

Operational Flexibility & Emission Reduction via Steam Turbine Brownfield Footprint Solution on oOEM Equipment



Initial study where the engineer is working to identify the ideal SST-DR turbine type that has 10% increased output power as per customer requirements but at the same time fit in to the existing tight spaced turbine rooms

 Reliability	 Availability	 Efficiency	 CO ₂ -savings
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Increased Efficiency

CO₂ Up to 30% CO₂ reduction potential due to repowering

Client Needs & Challenge

A power generation customer was exploring to modernize their old fleet of 3 GE frame DRV-631 BFP turbines with a very limited changes to site assets and configuration. Customer was looking to achieve more power, more operation flexibility in terms of quicker starts and reduction in operating cost.



Solution and Improved Features

Siemens Energy offered custom designed modification where oOEM turbines were successfully replaced with SST-DR machines. Solution included:



- Complete new turbine tailored to the customer parameters that can be setup on the existing foundation
- Only minor to none modifications required for the piping and periphery

Benefits¹

- Turbines with 10% increased output power were fitted with the same special requirements as the older GE turbines
- Up to 30% potential decrease in CO₂ emissions due to repowering
- Cost and productivity benefits from quicker start and increased lifetime expectancy of the turbine



Scope of work & Implementation

- The transition process starts with a study followed by a customized new turbine footprint solution

