



Proceedings of the Final conference

Deliverable D4.9

WP 4:

Authors:

Communication and dissemination

Bial, Marcel (ESTELA)

Crabs, Bérénice (ESTELA)

Genikomsakis, Konstantinos (ESTELA)

Marsico, Angelica (ESTELA)

Rostoka, Santa (ESTELA)

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This report should be cited as:

Project Coordinator, Work Package Coordinator and
Lead Beneficiary



ESTELA, European Solar Thermal Electricity Association

Contributing Partners



CIEMAT, Centro de Investigaciones Energéticas,
Medioambientales y Tecnológicas



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



DLR, Deutsches Zentrum fuer Luft - Und Raumfahrt
EV



METU, Middle East Technical University

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Project information	
Project Number:	838514
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ABOUT THE PROJECT

HORIZON-STE is a Horizon 2020 funded project aiming at supporting the Implementation of the Initiative for Global Leadership in Solar Thermal Electricity (STE), also known as Concentrated Solar Power (CSP), which was launched by the European Commission and adopted within the Strategic Energy Technology Plan (SET Plan) of the European Commission.

Since more than a decade, Europe's STE sector holds a worldwide technology leader until its further development abruptly hindered in Europe. To unlock this situation, the European Commission has launched a dedicated Initiative – Initiative for Global Leadership in CSP focusing on 2 targets: a cost reduction target and an innovation target, in order to keep STE's global technology leadership and rebuild a home market in Europe.

Acting as competence centre of the Implementation Working Group within the SET Plan of the European Commission, the overall goal of HORIZON-STE is to support the execution of the Implementation Plan regarding both STE Research and Innovation lines as well as First-Of-A-Kind projects that will help steer countries through political, legislative, and institutional shortcomings linked to various national policies concerning solar thermal electricity. Much of the focus centres on improving procurement of manageable renewable energy sources (RES) and increased public funding for STE research.

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1. INTRODUCTION

The HORIZON-STE Deliverable D4.9 “Proceedings of the Final conference” is an outcome of Task 4.2 “Tools and activities for communication and dissemination” as part of Work Package (WP) 4 “Communication and dissemination” for which ESTELA is WP leader. As a reminder, the overall objectives of WP4 are labelled as follows in the initial proposal:

“Establishing effective channels, platforms and means for:

- 1) Disseminating the project objectives, activity progress and outcomes to all relevant stakeholders.
- 2) Informing relevant stakeholders on progress and achievements of the CSP SET Plan and the Implementation Working Group to foster their engagement and commitment.
- 3) Informing and engaging decision makers in SET Plan countries, to streamline alignment and strengthen commitment to the execution of the Implementation Plans.
- 4) Raising awareness and mobilising wider audience and showing how the impacts are relevant to public audiences, by creating jobs, introducing a better way of energy mix for a sustainable future.

Organising events, conferences and site visits for:

- 5) Showcasing how the collaboration between CSP/STE industry and research institution can be archived for the sake of realisation of the FOAK project(s) in Europe.
- 6) Making better use of the results by documenting and presenting the policy advices and ensuring the messages are taken up by policy makers.

Ensuring the alignment of the project's dissemination activities with international and national events of relevant EU projects and initiatives, as well as SET Plan Annual Events”.

Task 4.2 lasted from M1 to M42 and was based on the outcomes of the country reports from Task 2.3 and Task 2.4 in WP2. The “Final conference” (hereafter referred to as Closing Event) with general audience and stakeholders, including national decision makers and authorities, industry and R&I representatives was held in Brussels, Belgium after the series of six (6) Joint Industry and R&I National Events across Europe resulting in country mapping related to cooperation opportunities. The objective of this Event was to spread and anchor the final findings of HORIZON-STE in policy and academic communities, and to the CSP and electricity industry.

This Closing Event was organised together with the EU Cooperation Event as a full day event with two sessions, i.e., the so-called “EU cooperation and closing event”. The first session was devoted to the presentation of the project's key findings, while the second one was focused on the potential cooperation opportunities.



2. OVERVIEW

The EU Cooperation & Closing Event was held on 14 September 2022 in the Hotel HILTON Brussels Grand Place and via Webex. The use of the online participation method allowed wider participation, enabling the message to be extended across EU and Turkey. The Event, ESTELA, was attended by the industry, research institutions, decision makers and authorities and others. The main goal of the Closing Event (i.e., session I of EU Cooperation & Closing Event) was to present the findings of the project, as a starting point of the discussions in the EU Cooperation event (i.e., session II of EU Cooperation & Closing Event) to open doors for potential cooperation opportunities between the countries of focus.

President of ESTELA, J.L. Martinez Dalmau, welcomed the attendees and highlighted the importance of projects like HORIZON-STE as an important way to bring the awareness to the technology. What followed were main conclusions from R&I, industry, and integrated point of view with list of recommendations for each country in focus, drawn from conclusions of Task 2.4 with respect to the project Deliverable D2.4 “Final Country Reports”.

Presentation “Project objectives & main lessons learnt” was delivered by ESTELA outgoing Secretary General; presentation “Findings from R&I perspective in countries of focus” was delivered by representatives from the project partners, METU, ENEA, DLR and CIEMAT regarding Turkey, Italy, Germany, Spain, Portugal, and France. Finally, the outgoing Secretary General of ESTELA took the stage with the presentations “Findings from industry perspective in countries of focus” and “Integrated findings and recommendations”, bringing the finding across the sectors and countries together. The first part of the day concluded with a Q&A session, with questions received both from the audience in Brussels and online.



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HORIZON-STE EU COOPERATION & CLOSING EVENT

WHICH INCENTIVES ARE NEEDED FOR
MORE EU COOPERATION?

Brussels, 14 September 2022

(hybrid event presential & online)
Hotel HILTON Brussels Grand Place
Ball Room Elisabeth
Carr de l'Europe 3
1000 Brussels



DRAFT PROGRAMME

09:30	Welcome coffee
09:50	Opening address by J.L. Martinez Dalmau, ESTELA President
10:00	Project HORIZON-STE: Project objectives & main lessons learnt (Marcel Bial, Secretary General ESTELA)

Session I – PRESENTATION OF PROJECT RESULTS

10:15	Findings from R&I perspective in countries of focus Presenters: Julian Blanco/Eduardo Zarza (CIEMAT), Peter Heller (DLR), Simona De Iulius (ENEA), Derek Baker/Yelda Erden Topal (METU)
10:45	Findings from industry perspective in countries of focus Presenter: Marcel Bial (ESTELA)

11:15 – 11:30 Coffee break

11:30	Integrated findings and recommendations Presenter: Marcel Bial (ESTELA)
12:00	Q&A

Session II – PANEL DISCUSSIONS

12:15 – 13:15 Round Table I:	Institutional framework
Panellists: – Ignacio Asenjo (DG ENER) – Cristina Trueba (IWG CSP) – Piero de Bonis (DG RTD) – Pablo Ralon (IRENA)	Moderator: Marcel Bial (ESTELA)

13:15 – 14:15 Lunch break

14:15 – 15:15 Round Table II:	R&I perspective
Panellists: – Simona de Iulius (ENEA) – Eduardo Zarza (CIEMAT-PSA) – Peter Heller (DLR) – Derek Baker (METU)	Moderator: Mark Schmitz (Flagsol Engineering GmbH)

15:15 – 16:15 Round Table III:	Industry perspective
Panellists: – Gonzalo Martin Barrera (Protermosolar) – Mark Schmitz (Flagsol Engineering GmbH) – Jeroen Van Schijndel (Rioglass) – Lorraine Devouton (ENGIE) – Pedro Cabanillas (John Cockerill Group) – José Alfonso Nebrera (ACS Industria)	Moderator: Bérénice Crabs (ESTELA)

16:15 – 16:30 Conclusions	Piero de Bonis (DG RTD) & Marcel Bial (ESTELA)
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16:30 – 17:00 Networking coffee

Figure 1: The programme of EU Cooperation & Closing Event



3. PARTICIPANTS

The EU Cooperation & Closing Event, organised in Brussels, Belgium and via Webex, was attended by 27 in-person participants and 105 remotely connected participants. Figure 2 and Table 1 show the breakdown of the participants into four categories, as indicated in Section 2. The significant interest from research institutions indicates the potential of innovation and development of the CST in Europe and Turkey and with one third of the attendee's representing industry, it's clear there is interest in CST from commercial applications.

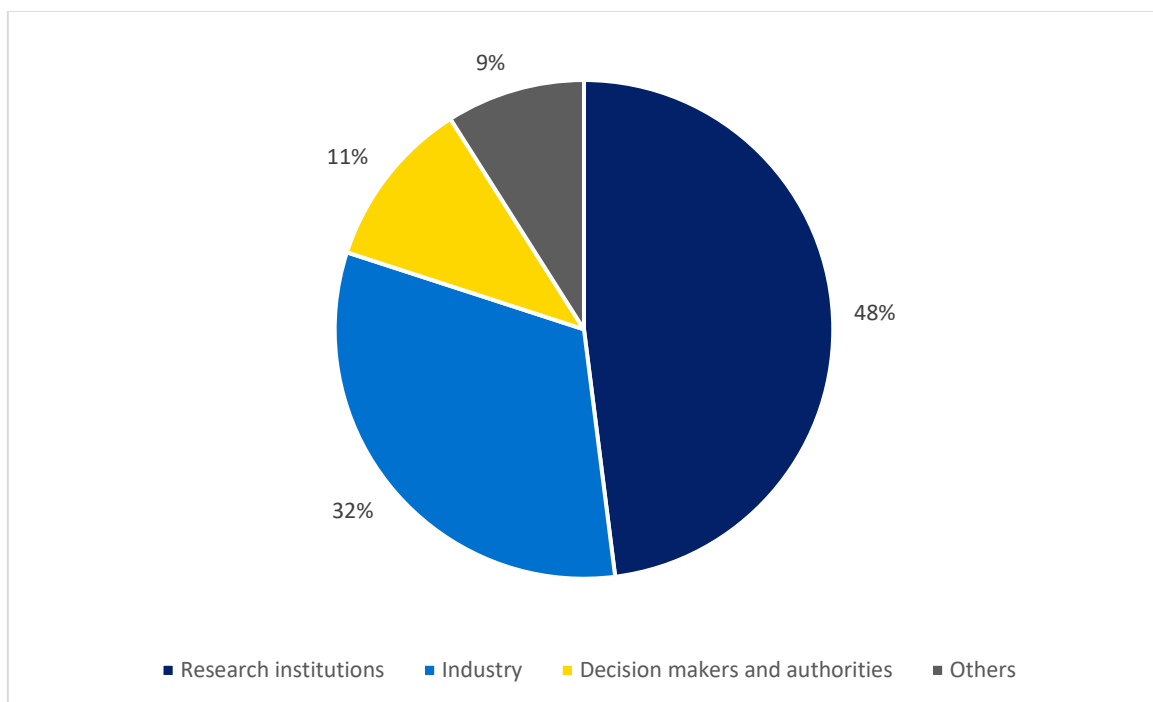


Figure 2: Breakdown of participants in EU Cooperation & Closing Event

Category	Number of participants	%
Research institutions	63	48%
Industry	42	32%
Decision makers and authorities	14	11%
Others	12	9%

Table 1: Breakdown of participants in EU Cooperation & Closing Event



4. PHOTOGRAPHS OF THE EVENT

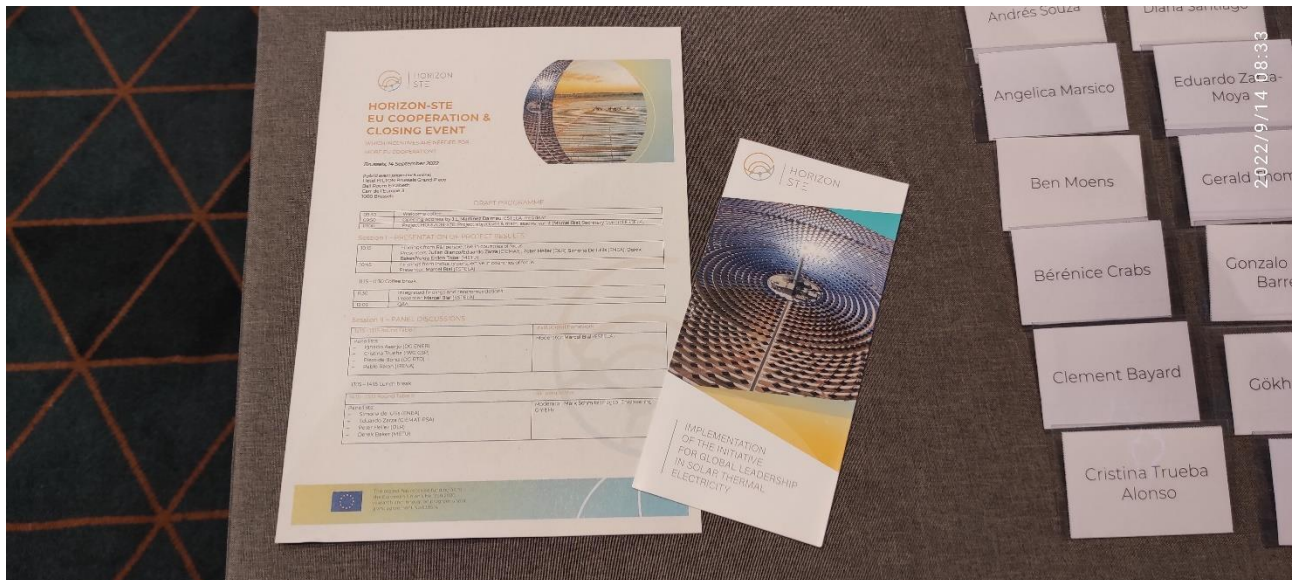


Figure 3: Closing Event's programme, brochures and name tags distributed



Figure 4: Opening and welcome to the attendees by ESTELA President and outgoing Secretary General





Figure 7: Presentation of the findings from R&I perspective in Germany



Figure 8: Presentation of the findings from R&I perspective in Spain



Figure 9: Presentation of the findings from R&I perspective in Portugal



Figure 10: Presentation of the findings from R&I perspective in France



Figure 11: Presentation of the findings from industry perspective



Figure 12: Presentation of the integrated findings and recommendations



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Figure 13: Wrap-up of the Closing Event - Q&A session



5. CONCLUSIONS & HIGHLIGHTS DRAWN FROM THE EVENT

5.1 Integrated findings and recommendations in Turkey

- 1) Country is blessed with great solar resources and can provide CST solutions for many applications, first in heat.
- 2) Potential for opportunities for international collaboration.
- 3) Research is a dynamic asset that can efficiently add support to this new market in Turkey.
- 4) Lessons learned from the tender in Spain should be scrutinized and adjusted to the Turkish environment.

5.2 Integrated findings and recommendations in Italy

- 1) Communication about CSP costs - cost reductions for CSP plants are expected to materialise due to “economies of scale” and manufacturing standardisation in case of a CSP European project pipeline.
- 2) Harmonisation of permitting - better coordination for permitting procedures between the national, regional, and municipal levels would substantially support the deployment of CST.
- 3) Opening doors to redeploy CSP in Italy: the adjustment of tender and adjudication criteria would enable the valorisation of the system benefits of CST plants for the electricity system:
 - Higher visibility of the CST - the industry in Italy should be involved in CST deployment, that includes from major companies to numerous know-how holding SMEs.
 - Focus on smaller plants - the initial investments in CSP should go to projects with a balanced ratio between environmental sustainability and technical/economical yield.

5.3 Integrated findings and recommendations in Germany

- 1) Extended funding schemes for demonstration combining different elements such as REFM, KfW Soft loans, Carbon Contracts for difference, etc.
- 2) Setting up a clear regulatory framework for STE process heat applications.
- 3) The support to international project development.



- 4) New consideration of the EU cooperation mechanisms.

5.4 Integrated findings and recommendations in Spain

- 1) The results of the expected tender in 2022 will be exemplary for the CSP sector in Europe:
 - The tender design should provide viable conditions for blending technologies - exposure to market prices.
 - Use different evaluation criteria for each of the technology involved regarding their proper system or macro-economic value.
 - Incremental performance improvements from R&I - the highly developed R&I sector can contribute to the relaunch of CSP/CST via incremental innovations in power plants and new applications for process heat or solar fuels.
- 2) Adjustments of the current regulatory conditions for existing and new power plants and besides the a.m. auction design, other regulatory conditions should be adjusted, such as:
 - The Spanish TSO should control the use of the storage capacities in plants, without remuneration loss for the owners/operators of the plant which would occur under the current regulatory regime.
 - Support the possibilities to optimise the use of CSP storage during the winter period – and motivate plant owners to offer this capacity to the TSO.
 - Definition of targets for dispatchable RES in Spain towards a more balanced ratio between intermittent and dispatchable RES capacities to be also promoted at EU level.

5.5 Integrated findings and recommendations in Portugal

- 1) Consider the storage challenge across the Iberian Peninsula.
- 2) Consider the potential job creation and the related socio-economic benefits.
- 3) Coordinating RES supply auctions between Spain and Portugal and optimising the solution to the storage challenge across the Iberian Peninsula.
- 4) Take a common political initiative by authorities in Portugal and Spain stimulating wider cooperation in the RES sector taking advantage of the best natural conditions in Europe.
- 5) Proactively support industrial cooperation between Portugal and Spain on extended uses of CSP.



- 6) Strengthen the support for aligning research and industry policy to overcome the thinning funding beyond 2020 via already ongoing EU funding programs.
- 7) Maintain a stable funding framework for R&I on extended CSP applications beyond 2020 in line with the NECP targets.

5.6 Integrated findings and recommendations in France

- 1) The a.m. features, especially when analysed in the light of the ongoing energy crisis that will be further amplified by the Russian invasion in Ukraine, should lead to a clearer and stronger reconsideration of its solar strategy and its implementation instruments as a building block to reduce its dependency on fossil fuels.
- 2) France is in Europe the country that binds most positive conditions for a better use of concentrated solar technologies.
- 3) The strong lack of information about dispatchable renewables in France should be filled by dedicated campaign of the French authorities so to raise awareness of both decision-making authorities and the general audience.



6. GLOSSARY

<i>CSP</i>	Concentrated Solar Power
<i>CST</i>	Concentrated Solar Technology
<i>DGEC</i>	Directorate-General for Energy and Geology
<i>GÜNAM</i>	Center for Solar Energy Research and Applications
<i>LENG</i>	Laboratório Nacional de Energia e Geologia
<i>NECP</i>	national energy and climate plan
<i>ODTÜ</i>	Middle East Technical University
<i>PV</i>	Photovoltaic
<i>R+D</i>	Research and development
<i>RI</i>	Research infrastructure
<i>R&I</i>	Research & Industry
<i>STE</i>	Solar Thermal Electricity
<i>TRL</i>	Technology readiness level
<i>WP</i>	Work Package