

# Growing tomatoes in the Australian desert - with Integrated Energy System



### Area



200,000 m<sup>2</sup> greenhouses



51,500 m<sup>2</sup> solar field

### Integrated energy system



20,000 MWh heat / year



250,000 m<sup>3</sup> fresh water / year



1,700 MWh electricity / year

# Tomato production



17,000 tons tomatoes / year

## **Environmental savings**



400,000 tons CO<sub>2</sub> / 25 years

# Solving the world's food problems

A futuristic desert-farming system addressing the world's increasing food security concerns is powered by a globally unique Integrated Energy Sytem developed and delivered by Aalborg CSP.

The energy plant is based on the concentrated solar power technology and it is located in the South Australian desert with the aim to provide sustainable energy to grow 17,000 tons of tomatoes annually in 200,000 m<sup>2</sup> greenhouses.

Since the official opening ceremony held in October 2016, the Integrated Energy System has been harvesting the sun in the most efficient way to satisfy multiple energy demands. Altogether 23,712 heliostats collect the sun's rays and reflect them onto the top of a 127m high solar tower. Here, the concentration of energy generates high temperatures which is then used to heat the greenhouses in wintertime and on cold summer nights, to provide fresh water by desalinating seawater and to periodically run a steam turbine to produce electricity.



October 2015: Overview of the construction



March 2016: Construction of the 127m high solar tower is finalize



October 2016: Official opening of the facilit







### **CHANGING ENERGY**

Aalborg CSP is a leading developer and supplier of innovative renewable technologies aiming to change the way energy ir produced today. Relying on extensive experience from some of the most efficient concentrated solar power (CSP) projects around the world, the company designs and delivers green technologies and integrated energy systems to lower cost of energy for industries and power plants worldwide.



VALUE-ADDING ENGINEERING DESIGN



TECHNOLOGY OF TOMORROW





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