



# Morocco Solar Opportunities

## Developer's Perspective

22 January 2018



# Our take on Morocco Renewables Market



- Clear vision about renewable energy
- SMART objective (**S**pecific, **M**easurable, **A**chievable, **R**elevant and **T**ime bound): 42% RE @2020 and 52% RE @2030
- Clear ownership and responsibility allocation (MASEN, ONEE)
- Legislation (Masen law 57-09 & 37-16; 13-09, etc.)
- Rigorous and timely process
- Transparent tendering and steering
- Strong requirements and close monitoring at all stages
- Competitive financing from IFIs through Masen
- Learning, lessons learnt, improvements

**Morocco and ACWA Power joint effort was instrumental in survival of CSP**



# What has been achieved so far...

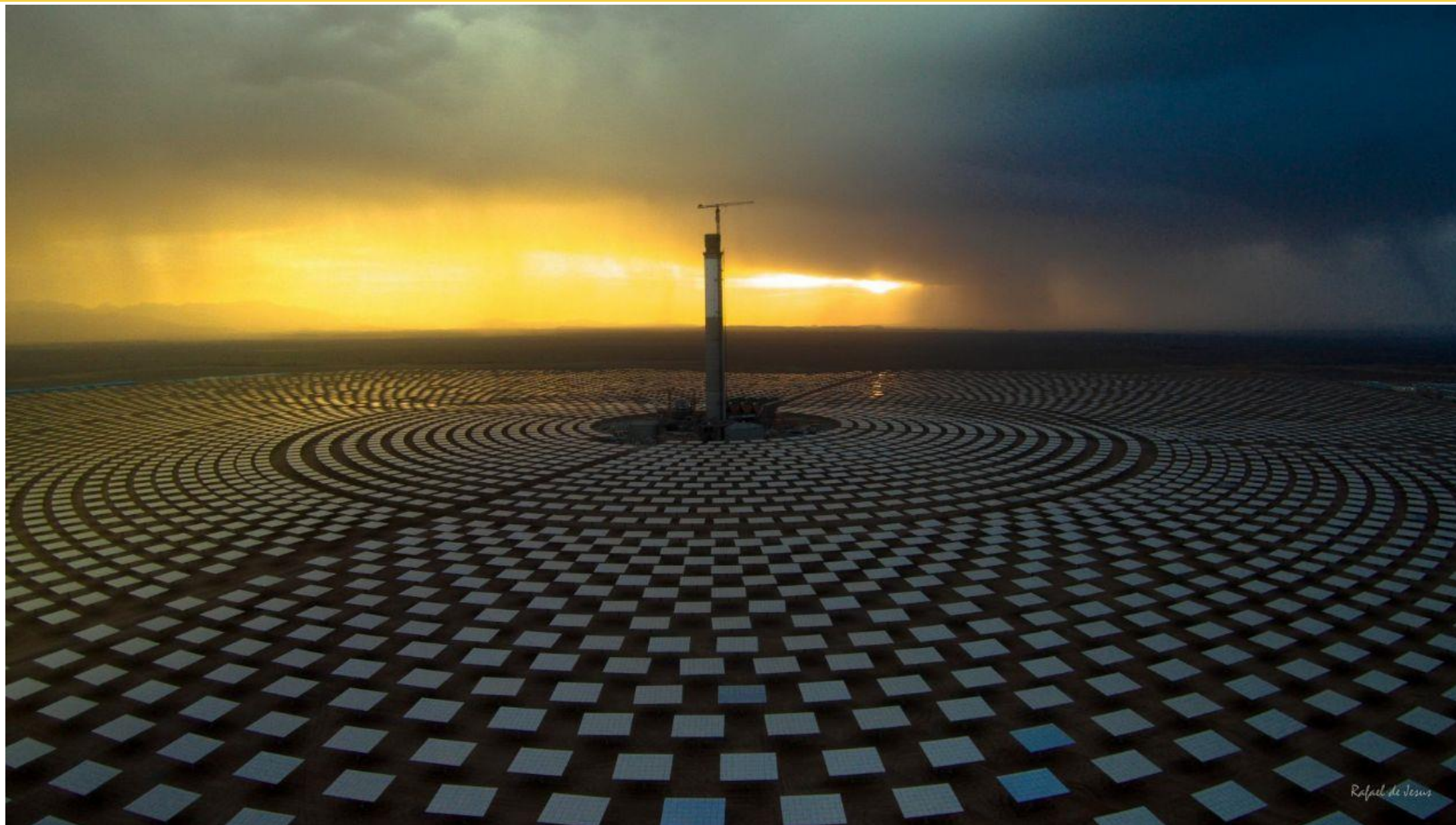


In 5 years, 5 landmark renewable energy projects, ~800 MW

1. Noor 1 [160 MW CSP / Parabolic trough / 3 hours of TES / Wet cooling] – Operational since January 2016
2. Noor 2 [200 MW CSP / Parabolic trough / 7 hours of TES / Dry cooling] – Energized in 2017. Synchronized with the grid in January 2018
3. Noor 3 [150 MW CSP / Central tower / 8 hours of TES / Dry cooling] – Energized in 2017. Construction activities almost completed. Commissioning activities ongoing
4. Noor PV1 [175 MWp PV] – Good progress
5. Khalladi Wind [120 MW] – synchronized – Partial dispatch

Full portfolio to be operational in 2018.





Rafael de Jesus



# Socio-economic benefits



- Beyond solar projects and power generation from solar comes social development
- Employment during construction (up to 30 months) and operation
- Localization (industrial integration and various services)
- Industrial integration : 32% @Noor 1 and more than 35% @Noor 2 & Noor 3
- Local manufacturing and assembly lines of key components of the solar fields
- Various CSR initiatives (health, education, training, revenue creation)





WELDING of TORQUE TUBE FOR PARABOLIC  
TROUGH COLLECTOR (Noor 1 & Noor 2)









WELDED, GALVANIZED & MACHINED  
TORQUE TUBE FOR HELIOSTAT (Noor 3)



TRUSS FOR HELIOSTAT (Noor 3)













Je vous remercie

Danke

תודה

obrigado

mihi koe рақмет сізге

çox sağ ol

شکرا

cảm ơn bạn

謝謝

Ngiyabonga

Дякую

धन्यवाद

תודה

Thank you

Terima kasih

நன்றி

Asante Tak

Спасибо

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