

# The Smartest Path to Power

How Artificial Intelligence and Machine Learning Helps Aeroderivative Turbines to Generate More Power with Less Fuel and Emissions



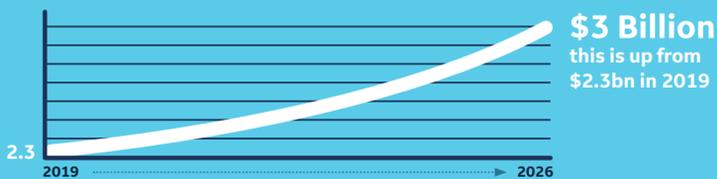
## Electricity

Over the next 20 years, 74% of electricity additions will come from solar and wind. But the sun doesn't always shine. And the wind doesn't always blow. So how can you bring **more agility** to traditional energy production – **fast?**<sup>1</sup>



## Start

You can respond to power generation needs in as little as 5 minutes with an aeroderivative turbine. Despite the added agility, efficiency is more elusive. Aeroderivative turbines typically require manual seasonal tuning, but digital solutions like our **Autonomous Tuning software** can help.



The aeroderivative turbine market is set to exceed **\$3bn by 2026 – up from \$2.3bn in 2019<sup>2</sup>** – fueling a balanced energy transition for power generators in the US, Canada, Europe and the world over.



## 1 month setup

Realize the full potential of your aeroderivative turbine. Go from the integration and setup of our Autonomous Tuning software to reduced emissions and fuel consumption with no input needed from your plant staff in just one month.



## Optimized combustion

Autonomous Tuning uses artificial intelligence and machine learning (AI/ML) to send real-time adjustments **every two seconds** – maintaining ideal flame temperatures and fuel splits.

## Automated operation

Learn. Control.

These two modes of automated operation are linked by a step that allows users to build a tailored ML model.



**Learning**  
Explore the space of operation



**Building**  
Build ML model with learning data



**Controlling**  
Find optimal operation for current conditions

## Reduced fuel & emissions

Driven by our Autonomous Tuning software, power plants can deliver...

**1% less fuel and CO<sub>2</sub>**  
Reduce fuel consumption by as much as 1%.

**14% less CO**  
Cut Carbon Monoxide (CO) emissions by up to 14%.

**12% less NO<sub>x</sub>**  
Cut Nitrogen Oxides (NO<sub>x</sub>) emissions by as much as 12%.

## Rapid returns

Payback your investment in less than a year through reduced fuel consumption, emissions, and O&M costs...

**\$ 100-500k**  
Heat rate optimization can save up to \$100-500k.

**\$ 117k**  
The removal of manual tuning costs and associated downtime can eliminate up to \$117k over the first year.

Help your business deliver rapid returns on a balanced energy transition.



**Request a call** with the GE Digital team to learn more about **Autonomous Tuning**.

Download our new whitepaper, **“Sustainability & Profitability”**, to explore the impact of digital solutions on your decarbonization journey.



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