

Electric Power Research Institute (EPRI)
24/7 Carbon Free Energy (CFE) Buyers Forum: June 4–5, 2024

Key Takeaways

- **Coordination:** Customers and utilities need to work together from the outset when developing [24/7 CFE](#) products.
 - Both parties share the common goals of improving affordability and resiliency and supporting further CFE development as they move to decarbonize the grid.
 - Successful coordination requires input from both parties' management, resource planners, tariff developers, regulatory teams, and legal counsel.
 - Achieving the U.S. Government's CFE goals will require establishing a consistent baseline of grid-supplied CFE and ensuring that utilities are in a position to attest, as needed, to the energy attributes of CFE.
 - Involving large customers in the integrated resource planning (IRP) process can help utilities plan for future demand. However, many customers are new participants in these processes and there may be learning curves on both sides.

- **Tools:** Accurate accounting of 24/7 CFE requires detailed data on hourly generation, dispatch, and usage, which will require broad adoption of new technology and data visualization tools. These tools have recently come to market and utilities have begun piloting them. Developing a robust hourly matched electricity system will also require improved tracking of the time and place at which all generation occurs and the development of markets for trading hourly renewable energy certificates. In some cases this data may already be available, but customers are unable to easily access and use it.

- **Technologies:** Clean firm generation and storage technologies are part of a portfolio of resources to reach utilities' and customers' 24/7 CFE goals. Adding wind and solar capacity without storage resources to make them dispatchable can make curtailment necessary, which can impact costs. Emerging technologies such as advanced nuclear, geothermal, and long duration energy storage will help decarbonize the grid, and utilities are seeking risk-sharing structures to deploy them.

- **Benefits and Challenges:** Benefits of developing 24/7 CFE offerings include spurring economic development through the construction and improvement of infrastructure, engaging customers to help accelerate clean capacity deployment, and increasing grid-supplied CFE to support both customers and utilities in meeting their decarbonization goals. Current challenges include meeting the costs of developing new sources of CFE and connecting them to the grid, providing transparency on CFE pricing for customers, and handling the complexity of developing CFE products for a wide range of customers with varied preferences and targets in their pursuit of decarbonization.