

PSS[®]E *Xpress*

More than just a viewer – an essential power flow toolbox!

At a glance

In recent years, major blackouts around the world have increased awareness regarding the benefits of accurate modeling for improved system planning. Municipalities and cooperatives that have traditionally relied on regional independent system operators (ISO) or transmission owners (RTO) to provide planning modeling, need to be actively involved to ensure the accuracy of their own system representation. To streamline the process of exchanging data with their ISO, RTO, or other governing body, utility companies, municipalities and cooperatives need a solution to perform essential tasks in a cost-effective manner.

Our solution

To address these challenges Siemens PTI offers PSS[®]E *Xpress*. Derived from our market-leading PSS[®]E transmission planning software and a 40-year heritage, PSS[®]E *Xpress* includes essential functions for modeling and data exchange.

Summary

PSS[®]E *Xpress* provides the tools to build and share an efficient network model. A solution developed by engineers for engineers, PSS[®]E *Xpress* has identical PSS[®]E data categories to model all commercially available equipment. Flexible power flow calculation and reporting features are embedded to help efficiently understand the steady-state and thermal behavior of the network. Data checking functions provide the guidance needed to verify valid power flow entries. Finally, interpreting the system is aided by intuitive graphical displays, such as contouring and animation.

Expand capabilities

Expand PSS[®]E *Xpress* capabilities to include short circuit calculation by purchasing PSS[®]E *Xpress* Plus. Various types of unbalances or faults can be applied at any bus/transmission line on any phase, either to ground, with

specified impedance, or open phases. Multiple faults can be applied simultaneously. Simulate one or all fault types at one bus or all system or sub-system buses in one run, thereby reducing the analysis time. PSS[®]E *Xpress* Plus follows both ANSI and IEC standards.

How to get started

For further information or to purchase PSS[®]E *Xpress*, please contact a software sales representative at +1 (518) 395-5000 or pti-software-sales.ptd@siemens.com.

User support

Siemens PTI offers a number of fast and convenient ways to become a PSS[®]E *Xpress* expert!

Web site: Receive 24/7 access to the customer service and the user-exclusive product support Web sites. There you can navigate through the latest in product specific news and information.

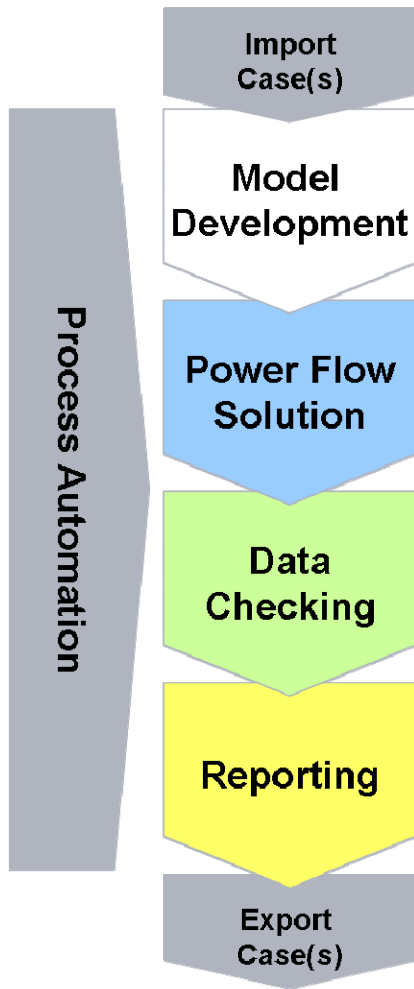
Online manual: The product installation includes the *PSS[®]E Xpress Users Guide* designed to take you through your work flow step-by-step.

Customer service: Finding the answer is easy through our customer relationship management (CRM) system. Submit questions to our consulting engineers and product support staff by e-mail or via the Siemens PTI Product Support Web form.

Siemens PTI – Software Solutions

Answers for energy.

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Benefits

PSS[®]E Xpress is an essential power flow toolbox, equipped with the following functions:

Model development

Build system models, or edit the existing system models received from an ISO/RTO. With PSS[®]E Xpress, use the identical PSS[®]E data modeling capability that provides the *flexibility to view and edit existing cases* or create new ones. Simulate equipment, from traditional plan to complicated HVDC, voltage source converter and FACTS devices in either bus/branch or node/breaker mode.

Power flow solution

With the system model complete, the next step is to solve the power flow. PSS[®]E Xpress includes the solution methods; Newton Raphson, Gauss-Seidel and our *unique non-divergent solution option* to investigate difficult-to-converge cases. All the control settings are user-friendly, as well as fully-adjustable and customizable.

Data checking

Identify potential risks to system reliability based on bus voltage, branch loading, machine loading, etc., with PSS[®]E Xpress automated routines. *Verify valid power flow data entry* to help ensure network conditions and equipment ratings are within operational limits.

Reporting

Over 30 types of customizable one-click reports are included and combined with our powerful visualization tools to quickly and effectively highlight system response characteristics, contrast different power flow cases, or integrate with geographical information through Google Earth™.

Process automation

The ability to record and play a sequence of tasks is deployed through Python™ and/or response file scripting. PSS[®]E Xpress can handle extremely complicated power flow cases up to 150,000 buses, more than capable of handling the largest interconnected system.

Products and services

You may also be interested in other Siemens PTI offerings. The combination of the right products and services brings you the expertise needed for an effective solution to your current and future needs:

- **Software solutions:** PSS[®] Product Suite is a comprehensive set of programs used in the study of power system transmission and distribution networks, and generation performance in both steady-state and dynamic conditions.
- **Education training and programs:** For in-depth hands-on training, attend a class led by our consulting engineers and product experts at one of our regional training centers. See our complete course schedule at <http://www.usa.siemens.com/energy/pti-education>.
- **Consulting services:** Siemens PTI also provides fast and reliable consulting services for turnkey-style data assembly and planning studies.

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Siemens Energy, Inc.
Power Distribution, T&D Service Solutions
Siemens Power Technologies International
400 State Street
PO Box 1058
Schenectady, NY 12301-1058

Phone: +518 395 5000
E-mail: pti-software-sales.ptd@siemens.com

www.siemens.com/energy/power-technologies

Siemens AG
Energy Sector
E D SE PTI
Freyeslebenstrasse 1
91058 Erlangen, Germany

Siemens Transmission and Distribution Ltd
Siemens PTI
Sir William Siemens House, Princess Road
Manchester, M20 2UR
United Kingdom

For more information, please contact
our Customer Support Center.
Phone: +518 395 5075
Fax: +518 346 2777
(Charges depending on provider)
E-mail: pti.support.energy@siemens.com

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