



A change in how we consider our maintenance strategies

EEA APEX Presentation

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About Me

- Dog mum
- Electrical Engineer
- Twizel

The slide contains two photographs. On the left is a close-up of a black and tan dachshund puppy sitting on a wooden deck. On the right is a wide-angle photograph of a large concrete dam with a reservoir behind it, set against a backdrop of rolling hills and a clear sky.

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About Me


- Electric Vehicle charger installs at our Hydro sites and offices

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What's this all about?

Site equipment → PLC → PI



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What's this all about?



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Preventative Maintenance

Cons:

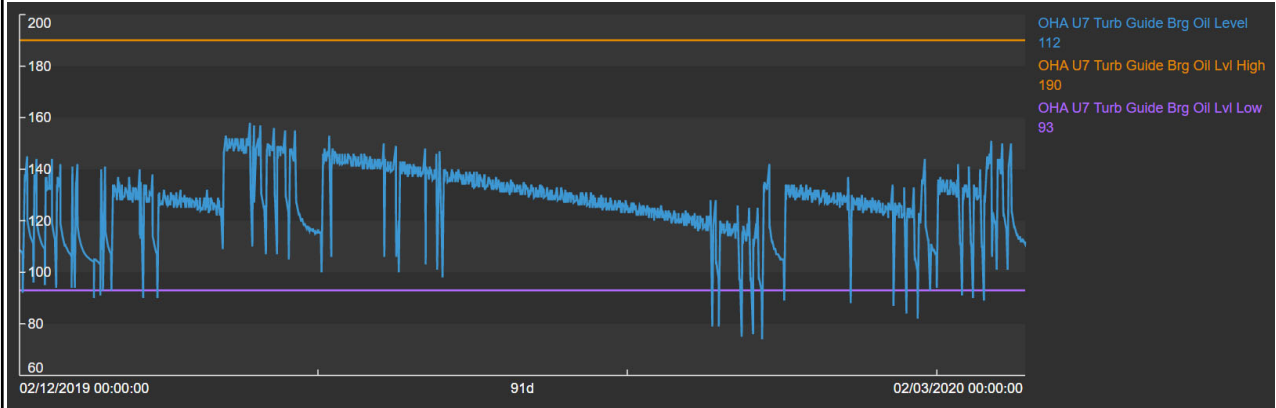
- Longer outages
 - More resources
- ➔ Higher carbon emissions

Pros:

- Scheduled
 - Spread across sites
- ➔ Control maintenance demand

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Predictive Maintenance



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Predictive Maintenance

AVI Metal Temp Has generated an Alert for the Steady State Temp is High

Pi.Alert
To: Jessica Silcock

Navigation icons: back, forward, search, etc.
2:19 pm

Steady State Test : AVI Metal Temp Steady State
Event Frame Start time: 1/01/1970 12:00:00 a.m. New Zealand Daylight Time (GMT+13:00:00)
SteadyState: 50.10
SteadyState2: 51.52
Imin Steady State at Start time: 50.00

This is a POC for the Steady State Temp High test

Path to display: <https://piportaltest/PIVision/#/Displays/761/SteadyStateTest>

AVI U1 Steady State Metal Temperature

ANALOG_AV1_01_MED10T0100TM: 50.10 dec. C	
ANALOG_AV1_01_MED10T0200TM: 51.50 dec. C	
MAX Temp Limit: 93 °C	MIN Temp Limit: 50 °C

Current Steady State Temp

TGBrg_Metal_Temp_1	TGBrg_Metal_Temp_2
51.57 °C	50.20 °C

Max and Min Steady State Values

TGBrg_Metal_Temp_1_Steady_State_AV1_Max: 90.01 °C
TGBrg_Metal_Temp_1_Steady_State_AV1_Min: 49.67 °C
TGBrg_Metal_Temp_2_Steady_State_AV1_Max: 51.60 °C
TGBrg_Metal_Temp_2_Steady_State_AV1_Min: 51.20 °C



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Predictive Maintenance

Cons:

- Cluster of maintenance → Higher carbon emissions

Pros:

- Reduced outage duration
- Extended life expectancy → Reduced emissions
- Reduced travel

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Predictive Maintenance – How far can we go?



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Summary

