



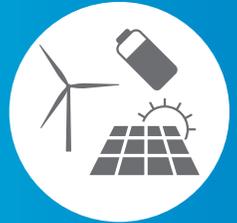
Digital Energy

Advanced Energy Management System (AEMS)

VAr Dispatch System (VDS)

IS VOLTAGE CONTROL DEMANDING MORE AND MORE ACTIONS FROM YOUR OPERATORS?

GE's VAr Dispatch System enables transmission utilities to better manage voltage control whilst improving security and equipment life and avoiding unnecessary MVA losses



BUSINESS CHALLENGE

Many countries are quickly introducing renewables and distributed energy resources in their generation profile in order to achieve a zero-carbon grid.

The adoption of these energy sources have already impacted grids by greatly increasing load variation during the day and creating large variations in inter-regional flows. Also, large variations in temperature across different geographic regions can lead to significant variations in demand.

As a result, the number of voltage control actions in the control room is increasing fast. In some cases, transmission operators have fully dedicated operators only to perform voltage control operation.

REAL RESULTS

Grid Size

No. of Buses: ~2,500 SCADA ~ 70,000 points
Generating units: ~360 Installed capacity: ~42,000 MW
High renewables penetration

Outcome

- 99.9% convergence rate, with all violations resolved 99% of the times
- ~ 350 voltage instructions per day managed more proactively
- Operators freed up to perform more complex operational tasks

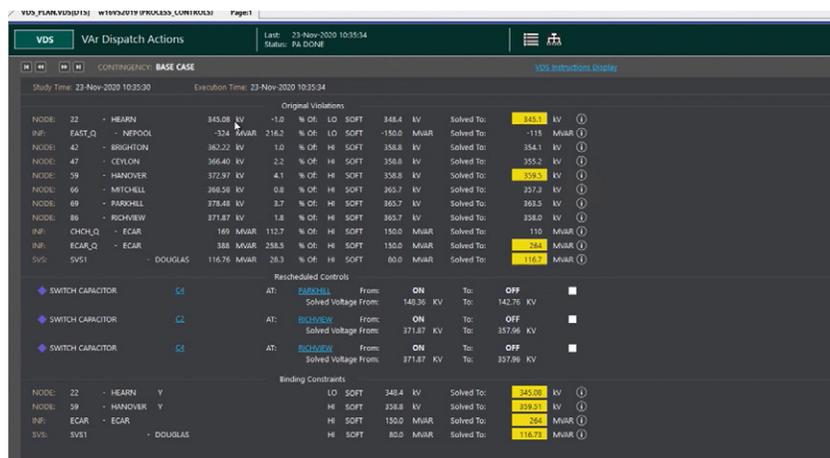
ge.com/digital/transmission

OVERVIEW

VDS fully supports the dispatch of reactive plants and resources. It can improve how voltage control is performed and has been greatly appreciated by transmission operators to help with the retirement of experienced operators. Operators can decide if VDS will be used as an advisory tool, or if it will fully automate the voltage control actions.

VDS was designed considering the following objectives:

- Maintain base case and post-contingency voltage within voltage ratings
- Improve Security
- Improve Equipment Life
- Improve VAr allocation



VAr Dispatch System
Actions dashboard displaying operational procedures for voltage control

Contact Us

ge.com/digital/sales-contact-me

© 2020, General Electric Company. GE Proprietary Information - This document contains General Electric Company (GE) proprietary information. It is the property of GE and shall not be used, disclosed to others or reproduced without the express written consent of GE, including, but without limitation, in the creation, manufacture, development, or derivation of any repairs, modifications, spare parts, or configuration changes or to obtain government or regulatory approval to do so, if consent is given for reproduction in whole or in part, this notice and the notice set forth on each page of this document shall appear in any such reproduction in whole or in part. The information contained in this document may also be controlled by the US export control laws. Unauthorized export or re-export is prohibited. This presentation and the information herein are provided for information purposes only and are subject to change without notice. NO REPRESENTATION OR WARRANTY IS MADE OR IMPLIED AS TO ITS COMPLETENESS, ACCURACY, OR FITNESS FOR ANY PARTICULAR PURPOSE. All relative statements are with respect to GE technology unless otherwise noted.