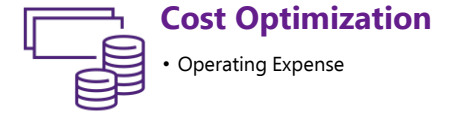
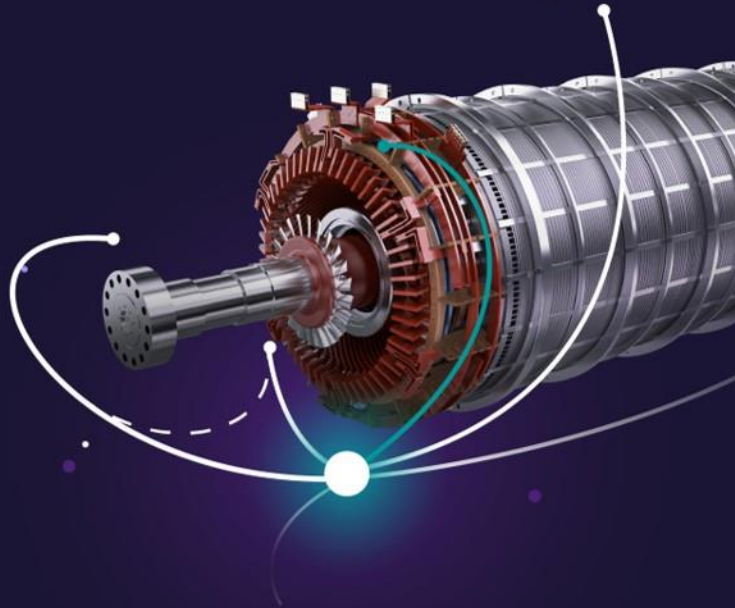


Rotating Grid Stabilizer Conversion Solution with Flywheel

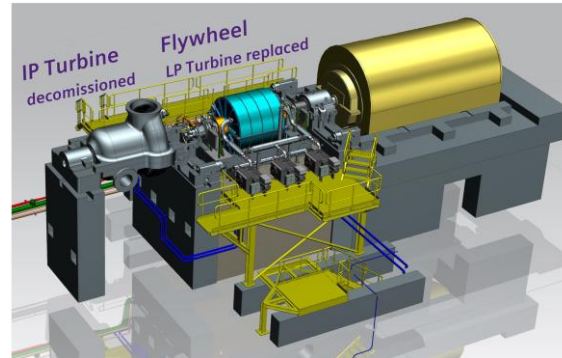
Help avoid power system blackouts with additional inertia and unlock new revenue streams by transforming existing power plant assets. Intended to enable a high amount of renewable power infeed into the grid.



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.

- Reduction of blackouts in volatile grids by significantly increasing system inherent inertia via adding rotating mass by means of a flywheel
- Economic advantage in contracts with the TSO by optimization of frequency stabilization capabilities
- Future economic operation by reusing existing power plant equipment, grid connection and permits
- Site conversion to unlock new revenue streams and help avoid stranded generation assets
- Dynamic voltage control via reactive power compensation
- Promote grid resilience by short circuit power contribution



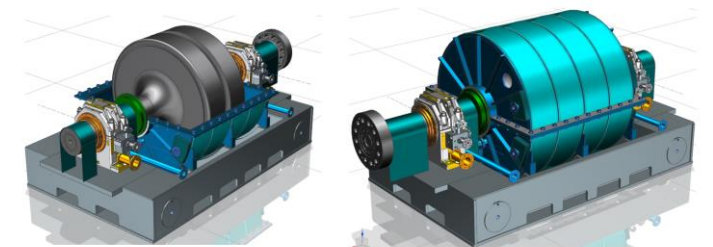
Steam Turboset: Low Pressure Turbine is replaced with a Flywheel

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 thermal power plants can be converted to rotating grid stabilizers with increased inertia contribution:

- Analysis of existing assets including lifetime assessment
- Decommissioning and dismantling of turbine components
- Integration of a flywheel with scalable and customized design into the existing shaft configuration
- Adaption of the foundation to enable installation of the additional flywheel including its auxiliary systems
- Installation of a hydro motor with SFC or a pony motor with a VFD for startup and accelerating the generator
- Adaption of I&C, protection and electrical systems



Scalable Flywheel Solution to increase System Inertia

Legal Disclaimer

Full Disclaimer

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