OBJECTIVE/STATEMENT OF WORK:
BWR Innovations proposes a turn-key sustainable electrical generation system, integrating renewable energy resources (wind and solar) with an electrolyzer (that produces hydrogen) and a hydrogen fuel cell system accompanied with a hydrogen storage system. This will provide the first industrial level “closed loop” microgrid, fully powered by renewable energy. BWR’s design is a scalable and modular design that will demonstrate the production and storage of energy efficiently, with zero carbon emissions, minimal maintenance, and no operating expense.

This system will be demonstrated at Grand Farm. BWR expects to demonstrate an electrical system capable of providing the entire electrical demands for a site, store sufficient energy to provide a buffer during periods of time when the sun isn’t shining and the wind isn’t blowing, and the capability for providing energy as a revenue source.

STATUS:
The contract has been fully executed.

Status Report – March, 2022
BMW Innovations provided a status report regarding the work they have completed from November 1, 2021 through February 28, 2022. The report states in part:

BWR Innovations has purchased equipment to create our clean energy generation. Critical components, such as fuel cell modules, electrolyzer, and carbon fiber hydrogen tanks have been purchased for integration. This activity is the first step in creating a standalone green energy system which will be integrated at a later date with solar panels and wind turbines to “capture sunlight and bottle the wind.”

Engineering models have been created for electrical, telemetry, and mechanical design. The electrical engineering efforts include harness designs for power and control and embedded software algorithms and control narratives for system operation. The telemetry engineering effort includes parameter selection for critical data, and software activities to transmit physical data points of a clean energy generator to a cloud-based data set for display, analysis and archival. Mechanical engineering efforts include design capture of the enclosure with mounting for all components, and mechanical engineering drawings for fabricators and assemblers.