

Molten Salt Thermal Storage

An innovative way to store energy

You want to:

- Find decarbonisation solutions for medium temperature heat processes
- Develop cost-effective projects through arbitrage and grid services
- Increase renewable energy penetration requiring large scale grid flexibility, dispatchable power or investment deferral
- Modernise coal-fired plants and convert them to renewable solutions (as in Germany, Chile and Eastern Europe)

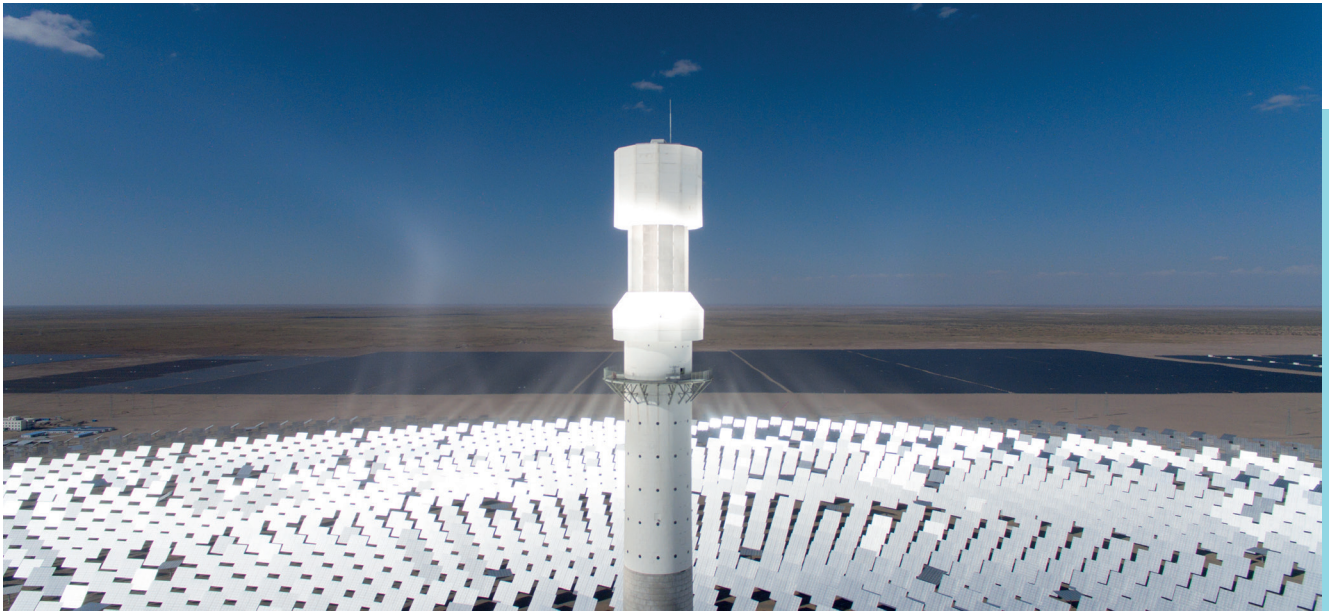
You are active in:

- Large scale energy storage
- Coal plants retrofits
- Pulp & Paper
- Food & Beverage
- Chemicals

John Cockerill's Integrated Energy Systems are the Solution!

We offer:

- A comprehensive and integrated molten salt Thermal Energy Storage (TES) system, combining technologies, sized and designed to store efficiently green electricity, with high level of flexibility
- A solution based on a molten salt heating medium
- A world proven expertise in mechanical equipment handling molten salt for more than 10 years
- A proven track records, based on molten salt solar tower references in the Concentrated Solar Power (CSP) industry e.g. Cerro Dominador (Chile), Haixi Luneng (China), DEWA (Dubai) and Redstone (South Africa)
- As a partner of choice, we have the expertise and experience to deliver comprehensive solutions



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Market Applications

- Decarbonise and upgrade industrial process heat production in medium temperature range (from 300 to 600°C)
- Generate revenues from arbitrage and grid services, through storing thermally large quantity of electrical energy cost effectively
- Retrofit existing fossil-based power generation assets i.e. power plants
- Reduce energy bills
- Develop energy flexibility
- Contribute to a greener image of the facility
- Enhance secured energy access

Your Benefits

- Integration into the grid of intermittent renewables:
 - avoiding curtailment
 - balancing power and grid augmentation
 - profit from spread in prices and secondary energy markets (inertia, frequency control, ...)
- Taking advantage of the existing coal plants assets (power block) to:
 - decrease the total investment
 - improve profitability
 - re-use existing pieces of equipment

Key Features

- Main technologies:
 - Electrical power source: photovoltaics, wind power, electrical grid
 - Molten salt electrical heater
 - Molten salt storage tanks
 - Molten salt steam generator
- Integration with other systems upon needs e.g.:
 - Green heat production
 - Cooling



Our Approach

From diagnostic, feasibility study, concept design, to EPC delivery, financing and O&M services, and through analysis and review of the client's process, John Cockerill builds the architecture of the best decarbonisation solution, aiming for reliability, quality, efficiency and profitability.



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