

**Name of the organization**

ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development)

Name of the infrastructure / laboratory

CCR Casaccia / Prova Collettori Solari (PCS)

Address and country of the infrastructure / laboratory

ENEA C.R. Casaccia - Via Anguillarese 301 - 00123 Rome, Italy

Person responsible of the access / Contact person

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Main field of activity of the infrastructure / laboratory

► Hydrogen production

Short description of the infrastructure / laboratory

The PCS facility is the main testing loop built in ENEA and it is unique in the world. It consists in a two lines of high temperature parabolic trough collector using as heat transfer fluid a binary component salt (60% of sodium nitrate and 40% of potassium nitrate) operating up to 550°C. This facility is in operation since 2004 and it is composed of a totally instrumented molten salt closed loop and a molten salt storage tank (5 m³ capacity), electric heaters and salt-air heat exchangers. Its task is the testing under real operating condition of all the main plant components (parabolic solar collector, supporting structure, mirrors, tracking and driving systems, heat collecting elements, molten salt components, circulating pumps, sensors, valves, preheating systems, etc.) and setting up operating procedure of a molten salt solar field: operation and maintenance procedures, control loops, draining and filling procedures, etc. It is noteworthy that this facility is potentially adaptable to thermochemical plants requiring up to 500 kW of thermal power at 550°C for proof-of-concept and demonstration studies on solar-hydrogen production at the pilot level.

Access not available yet.

Information on the installation will be further updated.