**Portland General Electric Company Description**

Operating in 52 Oregon cities, Portland General Electric Company serves approximately 829,000 customers, including more than 100,000 commercial customers. PGE receives oversight from state and federal regulatory agencies, including the Oregon Public Utility Commission and the Federal Energy Regulatory Commission.

As Oregon’s largest utility, the PGE service territory attracts major employers in diverse industries, such as high technology and health care. Economic growth in northwest Oregon continues to fuel the customer growth rate.

PGE has a diverse mix of stable generating resources that include hydropower, coal and gas combustion, wind and solar, as well as key transmission resources. These 15 power plants have a total combined generating capacity of 3,357 MW.

By managing PGE’s own power plants in conjunction with the available power supplies on the wholesale market, management believes that fully integrated power supply operations provide the flexibility and efficiency necessary to effectively balance the power supply resources to achieve the lowest possible cost for customers.

Portland General Electric is focused on providing reliable, responsibly generated power at a reasonable cost. To accomplish this requires a broad mix of generation resources. While some utilities obtain their power from one or two sources, PGE relies on seven different sources. This greater diversity of power supply contributes to higher reliability and more stable prices.

**Program Highlights**

Portland General Electric Company regards equipment reliability as an indispensable component of our Generation Excellence business practices. Increased equipment reliability results in valuable improvements to business performance regarding safety, health, environment, sustainability, regulatory compliance and generation availability. Employees are responsible for reliability and strive for excellence in this area every day.

The Generation Reliability team mission is to integrate leading reliability engineering and maintenance practices into a continuous improvement process designed to reach PGE’s maximum potential in a safe working environment. Through the implementation of these practices, PGE sustains improvements in safety, availability, workforce efficiency, risk reduction and increased reliability of our generation assets.

**Hardware/Software**

Below is the list of instruments that we use for predictive maintenance, condition monitoring, maintenance strategy development and root cause analysis:

- **Vibration Data Collection**
  - Bently Nevada Adire 408
  - Bently Nevada Scout 100
- **Ludica VibExpert**
- **Thermography**
  - FLIR T-400
  - FLIR T-300
- **Ultrasound**
- **UE15000**
- **Oil Analysis**
  - CSI MiniLab
  - OSA4 MiniLab
- **Motor Testing**
  - Baker Explorer

Additionally, PGE’s NDT lab contains various materials testing equipment for validation material composition and properties in the lab and field environment. Most recently, PGE has begun the field use of the Bruker Q4 Mobile OES spark spectrometer testing for validation of materials installed in plant prior to repair or replacement.