

Dubai's John Cockerill thermal solar receiver in the spotlight

Dubai, 10 November 2021 – Prestigious visit today thanks to Noor Energy 1 PSC, which gave us access to the John Cockerill thermo-solar receiver installed at the top of the tower of the MBR Solar Park energy complex in Dubai: the Belgian delegation to the Dubai 2020 World Expo led by the Minister-President of Wallonia Elio Di Rupo was able to see for themselves how much this Walloon technological flagship, fully developed by John Cockerill, is part of the technological mix needed for the energy transition and the decarbonization of human activities.

In 2018, John Cockerill won a contract to design and supply the solar thermal receiver to equip the Mohammed Bin Rashid Al Maktoum solar park (Dubai) built by the Noor Energy 1 PSC, a company formed by ACWA Power, DEWA, the Dubai Electricity and Water Authority, and Silk Road Fund. Three years later, the installation of the receiver is being finalized. It should be operational by the early next year. This thermal solar power plant will then be able to develop its 100 MW of electrical capacity. Together with the other facilities of the MBR Solar Park Phase 4, Noor Energy 1 will provide electricity to some 320,000 households and avoid 1.6 million tons of CO₂ per year.

Installed at a height of 260 meters, the John Cockerill thermal solar receiver is a state-of-the-art heat exchanger. It is the heart of the thermal solar power plant and it can absorb the solar energy coming from all the mirrors placed around the tower in a heat transfer fluid (molten salts). These molten salts are brought to temperatures of more than 560°C. A significant advantage of this technology is that it allows energy to be stored on a large scale in a very competitive manner: the molten salts are accumulated in enormous tanks at the base of the tower, where they retain their high temperature for about 15 hours. This solar power plant is therefore unique because it can operate 24 hours a day, day and night.

Jean-Luc Maurange, CEO of John Cockerill: *"We are very proud to show all our know-how to such an assembly. John Cockerill is truly invested in the fight against global warming. This thermal solar power plant is a good example of how John Cockerill is facilitating access to renewable energy. And for regions where the sun shines less often than here in the United Arab Emirates, we offer other technologies dedicated to the energy transition. I'm talking, of course, about our electrolyzers, which produce hydrogen by electrolysis of water, our boilers for combined gas/steam cycle power plants, and our entire range of services in wind power, biomass, hydroelectricity, battery storage, or even nuclear power."*

John Cockerill is now the world leader in receivers for concentrated thermal solar power plants. In addition to the Dubai plant, the Group has also equipped the Khi Solar One (South Africa), Haixi (China) and Cerro Dominador (Chile) plants. A fifth project is currently under construction, again in South Africa, with more to follow.

John Cockerill, enabler of opportunities

Driven since 1817 by the entrepreneurial spirit and the thirst for innovation of its founder, the John Cockerill Group develops large scale technological solutions to meet the needs of our time: preserving natural resources, contributing to greener mobility, producing sustainably, fighting against insecurity and facilitating access to renewable energy.

Its offering to enterprises, States and communities comes in the form of services and associated equipment for the energy, defense, industry, environment, transport and infrastructure sectors.

Driven since 1817 by the entrepreneurial spirit and thirst for innovation of their founder, the 5 000-strong workforce of the Group enabled it to achieve turnover in 2020 of 1.01 billion Euros in 22 countries across 5 continents.

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