

# The impact of a deterministic control system on Gas Turbine Operations

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## Audience

This presentation is applicable for all disciplines involved with Gas Turbine operations. From on-site operators, to experienced reliability engineers and asset owners.

## Training Description

There is a huge offering of control systems in the market that are used for all sorts of applications. It is a challenge to have an overview of what impact a control system has on the operation of your asset. During this course, we will take you through three vital topics that are related to a control system:

- Troubleshooting a gas turbine using a control system
- Signal Accuracy & Processing predictability
- Energy Transition

At the end of this course you'll be able to understand how a control system can be used to troubleshoot your asset, how signal accuracy and processing determines the efficiency of a turbine and how the energy transition is supported by a well specified control system.

## Training Learning Objectives

As the course is tailored for a variety of disciplines in relation to Gas Turbine operations, participants will have a diversified outcome that can be useful for them.

During the first part of the course, troubleshooting, the participant will appreciate what signals to look for and how a control system can help identify what sequence is causing an issue. You'll also see that most mechanical problems in the field show up as a control system related problem.

The second part of the course, we'll dive deeper into how to calculate the signal accuracy, what influence a filter has on that and what it means on the signal processing time and efficiency of the turbine. Furthermore, you'll learn to understand what a deterministic control system is and what impact the signal processing buffer has on P&ID accuracy.

The last topic in the course is to cover the future of our industry, we see that a lot of new policies and directives are being rolled out by governments, but we have a technical challenge as to how to execute these policies

and directives. A control system plays an integral role in the future scenario using alternative fuels, but also utilising existing assets to the maximum.