

SeeQ®

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connect

POWER & UTILITIES

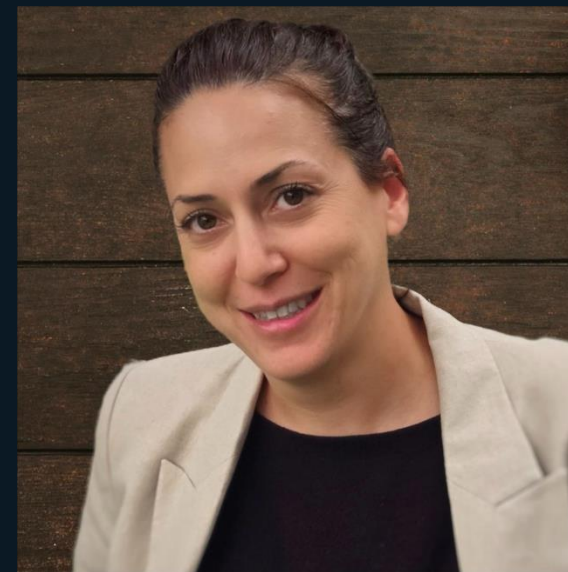




Yehiel Viner,
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Engineering



Rachel Huberman,
Performance Engineer
Lead



Power Generation Forecasting with Seeq

Rachel Huberman, Performance Engineering Lead

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SAFE HARBOR STATEMENT AND NON-GAAP METRICS

THIS PRESENTATION INCLUDES FORWARD-LOOKING STATEMENTS, AND THE DISCLAIMER SHOULD BE READ CAREFULLY

FORWARD-LOOKING STATEMENTS

This presentation, and information provided during any discussion accompanying this presentation, may contain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These statements involve estimates, expectations, projections, goals, objectives, assumptions and risks, and activities, events and developments that may or will occur in the future. When used in or during the course of this presentation, the words “may”, “will”, “could”, “should”, “expects”, “plans”, “anticipates”, “believes”, “estimates”, “predicts”, “projects”, “thinks”, “forecasts”, “guidance”, “continue”, “goal”, “outlook”, “potential,” “prospect” or “target”, or the negative of these terms or other comparable terminology are intended to identify forward-looking statements, although not all forward-looking statements contain such words or expressions. Such forward-looking statements include, but are not limited to: statements about Ormat Technologies, Inc.’s and its affiliates’ (“Ormat”) business strategy; statements about Ormat’s competitive strengths; statements about Ormat’s development and operation of electricity generation, storage and energy management assets, including distributed energy resources; statements about Ormat’s other plans, expectations, objectives and targets; statements about Ormat’s views on market and industry developments and economic conditions, and the growth of the markets in which Ormat conducts its business; and statements about the growth and diversification of Ormat’s customer base and Ormat’s future revenues, expenses, earnings, capital expenditures, regional market penetration, electricity generation, and other operational performance metrics, including statements about “target” or “targeted” amounts for 2025 growth (MW) and 2023 operational performance metrics such as growth (MW) and adjusted EBITDA, among others.

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These risks, uncertainties and other factors include, but are not limited to, the risks, uncertainties and other factors described in Ormat Technologies, Inc.’s Form 10-K filed with the SEC on February 24, 2023, and from time to time, in Ormat’s quarterly reports on Form 10-Q that are filed with the SEC.

NON-GAAP METRICS

RECONCILIATION TO US GAAP FINANCIAL INFORMATION

This presentation includes certain “non-GAAP financial measures” within the meaning of Regulation G under the Securities Exchange Act of 1934, as amended, including EBITDA and Adjusted EBITDA. The presentation of these non-GAAP financial measures is not intended as a substitute for financial information prepared and presented in accordance with GAAP and such non-GAAP financial measures should not be considered as a measure of liquidity or as an alternative to cash flow from operating activities, net income or any other measures of performance prepared and presented in accordance with GAAP. Such non-GAAP financial measures may be different from non-GAAP financial measures used by other companies.

The appendix slides in this presentation reconcile the non-GAAP financial measures included in the presentation to the most directly comparable financial measures prepared and presented in accordance with U.S. GAAP.

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A LEADING RENEWABLE ENERGY PROVIDER

WITH A PROVEN TRACK RECORD
IN GEOTHERMAL AND ENERGY STORAGE

With
60
Years of
experience

Own & operate
1.5_{GW}
Geothermal, Storage,
Solar PV & REG⁽¹⁾

~1,500
Employees

- (1) REG – Recovered Energy Generation
- (2) See appendix for reconciliation of non-GAAP financial measures.
- (3) Net income attributable to the company stockholders

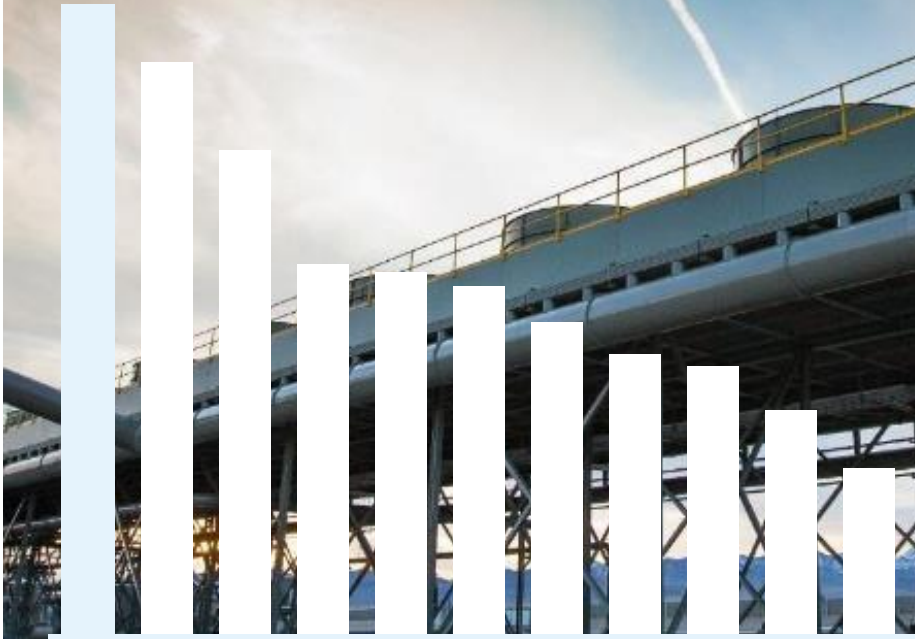


GLOBAL PRESENCE



Chart Source : ThinkGeoEnergy - "Geothermal Market Analysis September 2024" by Alexander Richter; Data is presented at gross installed capacity.

#1
Ormat - the largest
geothermal owner &
operator



OUR CORE COMPETENCIES

THE WORLD'S ONLY VERTICALLY INTEGRATED GEOTHERMAL COMPANY



GOAL: DATA FLOW FROM EDGE TO ENTERPRISE

AVEVA™ PI System™



AVEVA Historian



AVEVA
Plant
SCADA

PI Connectors

AVEVA
Plant
SCADA

PI Connectors



Server



PLC,
Controllers

Geothermal

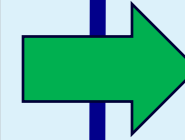


Server



Invertors

Solar



PowerOptix®



Power BI



Seeq®

APERIO
Superior Data

connect



GEOTHERMAL OPERATIONAL CHALLENGES

Reservoir Performance and Degradation

Decline in productivity requiring regular maintenance and well rehabilitation.

Plant Availability and Reliability

Minimizing downtime and quickly addressing operational disruptions.

Operational Efficiency

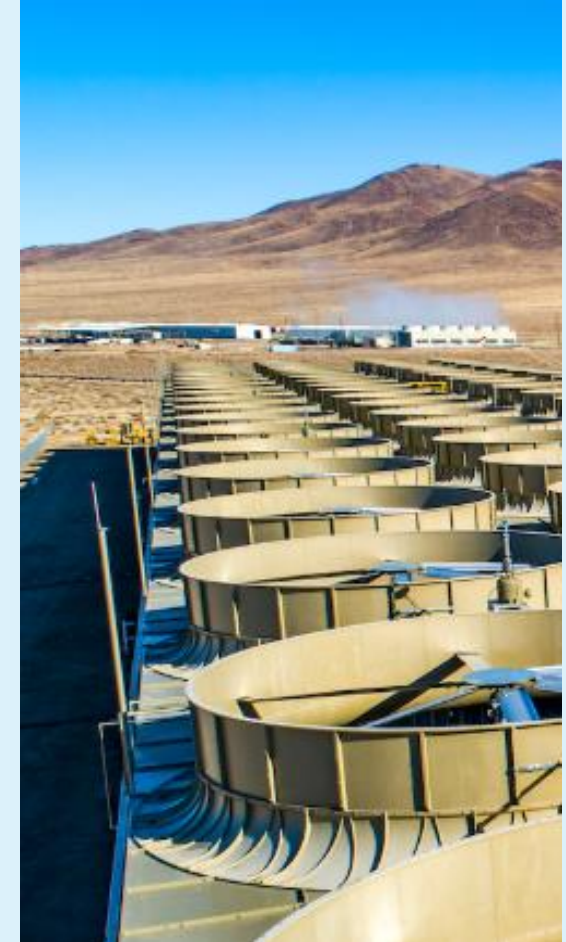
Optimizing equipment performance to reduce costs and increase output.

Environmental and Regulatory Compliance

Ensuring continuous adherence to environmental and safety standards.

Optimize Revenue by managing imbalances

The ability to accurately predict power generation to reduce imbalances



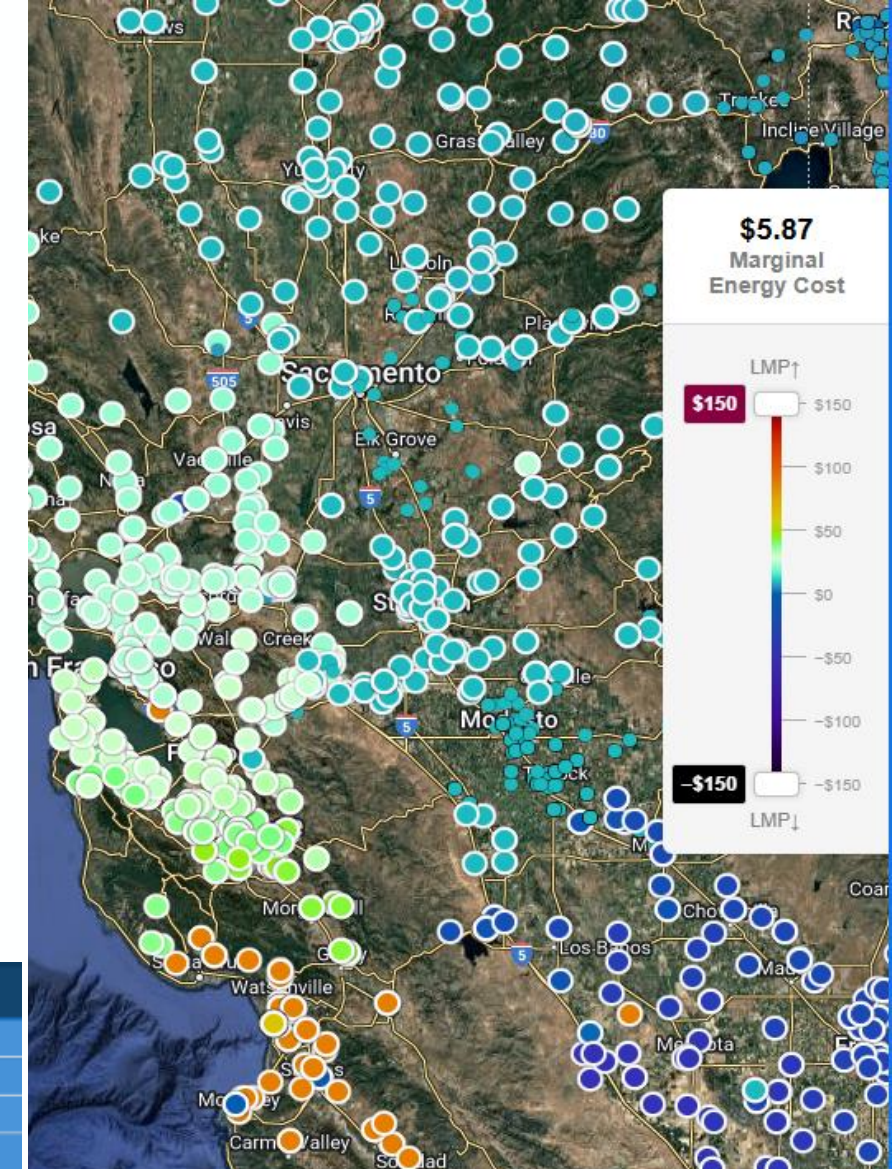
OPTIMIZE REVENUE BY MANAGING IMBALANCES

- Geothermal production depends on many parameters such as
 - Heat source flow
 - Heat source temperature
 - Ambient temperature
 - Reservoir decline rate,
 - Equipment age and fouling
- The ability to accurately predict the day ahead hourly generation is critical to optimize revenues.

WHY FORECASTING MATTERS NOW

- To obtain PPA revenue in an unstable electricity spot price environment, an accurate generation prediction is necessary

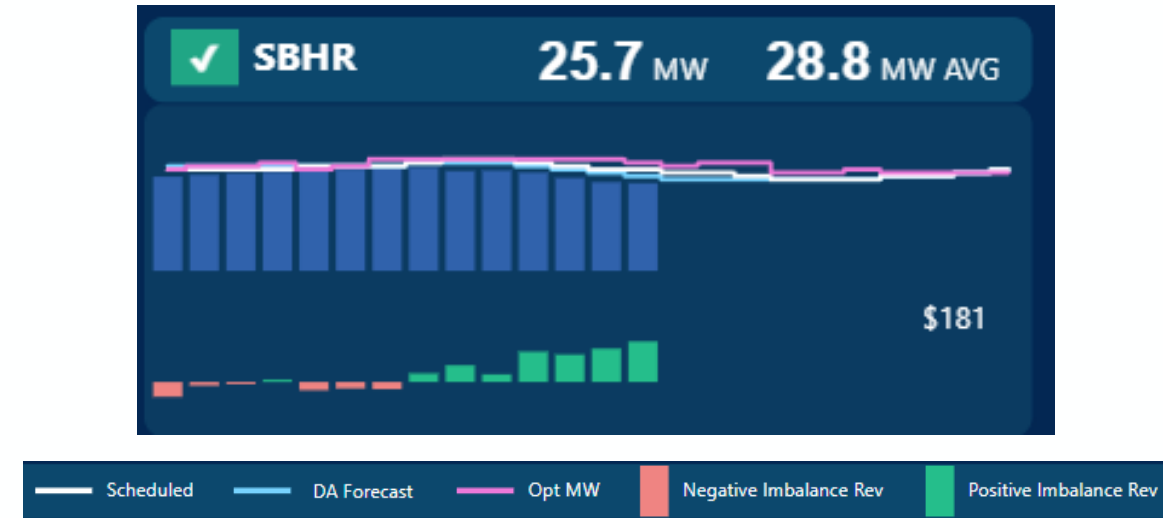
Location	1	2	3	4	5	6	7	8	9	10	11	12
Don Campbell 1	5.57	6.41	4.89	5.53	5.04	-1.50	-410.15	-156.45	6.93	20.97	24.66	30.06
McGinness 3	4.62	5.47	3.82	4.64	4.15	-2.36	-421.41	-161.77	6.22	21.01	25.02	30.74
SBHR	1.66	2.64	0.97	1.70	1.25	-6.44	-489.30	-191.34	2.63	19.32	22.16	29.12
Tungsten	4.09	4.96	3.31	4.11	3.61	-3.16	-433.98	-167.29	5.48	20.68	24.44	30.39



Spot Price volatility map

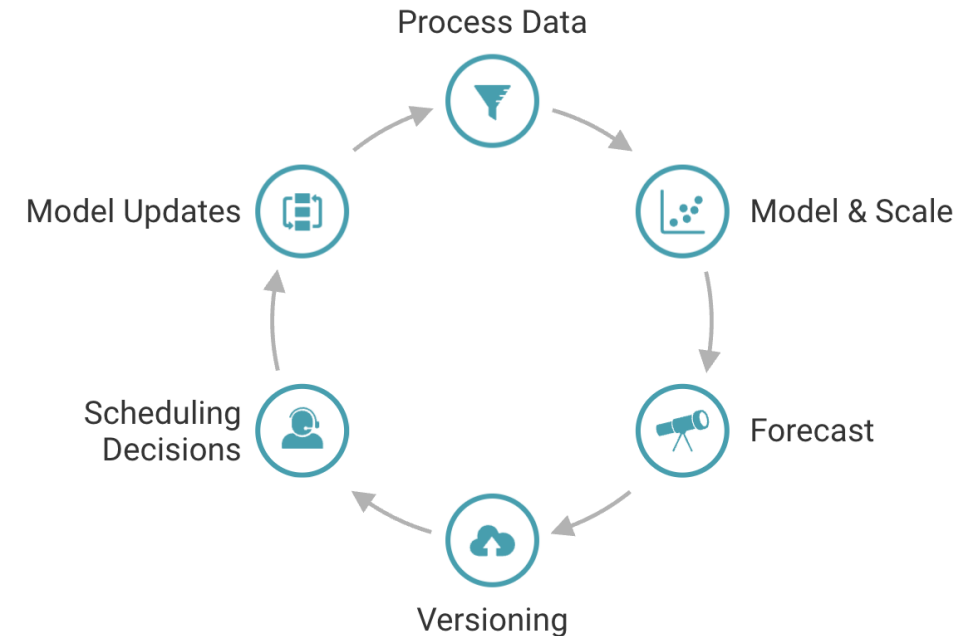
LIFE BEFORE SEEQ

- Manual, time consuming expert-based forecasts
- Inaccuracy leads to revenue loss
- No standardization or back-testing
- Difficult to scale or validate



WHAT WE SET OUT TO BUILD

- A scalable forecasting workflow
- Integrate sensor + weather forecast data
- Build and validate models in Seeq
- Automate forecast exports for scheduling decisions



BRINGING THE VISION TO LIFE WITH SEEQ

MODELING, FORECASTING, AUTOMATION

- Dynamic multi-variate regression model
- Seeq Data Lab + external API for weather forecasts
- Day-ahead forecast versioning & automation
- Scaling with Assets

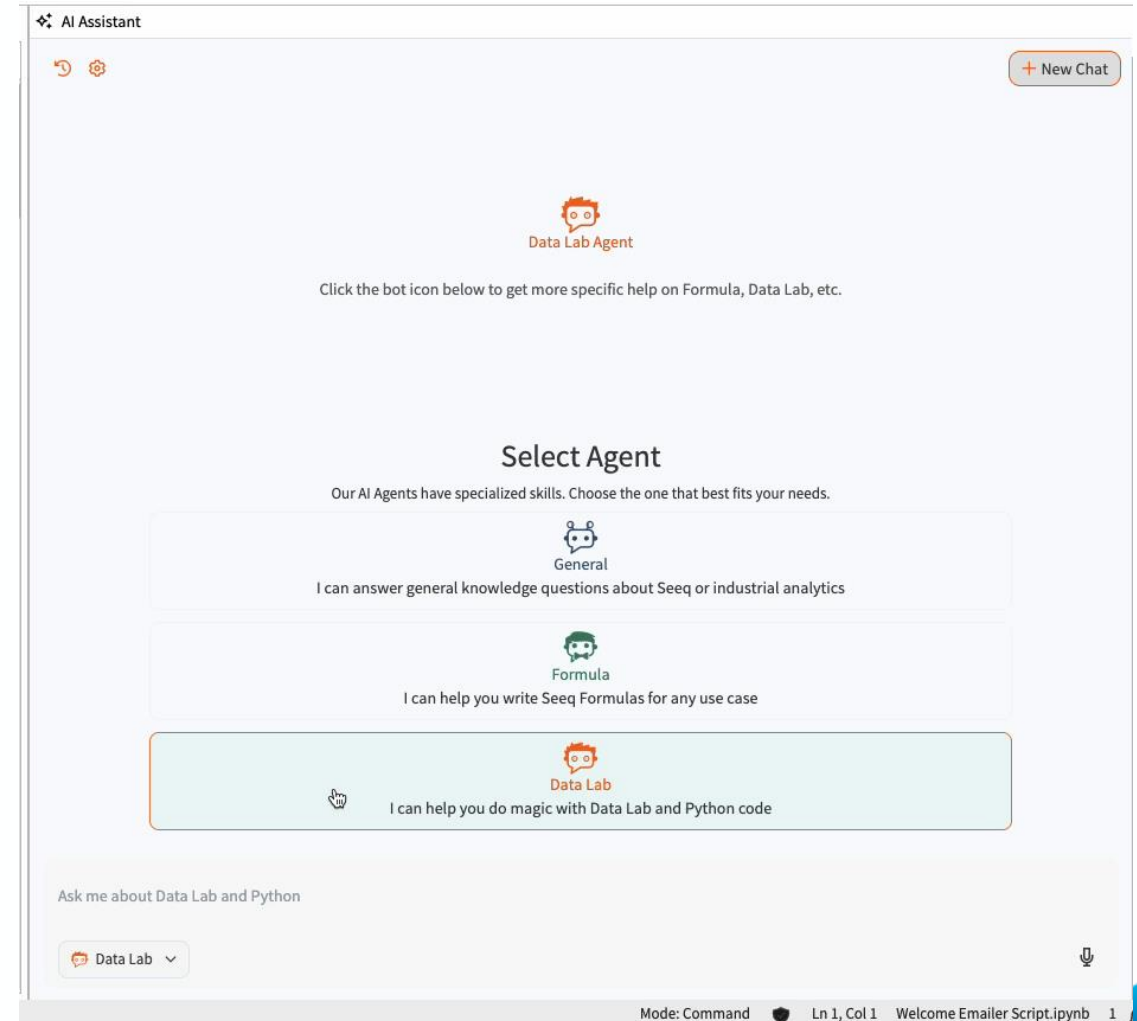


Chart: Improved accuracy of Geothermal generation predictions

GENERATIVE AI AS A FORCE MULTIPLIER

BUILDING WITH SEEQ AI ASSISTANT – OUR SECRET WEAPON

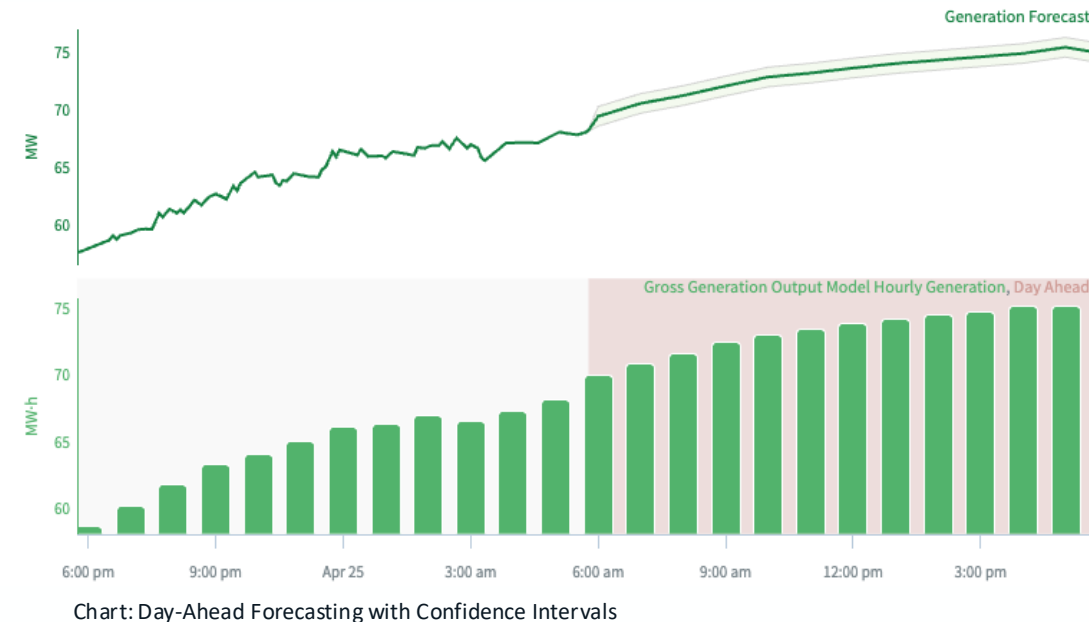
- Data Lab Assistant writing & reviewing python code
- Formula Assistant to write complex model evaluation KPI formulas
- Actions Assistant helped scale calculations automatically



RESULTS: MORE THAN JUST A FORECAST

SMARTER SCHEDULING. BETTER PLANNING. LESS MANUAL WORK

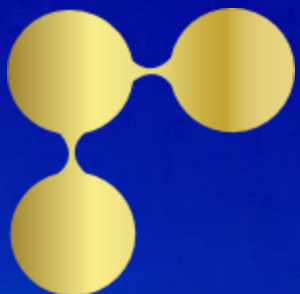
- Accurate prediction is crucial for PPA optimization – deviations can cost \$100,000s
- Daily forecasts to scheduling desk
- Historized for backtesting and accuracy evaluation
- Analysts freed from manual tasks – focus on insight and decision, not spreadsheets



OUR BROADER JOURNEY WITH ANALYTICS AND SEEQ

- Weekend and holiday scheduling
- Solar Field Forecasting & Health
- Similar Days App
- Reservoir System Analytics
- Asset Performance Health Monitoring
 - Steam Turbine Optimization
 - Rotating Equipment Anomaly Detection
 - Motive Fluid Analytics





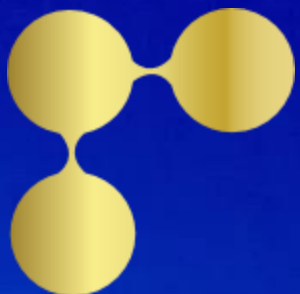
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Questions?





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Thank you!

