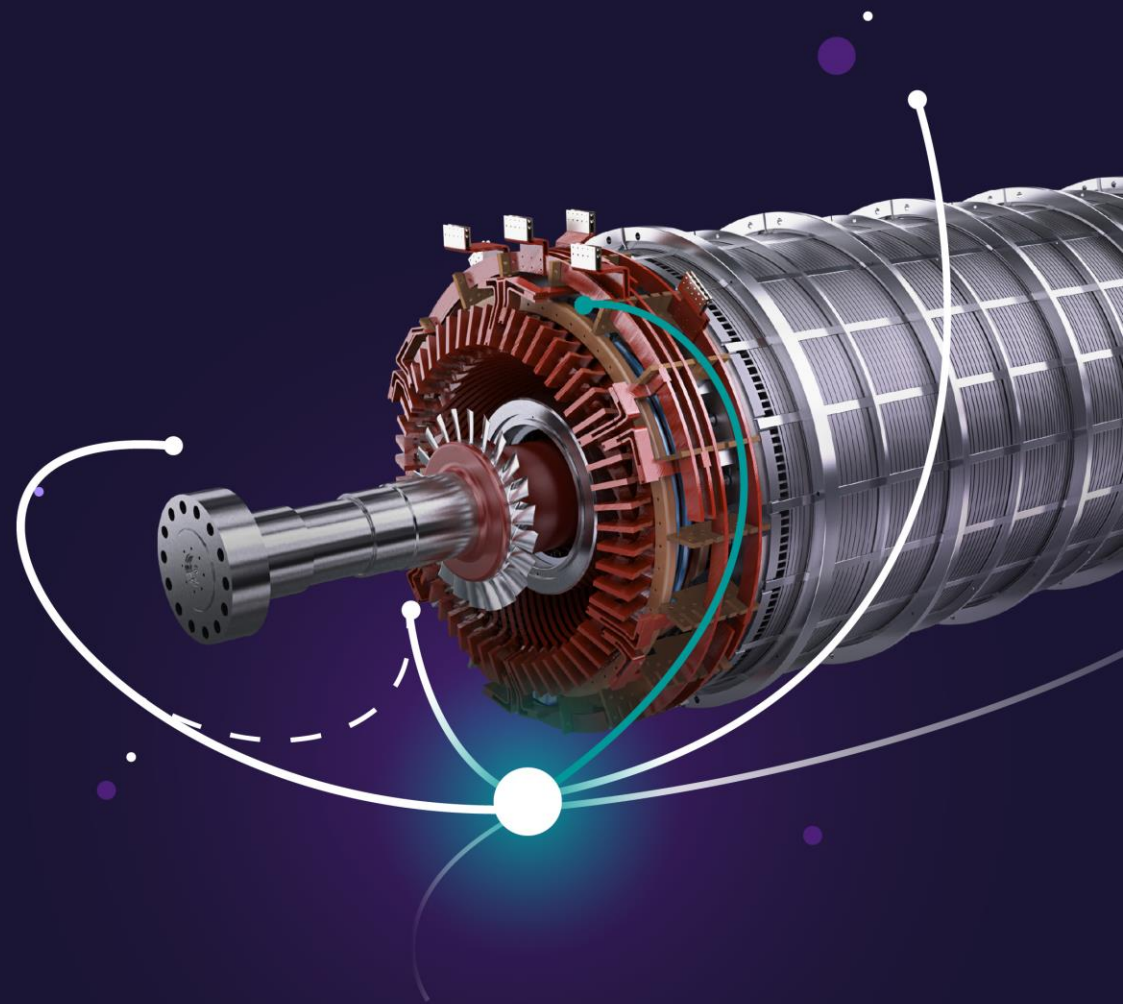


Basic Rotating Grid Stabilizer Conversion Solution

Cost optimized solution enabling a high share of renewable power infeed by balancing and stabilizing the grids. Transformation of existing power plant assets to unlock new revenue streams.



Est. Lead time
6 months



Min. event type
Other



Fleet experience
> 15 units

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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 inherent inertia in the grids worldwide. Our solution is targeting the following benefits:

- Site transformation to unlock new revenue streams, achieve economic future operation and thereby avoid stranded power generation assets
- Secure future economic operation by reusing existing power plant equipment, grid connection and permits
- Implementation at comparably low costs within a short execution time of approximately 6 months
- Dynamic voltage control via reactive power compensation
- Avoidance of black outs in volatile grids via inherent response to sudden load imbalances
- Ensure grid resilience by short circuit power contribution

Scope



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

Turbogenerators in phased out thermal power plants can be converted to rotating grid stabilizers with minor changes comprising the following steps:

- Analysis of existing assets including life time assessment
- Decommissioning and dismantling of turbine components
- Installation of a hydro motor with a static frequency converter (SFC) or a pony motor with a variable frequency drive (VFD) for startup and accelerating the generator
- Upgrade of the I&C and protection systems
- Integration into the existing plant electrical systems
- Optimization of turbine train auxiliaries as well as Balance of Plant systems



Sustainability



- Enabler for Energy Transition
- Grid Resilience

Availability



- Improve Asset Utilization

Power



- Reactive Power Contribution

Bilibis - A Nuclear Power Plant converted to a Basic Rotating Grid Stabilizer

Frequency Stabilization



System Inertia



Short-Circuit Power



Voltage Control



Key Grid Stability Parameters provided by Rotating Grid Stabilizers

Legal Disclaimer

Full Disclaimer

This is not an offer to sell. Prices, if any are stated, are not firm and are estimates for indicative purposes only. Among other things, this indicative price is based upon certain assumptions, such as availability of resources, existing plant, configurations, and other factors, and excludes any insurance, escalation, currency exchange risk, duties, tariffs, taxes of any kind, mobilization/demobilization, and other charges.

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