

Solar Energy & Contracting for Construction Services

Location

McCarthy Conference
Center
80 E. Rio Salado Parkway
Suite 310
Tempe, AZ 85281

Dates

June 11 – June 12, 2009
8 AM to 4 PM

Cost

\$495 per person

Contact

Please direct all questions to
Sylvia.romero@asu.edu
Subject: June Solar Seminar

Credits

CEU Credits: 2, Contact
Hours: 16

*This seminar is of
tremendous value
to you and your
organization.*

OVERVIEW

The Del E. Webb School of Construction at Arizona State University announce a two day seminar titled "Solar Energy and Contracting for Construction Services," which will be held June 11-12, 2009 at the McCarthy Construction's Southwest Division headquarters in Tempe, Arizona. The seminar is cosponsored by Renewable Energy Contracting, McCarthy Construction, Atwell-Hicks, the National Renewable Energy Laboratory (NREL) and Arizona Public Service (APS) Company.

Renewable energy projects have a high percentage of costs associated with the generating technologies (PV modules, turbines, etc.). As a result, much of the industries' efforts are focused on securing cost effective supplies for these components to reduce project risks. Unlike PV modules, construction materials and services can rarely be procured before a utility selects a project in an RFP process and the costs associated with this portion of the project can vary greatly depending on the contractor, location, schedule and scope. As a result, the construction costs often bring the greatest project risks and can greatly impact the financial success of the project.

When it comes to design and construction, ask yourself a simple question: Are you still using price-based or traditional alternative delivery methods to contract and manage vendors? The future of design, construction procurement and contract management is using value-based methods to deliver and manage all procured professional services and construction. This method is a business structure that uses performance measurement, accountability, and risk mitigation techniques to minimize client management, increase performance, and reduce cost of procured services. This structure is ideal for risky projects, large projects, and projects with highly technical requirements.

At this seminar, you will gain a comprehensive introduction to the construction industry, contracting methods and key risks facing owners contracting for construction services. More specifically, you will learn the following:

- How to be a more effective construction client and buyer
- The basics of the construction industry
- Why the industry works the way it does (or why it seems so messed up and inefficient)
- Alternative Contract Methods (i.e. EPC)
- A revolutionary procurement and project management process based upon six-sigma and lean concepts
- How to reduce effort and increase results
- Identify typical contractor risks and efficiently implement risk management techniques, which do not add unnecessary costs.
- Optimal outsourcing structures and realizing a "win-win" contract
- Creating an environment that from minimal data will increase accountability and performance
- Case studies and examples of projects

There will also be two additional special presentations:

Thursday Lunch: Dennis Tucker, *Executive V.P. of McCarthy*. Discussion of the course concepts and how they relate to large project construction.

Friday Lunch: Atwell-Hicks: Discussion of land citing and construction issues.

CEU Credits: 2, Contact Hours: 16

WHO SHOULD ATTEND

Clients, buyers, project managers of solar design, engineering and construction companies including solar project developers, systems integrators, other alternate energy developers.

Please note we will be holding another two-day seminar for construction companies that are considering entering the solar development and construction industry.

HOTEL INFORMATION

Hotel Reservations: June 10-11 with option for June 12

Hyatt Place Tempe/Phoenix Airport
1413 W. Rio Salado Parkway
Tempe, AZ 85281
\$159/night for single/double occupancy
www.hyattplace.com

Tempe Mission Palms
60 East Fifth Street
Tempe, Arizona 85281
\$209.95/night for single/double occupancy
www.missionpalms.com

INSTRUCTORS

- Kenneth T. Sullivan, PhD, Assistant Professor, Del E. Webb School of Construction, Arizona State University
- Dennis Tucker, Executive Vice President, McCarthy Construction
- B. Scott Canada, Division Manager, Renewable Energy Contracting
- Tim Augustine, Atwell-Hicks

SPONSORS

- Arizona State University, Del E. Webb School of Construction
- McCarthy Construction
- Atwell-Hicks
- Renewable Energy Contracting Co. (a division of Ironco Enterprises LLC)
- National Renewable Energy Laboratory
- Arizona Public Service Company

REGISTRATION

To register for this seminar, complete the attached form and fax it to Solar Construction Seminar at (480) 965-4371.
Forms of payment: Check or credit card payable to: ASU – PBSRG

SEMINAR AGENDA

Thursday June 11, 2009

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|------------------------|--|
| 8:00AM - 8:15AM | Introduction & Overview: Scott Canada discusses his experience with the construction of large PV installations and impacts caused by the trend of larger installations. |
| 9:00AM - 9:30AM | Construction Industry Structure - Kenneth Sullivan |
| 9:30AM | Break |
| 9:45 - 11:00AM | Project Contracting Methods: Low Bid, EPC (Design-Build, Construction manager, Construction Manager at Risk), Indefinite Delivery Indefinite Quantity, Job Order Contracting |
| 11:00AM - Noon | Construction Basics: Designs, Specs, Bonding, Insurance |
| Noon - 1:00PM | Lunch – Experience Gained from Solar Construction Projects, Dennis Tucker |
| 1:00PM - 1:30PM | Getting the Client/Buyer Organized |
| 1:30PM - 2:00PM | Developing the Scope & RFP |
| 2:00PM - 2:30PM | Selecting the Right Designer/Contractor |
| 2:30PM - 2:45PM | Break |
| 2:45PM - 4:00PM | Selecting the Right Designer/Contractor (continued) |

Friday June 12, 2009

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|--------------------------|---|
| 8AM - 8:45AM | 11 Key Contractor and Developer Risks |
| 8:45AM - 9:30AM | Preplanning and Risk Management |
| 9:30AM - 9:45AM | Break |
| 9:45AM - 10:30AM | Managing the Project during Design and Construction |
| 10:30AM - 11:30AM | Change Orders and Project Close Out |
| 11:30AM - 1:00PM | Lunch – The importance of proper land siting in solar energy projects |

1:00PM – 2:30PM Land citing and construction issues – Atwell-Hicks

2:30PM – 2:45PM Break

2:45PM – 4:00PM Land citing and construction issues (continued)

4:00PM End of Program

www.pbsrg.com/procuring-solar-energy/

2009 Solar Energy Construction Seminar

June 11-12, 2009 - Tempe, AZ

REGISTRATION FORM

Attendee Name

Company

Address

City

State

Zip Code

Phone Number

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Fax Number

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Email

PAYMENT DETAILS

\$495 per person*

Cancellation Fee: \$75

No Refunds after May 30, 2009

*This fee does not include hotel stay, only seminar registration.

Option 1 - Credit Card (VISA or Master Card ONLY)

Name of Card Holder:	
Card Number:	
3 Digit Code:	Expiration Date:
Signature:	

Option 2 - Check

Please make check payable and mail to:

ASU - PBSRG

Attn: Solar Seminar

P.O. Box 870204

Tempe, AZ 85287-0204

Questions?

Please contact:

Sylvia Romero

(480) 965-1252

Sylvia.romero@asu.edu

Complete and fax to Solar Construction Seminar at (480) 965-4371.