

EnerSmart Intelligent Asset Optimizer

4 Wk Assessment

Selling electricity in energy markets is complex and can leave you open to ESG and Compliance risk. It often involves many generation stations in connected networks, leading to a complicated set of operational decisions that must be made on a daily basis. What if you could automatically generate the optimal set of decisions for operating your energy assets? EnerSmart's custom AI framework constructed on Azure uses a combination of advanced forecasting techniques and mathematical optimizers to allow you to do just that, resulting in increased revenue and lowered ESG and compliance risk.

Offer description & details

Built on BDO Lixar's award winning Modern Data platform, HeroPath and leveraging best in class Azure tools including Azure Data Factory, Databricks, Event Hubs, Power BI and API Manager the Asset Management solution gives you the competitive market advantage you need to succeed.

How does it work?

Consider hydropower generation. This often involves many stations in a given river system, where the challenges with coordinating station operations involve how to best schedule power generation at each station based on various factors. These factors include current water levels, price and weather forecasts, operational constraints, and regulations and safety considerations.

Deliverables

Weeks One to Three // Assess

The BDO Lixar team takes you through an accelerated technical advisory to assess readiness and establish phase one priorities.

Week 4 // Advise

We deliver your unique migration road map with defined next steps.

What is the value?

Our clients that have implemented the Asset Management Solution have realized;

- Reduced ESG Risk
- Reduced Compliance Risk
- Increased Revenue

In addition, decisions made for upstream hydropower generation stations affect those downstream. There are simply too many variables to consider to perform a manual analysis to identify optimal scenarios, let alone repeating this analysis as frequently as business decisions demand.

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EnerSmart solves this problem by automatically generating the ideal set of decisions for each station. The first layer of this solution is a strong data foundation using BDO Lixar's award-winning HeroPath offering for supporting advanced analytics. Using this foundation, an optimization algorithm calculates optimized generation schedules. Scheduling is based on a number of inputs and forecasts, such as: weather, water level inflows, generator efficiency, and market prices.

Our clients that have implemented the EnerSmart solution for hydropower scheduling have seen an increase in revenue of 6% annually, and an estimated internal rate of return of ~300% over 5 years. For

hydro and wind power co-optimization with multiple wind and hydro assets meeting at the same substation, using EnerSmart has led to improved power generation balance and energy offers into the same node, leading to an estimated internal return rate of 380% over five years. In addition, given better coordination of the two energy sources, our clients have been able to avoid significant penalties related to congestion by better aligning the amount of energy offered into the hub to respect transmission limits.

BDO Lixar consulting combines our industry expertise with operational excellence to deliver this 4 week assessment.

**Start Your Journey
Today!**

Estimated Cost
\$50000 CAD

Duration
4 WEEKS

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