



# Case study:

## Upgrading technology for better site-wide condition monitoring



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**Tim Harrison,**  
**Maintenance**  
**and Outage**  
**Supervisor,**  
**NewGen**  
**Power**  
**Kwinana**



### A better understanding of machine condition

The maintenance team at NewGen Power Kwinana now have greater visibility of machine health, can save on costs and have a management-approved pathway to upgrading to world-class monitoring technology.

#### Challenges

NewGen’s maintenance team were relying on protection systems to safeguard their assets, collecting vibration data via an outside contractor once a month. Without the monitoring equipment to collect and analyse data themselves, the team didn’t have visibility of early fault signals that could help them avoid trips and failures.

With a small team to keep equipment running, Maintenance and Outage Supervisor Tim Harrison wanted to increase their ability to detect faults early and give all stakeholders access to the data they need to improve reliability.

Tim Harrison wanted to upgrade on-site equipment and allow the team to do some of its own analysis, but the significant cost of upgrading was an objection from management.

## A three year-plan

A tiered plan was devised that would spread cost over three financial years, so that it was possible to upgrade.

### Year one

Purchase a vb7 vibration analyser and some Ranger wireless vibration sensors, which collect data daily to increase data collection frequency.

### Year two

Permanently mount vbOnline units and deploy the wireless Ranger units to problem assets in hard to reach places.

### Year three

Connect all monitoring equipment to System 1 to give the maintenance team a single site-wide view of machine condition.



## A clear path to better condition monitoring

NVMS devised an upgrade path that would arrive at the team's preferred solution: GE's System 1, a system that brings all process and monitoring data into one platform for analysis.

Tim Harrison said that NVMS had been very helpful in helping him justify the upgrade path to management.

"The guys from NVMS have been very proactive and very patient with us – they gave us all the information and then let us make a decision. It has been first class," Tim Harrison said.

"Some people would say they are just salesmen trying to sell us a product, but they seem to have a genuine understanding. The first part was to understand exactly what we wanted and to see where we wanted to get to in three to four years' time. They set up a pathway, which made it easy for me then to pass the right information and get the decisions made by our management team."

## Benefits of a better system

Improved on-site data collection capability has given NewGen Power Kwinana the ability to cut costs on external contractors.

"My plan this coming year is to only use a third party contractor to analyse the data: we will collect the data ourselves. At the moment I'm paying two days a month, but we will see a 50 percent saving because we won't be paying someone to come to site."

The new equipment also gives the maintenance and operations teams visibility of machine condition, which will help them avoid downtime.

"If we have more up to date and accurate information we will save money because we can avoid malfunctions and trips."

## Customer care with NVMS

Tim Harrison said the customer service from NVMS has been first class. Not only did NVMS come to site to help during the sales process, but they helped with product selection, justification and followed up with installation. NVMS also trained the team how to use the new equipment.

"They didn't just give it to us and say 'here it is'. They actually made sure it worked and was fit for purpose for us, which is really good."

With five-year support and warranty supplied with all the GE's Bently Nevada product line, Tim Harrison is assured that NVMS will be able to support his team's condition monitoring program now and into the future.