

## 2012

# Geothermal Standing Column & Open Well Engineering Design & Project Management Workshop

As the Geothermal marketplace "heats up", so does the demand for engineers that can successfully design commercial geothermal projects. Projects that include not only geo compatible in-building distribution techniques but also the need for the most efficient and least expensive earth-coupling design available has risen dramatically.

Water Energy Distributors, Inc. (WEDI) is a geothermal industry leader with 33 years of experience in the geothermal distribution and design field. With 4 Certified Geothermal Designers (CGD) available, we are uniquely qualified to share our knowledge and experience with the engineering community.

The "Engineers Geo Workshop" is an intensive 3-day program intended for design engineers and project management. The workshop will give you the knowledge, templates and tools to design all the most popular open systems including the Standing Column Well and Open to Diffusion System. All the instructors for this intensive three day workshop are Certified Geo Designers.

### WHAT YOU WILL TAKE AWAY:

1) ACAD files of- Typical Multi SCW drawing package including

- Cover
- Cross Sections, of well systems
- System Level Schematic, for coordination
- Manifold Schematics,
- Details, geo related trim items, controls
- SCW & Open Well template schedules,
- Electrical Interface
- Plot Plan, including layouts & trenches
- ISO Heat Pumps w/ Typical connections
- Schedules

- 2) Total Dynamic Head Computation
- 3) Bleed Volume Annual, Typical for Regulatory
- 4) SCW well bid evaluation worksheet
- 5) SCW Submittal Logs
- 6) Draw Down Well Test Forms
- 7) SCW Specifications Typical
- 8) SCW Related Key Trim Items Specifications
- 9) Various related Technical Bulletins
- 10) Geothermal Heat Pump Specifications with Options

**AUTOCAD, EXCEL or  
WORD FORMAT  
CD & HARD  
COPY PROVIDED**

**WITH THE WORKSHOP YOU ALSO RECEIVE UP TO 6 HRS OF DESIGN ASSISTANCE FOR YOUR NEXT PROJECT (\$1,600.00 VALUE).**

Workshop is limited to six attendees. Please call 603-329-8122 or email:  
Chris Orio, President (x23) [Chris@northeastgeo.com](mailto:Chris@northeastgeo.com)  
OR Erin Sweeny (x 35) [erin@northeastgeo.com](mailto:erin@northeastgeo.com)



## Engineer Training Program ETP

- DAY 1**
- Menu of Design
  - Three Basic Earth-Coupling Methods & Comparison
  - Importance of Loads and Load Profiles COP & EER
  - Geology and Design Effect
  - Break**
  - SCW and OD Installation & Component Overview
  - Design Mathematics, Design Tools with Models and Overview
  - Support & Integration Math/Models Overview Detailed Examples
  - Lunch**
  - Empirical Heat Transfer Results
  - Effect of Bleed, Bleed Model and Theory
  - Flat Plate Heat Exchanger when needed, Advective Volumes for Regulators, Effects and Controls
  - Bleed
  - Pump Selection, Curves and Efficiencies
  - Break**
  - VFD when needed, Packages, Controls and Installation
  - Erosion, Corrosion and Electrolysis
- DAY 2**
- Installation Example:  
Hastings School, Army War College, Trinity Church, Byerly Hall-Harvard, New York City Jobs,  
Merrimack County Nursing Home, Haverhill Library
  - TRIP to Library for Hands On**
  - Lunch**
  - Well Drawings and Well Examples and Controls
  - Geothermal Heat Pump Specification and Example Templates
  - Operational Sequence Typical Standing Column Well w/o Flat Plate
  - Break**
  - Submittal Logs and Tracking
  - Well Bid Evaluation "Apples to Apples"
- DAY 3**
- Controls Integration CXM, DXM, MPC & Earth-Coupling
  - Designing and Checking for Proper Grounding and Electrolysis
  - Kelvin Line Math Worksheet
  - Designing with Climasize Software
  - Break**
  - Designing with EQuest w/geo enhancement
  - Water Energy Continuing Support - Using your 6 hours of Design Assistance
  - Questions and Answers
  - Lunch**
  - Questions and Answers - to continue until all questions are answered

2 Starwood Drive Hampstead, NH 03841  
603-329-8122



# Engineering Workshop REGISTRATION FORM \$3,950.00

\*A \$1,000 deposit is required with the balance due prior to classes.  
Any cancellations must be done in writing at least 3 weeks in advance.

## CONTACT INFORMATION

NAME \_\_\_\_\_ TITLE \_\_\_\_\_

COMPANY NAME \_\_\_\_\_

OFFICE# \_\_\_\_\_ FAX# \_\_\_\_\_ CELL# \_\_\_\_\_

MAILING ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

EMAIL \_\_\_\_\_

**PAYMENT** (Visa / MasterCard / Check ONLY)\*\* All six spots are on a first come first serve basis and must be paid for in advance to reserve your seat in the workshop.\*\*

VISA or MASTERCARD #: \_\_\_\_\_ EXP. DATE: \_\_\_\_\_  
(Circle one)

SECURITY CODE: \_\_\_\_\_ CARDHOLDERS ZIP CODE: \_\_\_\_\_ CHECK# \_\_\_\_\_  
(3 digit # located on back of card) *Make check payable to: Water Energy Distributors*

CARDHOLDERS SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**2012 SCHEDULE OF WORKSHOPS**  
of classes or visit our website at [www.northeastgeo.com](http://www.northeastgeo.com)

Please contact Erin Sweeny [erin@northeastgeo.com](mailto:erin@northeastgeo.com) for a current list

Class you are Attending \_\_\_\_\_ Date of Class \_\_\_\_\_