

# Training Content

## Advanced Handling of *PowerFactory*

### DAY 1

#### MODULE 1: Graphical Representation in Diagrams

##### **Presentation: Graphical Representation in Diagrams**

1 h

Show the different graphical representations in *PowerFactory*. Use of Layers and the Diagram Layout Tool.

##### **Exercise: Graphical Representation in Diagrams. Part I**

1/2 h

Define branches and include sites in a simplified diagram. Customise single line diagrams.

#### Coffee break

##### **Exercise: Graphical Representation in Diagrams. Part II**

1 1/2 h

Generate overview, detailed, simplified and geographical diagrams. Use of the diagram layout tool. Assign coordinates in a geographical diagram.

#### Q&A session

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### DAY 2

#### MODULE 2: Load Flow Troubleshooting

##### **Presentation: Load Flow Troubleshooting**

3/4 h

Classification of the typical convergence problems into data model, inner loop and outer loop issues. Description, identification and possible solutions for each type of problem.

##### **Exercise: Solving Convergence Issues**

3/4 h

Identify and solve data model, inner loop and outer loop problems.

#### Coffee break

#### MODULE 3: Compare and Merge

##### **Presentation: Compare and Merge**

1/2 h

Use of the compare and merge tool to compare elements and projects. Merge changes using the tool and solving conflicts.

### Exercise: Simple Compare and Merge of Elements

1/4 h

Use the compare and merge tool to identify the differences between projects and simple merge of elements.

### Exercise: Advanced Handling of Compare and Merge Tool

3/4 h

Merge projects and handling of conflicts. Compare single elements using the Compare and Merge Tool.

## Q&A session

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## DAY 3

### MODULE 3: Advanced Network and Operational Planning

#### Presentation: Advanced Network and Operational Planning. Operation Scenarios

1/2 h

Network and operational planning with operations scenarios. Introduction to the Operation Scenario Manager.

#### Exercise: Advanced Network and Operational Planning. Part 1

1 h

Define operational data and compare it using the *Operation Scenario Manager*. Transfer operational data using a *Scenario Apply Configuration*.

## Coffee break

#### Presentation: Advanced Network and Operational Planning. Variations

1/2 h

Network and operational planning with variations and operations scenarios. Introduction to the Variation Manager.

#### Exercise: Advanced Network and Operational Planning. Part 2

1 h

Use variations for network planning. Track changes and identify conflicts using the *Variation Manager*. Merge and split variations. Transfer the data from the base case into a variation. Usage of the *Error Correction Mode*.

## Q&A session

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## DAY 4

### MODULE 5: Project Combination and Connection

#### Project Combination and Connection

3/4 h

Small presentation of the project combination and project connection tools and exercise to prepare and combine two different projects using the virtual node method.

## MODULE 6: Data Extension

### Data Extension

3/4 h

Use of data extensions for additional parameters. Exercise to define a new class and new parameters in an existing class.

### Coffee break

## MODULE 7: Task Automation

### Task Automation

1/2 h

Automating task using the Task Automation tool. Exercise to prepare the Task Automation tool and result files. Define parallelisation and show results of the automation.

## MODULE 8: *PowerFactory* Interfaces

### *PowerFactory* Interfaces

1/2 h

Presentation of available interfaces and usage of the DGS interface to enrich the data model. Exercise to import DGS data and export results.

## MODULE 9: Tips and Tricks for *PowerFactory*

### Presentation: Tips and Tricks for *PowerFactory*

1/2 h

Helpful shortcuts, new functionalities of the newest *PowerFactory* version and room for open questions.

### Q&A session

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## Time Schedule (Central European Time)

	Time
First 90 minutes block	9:00
Coffee break	10:30
Second 90 minutes block	10:45
Q&A session	12:15
End of the training day	12:30



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