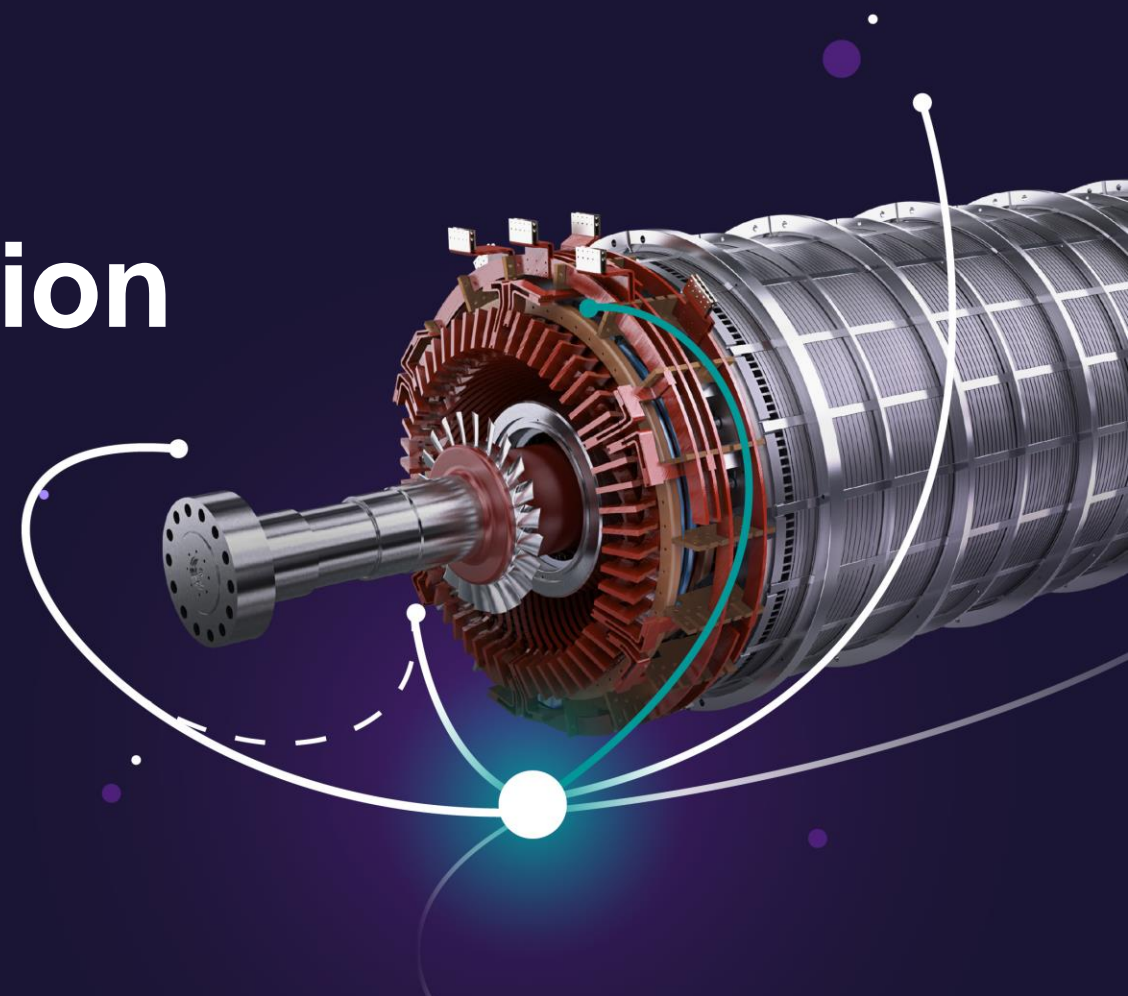


Hybrid Rotating Grid Stabilizer Conversion Solution for Dual Mode Operation

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



Est. Lead time
18 months



Min. event type
Other



Fleet experience
> 5 units

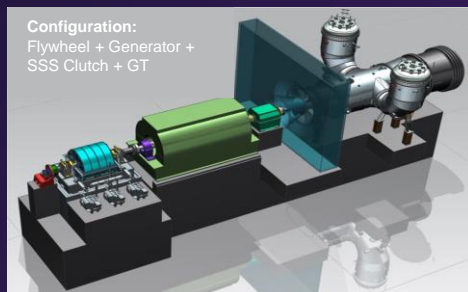
Hybrid Rotating Grid Stabilizer Conversion Solution for Dual Mode Operation

Intended Benefits



Grid stabilization becomes increasingly important with the rising share of renewable power generation that leads to a lack of short-circuit power and inertia in the grids worldwide.

- 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
- Avoid black outs in volatile grids by significantly increasing system inherent inertia via adding rotating mass by means of integrating an optional flywheel
- Secure future economic operation by reusing existing power plant equipment, grid connection and permits
- Site transformation to avoid stranded generation assets
- Dynamic voltage control via reactive power compensation
- Ensure grid resilience by short circuit power contribution



Gasturbine Generator Turboset converted to Hybrid Grid Stabilizer

Sustainability



- Enabler for Energy Transition
- Grid Resilience

Availability



- Improve Asset Utilization

Flexibility



- Operational Flexibility

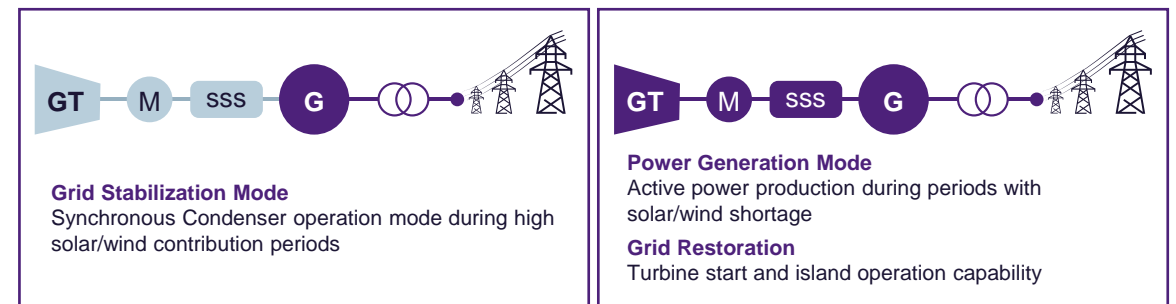
Scope



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 life time assessment
- Hybrid conversion via integration of a SSS clutch in between the generator and the turbine
- Optional installation of flywheel with scalable and customized design
- Adaptation of the foundation to enable installation of the additional clutch and the optional flywheel
- Modification of the existing startup frequency converter (SFC) or integration of a new customized startup system
- Upgrade of the I&C and protection systems as well as integration into the existing plant electrical systems



Dual Mode Operation Scheme for RGS

Legal Disclaimer

Full Disclaimer

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