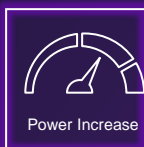
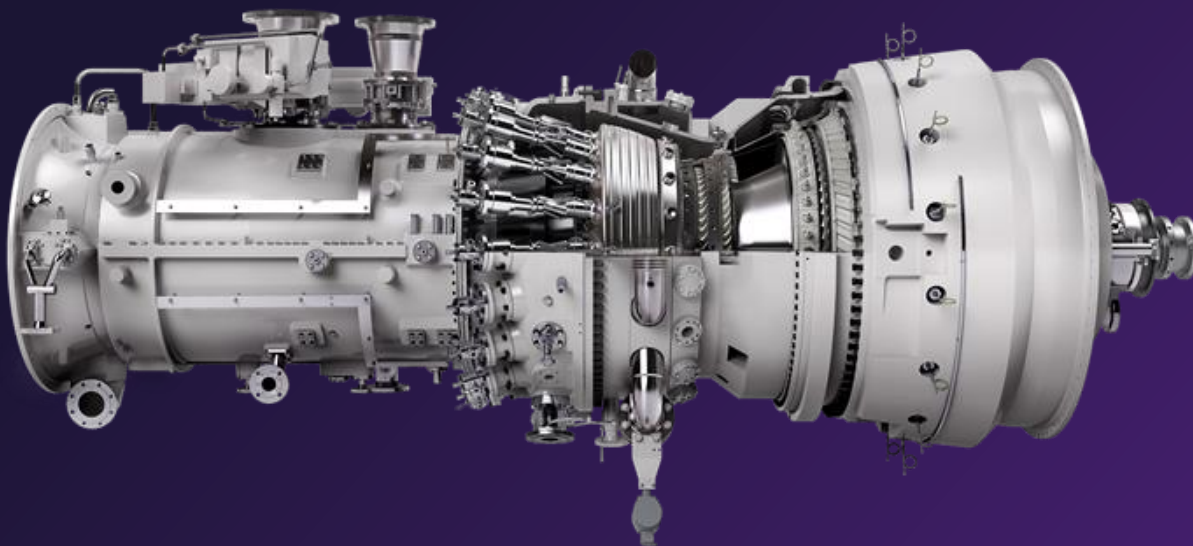
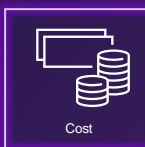


# Performance enhancement of your SGT-700 to 33 MW

Increase energy efficiency and power output



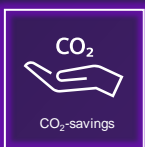
Power Increase



Cost



Efficiency



CO<sub>2</sub>-savings



Availability



+1%\*  
Efficiency



- 11 kg CO<sub>2</sub>  
per MWh<sub>el</sub>

## Product Overview

Siemens Energy offers a solution to increase the power output from your existing SGT-700. The performance enhancement product is applicable for all SGT-700 to go from 29-31 MW up to 33 MW rating. This cost-effective and simple retrofit approach ensures down-time is minimized, while performance, power and operator profitability are optimized.



## Improved Features

- Burners – burner tip is improved with better cooling and better pilot flame stability
- Combustor – improved heat shield cooling, optimized cooling of outer liners, increased thickness of TBC
- Vane #1 – reduced diameter and number of cooling holes, TBC on airfoil and platform
- Blade #1 – TBC on airfoil and platform, new core with separate LE cooling channel
- Vane #2 – closed angle to improve performance
- Blade #2 – TBC on airfoil and platform
- Heat shield 2 – new design, abrasion coating for minimized tip clearance
- Turbine Vane #3 – addition of oxidation coating
- Control system – adjusting firing temperature and associated control set points



## Benefits

- Improved power output and efficiency
- Reduction of CO<sub>2</sub> emissions per produced MWh and less fuel cost
- Increased revenue from more power produced
- Improved input data for combined cycle operations
- Smooth installation during planned major overhaul



## Scope of work & Implementation

- Evaluating status of gas turbine and expected performance improvement according to customer operation conditions, reviewing auxiliary cooling capacity and downstream equipment capacity is necessary.
- Performance evaluation for power output and efficiency to be tested before and after installed upgrade.

