

CHILE: SOLAR THERMAL FOR POWER AND HEAT

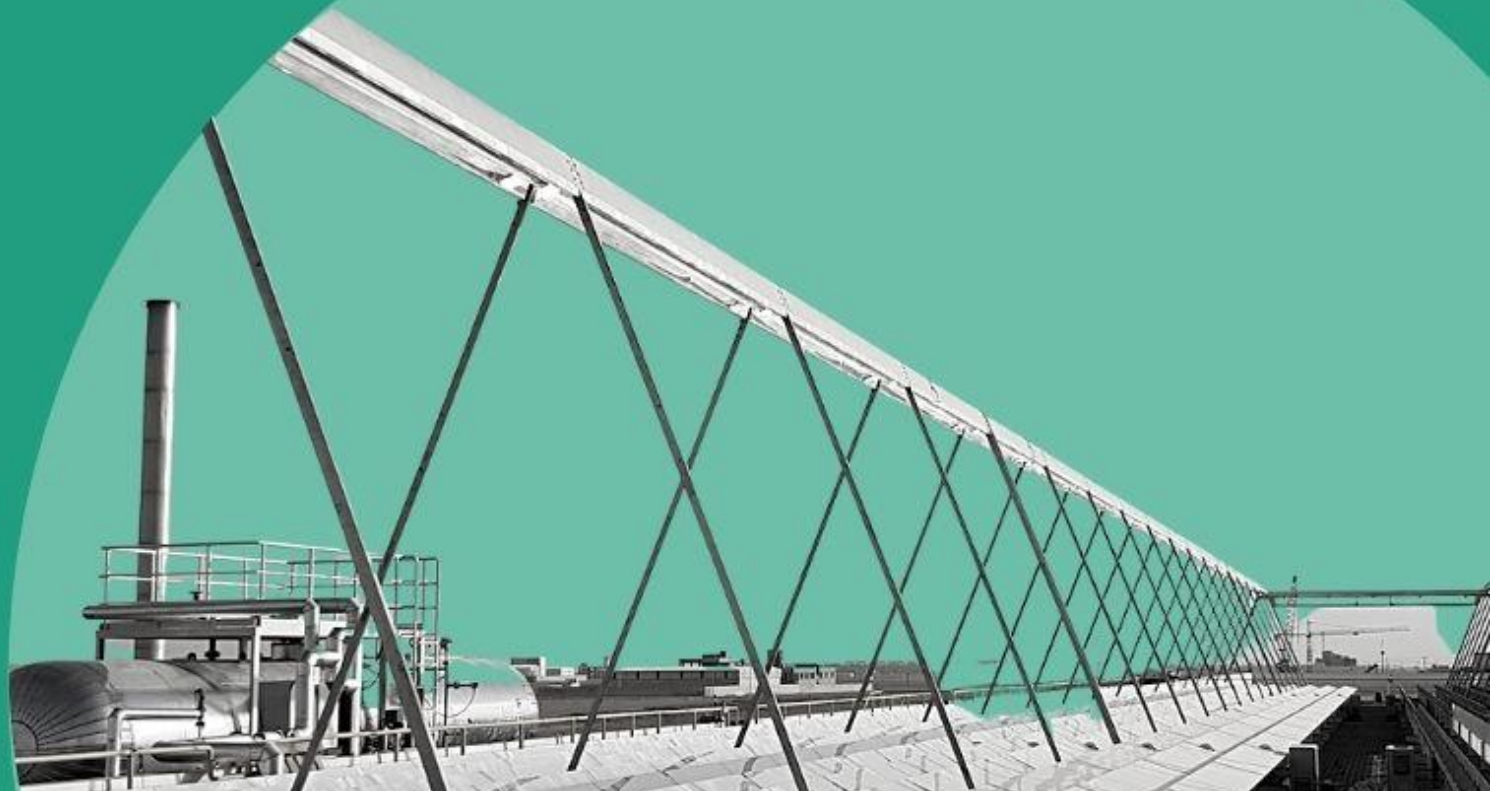
SUCCESS STORIES AND PERSPECTIVES

INTERNATIONAL WEBINAR

MAY 26 & 27

10 - 11:30 CLT
(Chile Standard time)

14 - 15:30 UTC
(Coordinated Universal Time)



Bridge between science and industry

Fraunhofer Gesellschaft



Since its foundation in **1949** in **Germany**, FRAUNHOFER GESELLSCHAFT focused on **applied research that leads to economic development** and provide wide benefits for the society.



Top ranking applied research center in Europe

Fraunhofer Gesellschaft



74 Institutes in
Germany



26.600 Researchers
and Engineers



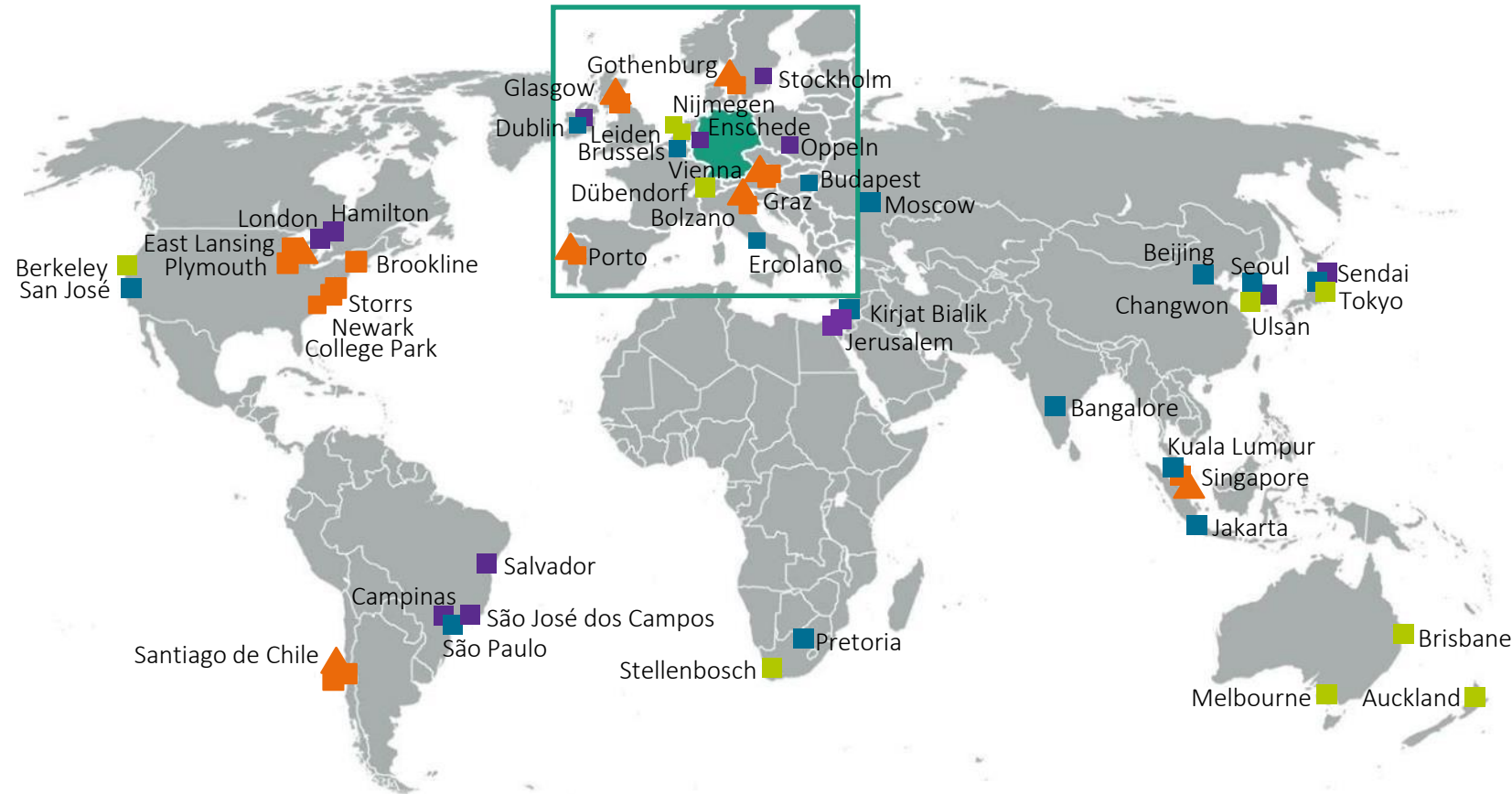
2.600 Millions euros
yearly budget



More than **2** patents per day

World representation

Fraunhofer Gesellschaft



- ▲ 8 Affiliates
- 15 Center
- 12 Project Center
- 10 ICON
- 6 Repr. Offices
- 7 Senior Advisor

Fraunhofer ISE

Performing Research for the Energy Transformation



Director:
Prof. Dr. Hans-
Martin Henning
Prof. Dr. Andreas
Bett



Staff: ca. 1250



Budget 2020:
€104.8 million

Established: 1981



Fraunhofer ISE

Areas of Concentration



ENERGY TECHNOLOGIES AND SYSTEMS

Prof. Dr. Hans-Martin Henning

Energy Efficient Buildings

Solar Thermal Power Plants and Industrial Processes

Hydrogen Technologies and Electrical Energy Storage

Power Electronics, Grids and Smart Systems

Silicon Photovoltaics

III-V and Concentrator Photovoltaics

Perovskite and Organic Photovoltaics

Photovoltaic Modules and Power Plants

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Solar Thermal Power Plants and Industrial Processes



Research Themes

- Solar Thermal Power Plants
- Concentrating Solar Collectors
- Water Treatment and Separation
- Thermal Energy Storage for Power Plants and Industry
- Industry Processes and Process Heat
- Efficient Heat Exchangers

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Portfolio of Group Concentrating Collectors and Optics



Dr. Gregor Bern
Head of Group

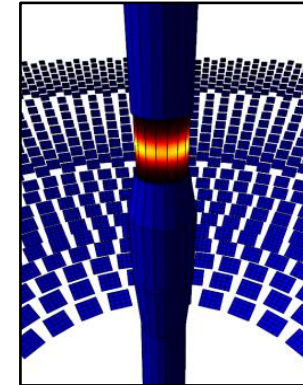
- Concentrating collectors concepts
- Optical characterization
- Soiling and cleaning
- Optical and thermo-hydraulic simulation
- Yield assessment and performance characterization
- Software development



Lab Testing



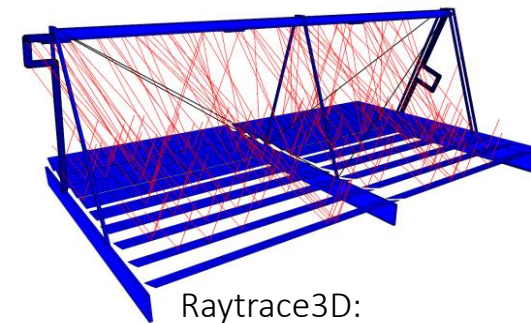
PTC soiling
measurement
PFlex



Raytrace3D:
Solar Tower



Field testing
Laser scanning



Raytrace3D:
Linear Fresnel collector



Insitu
deflektometry

Focus according to Chile characteristics

Fraunhofer Chile Research



Centro de Biotecnología de Sistemas (CSB) – Systems Biotechnology Center

- Innovation to face challenges in the circular economy, food, aquaculture and sustainable agriculture
- Funded in 2010
- Dr. Pilar Parada: Executive director and General Manager of Fraunhofer Chile



Center for Solar Energy Technologies (CSET)

- Innovation for the development of a world-class solar industry
- Funded in 2014
- Prof. Dr. Frank Dinter Executive Director

Center for Solar Energy Technologies

Fraunhofer Chile Research



The CSET was constituted in response to the call made by the Ministry of Energy and the Ministry of Economy of Chile

Proyecto apoyado por



Subsidized by the Ministry of Energy through the Corporación de Fomento de la Producción CORFO.



PONTIFICIA
UNIVERSIDAD
CATÓLICA
DE CHILE

Co-founder and co-executive partner. Solid background in basic and applied research.



Co-founder partner. Main European Solar Energy Research Center

Research lines

FCR CSET



Photovoltaic



Photovoltaic technologies,
Concentrated photovoltaic

Solar thermal



Concentrated solar
thermal, Solar Heat for
Industrial Processes

New opportunities



Economics models, Market
analysis, Green Hydrogen
and Electromobility

Fraunhofer Chile - CSET

Solar Thermal Systems








MSc. María Teresa Cerda
Head of Group

- Quotations for industrial partners
- Studies on solar thermal integration into processes
- Research in CSP and SHIP
- Performance assessments of STS
- Validation of systems or pilots
- Soiling and cleaning
- Solar Resource assessments





Contacto

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 Fraunhofer Chile  fraunhoferchile

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Proyecto apoyado por

