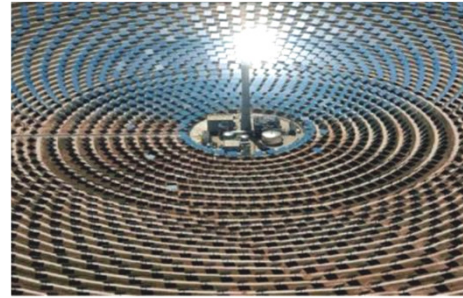




CST European approach and European Strategy Forum on Research Infrastructures (ESFRI) projects

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Athens, May the 27th, 2016

WHO IS ESTELA?



ESTELA is the **Euro-Mediterranean STE Industry Association** supporting the deployment of the solar thermal electricity industry for the deployment of green power in Europe and abroad, mainly in the Mediterranean region

ESTELA involves and is **open to all main actors in the Euro-Med zone:** promoters, developers, manufacturers, utilities, engineering companies, research institutions

ESTELA is building a **global cooperation platform with AUSTELA, SASTELA, MESIA, CSP Alliance as well as the Chinese industry** to bundle forces for addressing political target groups. The name of this platform will be STELA-World

INDUSTRY, INNOVATION AND RESEARCH



ESTELA directly participates in **5 EU projects** (EU-SOLARIS, STAGE-STE, SFERA II, KNOWRES and Solar CV) with the main role to be the interface between industry and R&I.

Most recently, in the framework the SET-Plan, **EERA, ESTELA and EUTurbines presented together to EU member states their most important targets related to STE.**

These targets were endorsed by Member states and EU services will now work closer with ESTELA to support the implementation of these targets.

TWO STRATEGIC TARGETS (1/2)



Motivation:

- ✓ in the narrow context of electricity markets, significant narrowing of the cost gap between STE plans and gas combined-cycles;
- ✓ macro-economic benefits to EU economy not only in the countries hosting the STE plants.

TWO STRATEGIC TARGETS (2/2)



Motivation:

- ✓ An extended cooperation between EU research centres and industry is needed to accelerate the incremental and disruptive innovations and bring them to markets (higher TRLs).
- ✓ Most of research lines established in ESTELA's Strategic Research Agenda (2012) are fully compatible with this target and will also contribute to increasing efficiency and reducing costs.

NON TECHNOLOGICAL PREREQUISITES TO MAJOR COST REDUCTIONS



- ✓ Economies of scale due to market volume
- ✓ Solid risk finance (investor protection)
- ✓ International cooperation

In practice, one or more member states, supported by the EC services, should initiate a STE *deployment* program (embedded in a reliable investment environment).

Objectives:

- ✓ Adjusting the EU generation mix towards a CO2 free power system in 2050 to a **better balance between non- dispatchable and dispatchable renewables** in the system (TSO needs!)
- ✓ Optimizing the use of renewables via the **cooperation mechanisms** (RES 2009) across EU originally developed in order to ease the achievement of RES 2020 targets for member states lacking abundant and flexible renewables resources.

WHERE ARE THE KEY CHALLENGES?



- 1) Getting **political** “investment drivers” to look at the difference between STE **costs** and STE **value**
- 2) Implementing in EU-Med focused STE **programs** that can:
 - ✓ Reveal STE value according to various needs
 - ✓ Achieve market volume → STE costs to go down

STE value builds on dispatchability (storage), cross-RES complementarity (e.g. STE-PV) and industrial inclusiveness

ABOUT THE ESFRI (EUROPEAN STRATEGY FORUM FOR RESEARCH INFRASTRUCTURES)



Set up by the Council of Research Ministers in 2002: ESFRI gathers Representatives of Member States, Associated States, and of the European Commission

Aim is to support the development of a European policy for Research Infrastructure and discuss a long-term vision at European level

Mandated by the EU Council of Research Ministers of November 2014 to develop a strategic roadmap identifying new pan-European Research Infrastructures or major upgrades to existing ones

THE 2016 ESFRI ROADMAP



Has been launched on the 10th of March 2016 and contains:

- ✓ 21 projects and 29 landmarks
- ✓ An analysis of the role of research infrastructures for European competitiveness

→ **EU-SOLARIS is part of those 21 projects:**

The **ESFRI working group on Implementation did an assessment of the status of implementation of EU-SOLARIS in 2015:** EU-SOLARIS has been assessed as feasible and integrated in the 2016 ESFRI Roadmap.

21 ESFRI PROJECTS: 15 + 6 NEW



ENE	ENV	HF	PSE	SCI	e-RI
ECCSEL	EISCAT_3D	EMBRC	CTA		2008
	EPOS	ERINHA			
	SIOS	EU-OPENSREEN			
		Euro-Biolmaging			
EU-SOLARIS		AnaEE			2010
MYRRHA		ISBE			
WindScanner		MIRRI			
					2016
	ACTRIS		EST		
	DANUBIUS-RI	EMPHASIS	KM3NeT 2.0	E-RIHS	

CONSULTATION ON THE LONG-TERM SUSTAINABILITY OF RESEARCH INFRASTRUCTURES



Made by the EC in 2015, in line with the Mission statement of Commissioner Moedas:

“Improving research infrastructure and making better use of research results is essential to strengthen innovation further, develop new activities and boost the productivity and competitiveness of our economy”.

The outcome of the Consultation helps to:

- ✓ Build on current RI best practices
- ✓ Showcase possible solutions to be considered by the appropriate services and relevant stakeholders
- ✓ Identify potential new approaches to policy bottlenecks

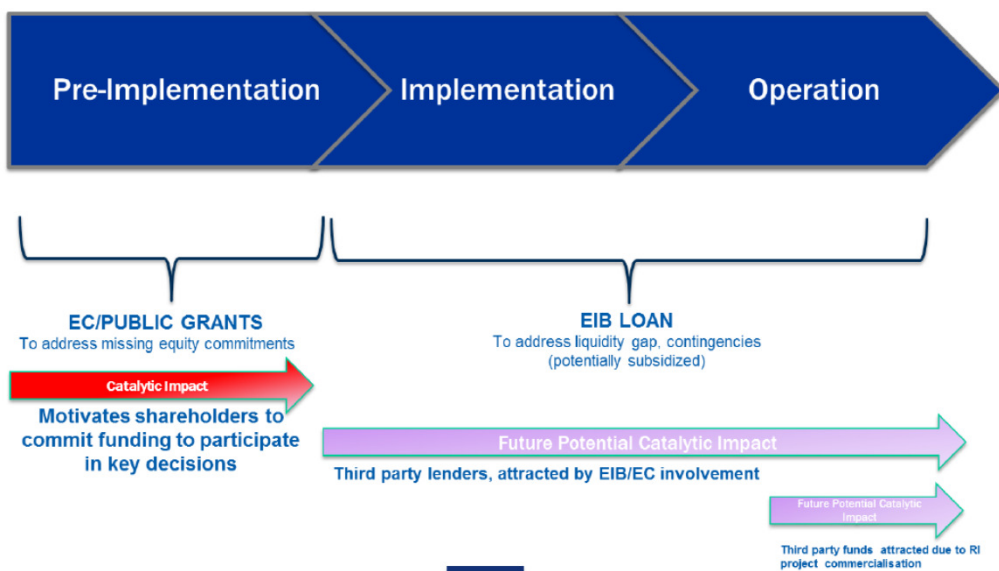
MAIN FINDINGS OF THE CONSULTATION



While some results confirmed current understanding, the consultation points at specific challenges that require attention:

- ✓ Untapped **innovation potential** of RI and increase awareness of the RI operators;
- ✓ Willingness to use **data repositories**, data management plans and **(open) access** to data;
- ✓ Need of awareness on the importance of **RI bankability** (operators and funders);
- ✓ **Limited awareness** of the importance of measuring **socio-economic impact** within the RI community;
- ✓ **Increase visibility** of RIs and expand their services;
- ✓ **Staff exchange** programmes for RI managers.

OVERVIEW OF POSSIBLE FUNDING SOLUTIONS RI PROJECT LIFE CYCLE



Thank you for your attention!!



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