

# Orbit Magazine

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## Case Study: Remote Monitoring

Date : December 22, 2014



### REMOTE MONITORING

#### AN EXAMPLE OF HOW GE HELPS CUSTOMERS IN THE OIL & GAS INDUSTRY

**GE Engineers Remotely Investigate Offshore Generator Radial Probe Spiking.**

GE's Bently Nevada product line recently provided remote monitoring support to a North Sea offshore facility for a customer in the United Kingdom.

#### PROBLEM

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GE's Bently Nevada product line has a supporting services agreement (SSA) with an offshore platform in the North Sea. The platform has GE's System 1\* condition monitoring software installed on multiple compressor, pump and power generation trains logging vibration, process, performance and predictive emissions parameters.

A System 1 software alarm identified a direct amplitude problem on a generator radial vibration probe from one of the main power generation units. After an automatic email alert, GE engineers in its U.K.-based remote monitoring center connected remotely to System 1 to investigate. A review of the direct amplitude vibration trend revealed a gradual increase over several days. Further investigation identified an increasing spike on waveforms of the generator radial vibration probes, suspected to be electrical noise.

## SOLUTION

The GE team issued an exception report to the customer the same day as the alarm, recommending further investigation into the possible source of the suspected electrical noise. As the site's power generation units have spare capacity, the unit was taken off-line to investigate. The customer eventually traced the problem to a faulty power supply unit of another system located under GE's 3500 Series Machinery Monitoring System. The power supply was replaced and the unit was quickly returned to service.

## PAYBACK

A well-optimized System 1 provided early detection of a developing issue. Although the power generation at this site had spare capacity, allowing the platform to run on a single unit would increase the risk of losing total production should the other machine trip. Early identification of the faulty equipment saved a potential unit trip, and with the help of GE's remote support team, the customer avoided any unplanned mobilization of personnel to investigate.

## BENEFITS

- **Avoided Costly Travel.** Remote monitoring and diagnostics via System 1 prevented the need for support personnel to travel to an offshore location.
- **Early Detection.** System 1 also helped identify the problem early, which allowed the customer to plan downtime to investigate.
- **Avoided Downtime.** The increasing vibration could have eventually tripped the unit and caused increased downtime.
- **Historical Documentation.** Documentation of this event can help enable immediate resolution of similar future events, which should help the customer avoid additional downtime for related issues.

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