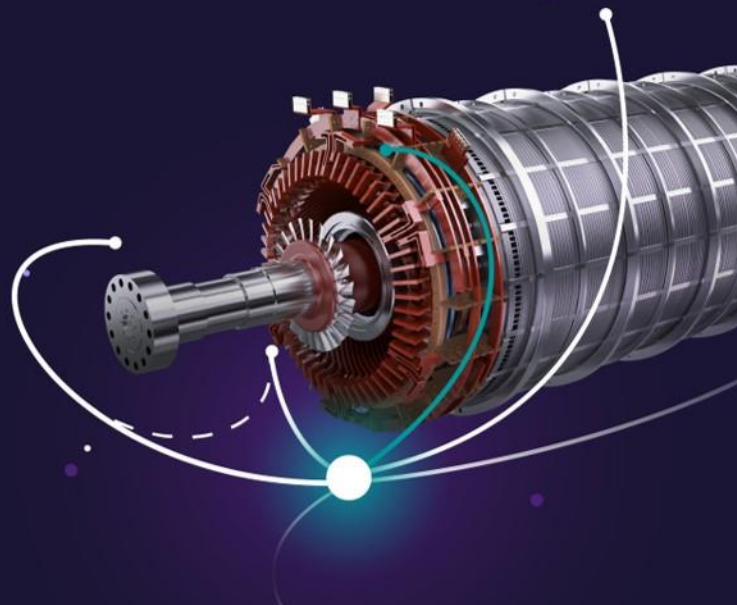


Hybrid Rotating Grid Stabilizer Conversion Solution for Dual Mode Operation

Maximize asset utilization to secure existing and unlock new revenue streams by transforming existing power plants. Intended to enable and backup a high amount of renewable power infeed into the grid.



Flexibility
• Operational Flexibility

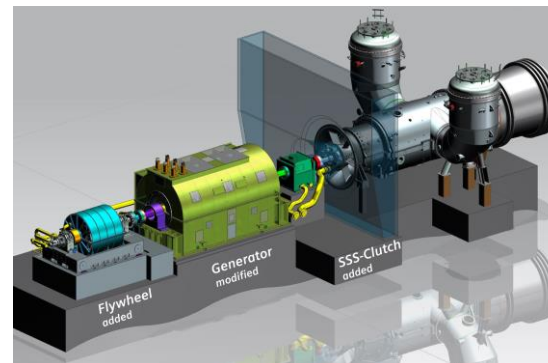
Sustainability
• Carbon Footprint

Cost Optimization
• Operating Expense

Intended Benefits

Grid stabilization can become increasingly important with the rising share of renewable power generation that can lead to a lack of short-circuit power and inertia in the grid.

- Maximized flexibility via enabling dual mode operation: Power generation mode and grid stabilization mode
- Participation in capacity market as well as unlocking new revenue streams in the grid stability market
- Reduction of blackouts in volatile grids by significantly increasing system inherent inertia via adding rotating mass by means of integrating an optional flywheel
- Future economic operation by reusing existing power plant equipment, grid connection and permits
- Site conversion can help avoid stranded generation assets
- Dynamic voltage control via reactive power compensation



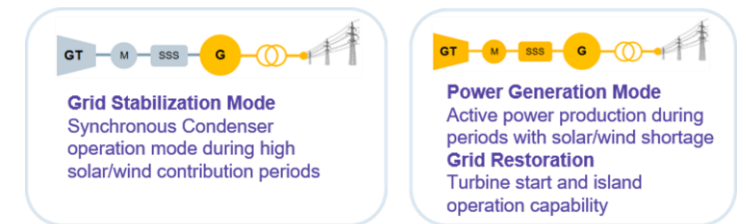
Gasturbine Generator Turboset converted to Hybrid Grid Stabilizer

Scope

Siemens Energy provides tailor-made turnkey Rotating Grid Stabilization Conversion Solutions to address your needs based on our proven technology and execution experience.

Existing turbo-sets in fossil power plants can be converted to rotating grid stabilizers targeting maximized flexibility:

- Analysis of existing assets including lifetime assesment
- Hybrid conversion via integration of a SSS-Clutch in between the generator and the turbine
- Optional installation of flywheel with scalable and customized design
- Adaption of the foundation to enable installation of the additional clutch and the optional flywheel
- Modification of the existing SFC or integration of a new startup system
- Adaption of I&C, protection and electrical systems



Dual Mode Operation Scheme for RGS

Legal Disclaimer

Full Disclaimer

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