Post-Conference Workshop:

Electric Vehicle Bulk Buy Programs
Utility Participation, Best Practices
and Considerations

November 3, 2016
OVERVIEW

Electric vehicles hold significant potential for improving local air quality, reducing carbon emissions, and stimulating electricity demand. According to analysts at Argonne National Laboratory, electric vehicles will make up 58% of the light vehicle market by 2030. Customers with electric vehicles use nearly 60% more electricity than the average customer. For electric utilities, this is an opportunity to increase load at a time when growth is slowing.

This conference addresses critical considerations, opportunities and challenges regarding electric vehicles from the utility perspective. It will include case studies from Los Angeles Department of Water & Power, Southern California Edison, San Diego Gas & Electric, and Avista. Experts will describe electric vehicle charging options, review charging service business models, and provide rate case studies. Electric vehicle infrastructure deployment will be discussed and EV policies, regulations and their implications for utilities will be addressed. The Director of the Smart Grid Energy Research Center will discuss the benefits of using a smart infrastructure with electric vehicles, including V2G technology and its applications, EVs in the context of a microgrid, and using EV batteries for shifting energy consumption. National and regional overviews of EV adoption will be provided and the conference will conclude with a panel of experts discussing the future of electric vehicles.

LEARNING OUTCOMES

- Discuss the current state of electric vehicles
- Describe policies and regulations related to electric vehicles
- Review the steps the Los Angeles Department of Water & Power has taken to encourage EV adoption
- Explain electric vehicle infrastructure deployment
- Assess electric vehicle charging options
- Discuss electric vehicle rate considerations for in-home and charging stations
- Evaluate charging service business models
- Describe Southern California Edison’s Charge Ready program
- Participate in a panel discussing best practices, trends, key concerns & potential solutions in electric vehicle adoption
- Describe Avista’s charging station installation program
- Discuss initiatives and potential roadblocks for EV adoption in the Northeast
- Explain how to use smart grid to avoid electric vehicle grid disruption
- Evaluate San Diego Gas & Electric’s Power Your Drive program
- Discuss the future of electric vehicles, including: using EVs as DERs, energy storage, vehicle 2 grid, and more
AGENDA

WEDNESDAY, NOVEMBER 2, 2016

7:30 – 8:00 am  Registration and Continental Breakfast

8:00 – 8:45 am  The Current State of Electric Vehicles
• An overview of EV adoption and infrastructure deployment on a national level
• Current trends throughout the country
• Recent projects and initiatives
• EV adoption from the perspective of the California Air Resources Board.
  - Supervisor Ron Roberts, San Diego County Board of Supervisors, California Air Resource Board

8:45 – 9:30 am  EV Policy & Regulations
This session will discuss current EV policies and regulations and their implications on utilities, including:
• The Obama Administration’s new set of executive actions to accelerate EV adoption in the U.S.
• Federal, state, and local regulations and how they interact with one another
• Best practices & FAQs regarding EV regulations
• Moving forward: What to expect from a policy & regulatory standpoint
  - Kevin Wood, Project Manager- Clean Fuels Transportation, Center for Sustainable Energy

9:30 – 10:00 am  Los Angeles Department of Water & Power
• Overview of Los Angeles city infrastructure development
• Why Los Angeles is investing in EVs: The environmental and business cases for EVs
• Newly launched rebate program
• Mayor’s sustainability plan
• Expanding DC fast chargers
  - Scott Briasco, Manager of Fleet Environmental Compliance & Electric Transportation, Los Angeles Department of Water & Power

10:00 – 10:30 am  Networking Break

10:30 – 11:15 am  Electric Vehicle Infrastructure Deployment
This session will cover important considerations regarding EV infrastructure, including:
• Current and anticipated projects
• Financing infrastructure
• Costs & upgrades
• Infrastructure development models
  - John Smart, Group Lead - Advanced Vehicles, Idaho National Laboratory

11:15 am – 12:00 pm  Electric Vehicle Charging Options
EV charging options for the future will be:
• Residential charging – includes single family and multi-unit dwellings
• Long dwell time public charging – includes workplace, hotels, train/bus station parking, etc.
• Short dwell time public charging – includes DC fast charging for corridors
This session will discuss the different charging options and the costs and benefits associated with each.
  - Charlie Botsford, Business Development, AeroVironment

12:00 – 1:00 pm  Group Luncheon
AGENDA

WEDNESDAY, NOVEMBER 2, 2016 (CONTINUED)

1:00 – 1:45 pm  Electric Vehicles & Rates
- Overview of the current status of electric vehicles in the Northwest
- Utility and customer rate considerations for in-home and charging stations
- Case Study: Developing charging station rates for an Oregon Public Utility
- Case Study: Drive Clean Seattle, Seattle City Light Electric Vehicle Initiative
  - Anne Falcon, Senior Associate, EES Consulting

1:45 – 2:30 pm  Billing Considerations: Charging Service Business Models
This session will cover important considerations regarding billing considerations for EV charging service business models. It will cover various models for charging fees – or not – for both electric utility-owned and privately owned charging stations. It will also address some specific considerations for regulated electric utility companies.
- Privately owned charging stations business model considerations
- Electric utility owned charging stations business model considerations
- Regulated utility considerations
- Bill delivery considerations
  - Larry Kinder, CEO, LilyPad EV

2:30 – 3:00 pm  Networking Break

3:00 – 3:30 pm  Southern California Edison’s Charge Ready Program
Southern California Edison, recently received approval from the California Public Utilities Commission to begin a pilot project to support installation of as many as 1,500 electric vehicle charging stations within its service territory. The Charge Ready program will help move California closer to its objective of putting 1.5 million zero-emission vehicles on the road by 2025, which will in turn support the state’s goal to reduce greenhouse gases and meet deadlines for federal clean air standards. This session will include:
- Overview of workplace charging program
- Overview of Charge Ready pilots
- What worked, what didn’t, why
- Recommendations to move things along
  - Mauro Dresti, Senior Manager, Mass Markets: New Programs & Products, Development & Launch, Southern California Edison

3:30 – 5:00 pm  Panel: Best Practices, Trends, Key Concerns & Potential Solutions in Electric Vehicle Adoption
Moderator: John Morris, CEO, Morris Energy Consulting
- Kathy Kinsey, Senior Policy Advisor, Northeast States for Coordinated Air Use Management (NESCAUM)
- Kevin Wood, Project Manager- Clean Fuels Transportation, Center for Sustainable Energy
- Jordan Smith, Engineering Manager-Advanced Technology, Southern California Edison
- Joseph Gottlieb, President, Electric Vehicle Association of San Diego
- Ashley Horvat, Vice President-Strategy, PlugShare
### AGENDA

**THURSDAY, NOVEMBER 3, 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>7:30 – 8:00 am</td>
<td><strong>Continental Breakfast</strong></td>
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<td>8:00 – 8:30 am</td>
<td><strong>Electric Vehicles - A Northeast Perspective</strong></td>
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<td>Several Northeast states have adopted aggressive greenhouse gas (GHG) emission reduction goals. Since transportation is the largest source of GHG emissions in these states, the Northeast is poised to become a major player in the electric vehicle market. This session will provide an overview of EV adoption in the region, including: state initiatives, infrastructure deployment, potential roadblocks to EV adoption, and utility case studies. The speaker will include a short-term EV adoption outlook for the region.</td>
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<td>- Kathy Kinsey, Senior Policy Advisor, Northeast States for Coordinated Air Use Management (NESCAUM)</td>
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<td>8:30 – 9:00 am</td>
<td><strong>Avista: Electric Vehicle Charging Station Installation</strong></td>
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<td>• Electric transportation strategy at Avista</td>
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<td>• Preliminary impact study</td>
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<td>• EVSE Pilot</td>
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<td>o Lessons learned</td>
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<td>- Rendall Farley, Manager - Electric Vehicles, Avista</td>
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<td>9:00 – 9:45 am</td>
<td><strong>Using Smart Grid to Avoid Electric Vehicle Grid Disruption</strong></td>
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<td>Grid disruption is one of the chief concerns regarding widespread electric vehicle adoption. This session will focus on the benefits of using a smart infrastructure with electric vehicles, including:</td>
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<td>• Technology for using EVs for aggregation services</td>
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<td>• V2G technology and its applications</td>
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<td>• EVs in the context of a microgrid</td>
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<td>• Using EV batteries for shifting energy consumption</td>
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<td>• EVs to support solar Duck Curve and other renewable requirements</td>
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<td>• TOU pricing and Smart EV charging</td>
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<td>• Grid friendly EV charging</td>
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<td>- Rajit Gadh, Director, Smart Grid Energy Research Center, UCLA</td>
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<td>9:45 – 10:15 am</td>
<td><strong>San Diego Gas &amp; Electric’s Power Your Drive Program</strong></td>
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<td>San Diego Gas &amp; Electric has launched a pilot program that within three years will install, own, operate, and maintain 3,500 grid-integrated EV charging stations at workplace, multi-family locations and diverse communities throughout their service area. This session will discuss the details of the program, implementation, best practices, and lessons learned.</td>
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<td>- Gregory Haddow, Manager - Clean Transportation, San Diego Gas &amp; Electric</td>
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<td>10:15 – 10:30 am</td>
<td>Networking Break</td>
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<td>10:30 – 11:00 am</td>
<td><strong>NYPANew York EV Initiatives</strong></td>
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<td>• NYPANew York’s two decade history in electric transportation</td>
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<td>• NY Governor’s Charge NY Initiative with goal of installing 3,000 EV charging stations by 2018</td>
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<td>• Completion of statewide 100 EV charging station pilot – largest open protocol deployment in North America at the time</td>
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<td>• Completion of DC fast charging pilot on the NY State Thruway – demand charge issues</td>
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<td>• Current programs</td>
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<td>o Centralized procurement of EV charging stations for state and local governments</td>
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<td>o NYC electric bus pilot – intelligent load control</td>
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<td>o Residential EV charging with intelligent load control</td>
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<td>- John Markowitz, PE, CEM- Integrated Grid, New York Power Authority</td>
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THURSDAY, NOVEMBER 3, 2016 (CONTINUED)

11:00 am – 12:30 pm  Panel: Electric Vehicles: Moving Forward
- Demand response options
- Electric vehicles as DERs
- EV as energy storage
- Emerging technology that will help facilitate widespread EV adoption
- Consumer engagement
- Policymaking opportunities
  - Rajit Gadh, Director, Smart Grid Energy Research Center, UCLA
  - Eric Seilo, Project Manager, Southern California Edison
  - Greg Haddow, Manager- Clean Transportation, San Diego Gas & Electric
  - JJ McCoy, Senior Policy Associate, NW Energy Coalition
  - Prajit Ghosh, Head- America Powers & Renewables Research, Wood Mackenzie
  - John Smart, Group Lead- Advanced Vehicles, Idaho National Laboratory

12:15 pm  Conference Adjourns

Post-Conference Workshop:
Electric Vehicle Bulk Buy Programs:
Utility Participation, Best Practices and Considerations
NOVEMBER 3, 2016

OVERVIEW

Electric vehicles present an excellent opportunity for utilities to increase sales. The addition of an EV can increase a household’s electricity demand by as much as 30%. However, without a significant increase in current sales rates, there will not be enough EVs on the road to give utility electricity sales a big boost in most areas. One way in which utilities can encourage EV adoption among consumers is to partner with other stakeholders in EV bulk buy programs.

This workshop will provide an overview of electric vehicle bulk buy programs. The instructor will describe methods to cultivate auto dealer engagement with EV bulk buy incentives. He will explain how to leverage local partnerships, including: EV associations, universities, city administrations, utilities, and battery manufacturers to create a bulk buy program that will attract consumers. Attendees will review case studies of EV bulk buy programs from Colorado and Oregon. They will discuss sample memorandums of understanding to use for developing agreements with partners. Attendees will learn how to educate customers on the value of EV purchases and review PR and marketing strategies to promote a successful campaign.
LEARNING OUTCOMES

- Provide an overview of electric vehicle bulk buy programs
- Describe methods to cultivate auto dealer engagement with EV bulk buy incentives
- Explain how to leverage local partnerships, including: EV associations, universities, city administrations, utilities, and battery manufacturers
- Review case studies of EV bulk buy programs from Colorado and Oregon
- Discuss sample memorandums of understanding to use for developing agreements with partners
- Assess how to educate customers on the value of EV purchases
- Discuss PR and marketing strategies to promote a successful bulk buy program campaign

AGENDA

THURSDAY, NOVEMBER 3, 2016

12:30 – 1:00 pm  Registration

1:30 – 5:00 pm  Course Timing

- Overview
- Auto dealer engagement
- Leveraging local partners
  - EV Associations
  - Universities
  - City Administration
  - Utilities
  - Battery Manufacturers
- Case studies: Colorado & Oregon bulk buy programs
- Sample memorandums of understanding to use for developing agreements with partners
- Consumer workshops- Educating consumers on the value of electric vehicles
- PR/Marketing strategies

SPEAKER

John Morris
CEO, John Morris Energy

John Morris has provided consultative services to the energy efficiency industry since 2004. He has worked at PECI, Fluid Market Strategies and CLEAResult. Within these organizations he has had a number of roles including efficiency program implementation, program design, operations at the executive level, business development and policy. John has board service experience including board positions with Climate Solutions, Northwest Energy Efficiency Council and Drive Oregon.
REQUIREMENTS FOR SUCCESSFUL COMPLETION

Participants must sign in/out each day and be in attendance for the entirety of the conference to be eligible for continuing education credit.

IACET CREDITS

EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the AN-SI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the AN-SI/IACET Standard.

EUCI is authorized by IACET to offer 1.0 CEUs for the conference.

PROCEEDINGS

A copy of the conference proceedings will be distributed to attendees at the event. If you are unable to attend or would like to purchase additional copies, a downloadable link will be available two weeks after the conference is complete. The cost per download is US $295. The link includes visual presentations only. Upon receipt of order and payment, the link will be sent to you via email. NOTE: All presentation sales are final and are nonrefundable.

EVENT LOCATION

A room block has been reserved at the Renaissance San Diego, 421 W B St, San Diego, CA for the nights of November 1-2, 2016. Room rates are $189, plus applicable tax. Call 1-619-398-3100 for reservations and mention the EUCI event to get the group rate. The cutoff date to receive the group rate is October 1, 2016 but as there are a limited number of rooms available at this rate, the room block may close sooner. Please make your reservations early.

REGISTER 3, SEND THE 4TH FREE

Any organization wishing to send multiple attendees to these conferences may send 1 FREE for every 3 delegates registered. Please note that all registrations must be made at the same time to qualify.
A room block has been reserved at the Renaissance San Diego 421 W B St, San Diego, CA 92101, for the nights of November 1-2, 2016. Room rates are $189, plus applicable tax. Call 1-619-398-3100 for reservations and mention the EUCI program to get the group rate. The cutoff date to receive the group rate is October 1, 2016, but as there are a limited number of rooms available at this rate, the room block may close sooner. Please make your reservations early.

How did you hear about this event? (direct e-mail, colleague, speaker(s), etc.)

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Company

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Billing City

Billing State

Billing Zip Code/Postal Code

Exp. Date

Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx)

OR Enclosed is a check for $ ________________________ to cover __________________registrations.

Substitutions & Cancellations
Your registration may be transferred to a member of your organization up to 24 hours in advance of the event. Cancellations must be received on or before September 30, 2016 in order to be refunded and will be subject to a US $195.00 processing fee per registrant. No refunds will be made after this date. Cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI event. This credit will be good for six months from the cancellation date. In the event of non-attendance, all registration fees will be forfeited. In case of conference cancellation, EUCI’s liability is limited to refund of the event registration fee only. For more information regarding administrative policies, such as complaints and refunds, please contact our offices at (201) 871-0474.