

An EU strategy for solar energy - public consultation questionnaire

Fields marked with * are mandatory.

Introduction

About this Consultation

With the proposal for a revision of the Renewable Energy Directive adopted on 14 July 2021 as part of the Delivering the European Green Deal package, the EU is setting out its aim of doubling the share of renewables in the energy mix compared to 2020, to reach at least 40% in 2030. The current pace of deployment of projects and market penetration will need to accelerate significantly to meet the needed capacity increase, while supporting the environmental performance of the relevant technologies. A strategy specifically for solar technologies is needed to underpin the efforts of authorities, producers, consumers and stakeholders.

In this context and in line with 'better regulation' principles, the Commission is launching this public consultation designed to gather stakeholder views on matters relating to the objectives of the Communication on an EU solar energy strategy.

What is the purpose of the communication?

The EU solar energy strategy aims at helping unlock solar energy's potential in contribution to the European Green Deal objectives, including its key role to achieve climate and energy targets. It will analyse the state of play of solar energy across the EU, identify barriers and propose measures to accelerate deployment, ensure that the public reap related opportunities as well as enhance system integration. It will also consider avenues to foster EU competitiveness along the solar energy value chain.

How can I participate?

You can complete this questionnaire through the Commission website until 12 April 2022. Please use the button at the end of the questionnaire to upload feedback in other document formats. A synopsis report of this public consultation, as well as a summary of all consultation activities' results will be published on this page at the end of the consultation period.

You may choose to answer any or all of the questions.

Please note: In order to ensure a fair and transparent consultation process only responses received through our online questionnaire will be taken into account and included in the report summarising the responses.

Should you have a problem completing this questionnaire or if you require particular assistance, please contact ENER-C1-SECRETARIAT@ec.europa.eu.

About you

* Language of my contribution

- Bulgarian
- Croatian
- Czech
- Danish
- Dutch
- English
- Estonian
- Finnish
- French
- German
- Greek
- Hungarian
- Irish
- Italian
- Latvian
- Lithuanian
- Maltese
- Polish
- Portuguese
- Romanian
- Slovak
- Slovenian
- Spanish
- Swedish

* I am giving my contribution as

- Academic/research institution
- Business association
- Company/business organisation
- Consumer organisation
- EU citizen
- Environmental organisation
- Non-EU citizen
- Non-governmental organisation (NGO)

- Public authority
- Trade union
- Other

* First name

Lucie

* Surname

Lochon

* Email (this won't be published)

lucie.lochon@external.totalenergies.com

* Organisation name

255 character(s) maximum

TotalEnergies SE

* Organisation size

- Micro (1 to 9 employees)
- Small (10 to 49 employees)
- Medium (50 to 249 employees)
- Large (250 or more)

Transparency register number

255 character(s) maximum

Check if your organisation is on the [transparency register](#). It's a voluntary database for organisations seeking to influence EU decision-making.

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* Country of origin

Please add your country of origin, or that of your organisation.

- Afghanistan
- Djibouti
- Libya
- Saint Martin
- Åland Islands
- Dominica
- Liechtenstein
- Saint Pierre and Miquelon

- Albania
- Algeria
- American Samoa
- Andorra
- Angola
- Anguilla
- Antarctica
- Antigua and Barbuda
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bermuda
- Bhutan
- Bolivia
- Dominican Republic
- Ecuador
- Egypt
- El Salvador
- Equatorial Guinea
- Eritrea
- Estonia
- Eswatini
- Ethiopia
- Falkland Islands
- Faroe Islands
- Fiji
- Finland
- France
- French Guiana
- French Polynesia
- French Southern and Antarctic Lands
- Gabon
- Georgia
- Germany
- Ghana
- Gibraltar
- Greece
- Greenland
- Grenada
- Lithuania
- Luxembourg
- Macau
- Madagascar
- Malawi
- Malaysia
- Maldives
- Mali
- Malta
- Marshall Islands
- Martinique
- Mauritania
- Mauritius
- Mayotte
- Mexico
- Micronesia
- Moldova
- Monaco
- Mongolia
- Montenegro
- Montserrat
- Morocco
- Mozambique
- Myanmar/Burma
- Namibia
- Saint Vincent and the Grenadines
- Samoa
- San Marino
- São Tomé and Príncipe
- Saudi Arabia
- Senegal
- Serbia
- Seychelles
- Sierra Leone
- Singapore
- Sint Maarten
- Slovakia
- Slovenia
- Solomon Islands
- Somalia
- South Africa
- South Georgia and the South Sandwich Islands
- South Korea
- South Sudan
- Spain
- Sri Lanka
- Sudan
- Suriname
- Svalbard and Jan Mayen
- Sweden

- Bonaire Saint Eustatius and Saba
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- British Virgin Islands
- Brunei
- Bulgaria
- Burkina Faso
- Burundi
- Cambodia
- Cameroon
- Canada
- Cape Verde
- Cayman Islands
- Central African Republic
- Chad
- Chile
- China
- Christmas Island
- Clipperton
- Guadeloupe
- Guam
- Guatemala
- Guernsey
- Guinea
- Guinea-Bissau
- Guyana
- Haiti
- Heard Island and McDonald Islands
- Honduras
- Hong Kong
- Hungary
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Isle of Man
- Israel
- Italy
- Jamaica
- Nauru
- Nepal
- Netherlands
- New Caledonia
- New Zealand
- Nicaragua
- Niger
- Nigeria
- Niue
- Norfolk Island
- Northern Mariana Islands
- North Korea
- North Macedonia
- Norway
- Oman
- Pakistan
- Palau
- Palestine
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Switzerland
- Syria
- Taiwan
- Tajikistan
- Tanzania
- Thailand
- The Gambia
- Timor-Leste
- Togo
- Tokelau
- Tonga
- Trinidad and Tobago
- Tunisia
- Turkey
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu
- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom
- United States

- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Cook Islands
- Costa Rica
- Côte d'Ivoire
- Croatia
- Cuba
- Curaçao
- Cyprus
- Czechia
- Democratic Republic of the Congo
- Denmark
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Kyrgyzstan
- Laos
- Latvia
- Lebanon
- Lesotho
- Liberia
- Philippines
- Pitcairn Islands
- Poland
- Portugal
- Puerto Rico
- Qatar
- Réunion
- Romania
- Russia
- Rwanda
- Saint Barthélemy
- Saint Helena
Ascension and
Tristan da Cunha
- Saint Kitts and
Nevis
- Saint Lucia
- United States
Minor Outlying
Islands
- Uruguay
- US Virgin Islands
- Uzbekistan
- Vanuatu
- Vatican City
- Venezuela
- Vietnam
- Wallis and
Futuna
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

The Commission will publish all contributions to this public consultation. You can choose whether you would prefer to have your details published or to remain anonymous when your contribution is published. **For the purpose of transparency, the type of respondent (for example, 'business association, 'consumer association', 'EU citizen') country of origin, organisation name and size, and its transparency register number, are always published. Your e-mail address will never be published.** Opt in to select the privacy option that best suits you. Privacy options default based on the type of respondent selected

* Contribution publication privacy settings

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

Anonymous

Only organisation details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published as received. Your name will not be published. Please do not include any personal data in the contribution itself if you want to remain anonymous.

Public

Organisation details and respondent details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published. Your name will also be published.

I agree with the [personal data protection provisions](#)

About you - continued

1. Are you:

- Electricity market undertaking related to the integration of distributed solar installations (supplier, aggregator, etc)
- Utility-scale producer of electricity from solar energy
- Solar project developer
- Consumer organisation
- Public authority
- NGO
- Small or medium-sized business
- Primary agricultural producer, including farmer and forester
- Owner of Industrial facility
- Solar energy product (hardware) manufacturer
- Digital solutions developer
- Research and Innovation Organisation
- An individual that produces and consumes solar energy
- Other

2. What solar energy technology do you work with, if any?

- Solar photovoltaic – utility grid
- Solar photovoltaic – distributed
- Solar thermal – for industrial / agricultural application
- Solar thermal – domestic use
- Solar thermal – district heating
- Concentrated solar power (CSP)/Solar thermal electricity (STE)
- Other

3. In which markets are you active?

- All EU countries
- Some EU countries
- Non-EU countries

3c. which countries specifically?

500 character(s) maximum

4. Do you represent either a renewable energy community in the sense of the Renewable Energy Directive or a citizen energy community in the sense of Electricity Market Directive?

- Yes
- No

5. Are you or do you represent an owner / owners of distributed, small-scale solar energy production?

- Yes
- No

Accelerating the deployment of solar energy projects

6. What are the key barriers that delay or prevent new utility grid solar energy projects (photovoltaic -PV or concentrated solar power - CSP) from materialising? Please assess their importance, separately for each technology, with 5 being the highest level of importance.

	PV: 1	PV: 2	PV: 3	PV: 4	PV: 5	PV: no opinion	CSP: 1	CSP: 2	CSP: 3	CSP: 4	CSP: 5	CSP: no opinion
Obstacles / lack of clarity related to permitting procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Regulatory framework impacting the business case	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conflicting environmental regulations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of public acceptance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grid connection issues	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increased uncertainty of curtailments	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If other please specify

100 character(s) maximum

Land property availability

6c. Comment

300 character(s) maximum

In the European Union, permitting process is far too complex and RES projects are likely to face restrictive or unclear regulations, that are totally incompatible with the Fit for 55 ambitions, and even less with the RePowerEU goals that emphasize and accelerate these ambitions (see attached).

7. What do you consider are the main factors that negatively affect the business case of new utility grid solar energy projects (photovoltaic -PV or concentrated solar power - CSP)? Please assess their importance, separately for each technology, with 5 being the highest level of importance.

	PV: 1	PV: 2	PV: 3	PV: 4	PV: 5	PV: no opinion	CSP: 1	CSP: 2	CSP: 3	CSP: 4	CSP: 5	CSP: no opinion
Competition from conventional generation installations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competition from utility-grid solar energy production installations which receive or have received feed-in tariffs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carbon price is not high enough	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insufficient cooperation between Member States (e.g. through the cooperation mechanisms of the Renewable Energy Directive)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auction-based systems inadequate to ensure level playing field	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uncertainty regarding future support scheme framework	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uncertainty regarding future regulatory framework	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy taxation framework unfavourable towards renewable electricity generation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insufficient incentives through disclosure schemes such as guarantees of origin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Lack of incentives for behind-the-meter storage combined with solar projects	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unfavourable financing conditions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unfavourable or uncertain market entry / dispatching of energy produced	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If other please specify

100 character(s) maximum

Long duration of permitting process

7c. Comment

300 character(s) maximum

The uncertainty regarding future regulatory framework is one major impact negatively affecting the development of new projects. EU should promote a clear and common framework by proposing a common approach of direct generation projects between MS and by easing and accelerating the permitting process.

8. Which do you consider to be the main factors that negatively affect the deployment of distributed, small-scale solar production installations in single-unit (SUB) or multi-unit buildings (MUB)? Please assess the importance of the following factors, separately for both categories of buildings, with 5 being the highest level of importance.

	SUB: 1	SUB: 2	SUB: 3	SUB: 4	SUB: 5	SUB: no opinion	MUB: 1	MUB: 2	MUB: 3	MUB: 4	MUB: 5	MUB: no opinion
Obstacles / lack of clarity related to permitting procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Regulatory and public support framework impacting business case	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Unfavourable taxation / tariffs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specific issues or limitations to self-consumption related to the existing net metering / net billing schemes (e.g. limitations in capacity installed)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conflicting environmental / town planning regulations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of resources of owner/s to face upfront investment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unfavourable financing conditions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dwellings are used by tenant/s, therefore owner/s lack interest to invest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Absence of or low remuneration for sales of excess electricity produced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unsuitability of the building (shape, size, strength, structure or shading of roof areas)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of standardisation amongst solar solutions (e.g. size of panels / tiles, method of attachment, compatibility etc)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of or limited choice of experienced solar installation companies in the area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Only for MUB: Absence of an adequate legal framework for decision-making and representation in joint-ownership buildings (e.g. blocks of flats) with commonly owned rooftops and facades.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8c. Comment

300 character(s) maximum

One main issue is the complexity of reselling the extra energy above self-consumption from an administrative point of view on one hand, and due to low valuation on the other.

9. In the absence of net-metering / net-billing schemes, do you consider there would be a lack of incentives for distributed, small-scale installations?

1

9.1. If so, how would you assess the following as disincentivising factors? (5 being the highest level of disincentivisation)

	1	2	3	4	5
Applicable network charges, taxes and levies	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unfavourable or uncertain market entry / dispatching of electricity produced	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Absence of value added services by electricity suppliers / aggregators to "prosumers", for selling excess electricity in the market on their behalf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Insufficient incentives through disclosure schemes such as guarantees of origin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. How would you assess the following factors in preventing energy communities from fully playing their role in the generation, sharing and sale of solar energy? (5 being the highest level of prevention)

	1	2	3	4	5
Obstacles / lack of clarity in permitting procedures to set up energy communities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Applicable grid tariffs for physical electricity sharing or collective self-consumption	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Conditions set by the system operator or the energy regulator to participate in energy markets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Insufficient generation capacity to operate in energy markets	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obstacles related to grid connection / other infrastructure connection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Limited ownership / management rights on the community network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Lack of community engagement	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting professionals on board / receiving technical advice	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rigid and time-consuming tender procedures for subsidies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Lack of cooperation of local authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10c. Comment

500 character(s) maximum

Energy communities are one of the solutions to promote renewable energy projects, raise public awareness and strengthen social acceptance (Read full comment in attached document).

11. How would you assess the following factors in preventing solar installations in industrial areas / facilities? (5 being the highest level of prevention)

	1	2	3	4	5
Obstacles / lack of clarity related to permitting procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Lack of business case	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unfavourable taxation / tariffs	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regulatory and public support framework impacting business case	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Conflicting environmental / town planning regulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Grid connection issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Unfavourable financing conditions	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of long-term visibility needed to make large investment decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Lack of incentives to use more renewable energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Low potential for electrification of operations	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

If other please specify

100 character(s) maximum

Power equipment not designed for self-consumption and need of additional investments

12. How would you assess the following factors in preventing further deployment of solar thermal installations in the EU? (5 being the highest level of prevention)

	1	2	3	4	5
Obstacles / lack of clarity related to permitting procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unfavourable conditions for renewable sources connecting to the heating market or system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Absence of a heating system to connect to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unfavourable taxation / tariffs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unsuitability of the building (shape, size, strength, structure or shading of roof areas)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regulatory and public support framework impacting business case	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conflicting environmental / town planning regulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unfavourable financing conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hot water consumption is not enough to justify investment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space heating system cannot effectively utilise hot water from a solar thermal system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Absence of other uses of heat (e.g. swimming pool, industrial process, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12c. Comment

500 character(s) maximum

13. How would you assess the following factors in encouraging public authorities to install solar energy in the buildings or land they own or lease? (5 being the highest level of effectiveness)

	1	2	3	4	5
Setting targets for renewable installations in public buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Legal mandates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Lease public building's roof for use by private companies to exploit the solar potential	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Lease public building's roof for use by energy communities to exploit the solar potential	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Lease publicly owned land for use by private companies or energy communities to exploit the solar potential	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Promotion of green public procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Focus on key categories, e.g. social housing, schools or hospitals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. To primary agricultural producers including farmers / agriculture associations: have you invested or are you planning to invest in solar energy in your farm?

- Yes
- No

14.1. If yes, in which context?

- As part of a net-billing / net-metering scheme
- As a stand-alone electricity generation installation, feeding into the wholesale /retail market
- As part of an energy community
- Alongside electrifying my agricultural machinery set / fleet
- To support artificial lighting for plant growing / vertical farming installation
- Other

14.2. If not, why?

- Lack of financing
- Barriers linked to permitting
- Barriers linked to grid connection
- Unclear technology choice or preference for another technology, e.g. biogas production
- Conflict with other land uses
- Not a priority
- Other

15. What regulatory changes would be beneficial to create a more supportive framework for additional distributed photovoltaic capacity in locations other than buildings, e.g. agricultural, industrial, or recreational areas?

500 character(s) maximum

TotalEnergies and the French National Federation of Agricultural Holders' Unions (FNSEA) have recently entered into an agreement to work together to identify and promote production sites of renewable energy sources. PV installations provide electricity and help to protect crops from critical weather conditions and enhance value of poor farmlands. Supporting and giving a clear status to farmlands combined with PV without losing subsidies from the CAP could strengthen PV installations.

Facilitating system integration of solar energy production

16. Do you consider that compatibility / interoperability issues between components of solar photovoltaic installations, or solar production & storage systems, limit

customer choice in equipment to a particular supplier, manufacturer, or product line?

16.1. If so: What is this incompatibility attributed to?

- Incompatible communication protocol / standard
- Incompatible power specifications, such as voltage requirements
- Other

17. Do you provide flexibility services (e.g. through demand response) to the local electricity system operator?

- Yes
- No

17.1. If No, what is preventing you from doing so?

- Concerns about data protection
- Regulatory barriers
- Conditions set by the local system operator or the energy regulator to offer flexibility services are too strict
- Insufficient scale to offer flexibility services
- Other

18. Do you consider that distributed, small-scale solar producers should be allowed to sell on both wholesale and retail markets?

- Yes
- No

18.1. How would you assess the following barriers, preventing such market participation? (5 being the highest level of prevention)

	1	2	3	4	5
Bidding thresholds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of opportunity to participate in several market streams (e.g. wholesale day-ahead and intraday market, or ancillary services (including balancing), or congestion management services)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Absence of local markets, peer-to-peer trading possibilities etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Market dominated by large utilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Net metering / net billing restrictions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. Have you installed or do you plan to install a battery for your domestic or business needs?

- Yes
- No

19.1. If yes, why?

- To better align my consumption with solar production
- To charge my electric vehicle at night with own solar production
- To decrease dependence from the grid
- To use in agriculture / industrial applications
- Other

19.2. If no, how would you assess the following factors, deterring you from installing a battery for your domestic or business needs? (5 being the highest level of deterrence)

	1	2	3	4	5
Too expensive for the added value	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
High upfront costs, although it is a financially viable investment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Not enough space	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regulatory / grid connection related barriers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Lack of suppliers / experienced installers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Safety issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Issues with disposal/recycling at the end of life	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19c. Comment

300 character(s) maximum

Storage is still facing negative effects which affect its development (Read full comment in attached document).

20. Do you consider that a common format of data for grid communication of distributed solar photovoltaic systems is necessary?

You may provide extra information on suggested protocols or data flow organisation.

- Yes
- No

20.1. Do you consider that such data production should be close to the time intervals of electricity markets (e.g. 15 minutes), or even closer to real time (e.g. down to 1 or 5 minute intervals)

- Yes
- No

20c. Comment

300 character(s) maximum

Enhancing sustainability, resilience, competitiveness, innovation and transparency along the solar energy value chain

21. Would you consider appropriate to apply any of the following sustainability-related measures for solar energy products/systems sold in EU, in relation to their production and/or lifecycle?

	Yes	No	Not sure
Requiring transparency about environmental sustainability (e.g. through labelling)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Requiring transparency about carbon footprint (e.g. through labelling)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Requiring transparency about employment conditions (e.g. through labelling)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Placing quantitative requirements (e.g. thresholds) for environmental sustainability, carbon footprint, or other production aspects	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

21c. Comment

300 character(s) maximum

This is principally for citizen users who are not aware of these topics, however, for professional customers the situation is clearer.

22. Do you consider that the EU's reliance on imported products/materials in the solar energy sector creates vulnerabilities or risks for accelerating deployment of solar energy?

- Yes
- No
- Not sure

22c. Comment

300 character(s) maximum

Read full comment in attached document.

23. Do you consider that supply chain challenges could have a substantial impact on the availability of cost-effective solar energy solutions in the EU market in the medium-long term?

4

23c. Comment

300 character(s) maximum

Prices are increasing throughout the entire supply chain (Read full comment in attached document.).

24. How would you assess the following factors in hampering EU's capacity for generating intellectual property and innovation in relation to the solar energy value chain? (5 being the highest level of hampering)

	1	2	3	4	5
Lack of support to academic and research institutions	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Limited large-scale manufacturing in EU	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Lack of financing for start-ups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Process to file for EU-wide patents is too long / tedious	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Process to file for EU-wide patents is too costly	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Absence of possibility to file a provisional patent application at EU level securing short-term (e.g. one year) patent protection with minimal cost, until a full application is filed	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of technical and financial capacity to pursue future intellectual property disputes	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24c. Comment

300 character(s) maximum

25. How would you assess the potential of various sectors of the photovoltaic supply chain to increase the competitiveness of the EU industry? (5 being the highest level of potential)

	1	2	3	4	5
Novel technologies (e.g. heterojunction, perovskite, tandem)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Polysilicon production	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Ingots & wafers production	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cells production	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modules production	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Equipment manufacturing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Project engineering, procurement and construction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Project operation and maintenance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Balance of system	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
System dismantling and recycling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

If other, please specify

100 character(s) maximum

Monitoring and digitalization

25c. Comment

300 character(s) maximum

26. How would you assess the contribution of the following measures to the sustainability, competitiveness and resilience of the EU solar energy value chain? (5 being the highest level of contribution)

	1	2	3	4	5
Access to favourable financing conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Launch a process of Important Projects of Common European Interest for the solar energy sector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Secure access to raw materials by enhancing EU production	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Secure access to raw materials through promoting diversified and undistorted international traded	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Measures promoting fair and undistorted access to international markets for EU companies in the solar value chain, including through engagement with third countries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Measures promoting solar energy solutions that require customisation (e.g. building-integrated photovoltaics, agri-photovoltaics, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Enhance skills development in the solar energy value chain in the EU	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Support to the development of large-scale production facilities, including through accelerated permitting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Measures promoting match-making between manufacturers and off-takers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enhance synergies with the use for space applications	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

If other, please specify

100 character(s) maximum

Supporting technical application to solar storage, smart grids, digitalization.

26c. Comment

500 character(s) maximum

Feedback via file upload (optional)

Only files of the type pdf,txt,doc,docx,odt,rtf are allowed

3ea1d820-b0cb-4d1d-8fef-2de28e103b4a/EU_strategy_for_solar_energy_-TotalEnergies_comments.pdf

Thank you, your participation is very much appreciated!

Contact

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