



## CASE STUDY

# Solar Inverter Analysis

Learn how a French PV plant achieved superior data accuracy & extra €38,000/year!



Connection Date  
October 2019



Stations  
25



Monitored Strings  
6,683



Inverter Infrastructure  
100 Central Inverters



Inverters  
92



Location  
France

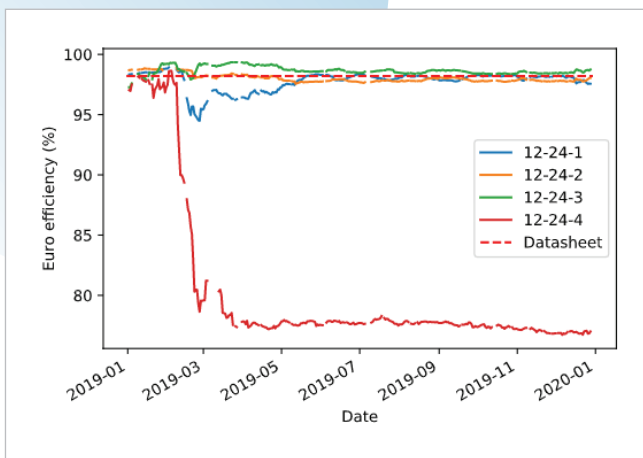
## The Challenge

One of the largest French renewable energy companies asked Raycatch to analyze one of its plants with its DeepSolar™ digital asset management system and provide it with relevant insights regarding its inverter performance.

## The Solution

The plant has started to use DeepSolar's AI engine, which uses advanced algorithms on existing data in order to filter out electrical and other data noises and to apply pattern recognition to identify recoverable losses.

According to DeepSolar's insights, one of the inverters in the plant had very low Euro Efficiency values. The customer was not aware of this faulty inverter even though it regularly used a monitoring system.



*Inverter 24 - Efficiency over Time*

The graph to the left shows the serious issue in Inverter 24 as it stood out from all other inverters with 10.18% efficiency below spec and 14.5% Euro Efficiency.

Raycatch's team recommended to focus on this inverter first and to work with the O&M and the manufacturer in order to regain the losses.

Raycatch provided the customer with a list of 27 other non-optimal inverters with their location and respective losses. 22 of the inverters were 1.5% less efficient than spec, meaning that there might be local issues on those inverters which are worth examining (dirt, filters, overheating etc).

## The Results

The faulty inverter was quickly repaired, enabling the plant to easily recover losses of €18,000/year.

Recovering the other inverters' energy required working with the O&M team and performing field inspection, as well as working with the manufacturer to regain the losses that were below spec, which eventually amount to additional €20,000/year.

The customer asked Raycatch to provide a deeper analysis regarding efficiency-related factors (efficiency over time, efficiency power curve, etc.) in order to assist it with filing a manufacturer warranty claim.

