



European
Solar Thermal
Electricity
Association



HORIZON-STE

IMPLEMENTATION OF THE INITIATIVE FOR GLOBAL
LEADERSHIP IN SOLAR THERMAL ELECTRICITY

SOLARCONCENTRA
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The project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 838514.

CONTENT



1. About ESTELA
2. About HORIZON-STE
3. Upcoming events



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1. ABOUT ESTELA

The European Solar Thermal Electricity Association

THE VOICE OF SOLAR THERMAL ELECTRICITY IN EUROPE AND MENA REGION



- **Brussels-based industry association** (established in 2007).
- Representing the interests of **both industry and R&D members involved in the Solar Thermal Electricity (STE) sector.**
- ESTELA **advocates** for a sustainable energy transition, a strong EU industry leadership and a 100% renewable energy system.
- ESTELA carries out **EU-funded projects** aiming at:
 - Favouring the commercial development of STE plants and its technologies across industrial sectors
 - Improving STE technology and its components (R&I)



MAIN ACTION LINES



Policy

#1 PROMOTING THE ROLE OF STE IN DECARBONISING THE POWER SYSTEM AND FIGHTING CLIMATE CHANGE

- At EU level, promoting: a new vision **beyond LCOEs, the role of STE in the recovery, the EU value-chain**
- At national level, focusing on: A proper valuation of storage, cooperation mechanisms and system integration

#2 PROMOTING A WIDER VISION OF CONCENTRATED SOLAR THERMAL TECHNOLOGIES (CST) TO ADAPT TO POLITICAL REALITIES

- Mainstream political moves drive investments and create opportunities, beyond the sole energy system
- Increase “political shout-outs” with synergies: FlexiRES vs. intermittent RES, a wider solar sector.

MAIN ACTION LINES (II)



Policy

#3 ACTING AS A COMPETENCE CENTRE OF THE IMPLEMENTATION WORKING GROUP WITHIN THE STRATEGIC ENERGY TECHNOLOGY PLAN (SET-PLAN) OF THE EUROPEAN COMMISSION

- Informing European **national** entities about the impact of STE Increasing public funding for close-to-market CST related R&D activities

#4 ACTING AS A RELAY BETWEEN EU INSTITUTIONS AND INDUSTRY STAKEHOLDERS

- Relaying direct concerns to EU decision-makers (e.g., Horizon Europe budget, green recovery, ...)
- Influencing upcoming policies (e.g., European Parliament initiative on storage)
- Sharing developments on European Financial Instruments or Mechanisms relevant for the sector

MAIN ACTION LINES (III)

Projects

Ongoing



Project	Duration	Participation
<p>MUSTEC</p> 	<p>3 years (Oct'17 - Mar'21)</p>	<ul style="list-style-type: none"> • Feedback from Industry and Policy makers & dissemination • Identification of typologies of commercial CSP projects suitable for take-off under cooperation mechanisms
<p>SMARTSPEND</p> 	<p>3 years (Dec'18 - Nov'21)</p>	<ul style="list-style-type: none"> • Development of cross-tech synergies among stakeholders to make funding more efficient • Support in roadshow activities and organization of access to finance conference
<p>SFERA-III</p> 	<p>4 years (Jan'19 - Dec'22)</p>	<ul style="list-style-type: none"> • Support providing industrial perspective • Support in Communication, dissemination, and exploitation of results



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2. ABOUT HORIZON-STE

Implementation of the Initiative for Global Leadership in
Solar Thermal Electricity

BACKGROUND



- ***The Initiative for Global Leadership in Solar Thermal Electricity (STE) & the CSP Implementation Plan:***
 - Joint effort from the European Commission and the sector
 - Adopted within the Strategic Energy Technology Plan (SET Plan)
 - Guiding document for the sector with cost and innovation targets
 - First-of-a-Kind projects and Priority Research Actions (next generation of CSP tech)
- ***Main goal is to keep STE/CSP's global technology leadership and rebuild a home market in Europe.***

GENERAL INFO



OVERVIEW OF THE PROJECT

- EU-funded project (CSA) coordinated by ESTELA
- Aims to:
 - Support the execution of the **CSP Implementation Plan**, from both R&I and industry perspectives (SET-Plan)
 - Focus on national perspectives
 - Improve procurement of manageable RES and increased public funding for STE research

- Duration: 36 months (April 2019 – April 2022)
- Total budget: 1 million EUR

Coordinator



Contributing Partners

Ciemat

CIEMAT, Centro de Investigaciones Energeticas, Medioambientales y Tecnologicas



METU, Middle East Technical University



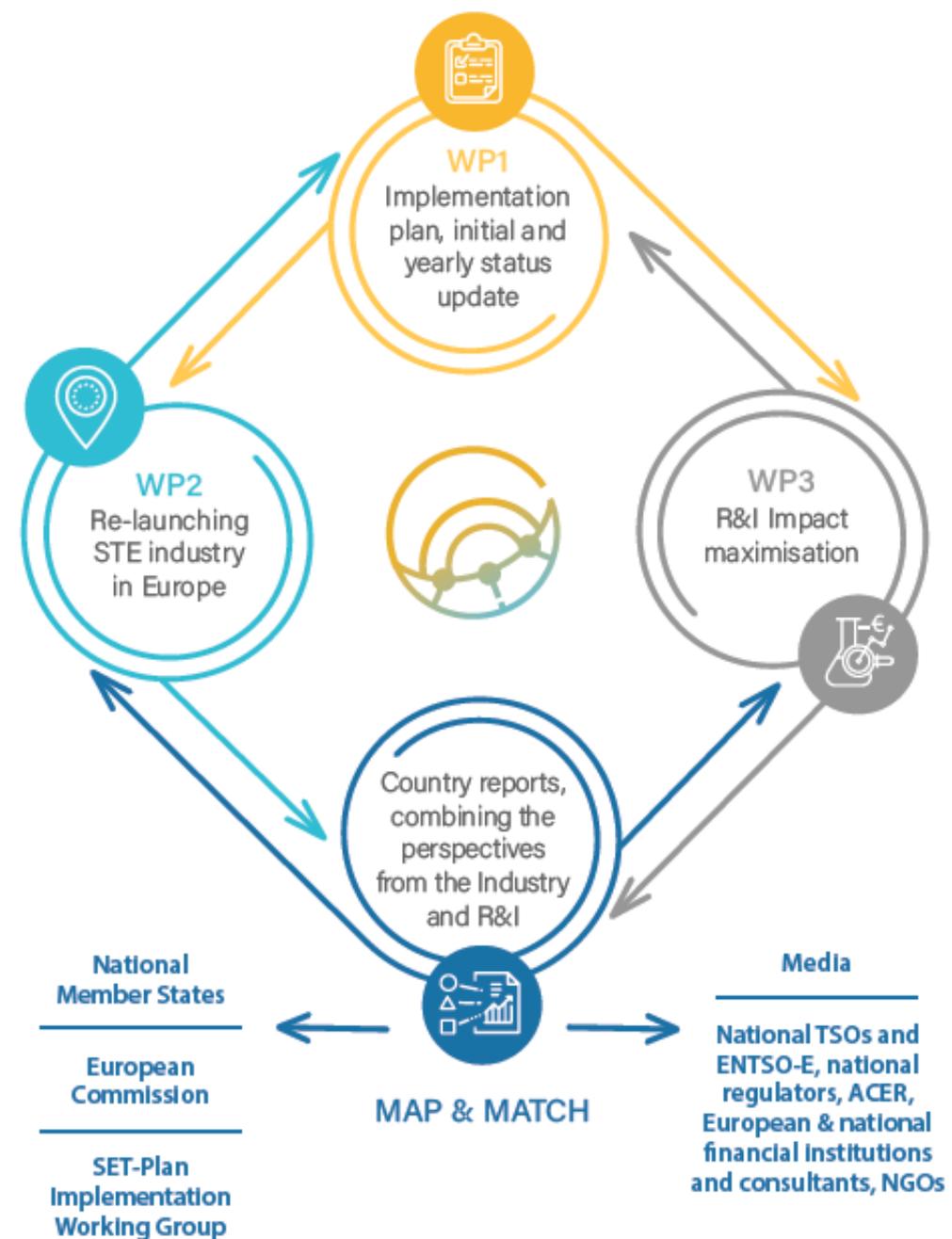
DLR, Deutsches Zentrum Fuer Luft - Und Raumfahrt EV



ENEA, Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile

OBJECTIVES

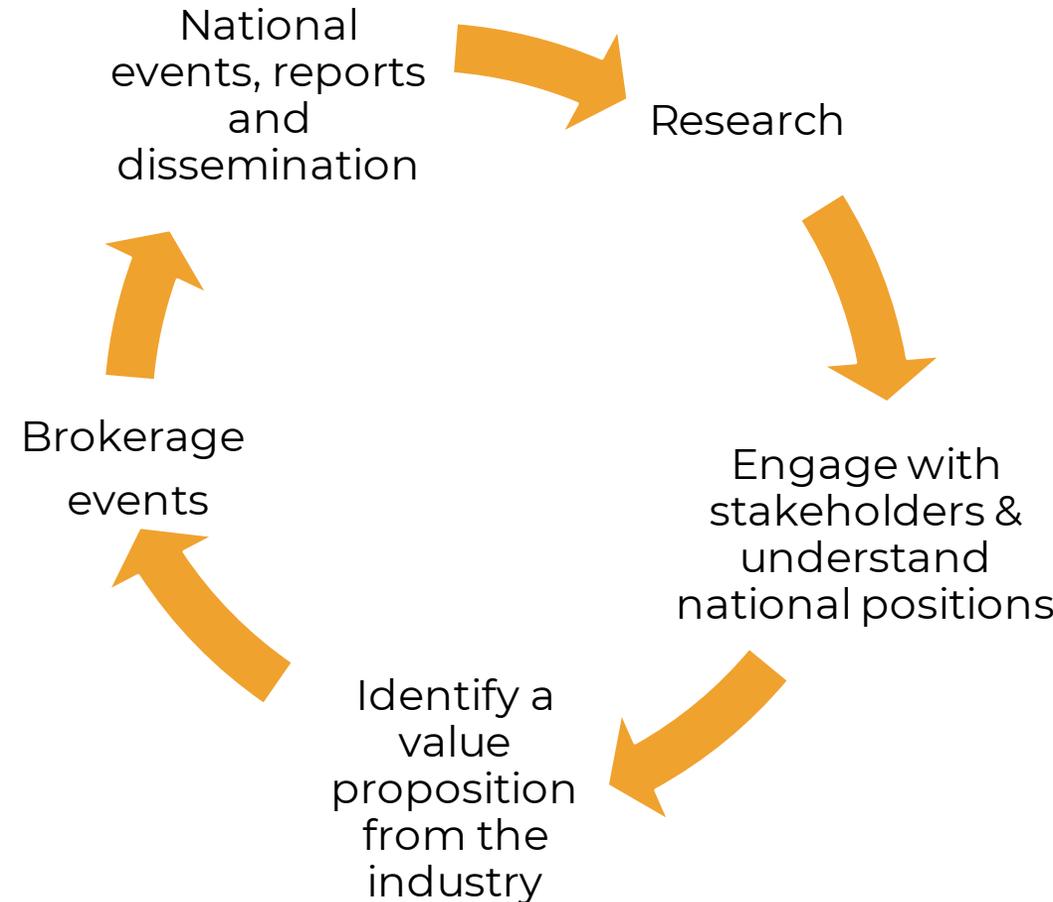
1. Assess the conditions required for replicating in Europe the already-achieved commercial cost levels in overseas markets (< 10 €cts/kWh) and paving the way for implementation of FOAK projects.
2. Find the most suitable strategy for the re-introduction of STE/CSP into energy strategy policies at European or national levels.



GENERAL WORKFLOW



- 1. Research & management of the interaction with stakeholders**
- 2. Analysis of relevant countries' energy needs and strategies**
 - Need for manageable RES energy and their respective strategies on its procurement
 - Possible changes in the relevant framework conditions
- 3. Map and Match:** Assessment and presentation of potential solutions using CSP/STE
- 4. Meeting with national stakeholders / officials**
- 5. Country reports combining industry and R&I perspectives**



STATE OF PLAY & TIMELINE



- 3 Country Reports completed: Turkey, Portugal and Denmark
- Awaiting meetings with Portuguese officials (Ministry of Environment and Energy Transition, Directorate General of Energy and Geology)
- Ongoing analysis: Germany and Belgium

Country	Dates
Germany	Jul. 2020 – Oct. 2020
Belgium	Jul. 2020 – Oct. 2020
Spain	Nov. 2020 – Feb. 2021
Greece	Nov. 2020 – Feb. 2021
France	Apr. 2021 – Jul. 2021
Switzerland	Apr. 2021 – Jun. 2021

Country	Dates
Italy	Aug. 2021 – Sept. 2021
The Netherlands	Aug. 2021 – Sept. 2021
Cyprus	Nov. 2021 – Dec. 2021
Luxembourg	Nov. 2021 – Dec. 2021
Sweden	Nov. 2021 – Dec. 2021

PRELIMINARY FINDINGS



#1 AT LEAST THREE VISIONS FOR ONE TECHNOLOGY EXIST

- Power generation in sunny countries: Iberia & Mediterranean (CST)
- Industrial transition: the hybridisation potential of STE (storage, heat)
- Supporting political strategies: hydrogen, foreign markets, etc., to strengthen economic assets

#2 POTENTIAL BENEFITS ARE RECOGNISED

- Four NECPs initially mention commercial STE applications, one mentions scaling-up R&I
- The storage issue is acknowledged by TSOs

#3 NATIONAL INTEREST STILL RELIES ON THREE NECESSARY CONDITIONS

- Use of national technological capacities (local companies and R&I)
- Localisation of industrial deployment (inc. local supply chains)
- Matching current power system and economy needs



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3. UPCOMING EVENTS

UPCOMING EVENTS



30 SEPTEMBER 2020 ONLINE WORKSHOP

“CSP – EUROPEAN PERSPECTIVE” by Marcel Bial (ESTELA, Secretary General)

1st Plenary Session (Global CSP Development)
Monday 28 September 13:30 UTC+2(CEST)

<https://cms2020.solarpaces-conference.org/program>

“Financing Clean Energy Transition in the Context of EU Recovery”

<https://eu-projects-events.events.idloom.com/smartspend-access-to-risk-finance-conference>



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THANK YOU FOR YOUR ATTENTION

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