EUCI
ONLINE CONFERENCE

NON-WIRE ALTERNATIVES:

Examining the Viability of Alternatives to Traditional Infrastructure Upgrades

October 8-9, 2020
Online | Central Time

EUCI ONLINE CONFERNCE

EUCI is pleased to offer this virtual conference on its online interactive platform. Enjoy a valuable learning experience with a smaller impact on your time and budget. You will gain new knowledge, skills, and hands-on experience in from the comfort of your remote location.

> ***"Continue this series. Very informative and great to have an event focused on NWA only."***
>
> Senior Consultant, DNV GL

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OVERVIEW

EUCI's annual **Non-Wire Alternative (NWA) Conference** serves as a national forum for the energy industry to explore the dynamic landscape of NWA projects, and their growing role as a resource replacement for traditional (and often costly) T&D upgrade investments.

The program will evaluate a range of different NWA project types and technologies, their market and regulatory drivers and challenges, overall resource value (economics, grid benefits) and grid deployment case studies:

- Distributed generation (solar PV, storage, hybrid projects, microgrids, EVs)
- Energy efficiency and other demand management techniques
- Renewable gas as a long-duration energy storage resource
- Grid software and controls, Volt/VAR optimization and conservation voltage reduction (CVR)
- Rate design, demand charges, dynamic pricing & customer programs

Utility case studies and leading industry experts will provide attendees with deep knowledge on the state of non-wire alternatives (NWAs) across the country, evaluating the massive growth and potential already underway. Discussions will also address the challenges associated with NWA projects and tips to overcome them – impacts of COVID-19 on project development, barriers with traditional rate and regulatory processes, and legal/contractual issues with NWA technologies.

*****Specialized virtual networking opportunities will be integrated into the agenda, offering attendees an opportunity for meaningful connections with speakers and each other*****

LEARNING OUTCOMES

- Evaluate utility NWA project case studies that have been deployed across the country
- Assess NWA measures and scenarios currently considered feasible
- Identify distribution and transmission infrastructure that are NWA candidates
- Discuss policy and regulatory considerations needed to incentivize non-wire alternative projects
- Review frameworks to assess cost/benefits of NWA projects & overall economic viability
- Analyze how utilities, grid operators and regulators across the country are viewing NWAs
- Review how new technologies and market paradigms are impacting traditional resource planning through least-cost, least-risk outcomes
- Evaluate RFP and contracting processes for NWA specific projects
- Review analytical processes to optimize NWA location & performance on the distribution grid

> ***"Great quality of information!"***
>
> Senior Manager, SEPA

> ***"Great conference, very impressed."***
>
> DER Policy & Program Manager, Snohomish PUD

AGENDA

THURSDAY, OCTOBER 8, 2020 - CENTRAL TIME

8:40 – 9:00 am **Log In**

9:00 – 9:05 am **Welcome & Introduction**

9:05 – 10:15 am **State of the Industry Update: Non-Wire Alternatives Industry Trends & Best Practices**

- Traditional solutions to aging T&D assets vs. non-wire alternative (NWA) potential
- Industry drivers & perspectives for NWA solutions
- Non-wire alternative resources and technologies overview
  - Distribution grid applications
  - Transmission grid applications
  - Cost/benefit analysis of NWA technologies
- The NWA current landscape: strategies, business models & projects
  - Impacts of COVID-19 on the non-wire alternative (NWA) landscape
  - What are we seeing from utilities & regulators across the country?
  - What technologies and resources are being deployed?
- Regional update on NWA projects
  - NWA in recent state and federal policy proceedings
  - What states/regions are currently most economically viable for NWA projects?
- NWA utility and energy industry best practices
  - Case studies of successful NWA implementation
  - Overcoming challenges and barriers to NWA adoption
- Evaluating the economics and value of services for NWA projects
- Analyzing full value of services NWAs provide to the market
- Full spectrum of ancillary services
- How quickly do market values need to materialize to make a project viable?

Shreyas Vangala, Senior Consultant - Energy & Utilities, West Monroe Energy Partners

10:15 – 10:30 am **Break**

10:30 – 11:30 am **NWA Regulatory & Market Drivers, Challenges, & Impacts on Operational Implementation**

- Regulatory drivers for NWA projects
  - FERC transmission rules
  - Environmental, portfolio standards & state procurement rules
  - Program design, performance-based ratemaking/performance incentive mechanisms
  - How NWA solutions can be an attractive option by dramatically reducing price tags for ratepayers
- Market drivers for NWA projects
  - Technology cost curves & competitive market pressures
  - Changes in load and DER adoption
  - Corporate strategy & stranded asset analysis
- A review of NWA projects and their operational implementation processes
  - Battery storage
  - Solar PV
  - Solar + storage
  - Electric vehicles (EVs)
  - Microgrids
- Challenges and opportunities for enabling NWA growth with regulatory mechanisms and integrated planning practices on the T&D grids

AGENDA

THURSDAY, OCTOBER 8, 2020 - CENTRAL TIME (CONTINUED)

10:30 – 11:30 am **NWA Regulatory & Market Drivers, Challenges, & Impacts on Operational Implementation (continued)**

- Understanding how different NWA projects impact the grid under different scenarios & volumes of penetration
- Market mechanisms that affect costs and economics of NWAs projects
- Determining the 'need quantification' for NWA projects:
  - Hourly and sub-hourly forecasts of circuit to circuit behavior
  - Identifying costs locationally and temporarily
- Optimization of NWA project performance & costs as DERs on the grid
  - Circuit specific analysis for NWA investments across multiple locations
  - Opportunities for optimizing demand charges and enhancing grid services
  - Considerations for rate design, demand charges & customer programs
  - Addressing grid constraint and demand avoidance
- Site specific DER adoption assessment

Aram Shumavon, Co-founder & CEO, Kevala

11:30 am – 12:15 pm **California ISO (CAISO): Non-Wire Project Activity and Implementation in T&D**

- Evolving operational needs on the California grid
- CAISO processes for planning & initiating NWA projects
  - Transmission level NWA projects
  - Distribution level NWA projects
- FERC 841 implications for storage projects
- Description of market products in CAISO markets
  - Demand response
  - Battery storage
  - Other distributed energy resources (DERs)
- Specifics of NWA project contracting, development and deployment at CAISO
- Market interactions and features related to NWA projects
  - Market expansion and enhancements
  - California's 100% renewable energy goal

James Price, Senior Advisor – Market Analysis & Development, Renewable Integration, CAISO

12:15 – 1:00 pm **Break for Lunch**

1:00 – 2:15 pm **PHI's Non-Wire Projects: Storage, Solar, Dynamic Pricing, Demand Response & Energy Efficiency**

- Overview of NWA activity and initiatives in PHI's Mid-Atlantic jurisdictions
  - Washington D.C., Maryland, Delaware, New Jersey
- Regional specific policies promoting specific non-wire resources & their implications
  - State mandated initiatives for energy storage
- Evaluation & costs/benefits analyses for NWA resources
- Overview of PHI's NWA projects, their development processes, associated technologies, & deployment
  - Storage
  - Solar + storage
  - Energy efficiency & demand response
  - Dynamic pricing
- NWA project outcomes, data & findings
- Future plans for NWA projects

Stephen Sunderhauf, Strategic Manager – Customer Programs, Pepco Holdings, Inc.
Tom Shetty, Manager – Investment Management, Pepco Holdings, Inc.

AGENDA

THURSDAY, OCTOBER 8, 2020 - CENTRAL TIME (CONTINUED)

2:15 – 3:00 pm **DTE Energy Non-Wire Alternative Projects: Methodology & Outcomes**

- Pursuing non-wire alternative (NWA) pilot projects to remove technology barriers, understand their costs and technical performance
- NWA screening process and key considerations to determine pilot projects
  - Project type
  - Load relief required
  - Equipment and reliability
  - Cost and timeline suitability
  - Technology specific considerations
- Overview of NWA pilot projects, their objectives and timelines at DTE Energy
  - Geographically target energy efficiency and demand response measures
  - Stakeholder and customer engagement
  - Residential vs. C&I projects
- Implementation of economic framework plan and analytical methodology
  - Determining cost effectiveness
  - Identification of incremental costs and benefits
- Benefits and costs of economic framework plans
  - Breakdown of benefits: avoided costs, new capacity, and avoided T&D infrastructure buildouts
  - Costs for NWA projects
- Residential marketing channel processes & their outcomes
- C&I implementation overview
- Demand response (DR) programs overview

Kevin Stewart, Principal Marketing Specialist, Pilot Programs, DTE Energy

3:00 – 3:15 pm **Afternoon Break**

3:15 – 4:45 pm **Panel: New York NWAs—Experience, Lessons Learned and Next Steps**

New York's infamous REV initiative, along with a range of other progressive state policies, are driving energy innovation and advancing deployment of NWA projects on the grid. This dynamic panel will feature leaders from some of the most prominent energy companies in NY to share their experiences, case studies, lessons learned, and next steps with NWA project development and grid integration.

Moderator: David South, Senior Principal- Energy & Utilities, West Monroe Energy Partners
Marie Schnitzer, Lead Project Manager, National Grid
Griffin Reilly, Section Manager - Targeted Demand Management, Con Edison
Mike DeAngelo, Program Manager – Non-Wire Alternatives, NYSEG/RGE (invited)
MD Sakib, Section Manager – Utility of the Future, Orange and Rockland Utilities, Inc.

> ***"My experience attending EUCI's conference remotely went very well. The technology utilized was very user-friendly and allowed me to fully participate in the conference. I'm glad I was able to receive the training & knowledge needed, despite an inability to travel. Would certainly recommend to others!"***
>
> Regulatory Affairs, DTE Energy

AGENDA

FRIDAY, OCTOBER 9, 2020 - CENTRAL TIME

8:40 – 9:00 am **Log In**

9:00 – 9:45 am **Legal & Contractual Issues for NWAs in Uncertain Times**

- Impacts of COVID-19 on NWA contracts and projects
  - Force majeure clause enforcement
  - Scheduling and timing impacts on project feasibility
- Tips and issues to consider with non-wire alternative (NWA) contracts
  - Solar + storage contracts
  - Microgrid contracts (CA procurement mandate)
- Key elements of contract negotiation
  - Evaluating overall project economics and affordability
  - Force termination (FM) considerations
  - Performance deadlines & the role of other parties in meeting them
    - Utility interconnection
    - Utility resource management
- Technology contingency elements of contract negotiation
  - Testing
  - Delivery date of energy
  - Forecasting pricing
  - Indemnity
  - Working with multiple technology resources
- Regulatory & compliance considerations – what do you need to do to make project comply?

Tara Kaushik, Partner, Holland & Knight

9:45 – 10:00 am **Morning Break**

10:00 – 11:00 am **Renewable Gas: An Emerging NWA Solution for Utilities**

Gas utilities in the Pacific Northwest are actively developing renewable gas projects – from both biogas and hydrogen resources– to decarbonize their resource supply. However, renewable gas is also being recognized as a non-wire alternative resource for the benefits it can provide to the transmission grid as a long duration energy storage resource. This session will evaluate this resource and project development potential, discussing:

- Production methods of renewable gas projects & their economics
  - Capitalizing off California renewable curtailment to produce renewable hydrogen
- Benefits of renewable gas projects on the electric grid
  - Alleviation of pressure on transmission grid
  - Managing volatility
  - Serving as a load balancing resource
    - Electrolyzer grid response rate
- Renewable gas as a long duration energy storage resource
  - Storage size potential in existing gas infrastructure
  - Comparison to lithium-ion batteries as storage:
    - Cost, size & duration capability

Chris Kroeker, Emerging Technology Program Manager, NW Natural

11:00 am – 12:30 pm **Closing Panel & Facilitated Virtual Networking Session**
Moderator: Paul DeCotis, Senior Director – Energy and Utility Practice, West Monroe Partners

12:30 pm **Program Adjourns**

INSTRUCTIONAL METHODS

PowerPoint presentations and case studies will be used in program.

REQUIREMENTS FOR SUCCESSFUL COMPLETION

Participants must login for the entirety of the course 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 ANSI/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 ANSI/IACET Standard.

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

ONLINE COURSE DELIVERY & PARTICIPATION DETAILS

We will be using Microsoft Teams to facilitate your participation in the upcoming event. You do not need to have an existing Teams account in order to participate in the broadcast – the course will play in your browser and you will have the option of using a microphone to speak with the room and ask questions, or type any questions in via the chat window and our on-site representative will relay your question to the instructor.

- You will receive a meeting invitation which will include a link to join the meeting.
- Separate meeting invitations will be sent for the morning and afternoon sessions of the course.
  - You will need to join the appropriate meeting at the appropriate time.
- If you are using a microphone, please ensure that it is muted until such time as you need to ask a question.
- The remote meeting connection will be open approximately 30 minutes before the start of the course. We encourage you to connect as early as possible in case you experience any unforeseen problems.

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ONLINE DELIVERY & PARTICIPATION DETAILS

EUCI will use Microsoft Teams to facilitate participation in the upcoming event. Attendees do not need to have an existing Teams account to participate in the broadcast. The course will play in attendee's browser. When attendees sign on, their microphones are typically muted. Attendees should keep their mic muted until such time as it's needed to ask a question. During the event, participants will have the option of using a microphone to speak with the room and ask questions, or type in any questions via the chat window and our online administrator will relay your question to the instructor.

- Each attendee will receive an event invitation by e-mail, which will include one link to sign on for each half-day of the event (i.e., three links for a 1 ½ day event). The appropriate link must be used to join each half-day event segment at the appropriate time.
- The remote meeting connection will open approximately 30 minutes before the start of the course. We encourage attendees to connect as early as possible in case of unforeseen problems.

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

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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 4, 2020 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 course 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.
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