

The Itron logo is located in the top left corner, featuring the word "Itron" in white lowercase letters on a red rectangular background. A yellow lightning bolt icon is positioned above the letter 'o'.A businesswoman in a dark suit and high heels stands on the left side of the frame, pointing her right index finger at a glowing digital interface. The interface is a complex, futuristic grid of data visualizations, including line graphs, bar charts, pie charts, and a world map. The background is a cityscape at dusk or dawn, with a grid pattern overlaid on the ground. The overall color palette is dominated by blues, purples, and oranges.

Forecast as a Service

Accurate and Reliable Forecasts are One Click Away



Itron: The Global Leader in Forecasting

Itron software and forecasting methods are used by large system operators and energy retailers in North America, Australia, Europe and other markets around the globe. We have established this leadership position by delivering:

- » Unparalleled forecast accuracy
- » Strong customer support
- » Scalable and reliable systems, used by hundreds of energy companies
- » Support for all data frequencies, from daily down to five-minute data
- » Flexibility to model energy, solar, wind, demand response and energy prices
- » Advanced modeling processes
 - Ensemble forecasts
 - Multiple weather providers
 - Uncertainty modeling
 - Built-in error correction
 - Automated performance tracking

ACCURATE FORECASTS FOR SYSTEM AND MARKET OPERATIONS

Accurate and timely short-term forecasts—from five-minutes to several months ahead—provide critical decision support for grid operators and participants in today’s increasingly dynamic energy markets.

Throughout the world, Independent System Operators (ISOs), utilities, municipalities, cooperatives and energy retailers rely on Itron systems to deliver accurate, real-time power and natural gas forecasts. This powerful capability is now available as a cloud-based forecast service running on the Microsoft® Azure platform and operated by Itron forecasting experts.

With this approach, Itron is responsible for system and model maintenance and monitoring. All you need to do is provide up-to-date energy data, and Itron delivers updated forecasts to your desktop or mobile device as frequently as you need them.

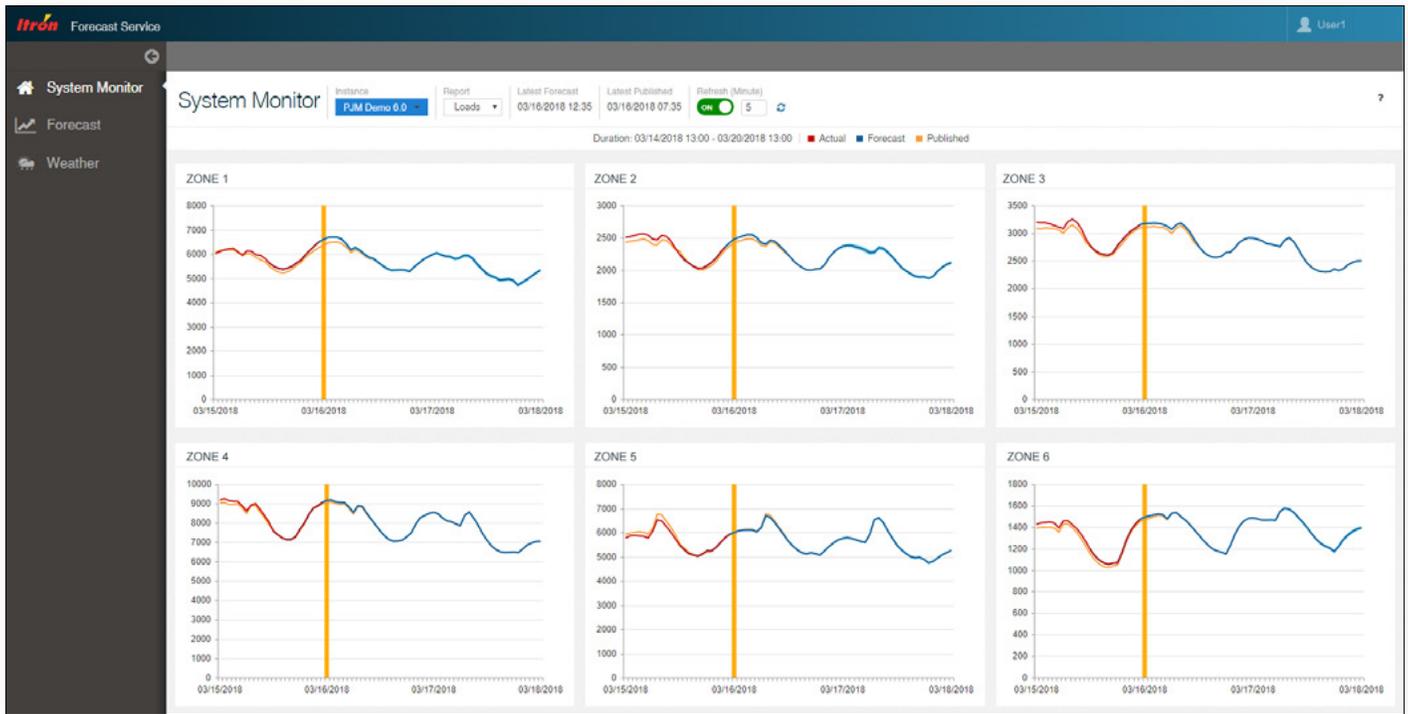
With Forecast as a Service, you get the proven power and accuracy of the Itron system. You benefit from the experience of Itron forecasting experts. And you avoid the upfront cost of hardware and software, and the ongoing cost of operating and maintaining an on-premise system.

Forecasts Tailored to Your Business Needs

The Itron service provides daily, hourly or sub-hourly power and natural gas forecasts for forecast horizons of five minutes ahead to several months ahead. Forecasts are updated continually to support scheduling and dispatching of generation and gas supply on a 24/7 basis. To achieve the highest accuracy levels, models are tailored by our experienced consulting team to account for the unique characteristics of each load. Based on your needs, the service provides forecasts for utility systems, transmission zones, city gates, substations and feeders as well as individual delivery points.

Ensemble Forecasts

Load forecast uncertainty is quantified by presenting an ensemble of load forecasts, each one driven by an alternative weather provider forecast or error-corrected weather forecast. The Itron Optimal Forecast is computed dynamically based on recent forecast performance for each element of the ensemble.



Itron's Forecast as a Service lets you manage your day-ahead forecast and track forecast performance in real time.

Grid-Connected Renewable Generation Forecasts

Real-time and day-ahead solar and wind generation forecasts are developed using proprietary machine-learning algorithms that incorporate meteorological forecasts and SCADA measured generation. Alternatively, externally sourced generation forecasts can be utilized.

On-Premise Solar Photovoltaic (PV) Generation Forecasts

For service territories with significant on-premise solar generation, forecasts are adjusted for the impact of solar PV using Itron-supplied or externally sourced generation forecasts.

Demand Response Forecasts

To improve grid operations on days of high demand and significant demand response events, the Itron service supplies load forecasts both with and without load-shed activity. Itron can accurately forecast demand response program impacts directly or utilize externally sourced load-shed forecasts.

FORECAST AS A SERVICE WEB PORTAL

The Forecast as a Service web portal is designed for forecast analysts and operators responsible for making the mission-critical decisions required for real-time operations and day-ahead scheduling. Key elements and attributes of the web portal are:

- » Secured user access via Itron Identity Service
- » Available 24/7

- » Online graphical and tabular reviews for performance
- » Drill-down capability for quick review of the ensemble forecasts
- » Visual comparison of similar days to build confidence in the baseline forecast
- » Quick edit tools to override baseline forecasts. These tools include:
 - Set peak, minimum and energy targets
 - User-defined weighting of ensemble components
- » Real-time forecast performance tracking
- » One-click download of tabular data to local Excel workbooks
- » One-click download of graphical displays to local PDF files
- » Support for desktop internet browsers and mobile devices

THE ITRON ADVANTAGE

Proven Forecast Factory

- » Relied on by ISOs operating in North America, Australia and Europe
- » Advanced forecast methods
 - Advanced neural networks and non-linear multivariate regression
 - Ensemble forecasts and multiple weather providers
 - Top-down and bottom-up forecast processes
 - Patented five-minute load forecast framework
 - Proven approaches for modeling renewable generation and demand response
 - Automated generation of key performance indicators

Backed by Industry Experts

- » Itron team known for innovative forecast solutions since the 1970s
- » Deep knowledge of energy modeling
- » Industry leaders in delivery of advanced forecast solutions
- » Itron's experienced forecasting team manages all forecast models
 - Monitor performance of weather, load and generation forecasts
 - Forecast models tailored for each load
 - Ensure that models are aligned with current load conditions

Global Cloud Platform

- Forecast as a Service is delivered on Microsoft Azure, which provides the scalability, security, power and agility required for safe and reliable operation.
- » Worldwide network of Microsoft-managed data centers
 - All data stays within regulated data neighborhoods
 - Durable, highly available and massively scalable cloud services
 - Industry-leading data security compliance certifications

THE BOTTOM LINE

In today's increasingly dynamic and complex energy marketplace, there is no substitute for an accurate short-term forecast. Whether it is five minutes ahead or five months ahead, Itron delivers the accurate forecasts you need for successful grid operations, market enablement and energy trading.

With our Forecast as a Service offering, Itron delivers those critical forecasts via the cloud, enabling you to focus on running the business, while we take care of the rest.

To learn how Itron can improve the accuracy of your forecasts while reducing your resource commitments, contact us at:

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itron.com/forecasting



Join us in creating a more **resourceful world**.
To learn more visit itron.com

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