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TRANS-AFRICA PROJECTS

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# PLS CADD, PLS Tower, PLS Pole

5 DAY COURSE (5 CPD Credits) | Presented by leading TAP professionals

a **FLUOR** and  Eskom joint venture company

**POWER LINE**  
SYSTEMS INC.

# About the Course

## COURSE DESCRIPTION AND LEARNING OBJECTIVES

This 5 day course is aimed at teaching line designers how to use the industry standard line design programmes developed by Power Line Systems (PLS) in order to create accurate, efficient and optimal designs.

The course begins with two days of structural analysis, during which attendees are led through the steps to define and analyze both transmission pole and lattice tower structures in the structural modules PLS Pole and PLS Tower.

The final 3 days of the course are dedicated to line profiling and design using the line design programme PLS CADD. Using a worked example of a basic line profile, the course covers all steps required to utilise the software from creating survey data and structure seed files, stringing conductor, performing design checks and finally creating plan and profile sheets.

The final module covers many of the more useful and advanced features of PLS CADD are covered.

## COURSE MATERIAL

Delegates will receive a set of electronic notes and writing material. Videos illustrating examples and experiences of the topics discussed will be shown where necessary. Practical work examples will be explained and discussed.

All Delegates are required to bring their own laptop to the training session. Please ensure that you have administrative rights on your laptop in order for us to load the necessary training software.

# COURSE CURRICULLUM

## Day 1 : PLS Pole

- ▶ Design of steel transmission poles
- ▶ Defining component libraries
- ▶ Creating pole geometries
- ▶ Defining loads
- ▶ Model checking and analysis + Optimising elements

## Day 2 : PLS Tower

- ▶ Design of lattice transmission tower
- ▶ Defining component libraries
- ▶ Defining joints/nodes, adding members, copying and transposing sections to build complex modular structure geometries
- ▶ Defining loads
- ▶ Model checking and analysis + Optimising elements

## Day 3 – 5 : PLS CADD I

- ▶ Overview of PLS modelling process
- ▶ Creating and understanding survey points
- ▶ Defining weather loadcases
- ▶ Setting up conductor swing, templating, and mechanical criteria
- ▶ Creating and editing method 1 structures
- ▶ Manual templating
- ▶ Automatic spotting
- ▶ Generating .pfl profiles
- ▶ Setting up of profile sheets, drafting & annotation

## PLS CADD II

This module will enable the user to maximize the capabilities of PLS CADD.

- ▶ Use of PLS CADD / Lite and the link between PLS Pole /Tower
- ▶ Using method 4 structures (Finite element modelling)
- ▶ Overview of line optimisation process
- ▶ Optimum spotting
- ▶ Management of preferences, backups and user defined libraries
- ▶ Advanced display options
- ▶ Inspect design check reports
- ▶ Importation of digitised drawings
- ▶ Importation of data & data filtering
- ▶ Generating 3D .xyz profiles and TIN model functionality
- ▶ Guy and leg extension reports
- ▶ Investigating conductor swing
- ▶ Generation of 3D mpegs and Images (Virtual line inspection)
- ▶ Generation of stringing charts
- ▶ Generation of staking tables
- ▶ Exporting & viewing the line in Google Earth



## REGISTRATION INFORMATION

Delegates are responsible for their own travel and accommodation arrangements. The names of nearby accommodation will be provided if requested.

Registration material will be available at 07:30 on the first day of the course. The formal programme will commence at 08:00 and end at approximately 17:00 every day.

Location:

- ▶ TAP Office Johannesburg, Allandale Offices, 23 Magwa Crescent (West), Waterfall City, Midrand
- ▶ TAP Office Durban, 3B, 18 The Boulevard, Westway Office Park, Westville
- ▶ TAP Office Cape Town, 163 Uys Krige Drive, Tygerberg Office Park, Uitzicht Building, Platteklouf (Map will be supplied upon registration)

## REGISTRATION FEE SCHEDULE

Individual registration

R17 000 (excluding VAT)

Group discount (five or more delegates from the same company)

10%

Note: Registration will be accepted on a first come, first served basis. Enrolment for each course is limited to a maximum 10 delegates, and advanced registration is required. The registration fee covers the five-day course, course materials, and refreshments during all course breaks. The registration and payment/purchase order deadline is 10 business days prior to the course start date. To register, please complete the attached form and return it to:

**[training@taprojects.co.za](mailto:training@taprojects.co.za)**

*\* Attendance will only be confirmed once the registration form and payment/purchase order has been received.*

# Terms & Conditions

The responsible person booking or authorising the attendance of the training event will be liable to adhere to these Terms and Conditions.

## Payment Terms

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Payment needs to be made within 10 working days from date of invoice or prior to the training start date, whichever is sooner.

The delegate is responsible to ensure Trans-Africa Projects (Pty) Ltd is notified via the booking form if a Purchase Order or Vendor Application is required before payment can be authorised by the delegate's principal.

## Rescheduling of booking

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Rescheduling of a booking will be allowed if there is an available seat at the next scheduled training course. Rescheduling of a booking will only be allowed once. The delegate is still liable for payment of the original invoice associated with the original booking. There will be no credit notes issued for rescheduling of the training course, unless caused by TAP.

The request to reschedule a booking needs to be provided in writing to **training@taprojects.co.za** within 14 working days prior to the start date of the training course. Failing to do so will automatically be treated as a cancellation.

The delegate will be registered for the next available course.

## Cancellation of booking

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Notification of cancellation of attendance must be made in writing to **training@taprojects.co.za**

Cancellation requests received less than 7 working days prior to the start date of the training course will incur the full cost of the training course.

Cancellation request received between 8 to 14 days prior to the start date of the training course will incur a cancellation fee of 50% of the full cost of the training course.

## Substitution of booking

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Delegates will be allowed one substitution for the training course. TAP must be notified in writing at least three days prior to the training starting date.

## Non-attendance of booked training intervention

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No refund for non-attendance.

## General

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TAP reserves the right to cancel the course, change the course location. In the event that the course must be cancelled, the delegate will be informed 7 days prior to the commencement of the training course and receive a full refund.

# BOOKING FORM



TRANS-AFRICA PROJECTS

Substation Engineering Course:  PLS-CADD, Tower & Pole Course:  Overhead Line Maintenance Course:

Planning, Design & Construction Of Overhead Lines Course:

Individual Registration:

Group Registration:

(Please provide names of all delegates)

\*Session Date

\*Company Trading Name

\*Country

\*Name of delegate

\*Surname of delegate

\*ID / Passport number

\*Position held by delegate

ECSA registration number if applicable

SAIEE registration number if applicable

\*Office Phone

\*Mobile Phone

\*E-mail

\*Special Dietary requirement

\*Manager's Name

\*Manager's Position (i.e. Exec Man 765kV Projects)

\*Manager's E-mail

Purchase Order No

\*Send Invoice To

\*Mobile Phone / Office Phone

\*E-mail

\*Postal Address

\*Vat Registration (if applicable)

\*Company Registration Number

\*I have read and agreed to the terms and conditions below (please mark with an ✓)

\*Signature

Please complete and print