Atacama Modules & Systems Technology Consortium

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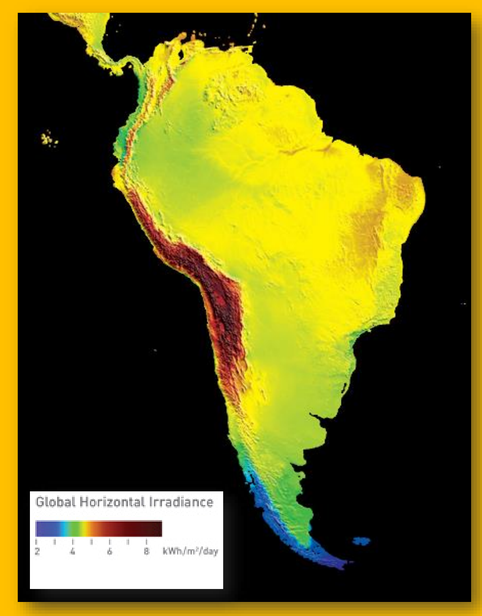
CHALLENGES

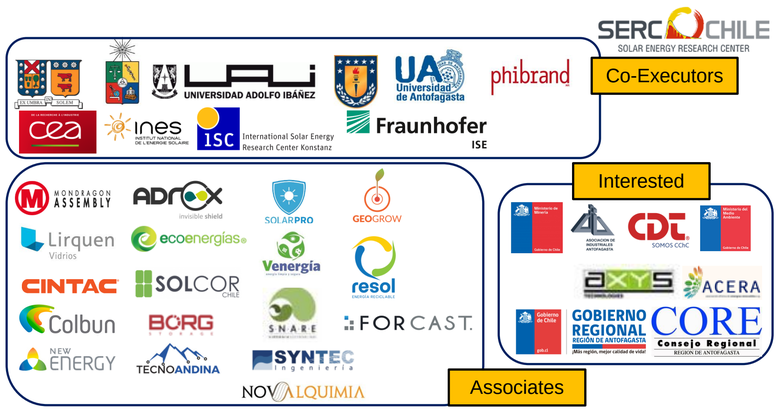
Given the unique conditions of the Atacama Desert:

- Solar radiation has a distinctive solar spectrum (eg. ultraviolet radiation),
- Comparatively low ambient temperature (eg. Sahara, Australia),
- Systematic winds in speed and direction (east-west),
- Relevant local consumption, like Mining activities,
- Available territory
- Various geographic areas (altitude, access, type and magnitude of aerosols),
- Water scarcity,
- High seismicity,
- National related industry that can expand its product lines (ex structures, glass).

The development of photovoltaic systems for desert conditions has been selected as one of the main initiatives of the Chilean Solar Strategic Program with the focus on positioning of Chile as a regional solar energy exporter.



TEAM AtaMoS-TeC



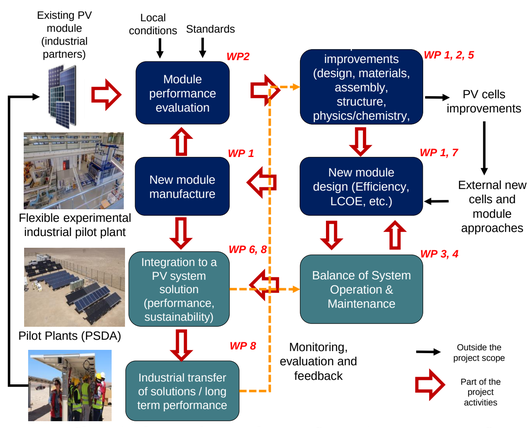
The research team of AtaMoS-TeC Consortium, together with the participating companies have the objectives:

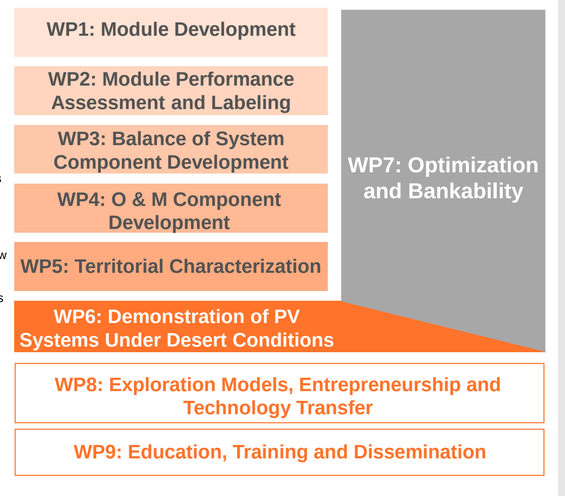
- Create a collaborative and high-impact platform for the execution of niche projects for the development of solar photovoltaic energy technologies (focus on bifacial technology)
- Execution of a portfolio of projects that addresses the challenge of adapting and developing appropriate technologies for desert zone conditions and high solar radiation, in terms of durability and expected yields (eg. new material and glass-glass modules design)
- Reduce the LCOE.
- Promote a high penetration of solar photovoltaic energy in the Chilean energy matrix.
- Development and strengthening of local suppliers, and create a sophisticated industrial network oriented to provide solar-related technology and services in Chile and abroad.

STRATEGY

WORK PACKAGES

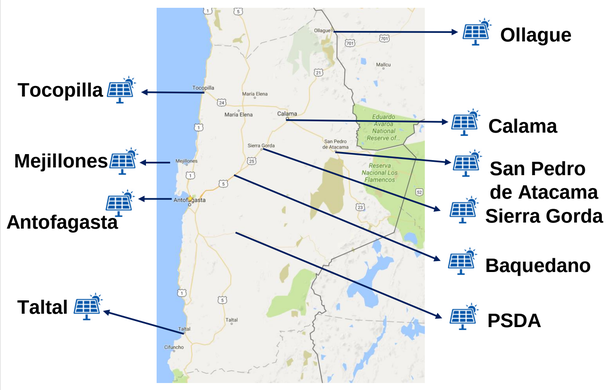
The main components of the project and their most relevant relations:





- A flexible pilot plant for the manufacture and testing of modules
- Iterative process of performance evaluation (including technical and economic aspects)
- Modules, BoS & OM adapted to climatic conditions

INFRASTRUCTURE



Yungay Pilot Center (PSDA)

Lalcktur Industrial Pilot Plant 1 MW

Laboratory network, equipment and infrastructure of SERC and international partners

ACKNOWLEDGEMENT

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PROGRAMA ENERGÍA SOLAR

Proyecto apoyado por: CORFO