Optimal Capacitor Placement

Selective
Efficient
Powerful

Optimal Capacitor Placement allows engineers to strategically place capacitors for voltage support and power factor correction while minimizing installation and long-term operation costs. The advanced graphical interface gives users the flexibility to control the capacitor placement process and graphically view the results. The precise calculation approach automatically determines the best locations and bank sizes. In addition, it reports the branch capacity release and the estimated savings during the planning period due to var loss reduction.

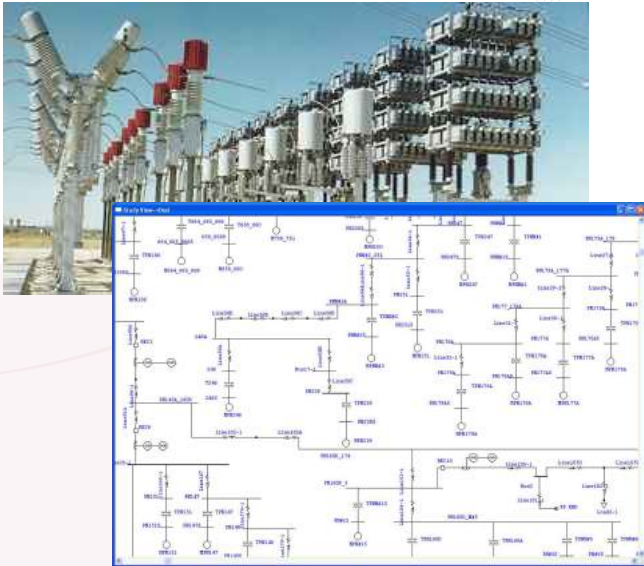# Optimize Size & Location to Minimize Costs

Key Features

Optimal Location & Bank Size
Minimize Installation & Operation Costs
Individual Source or Average Energy Cost
Voltage and/or Power Factor Objectives
Minimum, Maximum & Average Loading
Branch Capacity Release & Cost Savings
Review Capacitor Impact on the System
Capacitor Control Method

Flexible Operation

- Selectable candidate locations
- Selectable capacitor types & bank sizes
- Different loading categories
- Multiple cost functions
- User-defined planning period & interest rate
- Optional capacitor placement objectives
- Flexible constraints

Capabilities

- Find capacitor's best location & bank size
- Minimize the total cost of installation & operation
- Uses a Genetic algorithm (with heuristic initialization) to find a global optimal solution
- User selectable capacitor placement objectives: voltage support, power factor correction, or both
- Global or individual constraints
- Analyze capacitor control method & review capacitor impact on the system with load duration setting
- Handle radial or meshed balanced networks
- User-controlled speed & precision ratios
- Determine available capacitor installation locations by users
- Determine maximum capacitor size using maximum load & determine switchblade capacitor size using minimum load
- Use global average energy cost or individual source energy cost
- Focus on savings during the whole planning period
- Report branch capacity release
- Integrated load flow features
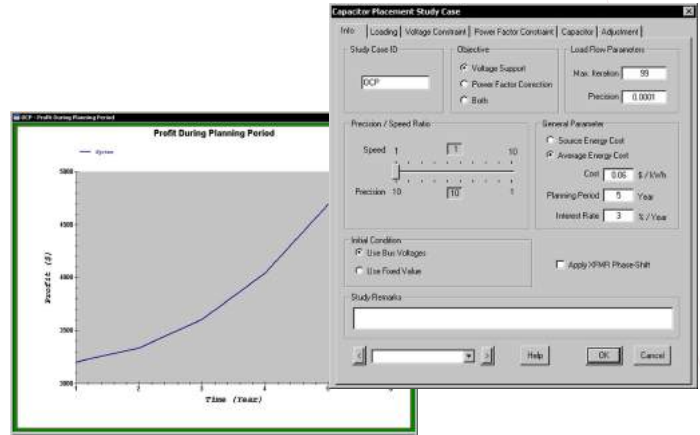- Graphical display of new capacitor information (location, size...) & load flow results

Advanced Battery Selection & Verification

Unlimited Buses* & Elements
No Voltage Limitations
Looped & Radial Systems
Integrated 1-Phase, 3-Phase, & DC Systems
Multiple Generators & Grid Connections
Multiple Isolated Sub-Systems
Customizable Libraries
Graphical Display of Results on One-Line Diagrams
Customizable Font Types, Sizes, Styles, & Colors
Customizable Display of Ratings & Results
Graphical Display of Equipment Impedance & Grounding
Automatic Error Checking
Graphical Display of Overstressed Devices
Graphical Display of Over/Under Voltage Buses
Dynamically Adjust Display of Results

Plotting

- Loss reduction savings during the planning period
- Capacitor operation cost during the planning period
- Annual savings during the planning period

Reporting

- Capacitor properties
- Capacitor locations & sizes
- Load flow results
- Branch capacity release
- Customize output reports using Crystal Reports®

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Thinking Power for Power Engineers