



EUCI Presents a Web Conference on:

INTEGRATING AND BALANCING EV CHARGING WITH RENEWABLE ENERGY GENERATION

August 31, 2010 • 12:00 – 1:30 p.m. Eastern Time



EUCI is authorized
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webinar.



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OVERVIEW

The growth of renewable generation is being embraced because it satisfies many goals: state and federal renewable portfolio standards, carbon reduction targets, load growth, and consumer interest in renewable energy. In fact, more than half of new proposed generation projects are renewable ones. However, renewable intermittent sources such as wind and solar are a challenge and a concern because of their dependency on the weather in order to generate. The installation of storage technologies is needed to ensure the power generated by renewable resources is available to consumers during times when it's most needed. This presentation will provide two examples of how electric vehicles can be leveraged as electricity storage to increase the integration of renewable energy.

There is an interesting synergy between plug-in vehicles and renewable energy, particularly wind. In western Texas and the Texas panhandle, where most of the wind farms are located, wind energy production tends to be highest in the middle of the night, when the system load is at its lowest. As wind farms continue to proliferate, there will come a time (in the next three to five years) when the electric system cannot absorb all the energy – both from wind farms and from the “must-run” conventional generating units. This phenomenon will cap the further development of wind in Texas, unless the nighttime load increases significantly. A large number of plug-in vehicles charging throughout the night would help accomplish this. Austin Energy will share its plans for managing electric vehicle charging in order to even out demand and utilize more wind energy.

Furthermore, electric system operators would benefit from the ability to selectively interrupt vehicle charging in response to variations in wind-farm output level. This type of “load control” is viewed as an ancillary service (i.e., an energy-balancing service) in power markets and has a monetary value. PJM is planning for 180,000 electric vehicles to come online in their territory over the next five years. These vehicles will be aggregated and used for frequency regulation and the spinning reserve market, providing significant off-peak storage. PJM will discuss how widespread deployment of electric vehicles will be accommodated and optimized.

LEARNING OUTCOMES

- Discuss electric vehicles as a storage technology
- Blend electric vehicle charging with wind energy
- Optimize load control with electric vehicle deployment
- Identify smart charging opportunities

PROGRAM AGENDA

- Harnessing wind energy for electric vehicle charging in Texas
- Using vehicle charging as a controllable load to enhance energy balancing in PJM regions with high levels of wind energy generation
- Using EVs as an integration of storage and renewable energy capacities
- Challenges, opportunities, and benefits of using EV charging to shift and manage load
- Smart charging: at home and at charging stations

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the International Association for Continuing Education and Training (IACET), 1760 Old Meadow Road, Suite 500, McLean, VA 22102. In obtaining this approval, EUCI has demonstrated that it complies with the ANSI/IACET Standards, which are widely recognized as standards of good practice internationally.

As a result of their Authorized Provider membership status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standards.

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Requirements for Successful Completion of Program

Participants must be logged in to the Web conference for its entirety to receive continuing education credit.

Instructional Methods

Web based PowerPoint presentation and online interactive question/answer session.

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INSTRUCTORS

Mark Kapner, Senior Strategy Engineer, Austin Energy

Mark was instrumental in developing and running Austin's GreenChoice program, the nation's leading renewable-energy marketing program. He originated the "dual storage media" system for integrating off-peak wind energy and solar thermal to produce utility-scale, dispatchable energy. Kapner also helped to launch Plug-In Partners, the Austin Energy-led campaign to persuade the automobile industry to build plug-in hybrid vehicles. He has 30 years of experience in energy technology and environmental engineering and policy. Prior to coming to Austin, Kapner launched TerraSolar USA, a solar photovoltaics company based in New Jersey. He was a research and development manager in the New York Power Authority, where he developed demonstration projects in energy storage, biomass energy, solar, and cogeneration. Kapner spent 10 years as a consultant to federal government agencies, including the National Science Foundation, the Department of Energy, and the Environmental Protection Agency. He has a B.S. in engineering science from the State University of New York and a master's degree in public policy and management from Carnegie Mellon University.

Ken Huber, Senior Technology and Education Principal, PJM Interconnection

Ken's responsibilities at PJM Interconnection include conceiving, developing, and applying technology to address the needs of the PJM business units and members. His current responsibilities are focused on smart grid development, particularly storage and plug-in hybrid electric vehicle implementation. Huber has the leadership role in exploring opportunities for smart-grid demonstrations and pilots within the PJM territory.

Prior to joining PJM, Ken was employed for 23 years by AT&T Bell Laboratories. His responsibilities included new services creation, vertical industry development, and corporate strategy. Ken is the holder of 12 patents. One patent, Communications Systems Having Unified Messaging, was awarded "Patent of the Year" by Lucent Technologies in 2000.

Ken holds a B.S. in electrical engineering from the University of Pittsburgh, an M.S. in systems engineering from the University of Pennsylvania, and an MBA from Drexel University.

LOGGING IN TO THE WEB CONFERENCE

After registration, each registrant will receive a confirmation of payment or an invoice, depending on method of payment. Each registrant will also receive an e-mail with appropriate login information and more information regarding the event 24 hours prior to the start of the event. To log on, you will need a Windows PC with a broadband connection and audio system.

WHAT IS A SINGLE SITE CONNECTION?

A site connection allows a single connection to the Web conference. That connection is open to any number of users in a collaborative setting. Because there are no travel expenses and only a single registration fee is required, each additional participant lowers the cost per participant significantly.

By purchasing a site connection, you can invite as many people as you would like to view and participate in the session from a single location. Set up the session in a conference room and project the presentation and chat on a large screen. You also have rights to distribute copies of the presentation materials to everyone involved. Please note that audio is received via the computer sound system and must be broadcast to your group.

If for any reason a relevant stakeholder cannot co-locate for the session, we encourage you to include that person by purchasing an additional connection at the reduced fee of \$195 per session. This will ensure that every member of a team receives the same relevant, timely information in the most efficient way.

If you have any technical or purchasing questions, please contact us at (201) 871-0474.

Start Time: 12:00 p.m. Eastern Time

United States Regional Start Times:

9:00 a.m. Pacific :: 10:00 a.m. Mountain :: 11:00 a.m. Central :: 12:00 p.m. Eastern

Use the time zone converter at (<http://www.timezoneconverter.com/cgi-bin/tzc.tzc>) to find your correct start time.

Register today! call (201) 871-0474

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REGISTRATION INFORMATION

Mail or fax this form along with payment. You will receive a confirmation and/or invoice within 48 hours. Make checks payable to "PMA".

MAIL DIRECTLY TO:

The Power Marketing Association (PMA)
P.O. Box 2303
Falls Church, VA 22042

FAX TO:

(253) 663-7224

PHONE:

(201) 871-0474

ONLINE:

www.pmaconference.com

REFUND/CANCELLATION POLICY

All cancellations received prior to July 30, 2010 will be subject to a US \$50 processing fee per Web conference per registrant. Written cancellations received after this date will create a partial credit of the tuition good toward any other EUCI conference, publication, or Web conference. This credit will be valid for six months. No refunds will be given after July 30, 2010 in any case. In case of Web conference cancellation, EUCIs' liability is limited to refund of the Web conference registration fee only.

PLEASE REGISTER THE FOLLOWING

Integrating and Balancing EV Charging with Renewable Energy Generation, August 31, 2010, Single Site Connection: US \$345
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Additional Connection: US \$245
Early Bird on or Before August 30, 2010: US \$195 each
Number of additional connections: _____

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CDs are available 48 hours after the web conference is complete. The cost per CD is US \$295 (add US \$50 for international shipments). Upon receipt of order and payment, the CD will be shipped to you.
NOTE: All Web conference CD sales are final and are non-refundable.

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(direct e-mail, colleague, speaker(s), etc.)

Name _____ Job Title _____

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Please charge my credit card: Visa MC AMEX _____ Security Code _____

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