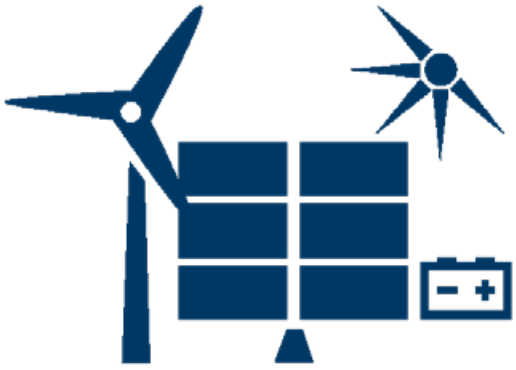
CYME power engineering and analysis software
Brightlayer Utilities suite

CYME 9.1 new features

Improving the capacity planning integration and the distributed resources planning processes

The Brightlayer Utilities suite is a full complement of software applications that enable utilities to use data to optimize the performance and reliability of the grid, integrate renewables, comply with regulations and plan for the future. As a key solution in the Brightlayer Utilities suite, our CYME power engineering software continues to evolve its best-of-breed power system analysis software with the release of CYME 9.1, the second version of a new generation aimed at supporting utilities in their efforts to align their practices with the climate and clean energy goals of the 21st century.



Powering Business Worldwide

CYME power engineering and analysis software, part of the the Brightlayer Utilities suite, is a next generation solution aimed at supporting utilities with efforts to modernize long-term grid planning framework. Built on core components such as chronological as-planned network modeling, time-series analysis, DER optimization, non-wires alternatives design, and project portfolio evaluation, CYME 9.1 enables the integration of the capacity planning and the distributed resources planning processes while paving the way to integrated system planning.

Key new features include:

- Long-Term Planner module engineered to generate crucial insights on long-term hourly demand forecasts and distribution system's risks and performance over time.
- Cable Thermal Rating module that brings forth the world-renowned CYMCAP Software calculation engine into the realm of the CYME Software for the thermal analysis of underground duct bank structures.
- Improved Steady-State Analysis with Profiles module that pushes the limit of time-series analysis through local or remote multiprocessing with direct integration to external data sources via the Dynamic Data Pull module.
- Continuous improvement of the core components such as Load Flow Analysis, Load Allocation function, Advanced Project Manager, Integration Capacity Analysis, Load Relief DER Optimization, Techno-Economic Analysis, and the Python® Scripting Tool.
- Optimized performances and several enhancements to the software framework, user interface, and the one-line diagram navigation.

By working together with electric utilities, we continue to advance the capabilities of the CYME power system analysis software to meet the needs of any engineering study from elementary to complex.

Long Term Planner module:

The CYME Long-Term Planner module combines a series of tools designed to optimally carry tasks involved with the annual planning cycle. Leveraging the power of the Advanced Project Manager and the Load Flow with profiles, a time-series analysis combining load allocations and load flows, this module features powerful forecast analytics capabilities and a novel report technology that aggregates content from different contexts to provide a holistic view of distribution circuits and substations performance over time.



Cable Thermal Rating module:

- The CYME Cable Thermal Rating module brings forth the world-renowned CYMCAP Software calculation engine into the realm of the CYME Software, anabling users to performe ampacity and temperature rise calculations for power cable installations.
- This module addresses steady-state and transient thermal cable rating as per the analytical techniques described by Neher-McGrath and the International Standards IEC 287© and IEC 853©.

Engineering Analysis Enhancements:

Load Flow — Load Allocation

- Controls – Transformer tap operation with two new operation modes
- Improved algorithm to better handle: Complex BESS controls, new voltage regulator control modes (bias controls), convergence for Y-g/D connected transformers.
- Define Voltage Sensitivity Load Models and default power factors per load model (Customer Type dialog box) > seasonal parameters (winter, summer, etc.)
- Time Parameters: a load model can now be assigned to each season.
- Abnormal conditions: feeder sources fed by an upstream substation are now considered in the evaluation of abnormal loading conditions.

Network Modeling Enhancements:

- Voltage Regulator: The First House Protection option is now enabled for voltage regulators working in reverse mode.
- It is now possible to Drag & Drop a network from the toolbox onto a node to create a network on this node.
- Network Properties: three (3) more grouping attributes have been added to the Network Properties in order to capture additional non-electric hierarchical information for each circuit. The total number of grouping attributes is now six (6).
- Network Properties: a new Limits tab has been added to define the circuit's capacity and protection trip limits to evaluate overload conditions at the circuit level or at the source.
- A new CYME Library of AC/DC converters is now available from the Equipment menu. This library features 680 documented converter models for a mix of single-phase and three-phase converters from different manufacturers.

Improved User Experience:

One-Line diagram

- A new option button has been added to prevent automatic "best display calculation" (switch from automatic to manual calculation).
- The user experience has been improved when making multiple selections using the mouse and the Ctrl Key.
- Now users can modify the Remote-controlled attribute for devices from the group properties dialog box.
- "Low voltage cable/overhead" symbols concept extended to Secondary Network (CYME / SNA) type networks. Line styles can be now assigned by OH line or cable ID.

Reports, Color Coding and Charts

- A new option is available to toggle a tabbed report into full-screen mode.
- Create a report for upstream sections , including laterals.
- Several new chart options have been added to enhance the user experience.

User interface and Framework

- It is now possible to access the TCC settings of a protective device from the Properties control of the Explorer bar.
- A new icon for Batch Analysis has been defined.
- A new tool, "Clear simulation Circles", is available in the toolbar to remove any circling of devices due to a simulation.
- It is now possible to reset the position of the result's box to be centered on the CYME software window.
- A new option, "Restore Layout", was added to the CYME Configuration Setup dialog box to restore the display to default when restarting the CYME application.

We are committed to advancing the calculation engines and modeling capabilities of CYME power engineering software by continuously working to meet and exceed the evolving needs of the energy landscape.

As part of the Brightlayer Utilities suite, CYME 9.1 is a fundamental tool enabling utilities to analyze data for optimizing grid performance and reliability, integrating renewables today and planning for the future.

For more information about the Brightlayer Utilities suite, please visit **Eaton.com/brightlayer-utilities-suite**.

For a web demonstration or download information on the latest version of CYME power engineering software, please visit **Eaton.com/cyme** or contact us at **cymeinfo@eaton.com**.

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