

# Steady State Analysis with Load Profiles

## Perform accurate time range analysis based on AMR, historical and real-time data

New tools are necessary to help distribution utilities exploit the integration of automated meter reading (AMR) in distribution systems, short-term load forecast calibrated by AMR telemetry and energy billing records.

The CYME optional module Steady State Analysis with Load Profiles assists users in performing accurate time range analysis based on a combination of AMR data and historical consumption patterns.

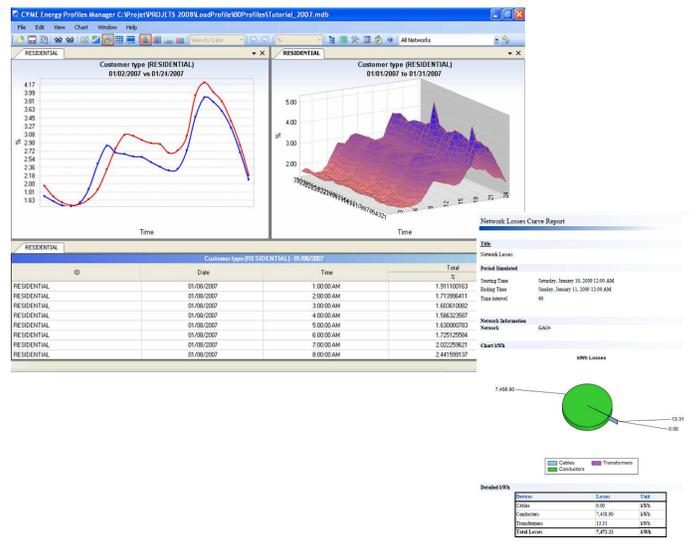
### Program Features

The module comes with its own user interface and wizard for the optimal viewing, editing and importing of load profiles and demand profiles.

More specifically, the module:

- Allows the creation of curves (load profile) for customers whose load is measured. The curves can also represent a typical load such as customer types, a meter reading or a network demand. The user can also input generation curves.
- Facilitates the import of interval (15 min, 30 min, 60 min) and non-interval (monthly kWh) metered data such as automated meter reading systems, customer billing information systems. This metered data along with load behavior studies data can be used for load flow analysis.

- Simplifies the creation of profiles by proposing templates for the standard profile types such as the "8760 hour profile" and "day-type" (Typical week-day and week-end)
- Supports the import of profiles from ASCII format (.csv)
- Supports various units for the profiles: Average Demand kW, Amps-PF, kW & kVAR, kVA & PF, %, p.u. (by-phase or total)
- Provides the functionality for the creation, viewing, and editing of profiles. The profiles are available in tabular and graphical form
- Provides a tool to import and synchronize the devices that are kept in the CYME databases
- Allows the visualization of 2D, 3D and isoline plots
- Supports the creation of profiles for holidays and special days



Powering Business Worldwide

# Steady State Analysis with Load Profiles

Perform accurate time range analysis based on AMR, historical and real-time data.

## Load Flow with Profiles

The Steady State Analysis with Load Profiles module includes a Load Flow with Profiles analysis functionality that utilizes the data organized with the module. When running a voltage drop simulation for a specified period, it produces significant information for the system planners about the network conditions.

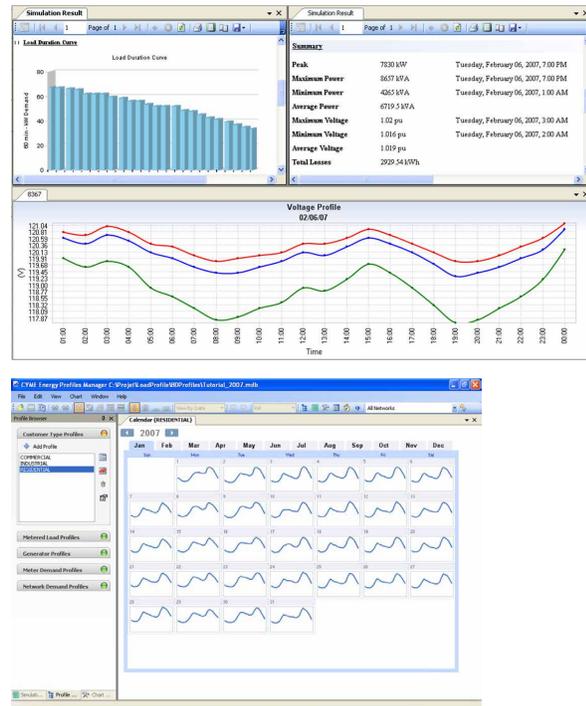
This analysis allows the users to:

- Run a load flow analysis as a day-type or as a time-range simulation
- Use of historical data to validate the network model
- Accurately model the loading conditions (load curves) at any moment in time at critical points on the networks
- Identify off-peak overloads and abnormal voltage conditions that often go undetected using typical peak condition system analysis
- Evaluate actual load using customer consumption curves (Billing information) or customer typical load curves
- Validate device setting adjustments such as voltage regulators, switching capacitors and load tap changers considering load variation over a period of time
- Confirm the recommended capacitor placement analysis results considering load variation over a period of time.

## Charts and Reports

Using the Load Flow with Profiles analysis functionality, the user can generate several reports and charts based on monitored device and summary networks results. Users can generate reports and charts such as:

- Network summary reporting total system losses, peak voltage and peak power
- Abnormal conditions reporting overloads and abnormal voltage conditions in duration and percentage of a period, such as the number of hours/days that an equipment has been overloaded
- Tabular reports with customized values for monitored devices
- Load duration curves for a distribution transformer or any monitored devices displaying the loading of the device in percentage



**Eaton**  
1000 Eaton Boulevard  
Cleveland, OH 44122  
United States  
Eaton.com

**CYME International T&D**  
1485 Roberval, Suite 104  
St. Bruno, QC, Canada J3V 3P8  
P: 450.461.3655 F: 450.461.0966  
P: 800.361.3627 (Canada/USA)  
Cymelinfo@eaton.com  
www.eaton.com/cyme

© 2015 Eaton All Rights Reserved  
Printed in Canada  
Publication No. BR 917 005 EN  
November 2014

Eaton is a registered trademark.  
All other trademarks are property of their respective owners.

Follow us on social media to get the latest product and support information.

