



CYMDIST – Distribution System Analysis

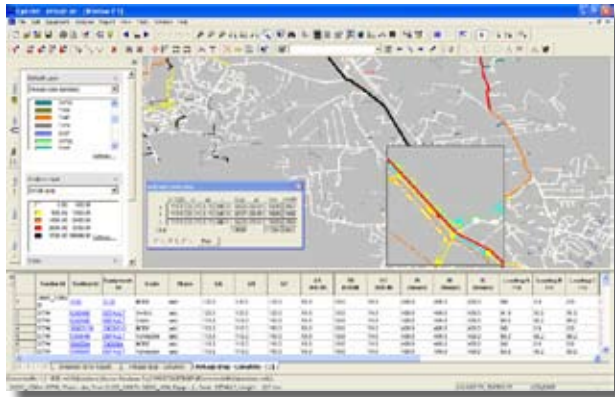
The CYMDIST Distribution Analysis program is designed for planning studies and simulating the behavior of electrical distribution networks under different operating conditions and scenarios. It includes several built-in functions that are required for distribution network planning, operation and analysis. The analysis functions such as load flow, short-circuit, and network optimizations, are performed on balanced or unbalanced distribution network that are built with any combination of phases and configurations.

Reliable analytic and planning tools to improve electrical network performance.

Overview

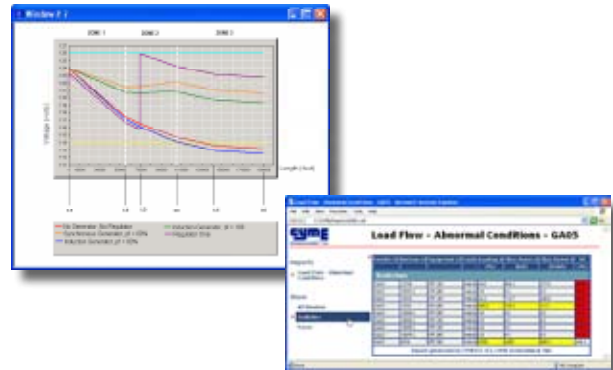
CYMDIST is also equipped with add-on modules to perform more in-depth analyses such as reliability analysis, contingency analysis, harmonic analysis, switching (tie-points) optimization, and more.

CYMDIST is an extremely powerful tool to assist you in creating “what-if” studies and performing simulations to evaluate the impact of modifications to the system.



Features and Capabilities

- Power flow and voltage drop analysis
- Fault flow analysis
- Optimal capacitor placement and sizing
- Load balancing and load allocation/estimation
- Voltage drop analysis with profiles
- Harmonic analysis
- Switching (tie-points) optimization
- Network planning
- Distributed generation modeling
- Service restoration
- Reliability analysis (predictive and historical)
- Single contingency analysis with restoration
- Substation and sub-network modeling
- Secondary grid network analysis
- Arc flash hazard assessment
- Protective device coordination



CYMDIST Distribution System Analysis

Reliable analytic and planning tools to improve electrical network performance.

Analytical Capabilities

CYMDIST Base Modules

- Balanced and unbalanced voltage drop and short-circuit analyses (radial, looped or meshed).
- Protective device coordination verification according to user-defined criteria for device clearance and loading.
- Fault current calculations for RMS, asymmetrical and peak values for all shunt fault configurations.
- Fault flow and fault voltage analysis throughout the network taking into account pre-fault loading conditions.
- Optimal capacitor placement and sizing to minimize losses and / or improve voltage profile.
- Minimum fault protection analysis.
- Load balancing to minimize losses.
- Load allocation/estimation using customer consumption data (kWh), distribution transformer size (connected kVA), real consumptions (kVA or kW) or the REA method. The algorithm supports multiple metering units as fixed demands and large metered customers as fixed load.
- Motor starting analysis (voltage dip and maximum motor size allowable).

- Flexible load models for uniformly distributed loads and spot loads featuring independent load mix for each section of circuit.
- Load growth studies for multiple years.
- Feeder interconnection for load transfer simulations.
- Phase merging capability.
- Automatic re-conductoring and re-phasing of multiple selected sections.
- Computes load equivalents and network equivalents to ease the analysis of large networks, matching exactly the power flow and short-circuit results of the non-reduced network.
- Distributed generation modeling, generator impedance estimation, grid side control and protection functions,

Power Engineering Analysis Software

CYMDIST – Distribution System Analysis

- Balanced/unbalanced load flow
- Network optimization
- Distributed generation modeling
- Short-circuit analysis
- Energy profile manager
- Switching optimization
- Harmonic analysis
- Predictive and historical reliability assessment
- Contingency with Restoration
- Substation and sub-network modeling and analysis
- Secondary grid network analysis
- Motor starting

CYMTCC – Protective Device Coordination

CYMDIST Gateway – Creation and maintenance of CYMDIST Distribution Network Model

CYMGRD - Substation Grounding

CYMCAP – Power Cable Ampacity

- Duct bank optimizer
- Multiple duct banks modeling
- Short-circuit cable rating
- Magnetic fields
- Cables in tunnels modeling
- Real-time temperature rating
- Cable crossings ampacity reduction calculation
- Ampacity/temperature calculation of cables in casings
- Cables parameters estimation

CYME International

1485 Roberval, Suite 104
St-Bruno, QC Canada J3V 3P8
P: 450.461.3655
F: 450.461.0966
P: 800.361.3627 (Canada and USA)

www.cyme.com | www.cooperpowereas.com
info@cyme.com