



# OPINION

European Economic and Social Committee

## Accelerating Renewables Rollout

Communication from the Commission to the European Parliament, the Council, the  
European Economic and Social Committee and the Committee of the Regions  
EU Solar Energy Strategy  
[COM(2022) 221 final]

and

Commission recommendation on speeding up permit-granting procedures for renewable  
energy projects and facilitating Power Purchase Agreements  
[C (2022) 3219 final]

TEN/783

Rapporteur: **Kęstutis KUPŠYS**  
Co-rapporteur: **Alena MASTANTUONO**

[www.eesc.europa.eu](http://www.eesc.europa.eu)

EN

Referral	European Commission, 28/06/2022
Legal basis	Article 304 of the Treaty on the Functioning of the European Union
Section responsible	Transport, Energy, Infrastructure and the Information Society
Adopted in section	04/10/2022
Adopted at plenary	26/10/2022
Plenary session No	573
Outcome of vote (for/against/abstentions)	171/1/3

## 1. Conclusions and recommendations

- 1.1 The EESC highlights the need for the EU to boost solar energy and further European capacities in this field as a matter of urgency for several reasons: to achieve the climate goals, to increase the EU's strategic energy autonomy, to promote public and private investment and the creation of decent jobs, to strengthen the industrial base and foster business opportunities, and to contribute to access to affordable energy by households.
- 1.2 At the same time, the EESC points out the need to recognise the differences between Member States in terms of their energy mix, which reflects their geographic and climate conditions and the availability of various renewable energy sources. The enhancement of solar energy must comply with technical conditions and environmental sustainability. Grasping the full potential of solar energy in Europe requires greater cooperation among Member States.
- 1.3 The EESC welcomes the EU Solar Energy Strategy<sup>1</sup> (hereinafter referred to as "the Strategy"), but regrets that its results will come so late. It calls on Member States not to wait for the adoption of the new EU rules and to already start facilitating administrative procedures and shortening the permit-granting process. The EESC calls on the Member States to enhance one-stop-shop, integrated and single permit-granting procedures and to immediately speed up the designation of "go-to areas", limiting the full implementation process to a maximum of two years. It also stresses that the solar strategy requires a robust deployment of storage capacities, and that the transmission and distribution networks be ready.

The EESC calls on policy-makers to encourage, support and enable people to become solar energy prosumers and to build up energy communities. The EESC recommends that local authorities launch projects to tackle energy poverty in areas where people cannot afford to invest via energy communities. The EESC calls for a stronger emphasis to be placed on agricultural photovoltaics (agri-PVs), to offer farmers new opportunities and benefits.
- 1.4 The Committee notes that the expansion of the use of heat pumps should be seen in tandem with the increase in the installation of solar PVs, as a combination of a (rooftop) solar PV system and a heat pump provides the most energy-efficient and economically accessible solution for cooling where climate conditions allow. The EESC also sees the need to promote utility-scale solar thermal systems.
- 1.5 To ensure a large-scale solar PV rollout, it is necessary to strengthen the European industrial base and ensure smooth and reliable supply chains in the solar field. The EESC thus finds it imperative for the EU to find ways of producing solar PVs in Europe, improving the environment for public and private investment and creating business friendly conditions, including proper access to finance and a strong focus on research and innovation.
- 1.6 There are major obstacles to the installation of solar energy due to a huge lack of skilled workers, as well as regulatory and even technical barriers. The EESC urges intensive promotion of training and skills development in cooperation between relevant stakeholders.

---

<sup>1</sup> Proposal [COM\(2022\) 221](#)

1.7 The EESC underscores the importance of building a domestic EU industrial capacity for sustainable and reasonably priced solar energy products and calls for solid support for the Solar PV Industry Alliance. It highlights the clear need to mobilise all stakeholders concerned, with the support of public authorities and the social partners, to ensure the necessary practical knowledge and expertise, as well as broad support for the deployment of solar PVs.

## 2. Background

2.1 On 18 May 2022, against the backdrop of the war in Ukraine, the introduction of EU sanctions against Russia, and efforts to address the issue of energy sovereignty, the European Commission proposed the REPowerEU plan<sup>2</sup>, aimed at "rapidly reducing our dependence on Russian fossil fuels by fast-forwarding the clean transition and joining forces to achieve a more resilient energy system and a true Energy Union".

2.2 In relation to clean energy production, REPowerEU proposes ways in which the EU can speed up the green transition and spur on massive investment in renewable energy<sup>3</sup>. As part of the REPowerEU plan, the European Commission adopted an EU Solar Energy Strategy (hereinafter referred to as "the Strategy"). This strategy focuses on four initiatives:

- a) a European solar rooftops initiative;
- b) a permitting procedures package;
- c) an EU large-scale skills partnership;
- d) an EU Solar PV Industry Alliance.

2.3 The Strategy builds on the proposed EU initiatives on renewable sources, energy performance of buildings, and energy efficiency (hereinafter referred to as "COM(2022) 222 final"<sup>4</sup>). COM(2022) 222 final envisages the adoption of a maximum duration for the permit-granting process applicable to renewable energy plants. The Commission has put forward an initiative for raising the targets set in earlier proposals for revisions to the Renewable Energy Directive (RED II) and Energy Efficiency Directive (EED).

2.4 This opinion is one of the several energy-related EESC opinions and needs to be seen in this overall context, covering opinions on the REPowerEU Plan<sup>5</sup>, energy markets, energy security and energy prices, among others.

## 3. General comments

3.1 The EESC welcomes the proposed Strategy, in particular the fact that it tackles the need to take action across the entire field of solar energy: investments, innovation, energy production,

---

<sup>2</sup> [COM/2022/230 final](#)

<sup>3</sup> [TEN/778 - REPowerEU: Joint European Action for more affordable, secure and sustainable energy](#) and TEN/782 - [RePowerEU Plan](#).

<sup>4</sup> [COM\(2022\) 222 final](#).

<sup>5</sup> TEN/782 - [RePowerEU Plan](#)

electricity, market design, incentives, infrastructure, skilled workers, awareness raising, sustainability, and value chains.

- 3.2 Boosting solar energy and furthering European capacities in this field is a matter of urgency for several reasons. It is necessary to achieve the climate goals as well as to increase the EU's strategic autonomy in energy. It also enhances public and private investment and the creation of decent jobs, provides business opportunities and contributes to access to affordable energy by households.
- 3.3 For a coherent and sustainable EU Solar Energy Strategy, the EU needs to ensure:
- 1) suitable regulatory frameworks that save time and reduce costs;
  - 2) the active contribution of consumers to solar energy production;
  - 3) use of economies of scale;
  - 4) robust public and private investment in infrastructure;
  - 5) incentives for research, development and innovation;
  - 6) skilled people and the quality jobs needed to attract them;
  - 7) raw material sufficiency;
  - 8) circularity and energy-efficiency in the whole solar PV sector; and
  - 9) adequate funding.
- 3.4 The EESC also points out that the Strategy needs to recognise the differences between Member States in terms of their energy mix, which reflects their geographic and climate conditions and the availability of various renewable energy sources. Moreover, the enhancement of solar energy must comply with technical conditions and the environmental framework.
- 3.5 The Committee hopes to see the Solar Energy Strategy becoming a cornerstone of the transition to a climate-neutral energy system where renewable energy plays a central role. To this end, strong emphasis needs to be put on the development of storage technology, demand-side management, and the integration of the overall energy system.
- 3.6 The EESC draws attention to the urgent need to create favourable conditions for research, product development and creation of EU industrial capacity for production of sustainable and competitively priced solar energy equipment. To that end, the EESC strongly supports the Solar PV Industry Alliance, which is expected to come up with solutions to the persistent problem of dwindling industrial capacity in the EU. Here, one should make use of the experience of, and possible synergies with, other alliances such as the European Battery Alliance. Civil society actors should be involved from the very beginning, as they play a vital role in providing practical knowledge and expertise, as well as in reaching out to the wider audience and ensuring societal support and consultation.

#### *Enhancing the uptake of solar energy*

- 3.7 To enhance the adoption of solar energy, we need a policy that will motivate consumers and all energy system stakeholders to respond to this ambition when procuring their energy. At the same time, they need to be encouraged to commit to energy efficiency and energy-saving

measures. This could be achieved by making them aware of the expected benefits, e.g. reduction of energy bills, improvement of daily well-being and increased value of their property, and by designing appropriate financial instruments.

- 3.8 The EESC calls for policy-makers to encourage, support and enable people to become not only conscious energy consumers but also energy prosumers and to build up local energy communities. This would help them to be more aware and independent of common market prices. The EESC recommends that local authorities launch collective solar energy projects, taking advantage of public buildings such as offices, schools and hospitals, so as to be able to tackle energy poverty in areas where people cannot afford to invest via energy communities.
- 3.9 Given the priority role of energy efficiency and saving, Member States should facilitate the deployment of smart meters in order to allow energy users to have a better picture of their consumption and a better understanding of how to manage it. The EESC calls for consideration to be given to the link between improving energy efficiency and increasing the role of solar energy in the renovation of buildings. Member States are encouraged to guide energy users to spread out their energy needs wisely over 24 hour periods in order to reduce peak demands.
- 3.10 The Committee notes that the increase in the installation of solar PVs should be seen in tandem with the expansion of the use of heat pumps, given that solar energy production peaks coincide with the increase in electricity demand to cool buildings. The combination of a (rooftop) solar PV system and a heat pump therefore provides the most energy-efficient and the cheapest solution for cooling (at certain times of the day) where climate conditions allow. The rest of the time production is linked to the volatility in solar intensity, which means that another energy source must be used in order to satisfy the demand for energy. The volatility can be partially mitigated by the deployment of robust storage capacity which is still not available today in sufficient quantities and better transmission connections, which calls for better cooperation among Member States.
- 3.11 Solar thermal energy has been largely underrated in the majority of the Member States. The EESC calls for greater use of solar thermal systems, where possible, at utility scale in energy transition plans at Member State, regional and municipal level. With the current gas supply crisis and the need to replace natural gas, mainly used for heating and industrial needs, solar thermal energy will be an important factor in the energy system.
- 3.12 The EESC sees the need to further assess and increase the potential for the uptake of rooftop solar PVs by creating permanent consultation and collaboration mechanisms involving a wide range of relevant stakeholders. This would require the establishment and proper funding of local and regional renewable agencies and entities to support citizens, SMEs and local authorities, while setting up training initiatives and promoting new, decent jobs.
- 3.13 Building-integrated solar PV (BIPV) systems have an important role to play in maximising solar energy production. If not only the roof but also parts of the façade of a building are covered in solar electricity generating surfaces, the user enjoys the possibility of "milking the sun" for a much longer portion of the day. This approach is good for the whole energy system, because it means that solar PV production peaks can be smoothed. The Committee recommends

encouraging further research into BIPV systems and also adding an additional layer to the Rooftop PV initiative, with an extra emphasis on support to east-west solar PV installation orientation.

*Speeding up permit-granting procedures and ensuring financial resources*

- 3.14 The EESC stresses that there will be an imminent need to speed up permit-granting procedures in order to facilitate the deployment of renewable energy, including its production, storage, distribution and transmission. While permit-granting is a matter for the Member States, the EESC supports the general lines set out in COM(2022) 222 final and Commission Recommendation C(2022) 3219 final<sup>6</sup> and encourages the Member States to focus their efforts on developing their procedures.
- 3.15 According to industry analysis<sup>7</sup>, solar PV installation permit-granting times range from 12 months in Lithuania to 48 months in Croatia. Of the 12 countries with available information, only three had permit-granting times less than the EU limit of 24 months. The EESC therefore calls on the Member States to set defined, shorter deadlines for administrative and permit-granting procedures and to simplify processes by enhancing one-stop-shop, integrated and single permit-granting procedures. In the Committee's view, Member States should not wait for the adoption of the proposal but already start shortening the procedures. Moreover, the Committee emphasises the need to digitalise as many procedures as possible throughout the various stages of the permit-granting process.
- 3.16 The EESC fully endorses the "Facilitating citizen and community participation" section of the Commission's Recommendation<sup>8</sup>. The participation of citizens and energy communities in renewable energy projects is essential for citizens' involvement in and their support for the energy transition. The EESC stress that deployment of solar energy should not be a privilege for some consumers, and that energy poor and vulnerable consumers must have access to solar energy, e.g. through social housing installations, energy communities, or financial support for individual installations.
- 3.17 According to COM(2022) 222 final, the Member States should adopt a plan or plans designating "go-to areas" for one or more types of renewable energy sources within two years after the entry into force of the amendments to the Directive. The Committee underscores the urgency of getting those plans in place as early as possible, limiting the full implementation process to a maximum of two years. Roofs comprise a homogenous area, except of course in culturally protected areas. The EESC advocates shorter periods for kick-starting initiatives where technical solutions are well known, such as in the case of rooftop PVs.
- 3.18 The EECS also notes that PV modules floating on lakes and reservoirs' surfaces reduce water loss by evaporation while improving PV power conversion efficiency due to the inherent

---

<sup>6</sup> [C/2022/3219 final](#)

<sup>7</sup> <https://ember-climate.org/insights/research/europes-race-for-wind-and-solar/>

<sup>8</sup> Commission Recommendation of 18 May 2022 on speeding up permit-granting procedures for renewable energy projects and facilitating Power Purchase Agreements, [C/2022/3219 final](#)

cooling provided by the water. In the case of dams, daytime electricity can be supplied by floating PV, and night-time power can be generated by water released from the dam, all using the existing grid connection.

- 3.19 However, a careful approach is necessary in cases where technical solutions are less advanced and implications for biodiversity loss have not been fully examined. One such example could be floating PV projects, especially in non-artificial water bodies. This lack of a more granular approach is one of the rare shortcomings of the aforementioned proposal.
- 3.20 The EESC calls for a stronger emphasis to be placed on agricultural photovoltaics (agri-PVs), possibly in the form of an additional Commission Recommendation. The actions of the Member States in this field should not distort the use of productive farmland or harm food production (hence the need to incentivise solar energy production on less valuable land). At the same time, the opportunities associated with extra income from energy production for farmers and better protection of crops and animals (shading and cooling effect, reduction of heat stress, protection against hail, frost) should be emphasised in the agricultural policy field. The latter factor should also be viewed through the lens of improved adaptation to climate change. The installation of large-scale solar parks should be prioritised on marginal and brownfield land.
- 3.21 Boosting solar energy is a matter of urgency and it is therefore necessary that the respective projects enshrined in national Recovery and Resilience Plans are a priority. As the capacity to produce green energy, and in particular solar energy, varies substantially between regions, cohesion policy could and should contribute decisively to the EU's overall energy supply; InvestEU or a similar programme should also play a major role. The EESC welcomes the Strategy's focus on the repurposing of former industrial or mining land, as such land represents an opportunity for the deployment of solar energy systems. In this regard, the EESC supports the use of the Modernisation Fund and the Just Transition Fund for go-to areas.

#### *Strengthening production and installation capacities*

- 3.22 The current EU solar PV target of 320 GW by 2025 and 600 GW by 2030 (Germany alone wants 215 GW) is very ambitious but necessary to meet the EU's climate targets. According to the REPowerEU plan, 42 GW needs to be deployed each year until 2025, with the pace speeding up to 53 GW per year after 2025. Following this plan, the EU has to double the pace of solar installation it recorded in 2021: a leap from 21 GW per year to 42 GW per year is required immediately.
- 3.23 Currently, the European economy is not ready to deliver the requisite components for such a large-scale solar PV rollout due to lack of manufacturing capacities. There are also major obstacles to installation owing to a huge shortage of skilled workers, as well as regulatory and even technical barriers. In comparison, and in sharp contrast to the EU, China is expected to install another 100 GW of PV capacity in 2022, almost doubling its installation pace<sup>9</sup>, while covering the entire value chain of its PV industry.

---

<sup>9</sup> <https://www.pv-magazine.com/2022/05/31/chinese-pv-industry-brief-chinas-nea-predicts-108-gw-of-solar-in-2022/>



- 3.24 The Committee therefore stresses the need to strengthen the European industrial base and economy, safeguard strategic autonomy (in particular autonomy of energy supply), and ensure smooth and reliable supply chains. The EESC points out that the EU can only play a leading role in the solar industry if the conditions allow for a business case, and highlights the clear need to mobilise all stakeholders concerned, with the support of public authorities and the social partners.
- 3.25 The EESC calls on the Commission and the Member States to create all the necessary conditions for commercialising European PV innovative solutions through the Important Projects of Common European Interest (IPCEI) along the whole solar value chain. Such a framework would ensure long-term sustainably competitive conditions for European PV manufacturing, including EU leadership in PV technologies, sustainability, recycling and integrated PV solutions.
- 3.26 The EESC finds it imperative for the EU to enhance public and private investment and create favourable conditions for the solar energy sector, for example by furthering training in that field and by ensuring proper access to finance, including via the "EU taxonomy for sustainable activities" tools. In line with the presumed transformation of the European Investment Bank into Europe's climate bank, the EESC calls for an emphasis on solar PV manufacturing support in the financing programmes provided by this bank.
- 3.27 The EESC calls for incentives for research into new PV technologies, e.g., based on alternative materials. To overcome the problem of the lack of skilled labour, it is crucial to promote training and skills development, in cooperation between relevant stakeholders. Therefore, the EESC urges competent institutions to find ways to develop a workforce that possesses the knowledge, skills and competences needed to render operational all the energy efficiency and renewable technology options available.

#### **4. Specific comments on manufacturing supply chains**

- 4.1 There are significant strategic dependencies in the upstream manufacturing segments which could hinder the rapid expansion of solar energy. The biggest hurdle of all remains the limited capacity to supply the necessary materials for the Strategy's ambitious targets. In almost all parts of the PV value chain, Europe – a former leader in solar PV production – is not playing a visible role, despite still being among the leaders in solar PV research, with important research facilities.
- 4.2 Along the industry value chain, the EU has limited capacity to source the underlying raw material, polysilicon. The issues with sourcing this raw material are exacerbated by the fact that the four largest solar-grade polysilicon factories, comprising nearly half of worldwide production, are located in the Xinjiang region in China.
- 4.3 The EESC welcomes the Commission's legislative initiative<sup>10</sup> banning products made by forced labour from the single market. This is a similar measure to the US Uyghur Forced Labor

---

<sup>10</sup> [COM\(2022\) 71](#), [COM\(2022\) 66](#) and [COM\(2022\) 453](#)

Prevention Act, which had direct impacts on polysilicon market distribution, as the price of this primary material, mainly produced in China, is set to increase for the whole PV industry. However, the EESC notes that such a measure, enforced on a global scale, contributes to the achievement of Sustainable Development Goal 8 on decent work.

- 4.4 A possible, albeit simplistic, response to the challenge is to build capacity in Europe; however, the current technologies for producing "raw" polysilicon and the ingots from it are, paradoxically, highly energy-intensive. It is indeed feasible and might be done where there is access to cheap and reliable energy, including energy from RES (e.g. via hybrid power stations, combining wind, solar and storage). Overall, the lack of raw materials and components and strict EU rules, including on energy efficiency, make it a rather less appealing business case for European industry, which is also having difficulties accessing finance.
- 4.5 The EESC is firmly convinced that European co-operation in innovation aimed at developing fully recyclable PV systems is necessary in order to build a thriving domestic European solar energy industry. Efforts should be made to examine the use of more promising raw materials than silicon for, among other things, the application of solar cells on foil or solar cells that can be made translucent, for instance in power-producing windows.
- 4.6 In relation to the further phases in the value chain, i.e. solar wafers and cells, the European Union is in an even worse position. Just 1% of solar wafers and only 0.4% of cells are produced in Europe. According to the industry association SolarPower Europe, we face a "critical lack of ingots and wafer manufacturing capacity".
- 4.7 According to data from the European Solar Manufacturing Council (ESMC) only 3% of solar PV modules are produced in Europe, by 29 different companies. This means that only one in roughly 30 modules assembled in Europe are of European origin. In 2020, the trade deficit in solar energy products amounted to USD 8.7 bn.
- 4.8 Other inputs for PV plants are also scarce; however, the critical shortages we face with them are less severe. The mounting structures are low-complexity products and can be imported with fewer critical dependencies or produced locally if demand is high.
- 4.9 The case with solar glass, an essential element for locally produced PV panels, is a perfect showcase of the short-sightedness of EU trade policy, whereby the defensive trade tariffs for the final products (solar PV panels) coming to Europe from China were lifted, exposing European producers to harsh competition from overseas, but similar defensive measures for the intermediate products, like solar glass, remained in place. That made solar glass sourced from Europe by European PV producers disproportionately overpriced compared to peer producers in other regions of the world. That in turn also led to pricing pressures for imported solar glass.
- 4.10 Solar panels can efficiently contribute to sustainability if the whole cycle is not overly demanding in terms of energy, including recycling and re-use. The manufacturing, transportation and disposal of any technology generates emissions. How a panel is manufactured and recycled helps determine how helpful it really is in decreasing overall

emissions. Moreover, the EESC believes it is important that the Sustainable Development Goals are adhered to all along the supply chain.

Brussels, 26 October 2022

Christa Schweng  
The president of the European Economic and Social Committee

---