

HORIZON  
2020

# Implementation of the Initiative for Global Leadership in Solar Thermal Electricity

## Reporting

### Project Information

#### HORIZON-STE

Grant agreement ID: 838514

[Project website](#) 

#### DOI

[10.3030/838514](https://doi.org/10.3030/838514) 

Project closed

#### EC signature date

4 March 2019

#### Start date

1 April 2019

#### End date

30 September 2022

#### Funded under

SOCIETAL CHALLENGES - Secure, clean and efficient energy

#### Total cost

€ 999 656,25

#### EU contribution

€ 999 656,25

#### Coordinated by

EUROPEAN SOLAR THERMAL  
ELECTRICITY ASSOCIATION

 Belgium

## Periodic Reporting for period 2 - HORIZON-STE (Implementation of the Initiative for Global Leadership in Solar Thermal Electricity)

Reporting period: 2020-10-01 to 2022-09-30

### Summary of the context and overall objectives of the project

In 2015 EC launched a dedicated Initiative for Global Leadership in CSP to keep STE/CSP's global technology leadership and rebuild a home market in Europe.

As CSA project, HORIZON-STE aims to support and carry out the adopted Implementation Plan that will help steer countries through political, legislative and institutional shortcomings linked to various national policies concerning STE. Much of the focus centres on improving procurement of manageable RES and increased public funding for R&I projects. This project proposed pathways to relevant EU countries for overcoming the shortcomings of the current national strategies related to STE.

In the final period, the project was substantially impacted by the ongoing energy crisis and to the question as to whether CSP technology will play a role in solving the severe challenges ahead. This period reflects that Spain (and to a lesser extent also Portugal) remains a specific case with a strong research activity on CSP technology for power generation since Spain is the sole European country using CST for electricity generation with still a huge potential for development due to excellent solar resources and land availability.

The potential of CSP technology in all reviewed countries goes beyond electricity, i.e. heat for industry, and hydrogen. There is a growing interest in hydrogen production and new interests are emerging to produce it with different processes. These processes are becoming interesting because it is a high-priority topic and there is a lot of funding for research into hydrogen production and how CST can be applied. Projects for process heat generation using CST are reported to become commercially viable and – now also financially supported – should substantially expand.

## Work performed from the beginning of the project to the end of the period covered by the report and main results achieved so far

Within WP1 the project continuously monitored basic conditions of the CSP/STE in comparison to the conditions existing when both the project and the IP were conceived. Specifically, consortium has analysed results of the 12 CSP R&I projects resulting from the IP of the SET-Plan and reported on countries relevant for the IP, current framework conditions, options for financing instruments and schemes and finally, on yearly bases all through the project, changes in framework and market conditions.

Within WP2 the project has assessed the conditions for replicating in European countries the commercial cost levels achieved by the industry on world markets. Throughout the WP2 the consortium performed a stakeholder mapping, drafted seven country reports from industry perspective, seven integrated country reports, compiling drafted country reports from both industry and R&I perspective and, finally, merged all integrated country reports into one final report, which, following the reviews of EC, will be available at project's webpage.

Within WP3 the project produced a survey about stakeholders' interests and capabilities to the R&I activities of the SET-Plan, recommendations for Call for Proposals, indicators and methodology for monitoring the success of the CSP IP, context for an European Joint Programme for CST and funding schemes and a webinar with focus on options to increase CST funding and the EU-SOLARIS ERIC and the results of the final survey about funding sources for CST.

Within WP4 the consortium has established channels, platforms and tools for dissemination and communication with stakeholders, decision makers in SET-Plan countries and wider audience, organised events, conferences and site visits. Throughout the project duration the consortium has:

1. Delivered a Plan for Exploitation and Dissemination of the Project Results;

- 2.Created a project identity, website, social media channels;
- 3.Created and distributed leaflet and poster. Both are available at project's webpage and social media accounts and were disseminated during the project events and events attended by the consortium;
- 4.Issued seven newsletters with over 400 subscribers by the end of the project. ESTELA members were the first group of contacts in the mailing lists. Additional mailing list has been added for new subscribers to the newsletter. The subscribe form is provided on website;
- 5.Issued two infographics. Both are available at project's webpage and social media accounts. The first infographic was used in brokerage event, stakeholder meetings and workshops/webinars to raise awareness, while the second infographic was disseminated ahead of the EU Cooperation & Closing Event;
- 6.Issued two videos. Both are available at project's webpage, social media accounts and YouTube. A shorter version of the first video was presented during 15th SET Plan conference, while the second project video was presented during the EU Cooperation & Closing Event;
- 7.Delivered proceedings of six Joint Industry and R&I Events, EU Cooperation Event and Final conference, where the results of the project were presented to the main target groups;
- 8.Delivered a Final Report on Dissemination and Communication Activities. Following the reviews of EC, above mentioned documents will be available at project's webpage.

## Progress beyond the state of the art and expected potential impact (including the socio-economic impact and the wider societal implications of the project so far) ▼

The overarching expected impact of HORIZON-STE at project start time was the execution of the IP of the "Initiative for Global Leadership in CSP". The goals were:

- 1.To open the way to cooperation agreements between relevant MS related to STE industry projects (FOAKs), also using Cooperation Mechanisms suggested in RES Directive 2009/28/EC;
- 2.To demonstrate the usefulness, appropriateness and commercial viability of the Cooperation Mechanism;
- 3.To progressively re-balance the ratio between intermittent and flexible RES sources in the European generation portfolio;
- 4.To help participating MS to be able to either achieve their new 2030 RES targets (NECPs);
- 5.To improve relationship with national funding agencies for being able to preserve and further boost the European leadership of the STE industrial and research community which will ultimately prevent the sector being acquired or controlled by non-European entities in the future;
- 6.To increase the contribution of the STE industry and its research community for better synergy to achieve the EU decarbonization goals – via the use of CST not only for electricity generation, but also for industrial process needs;
- 7.To open up opportunities for new tenders or new designs in tenders allowing European private industry companies to compete and overcome cooperation barriers/obstacles due to the size of their home market.

However, at closure of the project, it reflects which reviewed "relevant" European countries have boundary conditions for the technology to deploy: industry and R&I need to 'demonstrate' at decision-making level and possibly in alliance with major energy industry players the short-term contribution of

the technology to match the national energy policy priorities and achieve via cross border cooperation a balanced advance toward the energy transition to non-fossil economies at European level. This means first that the socio-economic impact of the project will depend on how the CST sector can better coordinate its efforts towards institutional targets. Further, the expected exploitation of the project results addresses the industry itself and the way how it will adjust its action: from data sharing to strategy coordination and a more active cooperation for promoting project concepts while managing commercial confidentiality limitations across the 3 sectors electricity, heat and transport.



ESTELA presented HORIZON-STE project at ODAK2023 joint EU projects event (Ankara, Turkey 2020-02-26)



HORIZON-STE partners participation in ODAK2023 joint EU projects event (Ankara, Turkey 2020-02-26)



HORIZON-STE infographic no2



HORIZON-STE infographic no1





Kick-off meeting with all partners (2019-05-07)

**Last update:** 9 May 2024

**Permalink:** <https://cordis.europa.eu/project/id/838514/reporting>

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