BASF
We create chemistry

Greater efficiency for solar power plants

BASF offers an extensive product and service portfolio

Renewable energies make an important contribution to climate protection. Solar energy plays a particularly significant role here and has become much more widespread in recent years due to photovoltaics. However, this technology does not currently offer an efficient means of storage.

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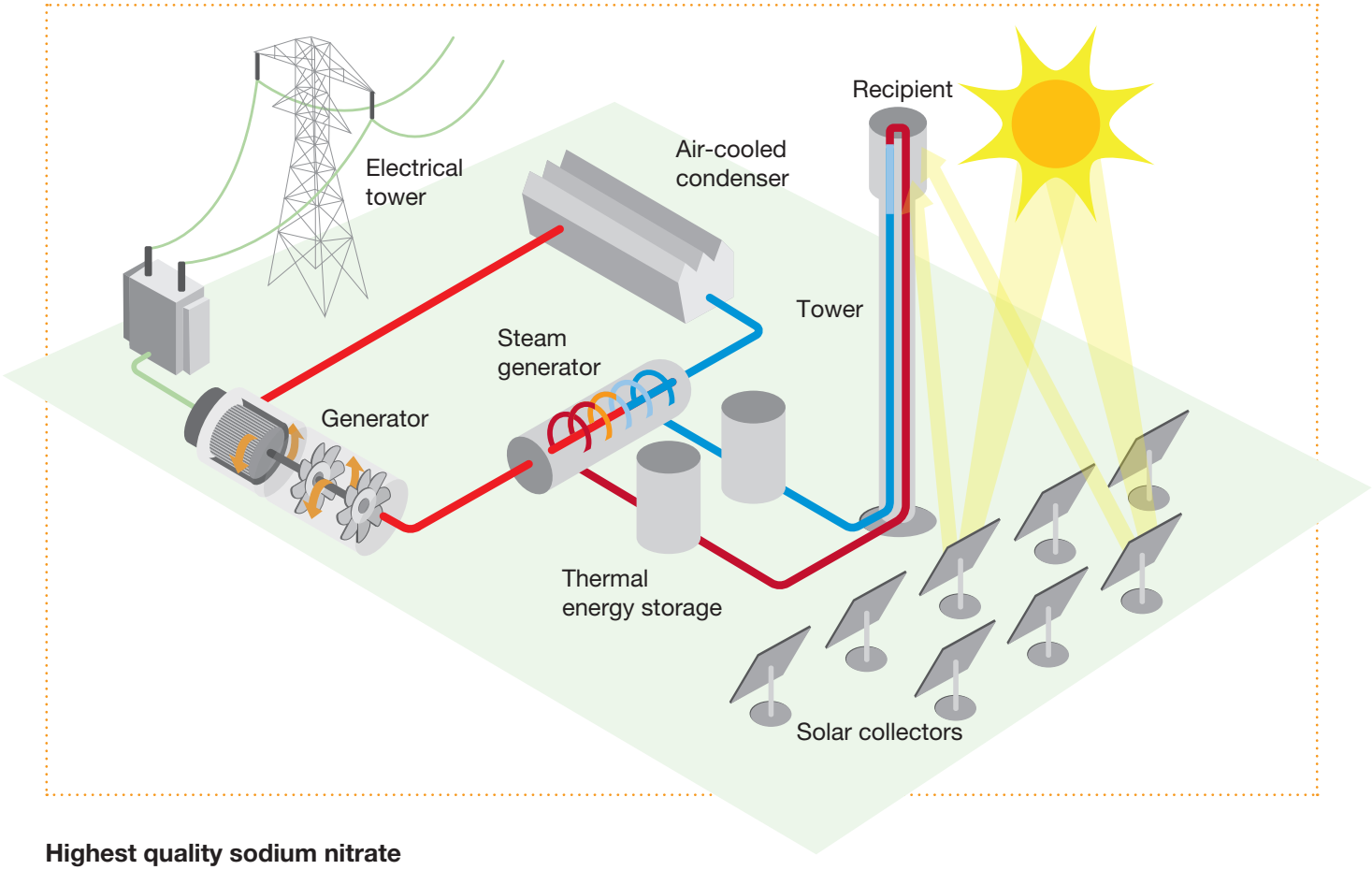
One alternative is generating energy in concentrated solar power plants (CSP), which allow heat to be stored and electricity to be generated even without sunlight. As this entails higher investment costs and electricity generation prices, it is all the more crucial to run the power plants as efficiently, economically and for as long as possible. BASF offers exceptionally pure products for concentrated solar power (CSP) heat transfer and thermal energy storage processes. Furthermore, we support you with tailored consulting services designed to maximize the efficiency of your plants. Whether you are new to the market or have already established yourself – BASF is a partner you can rely on.



Highest quality sodium nitrate

Heat storage media ensure that the energy generated in solar plants can be used regardless if the sun is shining or not. The technology utilizes a mixture of potassium and sodium nitrate as a storage medium. This mixture can be used up to temperatures of 565 degrees Celsius.

Additives for greater efficiency

Sodium nitrate from BASF impresses with its especially high level of purity. The corrosiveness and NOx emissions of the molten salt can be influenced in a targeted manner through the addition of additives. Molten salts containing additives have a lower rate of nitrite decomposition, reducing the NOx emissions by more than 30 percent. At the same time, this reduces the loss of mass of the heat transfer medium.

New software tool supports designing the solar systems

BASF has developed a new software to assist in mastering the challenges related to CSP plants. The simulation tool focuses on the stability of the storage medium (i.e. molten salt) including the simulation of gas emissions, the corrosion rate and the estimation of the plant's service life.