

Hybrid Power Plants are Here to Stay

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Have you ever heard of hybrid power plants? They are relatively new, but are going to become the power plants of the future. Hybrid power plants are power generation systems that combine two or more types of electricity generation or, more commonly, combine electricity generation with battery storage at the same location. Hybrid power plants generally consist of renewable energy technologies such as solar panels or wind turbines paired with energy storage facilities. The solar panels and wind turbines generate electricity while the sun is shining or the wind is blowing and any excess that's not used right away is stored in the battery. Then, in the evening when the sun is going down or at times when there is little wind in the area, energy reserves held in the battery can be released, providing electricity to consumers as needed. This greatly enhances the reliability of the grid while delivering cost effective electricity to customers.

These days, utilities are retiring power plants that rely on fossil fuels largely for economic and environmental reasons. Coal and gas prices rise and fall based on a variety of factors and contribute to air and water pollution. Wind and solar, however, have zero fuel costs and no direct emissions. This means that utilities and corporations can purchase renewable energy at a set price for a set period of time. This gives them certainty; and everybody likes that. Additionally, wind and solar production costs have come down and they are now the least expensive form of new energy generation.

Storage is a Game-Changer

plants can be fully integrated into our existing energy infrastructure. As CGA Policy Associate Madelyn Smerillo explains in her [recent blog](#), all resources on the grid must have established "rules of the road" that help utilities and grid operators use them effectively. While the Federal Energy Regulatory Commission (FERC) has ordered all grid operators to provide market rules for stand-alone storage, most regions of the country are still working to develop and implement them. Hybrid resource market rules have even farther to go, and more coordination is needed to see this technology to fruition. Clean Grid Alliance is working in the stakeholder process at MISO (Midwest regional grid operator) to push for the development and implementation of these market rules in order to open up more opportunities for [hybrid] projects in the near future. New [hybrid] resources will play an important role in the changing resource mix in the Midwest.

It's a fact. Hybrid projects are here to stay. And that's a good thing!