

Designing PV plants for 25+ years: what asset managers wish developers & EPCs knew

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Vector Renewables - NUO
Booth B5.455

RatedPower
Booth A4.330

Your speakers today



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01. Introduction

Development Timeline of a Solar Project



¹Power Market Analysis, Site Prospection, Financial Feasibility
²Financial Analysis, Engineering Feasibility

From Design to Operations: RatedPower & NUO

What is NUO? Vector Renewables' asset management platform

NUO is the platform designed by asset managers for you.

At Vector Renewables people have a deep understanding of the challenges and complexities that come with managing projects as a worldwide leading advisory firm.

From this experience comes NUO, Vector Renewables' cloud-based digital asset management platform that improves the management of renewable energy assets. Leveraging automation and data analytics, it delivers key performance indicators (KPIs), predictive insights, and real-time monitoring of technical and financial performance, enabling smarter decisions, all in a 360-degree platform.

Crafted with our expertise, tailored for your needs.

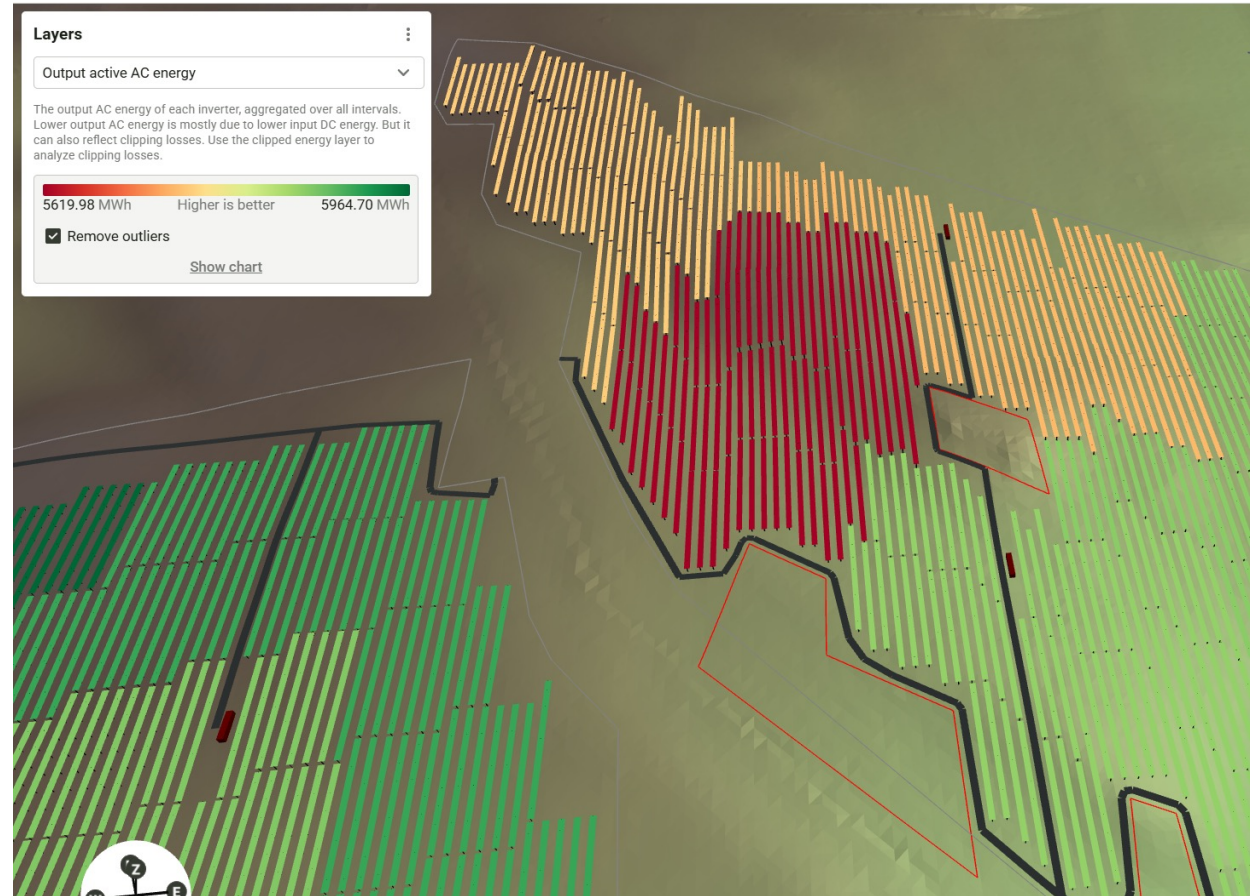
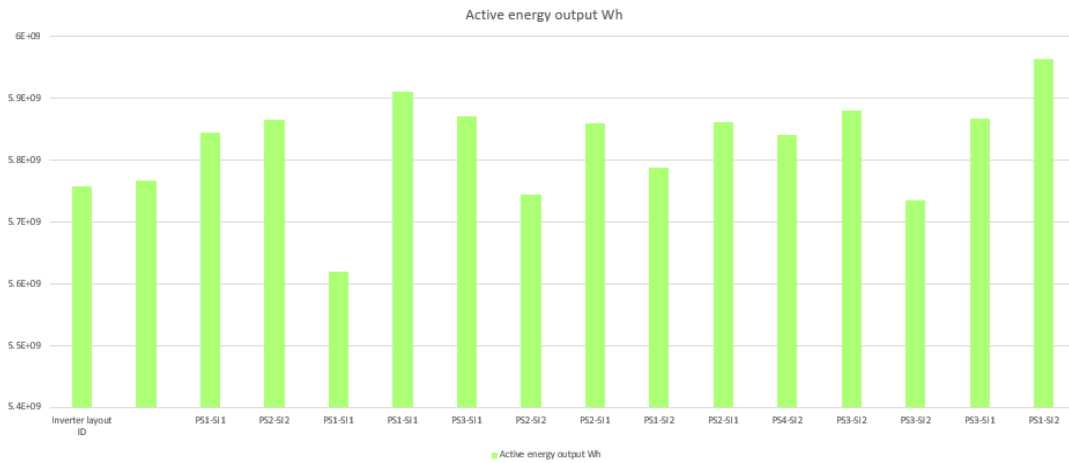


02. From Design to Operations: RatedPower & NUO

03. Real Use Cases: From Prediction to Reality

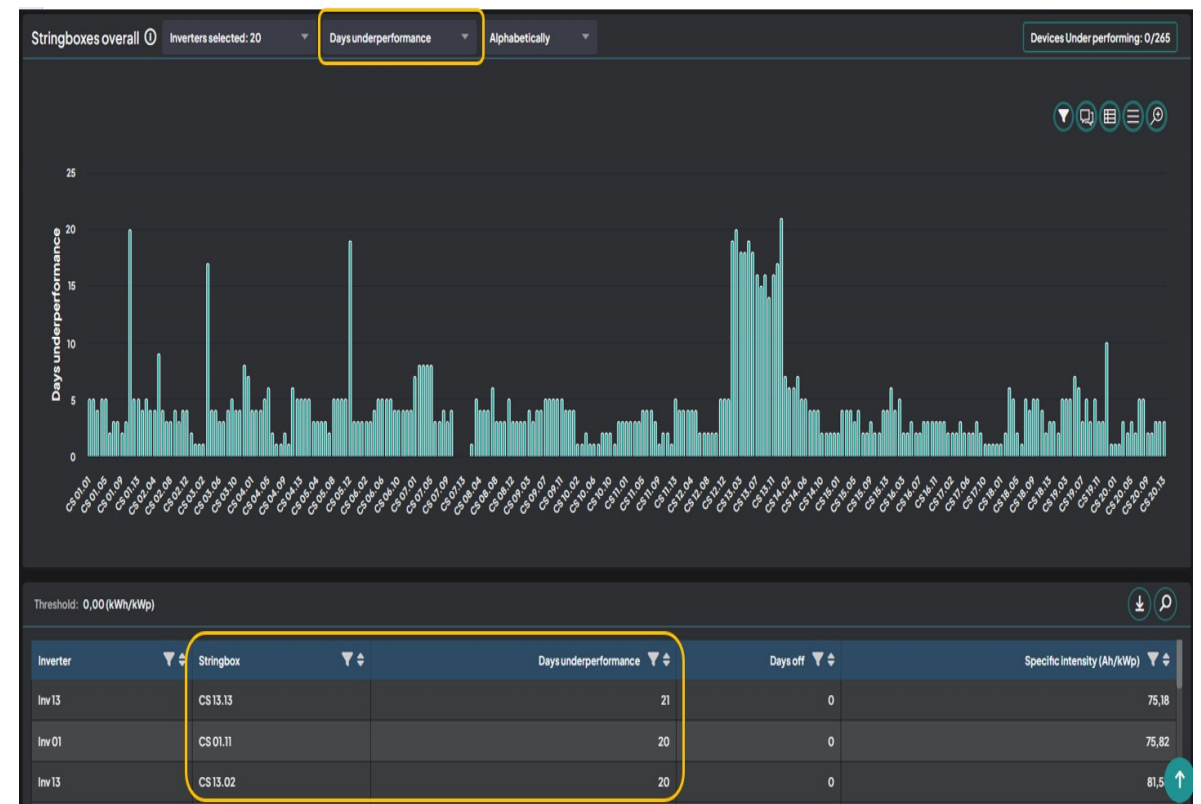
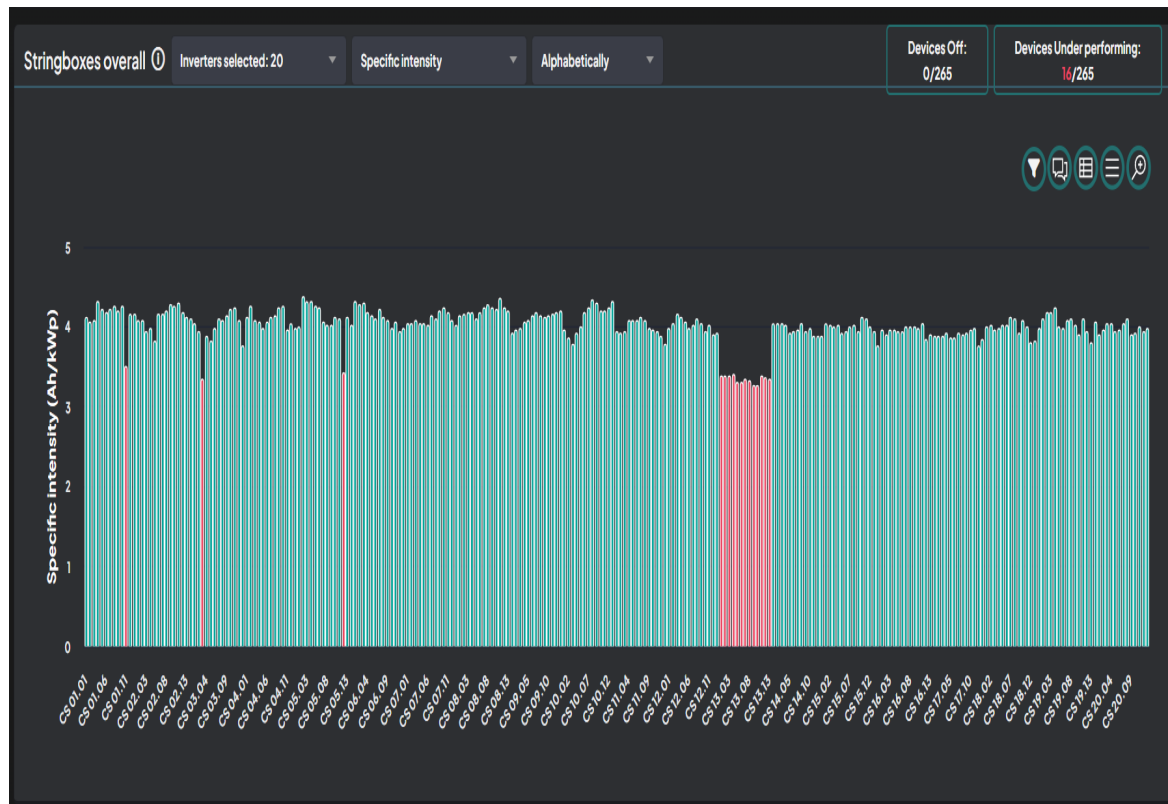
Inverter Performance & Underperformance Detection

→ RatedPower enables inverter-level analysis during the design phase, helping developers optimize plant configuration, evaluate expected inverter performance and anticipate potential underperformance risks before construction.



Inverter Performance & Underperformance Detection

→ NUO provides granular inverter performance monitoring based on industry-standard KPIs and IEC-aligned methodologies, enabling asset managers and O&M teams to detect, quantify and act on underperformance with confidence.




Irradiance vs Actual Production

- Using historical weather data or user-imported irradiation forecasts, RatedPower simulates expected energy production to optimize yield and validate performance assumptions before construction.


Meteo data [How to](#)


[Upload meteo](#)


Currently selected

 **PVGIS**
GHI: 1819.65 kWh/m2
PVGIS 5 [Show details](#)

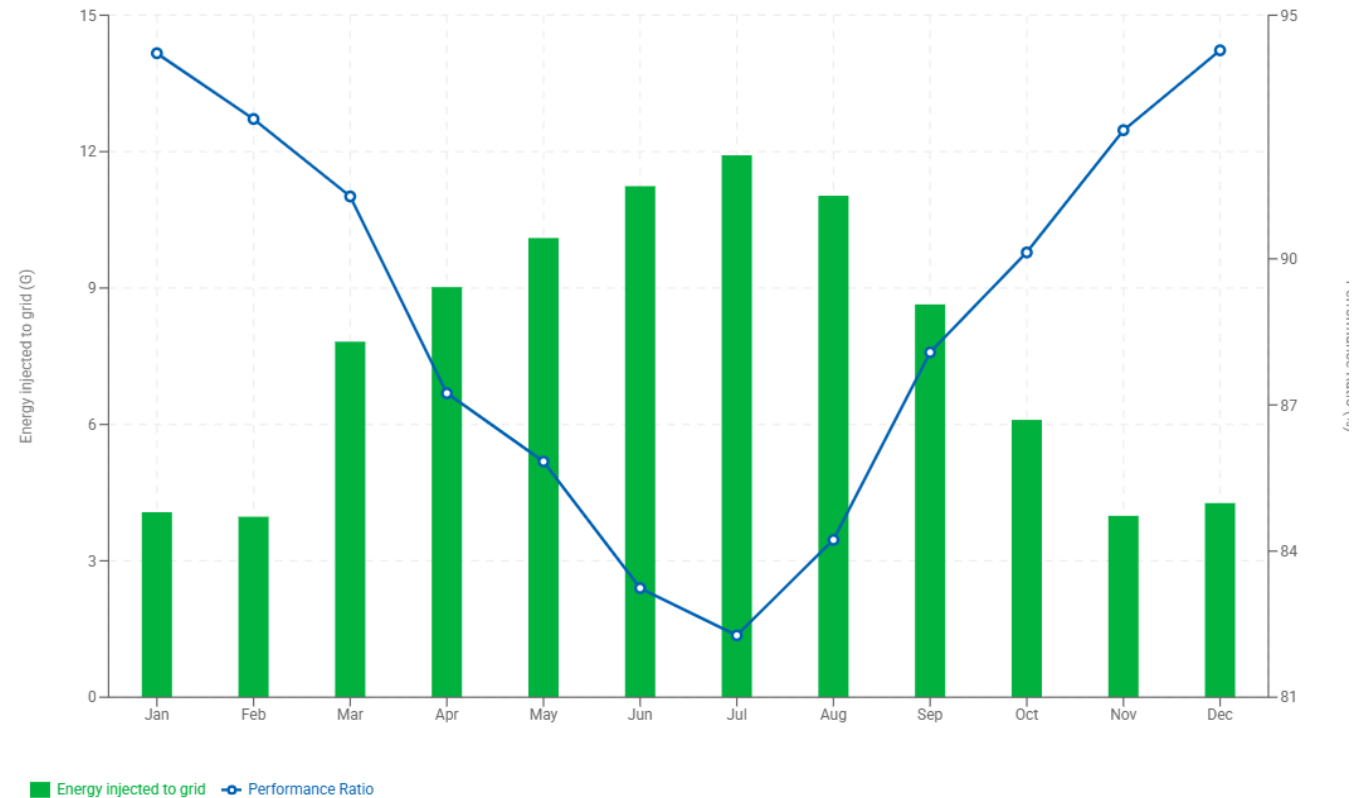
Rest of the meteo

 **NASA_POWER**
GHI: 1692.19 kWh/m2
NASA POWER [Show details](#)

 **NASA_SSE**
GHI: 1622.69 kWh/m2
SSE [Show details](#)

 **SolarAnywhere**
[Load data](#)

Monthly breakdown



Irradiance vs Actual Production

- NUO continuously compares measured irradiation with actual AC/DC energy production to assess how efficiently a PV plant converts available solar resource into electricity, providing a clear and transparent view of real performance.

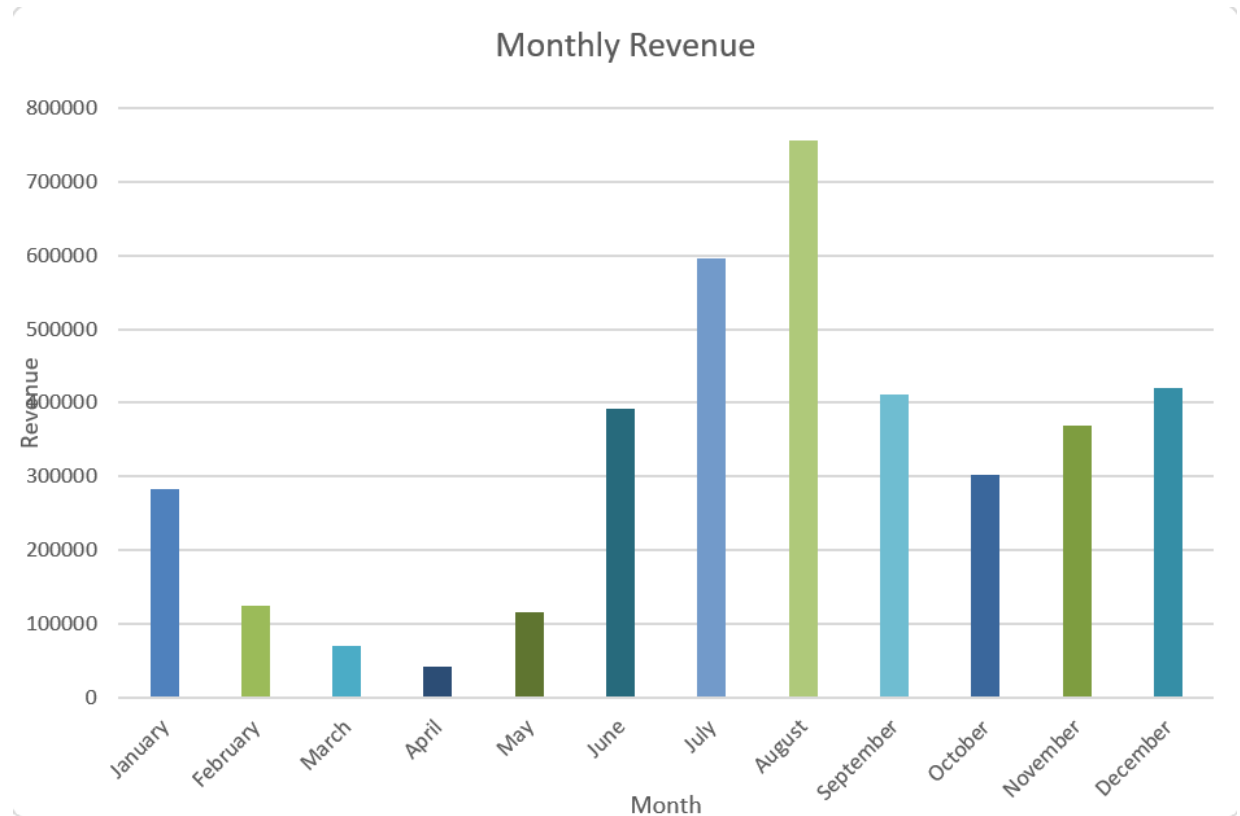


Real Use Cases: From Prediction to Reality

Expected Revenue vs Real Revenue

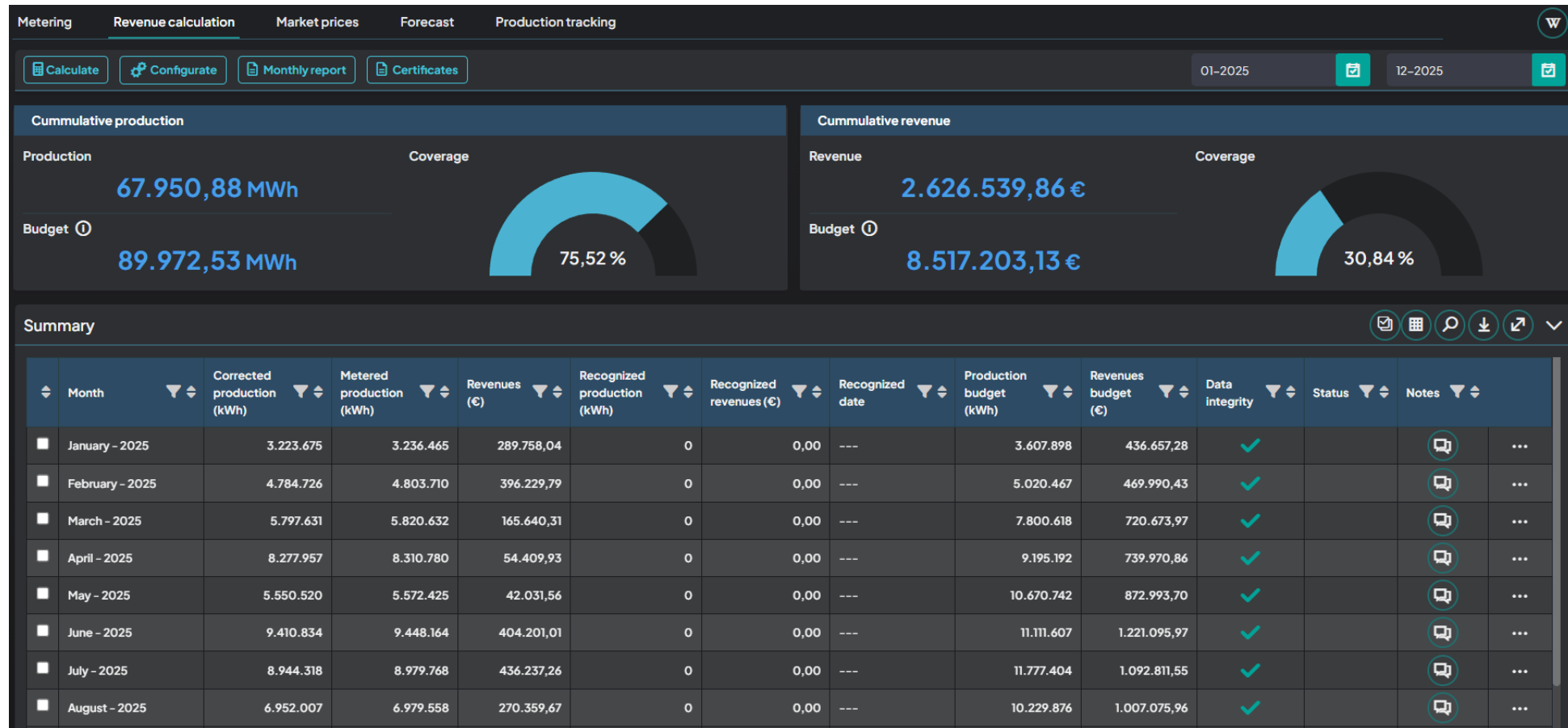
- RatedPower provides dynamic financial projections using hourly production data, day-ahead market pricing or user-defined forecasts, with live BOQ-driven CAPEX as an added layer to assess project profitability before construction.

DATE		Revenue & Variable OPEX					
Hour of the year	Date [YYYY-MM-DDTHH:HH]	Year 1			Year 2		
		Energy price (US\$/MWh)	Revenue (US\$)	Energy purchase (US\$)	Energy price (US\$/MWh)	Revenue (US\$)	Energy (L)
1	1990-01-01T00:00	50.09	0	3.85	51.09	0	
2	1990-01-01T01:00	47.5	0	3.66	48.45	0	
3	1990-01-01T02:00	43.5	0	3.35	44.37	0	
4	1990-01-01T03:00	42.5	0	3.27	43.35	0	
5	1990-01-01T04:00	42.09	0	3.24	42.93	0	
6	1990-01-01T05:00	42.5	0	3.27	43.35	0	
7	1990-01-01T06:00	42.59	0	3.28	43.44	0	
8	1990-01-01T07:00	43.37	0	3.34	44.24	0	
9	1990-01-01T08:00	42.29	0	3.25	43.14	0	
10	1990-01-01T09:00	25	66.51	0	25.5	67.63	
11	1990-01-01T10:00	3.9	32.45	0	3.98	33	
12	1990-01-01T11:00	3.2	33.54	0	3.26	34.11	
13	1990-01-01T12:00	2.06	24.7	0	2.1	25.12	
14	1990-01-01T13:00	1.73	20.32	0	1.76	20.66	
15	1990-01-01T14:00	5.72	67.72	0	5.83	68.87	
16	1990-01-01T15:00	18.49	417.15	0	18.86	424.22	
17	1990-01-01T16:00	37	203.65	0	37.74	207.07	
18	1990-01-01T17:00	47.5	181.87	0	48.45	184.93	
19	1990-01-01T18:00	54.97	0	4.23	56.07	0	
20	1990-01-01T19:00	60.9	0	4.69	62.12	0	
21	1990-01-01T20:00	60	0	4.62	61.2	0	
22	1990-01-01T21:00	47.5	0	3.66	48.45	0	
23	1990-01-01T22:00	42.09	0	3.24	42.93	0	
24	1990-01-01T23:00	37.8	0	2.91	38.56	0	
25	1990-01-02T00:00	25	0	1.92	25.5	0	
26	1990-01-02T01:00	3.99	0	0.31	4.07	0	
27	1990-01-02T02:00	14	0	1.08	14.28	0	
28	1990-01-02T03:00	10	0	0.77	10.2	0	



Expected Revenue vs Real Revenue

→ NUO enables a clear comparison between expected (budgeted) revenues and real (recognised) revenues, allowing asset managers to fully understand financial deviations and take informed action.



04. Conclusion – Q & A

Questions?

We're all ears!

Drop yours in the question box!



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