Webinar:

Cut your LCOE by optimizing PV tracker performance

Speaker:
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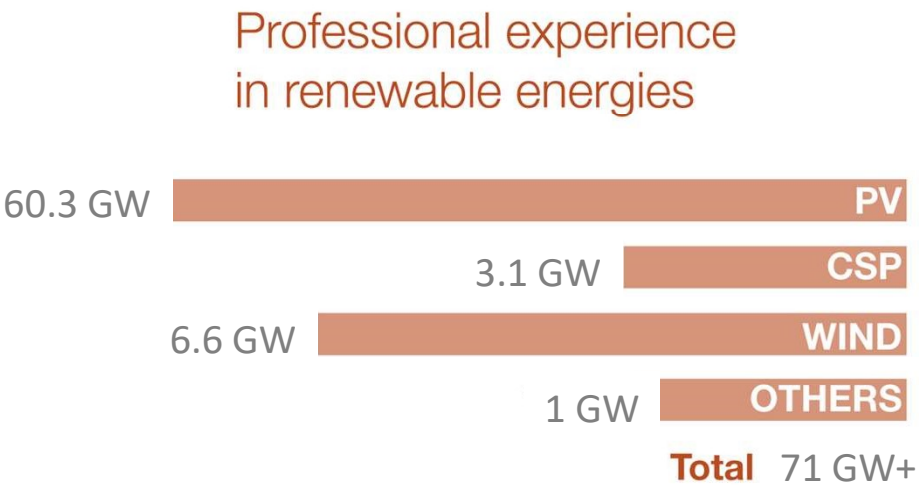
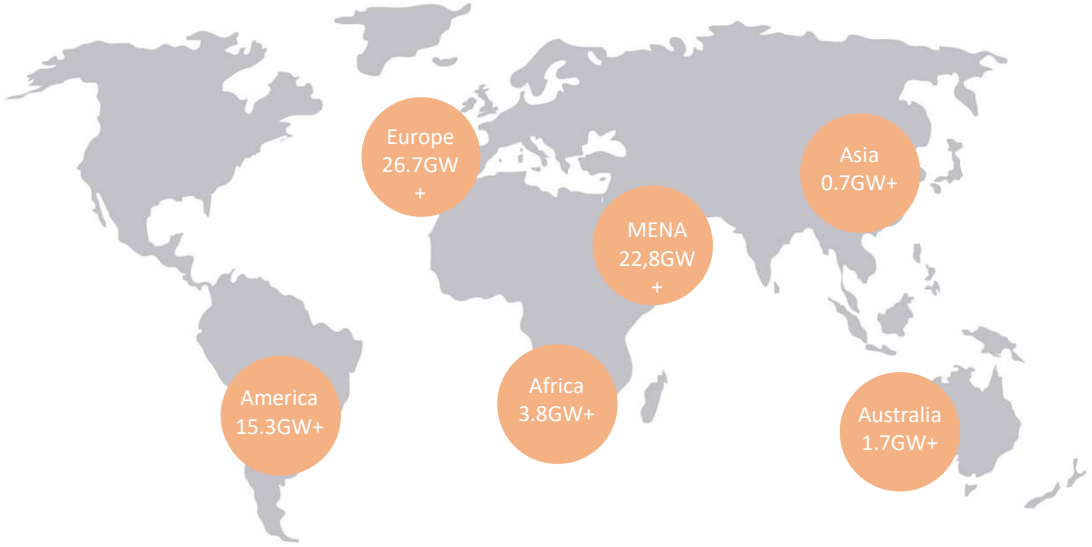
ata renewable experience





We are worldwide leaders in the supply of independent technical services in Renewable Energy Sources.

Pre-Engineering Phase (Advisory)

TRACKER CONFIGURATION

1. How is the project field? Irregular or regular Terrain? Single-row vs Multiple-rows.

STRUCTURAL SECURITY

2. How is the site wind loads? Aggressive or non aggressive? 1 module portrait vs 2 modules in portrait

PILES

3. How is the project geotechnical conditions? Foundation Depth, pile dimension and piles quantities. 1 module portrait vs 2 modules in portrait

OPTIMAL BACKTRACKING

4. Adjustment to terrain and weather conditions. ↑ the power from 2% to 6%

BIFACIAL POINTS

5. Width/length ratio of tracker. Torque tube rear side shading.

Engineering Phase

SCENERIOS ASSESSMENT. LOOKING FOR THE BEST LCOE

1. Trackers configuration, modules, inverters, GCR%, ratio DC/AC, power block configuration, bifacial aspects, etc.

TRACKER DIMENSIONS

2. Impact of Length and width Tracker in the project area. ↑ Peak Power.

DC STRING LOSSES

3. Impact of the different tracker configuration in the DC String losses.

STRING CONNECTION

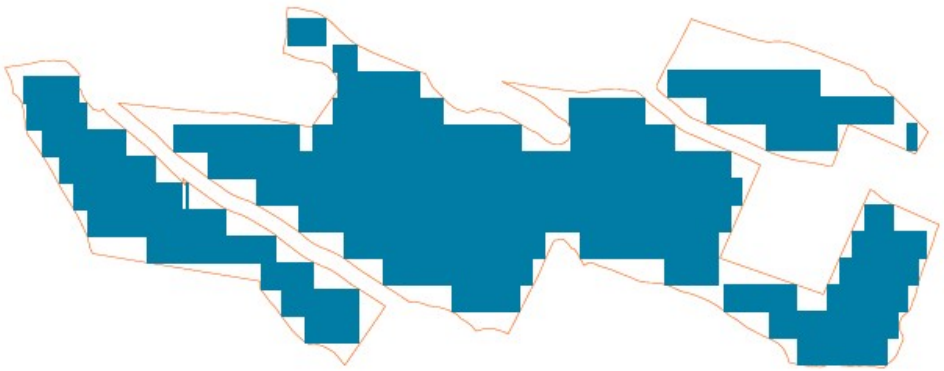
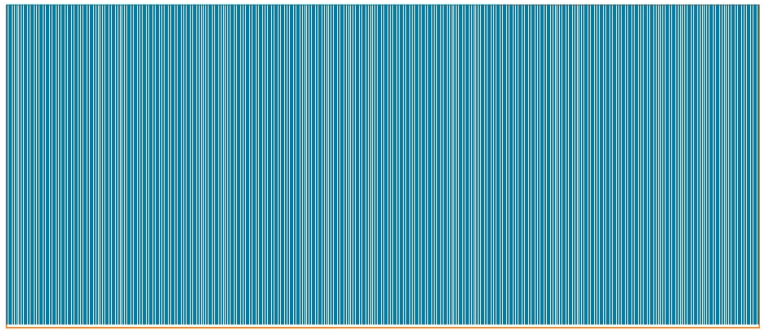
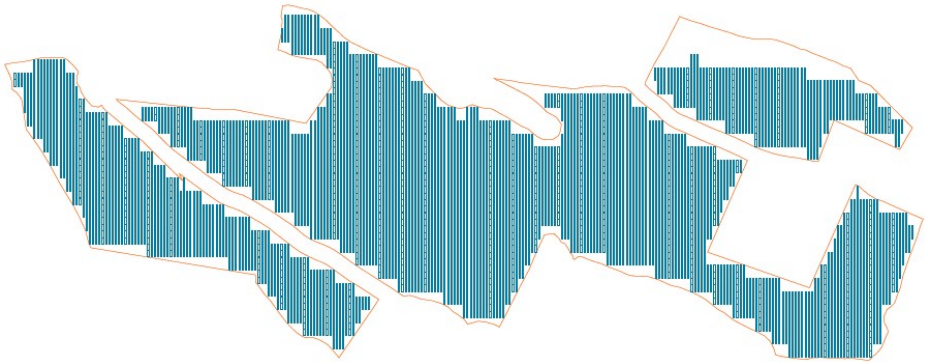
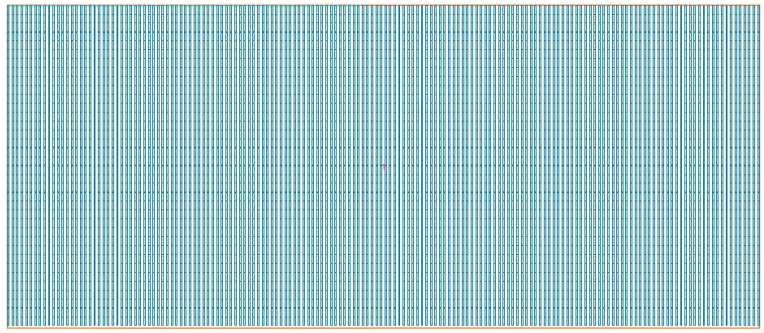
4. String boxes vs DC buses (DC Harness)

CABLING INSTALLATION MODE

5. Underground vs over ground cable routing (project by cleaning robots)

Optimizing LCOE

Example: Impact of Trackers dimmensions

	Irregular PV area	Regular PV area ↑ peak power
1P x 90 modules		
	Irregular PV area ↑ peak power	**Regular PV area**
2P x 45 module (with torque tube gap)		

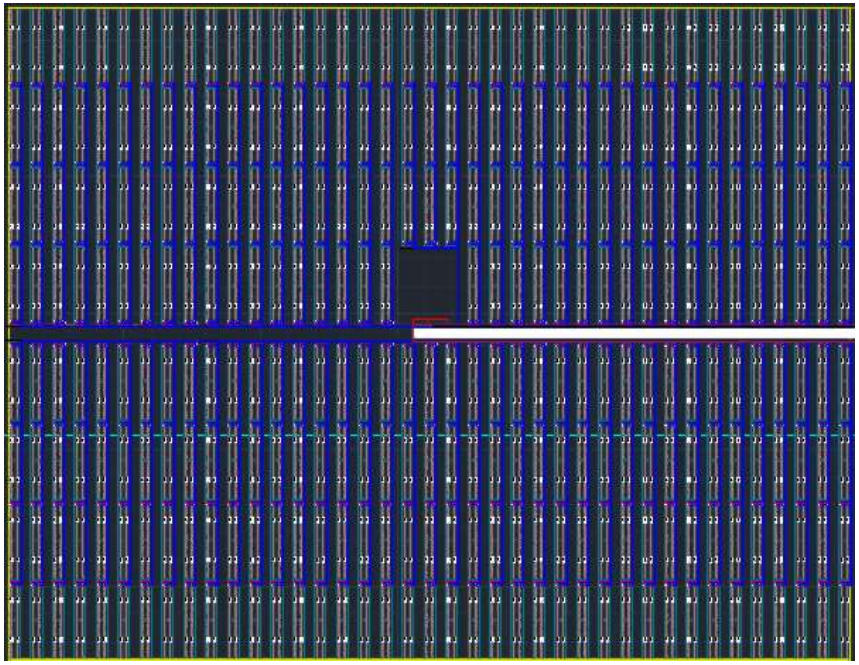
Optimizing LCOE

Example: Impact of String Connections

Same Peak Power
Same structure
Same GCR%

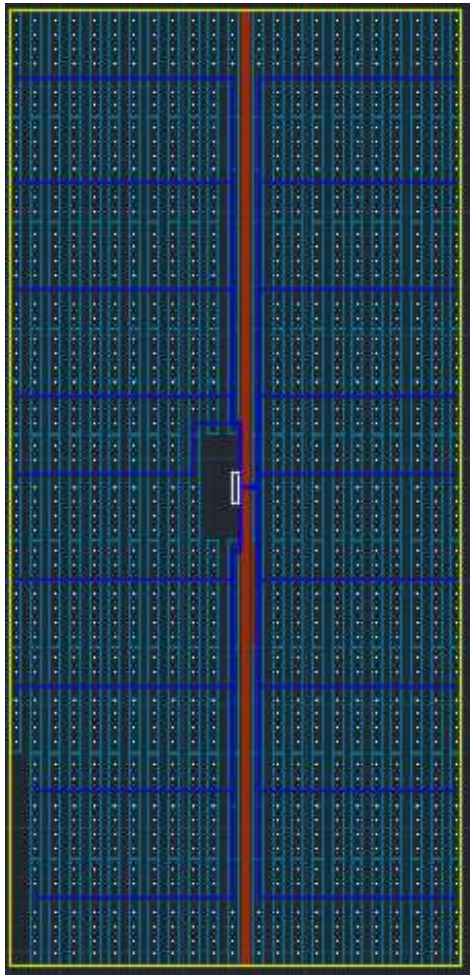
String Boxes
Solar and DC cables
(underground)

0,024 USD/Wp



DC Harness
DC buses (over ground)

0,018 USD/Wp



↓25% CAPEX (DC system)

Summary

Pre-Engineering Phase:

- Previous assesment phase. Orography, geotechnical and site conditions

(Single-row vs Multiple rows / Pile foundation Depth vs Quantities)

Engineering Phase:

- Project limitation in terms of peak power and PV area
- Evaluation of different scenerios (↓ Project in LCOE terms)
- Evaluation of different string connection and cabling mode (↓ Project in LCOE terms)

Thanks for your Attention

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