

# Nuclear Power Generation

Increasing reliability and operator awareness by transitioning to a modern DCS.

## Background

Our client, a nuclear power generation company who we had previously performed HMI services for their new Turbine Control System, needed additional monitoring points from their Bently Nevada system.

## Process

We used a Honeywell Experion SCADA solution communicating Modbus TCP to a Bently Nevada Turbine Monitoring System. We brought the Bently Nevada points into Honeywell in order for the Bently Nevada to be integrated with the clients existing turbine controls on their Honeywell system. Using our Honeywell expertise, we combined the various Bently Nevada signals in such a way that the standard Honeywell graphic symbols could be used on the graphic displays. This provided the operators with a consistent graphical interface for process visualization and alarming, regardless of whether the I/O originated from the Bently Nevada system, the Turbine Control System, or native Honeywell I/O. The Honeywell system also drove physical alarm annunciators in the control room.

We added three hardware points to drive the physical annunciator, SCADA points to communicate with the Bently Nevada, and several Honeywell HMI graphics to visualize the Bently Nevada system.

With a nuclear plant, monitoring key turbine parameters such as bearing temperature and vibration, and making the data available on the same HMI as the Turbine Control System, increases reliability and uptime by alerting operators to problems with the turbine operation.

## On Schedule, On Budget

Our client transitioned from 1960s panelboard monitoring control technology to a modern DCS, increasing reliability and operator awareness. The project was delivered on budget and on time for the refueling outage.

## Solutions

Modbus

Honeywell Experion

Honeywell HMIWeb  
Graphics

## Impact

Increased  
reliability, uptime,  
and operator  
awareness

