



NARUC 129th Annual Meeting and Education Conference



Welcome to Baltimore!

It's been five years since we last convened an Annual Meeting here in 'Charm City,' as Baltimore is known. We certainly hope that you'll be charmed by the outstanding slate of general sessions and concurrent panels that have been meticulously planned for you.

As many of you have noticed, our Annual Meeting is now the Annual Meeting and Education Conference, to better reflect NARUC's goal of providing meeting content that truly educates our members and stakeholders. Utility regulation is never easy and serving the public interest rarely merits public praise. However, we understand and appreciate the work undertaken by our state regulators and our meetings seek to address the issues that matter most to these public servants.

During this conference, we conclude this year's presidential theme: Infrastructure, Innovation, and Investment. We thank Immediate-Past President Robert Powelson for his steadfast leadership and support and congratulate him on his current FERC appointment. At this meeting, we will formally install our new NARUC President— Tuesday's Installation Luncheon will be one of the most memorable highlights of the meeting. Along with the installation speech, we will present NARUC's Innovation Awards to recognize achievements from industry and regulators.

We are also grateful that the Mayor of Baltimore, the Honorable Catherine Pugh, made time in her schedule to deliver welcome remarks.

We would be remiss in not acknowledging the tremendous effort on the part of our

committees and subcommittees, along with NARUC staff, who have worked diligently to assemble concurrent and general sessions that are relevant and educational.

Please enjoy your time in Baltimore and we look forward to engaging with you during the meeting!



Greg R. White NARUC Executive Director



John W. Betkoski III of Connecticut NARUC President



2017 NARUC Officers

John W. Betkoski, III **President** Connecticut Public Utilities Regulatory Authority

> Ellen Nowak Vice President

Wisconsin Public Service Commission

David E. Ziegner **Treasurer** Indiana Utility Regulatory Commission

Greg R. White Executive Director

National Association of Regulatory Utility Commissioners

Table of Contents

General Information 2
Daily Schedule at a Glance
2017 Terry Barnich Award6
Sponsors
Media Sponsors 9
Sunday11
Monday 21
Tuesday
Wednesday
CLE Information
Meeting Facilities Map45

General Information

Hotel Information

Hilton Baltimore

401 West Pratt Street Baltimore, Maryland 21201 443-573-8700

Overflow Hotel

Baltimore Marriott Inner Harbor at Camden Yards 110 South Eutaw Street Baltimore, Maryland 21201 410-962-0202

Registration and Information Desk

The NARUC registration and information desk will be open the following hours:

Sunday	8:00 a.m6:30 p.m.
Monday	8:00 a.m5:00 p.m.
Tuesday	8:00 a.m3:00 p.m.
Wednesday	8:30 a.m11:00 a.m.

Badge Color Identification

Badges must be worn and visible at all times when attending a NARUC meeting or event.

Blue – Commissioners Green – Industry Red – Commission Staff Tan – NASUCA/Public Interest/Consumer Groups/Federal/State Agencies (nonmembers) Purple – Media

Event Tickets

Tickets are required from everyone for entry to the NARUC Welcome Reception. There are no additional charges for this event. Tickets will be exchanged at the door for two beverage tickets. See the registration desk for guest ticket information and fees. NARUC encourages all individuals to drink responsibly and not to drink and drive.

Program Printing

This program was printed using information as of October 20. Some information may have changed by the time the meeting occurs.

The printing of this program was sponsored in part by



Suggested Attire

Sunday – Wednesday: Business
Welcome Reception: Business
Meeting rooms have a tendency to be cool. We suggest you bring a sweater or jacket for your comfort.

Continental Breakfast

A continental breakfast will be provided from 7:30 a.m. to 9:00 a.m. Sunday through Wednesday, courtesy of the National Rural Electric Cooperative Association (NRECA) in the Key Ballroom Foyer.



Twitter Users

Use the #NARUCAnnual17 hashtag when tweeting from our meeting. Follow us at http://twitter.com/naruc for the latest updates.

Internet

The password for wifi is NARUC17A. Please stop by the Carahsoft and Oracle tables to thank them for keeping you connected.



Electronic Devices

In consideration of the speakers and your colleagues, please silence all cellular phones and other communication devices while in the sessions. Your cooperation and courtesy is appreciated.

Conference App

Be interactive and don't miss out on the need-to-know information! Download the NARUC Annual Meeting Mobile App. Conveniently review everything you need to know about the Annual Meeting. Enhance your event experience by using the app to view the entire program, connect with other attendees, engage in panel sessions and polls, view speaker profiles, and more right at your fingertips! Stop by the NARUC Registration Help Desk or ask a NARUC staff member if you need assistance downloading the app.

Taping/Video Policy

Unless you receive prior approval from NARUC, only credentialed members of the press are allowed to tape or video NARUC sessions. This policy gives comfort to our speakers and protects NARUC from potential legal action. If you wish to tape or record any portion of the NARUC meeting, please contact Director of Communications, Regina L. Davis, at rdavis@naruc.org for permission.

ORACLE[®] Utilities

salesforce

sevenpoints

Daily Schedule at a Glance SUNDAY, NOVEMBER 12

Time	Event	Location	Page
7:30 a.m. – 9:00 a.m.	Continental Breakfast	Key Foyer	
7:30 a.m. – 9:00 a.m.	NRRI Board of Directors Breakfast Meeting (closed meeting)	Blake (2nd Floor)	11
8:00 a.m. – 6:30 p.m.	Registration Open	Key Foyer	
9:00 a.m. – 11:45 a.m.	Subcommittee on Supplier and Workforce Diversity	Кеу б	11
9:00 a.m. – 11:45 a.m.	Task Force on Military Workforce Development	Key 12	14
9:00 a.m. – 11:45 a.m.	Staff Subcommittee on Energy Resources and the Environment	Key 8	11
9:00 a.m. – 11:45 a.m.	Staff Subcommittee on Water	Key 8	12
9:00 a.m. – 11:45 a.m.	Staff Subcommittee on Consumer Affairs	Key 9	14
9:00 a.m. – 4:00 p.m.	Staff Subcommittee on Telecommunications	Holiday 2	13
9:00 a.m. – 5:00 p.m. 9:00 a.m. – 10:15 a.m.	Staff Subcommittee on Electricity Joint With Staff Subcommittees on Energy Resources and the Environment and Electric Reliability	Кеу 8	12
10:30 a.m. – 11:45 a.m. 1:30 p.m. – 5:00 p.m.	Joint with Staff Subcommittee on Electric Reliability Joint with Committee on Critical Infrastructure	Key 2 Key 6	
9:00 a.m. – 5:00 p.m. 9:00 a.m. – 10:15 a.m.	Staff Subcommittee on Electric Reliability Joint with Staff Subcommittees on Electicity and Energy Resources and the Environment	Key 8	12
10:30 a.m. – 11:45 a.m. 1:30 p.m. – 5:00 p.m.	Joint with Staff Subcommittee on Electricity Joint with Committee on Critical Infrastructure	Key 2 Key 6	
10:00 a.m. – 11:45 a.m.	Staff Subcommittee on Critical Infrastructure	Tilghman (3rd Floor)	14
10:30 a.m. – 11:45 a.m.	Washington Action (closed meeting)	Blake (2nd Floor)	14
10:30 a.m. – 1:00 p.m.	New Commissioner Forum and Luncheon (new Commissioners only)	Ruth	14
1:30 p.m. – 3:15 p.m.	Committee on Consumer Affairs	Key 2	16
1:30 p.m. – 3:30 p.m.	Staff Subcommittee on Executive Management (For Commission Staff Only)	Blake (2nd Floor)	17
1:30 p.m. – 5:00 p.m.	Committee on Critical Infrastructure	Key 6	16
1:30 p.m. – 5:00 p.m.	Task Force on Innovation	Key 8	17
2:30 p.m. – 5:00 p.m.	Committee on International Relations	Key 12	17
3:15 p.m. – 5:00 p.m.	Staff Subcommittee on Gas	Key 2	19
5:00 p.m. – 6:30 p.m.	Welcome Reception	Holiday 6	19

Daily Schedule at a Glance

MONDAY, NOVEMBER 13

Time	Event	Location	Page
7:00 a.m. – 8:45 a.m.	OPSI Breakfast Meeting (invitees only)	Latrobe (1st Floor)	21
7:30 a.m. – 8:45 a.m.	Board of Directors Breakfast Meeting	Johnson (1st Floor)	21
7:30 a.m. – 9:00 a.m.	Continental Breakfast	Key Foyer	
8:00 a.m. – 5:00 p.m.	Registration Open	Key Foyer	
9:00 a.m. – 10:15 a.m.	Committee on Consumer Affairs Joint session with Task Force on Natural Gas Access and Expansion and Committee on Gas	Key 6	25
9:00 a.m. – 10:15 a.m.	Task Force on Natural Gas Access and Expansion Joint session with Committee on Gas and Committee on Consumer Affairs	Key 6	25
9:00 a.m. – 11:45 a.m.	Committee on Telecommunications	Holiday 2	21
9:00 a.m. – 11:45 a.m.	Committee on Energy Resources and the Environment	Key 12	21
9:00 a.m. – 11:45 a.m.	Committee on Electricity	Key 2	23
9:00 a.m. – 11:45 a.m.	Committee on Gas	Key 6	23
9:00 a.m. – 11:45 a.m.	Committee on Water	Key 9	25
9:00 a.m. – 11:45 a.m.	Staff Subcommittee on Law	Chase (3rd Floor)	26
11:45 a.m. – 1:15 p.m.	Regulators Luncheon (Commissioners, Commission Staff and Commissioners Emeritus)	Key 8	26
1:30 p.m. – 3:15 p.m.	Opening General Session Featuring Officer Elections and Terry Barnich Award	Holiday Ballroom	27
3:15 p.m. – 3:45 p.m.	Networking Break	Holiday Foyer	
3:45 p.m. – 4:45 p.m.	General Session	Holiday Ballroom	28
5:00 p.m. – 6:00 p.m.	MACRUC (Invitees Only)	Poe (2nd Floor)	28
5:00 p.m. – 6:00 p.m.	NECPUC (Invitees Only)	Johnson (1st Floor)	28
5:00 p.m. – 6:00 p.m.	MARC (Invitees Only)	Ruth (1st Floor)	28
5:00 p.m. – 6:00 p.m.	SEARUC (Invitees Only)	Paca (3rd Floor)	28
5:00 p.m. – 6:00 p.m.	Western (Invitees Only)	Latrobe (1st Floor)	28

Daily Schedule at a Glance TUESDAY, NOVEMBER 14

Time	Event	Location	Page
7:30 a.m. – 9:00 a.m.	Continental Breakfast	Key Foyer	
8:00 a.m. – 3:00 p.m.	Registration Open	Key Foyer	
8:30 a.m. – 10:45 a.m.	General Session	Holiday Ballroom	31
9:30 a.m. – 9:45 a.m.	Networking Break	Key Foyer	
10:45 a.m. – 11:00 a.m.	Networking Break	Holiday Foyer	
11:00 a.m. – 12:00 p.m.	Concurrent Sessions Section A	Кеу	33
12:00 p.m. – 1:15 p.m.	Annual Officer Installation Luncheon and Innovation Awards	Holiday Ballroom	34
1:45 p.m. – 2:45 p.m.	Concurrent Sessions Section B	Кеу	36
3:00 p.m. – 4:30 p.m.	NARUC Research Lab MegaModel Mini Demo	Ruth	38
3:00 p.m. – 4:30 p.m.	NRRI Colloquium	Poe (2nd Floor)	38
3:00 p.m. – 4:30 p.m.	Board of Directors Meeting	Johnson (1st Floor)	38

WEDNESDAY, NOVEMBER 15

Time	Event	Location	Page
7:30 a.m. – 9:00 a.m.	Continental Breakfast	Key Foyer	
8:30 a.m. – 11:00 a.m.	Registration Open	Key Foyer	
9:00 a.m. – 10:15 a.m.	Concurrent Sessions Section C	Кеу	39
10:15 a.m. – 10:30 a.m.	Networking Break	Holiday Foyer	
10:30 a.m. – 11:45 a.m.	Closing General Session	Holiday Ballroom	42



Please Join NARUC's Committee on International Relations in Honoring the 2017 Recipient of the Terry Barnich Award:

Andreas D. Thanos

Gas Policy Specialist Massachusetts Department of Public Utilities



Andreas Thanos has played a vital role in NARUC's international efforts for more than a decade, mentoring and collaborating with regulators around the world. His service to the cause of shared learning across the international regulatory community has made him a role model for his colleagues and a thought leader on emerging issues like cybersecurity.

A staffer at the Massachusetts Department of Public Utilities since 1993, Andreas has

brought his expertise and dedication to bear on projects in Europe, Latin America and elsewhere. His efforts include assisting regulators in Kosovo to improve communications among regulators, consumers and government bodies as well as detailing how gas utilities forecast demand and acquire supply to meet customer demand with Albanian and Armenian regulators.

In Mexico City, Andreas engaged with colleagues in their efforts on cybersecurity by detailing how U.S. commissions are addressing the challenging topic. In Hungary, he advised regulators working on compliance to the EU directives on gas markets on balancing processes used in U.S. markets.

Andreas is now advising the World Gas Conference 2018 "Fueling the Future." He is supporting the conference on substantive materials and speaking and networking opportunities to showcase how U.S. regulatory experiences can be helpful to the international community.

In his role as a Gas Policy Specialist at the Massachusetts DPU, Andreas analyzes U.S. policies on natural gas and serves as a team leader on establishing cybersecurity standards for utilities under DPU jurisdiction. Beyond his international efforts, Andreas serves as chair of the NARUC Staff Subcommittee on Gas and is a member of the Advisory Council to the North American Energy Standards Board.

About the Terry Barnich Award



The Terry Barnich Award honors the memory of former Chairman of the Illinois Commerce Commission (1989 to 1992) Terrence "Terry" Barnich. He was killed on Memorial Day, May 25th, 2009, while working as the Deputy Director of the State Department office overseeing U.S. reconstruction projects in Iraq.

Terry was a dedicated public servant, responding to the call to serve both at home and abroad. He was also an active NARUC member, and the award named in his honor recognizes regulators like him who believe they have a personal responsibility to provide aid and expertise to our partners abroad.

Thanks to Our Elite Sponsors

Leadership Level



Premier Level







AMERICAN PETROLEUM INSTITUTE

Executive Level





Thanks to Our Sponsors

Gold Level





an industry-funded non-profit

Silver Level



NUCLEAR ENERGY INSTITUTE

Crystal Level



Thanks to Our **Sponsors**

Bronze Level



Blue Level



Energy solutions for a changing world





Special Exhibitors





Media Sponsors







America's electric cooperatives are ushering in the Consumer-Centric Utility future, embracing innovation and empowering consumers for the benefit of the system as a whole.



To Learn more visit cooperative.com/public/51st-state

Registration Open

8:00 a.m. – 6:30 p.m. • Key Foyer

NRRI Board of Directors Breakfast Meeting (closed meeting)

7:30 a.m. – 9:00 a.m. • Blake Room

Subcommittee on Supplier and Workforce Diversity

9:00 a.m. – 11:45 a.m. • Key 6

9:00 a.m9:05 a.m.	Welcome and Opening Remarks Hon. Sherina Maye Edwards-SWD Chairwoman, Illinois		
9:05 a.m 10:05 a.m.	Panel: Hisp	panics in Energy	
	Moderator:	Hon. Sadzi Oliva, Illinois	
	Panelists:	Elba Aranda-Suh, Executive Director, National Latino Education Institute (NLEI) Mario E. Dominguez, Associate, Rooney Rippie & Ratnaswamy, LLP Martin Montes, Director of Regulatory Affairs, ComEd Jose L. Perez, Chairman & CEO, Hispanics In Energy	
10:05 a.m 11:05 a.m.	Roundtable: Reflecting on the Past; Strategizing for the Future		
	Speakers:	Hon. Ronald A. Brisé, Florida Hon. Sherina Maye Edwards, Illinois Nikki Hall, Director of Regulatory Strategy & Services, Pepco Holdings Inc.	
11:05 a.m 11:20 a.m.	Update: Workforce Diversity Toolkit Laurie Dowling, Executive Director, National Utilities Diversity Council		
11:20 a.m 11:45 a.m.	Subcommittee Business and Closing Remarks		

Staff Subcommittee on Energy Resources and the Environment

9:00	a.m.	- 11:45	a.m.	• Key	y 8
------	------	---------	------	-------	-----

9:00 a.m. – 10:15 a.m.	Joint with Staff Subcommittees on Electricity and Electric Reliability Next Level Demand Response		
	Moderator: Wally Nixon, Commissioner's Legal Advisor, Arkansas Public Service Commiss		
	Panelists:	Robert Dostis, Vice President, Stakeholder Relations and New Products, Green Mountain Power	
		Ted Ko, Director of Policy, Stem	
		Virginia Lacy, Principal, Rocky Mountain Institute	
		Damei Mahama, Manager, ConEdison	
		Kent Walter, Manager of Customer Technology, Arizona Public Service	
10:30 a.m. – 11:45 a.m.	Joint with St	aff Subcommittee on Water	
	Voluntary Climate Action Practices: Implications for Utilities and Commission		
	Moderator:	Jon Kucskar, Senior Advisor to the Maryland Public Service Commission	

Sunday, November 12

Panelists:	James Bradbury, Mitigation Program Director, Georgetown Climate Center
	Adella Crozier, Director of Regulatory Affairs, DTE Energy
	Sue Gander, Director, Environment, Energy & Transportation Division, National Governors Association
	Alice Kennedy, Deputy Commissioner, Division of Green, Healthy and Sustainable Homes, City of Baltimore

Staff Subcommittee on Water

9:00 a.m. – 11:45 a.m. • Key 8

10:30 a.m. – 11:45 a.m. Joint with Staff Subcommittee on Energy Resources and the Environment Voluntary Climate Action Practices: Implications for Utilities and Commissions (See page 11.)

Staff Subcommittee on Electricity

9:00 a.m. – 5:00 p.m. • Key 8 / Key 2 / Key 6

9:00 a.m. – 10:15 a.m.	Joint With Staff Subcommittees on Energy Resources and the Environment and Electric Reliability — Key 8 Next Level Demand Response (See page 11.)	
10:15 a.m. – 10:30 a.m.	Break	
10:30 a.m. – 11:45 a.m.	Believers	taff Subcommittee on Electric Reliability — Key 2 and Skeptics: A Debate About Distributed Energy Integration on oution Grid
	Moderator:	Kimberly Jones, Chair, NARUC Staff Subcommittee on Electricity and Director of Clerk and IT Services with the North Carolina Utilities Commission
	Panelists:	John Farber, former staff with the Delaware Public Service Commission Mike Hyland, American Public Power Association Bob Schulte, Schulte Associates LLC, former utility executive Chris Villarreal, Energy Consultant and former Chair of NARUC's Rate Design Staff Subcommittee, former staff with the California and Minnesota Commissions
1:30 p.m. – 5:00 p.m.	Joint with C (See page 16	ommittee on Critical Infrastructure — Key 6 5.)

Staff Subcommittee on Electric Reliability

9:00 a.m. – 5:00 p.m. • Key 8 / Key 2 / Key 6

9:00 a.m. – 10:15 a.m. Joint with Staff Subcommittees on Electicity and Energy Resources and the Environment – Key 8 Next Level Demand Response (See page 11.)

10:30 a.m. – 11:45 a.m.			
1:30 p.m. – 5:00 p.m.	Joint with C (See page 16	ommittee on Critical Infrastructure — Key 6 5.)	
Staff Subcomm 9:00 a.m. – 4:00 p.		Telecommunications y 2	
9:00 a.m. – 10:15 a.m.		Dadband, Wireless Propagation & the 706 NPRM Lynn Notarianni, Colorado Joseph Witmer, Pennsylvania Adam Nelson, Senior Consultant, Federal Engineering, Inc.	
10:15 a.m. – 10:30 a.m.	Networkin		
10:30 a.m. – 11:45 a.m.		Vireless Resiliency Joseph Witmer, Pennsylvania Hon. Johann Clendenin, USVI Ben Aaron, Director, State & Regulatory Affairs, CTIA Alvaro Pilar, Chief Executive Officer ViYA Brent Struthers, Senior Strategist, State Government Relations, Neustar	
11:45a.m. – 1:00 p.m.	Lunch (on	own)	
1:00 p.m. – 2:00 p.m.		The State of FirstNet Cullen Robbins, Nebraska Don Brittingham, Vice President Public Safety Policy, Verizon AT&T (Invited) Rivada Networks (Invited)	
2:00 p.m. – 2:15 p.m.	Networking Break		
2:15 p.m. – 3:15 p.m.	Moderator: Panelists:	Contributions Hon. Chris Nelson, South Dakota Labros Pilalis, Pennsylvania Rick Cimerman, VP External & State Affairs, NCTA Joe Gillan, Consultant, Gillan Associates Mike Romano, Senior Vice President of Policy, NTCA Allison Ellis, Sr. VP Regulatory Affairs, Frontier Communications (Invited)	
3:15 p.m. – 4:00 p.m.	Resolution	ns Discussion – Staff Final Disposition	

Staff Subcommittee on Consumer Affairs

9:00 a.m. – 11:45 a.m. • Key 9

9:00 a.m. – 10:15 a.m. How the Sun is Shining in Low Income Communities

 Moderator: Charlene Ketchum, Policy Advisor & Legal Counsel to Commissioner Maida Coleman, Missouri PSC
 Panelists: Sandra Mattavous Frye, Esq., People's Counsel, DC Office of the People's Counsel Alison Kling, Project Specialist, Demonstration & Pilot Projects, Con Edison Taresa Lawrence, Deputy Director, Energy Administration, Department of Energy & Environment

> Melanie Santiago-Mosier, Program Director, Low-income Solar Access, Vote Solar Ingrid Schwingler, Policy & Regulatory Coordinator, GRID Alternatives

10:15 a.m. – 10:30 a.m. Networking Break

10:30 a.m. – 11:45 a.m. Is Net Metering Dead?

Moderator:Phil Boyle, Consumer Services Manager, Oregon Public Utility CommissionPanelists:Sean Gallagher, VP of State Affairs, SEIATed Kelly, Assistant Counsel, New York Department of Public ServiceBill Malcolm, Senior Legislative Representative, AARPNathan Phelps, Program Manager DG Regulatory Policy, Vote SolarJoelle Steward, Director of Rates & Regulatory Affairs, Rocky Mountain Power

Task Force on Military Workforce Development

9:00 a.m. – 11:45 a.m. • Key 12

9:00 a.m. – 11:45 a.m.	Helping Veterans, Helping Ourselves — Part 2	
	Moderator:	Hon. Judith Williams Jagdmann, Virginia
	Panelists:	Jim Kibler, President, Virginia Natural Gas, a subsidiary of Southern Company Gas
		Michelle Rostom, Director of Workforce Development, National Rural Electric Cooperative Association

Staff Subcommittee on Critical Infrastructure

10:00 a.m. – 11:45 a.m. • Tilghman

The Subcommitee will meet in closed session. The meeting will be led by Chair Lynn Costantini (NJ) and Sharon Thomas (NARUC).

New Commissioner Forum and Luncheon (new Commissioners only)

10:30 a.m. – 1:00 p.m. • Ruth

Washington Action (closed meeting)

10:30 a.m. – 11:45 a.m. • Blake

Closed Meeting. Agenda distributed at meeting.

A CLEAR ENERGY VISION FROM A PROVEN PARTNER

Landis |Gyr

OUR CLEAR ENERGY VISION:

Designing a grid that ensures secure and interoperable connectivity with the assets you and your customers rely on for efficient and affordable energy.

Let Landis+Gyr help you address today's complex industry challenges including growth distributed generation, business model changes, increased consumer engagement, and financial pressure.

Helping utilities make smart grid and smart communities possible.

Learn more at landisgyr.com

Sunday, November 12

Committee on Critical Infrastructure

1:30 p.m. – 5:00 p.m. • Key 6

1:30 p.m. – 1:45 p.m.	Opening R	emarks	
	Resolutions Hon. Richard S. Mroz, New Jersey		
1:45 p.m. – 2:15 p.m.	Partner Up Presenters:	Ddates Puesh M. Kumar, Director, Infrastructure Security and Energy Restoration, DOE Joseph H. McClelland, Director, Office of Energy Infrastructure and Security, FERC	
2:15 p.m. – 2:45 p.m.	Enhancing Presenter:	Grid Resilience: Strategic Insights M. Granger Morgan, Distinguished Chair, Committee on Enhancing the Resiliency of the Nation's Electric Power Transmission and Distribution System, National Academies of Sciences	
2:45 p.m. – 2:55 p.m.	Break		
2:55 p.m. – 3:45 p.m.	Toward Inf Moderator: Panelists:	TBA Scott Aaronson, Executive Director, Security and Business Continuity, EEI David Huff, Electrical Engineer, Office of Electric Reliability, FERC Andrew Phillips, Director, Transmission, Distribution and Substations, EPRI	
3:45 p.m. – 4:30 p.m.		Priorities and Practices from the Field Hon. Sadzi Martha Oliva, Illinois Jamey Sample, Executive Director, Americas Advisory Services,Power and Utilities Cybersecurity Leader, Ernst & Young TBA TBA	
4:30 p.m. – 5:00 p.m.	Resilience	Metrics and Monitoring	
	Presenters:	Sue Gander, Director, Environment, Energy & Transportation Division, NGA David Miller, Regulatory Sector Coordinator, EIS Council	

Committee on Consumer Affairs

 1:30 p.m. – 3:15 p.m. · Key 2

 1:30 p.m. – 2:00 p.m.
 Business Meeting (closed session)

 2:00 p.m. – 3:15 p.m.
 Not in My Backyard

 Moderator:
 Colette Honorable, Reed Smith's Energy and Natural Resources Group

 Panelists:
 Rob Gramlich, President, Grid Strategies, LLC

 Arturo Hernandez, Gibbs Pool and Turner, P.C.
 Hon. Kimberly O'Guinn, Arkansas

Committee on International Relations

2:30 p.m. – 5:00 p.m. • Key 12

2:30 p.m. – 2:35 p.m.	The Wide World of NARUC – Welcome and Introductions Hon. David Danner, Chair, IRC, Washington UTC	
2:35 p.m. – 2:40 p.m.	Approval of minutes/resolutions Hon. David Danner, Chair, IRC, Washington UTC	
2:40 p.m. – 2:50 p.m.		y Terry Barnich Award Winner Hon. David Danner, Chair, IRC, Washington UTC Andreas Thanos, Massachusetts DPU
2:50 p.m. – 3:45 p.m.		trification and Global Cooperation Hon. David Danner, Chair, IRC, Washington UTC Dan Waddle, Sr. Vice President, NRECA International
3:45 p.m 4:00 p.m.	Networkin	g Break
4:00 p.m. – 4:40 p.m.	•	from Mexico: Energy Reforms, WFER, NAFTA, and Other Matters Hon. David Danner, Chair, IRC, Washington UTC Hon. Guillermo García Alcocer, Chairman, Energy Regulatory Commission of Mexico
4:40 p.m. – 5:00 p.m.	•	NARUC International Programs , Director of International Programs, NARUC

Staff Subcommittee on Executive Management (For Commission Staff Only) 1:30 p.m. – 3:30 p.m. • Blake

1:30 p.m. – 3:30 p.m.	Overview	
	Discussion items	
	 From Blue to Black Skies – Preparing for Large-Scale and Long-Term Power Outages 	
	 Protecting Information – Being Transparent versus Being Secure 	
	 Operational Challenges – Roles and Responsibilities 	
	 State Legislative Updates – What's Hot and What's Not 	
	Roundtable	
	Future Meetings/Adjournment	
Task Force on		
1.30 p.m. – 5.00 p.	1:30 p.m. – 5:00 p.m. • Key 8	

1:30 p.m. – 2:00 p.m.	The Importance of Innovation in the Energy Sector; Setting the Stage for the Future of Digital Utility Transformation		
	Moderator:	Hon. Brien J. Sheahan, Illinois	
	Presenter:	Anda Ray, Senior Vice President, External Relations and Technical Resources, EPRI	

The Leading Edge of Innovation

Oracle Utilities

FROM GRID TO METER TO END CUSTOMER

Helping next generation digital utilities deliver reliability, efficiency and customer service across the entire utility value chain.



2:00 p.m. – 2:30 p.m.	Perspectiv	ves from Regulators and Consumer Advocates	
	Moderator:	Hon. Brien J. Sheahan, Illinois	
	Presenters:	Hon. Lorraine Akiba, Hawaii	
		Hon. Kara Brighton, Wyoming	
		David Kolata, Executive Director, Citizens Utility Board	
2:30 p.m. – 2:50 p.m.	Break & N	etworking	
2:50 p.m. – 3:30 p.m.	Perspectives from Innovators		
	Moderator:	Hon. Brien J. Sheahan, Illinois	
	Presenters:	Jiong Ma, Partner, Braemar Energy Ventures	
		Michael Polsky, Founder, President & CEO, Invenergy LLC	
		Aki Marceau, Hawaii Projects Deployment, Elemental Excelerator	
		ТВА	
3:30 p.m. – 5:00 p.m.	Roundtab	e Discussion & Roadmap	
	Moderator:	Hon. Brien J. Sheahan, Illinois	
	Presenters:	All speakers from Innovation Session	

Staff Subcommittee on Gas

3:15 p.m. – 5:00 p.m. • Key 2

3:15 p.m. – 3:45 p.m.	History and Understanding of R&D Funding for Natural Gas in the United States		
	Moderator:	Andreas Thanos, Chair, Staff Subcommittee on Gas	
	Presenter:	Ron Edelstein, Director, Regulatory and Government Relations, Gas Technology Institute	
3:55 p.m. – 4:25 p.m.	Natural Ga	s Price Transparency in the Next Decade	
	Moderator:	Andreas Thanos, Chair, Staff Subcommittee on Gas	
	Presenter:	Jennifer Fordham, NACD Governance Fellow, Senior Vice President, Government Affairs, Natural Gas Supply Association	
4:25 p.m. – 4:55 p.m.	-	Liquefied Natural Gas Export Permitting and Office of Oil and	
	Natural Ga	is Research & Development	
	Moderator:	Andreas Thanos, Chair, Staff Subcommittee on Gas	
	Presenter:	Amy Sweeney, Director, Division of Natural Gas Regulation, DOE Office of Oil and Natural Gas	

Welcome Reception 5:00 p.m. – 6:30 p.m. • Holiday 6





JUYU NATURAL GAS Demand increase by 2035

34% OF WATER Lost in the distribution system **OD PEOPLE** Global population by 2025

CREATING A MORE RESOURCEFUL WORLD

At Itron, we believe that the way we manage energy and water will define this century. We connect people, devices and information through technology and services—and in the process, we build more insightful utilities, stronger communities and smarter cities.

From integrating renewable energy at Reunion Island off the coast of Africa to protecting scarce water resources in Mali, or partnering with Charlotte, North Carolina on their smart city vision, we are helping **create a more resourceful world**.

itron.com

Monday, November 13

OPSI Breakfast Meeting (invitees only)

7:00 a.m. – 8:45 a.m. • Latrobe

Board of Directors Breakfast Meeting

7:30 a.m. – 8:45 a.m. • Johnson

Registration Open

8:00 a.m. – 5:00 p.m. • Key Foyer

Committee on Telecommunications

9:00 a.m. – 11:45 a.m. • Holiday 2

9:00 a.m. – 10:15 a.m.	Universally Affordable Broadband – What are the Barriers and How to Define Success	
	Moderator:	Hon. Paul Kjellander, Idaho
	Panelists:	Benjamin Aron, Director, State Regulatory and External Affairs, CTIA-the Wireless Association
		Joe Gillan, President, Gillan and Associates
		Roy Lathrop, Senior Director, State Government Affairs, NCTA-The Internet and Television Association
		Arthur Martinez, Vice President of State Govt. Relations, CenturyLink
	Responders	: Hon. Travis Kavulla, Montana
		Hon. Sarah Freeman, Indiana
10:30 a.m - 11:30 a.m.	On the Gro America	ound & On the Horizon: How to Bring Broadband to Remote
	Moderator:	Hon. Crystal Rhoades, Nebraska
	Panelists:	Ryan Harkin, Microsoft
		Christopher Murphy, Viasat
		Mike Romano, Senior Vice President, Industry Affairs & Business Development, NTCA

11:30 a.m. – 11:45 a.m. Business Meeting

Committee on Energy Resources and the Environment

9:00 a.m. – 11:45 a.m. • Key 12

9:00 a.m. – 10:30 a.m.	Is it Time for TOU rates?	
	Moderator:	Hon. Andrew Place, Pennsylvania
	Panelists:	Ashley Brown, Executive Director, Harvard Electricity Policy Group

WHY GIVE INCENTIVES FOR THIS?



Recycling Replacement

BUT NOT MERCURY THERMOSTATS?



IT'S TIME TO Get on Board!

State laws exist that require the responsible recycling of mercury thermostats. Join TRC and the leading utility implementers in this cause. Utility companies should require recycling in their RFP's but are not. Do your part by enforcing your state's already existing regulations to create a healthier environment for the future.

For more information, visit thermostat-recycle.org

Thermostat Recycling^{*}

Solar Energy ndustries Association®

For more than 40 years, SEIA has been the voice of the solar industry.

Our experts are working with states on critical issues, such as:

Net Metering 3.0

Along with more than a dozen other organizations, SEIA developed *Principles for the Evolution of Net* Energy Metering and Rate Design, presenting a pathway for the future: www.seia.org/futurenem

Grid Modernization

SEIA is producing a series of Whitepapers on Grid Modernization, aiming to inform states on lessons learned and provide guidance for the grid of the future: www.sela.org/gridmod

Promoting free and fair trade SEIA is taking the lead to oppose Suniva's Section 201 petition with the International Trade Commission, which could cause the industry to lose 88,000 jobs: www.seia.org/trade



Rick Gilliam, Program Director, DG Regulatory Policy, Vote Solar Marcel Hawiger, Staff Attorney, The Utility Reform Network Douglas Jester, Principal, 5 Lakes Energy Ellen Zuckerman, Senior Consultant, Schlegel & Associates

10:45 a.m. – 11:45 a.m. Business Meeting

Introductions: Hon. Nancy Lange, Minnesota, and Hon. Carla Peterman, California **Commissioner Roundtable:** This roundtable will continue the TOU discussion started in ERE's morning session. Committee Members will share the rate design changes being considered in their states and their response to the TOU panel discussion.

Resolutions

Research Updates: Ron Edelstein, GTI; Barbara Tyran, EPRI; and Tom Stanton, NRRI. **Mary Kilmarx Award**

Committee on Electricity

9:00 a.m. – 11:45 a.m. • Key 2

9:00 a.m. – 10:00 a.m.	Millennials and Boomers: Centuries Apart?	
	Moderator:	Hon. John Rosales, Illinois
	Panelists:	Martin Burns, Director of Campaigns, AARP
		Nathan Shannon, Deputy Director, Smart Energy Consumer Collaborative
		Molly Bauch, Manager of Customer Utilities Practice, Accenture
10:00 a.m. – 10:30 a.m. Business Meeting		
10:30 a.m. – 11:45 a.m. Federal-State Jurisdictional Tensions		
	Moderator:	Hon. Edward Finley, North Carolina
	Panelists:	Tony Clark, former FERC Commissioner, Sr. Adviser with Wilkinson Barker

Knauer LLP Ari Peskoe, Harvard Law School's Environmental Policy Initiative Marc Spitzer, former FERC Commissioner, Partner with Steptoe & Johnson LLP

Committee on Gas

9:00 a.m. – 11:45 a.m. • Key 6

9:00 a.m. – 10:15 a.m.	Joint session with Task Force on Natural Gas Access and Expansion and Committee on Consumer Affairs Uncovering the Opportunities for Natural Gas Access and Expansion Initiatives		
	Moderators:	Hon. John Coleman, Pennsylvania	
		Hon. Julie Fedorchak, North Dakota	
		Hon. Brandon Presley, Mississippi	
	Panelists:	Hon. Nick Wagner, Iowa	
		Robert Beard, President and Chief Executive Officer, UGI Utilities Inc.	

Monday, November 13

Michael German, President and Chief Executive Officer, Corning Natural Gas Corporation

Bill Senter, Division VP Rates and Regulatory Affairs, Atmos Energy David Terry, Executive Director, National Association of State Energy Officials (NASEO)

10:30 a.m. – 10:55 a.m. Business Meeting

Gas Leadership Team:

Hon. Stan Wise, Georgia Hon. Diane X. Burman, New York Hon. Julie Fedorchak, N. Dakota

Agenda:

Hon. Robert F. Powelson, FERC Vince Parisi, VP Finance and Regulatory Affairs, Columbia Gas of Ohio Travis Fisher, Senior Advisor, Office of Electricity Delivery & Energy Reliability, US DOE

Gas Committee Updates Discussion Other business as may come before the committee

10: 55 a.m. – 11:45 a.m. Methane Emissions Management and the Natural Gas System

Moderators: Hon. Stan Wise, Georgia

Hon. Diane X. Burman, New York



Turning Sunday into nonstop fun-day.

Be that sweet.

Creating the warmest family memories can be as easy as turning on clean, convenient natural gas in your kitchen. It offers everything you need to make life delicious in more ways than one: even heat, excellent oven temperature control and instant on/off settings for every meal or dessert. Natural gas is always there when it's time to bake a special something with your little someone!



 Panelists:
 Susan Blevins, Climate Policy Planning Senior Advisor, ExxonMobil

 Deanna Haines, Director, Gas Engineering, Southern California Gas Co

 Ron Edelstein, Director, Regulatory and Government Relations, Gas Technology

 Institute

 Mark Brownstein, Vice President, Climate and Energy, Environmental Defense

 Fund

Committee on Consumer Affairs

Key 6 9:00 a.m. – 10:15 a.m. Joint session with Task Force on Natural Gas Access and Expansion and Committee on Gas Uncovering the Opportunities for Natural Gas Access and Expansion Initiatives (See page 23.)

Task Force on Natural Gas Access and Expansion

key o		
9:00 a.m. – 10:15 a.m.	Joint session with Committee on Gas and Committee on Consumer Affairs Uncovering the Opportunities for Natural Gas Access and Expansion Initiatives (See page 23.)	

Committee on Water

Kay 6

9:00 a.m. - 11:45 a.m. • Key 9

9:00 a.m. – 10:30 a.m. Getting to Unleaded: Challenges and Solutions in Facilitating the Removal of Lead Service Lines

Moderator:Hon. Mary-Anna Holden, New JerseyPanelists:Stephen Genzer, Partner, Saul Ewing, LLP
Jay L. Kooper, Vice President, General Counsel & Secretary, Middlesex Water
Company
Howard J. Woods, Jr., General Manager, Howard J. Woods & Associates, LLC

10:45 a.m. – 11:45 a.m. Business Meeting

Items of Business of the Water Committee will be covered including discussion and action on Resolutions and approval of the minutes from the Summer Policy Summit. Additionally, updates from the various partners of the Water Committee will be given, including NAWC, NARUC, and NARUC's Rate School. Members of the Committee will also have time to brief the Committee on activities of interest in their States.

Staff Subcommittee on Law

9:00 a.m. - 11:45 a.m. • Chase

Agenda to be distributed at meeting.

Regulators Luncheon (Commissioners, Commission Staff and Commissioners Emeritus) 11:45 a.m. – 1:15 p.m. • Key 8

Commissioners, Commission Staff, and Commissioners Emeritus are invited to participate in the Annual Regulators Luncheon (pre-registration required).

Attendees will assemble hygiene packages for The Baltimore Station (TBS), an innovative therapeutic residential treatment program supporting veterans and others who are transitioning through the cycle of poverty, addiction, and homelessness to self-sufficiency. Over the course of its 28-year history, TBS has maintained a positive reputation for providing high-quality services to homeless veterans.

Jim Kibler, President, Virginia Natural Gas, will explain programs they have implemented to hire U.S. military personnel.

Direct Energy.

Learn more at directenergy.com

© 2017 Direct Energy. All Rights Reserved. Direct Energy and the Lightning Bolt design are registered trademarks or trademarks of Direct Energy Marketing Limited in the United States and/or Canada used under license, as applicable.

HAVE CHOICES.

Direct Energy gives customers choice, simplicity and innovation where energy, data and technology meet. That's why nearly four million customers have chosen Direct Energy – making us one of the largest retail energy providers of electricity, natural gas, and home and business energy-related services in North America.

Having only one option

is not an option.

ER9998-917

Monday, November 13

Opening General Session

Featuring Officer Elections and Terry Barnich Award

1:30 p.m. – 3:15 p.m. • Holiday Ballroom

Welcome to the NARUC 129th Annual Meeting and Education Conference



Opening by the Hon. Jack Betkoski, NARUC President, Connecticut

National Anthem, Nico Sarbanes



Welcome Remarks by The Hon. Catherine Pugh, Mayor, Baltimore



Deputy Secretary of Energy, The Hon. Dan Brouillette, will discuss the Staff Report to the Secretary on Electricity Markets and Reliability

and the NOPR for the Grid Resiliency Pricing Rule. Election of 2017-2018 Officers and Confirmation of Board Members

Elections facilitated by the Hon. Travis Kavulla, Montana

Nomination of NARUC President Hon. Katie Dykes, Connecticut

Second Nomination of NARUC President Hon. Thomas Forese, Arizona

Nomination of NARUC 1st Vice President Hon. Mike Huebsch, Wisconsin

Second Nomination of NARUC 1st Vice President Hon. Maida Coleman, Missouri

Nomination of NARUC 2nd Vice President Hon. Lib Fleming, South Carolina

Second Nomination of NARUC 2nd Vice President Hon. Dallas Winslow, Delaware

Presentation of the Terry Barnich Award

The Terry Barnich Award recognizes the ongoing commitment of NARUC members to futhering regulatory best practices around the globe. (See page 6 for details.)



Networking Break

3:15 p.m. – 3:45 p.m. • Holiday Foyer

General Session

3:45 p.m. – 4:45 p.m. • Holiday Ballroom

3:45 p.m. – 4:45 p.m. Shooting the Bull... What Regulators Need to Know to Understand Wall Street

This general session will be an engaging and edgy discussion with 'Wall Street Insiders.' Participants will share their insights and thoughts on what Wall Street really looks for when they are reviewing commission decisions and actions in the regulatory landscape. Attendees will learn valuable information on how commissioner and commission staff actions (and statements) may affect the financial health of the industry. Attendees also will learn how industry performance, financial trends, and regulatory initiatives are used in rating utilities. Discussion will also touch upon Wall Street assessments post recent hurricanes and tropical storms.

Moderator: Hon. Diane Burman, New York

Panelists:	Joyolin Brown, VP & Senior Analyst, Duff& Phelps Investment Management		
	Heike Doerr, Principal Analyst, S&P Global Market Intelligence		
	Anthony lanno, Managing Director, Morgan Stanley		
	Greg Gordon, Senior Managing Director, ISI Group LLC		
	Leslie Rich, Managing Director, Equity Analyst, JP Morgan Asset Management		

Regional Meetings (invitees only)

5:00 p.m. – 6:00 p.m.

MACRUC • Poe

NECPUC · Johnson

MARC • Ruth

SEARUC · Paca

Western · Latrobe

Board of Directors Dinner (Board Members Only)

7:00 – 9:30 p.m. • Designated Hitters Room at Camden Yards



AMERICAN PETROLEUM INSTITUTE

Bringing Business Know-how and Salesforce experts to solve your business problems.

Salesforce.com is a vast cloud computing platform and just figuring out where to begin can be a daunting challenge.

Our experienced team will help you define an implementation roadmap, complete with goals and detailed requirements to get you to your desired destination.



5 Star customer rating on the Salesforce AppExchange. Salesforce.com partner since April 2013

salesforce

Sell, service, and market smarter with the world's #1 Customer Relations Management Platform

www.salesforce.com

carahsoft.

10 + Years

Carahsoft and Salesforce have teamed up to provide Salesforce products and services to the government for over 10 years www.carahsoft.com

www.sevenpointconsulting.com

Registration Open

8:00 a.m. – 3:00 p.m. • Key Foyer

General Session

8:30 a.m. – 10:45 a.m. • Holiday Ballroom

8:30 a.m. – 10:45 a.m. Mother Nature – The Ultimate Disrupter!

The utilities industry has been facing disruptors coming from within the industry for many years now. We have talked about new business models and ways to increase demand and create new customers/revenue streams, but are we prepared for the disruptions to the industry from a force indifferent to the very existence of the industry? Recently, three major hurricanes have had severe impacts on the energy, water, gas, and telecommunications sectors. Some areas with total destruction are looking at starting from scratch. This session will feature a regulator, consumer advocate, and high-level representatives from the electricity, gas, water, and telecommunications industries.

During this timely session, attendees will:

- Understand how utilities were prepared for this kind of disruption.
- Learn how utilities will change their preparation for future natural disasters.
- Identify the role of the regulator in these circumstances—before, during, and after.
- · Discuss expectations of consumers.
- Moderator: Hon. Ron Brisé, Florida

Participants: Hon. Jeremy Oden, Alabama

Stephanie Brand, Director, NJ Division of Rate Counsel

Calvin Butler, Jr., CEO, Baltimore Gas & Electric

Joy Ditto, President and CEO, Utilities Technology Council

Christopher Franklin, President and CEO, Aqua America

Pierce Norton, CEO of OneGas and AGA Board chairman

Remarks by: M. Granger Morgan, the Hamerschlag University Professor of Engineering at Carnegie Mellon University. He holds appointments in three academic units: the Department of Engineering and Public Policy; the Department of Electrical and Computer Engineering; and the H. John Heinz III College.

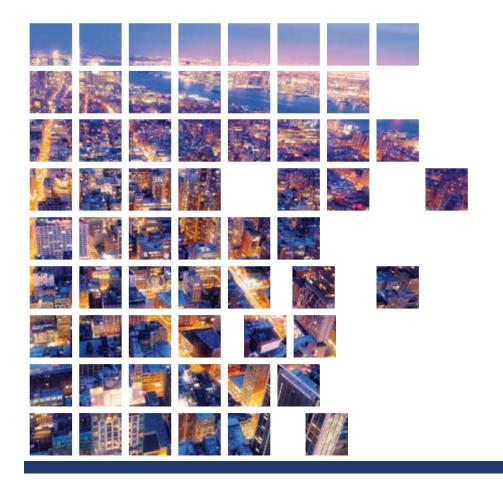
He currently chairs the Committee on Enhancing the Resilience of the Nation's Electric Power Transmission and Distribution System.

9:30 a.m. – 9:45 a.m. Networking Break • Holiday Foyer

9:45 a.m. – 10:45 a.m. Mother Nature – The Ultimate Disrupter! Continued

Networking Break

10:45 a.m. – 11:00 a.m. • Key Foyer



Your trusted partner for the electric sector evolution.



Visit sepapower.org for more info.

INNOVATIVE TECHNOLOGIES FOR A BETTER SOLUTION



Ampjack America Ltd. 3960 Howard Hughes Pkwy,

Las Vegas, Nevada 89169

Suite 500

1.702.990.3910

Ampjack Industries Ltd.

1.204.631.2500 ext. 102

Winnipeg, Manitoba R3C 2E6

90 Bergen Cut Off Rd, Box 122, Grp 200, RR#2

Transmission Tower Raises & Tower Repairs Capacity Enhancement Solutions

WHILE FULLY ENERGIZED	->	Eliminating Costly Outages
FLEXIBLE SCHEDULING	-	Outages Not Required
SAFE	→	Positive Control Without Suspended Loads
ENVIRONMENTALLY FRIENDLY	-	Minimal Footprint, Light Mobility

ECONOMICALLY PREFERRED METHOD



Concurrent Sessions Section A

11:00 a.m. – 12:00 p.m.

11:00 a.m. – 12:00 p.m. A1 The Bold and the Dutiful

Key 9 Changing economics, ratepayer needs and expectations, renewable resource strategies, and distributed generation are just a few of the hot topics regulators and the utility industry are navigating today. As the pace of innovation and change in the energy landscape accelerates, regulators and utilities are being asked to think more strategically – and more short term. Attendees will hear how regulators and utilities balance their core tenets: reliable service to consumers, affordable rates, sound risk management plans, and transparent processes in this new environment. Participants will answer the following: How do regulators see the balance of innovation vs the level of risk and ratepayer impact? How is innovation utilized without exposing companies to regulatory turbulence? How can innovation be effected without a substantial rate increase? Are these changes needed and cost-effective to the ratepayer?

Moderator: Hon. Brien Sheahan, Illinois

Participants: Hon. Nancy Lange, Minnesota

Tiffany Menhorn, EnerNOC, Inc., Wholesale Procurement

11:00 a.m. – 12:00 p.m. A2 Is A Cyber 9/11 In Our Future?

Key 6 In August, the President's National Infrastructure Advisory Council (NIAC) unanimously approved a 45-page report that found the federal government and the private sector are "falling short" in protecting critical systems. The report also states that the nation faces "a pre-9/11-level cyber moment, with a narrow and fleeting window of opportunity to coordinate our resources effectively."

Attendees will:

- Receive an overview of the NIAC report and its specific 11 recommendations to address vulnerabilities.
- Hear experts discuss their reactions to the report.
- Learn what actions are being taken to secure critical infrastructure networks from cyberattacks.

Moderator: Hon. Gladys Brown, Pennsylvania

Participants: Caitlin Durkovich, Leadership, Toffler Associates

Robert H. Mayer, Senior Vice President – Cybersecurity, USTelecom Association NIAC Representative

Susan Story, President & CEO, American Water

11:00 a.m. – 12:00 p.m. A3 Weathering the Storm: Communications Network Resilience

Key 2 Hurricanes Katrina and Rita, Superstorm Sandy, and the 2012 Derecho taught us many lessons. Changes in response time, resilience measures to the network, and mutual assistance procedures were just a few measures examined in some regions. During this session, regulators will discuss how measures implemented from previous experiences impacted recent restoration efforts and timelines and what lessons were learned this time around.

Moderator: Hon. Julie Brown, Florida

Participants: Hon. John Clendenin, Virgin Islands

Hon. Mary-Anna Holden, New Jersey

- Hon. Gregg Sayre, New York
- Hon. DeAnn Walker, Texas
- Hon. Stan Wise, Georgia

11:00 a.m. – 12:00 p.m. A4 The Battle for Peak Capacity: Batteries vs. Gas

Key 7 The United States electric grid is expected to need more peaking capacity resources, both to replace retiring units and to integrate higher levels of variable generation. Natural gas-fired power plants are the dominant technology providing peaking capacity. But for how long? Rapid and significant cost declines in battery energy storage have some proponents arguing that it can substitute for the gas peaking equipment. This session will debate whether battery storage can really compete with gas peakers.

Through an interactive Jeopardy-style experience, attendees will:

- Learn innovative ways regulators are approaching planning and procurement of new peaking capacity.
- Learn what the benefits are (if any) to consumers.
- Moderator: Hon. Ted Thomas, Arkansas
- Participants: Mikael Backman, Regional Director, North America, Energy Solutions, Wartsila Corporation

Praveen Kathpal, Vice President, AES Energy Storage

Chris Villarreal, President, Plugged-In Strategies

11:00 a.m. – 12:00 p.m. A5 From the Joneses to the Jetsons! Smart Communities and Infrastructure

Key 12 If communities are getting "smarter," regulators must stay ahead of the curve. Utilities are investing in a smarter electric grid that benefits customers and are working on projects in 'smart communities' to establish programs to bring more resilient and sustainable options to customers. As the smart technologies advance, industry, stakeholders, regulators, and policymakers should be on the same page.

Attendees will participate in a dynamic discussion that will address:

- How 'smart communities' are defined and how the emerging technologies will affect utility customers.
- What regulators may see in future proceedings and what investments utilities are making.
- Stakeholder perspectives on how ratepayers may be affected, along with privacy and cyber concerns.
- How financing these new programs will affect ratepayers in the near and far terms.
- Benchmarks and metrics to assess performance.

Moderator: Hon. Odogwu Linton, Maryland

Participants: Donna Cooper, President, Pepco Region for PHI

Brigham A. McCown, Nouveau, Inc

Michael Murray, President, Mission:data

David Owens, Retired Executive Vice President, Edison Electric Institute

Russ Vanos, VP Global Software, Services & Smart Cities, ITRON

Annual Officer Installation Luncheon and Innovation Awards

12:00 p.m. – 1:15 p.m. • Holiday Ballroom

OFFICE OF FOSSIL ENERGY LOCATIONS:

WASHINGTON, D.C. (CO-HEADQUARTERS)

GERMANTOWN, MD (CO-HEADQUARTERS)

MORGANTOWN, WV (NETL)

PITTSBURGH, PA. (NETL)

SUGAR LAND, TX (NETL)

ALBANY, OR (NETL)

ANCHORAGE, AK (NETL)

NEW ORLEANS, LA (STRATEGIC PETROLEUM RESERVE)

CASPER, WY (ROCKY MOUNTAIN OILFIELD TESTING CENTER)



DOE's Office of Fossil Energy consists of ~1,000 scientists, engineers, technicians and administrative staff located in many states. The Office of Fossil Energy is responsible for several high-priority research, development, and demonstration initiatives to develop a new generation of environmentally sound clean coal technologies, and the nation's Strategic Petroleum Reserve and Northeast Home Heating Oil Reserve, both key emergency response tools available to the President to protect Americans from energy supply disruptions.

The Office of Fossil Energy is very active in its support and outreach to the states, and is eager to work with states to help them meet their energy needs.



Concurrent Sessions Section B

1:45 p.m. – 2:45 p.m.

1:45 p.m. – 2:45 p.m. B1 Power to the Market

Key 2 The need for traditional sources of baseload electricity has taken the spotlight recently, particularly with the Department of Energy's filing of a Notice of Proposed Rulemaking directing FERC to "accurately price generation resources necessary to maintain reliability and resiliency." Because coal and nuclear generate half of the nation's electricity, some believe that these sources are necessary to ensure grid reliability, resilience and fuel diversity. Others believe the concept of baseload is outmoded and challenge the need to modify the rules or market. What is not in dispute is the large amount of traditional baseload generating capacity that has retired with more on the horizon. This panel will discuss: the future role of coal and nuclear; whether reliability and resiliency are being valued now and if not, whether they should be; what attributes should be valued; and what changes, if any, are needed to ensure just and reasonable rates.

Moderator: Hon. Ellen Nowak, Wisconsin

Participants: Hon. Kara Brighton, Wyoming

Paul Bailey, CEO, ACCCE

Kathleen Barron, Vice President of Federal Regulatory Affairs and Policy, Exelon Martin (Marty) J. Durbin, Executive Vice President and Chief Strategy Officer, API

Steve Herling, Vice President - Planning, PJM

1:45 p.m. – 2:45 p.m. B2 Frenemies and Free Riders

- **Key 6** Who doesn't want a free ride? Utility poles are in place but are they available to anyone? A recommendation from the Federal Communications Commission's Broadband Deployment Advisory Committee (BDAC) on pole attachments is expected in early November. This report will likely include major changes to the rules governing pole attachments, conduits, and rights-of-way. The report may also suggest pre-emption of State and local authority. Attendees will:
 - Become better informed about the recommendations of the BDAC.
 - Hear reactions to the realities on pole attachments and the BDAC's recommendations from the panel of experts representing telecommunications and electricity providers, regulators, and local governments.
 - Moderator: Hon. Michael Caron, Connecticut
 - Participants: Hon. Wendy Moser, Colorado
 - Hon. Karen Charles Peterson, Massachusetts
 - Allen Bell, Support Manager, Georgia Power
 - David Don, Vice President, Regulatory Policy, Comcast NBCUniversal
 - Mitsuko Herrera, Dept. of Technology Services, Montgomery County, Maryland

1:45 p.m. – 2:45 p.m. B3 Charging Ahead: Part II

Key 12 As sales of electric vehicles continue to rise, commissions are increasingly being presented with proposals from utilities to allow financial recovery for charging infrastructure investments. Building upon last year's panel, where regulators learned about electric vehicles and rate design, this session will examine developments that have occurred over the last year. Specifically, regulators will learn about recent State commission decisions on whether to finance electric vehicle infrastructure through general customer rates or other means. The application of traditional rate setting concepts, such as fairness to consumers and distribution of benefits, will also be explored.

Moderator: Hon. Rachael Eubanks, Michigan Participants: Hon. Daniel Hall, Missouri Max Baumhefner, NRDC

1:45 p.m. – 2:45 p.m.

o.m. **B4** Upstream with A Paddle

Key 9

The water industry is grappling with challenges that require significant financial investment, technical expertise, and technological innovation. These challenges are exacerbated by widespread fragmentation. There are more than 52,000 community water systems where 83 percent of the water systems serve less than 3,300 people. Many small and mid-sized water utilities lack resources needed to surmount the critical issues they are facing. State legislatures have instituted legislative and regulatory solutions that encourage acquisition of struggling waters systems and incentivize investment. This panel will explore legislative and regulatory options to help ensure that water can be safely, reliably, and affordably provided to consumers.

Attendees will be presented with:

- Ideas to manage market fragmentation.
- Solutions to improve troubled water systems.
- Incentives to encourage long-term infrastructure investment.

Moderator: Hon. Sadzi M. Oliva, Illinois

Participants: Mayor Michael Cherepko, City of McKeesport, PA

Deborah Dewey, President, Indiana American Water

Ellen Tarquinio, Environmental Protection Specialist, EPA

Richard Verdi, Senior Equity Research Analyst-Water, Atwater Thornton

1:45 p.m. – 2:45 p.m. **B5 Myth Busters...Family Feud Style**

Key 7

Reliability for wind and microgrids have been put to the test! Wind has earned a reputation for beating to its own drum – but does that make it unreliable from an operator's perspective? Is a 100% renewable grid possible? Are microgrids a reliability silver bullet? This session will explore some of the research and experiences of people in the industry about familiar antidotes to today's grid issues. Some say that wind is intermittent and therefore unreliable, whereas an operator may know something different. Some say that a 100% renewable grid is absolutely possible and that we should get a move on it already. Is that reality and what do others have to say about it? Microgrids might be a perfect fit for one campus, but should they be adopted everywhere? This session will break down some of the common, general questions and themes we are hearing.

Welcome to **Family Feud.** Our goal is to make this educational and entertaining. See our panelists go head to head to guess the top answers from survey questions. The winners get to pass or play, stake their claim first, or wait and rebut the others' claim. We'll then closeout the board with panelists guessing the rest of the survey answers. Three strikes and the other team can steal the board with a correct guess! Plan to join us for a fun and informative discussion. The winners won't get to play fast money, but they'll have NARUC bragging rights.

Moderator: Hon. Nick Wagner, Iowa

Participants: Hon. Michael Huebsch, Wisconsin

Rob Gramlich, President, Grid Strategies, LLC

Bruce Rew, Vice President, Operations, Southwest Power Pool, Inc.

Susan L. Satter, Public Utilities Counsel, Office of Attorney General Lisa Madigan, Illinois

Matthew Wald, Senior Communications Advisor, Nuclear Energy Institute

Don Wingate, Vice President – Utility Sales, Strategic Customers and Microgrid Solutions, Schneider Electric

3:00 p.m. – 4:30 p.m. NARUC Research Lab MegaModel Mini Demo

Ruth NARUC has developed an interactive Excel-based game to teach regulators, legislators, advocates, and other decision-makers about utility business models and regulatory regimes. Explore performance-based and cost-of-service regulation in vertically integrated and restructured environments. Attendees will learn more about the game and take a test drive.

Moderators: Kerry Worthington, Senior Manager, NARUC Research Lab

Kiera Zitelman, Program Officer, NARUC Research Lab

NRRI Colloquium

3:00 p.m. – 4:30 p.m. • Poe

3:00 p.m. – 3:20 p.m.	Telecommunications Oversight 2017: A State Perspective		
	This presentation takes a look at the findings of the 2017 NRRI Regulation Survey. It addresses the ways in which State Commissions continue to oversee critical communications services to protect consumers, ensure competition, and support the public good, despite reduced regulation and the transition to new technology. Presenter: Sherry Lichtenberg, NRRI		
3:20 p.m. – 3:40 p.m.	Electrification: The Link Between Markets, Consumer Behavior, and Public Policy		
	Presenter: Ken Costello, NRRI		
3:40 p.m. – 4:00 p.m.	Water Distribution System Improvement Charges: 20 Years in Review		
	Presenter: Kathryn Kline, NRRI		
4:00 p.m. – 4:20 p.m.	IRP from Both Sides Now: Planning and Implementing Distributed Energy Resources		
	Combinations of DER are proving cost-effective in many circumstances, so actions to adopt DER options are being taken by policy-makers, regulators, utilities, and customers. This presentation reviews the major types of actions, looking at early case studies to identify lessons learned.		
	Presenter: Tom Stanton, NRRI		

Board of Directors Meeting

3:00 p.m. – 4:30 p.m. • Johnson

Registration Open 8:30 a.m. – 11:00 a.m. • Key Foyer

Concurrent Sessions Section C

9:00 a.m. – 10:15 a.m. C1 To Know or Not to Know: That is the Ethical Question

Key 9 Scenario: A State Right-to-Know (RTK) requester was the Appellant in ongoing litigation he filed against a State utility in a court proceeding. The RTK requester asked the State public utility commission (PUC) for e-mail exchanges between counsel for the PUC and counsel for the utility regarding the PUC's strategy and participation as amicus curie in that court proceeding, as well as disclose the exchange of draft legal arguments. Because these communications were an attorney-client work product between the Commission's attorneys and the utility's counsel and were PUC counsel's legal strategies and consultations in furtherance of representation of the PUC's legal interest, those communications were withheld as confidential attorney-client and attorney work product.

The RTK requester appealed and the State Office of Open Records (OOR) ordered the disclosure of the communications. The OOR determined that because no confidentiality agreement existed between the PUC attorneys and the utility's counsel, and the Commission was only an amicus party, the Commission waived the privilege. OOR created a new separate standard for government attorneys when only the State Supreme Court has jurisdiction over the practice of law. No such requirement of an agreement exists when attorneys share the same litigation position. The OOR also ignored the ethical dilemma placed upon the attorneys by granting the RTK requester and his attorney access to privileged documents that could never be obtained under the Canons of Ethics. The ethical question was also raised for attorneys acting as solicitors for municipal governments, which are subject to the RTK Law in that State.

Attendees will:

- Learn how to identify information and certain types of records to determine if the record fits the definition of a State's RTK Law.
- Review how to determine if a record is a public document or if it is protected by exemption from disclosure.
- Participate in a discussion on the ethical responsibility to protect certain types of information balanced against transparency of government operations and the public's right to know.

Facilitators: Hon. David Sweet, Pennsylvania

Rosemary Chiavetta, Secretary, Pennsylvania

9:00 a.m. – 10:15 a.m. C2 Water and Electric Cybersecurity: Stakeholder Perspectives and Key 11 Partnerships

During this panel, we will explore cybersecurity approaches that are being used in the water sector as well as how coordination is conducted with the electric sector, which has common control systems. Speakers will discuss the controls and programs that water companies use to avoid being hacked, including how recent cyber incidents were prevented such as WannaCry, Petya, and more. We will also hear the regulatory perspective on the potential adverse impacts caused by cyber incidents in water and electric systems, including health threats, as well as how these threats are managed at the state level. Lessons from Indiana's recent cross-sector exercise, CritEx, will be shared. Additionally, we will learn about the role that partnerships can play in resiliency and cybersecurity, including lessons learned from

POWERING THE GRID. BREAKING THE GRIDLOCK.

Create jobs. Boost the economy. Power our cities and technology. And do it without emissions. Who would've thought that we could do all of it and more with a uranium pellet you can hold in your hand. Nuclear. Power the extraordinary.

Discover all that nuclear is doing at DiscoverNuclear.com

NUCLEAR. POWER THE EXTRAORDINARY.

Wednesday, November 15

Indiana's strategic approach in developing cross-sector partnerships through the Indiana Executive Council on Cybersecurity.

Moderator: Hon. Sarah Freeman, Indiana

Participants: Hon. Mary-Anna Holden, New Jersey

John Lucas, Vice President, Citizens Energy Group

Michael Luu, CIO & VP, Customer Service, California Water Service

Chetrice Mosley, State of Indiana Cybersecurity Program Director

Nick Santillo, VP Internal Audit & CSO, American Water

9:00 a.m. – 10:15 a.m. C3 Oh, What a Beautiful 'Site'? New Realities in Siting

Key 8 Multiple State and federal agencies are involved in transmission planning and siting. States are being asked to evaluate non-traditional projects, and economic and reliability projects are being proposed by a number of parties through integrated resource planning and other planning processes. New ways of thinking about electricity resources are affecting traditional transmission planning and siting, cost allocation, and the roles of State officials, utilities, and consumer advocates in these decisions. Siting discussions now include independent transmission owners and multiple local, State, and federal organizations, in addition to traditional utilities.

Attendees will:

- Hear the perspectives of State agencies as they navigate the changing transmission siting landscape.
- Learn processes for identifying infrastructure corridors on private and public lands.
- Tune into the State-level process challenges.

Moderator: Hon. Betty Ann Kane, District of Columbia

Participants: Hon. Ted Thomas, Arkansas

Patrick Donlon, Director, Ohio

Marissa Gillette, Senior Advisor to the Chairman, Maryland

Fred Hoover, NASEO

Tanya McCloskey, Acting Consumer Advocate for Pennsylvania and Executive Committee Member of NCEP.

Networking Break

10:15 a.m. – 10:30 a.m. • Holiday Foyer

Closing General Session

10:30 a.m. – 11:45 a.m. • Holiday Ballroom

Utility Scam Awareness Day and NARUC Business Meeting

The General Session will begin with the NARUC Annual Business Meeting. Commissioners are requested to take seats in the front of the meeting room.

The U.S. House of Representatives has designated the third Wednesday in November as Utility Scam Awareness Day. This year, we recognize it on November 15. Today, or on any given day, utility customers are receiving calls from people falsely asserting they represent a utility company. Callers are threatening to disconnect electric, water, or gas service, if immediate payment isn't made. These villains target vulnerable populations, including senior citizens and non-native English speakers. They use sophisticated tactics, including caller identification spoofing technology and recordings of the utility company's telephone menu messages. Utilities United against Scams (UUAS) is comprised of more than 100 (and growing) electric, water, and gas utilities, along with their respective trade associations in North America. The aim of UUAS is to educate customers about scam tactics in the hopes of ultimately putting an end to these types of crimes. Attendees will:

- Learn how these scams have a negative financial, fear-inducing effect of fraud on utility customers.
- Learn the vital role that regulators play in working with utilities to protect consumers from scams.
- Learn the types of phone, in-person, and Internet scams utility customers are currently experiencing.
- Learn tips to share with constituents/consumers to avoid falling for utility impostor scams.
- Explore solutions adapted for websites, social media, and in-person outreach events/town halls.
- Hear about steps utilities and their partners have taken to educate consumers on these scams.

Moderator: Hon. Jack Betkoski, NARUC President, Connecticut

Participants: Bryan Batson, SVP, Southern Operations, Southern Company Gas

Sheri Givens, Author, Consumer Scam Awareness Guide & Executive Director, Utilities United Against Scams

Kristin Keckeisen, Director, AARP Campaigns

Elin Swanson Katz, Consumer Counsel, State of Connecticut

Maureen Westbrook, VP Customer & Regulatory, Connecticut Water Company

Certificate of Attendance

Be sure to get a certificate of attendance while at the Annual Meeting. Certificates will be available at the NARUC Registration Desk beginning Tuesday, November 14, at 9:00 a.m. Please pick up a certificate by 11:00 a.m. on Wednesday, November 15. Certificates of attendance are not distributed after the meeting. It is the responsibility of the individuals to collect any handouts required by their State accreditation board. For questions after the meeting, contact Wendy Harris at wharris@naruc.org.

CLE Credit

When offering CLE credit, NARUC abides by the rules and regulations of all applicable professional accrediting boards and agencies. NARUC will not be able to provide CLE credit for attendees who leave the session before the program ends. To attain CLE compliance, ensure the integrity of our CLE processes, and preserve the high value of our CLE offerings for all attendees, please attend and stay until the sessions end.

Pennsylvania CLE Board Reminder: Introductory remarks, keynote addresses, business meetings, breaks, receptions, etc., are not included in the computation of credit.

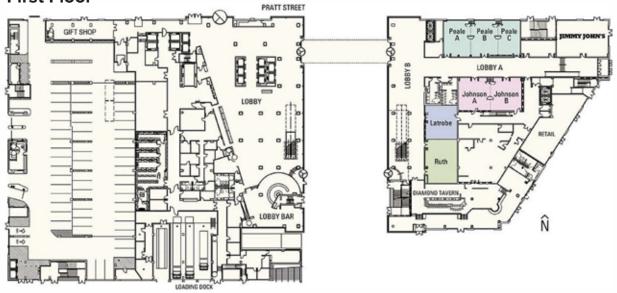
State	General Hours	Ethics Hours
Arkansas	8	1.25
Alabama	9	1
Colorado	9	-
Indiana	ТВА	TBA
lowa	7.5	1
Kansas	9	1
Maine	9	1
Minnesota	7.5	1.25
Missouri	11	1
New York	9	1
North Carolina	ТВА	TBA
North Dakota	8	1.5
Ohio	9	TBA
Oklahoma	8	1.5
Pennsylvania	9	1
South Carolina	9	1
Tennessee	ТВА	TBA
Texas	ТВА	ТВА
Utah	ТВА	ТВА
Washington	ТВА	ТВА
West Virginia	11	1.5
Wyoming	9	1

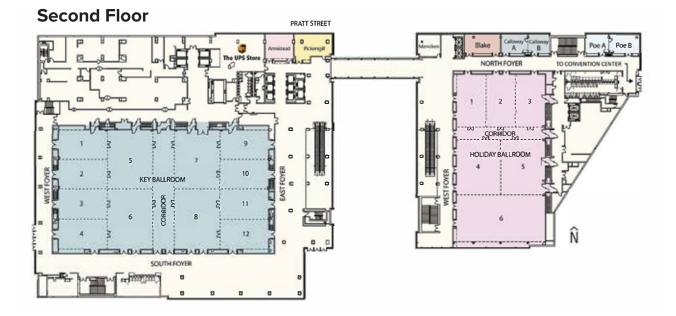
NARUC INTERNATIONAL

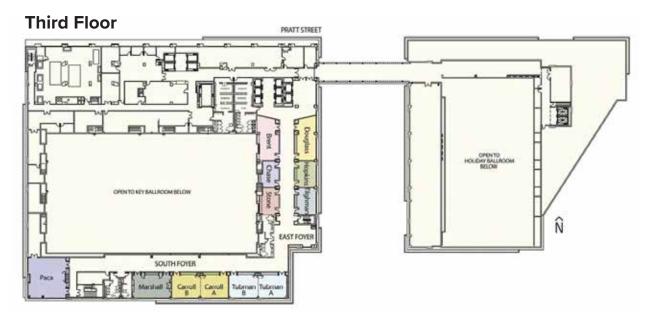
NARUC works around the world to support quality and effective energy regulation. Share your experience and knowledge to help solve problems and improve people's lives.

To Learn More, Contact International Programs Director Erin Hammel at ehammel@naruc.org or visit naruc.org/international

First Floor







Thank you for attending the 129th Annual Meeting and Education Conference. We look forward to seeing you at the 2018 Winter Policy Summit.

Mark your calendars!

Registration opens in December.



February 11–14, 2018 Renaissance Washington Hotel Washington, D.C.

The printing of this program was sponsored in part by



NUCLEAR ENERGY INSTITUTE