



Arava Power Case Study

THE BUSINESS

Founded in 2006, Arava Power is Israel's leading solar developer and a pioneer in mid- and large-size solar fields. Partnering with industry leaders like Siemens, Arava Power supplies hundreds of megawatts of green energy to Israel from large-scale photovoltaic solar fields in Israel's Negev desert. Inaugurated in 2011 and using Suntech photovoltaic panels to generate 5MW, *Ketura Sun* is Arava Power's flagship site – and the first commercial solar field in the Middle East.

THE CHALLENGE

Located in the hot southern stretch of the Negev between the Gulf of Aqaba and the southern tip of the Dead Sea, *Ketura Sun* suffers from frequent sand storms and virtually no rain. Due to the expense of traditional water-based cleaning, the field's panels were initially cleaned ad hoc *only eight times year*. Manual panel cleaning would take up to *five working days*, during which time the field operated sub-optimally and work crews endangered sensitive equipment. In the interim between cleaning cycles, significant electricity production degradation owing to dust accumulation would occur - negatively impacting overall field efficiency and profitability.

THE SOLUTION

Arava Power chose Ecoppia's **EcoClear** solution to lower *Ketura Sun's* solar panel cleaning overhead while dramatically improving the field's output. Following a successful pilot, in which **EcoClear** effectively removed 99% of panel dust, the entire *Ketura Sun* field was equipped with **EcoClear**. The rollout took less than two months. Today, almost 100 centrally-controlled **EcoClear** robots *clean the entire field every night*, ensuring maximum production efficiency during sunlight hours.

THE BENEFITS

Leveraging **EcoClear**, Arava Power markedly increased *Ketura Sun* field output, while simultaneously raising both operational efficiency and production stability. *Ketura Sun* managers retain full physical control and security over the site, with no physical cleaning crews required. Moreover,



production is no longer dependent on the lag between sudden changes in weather and next cleaning cycle.

"We conducted a thorough worldwide search for a cleaning solution that could deal with the tough weather conditions in our solar parks. Only Ecoppia's solution showed actual significant uplift in production, while offering an extremely appealing business model."

-- Jon Cohen, CEO, Arava Power (producing 9 million kilowatt hours per year)