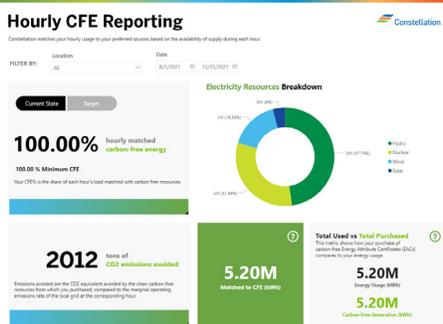# Hourly Carbon-Free Energy (CFE)

Achieving 100% carbon-free power is a key sustainability goal for many organizations. As customers make the transition to 100% carbon-free, many are looking to bridge the gap between their real-time electricity demand and available sources of carbon-free power. Currently, energy markets have limited options for tracking and matching carbon-free supply with demand on an hour-by-hour basis, and most organizations pursuing zero emissions power match their electricity use with renewable energy certificates, or RECs, on an annual basis.

To achieve a true 24 x 7 x 365 CFE strategy, customers need to understand not only their hourly demand but also, what carbon-free supply is available on the grid and local emissions rates. Then customers can build a strategy to match load and supply on an hourly basis, which will minimize the emissions impacts of their energy consumption. This is where Constellation, with our wind, solar, hydro and nuclear generation supply mix, supply management and data analytics can help. Partnering with Microsoft, we are developing an hourly-matching application that gives customers a transparent, independently verified view of their sustainability efforts, with analytics and supply solution recommendations to make quantifiable progress towards carbon reduction goals.

Generation Mix

Every hour of every day the mix of supply sources differ. Choose and rank the desired generation source mix –

- Wind
- Solar
- Nuclear
- Hydro
- Battery storage and other sources

Customer Hourly Usage

- Constellation matches your hourly usage to your preferred sources based on availability of supply during each hour
- Adjust consumption to meet your preferred sourcing mix goals

Emissions Data

Using localized marginal emissions data, Constellation will work with customers to:

- Strategically match carbon-free resources to achieve carbon avoidance target every hour
- Provide information to allow customers to make targeted purchasing decisions to reduce marginal emissions on a long-term basis
- Integrate with advanced metering technologies and alternative generation sources to optimize emissions impacts

- Dashboards track all energy sources
- Integration with emerging hourly REC/EFEC registry and audit programs
- Share your progress with employees, shareholders, and any future accounting regulations