PEAK PREDICTION WITH IHI ENERGY STORAGE:
REDUCING GLOBAL ADJUSTMENT CHARGES

Advanced software for a highly-effective solution

The Ontario Global Adjustment charge is an Ontario system peak related charge tied to your energy usage during the five peak hours annually. The Ontario IESO gives you the opportunity to reduce this charge by adjusting your energy usage during these peak hours – but with just five opportunities to do so, it can be difficult to effectively reduce your Global Adjustment charge. IHI Energy Storage provides peak prediction services to help you accurately determine when these peak hours occur and enable you to react swiftly and effectively. With day-ahead forecasts, real-time alerts, and an online web portal with up-to-date forecasts and insight into peak probability, you'll have the tools you need to reduce your Global Adjustment charge.

IHI Energy Storage's peak prediction services include:

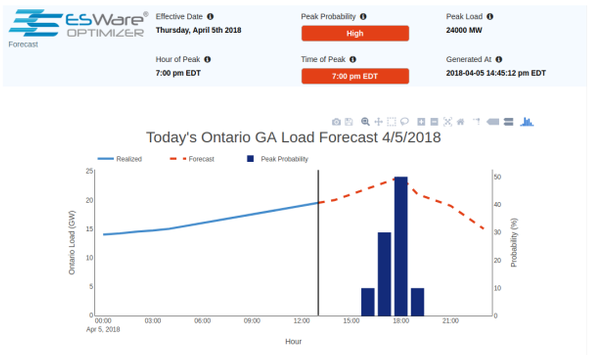
Alerts on high potential peak days

Daily demand forecasting

Hourly peak probability prediction

Intraday alerts on high demand days

Day ahead forecasts and hourly peak probabilities will be available via the online portal, with email and text alerts on high peak days. On days with sudden increase in demand, intraday alerts will be provided via email, text, and the online portal. Communications will go out promptly to enable you to react swiftly and gain the most value possible from our prediction services.



Deep neural network based algorithms with high accuracy

IHI Energy Storage's peak prediction software forecasts load using a robust neural network that is trained with historical data and is extensively tested. At midnight each day, the software will develop the forecast for the next 24 hours of load. Intraday forecasts will be adjusted as new data is provided by local weather stations and IESO, and will be reflected in the online portal. Any significant increases in load will trigger a customer alert. The data from each completed month will be used to train the neural network and increase prediction precision.

The software has been backtested using data from 2007 to present day, for a high level of accuracy – with an average of 26 days per year of operation, IHI Energy Storage's peak prediction software accurately predicted 100% of the peak days. IHI Energy Storage's hourly peak probability prediction allows two hour battery systems to achieve 85% accuracy.

Not only is IHI Energy Storage's peak prediction software effective for energy storage clients, but for demand response clients, too. Customers leveraging demand response to reduce their Global Adjustment charge can utilize IHI Energy Storage's peak prediction services to determine on which days would be most impactful to reduce their energy usage with limited attempts at curtailment.

Who can benefit from IHI Energy Storage's peak prediction services?

Opting into the Industrial Conservation Initiative (ICI) gives you the opportunity to save on your GA charge. Any customer participating in the ICI is charged a GA fee proportional to their energy usage during the five highest system peaks of the year.

Specifically, if you reduce the system peak in 2018 season (base period: May 1, 2018 – April 30, 2019), your global adjustment charge is reduced in the billing period (July 1, 2019 – June 30, 2020). By reducing your energy usage during these peak hours, you can reduce up to CAD500K/MW/year based on current GA pricing.

Customers with an average peak demand as follows can join into the ICI: 1MW-5MW have the choice to opt in; 5MW and higher are automatically opted in; and 500kW-1MW in specific industries (NAICS codes 31-33 and 1114) can opt in.

An end-to-end software solution

Peak prediction is one part of an advanced solution. Create a full energy storage solution with system integration and the ESWare software suite from IHI Energy Storage, which works in concert with the peak prediction software to provide you with a streamlined and effective energy storage system. All three products in the ESWare suite operate on same algorithm in an end-to-end software solution, synching the simulation tool with the real-time operation tool for optimal accuracy.

The ESWare Suite includes:

- Sophisticated techno economic analysis based on adaptive dispatch algorithms
- Optimized autonomous operation using real-time data integration and forecasting
- Nine different operating modes in addition to economic operation
- Highly scalable from 100kW to 100MW
- Technology agnostic in integrating different batteries and inverters
- Robust security protocols and secure data management

About IHI Energy Storage

IHI Energy Storage is a Chicago-based subsidiary of IHI, Inc., NY and provider of energy storage system solutions centered around the ESWare software suite, an end-to-end solution. As a systems integrator, IHI provides energy storage solutions for both front of the meter and behind the meter applications. IHI's solutions include adaptive, real-time operation software, technology agnostic system designs, and autonomous operation capabilities, with support from its 160-year-old parent company, IHI Corporation, Tokyo.

Contact

Contact **sales@ihies.com** to learn moreabout how IHI Energy Storage can help you streamline your energy investments.