

PLS-CADD Seminar

# Design of Overhead Transmission and Distribution Lines using PLS-CADD.

## Northern Star Power Line Consultancy

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### Dates and Location

Training is scheduled for the 12th to the 16th June 2023. It is to be held in Munich, at the NH Collection Munchen Bavaria.

The training will take the form of a classroom style lecture and practical training exercises.

The training will be conducted in English.

Class timings 1PM to 5PM Monday, 9AM to 5PM Tuesday - Thursday, 9AM to 12PM Friday. We would be delighted if attendees were to join us for a farewell lunch on Friday upon completion of the course.



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## About PLS-CADD

PLS-CADD is the industry standard in Overhead Line Design and Draughting Software. This course will teach the attendee how to use PLS CADD on a Transmission or Distribution Project from start to finish. Importing Survey Data, Criteria Development, Structure Design, Conductor Stringing and Sagging, Plan and Profile Drawing Development.



## After the course the Attendee will...

Have an understanding of all aspects of PLS CADD, and be able to create Power Line Projects from multiple sources. They will have a thorough understanding of Criteria Development, how to create Structures both within PLS CADD, but also within PLS-Pole and PLS Tower. They will be able to understand and utilise conductor data, to string and sag conductors using Design and As Erected techniques, and to understand the effect of creep on sagging. They will understand the differences between RS and FEA, Clipped and Unclipped Insulators, M1, M2 and M4 Structures, L1, L2, L3 and L4 analysis. They will be able to model electrical features such as Circuits and produce reporting of Line Constants.

## Topics Covered

### Executive Overview

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PLS Programs - quick overview, File - Open; Back Up; Restore. PLS - CADD, PLS - Lite, Ultra-Lite, PLS Pole, PLS Tower. Units and Settings, View Menu, Windows Menu.

### **Survey Data / Terrain Modelling**

Feature Codes, Survey Data, Defining an alignment, TIN Creation, TIN Display, Interpolated Points, Terrain Width, Side Profiles. Attaching drawings, shapefiles and imagery. Exercise using live LiDAR Project, to include: importing survey data, load feature codes, create TIN, define alignment, attach basemap and imagery, create TIN and display, Create Interpolated Points, Clean up profiles (Terrain Width / Side Profiles).

### **Engineering Functions in PLS CADD, PLS Lite and Ultralite**

Sag - Tension behaviour in Ultralite, Modeling Spans in PLS Lite, Set Up, Check Clearances (Phase to Phase, Crossing and Underbuild). Design criteria, Weather conditions, Code specific criteria, Wire criteria, Structural design criteria, Clearance criteria.

Structure functions. Add structures, Remove structures, Custom structure numbers, Modifying structures, Multiple structure functions, Create M1 structures, Edit M1 structures.

Cable Functions. Stringing, Managing Cable properties, Graphical Sagging, Cable data. Thermal rating check, Structure check, Multiple line design project options. Create a basic project from the very beginning.

### **Structures, Cables in PLS CADD.**

Develop criteria, Model stick structures, Spot structures, String cables, sagging (manual and graphical).

### **M4 Structures - PLS Pole**

Components, Geometry, Loads, Analysis, Live Project, Export to PLS Lite, Batch save.

### **M4 Structures - PLS Tower**

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Primary Joints, Secondary Joints, Components, Geometry, Loading, Analysis, Live Project, Export to PLS Lite.

### **New Line Optimisation**

Prohibited and Additional Cost Zones, Available structure list, Optimisation.

### **Reports, Documentation and Customisation.**

Engineering reports; structures, conductors. Survey point clearances, Ground surface clearances, Galloping clearances, Structure clearances, Wire clearances. Thermal ratings. Construction Reports, Program Customisations.

### **Plan and Profile Drawings**

Page size and layout, scales and drawing formats, text and layer controls, P&P border, North arrow, attach logo, Lines and annotation. Index Map and Title sheet, inset view functions, Live project.

### **Circuits, phases and jumpers.**

Define circuits and phases, label circuits and phases, create jumpers and circuit connectivity.

### **Materials management and Advanced Engineering functions.**

Add parts, add assemblies, Obtain BOM, SAPS, Electrical Functions, Danger Trees, Leg and Guy extension reports, Site Specific Structure functions.



#### **About the trainer.**

Paul Richardson has worked in the Power Industry for 40 years and in Transmission and Distribution for 30 years. He is a long time proponent of the use of PLS CADD software for the analysis of existing, design of new or upgrading power networks. He has worked extensively across Europe, the United States, Australia, NZ, India and the Middle East. He has been an accredited provider of PLS CADD Training

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Services for 5 years. Paul is a Chartered Civil Engineer and has worked for many of the leading Utilities worldwide.

### **Who should attend?**

The course is open to all engineers and technicians whose companies currently use PLS CADD or are considering purchase. The attendee should have basic understanding of Overhead Line Design concepts as the class focuses on the use of the software and not line design fundamentals.

### **Cost**

The class costs EUR2200 per person.

Attendees will be expected to bring their own PC suitable of running the software along with the latest version of the PLS CADD / Pole / Tower software. Alternatively this software can be provided at an additional cost of EUR300 per person, for a week's hire.

Should attendees bring along out-dated versions of the software, we will not be able to adequately cover the most recent software additions, and we cannot provide software training on legacy versions of the Software.

### **PLS CADD Seminar Registration Form.**

Name

Company

Address

Phone

E-mail

Classes are limited to the first 10 attendees and payment must be received by electronic transfer before the reservation can be confirmed. Confirmed registrants who fail to attend will forfeit their entire registration fee. Northern Star Power Line Consultancy reserves the

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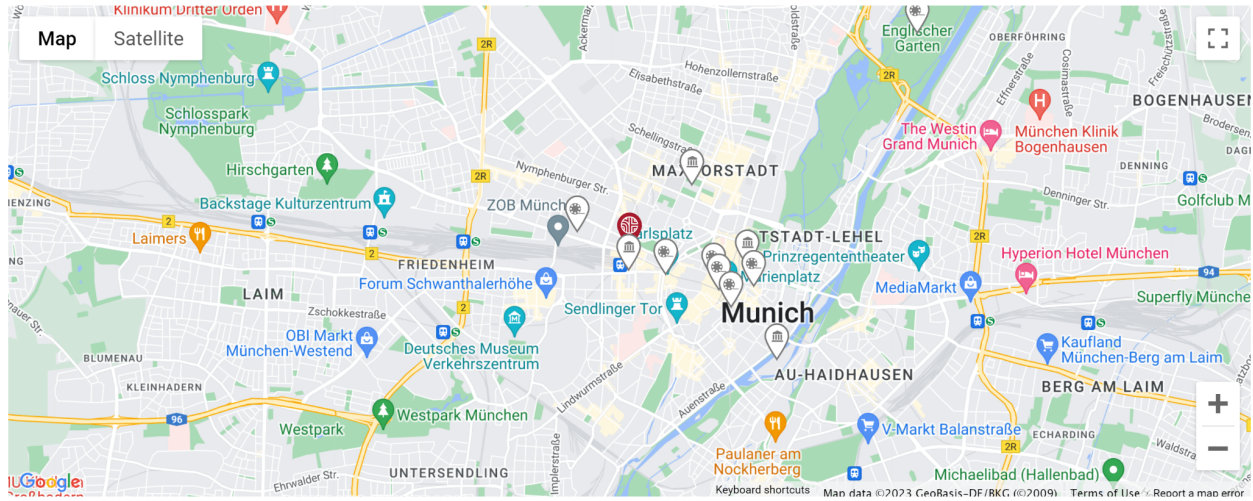
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right to cancel the training session, in which case registrants will receive a full refund of the entire registration fee in that unlikely event.

## About the Hotel.

NH Collection Munchen Bavaria - Munich Germany

[https://www.nh-hotels.com/hotel/nh-collection-muenchen-bavaria?campid=8435708&gclid=Cj0KCQI\\_AgaG8hC8ARIsAAAYLFGbEjU4NCRXDviQysLYRfhzanehpwcl9\\_dtoqDRloAIXTZ7HEbaU0caAuqWALw\\_wcB&gclid=aw.ds](https://www.nh-hotels.com/hotel/nh-collection-muenchen-bavaria?campid=8435708&gclid=Cj0KCQI_AgaG8hC8ARIsAAAYLFGbEjU4NCRXDviQysLYRfhzanehpwcl9_dtoqDRloAIXTZ7HEbaU0caAuqWALw_wcB&gclid=aw.ds)



Rooms can be booked at the Hotel using the link above.

Lunch will be provided on Tuesday through Friday. Afternoon Coffee Monday through Thursday and Morning Coffee Tuesday through Friday. We look forward to meeting you and an enjoyable yet informative course.

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For further information or to book your place on this class e-mail

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Or click on

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