



**ESTELA**  
European Solar Thermal  
Electricity Association

# SOLAR THERMAL ELECTRICITY

—  
An essential building block  
for the energy transition





## WHO WE ARE

### ESTELA – The Voice of Solar Thermal Electricity in Europe and MENA Region

The European Solar Thermal Electricity Association (ESTELA) is a Brussels-based non-profit association committed to supporting the development of the Solar Thermal Electricity (STE) industry in Europe and the Mediterranean and North African regions.

Created in 2007, ESTELA gathers members from the STE industry and research institutions along its whole value chain that actively promote sustainable green energy produced by concentrated solar power (CSP) technologies and thermal energy storage (TES). ESTELA works closely with other renewable energy associations and collaborates with the EU and international institutions in the fields of sustainable energy, climate change, environment, and research & innovation.

## ABOUT SOLAR THERMAL ELECTRICITY

Solar Thermal Electricity (STE), also known as Concentrated Solar Power (CSP), is a renewable energy technology that generates clean electricity by using mirrors or lenses to concentrate solar radiation to generate heat (with temperatures typically between 400°C and 1000°C) and drive a conventional steam turbine. In addition, the heat produced by STE can be also used for industrial processes.

Thermal Energy Storage (TES), a unique feature of STE power plants, allows to store between 6 to 17 hours of equivalent production. This enables them to operate into the evening hours (from sunset to early morning), allowing to increase power output at sunset to compensate for the loss of solar PV generation and to provide a firm delivery, a major concern for grid operators. Hence, it is a valuable complement to achieve carbon-free firm capacity for a reliable and secure decarbonisation of the power system.

STE can also be integrated in hybrid configurations with gas or biomass-powered turbines, offering absolute dispatchability, or with PV for extended operation and lower LCOEs. It is suitable for peak loads and base loads and can be adjusted to cover specific off-taker needs. STE, as a manageable renewable technology, plays a key role in increasing flexibility and transitioning to a completely fossil-fuel free energy system.

## OBJECTIVES



To promote STE/CSP technologies towards sustainable energy systems in Europe and worldwide, especially in the Mediterranean area and emerging economies enjoying good solar potential



To support EU's action in favour of industry development and to contribute to reach the Union's energy objectives and its main renewable energy targets, as well as those from the other Mediterranean countries



To support its members across the STE sector, from developers, EPC contractors to component manufacturers and research entities



To co-operate at international level and contribute to combat climate change

## WHAT WE DO

### Policy

ESTELA monitors regularly the climate and energy policy at EU level and follows policy, business and technology developments around the world. ESTELA actively participates in stakeholder consultations launched by EU institutions and EU regulators to voice the views of its members and to defend the sector's interests. It initiates and develops strategy lines allowing companies to setup pre-commercial alliances, providing answers to specific national and/or international institutions. Overall, ESTELA pursues several key objectives:

- Adjustments of the legal and regulatory framework;
- New auction practices (based on system needs rather than single technology focused and exclusively on LCOEs);
- A wider funding of research and innovation, blending national and European funding sources as well as the alignment of R&I activities on the short/medium term needs of the industry.

### R&I and EU Projects

ESTELA supports research and innovation under EU programmes in order to foster the market penetration of STE power plants and to maintain the global technology leadership of European industry in STE.

ESTELA actively participates in EU-funded projects in order to make STE technologies more visible to the EU policy makers. Via its active participation in such projects, ESTELA acts as bridge between the STE industry and the R&I community.

Currently, ESTELA takes part in several Horizon 2020 EU-funded projects and also coordinates an own project called "HORIZON-STE", aiming at supporting the execution of the Implementation Plan of the SET-Plan's "Initiative for Global Leadership in Solar Thermal Electricity", focusing on both R&I priorities and potential industry concepts able to match individual countries' needs or approach to the technology. ESTELA members are directly involved in these projects, which help strengthen the STE sector.

### Events & Working Groups

ESTELA regularly organises events focusing on the need for deploying STE in Europe and worldwide. It is also in regular contact with other organisations and is looking at areas of common interest with other RES associations on manageable RES which will play an important role in the energy transition.

ESTELA offers members opportunities to address initiatives aiming at making their voice heard from a European platform, also sharing national experiences and best practices. This collaboration and networking is essential to strengthen the lobbying actions towards policy makers. Topics include: Strategy, Markets and Cost development, among others.



## WHY JOIN?

Membership is open to companies and research institutions involved in the STE industry.

There are two categories of the membership:

- **Be heard**
  - Have your voice heard by EU and national policy makers
- **Strengthen the voice of STE industry not only in Europe, but also worldwide**
- **Be informed**
  - Increase your industry knowledge by attending STE events
- **Get the latest insight about relevant developments in EU policy and funding opportunities for the STE sector.**
- **Be connected**
  - Build or enlarge your business networks.
- **Increase chances of entering into innovative partnerships tailored to your business' needs.**

### CATEGORY

### ELIGIBILITY

#### Full Membership

Corporate industry

Developer / Electricity Generator  
Engineering Finance/Insurance  
Manufacturer / Service Provider / Utility

National association with similar natures and objectives as ESTELA's

National or Regional Association

#### Associate Membership

R&I and others

Consultancy / Certification Body / Media  
Non-Profit Organisation / Public Services,  
Governmental and Other Institutions /  
Research Institution /University

*Membership is open to companies, associations and research institutions involved in the STE industry and registered in Europe and MENA countries.*

**Become a member - Join ESTELA now!**

Companies wishing to apply for membership can fill in the application form on [ESTELA website](http://ESTELA website) and send it back to us [contact@estelasolar.org](mailto:contact@estelasolar.org)

## CONTACT US

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