

An Electric Utility Company

Opts into a Financial Opportunity Assessment with Redapt

An electric utility company requested a Financial Opportunity Assessment alongside a larger analytics modernization project for the entire corporation holding landscape. Executive leadership suspected more could be done to leverage advanced analytics techniques to impact the organization's health and increase stockholder value. The company will continue to learn and adapt as they work toward a clean energy goal.

Redapt's Financial Data Scientists (Value Engineers) analyzed the financial records and business processes over the past five years. They aligned the findings to support the company's Integrated Resource Plan for an exit from coal two years earlier than planned, with increased reliance on wind, solar, and storage.

Furthermore, Redapt uncovered opportunities to reduce future capital expenditure by 200 million USD over the next two years and to revolutionize how power is traded, intelligent power sealing detection, and capital machinery optimization.

Objectives

- The client has enhanced visibility into high-value analytics opportunities
- The client has an implementation plan against all discovered opportunities

Metrics

- The opportunity criteria filter on net ROI should be at least 54 million USD annualized from the current baseline. (.1% of Market Cap – 5.4 billion USD)

Value

- Increase organization valuation and stockholder equity
- Possible decrease in energy cost due to increased operational efficiencies
- Decrease the environmental impact of fossil fuel-based power generation

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Opportunity Output Summary

Purchased Power: The table below presents the company’s purchased power expenses and volumes for the last two years (in thousands, except for MWh amounts).

	Year Ended December 31,	
	2021	2020
Expense		
PURPA contracts	\$ 199,517	\$ 194,380
Other purchased power (including wheeling)	194,174	103,037
Total purchased power expense	\$ 393,691	\$ 297,417

Opportunity 1: Operating expenses related to purchasing power and power trading

Solution Summary: To create an AI-powered trading optimization and decision engine based on sub-models for ensemble forecasting. The current process is highly manual and has no AI-driven support. Estimated optimization for AI-assisted trading would amount to 60M USD per year in cost savings around selling and purchasing activities.

Power cost adjustment	(49,844)
Other operations and maintenance	361,297
Energy efficiency programs	29,920

Remaining useful life (RUL) and cost of ownership reduction initiatives based on enhanced IoT telemetry extensions and AI-assisted maintenance decisions based on current data sets from machinery operations. Potential savings of 10-20M a year from a 360M expense category.

Opportunity 2: Capital Equipment Optimization

Multiple AI models could be built to optimize the cost of ownership of power-generating capital equipment with 10–30-year life cycles. Maintenance scenarios would include suggestions around optimizing operational variables to extend the life of expensive machinery and reduce part replacement costs.

Contact us to gain a little more clarity

Tell us about your needs, goals, and the obstacles in your way. We’ll help you find solutions to get past them. [Click here](#) or visit redapt.com/contact to connect.