BUILD MORE ACCURATE LOAD FORECASTS INSTANTLY AND SAVE THOUSANDS
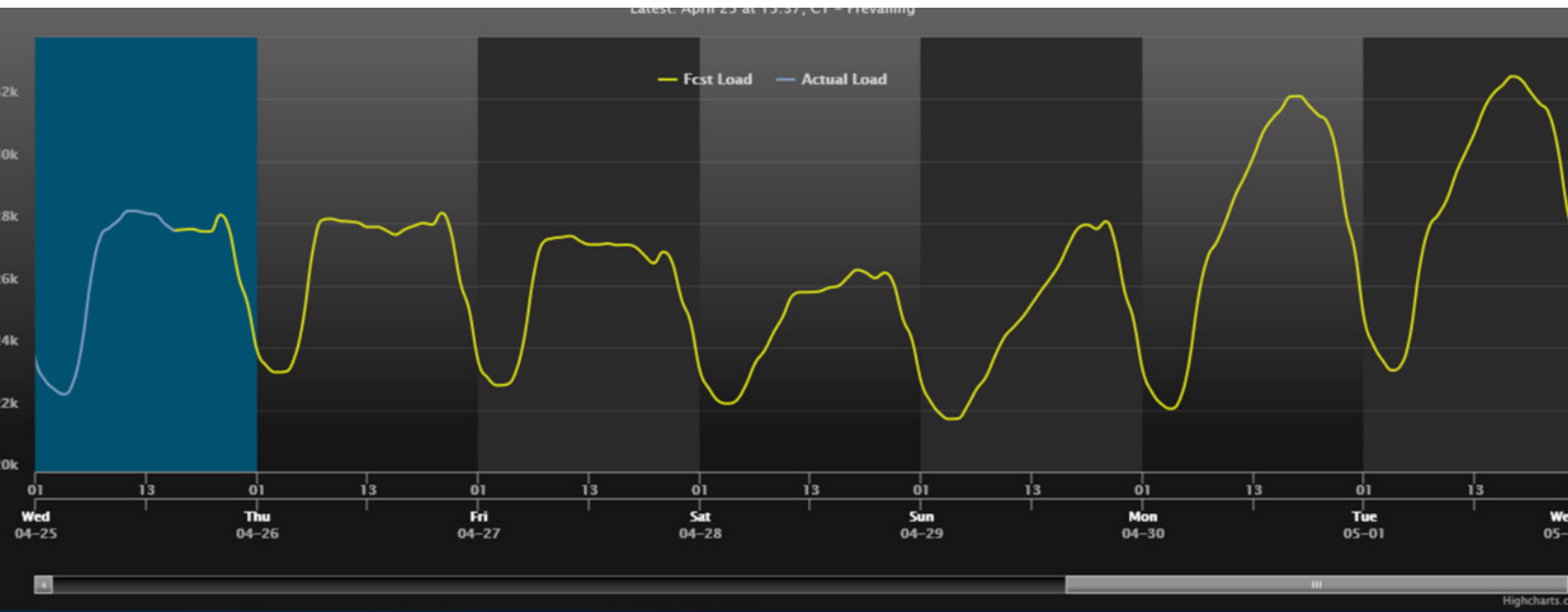
How Independence Power & Light Used PRT to Drop Their Error Rate by 4% and Save Over $100,000 Annually.

Case Study

Customer Problem:

For utilities, building accurate load profiles is extremely important. Inaccurate forecasts can result in huge financial losses, but unfortunately, the ability to accurately predict demand even within the very short-term is difficult to do. Operators, schedulers, and marketers must make high-stakes decisions every day, oftentimes based on tedious, manual and error-prone research.

Gary, the System Operations Supervisor at the City of Independence, Missouri, Power & Light Department found himself in this position. His department's responsibility was to predict the amount of power IPL's customers would consume each day and buy the required energy at the lowest prices possible. Ultimately, their goal was to ensure customers' needs were met, while maximizing cost savings on behalf of the city. Success hinged on having the most accurate load forecasts possible.

To do this, Gary and IPL's System Operators used an off-the-shelf product alongside proprietary historical data. Every morning before the markets opened, they would study weather forecasts, recent days' activity, and historical similar-day data to build a load profile for the next day. This was time-intensive, manual work. Because it was neither automated nor based on algorithms, it was also prone to human error. Due to the highly dynamic nature of power demand, it was also necessary for the System Operators to constantly update their predictions throughout the day. Ultimately, IPL was running an 8% average error rate.

PRT

Customer Solution with Drillinginfo:

Gary and his team knew there had to be a better, easier way to build load forecasts that would save the city and ultimately the residents, money. They purchased a product from Pattern Recognition Technologies Inc. (PRT), a company which provides load, price, wind, and solar forecasts based on highly adaptive and dynamic machine learning algorithms. Specifically, Gary and his colleagues used the eLoadForecast™ product, which optimizes historical data and real-time feeds of customer demand and weather to produce a load profile for the day and for the next 15 days out.

eLoadForecast™ showed immediate results for IPL's load territory. Gary and the System Operators no longer spent their mornings building load profiles by hand. Instead, eLoadForecast™ built the forecast, and they simply had to review and approve it. This freed up their time for other market responsibilities.

"The value added by PRT to IPL's system operations made an immediate impact that continues everyday."

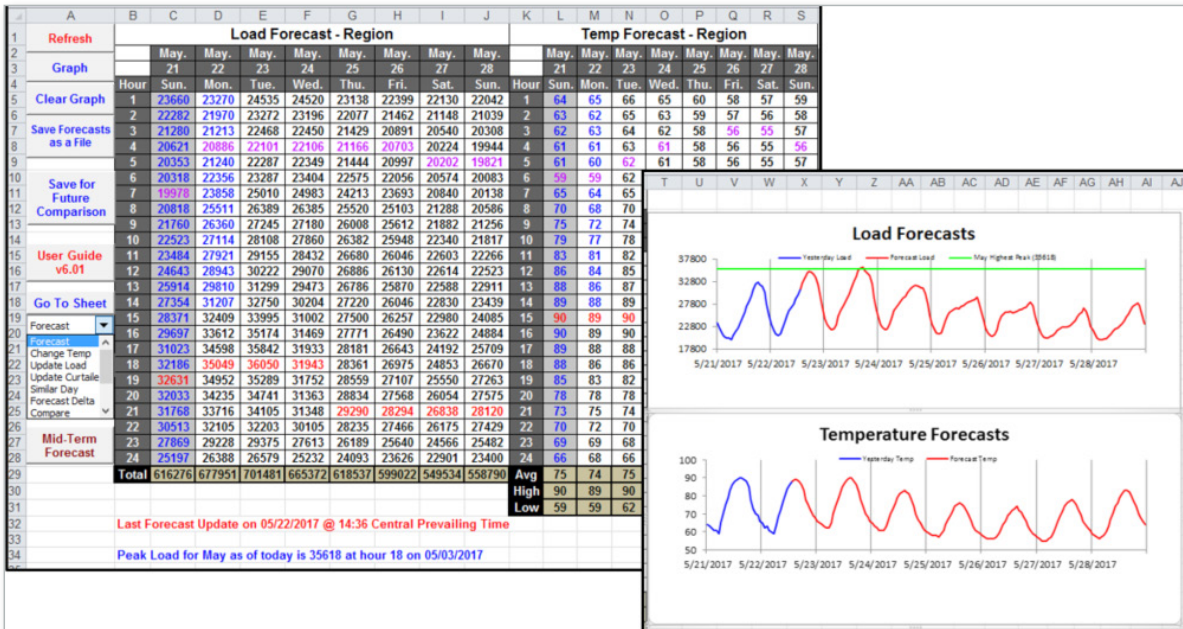**– Gary, System Operations Supervisor, Independence Power & Light**

PRT

PRT's technology-driven forecasts were also more accurate than what the IPL team could create by hand. Within two weeks, IPL's error rate dropped from 8% to 6%. The improvements continued as PRT's algorithms were able to "learn" from past load behaviors and build increasingly accurate forecasts. Within a year of using PRT, the error rate was down to within 4%, resulting in annual savings of over $100,000 the City.

By leveraging PRT's technology, IPL's Operations team was able to stop wasting time on manual activities and let PRT do the work. With more accurate forecasts and their team's time used more efficiently, IPL is creating value and cost savings that they can pass on to their ratepayers.