EU SOLARIS

The European Research Infrastructure for Concentrated Solar Power

European Strategy Forum on Research Infrastructures

ESFRI

CTAER ANDALUCIA

Supported by:

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EUROPEAN ROADMAP FOR RESEARCH INFRASTRUCTURES

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EU-SOLARIS IN THE ESFRI ROADMAP 2010

- The European Strategy Forum on Research Infrastructures (ESFRI) has included the EU-SOLARIS project -presented by CTAER/PSA- in the ESFRI ROADMAP 2010
- Partners from Germany, Portugal, Greece and Turkey provided non binding LOIs that were included in the original proposal to ESFRI. All of them confirmed their interest in participating
- New partners from Italy, France , Cyprus and Israel have been integrated for the “Preparatory Phase” of the project
- Preliminary contacts with Solar Technological Institutions of Northern African countries are going on

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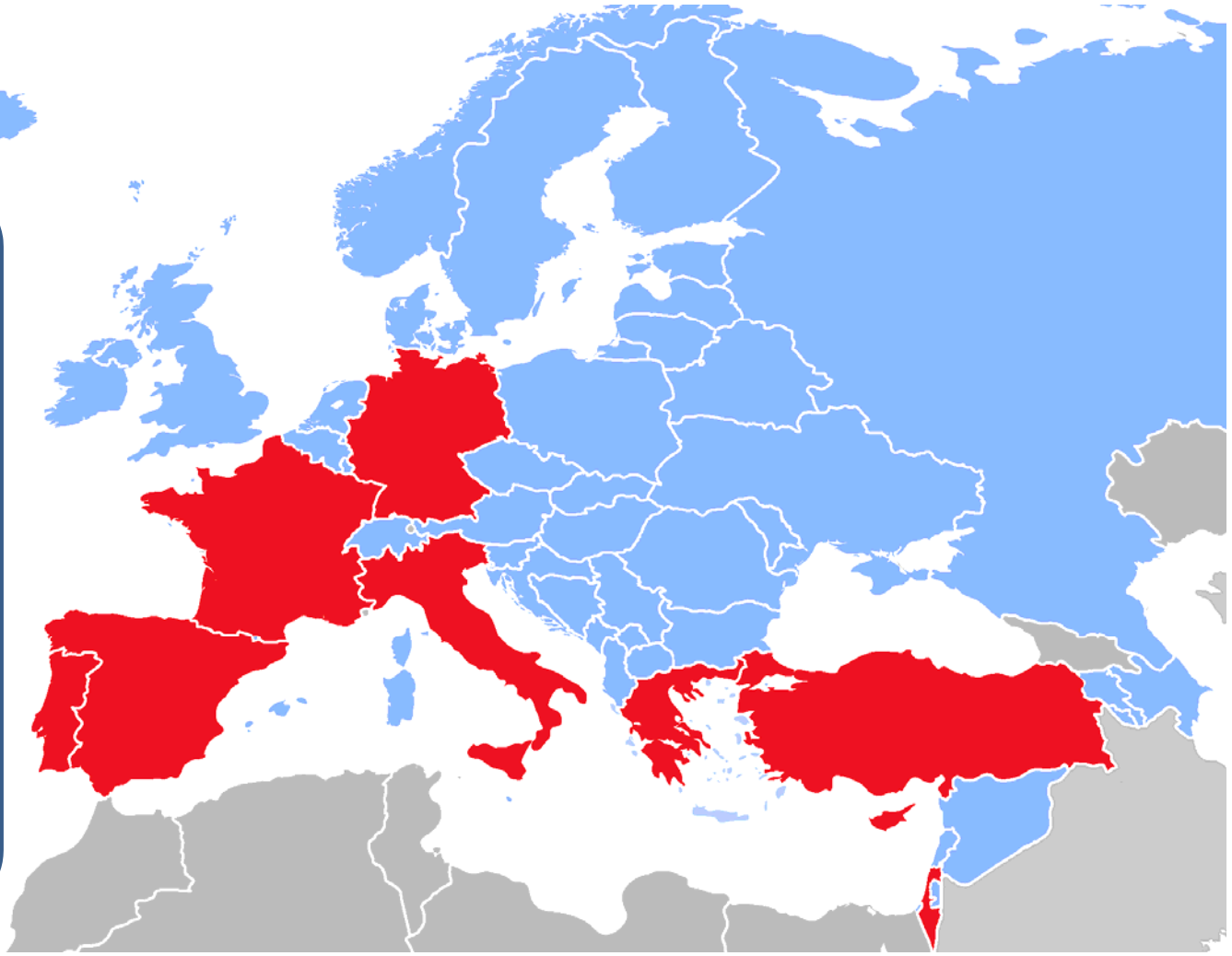
GEOGRAPHICAL DISTRIBUTION OF EUSOLARIS MEMBERS

- CTAER (ES)
- PSA (ES)
- DLR (GE)
- ENEA (IT)
- CNRS (FR)
- LNEG (PT)
- IPES U.Ev. (PT)
- CRES (GR)
- APTL (GR)
- CYPRUS I. (CY)
- GUNAM (TK)
- SELCUK U. (TK)
- WIS (IS)



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IMPLEMENTATION PLAN

The implementation plan would have three phases:

- **Proposal Preparation**
  Under the **CP-CSA PP** funding scheme of the 7th FP.
  Duration: July-November 2011

- **Preparatory Phase**
  Including the scope definition and the Governance Structure.
  Duration: 2012 – 2014 but it might take even longer.
  The budget for this phase could be around 4 M€ and the grant would be almost 100%

- **Operational Phase**
  2014 onwards

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WHAT DOES EU-SOLARIS REPRESENT

- EU-SOLARIS is the opportunity to achieve a real coordination on R&D capabilities and efforts on CSP by the European Research Centers along with those from the neighbouring countries in order to foster the technological development of the industry
- EU-SOLARIS is intended to be a real step forward in the current collaboration models going far ahead from simply networking, exchange of information, etc.
- EU-SOLARIS will offer one access point for users although its research facilities have multiple sites.
- EU-SOLARIS will be a privileged platform for presenting initiatives to European R&TD programmes

DEFINITION BY ESFRI OF **EUROPEAN DISTRIBUTED RESEARCH INFRASTRUCTURES**

*"A **European Distributed Research Infrastructure, as recognized by** ESFRI, is a Research Infrastructure with a common legal form and a single management board responsible for the whole Research Infrastructure, and with a governance structure including among others a Strategy and Development Plan and one access point for users although its research facilities have multiple sites"*

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WHAT IS EU-SOLARIS SUPPOSED TO BE

- **New juridical entity**

  The facilities of the partners would be integrated in the way and to the extent that would be finally decided by the partners. In any case certain access rights and joint strategic planning would be needed.
  New installations can eventually be joint financed

- **Own governing structure**

  The representation in the board will be proportional to the assets and the participation in joint activities

- **First of its kind** regarding rules and procedures to structure the multisite facility along with the involvement of the industry

The EU-SOLARIS Governance and Structure would be deeply analyzed during the preparation of the proposal for the Preparatory Phase with a realistic approach

The existing and improved CTAER/PSA facilities would be considered as the core of the project . The facilities of the other members -at the extend that will be finally determined- will play an essential role for the success of this networking initiative

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A NEW RELATIONSHIP MODEL BETWEEN LARGE PUBLIC INFRASTRUCTURES AND THE INDUSTRY

- Most of large R&D European Infrastructures included in the ESFRI roadmap have a predominant model of public funded installations and public long term R&D programs
- The technology development in the CSP sector is driven by the industry to a large extent as all the EU-SOLARIS partners are used to
- Some new installations will correspond to advanced innovative demonstration projects financed by the industry. The future use and diffusion of results might be discussed on a case by case bases with certain common rules
- EU-SOLARIS is expected to find new concepts by which the industrially driven collaborative programs will contribute to a wider dissemination of results, fostering the CSP technology development
- EU-SOLARIS is supposed to provide a transnational added value and support to a more effective response to the dynamic industrial needs

ENHANCED COLLABORATION POTENTIAL

- The one main access point and the joint organization can provide much effective interface with the industry
- The best qualified team can be found when a new industry need is received. Eventually a joint team could be the proper response
- The wider offer on R&TD capabilities and a stronger communication engagement as compared to those from individual partners might enhance the volume and scope of collaboration projects with the industry
- Transnational collaboration on R&TD with countries with favorable solar resources might also enhance CSP deployment

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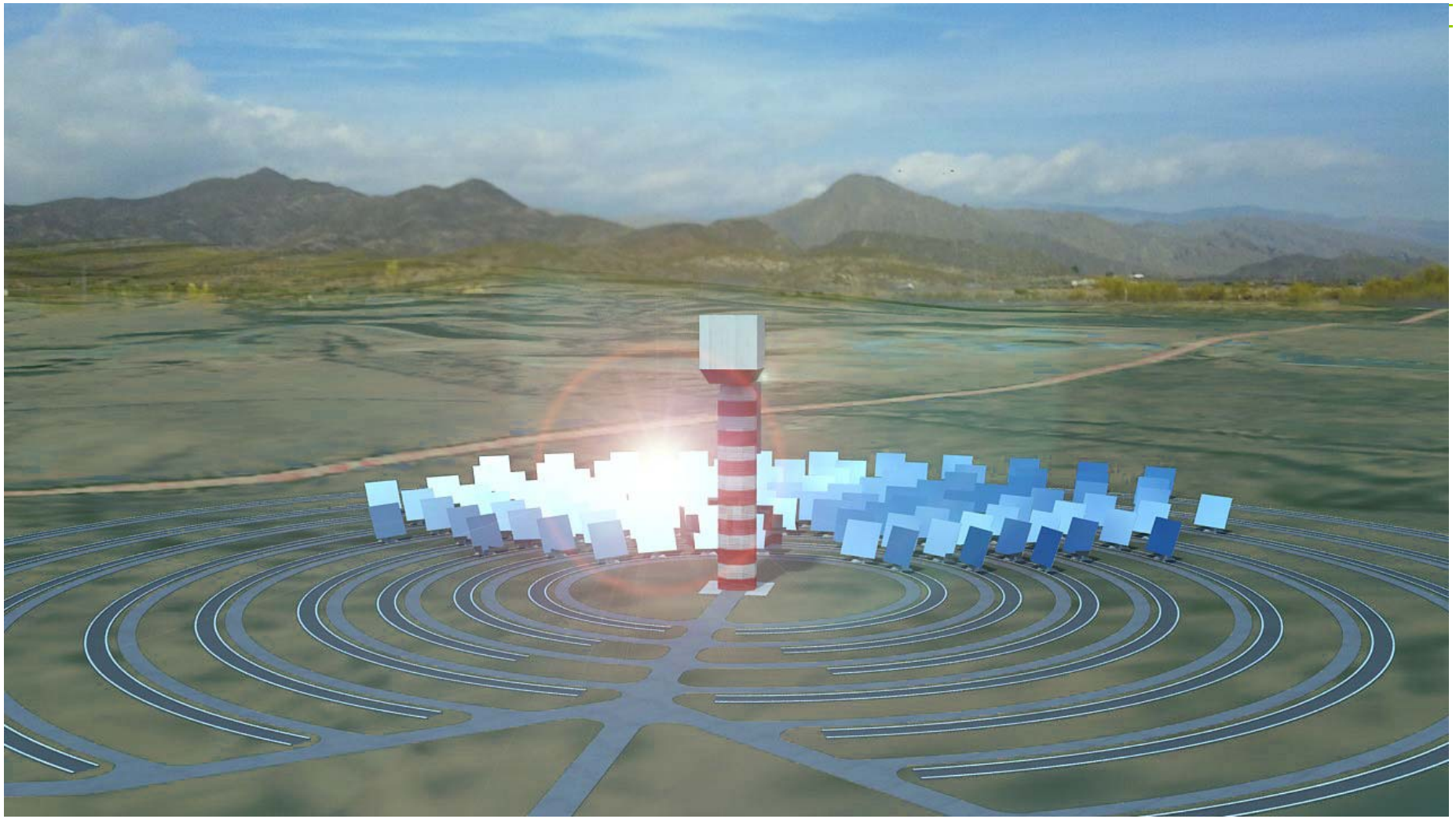
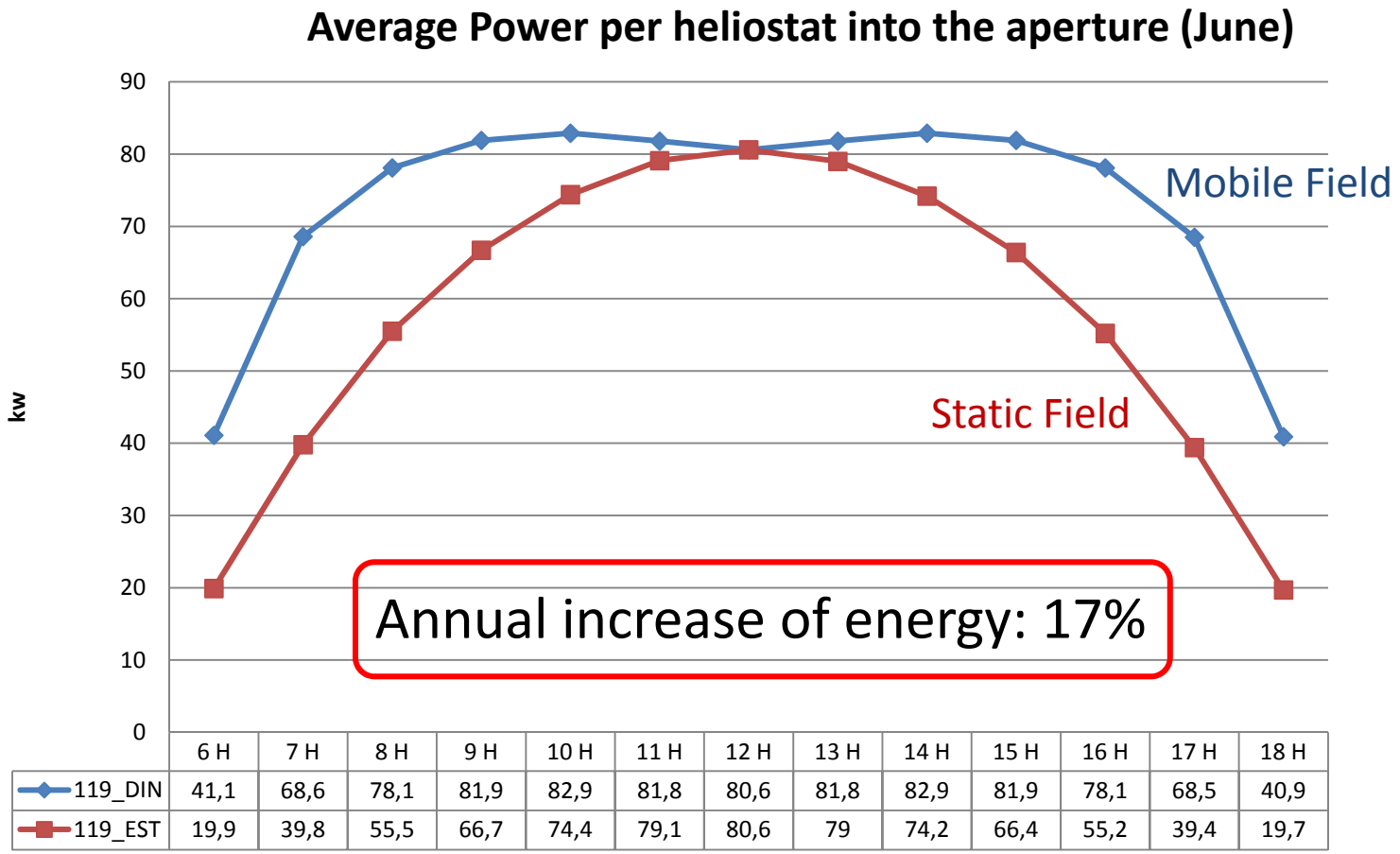
WHAT WOULDTHE BENEFITS FOR THE PARTICIPATING PARTNERS BE?

- Priorities on own national budget sharing
- Avoidance of duplicity in future infrastructures to a certain extent
- Real exchange of up to date information
- Quicker knowledge development
- Joint R&TD projects
- Transnational access
- Visibility by the industries at international level
- Influential role on the European policy on CSP
- Privileged position regarding the “calls” within European R&TD programs

Artist view of the Variable Geometry Installation consisting of 119 mobile heliostats and a rotating receiver



Performance comparison between mobile and static heliostat fields



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119_DIN	41,1	68,6	78,1	81,9	82,9	81,8	80,6	81,8	82,9	81,9	78,1	68,5	40,9
119_EST	19,9	39,8	55,5	66,7	74,4	79,1	80,6	79	74,2	66,4	55,2	39,4	19,7

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THANKS FOR YOUR ATTENTION

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