

Alpha Trader for Renewable Energy Offtake Risk Managers from GE Digital

Insights to manage risk and reduce uncertainty to improve portfolio results



Increase the value of your renewable offtake agreements with machine learning-informed recommendations for energy market participation

Shift day ahead market participation from a guessing game to a risk management decision. Variable generation and volatile pricing have traditionally kept Renewable market participants out of the day ahead market. Gain confidence knowing how to best hedge your risks with proven insights into next day generation, nodal and hub level pricing. Get recommendations that combine an understanding of your offtake contract and risk profile with those insights.

01 Maximize your revenue at the lowest possible risk with insights based on your generation and pricing

02 Provides not just a single number, but a highly accurate understanding of the probability distribution

03 Propel the transition to clean energy by increasing value of renewable assets

Key features

- Advises the megawatts (MW) to commit each hour for each plant
- Aggregate multiple offtakes into a single view for performance monitoring
- Energy Predictions for visibility on outputs (MWs) for Wind or Solar Farms
- Digital Twin models for each renewable generation facility
- Machine Learning (ML) model for all relevant market prices that affect your portfolio economics

- Risk management for tuning risk to match your target
- Flexible data delivery to fit your business process – UI, API or emailed CSV

Hardware/software

- Site operational data needs to be provided by customer
 - Already connected via GE Digital
 - Customer hosted service for GE Digital to query
- GE Digital hosted service for customer to post
- Nodes and hubs of interest
- Offtake details

PERFORMANCE

\$2⁺/MWh

Increase value of your offtake

+\$1.3M Annual revenue increase

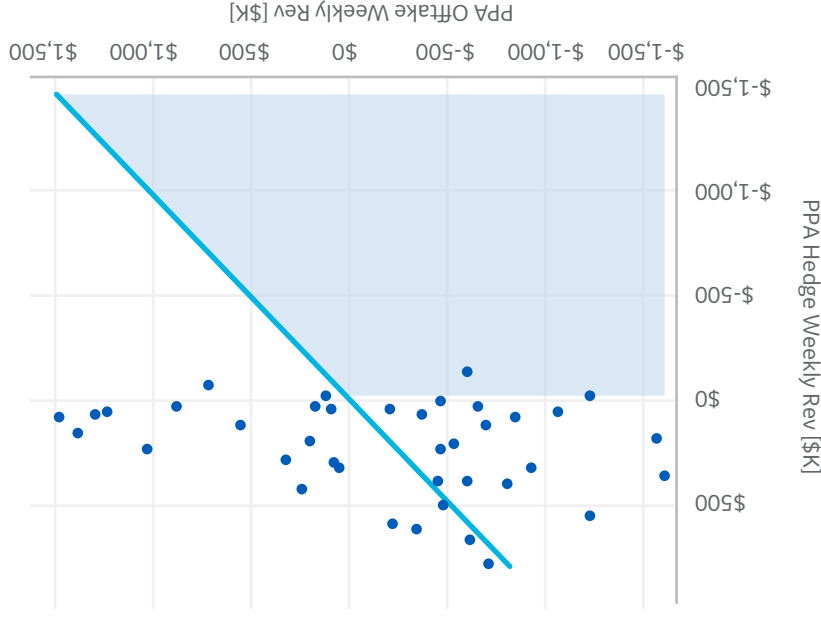
Assuming 250MW @ 30% capacity factor and \$2/MWh increase



Use case

To test the effectiveness of the AI/ML recommendations, a wind farm with a virtual power purchase agreement in N. America was selected. The offtaker experienced an \$8.6M loss over 9 months of operation due to negative real-time pricing when the project generated electricity. The Alpha Trader recommendations, during that timeframe, would have turned their \$8.6M loss into a \$1.3M gain, a swing of +\$9.9M.

When using Alpha Trader recommendations, consistency is key. As seen in the chart below, the offtake weekly revenue (Real Time Only) vs hedge weekly revenue (Incremental Day Ahead Participation), our recommended hedge was accretive to Real Time Only participation 36 of the 38 weeks. Of the 38 weeks, showing the AI/ML recommendations to be effective in improving portfolio performance in the day ahead market.

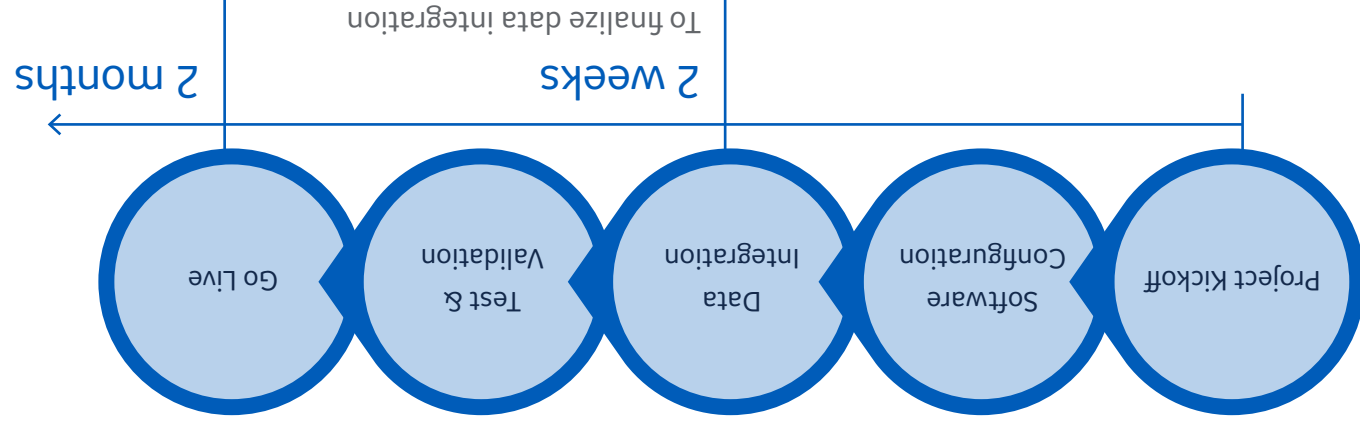


Feature	Competition	GE
Asset performance prediction	2	4
Price Prediction	2	4
Contract	3	4
Risk aware recommendation	1	4

Deployment

On cloud with configurable data delivery

Implementation



Alpha Trader utilizes the following

Optimize the balance between portfolio risk and revenue, leveraging our proprietary predictions of asset performance and market prices



Digital Twin Models for each

facility in your portfolio continuously updating based on

actual performance



Machine Learning models

for all relevant market prices that affect your portfolio

economics



Easy-to-access software

user interface that provides actionable recommendations

Base Solutions Add-on

Performance Predictions

- Operating Envelope Advisor for the thermal plants
- Energy Predictions for Renewables (Solar/Wind)

Thermal

- Fuel Noms
- Offer Curve Analysis
- Outage Scheduling Advice

Renewable

- Offtake Risk Advisor
- Merchant Operation
- Risk Advisor
- Deviation Settlement

Financial

- Energy Trader - Dart Spread

Alpha Trader Foundation

Processlink analytics environment



Take advantage of opportunities in the day ahead energy market with confidence

Contact GE Digital to learn more about Alpha Trader for Renewable Energy Offtake Risk Managers

GET STARTED