



1 Create a template with all the desired equations

2 Enter desired equations

3 Add comments to document adjustments

4 Name equations for ease of recognition

5 Integrate template with ASPEN to automatically calculate equation values

6 Save template for future applications to ensure consistency

# SARA: AUTOMATED TOOL FOR RELAY SETTING DEVELOPMENT

## *Empowering Utilities Through Automation*

SARA (Setting Automation Relay Assistant) is a software tool which integrates with ASPEN to automate transmission line relay setting creation and wide area coordination. This innovative program uses a smart template that streamlines fault calculations and settings equations, eliminating errors due to the manual transfer of data and ultimately producing more accurate settings.



**Eliminate Manual Errors** During Settings Development



**Perform Wide Area Screening Analysis** of Protective Relays



**Use Automation** Scripts to Increase Efficiency



**Automate Reports** for Easy NERC Reporting

# EMPOWERING UTILITIES THROUGH AUTOMATION

## *The Future of Relay Setting Development*

SARA is a powerful software tool for the protection industry which can simplify the relay setting development process, conduct wide area coordination studies, and review and analyze the resulting data. In SARA, engineers can create a template to define their protection philosophy, auto-populate information from ASPEN to eliminate copy and paste processes, perform relay setting calculations, and generate RDB files and reporting documentation which can be used for NERC compliance.

## *The Automation Process*

**CREATE TEMPLATE.** Create a template to define a set of equations that represent a setting philosophy.

**AUTOMATE DATA COLLECTION & FAULT ANALYSIS.** Integrate with ASPEN to automate data collection and fault analysis.

**AUTOMATE RELAY SETTING CALCULATIONS.** Run the template by bi-directionally communicating with a short-circuit program to solve setting equations.

**EXPORT ALL SETTINGS CALCULATIONS.** Export all settings to a relay setting file.

**GENERATE DOCUMENTATION.** Generate a report with all settings, equations, calculated fault values, and notes in an editable Word format.

**ACHIEVE NERC COMPLIANCE.** Create equations to verify NERC compliance for all versions of PRC-023, PRC-026, and PRC-027.



**SARA** is a product of SynchroSoft, a subsidiary of SynchroGrid. Together, we provide innovative tools and exceptional consulting services for the power industry.