company level) comprising financial incentives for instance through tax reductions. The aforementioned gap assessment and training and upskilling actions should be duly reported using Key Performance Indicators in EPBD Annex II.

Cities are essential actors in leveraging the climate and societal benefits of solar energy. Member States should provide dedicated funding opportunities for local governments to match the scale of the challenge of implementing local energy transition roadmaps (including the additional costs that will be incurred on permitting and setting up one-stop shops). According to a recent study[5], around 2.5 additional full-time positions per municipality per year will be needed over the next 9 years (including 2022) to deliver the challenge of building decarbonization.

[5] Human Capacity in Local Governments: The Bottleneck of the Building Stock Transformation. 2022

In particular, capacity building for municipal staff is needed to raise awareness among citizens and local SMEs to scale up the installation of solar projects.

4. **Member States shall establish a pathway with numerical targets for the deployment of renewable technologies, including progress indicators on the above-mentioned measures, within or outside article 9a, in their national building renovation plans in accordance with EPBD Article 3 and Annex II.**

We stand ready for a more detailed conversation on the topic:

Climate Action Network (CAN) Europe		**Energy Cities**	
Energy Policy Group (EPG)		**Environmental Coalition on Standards (ECOS)**	
Eurocities		**European Association for Electromobility (AVERE)**	
European Builders Confederation (EBC)		**European Copper Institute (ECI)**	
European Environmental Bureau (EEB)		**European Heat Pump Association (EHPA)**	
EuropeOn		**Friends of the Earth Ireland**	
Kyoto Club		**Legambiente**	
REScoop		**Smart Energy Europe (smartEn)**	
Solar Heat Europe		**SolarPower Europe**	