Solar Thermal Electricity (STE)

THE FUTURE OF SOLAR ELECTRICITY ON DEMAND



CASE STUDY: A MULTI-SOLAR TECHNOLOGIES COMPLEX

The Noor Ouarzazate Solar Complex is a 580MW power plant combining CSP and PV technologies located in Ouarzazate, Morocco.

### NOORo I



# CSP Trough Technology

#### 160 MW Capacity

#### 3 hours Storage

# ~ 280 000 tCO<sub>2</sub>

emissions avoided per year

34%

**Industrial integration** 

### **NOORo II**



## CSP Trough

Technology

# 200MW

Capacity

### >7 hours

Storage

#### ~ 380 000 tCO<sub>3</sub>

emissions avoided per year

40.6%

**Industrial integration** 

### NOORo III



### **CSP Tower**

Technology

#### 150 MW

Capacity

### >7 hours

Storage

#### ~ 250 000 tCO<sub>2</sub>

emissions avoided per year (in initial phase)

42%

**Industrial integration** 

#### **NOORo IV**



#### PV

**Technology** 

#### **70 MW**

Capacity

### ~ 87 000 tCO.

emissions avoided per year

24%

Industrial integration

With these thermal storages, the solar power station can store solar energy in the form of heated molten salt, allowing for production of electricity after sunset and at night.

More than 35% of the project costs are sourced locally, which aids in developing Morocco's industrial base and create jobs. NOORo I created approx. 2000 construction jobs and 100 permanent jobs during the operation and maintenance phase. NOORo II and III employed around 5000 people during construction phase and created more than 100 jobs during operation.

Together, the NOORo I, NOORo II and NOORo III plants can offset more than 900,000 tons of CO<sub>2</sub> emissions/ year and provide renewable electricity when it is most needed.

Source: MASEN (Moroccan Agency for Sustainable Energy)

