

Delivering 100% Carbon-Free Energy: Options & Issues

A Northwestern Electricity Dialogue Webinar

Northwestern Pritzker School of Law

Tuesday, March 16, 2021

8:45 a.m. – 12:00 p.m. CDT

[9:45 a.m. – 1:00 p.m. EDT]

Times listed below are CDT.

The Biden administration has made addressing climate change one of its top priorities, including moving the nation towards net-zero carbon emissions by 2050. The power sector, which has reduced its emissions 33 percent below 2005 levels as of 2019, can play a key role in achieving this goal. Cities, states, and large corporations—many of which have taken important initial steps to reduce carbon emissions—can also play a key role in reaching this goal by working with electric companies to use 100% carbon-free energy across their operations. Key steps to realizing the 100% carbon-free energy opportunity are: using a broad portfolio of zero carbon resources including hydro, nuclear, storage, and carbon capture and storage (CCS) in addition to renewable energy; taking advantage of demand-side resources such as energy efficiency and demand response; electrifying a greater portion of total energy use by electrifying fleets; and moving from purchasing goals to energy use goals.

8:45-9:00 a.m.

Opening Remarks

Maria Bocanegra, Commissioner, Illinois Commerce Commission

9:00-9:30 a.m.

Keynote Address

Roger Ballentine, President, Green Strategies, Inc.

9:30-10:45 a.m.

Session One – Realizing the 100% Carbon-free Energy Opportunity with Corporate Customers

This panel discussion will focus on:

- *The top challenges facing corporate customers in meeting their carbon goals 24/7;*
- *How electric companies, working with their regulators and consumer advocates, can help corporate customers meet their goals while assuring that electricity remains affordable, reliable, and safe for all customers; and*

- *Partnerships or policy changes needed to support the 100% carbon-free energy opportunity.*

Moderator: Lisa Wood, Vice President, Customer Solutions, EEI;
Executive Director, Institute for Electric Innovation
Stephen Chriss, Director, Energy Services, Walmart
Steve Kidwell, Vice President, Corporate Planning, Ameren Corporation
Mary Throne, Commissioner, Wyoming Public Service Commission

10:45-12:00 p.m. **Session Two – Embracing 100% Carbon-Free Energy: The Big Picture**

Public utility commissioners will discuss the growing movement towards net-zero carbon emissions goals at the state and national level, what that means for states and how such goals can be achieved. Panelists will highlight the opportunities and challenges in reaching net zero goals, including what can be accomplished with existing technologies and how the development of next generation clean technologies (e.g., advanced dispatchable renewable energy, advanced storage, carbon capture storage and utilization, advanced nuclear, hydrogen, etc.) can be advanced.

Moderator: Armond Cohen, Executive Director, Clean Air Task Force
Colin Cunliff, Senior Policy Analyst, Information Technology and Innovation Foundation
Ann E. Rendahl, Commissioner, Washington Utilities and Transportation Commission; Chair of Electricity Committee, NARUC
Jeff Lyng, Director, Energy & Environmental Policy, Xcel Energy

12:00 p.m. **Adjourn**

Participants (as of March 4, 2021)

1. **Roger Ballentine**, President, Green Strategies, Inc.
2. **Maria Bocanegra**, Commissioner, Illinois Commerce Commission
3. **Stephen Chriss**, Director, Energy Services, Walmart
4. **Armond Cohen**, Executive Director, Clean Air Task Force
5. **Colin Cunliff**, Senior Policy Analyst, Information Technology and Innovation Foundation
6. **Steve Kidwell**, Vice President, Corporate Planning, Ameren Corporation
7. **Jeff Lyng**, Director, Energy & Environmental Policy, Xcel Energy
8. **Ann E. Rendahl**, Commissioner, Washington Utilities and Transportation Commission; Chair of Electricity Committee, NARUC
9. **Mary Throne**, Commissioner, Wyoming Public Service Commission
10. **Lisa Wood**, Vice President, Customer Solutions, EEI; Executive Director, Institute for Electric

Registrants (as of March 4, 2021)

1. **Ed Achaab**, Trans Asset Mgr, AEP
2. **Chad Allen**, Regional Director, MISO
3. **Grant Anderson**, Senior Regulatory Affairs Analyst, Idaho Power
4. **Alison Archer**, Regional Director, MISO
5. **Stephanie Armistead**, Sustainability Lead, Energy and Water, Chick-fil-A Inc.
6. **Jay Balasbas**, Commissioner, Washington Utilities and Transportation Commission
7. **Vicki Baldwin**, Shareholder, PB&L
8. **Jeffrey Bedell**, VP Sustainability, Macerich
9. **Stephen Bennett**, Manager, Regulatory & Legislative Affairs, PJM Interconnection
10. **Adam Benschhoff**, Vice President, Regulatory Affairs, Edison Electric Institute
11. **Bryan Black**, Chief Operations Officer, UAMPS
12. **Bev Bowlby**, Manager Regulatory Affairs, Ameren Illinois
13. **Kate Bowman**, Renewable Energy Program Manager, Utah Clean Energy
14. **David Boyd**, Regulatory and Policy Strategist, AESL
15. **Cameron Brooks**, President, E9 Insight
16. **David Brown**, Engineer, NJBPU
17. **Rich Brunt**, Sr. Analyst, Indiana Utility Regulatory Commission
18. **Denise Buffington**, Director Federal Regulatory Affairs, Evergy Companies
19. **Ryan Burg**, Principal Business Analyst, ComEd
20. **Diane Burman**, Commissioner, NY PSC
21. **Michael Carman**, Sr Energy Manager, AT&T
22. **Michael T. Carrigan**, Commissioner, Illinois Commerce Commission
23. **Phillip Casey**, Partner, Calfee
24. **Celina Bonugli**, Associate, Clean Energy Innovation, World Resources Institute
25. **David Crawford**, Of Counsel, Betts & Holt LLP
26. **Sarah Cronin**, Commissioner Assistant, Illinois Commerce Commission
27. **Joe DeLosa**, Bureau Chief, Federal and Regional Policy, New Jersey Board of Public Utilities
28. **David Drexler**, Managing Attorney, New York State Department of Public Service
29. **Maisha Earl**, Principal Regulatory Specialist, ComEd
30. **Terri Eaton**, Sr. Director Fed Reg Affair, Xcel Energy
31. **Jacqueline Elliot**, Director, National Customers, Edison Electric Institute
32. **Mason Emmett**, SVP, Regulatory Policy & Analysis, Exelon
33. **Christine Ericson**, Attorney, Illinois Commerce Commission
34. **Jeff Ewart**, Deputy Director, Midwestern Governors Association
35. **Julie Fedorchak**, Commissioner, ND PSC

36. **David Fein**, Founder and President, Fein Solutions, LLC
37. **John Forrester**, Partner, Mayer Brown LLP
38. **Jason Forsythe**, Rate Analyst Utilities Trainee, NJBPU
39. **Trevor Freberg**, Transmission Planning Engineer, ComEd
40. **Al Freeman**, Assistant to Division Director, Michigan Public Service Commission
41. **Sarah Freeman**, Commissioner, Indiana Utility Regulatory Commission
42. **Jennifer Gardner**, President & Founder, Envision Energy
43. **Edward Garvey**, Regulatory Strategist, AESL consulting
44. **Suzanne Glatz**, Director, Strategic Initiatives and Interregional Planning, PJM Interconnection
45. **Roger Goldstein**, Exec. Director Facilities, Panda Restaurant Group, Inc.
46. **Katherine Goyette**, Counsel II, DPU
47. **Ryan Granholm**, Staff Attorney, Illinois Commerce Commission
48. **Kevin Gunn**, Principal, Paladin Energy Strategies
49. **Ryan Hadley**, Executive Director of External Affairs, Indiana Utility Regulatory Commission
50. **Dianna Hain**, AM, ComEd
51. **Daniel Hall**, Central Region Senior Director, Electricity and Transmission, AWEA
52. **Deidre Hansen**, External Affairs Specialist, Indiana Utility Regulatory Commission
53. **James Harmening**, Director of Cybersecurity & Risk Management, Illinois Commerce Commission
54. **Bryce Haugen**, Resource Planner, Otter Tail Power Company
55. **Marcus Hawkins**, Executive Director, OMS
56. **Pat Hayes**, Manager of Transmission Policy, LS Power
57. **Tom Haymaker**, Manager, Energy Planning, Clark Public Utilities
58. **Steph Hodgins**, Deputy Director of Communications & Media, Indiana Utility Regulatory Commission
59. **Harry Holtz**, Managing Director, Alphateam, Inc.
60. **Raelene Hopkins**, Utility Administrator, CVS Health
61. **John Howard**, President, howardconnections
62. **Doug Hunter**, CEO, UAMPS
63. **Ryan Jerman**, Corporate Counsel, PNM Resources
64. **Aubrey Johnson**, Executive Director, System Planning, MISO
65. **Meredith Jones**, Senior Utility Analyst, IN Utility Regulatory Commission
66. **Arthur Justice**, VP Energy & Sustainability, Cinemark USA
67. **Christopher Kennedy**, Partner, Whitt Sturtevant LLP
68. **Duane Kexel**, President, Duane T. Kexel Consulting, LLC
69. **Alexandra Klass**, Professor, University of Minnesota Law School
70. **Daniel Kline**, Director, Transmission Planning, Entergy
71. **Joshua Kmiec**, Director, ScottMadden, Inc.

72. **Phil Kosanovich**, General Counsel, Illinois Commerce Commission
73. **Glenn Krassen**, Of Counsel, Bricker & Eckler LLP
74. **Stefanie Krevda**, Commissioner, Indiana Utility Regulatory Commission
75. **Lorenzo Kristov**, Principal, Electric System Policy
76. **Jonghwan Kwon**, Energy Systems Engineer, Argonne National Lab
77. **Clay Layson**, Assistant Attorney General, Attorney General of Arkansas
78. **Kristin Lewis**, Paralegal, Wilkinson Barker Knauer LLP
79. **Howie Li**, Student, Kellogg School of Management, Northwestern University
80. **Wei Chen Lin**, Policy Advisor - Cybersecurity & Risk Management, Illinois Commerce Commission
81. **Shelby Linton Keddie**, Senior Director, State Energy and Regulatory Policy, EEI
82. **Franz Litz**, Program Consultant, Great Plains Institute
83. **Jody Londo**, Regulatory Policy Manager, Xcel Energy
84. **Sara Lopez**, Assistant Executive Secretary, MN Public Utilities Commission
85. **Etta Lockey**, VP Regulation, PacifiCorp
86. **Paul Lupo**, Bureau Chief, New Jersey Board of Public Utilities (Trenton, NJ)
87. **Ivy Lyn**, Director, State Regulatory Affairs, EEI
88. **Cristin Lyons**, Partner & Energy Practice Leader, ScottMadden, Inc.
89. **Glen Lyons**, Regulatory and Policy Advisor, Exxon Mobil Corporation
90. **Gene Marini**, Senior Originator, (PSCo) Xcel Energy
91. **Sophia Markowska**, Market Associate, Illinois Commerce Commission
92. **James Martin**, Student, Kellogg School of Management, Northwestern University
93. **Jessica Matthys**, MBA Student, Kellogg School of Management, Northwestern University
94. **Daryl Maxwell**, Dept Manager - Hydro Interconnections, MB Hydro
95. **Natalie McIntire**, Consultant, Clean Grid Alliance
96. **Theresa McMillan-Sepkoski**, Audit Specialist, Michigan Public Service Commission
97. **Allison McRoy**, Sr Analyst, Energy Procurement, 7-Eleven Inc.
98. **Sri Medicherla**, Engineer, NJBPU
99. **Chris Martel**, Regulatory Consultant, SWEPCO
100. **John Miller**, Energy Industry Analyst, Federal Energy Regulatory Commission
101. **David Moeller**, Senior Attorney & Director of Regulatory Compliance, Minnesota Power
102. **Martin Montes**, VP of Large Customer Services, Com Ed
103. **Jane Montgomery**, Partner, Schiff Hardin LLP
104. **Jennifer Murphy**, Dir. of Energy Policy, NARUC
105. **Daniel Nilsson Sjolander**, MBA Candidate, Kellogg School of Management
106. **Kenneth Nishimura**, MBA Candidate, Kellogg School of Management
107. **Liam Noailles**, Manager, Federal Regulatory Affairs, Xcel Energy Inc.

108. **Erin O'Connell-Diaz**, President, FutureFWD, Inc.
109. **Christopher Oprysk**, Environmental Engineer, NJ BPU
110. **Andrew Owens**, Dir, Regulatory, Entergy Services, LLC
111. **Nikodem Pancewicz**, Student, Northwestern University
112. **Katie Papadimitriou**, Deputy Executive Director – Policy, Illinois Commerce Commission
113. **Matt Pawlowski**, Exec Director - Bus Mgmt and Reg Affairs, NextEra Energy Resources, LLC
114. **Lucas Pechacek**, Manager - Strategic Alliance, Alliant Energy
115. **Audrey Penner**, Market Access, Manitoba Hydro
116. **Marji Philips**, VP, Wholesale Market Policy, LS Power
117. **Kerri Phillips**, Counsel/Hearing Officer, MA Dept of Public Utilities
118. **Dwayne Pickett**, Dir Reg Solutions, ComEd
119. **Zoe Pidgeon**, Business Analyst, ComEd
120. **Sarah Plotkin**, Senior Program Owner, Target
121. **Matthew Prorok**, Senior Policy Manager, Great Plains Institute
122. **Jay Rasmussen**, RTO Activities Manager, Duke Energy
123. **John Ratnaswamy**, Member, The Law Office of John Ratnaswamy, LLC
124. **Ryann Reagan**, Aide to the Commissioner, NJBPU
125. **Ashley Renkor**, Legal and Policy Advisor, Illinois Commerce Commission
126. **Jack Roback**, Trading & Shipping: Operator, BP
127. **Kerstin Rock**, Manager Policy & Analytics, PacifiCorp
128. **Jeff Rodgers**, Manager, AT&T
129. **Brian Rybarik**, Program Manager, Microsoft
130. **Jamie Saunders**, Deputy Director, Division of Energy, NJ BPU
131. **Matthew Schuerger**, Commissioner, Minnesota Public Utilities Commission
132. **Jeremy Schwartz**, Senior Pricing Analyst, OGE Energy Corp
133. **Doug Scott**, Vice President, Great Plains Institute
134. **Will Seuffert**, Executive Secretary, MN Public Utilities Commission
135. **Katie Sieben**, Chair, MN Public Utilities Commission
136. **Jay Skabo**, VP Elec Supply, MDU
137. **Lucas Smith**, Student, Northwestern University
138. **Jason Smith**, Director, State Energy and Regulatory Policy, Edison Electric Institute
139. **Beth Soholt**, Executive Director, Clean Grid Alliance
140. **Mary Stephenson**, Stephenson Schroeder Ltd.
141. **Joelle Steward**, Vice President, Regulation, PacifiCorp
142. **Tyler Stoff**, Director of Regulatory Affairs, American Council on Renewable Energy
143. **Alexis Sulentic**, Manager, State Regulatory Outreach, EEI
144. **Joe Sullivan**, Vice Chair, MN Public Utilities Commission

145. **Gavin Taves**, Climate Consultant, Overlap
146. **Brian Tulloh**, Executive Director, External Affairs North Region, MISO
147. **Rebecca Valcq**, Commissioner, Public Utility Service of Wisconsin
148. **Justin Vickers**, Staff Attorney, Environmental Law and Policy Center
149. **Julie Voeck**, Senior Director, Legislative and Regulatory Affairs, NextEra Energy Resources
150. **Ben Walker**, Dir Energy Market Analytics, Hospital Energy
151. **Jason Weiers**, Manager, Delivery Planning, Otter Tail Power Company
152. **Dave Wilms**, Solar Developer, SunPeak
153. **Sarah Wright**, Executive Director, Utah Clean Energy
154. **Michelle Zaccagnino**, Manager, State Regulatory Policy, Edison Electric Institute
155. **John Zarzycki**, Research Scientist, NJBPU
156. **Andy Zellers**, President, Influent Energy