

THE RAIL ELECTRIFICATION COUNCIL (REC) INVITES YOU TO ITS SPRING 2023 MEETING

IS RAIL ELECTRIFICATION ON TRACK?

Trends and Activities in the Electric Power – Transportation Eco-system

INTRODUCTION: REC News; New Members; Antitrust Warning Welcoming Remarks – Debra Phillips, NEMA President & CEO

1:15 p.m.

KEYNOTE ADDRESS: A Forward-Looking Perspective on the Technology and Operations That Drive Railroads in the 21st Century --Kari Gonzales- President & CEO of MxV Rail.

Kari was at the helm while MxV Rail built new infrastructure, transformed its services, and moved operations in 2022. She leads the team with the advantage of 20 years' service and experience in the rail industry. She is a mechanical engineer by training, holds an MBA, and was recognized by *Railroading* as a "rising star."

2:00 p.m.

PANEL 1 – Freight and Passenger Railroads Reflect on the Economic, Policy, and Technology Challenges of Decarbonization and the Electric Future

Panelists: Francois Belanger, Senior Director, Sustainability, Canadian National Thad Call, General Director, Sustainability, Union Pacific Michael Cleveland, Director, Advanced Energy, Progress Rail Michael Iden, P.E. Tier 5 Locomotive LLC

Moderator, Steve Griffith, Executive Director, Transportation & Cybersecurity, NEMA

3:00 p.m. Break

3:15 p.m.

PANEL 2 – Perspectives on Rail-Grid Synergies and the Pace of Change in Our Two Critical Industries

Panelists:

Michael Johnsen, Senior Advisor on Climate & Sustainability, Federal Railroad

Administration, USDOT Liza Reed PhD., Advisor, Grid Deployment Office, US Department of Energy Guy Van Uytven, Canadian Society of Senior Engineers (ret.), Bowman Center for Sustainable Energy, Class 3 Member, WECC Patty Long, President, Railway Supply Chain Institute

Moderator: Jim Hoecker, REC Co-founder & Counsel, Husch Blackwell

UPDATE ON COUNCIL ACTIVITIES AND COMING EVENTS

LOGISTICS

<u>Meeting Place:</u> In Person at NEMA's Headquarters in Arlington, VA, or Virtually through Microsoft Teams

- **Date & Time: Tuesday May 23, 2023, 1:00PM-5:00PM EDT** (For those attending in person a lunch will be provided at 12:00PM)
- **<u>RSVP To:</u>** Steve Griffith at <u>Steve.Griffith@nema.org</u> (Indicate attendance in person or virtually in your response)

UPDATES ON ACTIVITIES OF THE COUNCIL AND COMING EVENTS

Founded in 2020, the Council is a diverse coalition of electrical manufacturers, technology companies, transportation companies, renewable energy providers, and other stakeholders that seek to enhance the strength and efficiency of two of our most critical infrastructure networks – the North American high voltage electric transmission grid and the international, national, and regional networks of North American railroads. The Council is an affiliate of the National Electrical Manufacturers Association, but its membership is open to all interested companies and institutions seeking to advance modern energy and transportation policies. The Council's agenda addresses North American freight and passenger transportation, economic efficiency issues, mitigation of the climate impacts from the transportation and electric power industries, and infrastructure challenges in the U.S. and Canada. In particular the REC addressed development and integration of the high voltage transmission grid. For more information, please visit Rail Electrification Council

THE RAIL ELECTRIFICATION COUNCIL

Where Railroading's Major Contributions to North America Economies Meets New and Emerging Technological, Regulatory, and Policy Developments

JOIN THE COUNCIL AT THE INTERSECTION OF ENERGY AND TRANSPORTATION

- A **FORUM** FOR EVALUATING THE STRATEGIC ADVANTAGES OF, AND BARRIERS TO, ELECTRIC GRID MODERNIZATION IN THE U.S. AND CANADA, FOR THE BENEFIT OF TRANSPORTATION
- FINDING NEW **PARTNERHIPS** WITH INVESTORS, ELECTRIC POWER PRODUCERS AND TRANSMISSION PROVIDERS, MAJOR MANUFACTURERS IN THE RAILROAD, COMMUNICATIONS, AND ENERGY SPACES
- A COLLABORATIVE **EXCHANGE** ON THE FINANCIAL AND TAX ADVANTAGES OF ELECTRIFICATION, TECHNOLOGY INVESTMENTS, AND INFRASTRUCTURE AND SERVICE IMPROVEMENTS
- A **PATHWAY** FOR UNDERSTANDING AND COMMUNICATING WITH REGULATORS, CLIMATE CHANGE POLICY MAKERS, IMPROVING ESG PROFILES, AND WORKING WITH DIVERSE STAKEHOLDERS
- A **FOCUS** ON BUILD ING PASSENGER AND FREIGHT TRANSPORTATION FOR THE FUTURE THROUGH STRATEGIC CONVERSATIONS AND TRANSACTIONS

ELECTRIFICATION LEVERAGES PAST INVESTMENT FOR THE BENEFIT OF FUTURE COST-SAVING, THE ENVIRONMENT, AND ECONOMIC EFFICENCY

Founded in 2020, the Council is a diverse non-profit coalition of electrical manufacturers, technology companies, transportation companies, renewable energy providers, and other stakeholders that seek to enhance the strength and efficiency of two of our most critical infrastructure networks – the North American high voltage electric transmission grid and the international, national, and regional networks of North American railroads. The Council is an affiliate of the National Electrical Manufacturers Association, but its membership is open to all interested companies and institutions seeking to advance modern energy and transportation practices and policies.

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RAIL ELECTRIFICATION IS "BACK TO THE FUTURE"

RAIL ELECTRIFICATION IS NOT IN ITS INFANCY. HERE'S WHERE WE WERE 50 YEARS AGO ---

"[I]t appeared that economic advantages could accrue to both railroads and utilities by electrification. For the railroads, savings in investment costs and in operation and maintenance expenses may be available to railroad operators where traffic density is high and in other circumstances. For electric utilities, increased sales of power and energy provide incentives for investigation . . . Electrification of mainline railroads offers many advantages and should be vigorously pursued." Edison Electric Institute, A Report [of the Task Force on Railroad Electrification] to the Electrification Committee of EEI, 1970

"Government has provided rights-of-way facilities to highways, waterways, and airways that ... have subsidized the rail industry's principal competitors. Railroads have been slow in adapting to new technology, while rival modes have been more successful in making use of new developments." Secretary of Transportation, A Prospectus For Change in the Freight Railroad Industry, 1974

"Although railroad electrification is a relatively mature technology overseas . . . , U.S. railroad companies continue to have reservations about certain technical aspects. Among the technical uncertainties are the potential interferences with present signaling and communications systems, maintenance cost, and installation techniques to minimize interference with normal operations." DOT *Prospectus* 1978

The Report of the 1974 Report of the Government-Industry Task Force On Railroad Electrification, entitled *A Review of Factors Influencing Railroad Electrification* (DOT):

- (1) Railroad electrification is the only available alternative to diesel-electric operations on high-density, long-haul railroad lines.
- (2) Electrification offers the only feasible means to utilize coal or nuclear power for intercity movements of general freight and passengers
- (3) Modern rail electrification technology is available for application.
- (4) While electrification has been to have a positive rate of return on the projected investment, electrification of high-density lines has not been widely adopted by American railroads because of more pressing capital requirements or more attractive investment opportunities.
- (5) Railroad electrification presents a number of a system regulatory problems for railroads and utilities.
- (6) The development of railroad electrification in an orderly and efficient manner can best be facilitated by joint a government-industry program where substantial improvements in national transportation efficiency can be achieved

RAIL ELECTRIFICATION IS ONCE AGAIN FEASIBLE AND EVEN COMPELLING IN TODAY'S ENVIRONMENT! CONSIDER THE GROWTH OF ELECTRIFICATION ACROSS OTHER SECTORS, THE CHANGING ECONOMICS OF CLEAN ENERGY, INVESTOR FOCUS ON ESG, THE TRANSFORMATION OF THE ELECTRIC GRID, INDUSTRIAL DECARBONIZATION, CLIMATE CHANGE CONCERNS, SUPPLY CHAIN VULNERABILITIES, AND COST-COMPETITIVE RENEWABLE ELECTRIC GENERATION, STORAGE, AND DELIVERY TECHNOLOGIES? LET'S GET BACK ON TRACK!

JOIN THE COUNCIL TODAY

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