

ADEME



Agence de l'Environnement
et de la Maîtrise de l'Énergie

Club ADEME
International



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HQE certification of the Noor Solar Complex in Ouarzazate

reception, conference and services building. MASEN-Moroccan Agency for Solar Energy

The **Noor solar power plant** is a thermodynamic solar power plant that entered service in February 2016 near Ouarzazate in Morocco.

Consisting of a field of 480 hectares of curved mirrors (cylindro-parabolic) with a capacity of 160 MW, the plant, with its extension, programmed in three stages, will increase its power to 580 MW, making it one of the largest solar power plants thermodynamics in the world.

It is therefore natural that the building housing the plant's offices as well as the conference centre is representative of the project's environmental commitment and technical excellence.

In a semi-desert area where resources are scarce, it is imperative to use them virtuously, both in terms of water, energy and materials, and to anticipate their good management in the operating phase.

The proposed thermal excellence:

- Exposures to the South limited or protected by perforated aluminum finen
- The entire building envelope has particularly high insulating properties
- Natural and artificial lighting is optimized
- The entire building uses LEDs or compact fluorescent for lighting
- The Chaaba (watercourse) that borders the site provides an important water resource



Morocco



Country of intervention

From 2015 to 2017



Amount euros

Confidential



Staff mobilized

Confidential

Thematic



Benefits performed

Services

HQE Certification
(High Environmental Quality)
Construction

Engineering/study office
CAP Terre Morocco



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- A natural heating and cooling system has been developed: a wind tower for the refreshment needs of the auditorium and spaces open to the public

- The materials are also the subject of special attention with the use, of cork in the insulation of the building

- A self-contained water sanitation system with a micro-station and sewage treatment by planted filters is put in place.

The building, emblematic of Morocco's ambition in the field of renewable energy, aims for an innovative architecture capable of both giving it a strong visual identity and integrating it into its unique territorial context.

Finally, the project is all the more complex because it has different uses and objectives: research, workplace, pedagogy, leisure, etc. These diverse and complementary uses are respected in the project by separate buildings but communicating with each other.

Post-project results

The project has been certified **HQE Construction** with «Exceptional» level with certification themes (Energy, Environment, Health and Comfort).

Note the inauguration of the site by the King of Morocco in February 2016, and the presence in Ouarzazate of many international personalities including the French Minister of Ecology Ségolène Royal.

Winner of the **HQE Certified International Project** (Awards 2017)

Ecological/climate indicators

Consumption level: 35 kWh/m²/year.

All the energy used in the building, is of solar origin.

The water recovered from the treatment plant is reused in the toilets and for watering the plantations.

Videos

🔗 [Au Maroc, le complexe solaire Noor 1](#)

🔗 [Le complexe solaire Noor vu du ciel](#)

With more than 130 members, the Club ADEME International assists the SMEs in its network in the development of innovative projects and international partnerships. The objective is to participate in the dissemination of French knowledge, by supporting the private and public sector in the ecological and energy transition sector in order to meet global environmental and climate challenges.

For more information : www.clubinternational.ademe.fr

