7/ Market Introduction of Industrial Solar-Thermal Collectors [CRES]

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The Challenge

Greek-produced large-scale solar-thermal collectors face significant challenges in achieving **market penetration** in the European and global renewable heat sector. Competing technologies from established international manufacturers benefit from **economies of scale**, lower production costs, and stronger market presence.

To gain a competitive edge, Greek manufacturers need to **differentiate their products** by emphasizing high-quality design, ease of maintenance, and strong compliance with **EU standards**. Their **local production**, **shorter logistics chains**, and **"Made in EU" sustainability branding** can also be leveraged as strategic advantages — appealing to industrial clients who value **performance, reliability, and regional supply security**.

This challenge focuses on developing and validating **market entry strategies, pilot installations, and business models**that demonstrate the performance and cost benefits of locally produced large-scale solar-thermal collectors in industrial and agrofood applications.

Technology Readiness Level (TRL)

8 – Products are fully developed and certified; next steps involve demonstration, replication, and large-scale market deployment (TRL 9).

Expected Outcomes

- Increased market visibility and adoption of EU-made large-scale solar-thermal collectors
- Expansion of applications in industrial and agrofood sectors
- Competitive differentiation through quality, performance, and local service
- Strengthened domestic manufacturing and export potential

Impact on Operations

Overcoming market entry barriers will enhance the competitiveness of Greek solar-thermal manufacturers and **stimulate local industry growth**. Wider adoption in industrial heat applications will support **energy transition goals** and reduce dependence on imported technologies.

Current State / Next Actions

Greek manufacturers and research partners already produce solar collectors at TRL 8, with proven thermal efficiency and durability. However, large-scale systems (5–12 m²) remain underrepresented in industrial markets, which are dominated by imported systems. Demonstration projects and stronger business positioning are needed to improve visibility and customer confidence.

Next Steps: Pilot and demonstration projects, industrial-scale field validation, market analysis, and joint distribution and commercialization initiatives at the EU level.

About CRES (Centre for Renewable Energy Sources and Saving)

CRES is Greece's national energy research center, specializing in renewable energy, energy efficiency, and smart grid technologies. With extensive experience in **microgrids, distributed energy systems**, and **energy management optimisation**, CRES plays a key role in bridging research and industrial deployment. Through its work in SolarHub and related initiatives, CRES aims to **advance sustainable agri-PV integration**, ensuring that rural and remote areas can fully benefit from clean energy without compromising grid reliability.

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