

# More Power for São Paulo

46° west, 23° south



**Facts about the project:**  
By providing the equipment for a large-scale substation, Siemens played a major role in ensuring that the growing demands for electrical power in western São Paulo could be met.

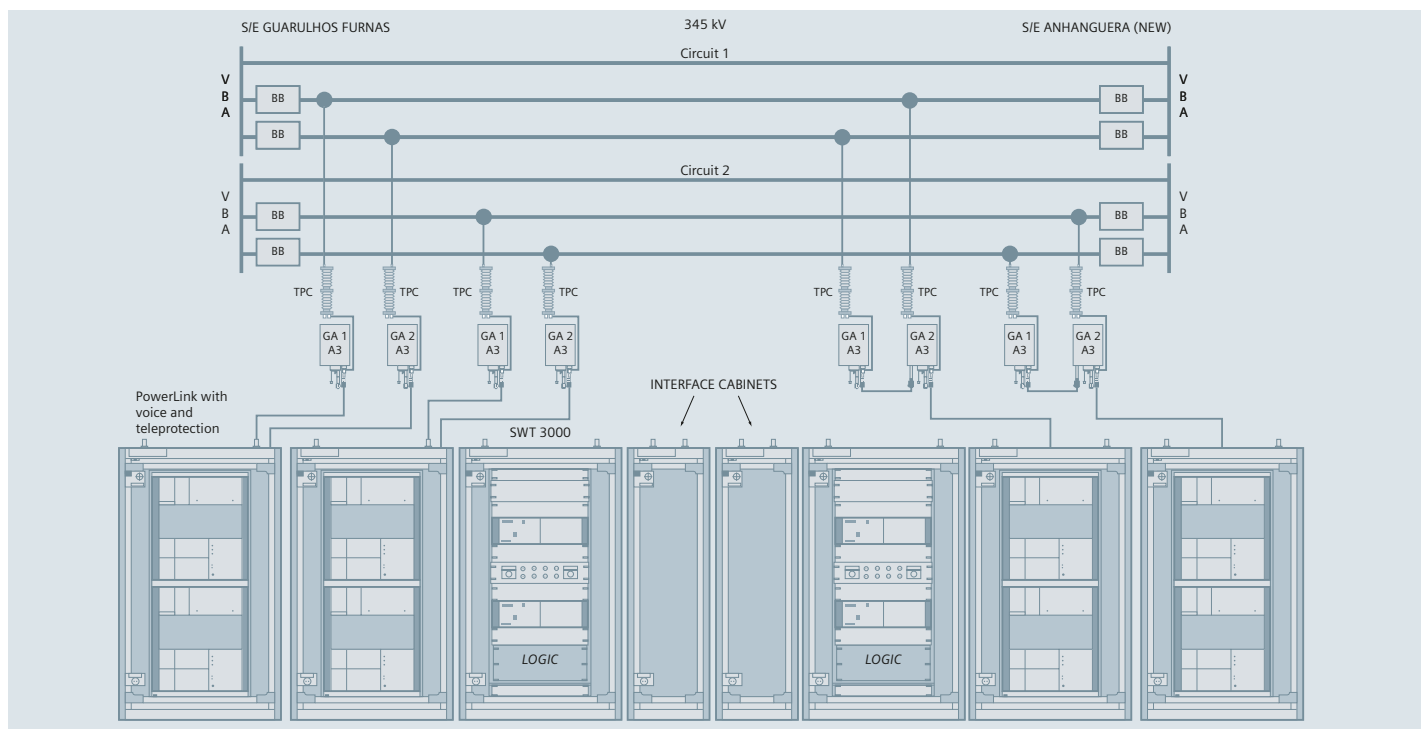
Companhia de Transmissão de Energia Elétrica Paulista (CTEEP) is the biggest power company in the State of São Paulo, Brazil. The company supplies its customers with about 136,000 GWh of electricity using a power grid that is 12,140 km long. However, the demand for more power continues to rise due to the region's dynamic growth. For this reason, the goal of the project described here was to rapidly expand the utility company's existing capacities to meet increasing power demands.

CTEEP, São Paulo, Brazil

Answers for energy.

**SIEMENS**

## CTEEP, São Paulo, Brazil



### The challenge:

The region's strong economic growth over the past several years has driven the demand for electricity upward. And this has impacted the power company's infrastructure significantly. New, high-performance substations were needed to ensure that end customers, especially those in industrial segments, could be reliably supplied with ample electricity. In January 2006, Siemens was contracted to equip a large-scale substation serving the western districts in the city of São Paulo. The contract included key automation, telecommunication, and disaster-protection systems. As this project was critical to the development of the entire region, timely completion of the substation was stipulated in the contract.

### Our solution:

In order to complete the project within the defined timeframe, and to ensure that the substation would deliver the power capacity required, Siemens insisted on installing the most modern technologies and components available. Communications are based on an optical ring with SDH and MUX equipment, and is managed by the CTEEP control center. The protection signaling system is configured redundantly and is regulated by the PowerLink and SWT 3000 modules. The communications network also uses the fiber optic network and accesses it via FMX multiplexers, or via Asga (an externally sourced product) for SDH. Making sure that power is transmitted smoothly, especially over long distances, was a major challenge.

The project was successfully completed in September 2007, and received PAC-certification at the end of 2008. Since then CTEEP has been able to permanently improve the monitoring of critical areas – and thus also the supply quality – in São Paulo.

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Power Distribution Division  
Order No. E50001-G720-A107-X-4A00\_36  
Printed in Germany  
Dispo 06200, c4bs No. 7433  
GB 090368 481043 WS 04101.5

Printed on elementary chlorine-free bleached paper.

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