



Gianluigi Angelantoni
il Presidente

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EXECUTIVE SUMMARY

Archimede Solar Energy (ASE), is an Italian based company that produces receiver tubes for solar thermodynamic power plants (CSP Plant).

Established on 2007, ASE is the sole manufacturer with a commercially available solar receiver tube operating above 550 °C, prerogative for using a mixture of sodium and potassium nitrates (Molten Salts or MS) as Heat Transfer Fluid (HTF). ASE has a worldwide patent in an innovative CSP technology – molten salt receiver developed together with ENEA⁽¹⁾.

On 2011 ASE completed the construction of one of the most innovative and flexible manufacturing plant, with a current production capacity of 250MW_e equivalent, scalable up to 350MW_e.

The manufacturing process allow to cover the complete technology portfolio, Oil, Molten Salt and Direct Steam Generation (DSG).

(1) Italian National Research Agency for Renewable Energy.



Manufacturing Plant

Overview





Manufacturing Plant

Production Capacity

- **Location:** Italy – Massa Martana (PC) Villa San Faustino
- **Starting Date:** September 14th 2011
- **Plant Area:** About 11.000 sqm of covered production area with additional 3.000sqm of adjacent offices. More than 30.000 sqm for all plant
- **Fully Automated and innovative manufacturing process:** the complete manufacturing equipment installed in the plant is based on internally-developed technology
- **Net production capacity:** 75.000 rec/y (current) upgradeable up to 140.000 rec/y
- **Electric Equivalent production capacity:** 250 MWe/year



Storage= dispatchability!





ASE's activity in China

ASE got the order to supply Molten Salt Receivers Tube for the first 50 MWe CSP PT commercial plant in China, located in Akesai, Gansu Province. The plant is under construction.



ASE signed the agreement with **TIANJIN BINHAI CSP RESEARCH** for the Engineering Services.

ASE made the Concept Design and Detailed Engineering for the Akesai Demo Plant. The demonstration plant is currently under construction. The commissioning is planned for March 2016.



TIANJIN BINHAI INVESTMENT and TIANJIN BINHAI CSP RECEIVER TECHNOLOGY CO.,LTD, have planned to build up a very innovative Renewable Energy manufacturing industrial district. They will produce the key components for the CSP Parabolic Trough Plants, using the latest developed technologies.





Solar Receiver factory using ASE's Technology, TIANJIN BINHAI CSP RECEIVER TECHNOLOGY CO.LTD, has planned the construction in 2016





September 30, China National Energy Administration (NEA) issued a ***notice on organizing the Construction of Concentrated Solar Power Demonstration Projects.***

Developer	Technology	Capacity (MW)
CGN	Parabolic trough	50
State Power Investment Corporation (SPIC)	Solar Tower	2*135
CITIC Group	Fresnel	2*50
China Huadian Corporation	Parabolic trough	50
China Datang Corporation	Parabolic trough	50
China Huaneng Group	Fresnel	50
GD POWER DEVELOPMENT CO., LTD	Parabolic trough + tower	50+50
SUPCON	Solar Tower	50
Shenzheng Huaqiang Holding limited	Fresnel	50
Rayspower	Parabolic trough	100
Royal Tech CSP	Parabolic trough	100
SUNCAN	Solar Tower	2*50
DCTC	Fresnel	100
Elion(Jinfan Energy/Gansu CSP)	Parabolic trough (molten salt)	50
		1220



Thank You

