

CUSTOM ENGINEERING SOLUTIONS PANAMA PRESENTS:

PLS-TOWER Training and Structure Design

English Training with Spanish Assistance

November 22 – 23, 2013

Friday to Saturday
8:00 AM – 5:00 PM

Training Facilities:

Hotel El Panama
Via Espana,
Panama City, Panama

***EARLY BIRD BEFORE
SEPTEMBER 1st. AND BE
ENTITLED TO A DISCOUNT***

*Learn about software aided, modeling,
assessment, structural design, criteria
specifications, testing and manufacturing.*

Custom Engineering Solutions Panama
Torres de Las Americas
Tower B, Floor 15th
Panama City

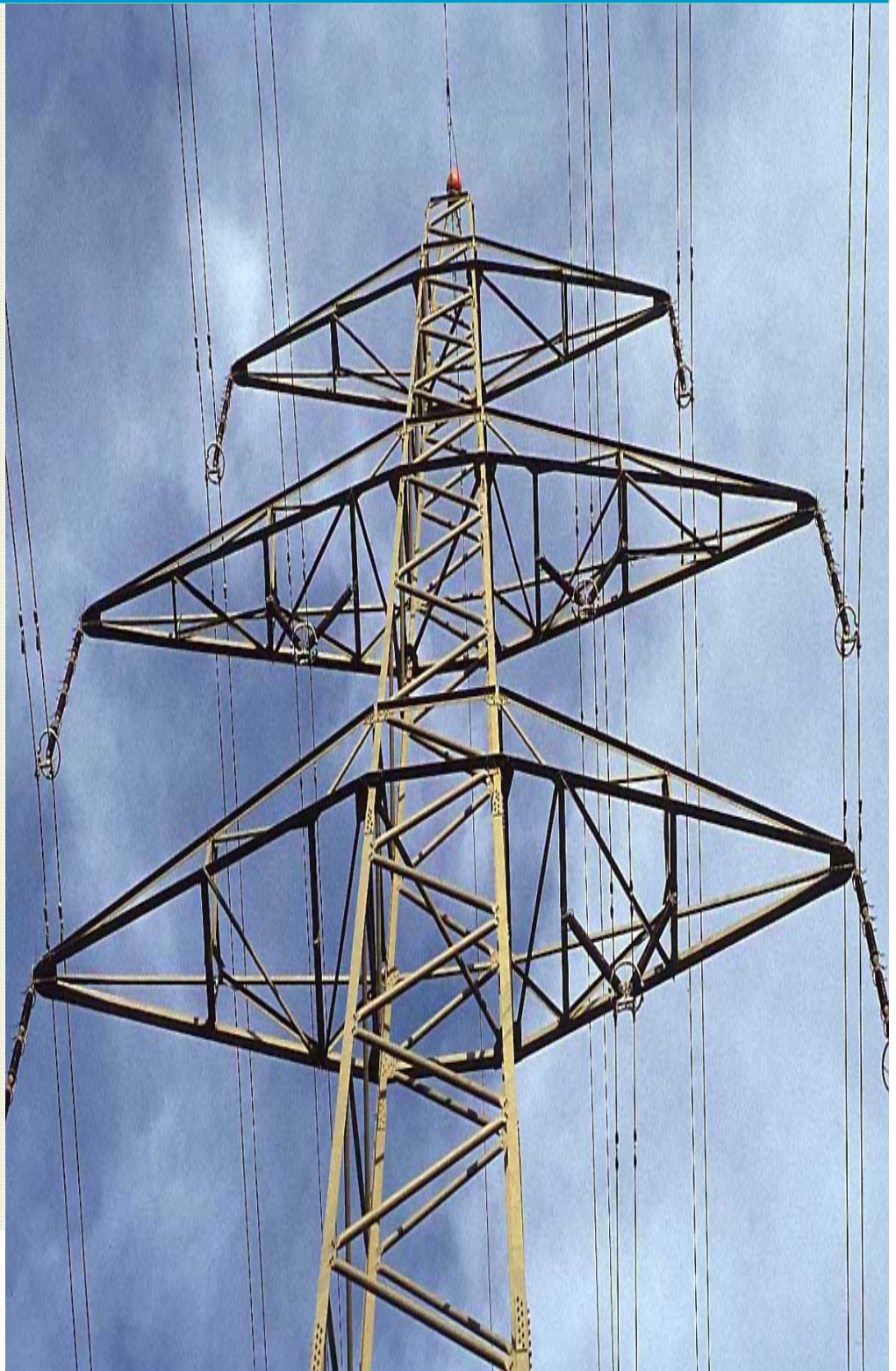
Telephone: 507-215-8312

Fax: 507-398-1621

Information: cspanama@cengs.com



Custom Engineering
SOLUTIONS



OVERVIEW: Learn the Industry Standard In Tower Design Software

The increase in demand for electric power has prompted upgrading and building new electrical transmission lines across the World. TOWER is the most widely used lattice tower analysis and design program in the world today! Its ability to link directly with PLS-CADD, the industry standard in overhead line design and drafting software, makes it the tool of choice for overhead line designers. The demand for experienced line designers and structural engineers is ever increasing. This combined with the aging and retiring of the experienced transmission structural engineers has made it vital for young and incoming structural engineers to become more familiar with the fundamental aspects of design, manufacturing, and testing of different types of installations.

This course will teach the attendees how to use TOWER to model lattice steel towers, whether for construction of new lattice tower lines or upgrading, re-conductoring, or adding ancillary attachments to existing transmission towers.

INSTRUCTORS:

Mr. Timothy C Cashman, P.E. has over 20 years of experience in the design of overhead transmission lines and lattice transmission towers. Prior to his own consultancy practice in 2010, he spent about 21 years working for a large, international design firm. During his career, he has been involved with the design and analysis of lattice towers from 69 kV to 500 kV.

Along with Mr. Cashman, Mr. Frank Noori, cofounder of Custom Engineering Solutions and Transmission Line Design Instructor with more than 11 years experience in Transmission Line Designs, as well as Mr. Archibaldo Clealand, managing director of Custom Engineering Solutions in Panama with over 15 years of design experience will be on hand for any necessary assistance and translations.

BRING YOUR OWN LAPTOP

We ask that students bring their own laptop computers for this course. If you prefer to rent a computer, laptops can be provided with advance reservations for \$75 per day by contacting our client services by email: cspanama@cengs.com or call US offices (770) 619-3999 or Panama offices (507) 215-8312. Your laptop must have Microsoft Windows 8, 7 or XP installed (x64 preferred). It must also have a 1GHz or faster processor, a minimum of 3GB of RAM, 500MB of available disk space, and an available USB port for hardware key connection. An external 2 button mouse will be necessary for easier use of provided training software. **YOU MUST HAVE ADMINISTRATIVE RIGHTS ON YOUR COMPUTER SO THAT THE HARDWARE KEY DRIVERS CAN BE INSTALLED.** You will be provided with all software and material during training.

TOPICS FOR PLS-TOWER:

◆ Day 1

Tower modeling concepts
Component libraries
Defining joints, members, and connections
Tower point loads
Tower wind loads

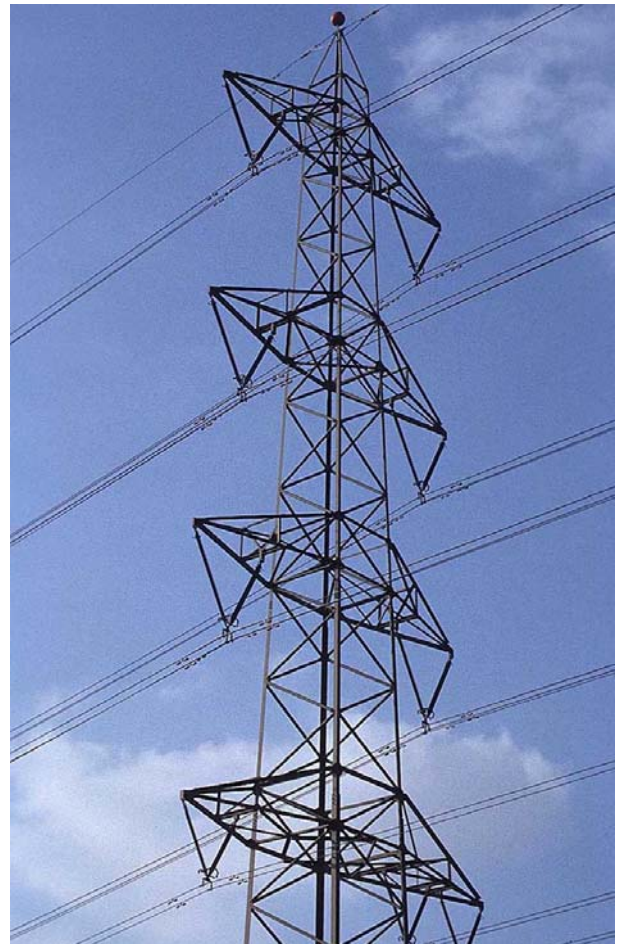
◆ Day 2

Review of analysis results and output
Batch manipulation of multiple models
Analysis of existing towers
Determining allowable spans
Using Tower models in PLS-CADD

LEARNING OUTCOMES

Attendees to this course will learn to:

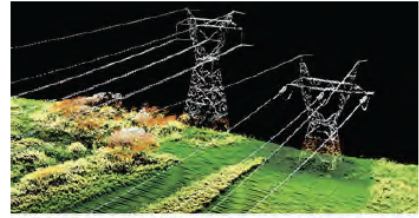
- ◆ Define the different types of structures and when to use them.
- ◆ Analyze economic efficiencies through the design process.
- ◆ Examine the applicable design standards and manuals.
- ◆ Identify the necessary loading criteria for which to design.
- ◆ Structural design fundamentals for latticed self-supporting towers.
- ◆ Design of tubular steel structures, guyed structures.
- ◆ Examine the appropriate design software applications.
- ◆ Analyze the different methods of testing and when to apply them.
- ◆ Identify the manufacturing and finishing process for structures.
- ◆ Examine the possibilities of aesthetics and innovation in design.



REGISTRATION FORM



Custom Engineering
SOLUTIONS



POWER LINE
SYSTEMS INC.

U.S.A. Headquarters (Atlanta, GA)
1095 Windward Ridge Pkwy, Suite 140
Alpharetta, GA 30005
Phone: 770.619.3999 Fax: 770.619.3987

Central America (Panama City, Panama)
Torres de Las Americas, 15th Floor, Tower B
Panama City, Republic of Panama
Phone: 507.215.8312 Fax: 507.398.1621

DETAILS:

The course will be held at the Hotel Panama. The registration form is at the end of this booklet and quotas are limited and reserved.

During the course a PLS-TOWER license will be provided for each attendee. The classes and course documentation will be in English with assistance in Spanish. Classes will be held from Friday, November 22 to Saturday, November 23 from 8:00 AM to 5:00 PM.

The Hotel Panama rooms for participants will cost \$ 125.00 + taxes per night (**subject to change**). For reservations contact Mrs. Irma Carrillo at (507) 215-9444 or email: icarrillo@elpanama.com

TUTION FEES:

The costs of the course is \$ 1,250.00 per person for 2 days course. Companies that register and cancel 100% of the cost before September 1, 2013 will be entitled to a discount.

CANCELLATION POLICY:

Participants who have paid but did not attend the course or cancel their participation after October 19, 2013 will lose the entire payment.

Custom Engineering Solutions reserves the right to cancel or modify this course at any time. In case of cancellation by CES, the 100% of the payment made by the participant will be refunded.

PLEASE REGISTER THE FOLLOWING

- | | |
|---|---|
| <input type="checkbox"/> PLS-Tower Training & Structure Design - English
Factors in Structural Design, Testing, and Manufacturing
November 22-23, 2013: US \$ 1,250
Early bird on or before September 1, 2013: US \$ 1,000 | <input type="checkbox"/> PLS-CADD Training - Spanish
A specialized course focusing on computer-aided design
November 18-21, 2013: US \$ 1,900
Early bird on or before September 1, 2013: US \$ 1,650 |
| <input type="checkbox"/> PLS-CADD Training - Spanish + PLS-Tower Training - English
November 18-23, 2013: US \$ 2,800
Early bird on or before September 1, 2013: BUY 1 GET 1 FREE!! | |

Name _____ Job Title _____
Name Preferred for Badge _____ E-mail _____
Company _____ Telephone _____
Address _____ City _____ State _____ ZIP _____

PAYMENT METHOD

For USA & Canada Based Clients:

Please charge my credit card:

Visa MC

Security Code _____

Visa and MC cards have a 3-digit code on the signature panel on the back of the card

Name on Card _____ Signature _____

Account Number _____ Exp. Date _____

Card Holder Phone Number _____

Billing Address _____ Billing ZIP Code _____

OR Enclosed is a check for \$ _____ to cover _____ registrations.

For Latin America Clients:

Payments are accepted via Bank Transfer. Please Email cspanama@CEngS.com for details or contact our offices in US or Panama.

INSTRUCCIONES PARA ENVIAR TRANSFERENCIAS A HSBC BANK PANAMÁ

Intermediary Bank in the US / Banco intermediario en Estados Unidos

Field/campo 56:

HSBC Bank USA
Swift Code: MRMDUS33
ABA: 021001088

Beneficiary Bank/ Banco Beneficiario

Field / campo 57:

000141186
HSBC Bank Panamá
Swift: **MIDLPAPA**

Final Beneficiary / Beneficiario Final

Field/campo 59:

Número de cuenta del Beneficiario Final (Debe constar de 10 dígitos y debe incluir el 0 inicial de la cuenta)
Nombre del Beneficiario Final
No. de Cuenta: 0109183252
Nombre: CUSTOM ENGINEERING SOLUTIONS
PANAMA, S.A.