TBG solutions
Understand, Engineer, Deliver.

GE Energy Case Study

GE Energy provides a broad array of power generation, energy delivery, and water process technologies to solve global challenges. The Power & Water division works in several areas of the energy industry, including wind and solar, biogas, and alternative fuels.

Testimonials

TBG Solutions delivered a reconfigurable, expandable and synchronised data logging network for full scale tidal turbine power train testing.

Understand

GE Energy is an industry leader in the R&D of renewable energy. The brief was to provide a data acquisition system to connect multiple sensors to a central server in order to monitor and control the test parameters of its marine turbines research facility.

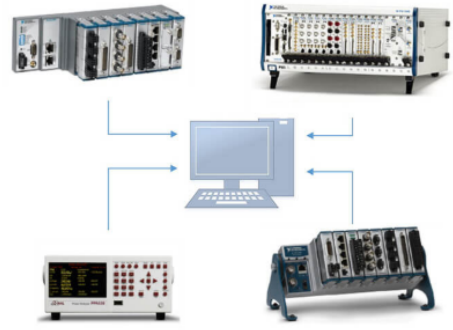
GE Energy

Engineer

Marine turbine nacelles would be placed into the system and seafloor current environments would be simulated in order to test both the efficiency and performance of the generators.

The system of sensors needed to be highly adaptable and configurable in order that multiple systems could be tested.

Due to the nature of the project there would be a lot of electrical noise, limiting the distance that data could be transmitted. This posed a problem since operations needed to be logged at high accuracy and in real time.



Deliver

The final system offered a high degree of flexibility being built on top of the National Instruments LabVIEW™ platform, with the set up being designed to use a generic code system. This made the system easily expandable with plug and play simplicity and allowed for minimal changes to be made to the system's architecture once sensors had been fitted to the nacelles.

Real-time data is channelled and gathered in a central server which forwards the data to the operator. Being controlled by independent GPS timing systems meant that data could be gathered and seen in sync in real time, ready for analysis and logging.

The facility is now ready to test manufacturer's latest designs in real time with an unparalleled level of accuracy and simplicity.