AMPERON

Unique Multi-Ensemble Weather Model
The most granular and highly aggregated weather data available

More data points. More weather vendors. More accurate forecasts. Amperon created an industry-unique multi-model weather platform, pulling in tens of thousands of hyper-local data points to feed into our award-winning energy demand forecasts. This granularity of weather data leads to better predictions of outlier events when your risk management strategy matters most.

4 Weather Vendors
Customers can view data from **WSI's AG2** forecasts by default. **DTN, NWS' NBM,** and **Spire (ERCOT)** are also available for an additional cost.

40,000+ Weather Points
Meticulously outlined hyperlocal population centers weighted using satellite imagery.

Weather Points Every 5km
Every 1km in densely populated areas.

30+ Different Weather Scenarios
Including: rolling 30-, 10-, and 5-year normals; extremes vs normals vs milds; single years (for instance, 2021); and new scenarios upon request.

15 Years Of Weather Data
Includes daily temperatures, dewpoints and, in some areas, snow. Updated weekly.

Model Methodology

Weather data is one of the most important inputs to load forecasting. Our models ingest historical weather observations and weather forecasts and then apply a range of techniques to assess their accuracy and sensitivity to local weather and local power consumption. Our process is tailored to specific customer needs (high-resi, solar, etc.). We then run multiple machine learning models, evaluate the performance of each model, weight them, and combine the models into a single forecast.

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Weather Features

Stress Tests for Short-Term Forecasts

- Try out different weather scenarios (such as 5 degrees colder/hotter) to see how your usage forecasts will be affected.
- Hourly weather data for the next 15-days, using 20,000 data points across the US.
- Choose between 4 different weather vendors.
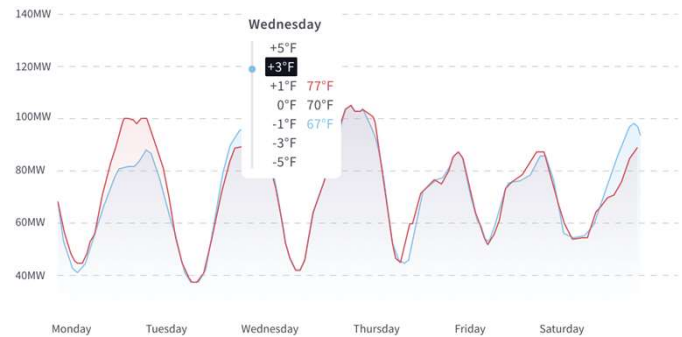
Weather Scenarios for Long-Term Forecasts

- Compare different simulated weather regimes to risk-model hotter summers or colder winters.
- Different weather scenarios include rolling 30-, 10-, and 5-year normals; extremes vs normals vs milds; single years (e.g. 2021)
- Forecasts for the next five years.
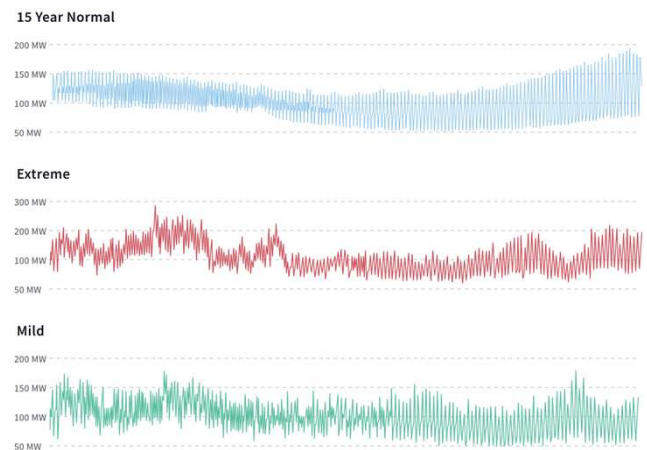
Additional Weather Product

- **AmpCast**: Visualized 15 days min/max forecasts for all major cities.
- **AmpCast Weather Daily**: Newsletter compiled by our in-house meteorologist that provides essential weather insights for each ISO/RTO.
- **AmpCast Expert**: Exclusive access to our in-house PhD meteorologist who provides personalized insights on weekly calls.
- **AmpCast Extreme**: Get dedicated monitoring and analysis during extreme weather events, like hurricanes.