

In the continuous challenge to produce clean energy and to reduce greenhouse gas emissions, **SOLAR ENERGY** is considered to be one of the leading renewable energy sources. Solar thermal energy can now be made available even at night or when the sun is not shining. **SQM** nitrates allow to store solar energy captured in order to apply it whenever needed and as such in the most efficient and environmental friendly way.

During the **SolarPACES 2010** Conference which was held from 21st till 24th September in Perpignan, France, **SQM** had the honour to meet a wide variety of academic, industrial and governmental key players with a keen interest in **SQM's** solution to store heat in CSP (Concentrated Solar Power) plants. **SQM's** molten nitrate salts solution is based on a combination of 60% sodium nitrate and 40% potassium nitrate which today is the only viable solution to store heat in vast quantities needed to be converted into steam to drive industrial steam turbines when the sun is not shining, or obscured by clouds, or at night.

Today, there are 2 types of CSP power plants where **SQM's** molten nitrate salts are used: parabolic trough plants which use parabolic mirrors to concentrate the sunrays onto receiver tubes filled with a heat transfer fluid which, once it is hot, is used to produce steam to power a turbine and a generator, and, power tower plants (also called solar towers) where flat mirrors (heliostats) reflect the sunrays to a receiver on the top of the solar tower where the heat transfer fluid is heated up to power a turbine and a generator.

The heat absorbed by **SQM's** molten nitrate salts which are stored in huge storage tanks, is used to make sure CSP power plants keep producing electricity all around the clock.

SQM, the worldwide market leader in the production and the commercialization of **Specialty Plant Nutrition** (SPN), Iodine and Lithium, is also one of the global key providers of natural, high quality solar salts (sodium and potassium nitrate) which are essential elements in the thermal storage units of Concentrating Solar Power (CSP) Plants.



The **SQM** solar salts booth at SolarPACES 2010 with Giuseppe Casubolo (Project Manager Solar Salts at **SQM**) in the centre.



On 22nd September **SQM** treated close to 800 guests to an authentic, much appreciated Catalan lunch in the Palais des Congrès.