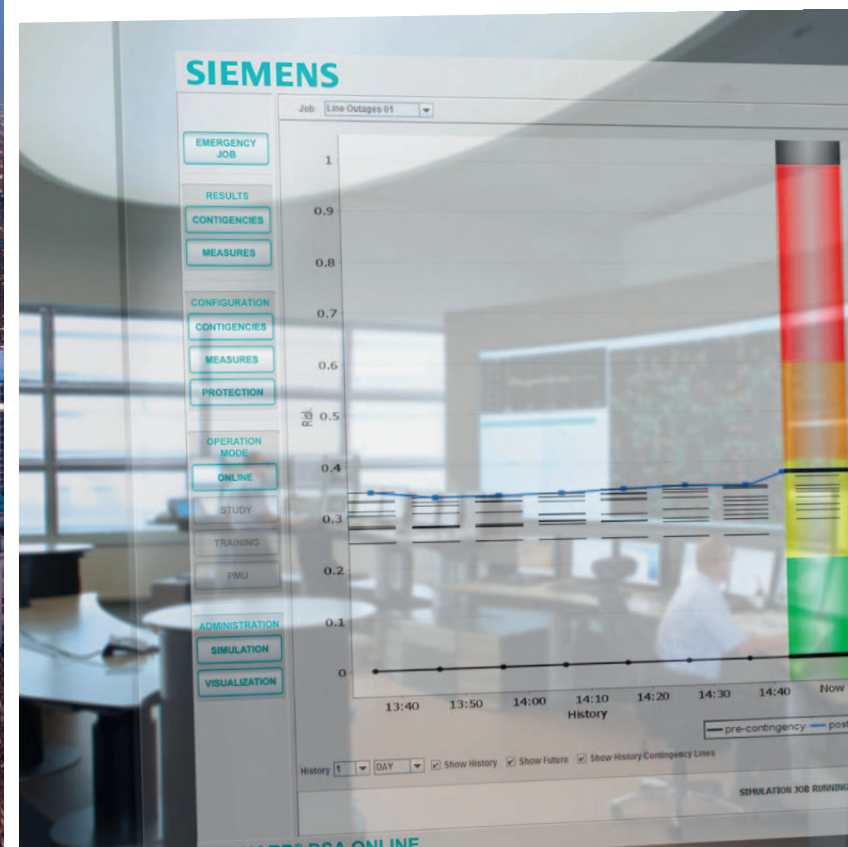


## Keeping the overview

SIGUARD is an innovative software solution from Siemens that helps ensure a reliable supply of energy at all times. SIGUARD identifies critical events in the entire power system and uses cutting-edge simulation engines to provide a clear overview of complex system data ahead of real time.

Transmission system operators benefit from the software solution's support in making the right decisions to prevent black-outs and to optimally utilize all assets. It can predict system security levels and provides the operator with intelligently processed, concise information.



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▶▶▶ Discover SIGUARD DSA

## SIGUARD DSA helps secure a reliable energy supply and highest power quality

The innovative software solution displays the entire energy system's security level for actual and near-future scenarios. It provides control center operators with in-depth data of the entire grid and its individual parts. Remedial actions that ensure grid stability are suggested.

## SIGUARD DSA is an intelligent simulation and security information system

All available system information, such as state estimator snapshots, PMU measurements, and asset monitoring data, are intelligently combined to perform contingency simulations. A smart reduction of the tremendous amount of simulation results makes possible the visualization of the system security in traffic-light style.

## SIGUARD DSA keeps transmission systems secure while integrating green generation

An increasing amount of energy from renewable sources is integrated into electrical power systems. The forecasts of renewable infeed, loads, and trades are used to determine the system's security level. Operators can identify this level and corresponding trends with a single glance at the single-view display.

## SIGUARD DSA ensures the best possible utilization of assets

The cutting-edge software solution enables dynamic congestion management. The precise assessment of risks makes it possible to operate the system close to its limit and to utilize assets optimally. This helps increase the efficiency and profitability of power grids.

## SIGUARD DSA provides answers to security-related questions

Operators benefit from the software solution's support in determining the measures that are best suited for blackout prevention in any situation. It can answer questions about the security of planned switching actions and supports operators in deciding whether security-related actions are required due to errors in wind and solar radiation forecasts.

## SIGUARD DSA is designed to meet highest control room standards

The advanced software architecture ensures highest reliability with its failure tolerance and hot-redundancy concept. The system is extremely flexible: It allows multi-user operations on various kinds of hardware, such as mobile devices, workstations, and PCs. The simulation is scalable to fit power systems of any size – from small urban all the way to country and continent size.

## SIGUARD DSA uses the highly sophisticated algorithms of the PSS® Product Suite

The high-speed simulation engine makes it possible to analyze the entire range of dynamic stability problems, such as voltage, frequency, and transient as well as small-signal stability, faster than real time with a single tool. With the embedded protection simulation, cascading outages can be observed and analyzed to prevent blackouts in the energy system.