SQM’s Thermo-Solar Salts:
The proven & reliable energy storage medium

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SQM AT A GLANCE: Reserves, Products & Capacities

- Caliche Ore: I$_2$, NaNO$_3$, KCl
  - Nueva Victoria: 14k MT/year
  - Coya Sur: 1.3 million MT/year
  - Salar de Atacama: 2 million MT/year
- Salar Brines: KNO$_3$, Li$_2$CO$_3$
  - Antofagasta (Salar del Carmen): 70k MT/year
- Spodumene: LiOH
  - Mt. Holland, 50/50 JV Western Australia: 45k MT/year in 2021

I$_2$ – iodine, NaNO$_3$ – sodium nitrate, KCL – potassium chloride, KNO$_3$ – potassium nitrate, Li$_2$CO$_3$ – lithium carbonate, LiOH – lithium hydroxide
SQM Activities in CSP: Brief history

SQM’s track record in CSP (2012-2019)

- Supply of solar salts in 26 out of 31 CSP projects with storage (excluding China)

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<thead>
<tr>
<th></th>
<th>excl. Dewa</th>
<th>Incl. Dewa</th>
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</thead>
<tbody>
<tr>
<td>NaNO3</td>
<td>66%</td>
<td>68%</td>
</tr>
<tr>
<td>KNO3</td>
<td>54%</td>
<td>73%</td>
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<tr>
<td>Mix</td>
<td>62%</td>
<td>70%</td>
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- Delivery of > 1,345,000 MT of solar salts (incl. Dewa) since 2012

SQM Expertise & R&D efforts

- Donation of 1800 MT of solar salts to Solar Two Project (USA) in 1992-1995 (Pioneering)
- Close collaboration with renowned research institutes (SANDIA, NREL) and customers (purity, contamination, corrosion studies,...)
- Waste heat recovery/Thermal storage research project (University of Ghent)
- Innova-Microsolar Horizon 2020 Project
- CSP on Demand Demo Plant (Masdar Institute, UAE)
SQM Activities in CSP: Brief history

Projects supplied or in progress:

- ANDASOL 1
- ANDASOL 2
- EXTRESOL 1
- EXTRESOL 2
- EXTRESOL 3
- MANCHASOL 1
- MANCHASOL 2
- LA FLORIDA
- LA DEHESA
- VALLE 1 & 2
- L’AFRICANA
- TERMOSOL 1 & 2
- SOLANA IN USA
- CASABLANCA
- KAXU
- BOKPOORT
- XINA
- ATACAMA 1 & 2 IN CHILE
- ILANGA 1
- SHAGAYA – Kuwait
- NOOR 2
- ASHALIM
- DEWA
SQM thermal energy storage salts “TESS” strengths and challenges

SQM has been the only company constantly expanding its production capacity over the last decades to meet growing demand of KNO3 and NaNO3.

SQM is the only producer in the world of both KNO3 and NaNO3 from natural resources.

Since the start of the Thermal Energy Storage Salts business, SQM has been proven to be a reliable supplier of thermal energy storage salts in terms of product quality (purity) and logistics of large-scale projects.

SQM is best positioned to supply future projects in Thermal Energy Storage Salts as it has shown to be the only company in the world capable of meeting increasing demand.

Challenge: balance S&D in very unregular market demand.