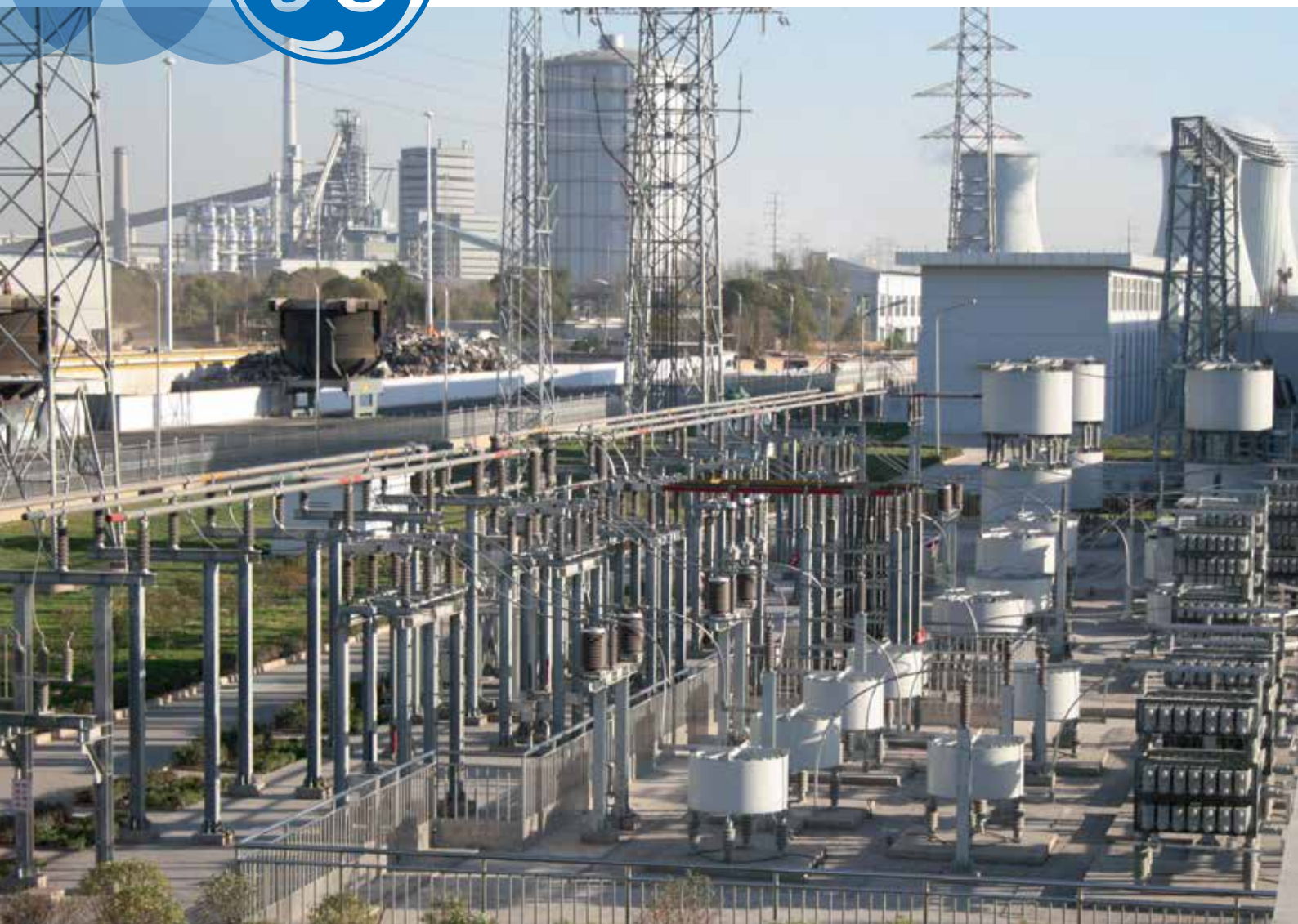


GE
Power Conversion

SVC and STATCOM

(Static VAR Compensator and Static Synchronous Compensator)

Proven power electronics technology to strengthen
grid operation



The grid stability challenge

How do you maintain grid stability and voltage control in both steady-state and transient conditions in today's world? The evolving power generation scene is becoming ever more challenging for Transmission System Operators – a larger share of renewables, retirement of base-load plants, increased environmental regulation and greater cross-border trading are all making grid stability more complex.

To maintain reliability and quality of power supply in this environment, economical and efficient solutions are needed to provide dynamic voltage support and fast reactive power compensation.

Local grid strengthening - easy to integrate

SVC and STATCOM belong to GE's power quality range and have been specifically designed to ensure dynamic voltage control as well as increased power transfer capabilities. They are easy to integrate into both new and existing grid structures, and can help improve grid reliability and avoid significant upgrade costs for grid connections. Both are suited to various applications including transmission and distribution lines, renewable energy and industrial plants.

Full system solution

GE can offer a full SVC or STATCOM substation engineered system solution including power system analysis, engineering, power electronics, controls and dielectrics.

- 20+ years industry experience
- 100 SVCs and STATCOMs installed
- 6000+ MVar installed

Benefits

- Well proven technology for reliable operation
- Local grid strengthening and VAR support for higher productivity and power quality
- Easy to integrate into new and existing grid infrastructure
- Helps reduce network extension investment costs
- Meets grid code compliance requirements
- Modular hardware for maximum flexibility and optimized footprint
- Low noise emissions – audible and electrical



Key features

SVC (Static VAR Compensator)

GE's SVCs are built around our well proven high-power thyristor valves which are widely used for industrial and transmission applications.

SVC system capability

- Thyristor-based technology
- From 20 MVAR to 600 MVAR
- Controls based on industry standard components
- Remote monitoring and diagnostics
- Solutions for industrial and grid applications
- Containerized options

SVC thyristor valves

- Range up to 300MVAR
- Voltages up to 63kV
- Power circuit consisting of two or three stacks
- Snubbers, divider resistors for thyristor protection
- Water-cooled
- Easy to maintain



STATCOM (Static Synchronous Compensator)

GE's STATCOMs are based on our proven range of Voltage Source Converters (VSC) with demonstrated capability in energy and industrial applications such as wind power, mining, melting shops and other industries using IGBT technology.

A STATCOM offers better dynamic performance than a SVC, in particular a faster response time as well as the ability to generate or absorb reactive power when the grid voltage drops. It therefore helps increase reliability and availability of grid operation.

A STATCOM is also well suited for industrial applications to reduce voltage flicker e.g. generated by electrical arc furnace.

STATCOM system capability

- Valve based on IGBT press-pack technology
- Power range up to 300 MVAR
- Stepless adjustable $\cos \phi$
- Transformer to connect to high voltage grid
- Air- or water-cooled
- Air conditioned option
- Remote monitoring and diagnostics
- Controls based on industry standard components
- Containerized options



Service from GE – minimizing risk, maximizing productivity

We understand the vital importance of process availability – and our focus on service keeps us actively engaged, both when things are going right, and when they are going wrong.

With a comprehensive global network of service engineers and technicians, GE is uniquely positioned to provide the knowledge, experience and skills for your full range of industrial service requirements—protect assets, maintain critical processes, minimize risks and maximize productivity. We deliver original equipment spares around the world as well as repair, refurbish

and upgrade customer systems with the latest technology. We offer risk protection through contractual services based on our system experience and sophisticated application calculations. Through advanced digital platforms, we deliver expert onsite and remote emergency 24/7 support, intervention and planned maintenance customized to meet unique customer requirements.

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