PRESENTATION MATERIALS

Parlay!
The Interplay Between Consumer Advocates and Public Utility Commissions

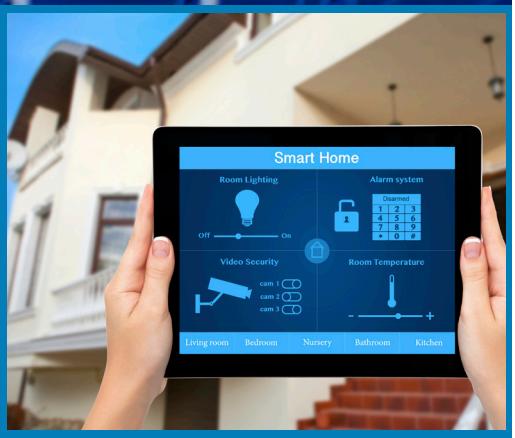
(Katrina McMurrian)

CCIF

Critical Consumer Issues Forum

The Evolving Distribution System

Helping Consumers Navigate Access to Data, Products & Services



July 2015

Table of Contents

I. Introduction

About CCIF

Formed in 2010, the Critical Consumer Issues Forum (CCIF) brings state commissioners, consumer advocates, and electric utility representatives together to tackle consumer-focused energy issues through interactive discourse and debate, to find consensus when possible, and at a minimum, to achieve a clearer understanding of – and appreciation for – each other's perspectives and positions.

To provide leadership, CCIF organized Executive and Advisory Committees, each with balanced representation from the three core communities. Current members are recognized in the Appendix. These leaders guide each initiative at each of the following steps in the process:

1. A large open kickoff forum, typically collocated with the NARUC & NASUCA Annual Meetings, to introduce a topic and initiate discussion among CCIF's three core communities and other stakeholders;
2. A series of smaller, invitation-only spring summits in which the three communities engage in facilitated dialogue; and
3. A report issued in the summer to share key takeaways with the broader stakeholder community and serve as a foundation for outreach and additional dialogue on numerous fronts.

Importance of CCIF

Consumer issues are at the forefront of the energy policy debate. State commissioners, consumer advocates, and electric utilities are uniquely positioned to understand those issues and how best to mitigate any negative impacts on consumers. These three groups play an important role in influencing the policies and decisions with respect to energy at the state level, and these state policies and decisions are often drivers of broader energy policy. Therefore, it stands to reason that they take the lead on addressing key energy issues so that our policies benefit from their experience, expertise, and insights on consumer preferences and concerns. CCIF provides these three core groups a unique opportunity to take that lead – by providing a non-adversarial, collaborative environment in which they can candidly discuss and proactively address a variety of energy issues with potentially broad impacts on electric consumers.

CCIF Track Record

The CCIF formula has proven successful, and its reports have contributed to the energy policy debate in a constructive way. Through this collaborative effort, CCIF has previously addressed topics including grid modernization, the regulatory process, and distributed generation. All prior reports are available at *www.CCIForum.com.*

CCIF's Initiative on the Evolving Distribution System

In late 2014, CCIF leadership identified the challenging topics of the evolving distribution system and consumer big data for discussion among the three core groups. Without question, state commissioners, consumer advocates, and electric utilities possess both individual and collective perspectives that should be considered as policies are formed in these areas. Therefore, CCIF kicked off an initiative

on these topics in November 2014 with a program that examined the opportunities and challenges associated with consumer big data, responsible management of advanced consumer intelligence, and translation of evolving distribution system opportunities into capabilities. The forum provided a solid foundation for the summits that followed as well as the framework and principles that ultimately were developed by summit participants from the three communities and included in this report.

As a compilation of participants' perspectives on critical issues pertaining to the evolving distribution system, this report demonstrates that these groups are clearly able and ready to lead both state and national debates on challenging energy issues – those pertaining to the evolving distribution system and countless others. CCIF trusts that the valuable perspectives reflected within these principles will be instrumental as we continue to build upon these ideas through further constructive dialogue with the broader stakeholder community.

II. Consensus Framework & Principles

Summit Process Objectives

As the electric distribution system evolves, participants acknowledge the need to provide safe, reliable, and resilient electric service at a reasonable cost; meet growing consumer expectations; address rapid technology innovation; recognize third-party providers; recognize differing state regulatory and market structures; and comply with relevant regional and federal requirements. Participants seek to develop a framework for evolving distribution system issues that will:

1. maintain or improve safety, security, reliability, and resilience;
2. integrate new products, services, and technologies in a manner that maximizes grid-wide benefits at a just and reasonable cost;
3. provide access to an integrated grid under just and reasonable conditions;
4. ensure that the benefits and costs associated with new products, services, and technologies (e.g., distributed energy resources) are accurately quantified and equitably allocated;
5. consider the role of utilities in the development and deployment of new technology;
6. educate consumers to support their informed decision-making;
7. protect consumers with rules that empower state regulators or other appropriate state agencies to investigate and resolve consumer complaints of fraud or privacy breaches;
8. address the access, maintenance, storage, and usage of unprecedented volumes and types of data and information;
9. assist policymakers and other stakeholders in evaluating and re-evaluating issues as new products, services, and technologies are introduced;
10. clarify jurisdictional responsibilities; and
11. recognize state and regional differences.

Evolving Grid Drivers & Implications

In developing such a framework, participants recognize a number of evolving grid drivers and implications. These include distributed energy resources (DER), such as distributed generation, energy efficiency, and demand response, but also include and are not limited to:

- Technology innovation
- 2-way data communication
- Consumer engagement (energy use; fuel mix; payment and service options)
- Changing load profiles
- Independence (e.g. Department of Defense facilities, micro grids, etc.)
- Policies (clean energy, renewable portfolio standards)
- Environmental regulations
- Incentives and subsidies
- Equitable rate designs
- Innovative financing
- Third-party access to consumers, data, and the grid
- Higher reliability
- Grid flexibility

List continued on page 4

- Infrastructure needs
- Resource availability and diversity
- Resilience
- Cyber and physical security
- Safety concerns
- Interoperability
- Preservation of universal service

Distribution System Planning & Operational Issues

1. Policies should preserve or enhance consumer value, safety, reliability, resilience, infrastructure security, and cybersecurity.
2. Policymakers should consider the role of utilities in the development and deployment of new products, services, and technologies.
3. Distribution system planning should:
    a) result in just and reasonable rates for all consumers;
    b) evolve to reflect the increased integration of new products, services, and technologies into the distribution system;
    c) analyze future scenarios incorporating varying types, amounts, locations, and timing of products, services, and technologies to maintain grid reliability, optimize grid operations, and enhance value for all consumers; and
    d) with respect to new products, services, and technologies, be strategic and transparent; incorporate stakeholder participation; and protect critical infrastructure and confidential data and information.
4. The distribution utility should have access to necessary operational and technical data to allow for the integration and planning of products, services, and technologies to maintain the integrity, safety, and reliability of the distribution system.
5. Owners of DER, including consumers, utilities, and third parties, should plan for the potential that evolving technical, safety, and regulatory requirements may result in future financial impacts.

Transactional Issues

6. The costs and benefits of products, services, and technologies should be transparent, measurable, appropriately reflected in prices, and considered in relevant regulatory proceedings.
7. Rules and transparent processes should be developed for product, service, and technology deployment.
8. Rules and transparent enforcement processes should be established to create equitable opportunities for new products, services, and technologies; avoid market manipulation; and resolve related complaints.

Consumer Education & Protection Issues

9. State commissions, consumer advocates, utilities, DER service providers, and other stakeholders should work to engage electric consumers to educate them with objective information in plain language regarding:
    a) how the distribution system works, how it is priced, and how and why it is regulated;
    b) the need, cost, time, and process for potential system upgrades to accommodate new services or resources;
    c) how to evaluate the costs, benefits, and risks of DER options and services (advantages and disadvantages; energy usage attributes; pricing; tax implications; consumer return on investment; disposal costs; etc.);
    d) the potential that prices, tariff structures, and technologies may change in ways that impact the costs, benefits, or operation of a DER option over its useful life;
    e) the source and extent of DER service provider licensing and regulation, installer insurance and certification credentials, assumptions about cost savings, and the risks associated with potential requirements for consumer equipment upgrades;
    f) their consumer rights, responsibilities, and remedies when purchasing or leasing products, services, and technologies, recognizing that they may be subject to state consumer protection laws and not traditional utility regulation;
    g) how data products and services can help them better understand and manage their energy use and bills;
    h) consumer energy data ownership, including disclosure; usage or sale; privacy; and security; and
    i) public safety, physical security, and cybersecurity challenges.
10. Consumer protection rules and policies should be periodically reviewed and modified to establish and maintain necessary protections.
11. States should clearly delineate jurisdiction and coordinate among state commissions, state attorneys general, and other consumer protection entities to ensure that there are no gaps in enforcement of the laws and regulations that protect consumers.
12. Laws and regulations should provide a clear method for receiving and resolving consumer complaints, and transparent enforcement processes should be established.
13. State laws and rules should require any entity with access to consumer data and information to have publicly available written privacy policies to protect against unauthorized access, disclosure, or sale of consumer data and information.

14. The process for a consumer to grant or revoke access, disclosure, or sale of consumer data and information should be simple and clearly articulated.
15. Upon discovery of a breach or misuse of confidential consumer data and information (such as personally identifiable information or individual consumer usage data) or a compromise of a system where that data and information are held, consumers should be notified immediately.

Jurisdictional Issues

16. States should retain their exclusive authority to determine the role and operation of the distribution utility systems within their state's current jurisdiction.
17. Policies related to the evolving distribution system should continue to provide utilities an opportunity to recover prudently-incurred costs.
18. To ensure safe, adequate, and reliable service at just and reasonable rates and to protect consumers, states should consider whether to exert regulatory oversight over third-party providers of products, services, and technologies.

Safety Issues

19. Standards, procedures, and practices related to products, services, and technologies must ensure the safety of the public, first responders, and electric utility workers, and must protect utility and consumer assets.
20. Information should be provided to policymakers and other stakeholders about how products, services, and technologies may potentially impact the costs and operation of the distribution utility system, the regulatory structure, and public safety.

Terminology

Participants define a few key terms used within the principles as follows:

- **Breach:** unauthorized access, disclosure, or sale of consumer data and information.
- **Department of Defense Facilities:** reference to the Department of Defense Facility Energy Program, which is designed to reduce energy costs and improve the energy security of fixed installations.
- **Distributed Energy Resources:** distributed resources – both dispatchable and non-dispatchable – including generation, energy efficiency, demand response, energy storage, and other technologies as developed.
- **Distributed Generation (DG):** non-centralized source of electricity generation generally interconnected to the distribution system and located at or near consumers' homes or businesses.
- **Integrated Grid:** a distribution grid on which new products and technologies are able to operate in an efficient, effective, and coordinated manner, and not adversely affect existing infrastructure.

III. Conclusion

Objective Met

Recognizing that the principles do not address all issues with respect to the expansive topic, the consensus achieved by participating state commissioners, consumer advocates, and utility representatives is significant nonetheless. Consistent with the stated objectives, participants developed a useful framework for considering and addressing policy issues pertaining to the evolving distribution system.

Disclaimer

Please note that these principles are not intended to override any individual or collective policies or positions developed by state commissioners, consumer advocates, electric utility representatives, or by the National Association of Regulatory Utility Commissioners (NARUC), the National Association of State Utility Consumer Advocates (NASUCA), Edison Electric Institute (EEI), or any other organizations referenced herein. Instead, CCIF work products are meant only to complement such policies or positions and provide a framework for additional discussion and policy development.

Acknowledgments

The CCIF Executive and Advisory Committees would like to acknowledge the valuable contributions of the following individuals and organizations:

- NARUC, NASUCA, and EEI, particularly the guidance of their respective leaders and the valuable input and hard work of their respective teams.
- All state commissioners, consumer advocates, and electric utility participants who worked tirelessly to draft and revise the CCIF principles, both during and after the summits in Phoenix, Arizona; Washington, DC; and Chicago, Illinois.
- All speakers, panelists, and attendees who participated in the November 2014 Kickoff Forum in San Francisco, where many of the issues addressed within this report were introduced.

Future CCIF Initiatives

CCIF offers participants the ability to engage in constructive debate on important energy topics. It provides a forum for state commissioners, consumer advocates, and electric utility representatives to collectively develop sound energy policies that fully consider impacts on consumers and other stakeholders. CCIF is designed to be a continuing, long-term effort to facilitate such leadership by these core groups and to address a variety of important energy issues in a collaborative, proactive manner. Therefore, we urge all interested stakeholders to stay tuned for future CCIF initiatives and events, and we specifically **invite all NARUC and NASUCA Annual Meeting attendees to join us the afternoon of Saturday, November 7, 2015, in Austin, Texas** (more details at *www.CCIForum.com* in the coming months).

APPENDIX

Acknowledgment of 2015 Summit Participants

Due to the nature of the collaborative process and the extensive degree of participation, specific principles developed within the 2015 summit process should not be attributed to specific individuals or to the organizations that he or she represents. With that understanding, CCIF acknowledges the following individuals who participated in CCIF events focused on the topic of the evolving distribution system:

Mr. Charles A. Acquard
National Association of State Utility Consumer Advocates (NASUCA)

Mr. Guillermo Aleman
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Hon. Elizabeth B. "Lib" Fleming
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Public Service Commission of the District of Columbia

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Mr. Dan Halperin
Pacific Gas & Electric

Ms. Rebecca Harsh Knox
Edison Electric Institute

Mr. Ross C. Hemphill
Commonwealth Edison Company

Hon. Sarah D. Hofmann
Vermont Public Service Board

Hon. Mary-Anna Holden
New Jersey Board of Public Utilities

Hon. John E. "Butch" Howard
South Carolina Public Service Commission

Hon. Elizabeth (Libby) S. Jacobs
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Mr. Christopher Raup
Consolidated Edison Co. of New York

Hon. Ann Rendahl
Washington Utilities & Transportation Commission

Mr. Robert Reuter
Pepco Holdings, Inc.

Mr. Dave Robertson
Portland General Electric

Mr. Mark R. Schuling
Iowa Office of the Consumer Advocate

Hon. Dianne Solomon
New Jersey Board of Public Utilities

Mr. David Springe
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Dr. Mark W. Toney
TURN—The Utility Reform Network

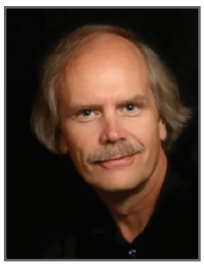
Hon. Betsy Wergin
Minnesota Public Utilities Commission

Hon. Greg R. White
Michigan Public Service Commission

Leadership

Executive Committee

Lisa Polak Edgar
Florida Public Service Commissioner
& NARUC President



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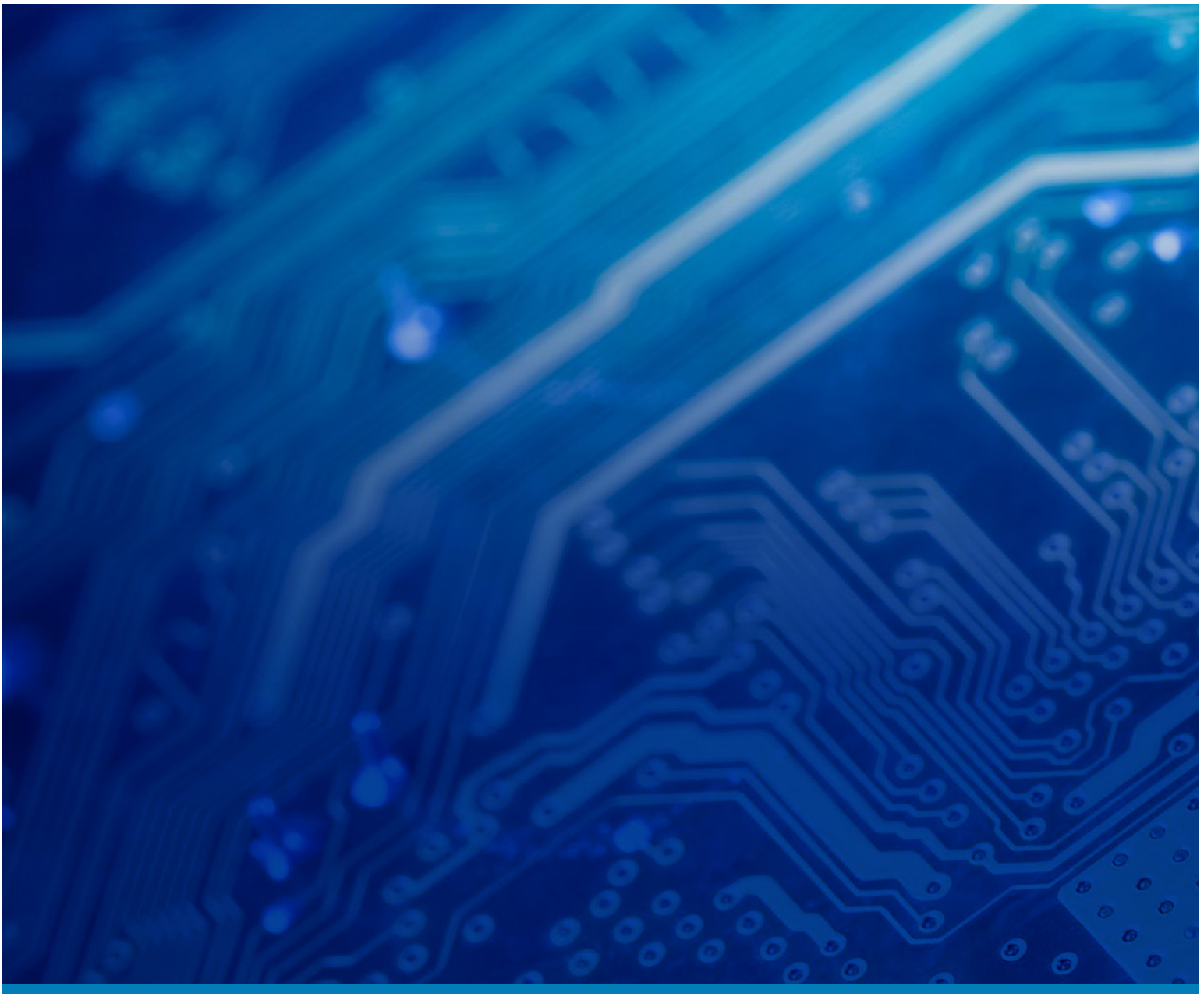
A former Florida Public Service Commissioner (2006–2009), Katrina McMurrian draws upon extensive regulatory experience to organize and facilitate relevant policy forums and to advise an array of entities on key regulatory and policy issues in the energy arena. McMurrian currently serves as the Executive Director of the Critical Consumer Issues Forum (CCIF), a unique national forum in which state regulators, consumer advocates, and electric utilities—via a series of facilitated, interactive dialogues—engage in productive debate and develop consensus on key issues of importance to consumers and policymakers. McMurrian also serves as the Executive Director of the Nuclear Waste Strategy Coalition, an ad hoc organization representing the collective interests of member state utility regulators, consumer advocates, tribal governments, local governments, nuclear-generating utilities, utilities with shutdown reactors, and other public and private sector experts on nuclear waste policy matters.

McMurrian frequently interacts with Congressional offices; Administration officials with the Department of Energy (DOE); state and federal utility regulators; state and national consumer organizations; industry representatives; and numerous other public and private stakeholders on matters related to the work of the NWSC (nuclear waste policy) and the CCIF (grid modernization, distributed generation, etc.).

As a commissioner, McMurrian decided numerous cases involving Florida's electricity, gas, communications, water, and wastewater providers; appeared before Congress; worked with other state and federal agencies; and participated on a number of influential national policy boards. She served on several National Association of Regulatory Utility Commissioners (NARUC) committees, including Electricity, Nuclear Issues (Vice Chair), Consumer Affairs, and Education & Research, as well as on collaboratives with the Federal Energy Regulatory Commission (FERC), including Demand Response (Co-Chair), Smart Grid, and Competitive Procurement. She also served on the Executive Committee of the NWSC, Advisory Council to the Electric Power Research Institute (EPRI) Board, EPRI Energy Efficiency/Smart Grid Group, Keystone Energy Board, Eastern Interconnect States Planning Council, and the Southeastern Association of Regulatory Utility Commissioners (SEARUC). Additionally, McMurrian Co-Chaired the 2009 NARUC/DOE National Electricity Delivery Forum.

A Northwest Florida native, McMurrian received a Bachelor's degree in finance from Florida State University in 1994 and an MBA from FSU in 1998.



CCIF
Critical Consumer Issues Forum

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CCIF

Critical Consumer Issues Forum

DG: A Balanced Path Forward

Providing Customer Choice While Ensuring Reliability

July 2014

Table of Contents

I. Introduction

About CCIF

Formed in 2010, the Critical Consumer Issues Forum (CCIF) brings state commissioners, consumer advocates, and electric utility representatives together to tackle consumer-focused energy issues through interactive discourse and debate, to find consensus when possible, and at a minimum, to achieve a clearer understanding of—and appreciation for—each other's perspectives and positions.

To provide leadership, CCIF organized Executive and Advisory Committees, each with balanced representation from the three core communities. The current members are recognized in the Appendix. These 12 leaders guide each initiative from topic selection to issuance of the final report.

The 3-step process by which CCIF develops its reports on relevant and timely energy topics entails:

1. A large open kickoff forum, typically collocated with the NARUC & NASUCA Annual Meetings, to introduce a topic and initiate discussion among CCIF's three core communities and other stakeholders;
2. A series of smaller, invitation-only spring summits in which the three communities engage in facilitated dialogue; and
3. A report issued in the summer to share key takeaways with the broader stakeholder community and serve as a foundation for additional dialogue on numerous fronts.

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CCIF Track Record

The CCIF formula has proven successful, and its reports have contributed to the energy policy debate. Through this collaborative effort, CCIF has previously addressed topics including grid modernization, the regulatory process, and distributed energy resources. In 2011, CCIF released its first report, which contained 30 consensus principles on grid modernization. CCIF's 2012 report explored whether and how transparency, communication, prioritization, and collaboration may be used to improve the regulatory process. The most recent report was released in 2013 and contained a consensus framework and 21 principles related to distributed energy resources. All three reports are available at *www.CCIForum.com*.

CCIF's 2-Year Initiative on Distributed Generation

In late 2012, CCIF leadership identified the challenging topic of distributed energy resources (DER) as ripe for discussion among the three core groups. Without question, state commissioners, consumer advocates, and electric utilities possess both individual and collective perspectives that should be considered as policies are formed in this area. Therefore, CCIF kicked off an initiative on DER in November 2012 with a program that examined our distributed future, the benefits and challenges of DER, and relevant public policy initiatives and regulatory actions. The forum provided a solid foundation for the summits that followed as well as the framework and principles that ultimately were developed by summit participants from the three communities and included in CCIF's 2013 report.

While recognizing that DER typically includes energy efficiency and demand response, 2013 summit participants from the three groups chose to narrow CCIF's focus to distributed generation (DG). This decision was reflected in the adopted definition of DER included in the 2013 final report.

In late 2013, CCIF leadership chose to continue CCIF's work on the topic of DG in a manner that would build upon the foundation of CCIF's 2013 consensus framework and principles. The November 2013 kickoff program examined lessons learned from DG public policy initiatives and regulatory actions, addressed potential future approaches to provide a balanced path forward, and dug deeper into a number of consumer protection and consumer education issues related to investment in DG.

Over the course of three summits that followed this spring, participants from the three core groups developed the additional principles on DG that are included in this report. Participants also chose to reflect related summit discussion in a few areas as noted within. Finally, please note that the principles and related context developed from both the 2013 and 2014 summit processes have been combined and reordered for a more complete and organized statement on DG.

As a compilation of participants' perspectives on critical issues pertaining to DG, this report demonstrates that these groups are clearly able and ready to lead both state and national debates on challenging energy issues—those pertaining to DG and countless others. CCIF trusts that the valuable perspectives reflected within these principles will be instrumental as we continue to build upon these ideas through further constructive dialogue with the broader stakeholder community.

II. CCIF Consensus Framework & Principles on DG

Scope of CCIF Work on DG

Distributed generation (DG) is a non-centralized source of electricity generation generally interconnected to the distribution system and located at or near customers' homes or businesses. Examples of DG addressed by this collaborative include solar panels, energy storage devices, fuel cells, microturbines, reciprocating engines, small wind, CHP systems, etc.

In CCIF's 2013 report, the term "distributed energy resources" and the abbreviation "DER" were used throughout the consensus framework and principles. However, the 2013 participants defined the term such that the principles effectively dealt with distributed generation, a subset of DER. Participants chose to use "distributed generation" or "DG" throughout the 2014 report and to more accurately reflect the intent of the 2013 report by changing the terminology to DG for those 2013 consensus items referenced herein.

For a more complete and organized statement on DG, the principles and related context developed from the 2013 and 2014 processes have been combined and reordered with the consent of the 2014 participants. While some of the 2013 participants were also part of the 2014 process, others did not participate and therefore should not be construed as having considered or provided consent for the additional 2014 principles and related input. Participants from both processes are separately recognized in the Appendix.

Objective of CCIF Work on DG

During CCIF's 2014 summit series, state commissioners, consumer advocates, and electric utility representatives endeavored to build upon the foundation of CCIF's 2013 principles on DG. By digging deeper into these complex issues, developing additional consensus where possible, and elucidating policy and regulatory options, participants better equipped themselves—as well as policymakers and other stakeholders via this final report—to integrate DG technologies in a safe, fair, cost-effective, and reliable manner.

During CCIF's 2013 summit series, participants acknowledged that the role of DG is growing and may require new approaches for providing and regulating electricity services. We recognized the need for a better understanding of costs and benefits of DG. Our goal was to develop a framework to assist policymakers and other stakeholders in evaluating issues related to the potentials and challenges of DG in providing safe, reliable, affordable, cost-effective, and environmentally sound energy supply. In developing this framework, we recognized the differing regulatory and market structures (e.g., vertically integrated, wires-only utilities, etc.) of the states, as well as the potential significance of regional and federal requirements.

Potential Benefits & Challenges of DG

Although the following list does not include all potential benefits and challenges pertaining to DG, it provides a useful starting point for further analysis.

When paired with appropriate public policies, DG has the potential to provide direct and indirect **benefits** to consumers, both individually and collectively. Depending on the type of DG, benefits that may be realized include:

1. Cost and risk reduction benefits;
2. Security and reliability;
3. Environmental benefits;
4. Innovation, expanded research and development, and other economic benefits; and
5. Expanded customer choice and control.

Likewise, the **challenges** associated with DG should be considered. Depending on the type of DG, such challenges may include:

1. Financial impacts on utilities and customers, including increased costs, revenue losses, and cost-shifting;
2. Safety, security, operational control, reliability, and planning;
3. Siting, permitting, and other environmental issues;
4. Maintaining consumer protection standards; and
5. Jurisdictional and regulatory issues.

Consensus Principles & Related Input on DG

This section is divided into four main categories: Financial & Regulatory Issues; Market Development & Deployment Issues; Consumer Issues; and Safety, Reliability & System Planning Issues. Each category contains consensus principles, and some include related input based on summit discussion (but not necessarily group consensus). While consensus principles are consecutively numbered, the related input is set apart so as to distinguish it from the principles. In addition, consensus principles developed as a result of the 2014 summits are shown in purple text but are combined with the consensus principles from the 2013 process in order to provide a more complete and organized statement on DG issues.

Financial & Regulatory Issues

1. Regulatory policies with respect to DG should balance the following objectives:
    - Facilitating opportunities for customers to choose DG options;
    - Minimizing customer bill impacts;
    - Protecting the interests of non-participating customers, including those least able to afford any increased costs;
    - Recognizing the appropriate benefits and costs of DG technologies;
    - Acknowledging federal and state energy, environmental, and economic policies; and
    - Recovering prudent costs of integrated grid services in rates.
2. To the extent that state commissions evaluate new regulatory policies and procedures in light of increased emphasis on DG, they should take into account the interests and concerns of all stakeholders.
3. Utility investments required to accomplish DG deployment should be consistent with state policies and recovered in a manner consistent with state laws and regulatory policies.
4. Policymakers, regulators, consumer advocates, utilities, DG owners and operators, and others should work collaboratively, and in formal proceedings as necessary, to assess various approaches to facilitate equitable and sustainable policies for DG integration and operation, respecting regional and state diversity.
5. To the extent state policymakers or regulators determine incentives[1] for DG are justified based on societal benefits, the costs of those incentives should be transparently distributed among all relevant consumers within that state.
6. Any incentives, through ratemaking practices, taxes, or otherwise, should be fair, transparent, and appropriate.
7. DG incentives should be based on clear policy objectives and periodically reevaluated based on market conditions. Once the underlying policy objectives are met or as the technologies become cost-competitive or cost-prohibitive, such incentives should be modified or discontinued.

[1] For purposes of this discussion, participants considered "incentives" as benefits received by or cost reductions to a DG project, such as tax subsidies, rebates, subsidized financing, any net metering arrangement that provides benefits exceeding the underlying value of the energy received from that DG, etc.

8. Generally, DG costs imposed on utilities should be borne by those who cause the costs. For example, backup or standby utility costs (particularly regarding intermittent DG technologies) should be borne by the operator of the DG.

9. Any required allocation of costs to others should be rational, transparent, based on benefits received, and not unduly burdensome.

10. While net metering is intended to be a relatively simple mechanism to provide an incentive for DG, it can over- or under-compensate DG customers depending on the underlying rate design. To ensure that net metering and other mechanisms to facilitate DG do not result in a misallocation of costs among customers or impose undue costs on utilities, regulators must ensure that rates reflect equitably the benefits and costs of DG.

Potential Regulatory Approaches (Rate Design & Other Regulatory Tools)

CCIF participants discussed a number of regulatory approaches to DG integration, but the group did not attempt to develop consensus around any one set of options. Below is an alphabetical list of some of the potential approaches.

- Buy All-Sell All: Utility provides services to DG customers at utility rates and purchases all DG output from DG customers at avoided cost or wholesale rates.
- Decoupling: Fixed cost recovery not linked to usage.
- Demand Charge: Charge that varies by amount of demand used by customers.
- Feed-In Tariffs: Utility pays DG customers a contracted amount for a specific type of generation.
- Fixed Customer Charge: Charge intended to recover fixed infrastructure costs that are not tied to volumetric usage.
- Minimum Monthly Billing: Regulatory-determined amount is chosen as a minimum bill amount which pays for an equivalent amount of usage. Customers must pay at least the minimum, regardless of usage.
- Net Metering: Customer pays for power based on meter reading which subtracts self-generation from customer usage.
- New Rate Group for DG Customers: Separate tariff for DG customers that reflects their usage characteristics.
- Three-Part Rates: Customer charge + demand or capacity charge + volumetric charge.
- Time-of-Use Pricing: Rate varying by time period allowing for potential cost savings by shifting usage off-peak; may require advanced metering technology.
- Two-Way Rates: Each party compensated for the services it offers the other.
- Value of Solar: Value of solar DG determined by valuation studies. Value can differ by type of DG.

Market Development & Deployment Issues

11. While policies and their application may vary by state, DG programs, grants, or subsidies should be periodically evaluated for cost-effectiveness and adjusted by the appropriate regulatory authority as market conditions and policy objectives or requirements change.

12. Utility and regulatory processes and requirements should allow for customer deployment of DG technologies subject to reasonable rules and regulations.

13. When developing DG market rules, the unique attributes of each participating technology (e.g., capacity value, dispatchability, technical longevity, and reliability impacts) should be taken into account.

14. Utility participation in DG markets should be fair, reasonable, non-discriminatory, and overseen and approved by the appropriate regulatory authority.

15. The incumbent utility should be allowed to participate in the DG market under fair and competitive terms where doing so would maintain or enhance reliability, reduce costs, or facilitate broader participation by customers.[2] In a collaborative manner, and in formal proceedings as necessary, regulators, utilities, non-utility DG participants, and other stakeholders should consider an array of options for the incumbent utility to participate in the market including the traditional regulated model based on cost of service, the unregulated model subject to appropriate affiliate rules, as well as non-traditional approaches.

16. Policies related to DG interconnection or deployment should be fair, reasonable, not unduly discriminatory, and overseen and approved by the appropriate regulatory authorities.

17. DG should be permitted on either the customer side or the utility side of the meter in accordance with interconnection rules and other applicable regulations.

18. Utilities and DG providers should work toward appropriate and reasonable data sharing that facilitates capturing system benefits and identifying costs of DG.

Consumer Issues

The Consumer Issues section is further divided into the subcategories of Consumer Protections and Consumer Education & Engagement, although a few principles address aspects of each.

Consumer Protections

19. States should provide DG consumers with appropriate education and enforceable protections to guard against and respond to unsafe, unfair, or deceptive business practices by DG providers.

20. States should clearly delineate jurisdiction and coordinate among state commissions, state attorneys general, and other consumer protection entities to ensure that there are no gaps in enforcement of the laws and regulations that protect DG customers.

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[2] Some states have adopted laws that restrict or prohibit utility ownership of generation. In view of this, some CCIF participants abstained from agreement on this principle. This principle should not be construed as a proposal for changing existing state laws.

21. As DG technologies are deployed, consumer protection policies should be periodically reviewed and revised as appropriate. In any event, consumers should be given a clear avenue to resolve complaints.

22. States should develop standards for DG providers which are enforceable through licensing, registration, or other regulatory requirements to address financial soundness, safety, reliability, system planning, and consumer protection.

23. Utilities and DG providers, with the participation of state regulatory bodies and consumer advocates, should develop standards for data protection, access, and disclosure consistent with state requirements.

24. In developing DG policies, particular attention should be given to the cost impacts on all utility customers, including those not participating and those least able to afford such costs.

State policymakers should ask the following questions regarding consumer protections

- What protections are needed for consumers, both in their relation with their utility and with third party DG providers?
- What are the potential gaps in existing rules and regulations?
- What are the options for filling these gaps?
- What level of oversight is needed for DG providers?
- Which agency should take the lead role?
- What are the proper roles of state commissions, consumer advocates, state attorneys general, and utilities in addressing complaints?
- Are there recommendations that should be made to other organizations or agencies to address consumer protection?

State policymakers should consider potential unintended consequences of DG policies

An additional issue that spurred discussion was the potential unintended consequences of certain DG-related policies on the collection of funds for various public benefit programs and standards (such as low-income or energy efficiency). In Arizona, for example, monies are collected to fund such programs and standards on a variable basis. If DG customers avoid all their variable charges, those programs lose that incremental revenue. To address this issue in relation to the renewable energy surcharge, the Arizona Corporation Commission decided to apply the average surcharge rate of the corresponding customer class to the solar adopting customers. For states that may have similar public benefits charges and policies, participants wanted to highlight the issue to make sure such states are aware of the potential ramifications. Participants encourage states to consider the implications of this issue.

Consumer Education & Engagement

25. States, consumer advocates, utilities, and DG providers should work together to provide potential DG customers with objective information that will help them make informed choices.

26. DG providers should provide potential DG customers with accurate information about DG-related products and services and should be held accountable for misleading or false statements.

27. States should encourage customers to complete an energy efficiency evaluation prior to acquiring DG.

State policymakers should ask the following questions regarding consumer education and engagement

- What type of consumer education and outreach is needed?
- Who should supply the information?
- What are the proper roles of state commissions, consumer advocates, state attorneys general, utilities, others?
- How and when should information be disseminated?

Safety, Reliability & System Planning Issues

28. DG interconnection standards, procedures, and practices must ensure the safety of the public, first responders, and electric utility workers. These standards, procedures, and practices must also protect utility and customer assets.

29. Information and applicable regulations related to the protection and safety of first responders (e.g., firefighters, police, and utility workers) who need to access DG facilities, either directly or indirectly, should be shared with DG customers, DG providers, and the general public.

30. DG deployment must be accomplished in a manner that does not compromise the continued reliability of utility infrastructure and operating systems.

31. Any positive and negative reliability impacts of DG interconnection should be recognized and accounted for so that any incremental costs and benefits of maintaining grid reliability are appropriately allocated.

32. DG deployment should not diminish infrastructure security or cybersecurity. (2013 Principle 20)

33. Transmission and distribution planning entities should consider and incorporate as appropriate state DG requirements into their planning processes.

34. Utilities should be aware that changes to utility system planning and operations may be required because of greater integration of DG technologies.

III. Conclusion

OBJECTIVE MET

Recognizing that the principles do not address all issues with respect to the expansive topic of DG, the consensus achieved by participating state commissioners, consumer advocates, and utility representatives is significant nonetheless. Consistent with the stated objective, participants better equipped themselves—as well as policymakers and other stakeholders via this final report—to integrate DG technologies in a safe, fair, cost-effective, and reliable manner.

DISCLAIMER

Please note that these principles are not intended to override any individual or collective policies or positions developed by state commissioners, consumer advocates, electric utility representatives, or by the National Association of Regulatory Utility Commissioners (NARUC), the National Association of State Utility Consumer Advocates (NASUCA), Edison Electric Institute (EEI), or any other organizations referenced herein. Instead, CCIF work products are meant only to complement such policies or positions and provide a framework for additional discussion and policy development.

ACKNOWLEDGMENTS

The CCIF Executive and Advisory Committees would like to acknowledge the valuable contributions of the following individuals and organizations:

- NARUC, NASUCA, and EEI, particularly the guidance of their respective leaders and the valuable input and hard work of their respective teams.
- All state commissioners, consumer advocates, and electric utility participants who worked tirelessly to draft and revise the CCIF principles and related input on DG.
- All speakers, panelists, and attendees who participated in the November 2013 Kickoff Forum in Orlando, where many of the issues addressed within this report were introduced.

FUTURE CCIF INITIATIVES

CCIF offers participants the ability to engage in constructive debate on important energy topics. It provides a forum for state commissioners, consumer advocates, and electric utility representatives to collectively develop sound energy policies that fully consider impacts on consumers and other stakeholders. CCIF is designed to be a continuing, long-term effort to facilitate such leadership by these core groups and to address a variety of important energy issues in a collaborative, proactive manner. Therefore, we urge all interested stakeholders to stay tuned for future CCIF initiatives and events, and we specifically **invite all NARUC and NASUCA Annual Meeting attendees to join us the afternoon of Saturday, November 15, 2014, in San Francisco** *(more details at www.CCIForum.com in the coming months)*.

Appendix

ACKNOWLEDGMENT OF 2014 SUMMIT PARTICIPANTS

Due to the nature of the collaborative process and the extensive degree of participation, specific principles developed within the 2014 summit process should not be attributed to specific individuals or to the organizations that he or she represents. With that understanding, the Critical Consumer Issues Forum (CCIF) acknowledges the following individuals who participated in CCIF events focused on the topic of Distributed Generation (DG):

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ACKNOWLEDGMENT OF 2013 SUMMIT PARTICIPANTS

Because the principles developed within the 2013 summit process are embedded again within this later report, it is appropriate to acknowledge those participants again here. Please note that some names and affiliations may have changed, but they have inserted them below as printed in the 2013 report on Distributed Energy Resources (DER). While some of the 2013 participants were part of the 2014 process, others did not participate and therefore should not be construed as having considered or provided consent for the additional 2014 principles and related content. Due to the nature of the collaborative process and the extensive degree of participation, specific principles developed within the 2013 summit process should not be attributed to specific individuals or to the organizations that he or she represents. With that understanding, CCIF acknowledges the following individuals who participated in CCIF events focused on the topic of DER:

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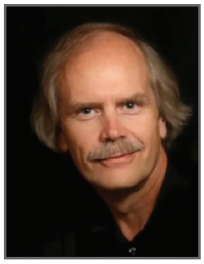

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A former Florida Public Service Commissioner (2006–2009), Katrina McMurrian draws upon extensive regulatory experience to organize and facilitate relevant policy forums and to advise an array of entities on key regulatory and policy issues in the energy arena. McMurrian currently serves as the Executive Director of the Critical Consumer Issues Forum (CCIF), a unique national forum in which state regulators, consumer advocates, and electric utilities—via a series of facilitated, interactive dialogues—engage in productive debate and develop consensus on key issues of importance to consumers and policymakers. McMurrian also serves as the Executive Director of the Nuclear Waste Strategy Coalition, an ad hoc organization representing the collective interests of member state utility regulators, consumer advocates, tribal governments, local governments, nuclear-generating utilities, utilities with shutdown reactors, and other public and private sector experts on nuclear waste policy matters.

McMurrian frequently interacts with Congressional offices; Administration officials with the Department of Energy (DOE); state and federal utility regulators; state and national consumer organizations; industry representatives; and numerous other public and private stakeholders on matters related to the work of the NWSC (nuclear waste policy) and the CCIF (grid modernization, distributed generation, etc.)

As a commissioner, McMurrian decided numerous cases involving Florida's electricity, gas, communications, water, and wastewater providers; appeared before Congress; worked with other state and federal agencies; and participated on a number of influential national policy boards. She served on several National Association of Regulatory Utility Commissioners (NARUC) committees, including Electricity, Nuclear Issues (Vice Chair), Consumer Affairs, and Education & Research, as well as on collaboratives with the Federal Energy Regulatory Commission (FERC), including Demand Response (Co-Chair), Smart Grid, and Competitive Procurement. She also served on the Executive Committee of the NWSC, Advisory Council to the Electric Power Research Institute (EPRI) Board, EPRI Energy Efficiency/Smart Grid Group, Keystone Energy Board, Eastern Interconnect States Planning Council, and the Southeastern Association of Regulatory Utility Commissioners (SEARUC). Additionally, McMurrian Co-Chaired the 2009 NARUC/DOE National Electricity Delivery Forum.

A Northwest Florida native, McMurrian received a Bachelor's degree in finance from Florida State University in 1994 and an MBA from FSU in 1998.

CCIF Events on DG

Fall Kickoff Forum

November 16, 2013
Hilton Orlando Bonnet Creek
Orlando, FL
Collocated with the NARUC and NASUCA Annual Meetings in Orlando
Approximately 200 participants

Spring Summit 1

March 17–18, 2014
The Westin San Diego
San Diego, CA
8 State Commissioners + 1 Staff; 10 Consumer Advocates; 7 Investor-Owned Electric Utility Reps;
2 Regulated Electric Cooperative Reps; 4 EEI Reps + 1 CCIF Rep

Spring Summit 2

April 3–4, 2014
Hilton Chicago O'Hare Airport
Chicago, IL
17 State Commissioners + 2 Staff; 16 Consumer Advocates; 17 Investor-Owned Utility Reps;
2 Regulated Electric Cooperative Reps; 5 EEI Reps + 1 CCIF Rep

Spring Summit 3

May 12–13, 2014
Hyatt Boston Harbor
Boston, MA
19 State Commissioners; 16 Consumer Advocates; 19 Investor-Owned Utility Reps;
1 Regulated Electric Cooperative Rep; 5 EEI Reps + 1 CCIF Rep

CCIF Kickoff Agenda

CCIF
Critical Consumer Issues Forum

Presents the CCIF 4th Annual Kickoff Forum:

Distributed Generation: Consumer-Focused Options for Policymakers & Regulators

Saturday, November 16, 2013 ♦ 2:00–5:15 pm

Hilton Orlando Bonnet Creek ♦ 14100 Bonnet Creek Resort Lane ♦ Orlando, FL 32821

Floridian Ballroom B & C (Lobby Level)

AGENDA

1:30 – 2:00	**Registration Open** Program begins promptly at 2:00 PM.
2:00 – 2:05	**Welcome to Orlando** *Hon. Lisa Polak Edgar, NARUC 2nd Vice President and Florida Public Service Commissioner*
2:05 – 2:15	**Introduction & Expectations** *Hon. Philip B. Jones, NARUC President and Washington Utilities & Transportation Commissioner*
2:15 – 4:00	**DG Lessons Learned & Future Approaches** Panelists will expand upon the CCIF framework on DG with a technical exploration of the benefits of DG and how the electric grid enables DG options. They also will explore lessons learned from current DG public policy initiatives and regulatory actions as well as address potential future approaches that provide a balanced path forward. Moderator: *Mr. David K. Owens, Executive Vice President of Business Operations, Edison Electric Institute* Panelists: • *Hon. Ellen Nowak, Commissioner, Public Service Commission of Wisconsin* • *Ms. Elin Swanson Katz, Consumer Counsel, Connecticut Office of Consumer Counsel* • *Mr. David Ozment, Senior Director, Energy, Walmart Stores, Inc.* • *Ms. Jean Wilson, Senior Vice President, Americas Utility & Commercial, SunPower Corporation* • *Mr. Christopher P. Johns, President, Pacific Gas & Electric Company* • *Mr. Kim Colberg, Chief Executive Officer, Linn County Rural Electric Cooperative*
4:00 – 5:00	**Consumer Protections, Complaint Resolution & Education** Using the CCIF principles on DG as a starting point, panelists will dig deeper into a number of consumer issues related to investment in DG. Do existing rules and regulations adequately protect consumers? Where should consumers go for more information about DG or to resolve complaints with providers? Moderator: *Ms. Janee Briesemeister, Senior Legislative Representative, AARP* Panelists: • *Hon. Jeff Goltz, Commissioner, Washington Utilities & Transportation Commission* • *Mr. John Howat, Senior Energy Analyst, National Consumer Law Center* • *Mr. Phillip R. May, President & CEO, Entergy Louisiana, LLC & Entergy Gulf States Louisiana, L.L.C.*
5:00 – 5:15	**Closing: Key Takeaways & Next Steps** *Ms. Paula M. Carmody, NASUCA President and Maryland People's Counsel*
5:15	**Wine & Cheese Reception**

CCIF Sample Summit Agenda

CCIF
Critical Consumer Issues Forum

Distributed Generation: A Balanced Path Forward

Providing Customer Choice While Ensuring Reliability

May 12-13, 2014

Hyatt Boston Harbor
Grand Ballroom (2nd Floor)

Agenda

During CCIF's 2014 summit series, state commissioners, consumer advocates, and electric utility representatives will build upon the foundation of CCIF's 2013 principles on distributed generation (DG). By digging deeper into these complex issues, developing consensus where possible, and fleshing out policy and regulatory options, participants will better equip themselves – as well as policymakers and other stakeholders via the final report – to enable DG integration in a safe, fair, and reliable manner.

Day 1 (May 12th)

7:30 – 8:30 **Hot Breakfast Buffet** *(Grand Ballroom, 2nd Floor)*
(Please note that the meeting begins promptly at 8:30 AM in Grand Ballroom.)

8:30 – 8:45 **Welcome, Introductions, and Summit Process Discussion**
Katrina McMurrian, CCIF Executive Director

- Recognition of CCIF Leadership & Introduction of Participants
- Overview of CCIF Purpose, Leadership, Process, Successes
- Description & Discussion of Summit Process & Goals and Expectations for Final Report

8:45 – 10:45 **Guest Stakeholder Panel & Group Discussion**
Panelists will address key items from the summit agenda, followed by an hour of interactive dialogue with summit participants.
Moderator: Katrina McMurrian, CCIF Executive Director

- ***Ms. Lori Bird, Senior Analyst, Market & Policy Impact Analysis Group, Strategic Energy Analysis Center, National Renewable Energy Laboratory (NREL)***
- ***Mr. Bob Gibson, Vice President of Education & Outreach, Solar Electric Power Association (SEPA)***
- ***Mr. David Ozment, Senior Director of Energy, Wal-Mart Stores, Inc.***

10:45 – 11:00 **Break**

11:00 – 11:30 **Arizona's Experience with DG-Related Consumer Protection & Outreach Issues**
Hon. Bob Stump, Chairman, Arizona Corporation Commission
Chairman Stump will share the Arizona Corporation Commission's experience to date with an active distributed solar market, the positive and negative implications for consumers, and things to be prepared for in other jurisdictions and with other forms of DG to best inform and protect consumers. Following Chairman Stump's initial remarks, participants are encouraged to ask questions and engage on issues that should inform the following discussion.

11:30 – 12:30 **Consumer Protections, Complaint Resolution, Outreach & Education**
Facilitated Discussion Featuring All Participants
Participants will discuss the need for improved consumer protections, complaint resolution methods, and consumer outreach & education. Specifically, we'll explore:

- Potential gaps in existing rules & regulations and options for filling such gaps
- Recipients and nature of DG-related complaints and options for best addressing such complaints
- Opportunities and best practices for consumer outreach and education about DG

12:30 – 1:00 **Lunch Buffet** *(Grand Ballroom)*

12:30 – 2:30 **Consumer Protections, Complaint Resolution, Outreach & Education** *(Continued)*
Facilitated Discussion Featuring All Participants

2:30 – 2:45 **Break**

2:45 – 3:15 **Safety, Reliability & System Planning Issues**
Facilitated Discussion Featuring All Participants
Participants will address additional safety and reliability issues.

3:15 – 4:55 **Regulatory Issues**
Facilitated Discussion Featuring All Participants
Participants will identify and explore options relating to regulatory issues such as pricing of DG (e.g., net metering, feed-in and other tariffs); approaches to ensure recovery of fixed costs (e.g., higher fixed charges, other revenue stabilization mechanisms); impacts on reliability; and others.

4:55 – 5:00 **Recap & Plans for Day 2**
Katrina McMurrian, CCIF Executive Director

5:00 – 6:00 **Networking Reception** *(Harborside Ballroom, 1st Floor)*

6:00 – 9:00 **Plated Dinner & Continued Issue Discussion** *(Harborside Ballroom, 1st Floor)*

Day 2 (May 13th)

7:00 – 8:00 **Hot Breakfast Buffet** *(Grand Ballroom, 2nd Floor)*
(Please note that the meeting begins promptly at 8:00 AM in Grand Ballroom.)

8:00 – 10:00 **Regulatory Issues** *(Continued)*
Facilitated Discussion Featuring All Participants

10:00 – 10:15 **Break**

10:15 – 11:15 **Regulatory Issues** *(Continued)*
Facilitated Discussion Featuring All Participants

11:15 – 11:30 **Boxed Lunch** *(Grand Ballroom)*

11:30 – 1:30 **Barriers to Market Entry & Whether/How to Remove Them**
Facilitated Discussion Featuring All Participants
Participants will discuss barriers to market entry for DG providers and how to level the playing field across types of DG; for incumbent utilities (regulated/unregulated) and how to level the playing field with unregulated DG providers; and for consumers who want to install DG.

1:30 – 1:45 **Break**

1:45 – 3:00 **Next Steps to Advance Key Concepts**
Facilitated Discussion Featuring All Participants
Participants will determine CCIF's role in advancing key concepts and a balanced path forward, including:

- Approach for sharing CCIF work products on DG (communications plan)
- Collaboration on future federal initiatives (Administration/DOE)
- Collaboration with stakeholder groups

3:00 **Meeting Adjourns**

Guest Stakeholder Summaries

CCIF invited five stakeholder representatives to participate in guest stakeholder panels at the beginning of CCIF Summits 2 and 3 to provide participating state commissioners, consumer advocates, and electric utility representatives with additional perspectives on issues related to DG. Each guest stakeholder panel discussion allowed for 20-minute presentations, followed by approximately an hour of interactive dialogue with summit participants. Participants appreciated the opportunity to hear from and engage with these experts, and CCIF would like to acknowledge the following five individuals for their contributions to our productive dialogue:

- Tom Beach, Principal, Crossborder Energy, Consultant to Solar Energy Industries Association (SEIA)
- Lori Bird, Senior Energy Analyst, National Renewable Energy Laboratory (NREL)
- Bob Gibson, Vice President, Education & Outreach, Solar Electric Power Association (SEPA)
- David Ozment, Senior Director of Energy, Walmart
- Rebecca Stanfield, Deputy Director for Policy, Midwest Program, Natural Resources Defense Council (NRDC)

We invited the five presenters to provide summaries of their presentations for inclusion in the final report so that others may benefit from their perspectives as well. Summaries from four of the presenters are included below.

Tom Beach, Principal, Crossborder Energy, Consultant to SEIA
Solar Energy Industries Association (SEIA)

Presented at CCIF Summit 2 (Chicago) on April 3, 2014

The electric utility industry faces important, perhaps unprecedented, opportunities and challenges. The opportunity is that achieving a major reduction in carbon emissions by 2050 is likely to require the widespread electrification of important sectors of the U.S. economy, including buildings and transportation. This could dramatically increase electricity's share of primary energy use in the U.S. The challenge is that the traditional structure and business model of electric utilities in the U.S. have been called into question by new technologies in distributed generation (DG) and storage that provide consumers with new options for obtaining electric service. The challenge is how to adapt the existing electric system infrastructure, much of which continues to be necessary and vital, to the new realities of the expanded choices available to electric customers. This adaptation will need to include changes to the regulatory structures and business models under which U.S. utilities operate.

Market Development & Deployment Issues

In the past, electric utilities have grown through exploiting economies of scale. In the future, due to the availability of economic DG and storage resources, there may no longer be economies of scale available through centralized generation and transmission. Instead, utilities will need to focus on exploiting "economies of sharing" with their customers. For example, an on-site storage resource can be shared between a customer and the utility, allowing the customer to improve the reliability and resiliency of its service, while providing a new means for the utility to meet peak demand at both the system and circuit levels. Considering financial resources, customers and DG providers who use and

build distributed resources will provide new sources of capital that will be vital to funding the transition to a cleaner energy infrastructure.

Consumer Education & Engagement

A significant benefit of the growth of DG and other demand-side resources is a higher level of education and engagement from customers in how their energy is provided. This does not have to be limited to customers who actually install DG on their premises. For example, community-based DG options are being tested in a number of states that can allow consumers the choice to subscribe to the output of a local supplier of renewable generation, with the utility continuing to provide integration, delivery, and billing services.

Customer Protection

The CCIF's principles for DG emphasize treating customers fairly and setting rates for all customers based on cost causation. These principles should apply to customers who adopt DG as well as to those who do not. For example, setting rates applicable to DG customers should consider their much different load profile than standard customers, a profile that may be much less expensive to serve than the class average. In addition, DG customers are contributing new, long-lived, clean resources to the system. Accordingly, policies applicable to DG, such as net metering, should be evaluated using a long-term analysis, over the expected lives of the DG systems, just as other new utility resources are evaluated. This analysis should recognize that, in the long-run, few utility costs are fixed, and DG will allow the utility to avoid capacity-related as well as energy-related costs. Finally, regulators seeking to balance the interests of customers who install DG and those who do not should recognize that DG customers bear new risks that traditional utility customers do not, such as the risks associated with the long-term operation and maintenance of the DG equipment. When the DG customer assumes such risks, it contributes to the overall reliability and resiliency of the entire system. Finally, it should be recognized that DG customers have made long-term investments in an important public purpose goal—a cleaner, more resilient energy infrastructure—that may be far larger than the average utility customer's month-to-month contributions to utility public purpose programs.

Safety, Reliability & System Planning Issues

Integrating DG presents new challenges for utilities. The impact of DG on utilities is similar to other demand-side resources in many respects (energy efficiency and demand response), in terms of reducing the loads which customers place on the grid. That said, DG also is different—it is generation interconnected to the grid, with additional safety and operational impacts. Permitting and interconnection of DG should be streamlined, and utility distribution planners need to incorporate the impacts of widespread DG adoption into their work in ways that are transparent and fair to all customers. The locational value of DG must be better understood and made more visible, to encourage siting where there will be the most system benefits for all ratepayers.

Financial & Regulatory Issues

The utility industry has faced the challenge of integrating demand-side resources before, when energy efficiency and demand response programs first became widespread. The industry successfully adapted, developing a standardized set of cost-effectiveness tests to balance the often-competing perspectives of participants, non-participants, the utility, and society as a whole. The net metering

debate should be addressed in a similar fashion, using data, careful analysis, and rate design changes to achieve the right balance between all of these interests. Ultimately, the tension between traditional utility service and the new customer choices available through DG and storage will have to be resolved through changes to the utility business model to reward not the growth of rate base, but the efficient integration of disparate resources, reliable service, safety, and environmental stewardship.

Lori Bird, Senior Energy Analyst
National Renewable Energy Laboratory (NREL)

Presented at CCIF Summit 3 (Boston) on May 12, 2014

Regulatory Considerations Associated with the Expanded Adoption of Distributed Solar

- Solar PV installations have been growing rapidly, but PV generation still represents a small fraction of total electricity generation nationally (<1%). The U.S. installed 4.8 GW of PV in 2013 (3.4 GW in '12) and 2.1 GW in Q4 '13. Utility-scale PV capacity represent more than half of installations in 2013.
- PV development has been concentrated in several states. CA, AZ, and NJ each have more than 1 GW of cumulatively installed PV. However, this trend is changing slowly as 16 states currently have 100 MW or more of PV capacity and 11 states each installed more than 50 MW in 2013 alone. 92% of the all systems are residential, with 131,000 residential systems installed in 2013. Hawaii is facing significant barriers with large penetration of PV on the grid. 25% of circuits in Oahu were at or above 100% daytime minimum load in Jan. 2014 (up from 13% in Sept. '13)
- System prices in AZ, CA, MA, and NY, for systems between 2.5–10 kW, fell on average 11% between 2012 and 2013. This is consistent with declines experienced in the previous 4 years. Q1 2014 pricing trended downwards as well—~8% below Q1 2013 for host-owned systems.
- Key issues and challenges for regulators in managing the growth of distributed generation include balancing the following objectives: sufficient revenues are collected to maintain the grid, fair and equitable rates, customer choice, policy goals are achieved, a level playing field for new technologies, and competition and provision of customer services.
- Key considerations for rate design and potential changes in rate structures include the following. Regulators strive to develop fair and equitable rates, but there is some degree of cost shifting embedded in rates (e.g., commercial vs. residential customers, low-income customers). For distributed generation, one key issue is that commercial customers pay demand charges which cover T&D costs while residential customers typically pay volumetric rates. Another issue is whether customers are offsetting all of their consumption with DG. Finally, distributed generation use is not the only customer behavior with implications for system costs and ratepayer equity (e.g., vacation homes; residential consumers who use large amounts of peak power). Given these and other considerations, how can rates be designed to align more closely with costs?
- A variety of options exist for regulators to address distributed PV and these may be used in combination. They include: net metering, two-way rates (e.g., value of solar), customer charges (e.g., fixed charges, demand charges, minimum bill), time-based rates, and disaggregated rates (cost of service model). Other options exist for addressing utility revenue loss issues, such as decoupling and performance incentives.

- Net metering is widely adopted by states (available in 43 states). Legislative changes recently have included expanding net metering (e.g., raising caps), which is the most common legislative change, adding virtual or community net metering, enabling utilities to place fees on net metered generators, and studies. Most states are currently well below their net metering caps, but some states may reach these caps in the next few years.

- Value-of-solar tariffs have emerged in some jurisdictions (e.g., Austin Energy, Minnesota). These differ from net metering in that the payment to the PV customer is based on the value of the PV. In these examples, the tariff is applied to all PV system generation. Customer consumption and value of solar revenues may be netted on the utility bill.

- The value of solar has been calculated in a variety of studies and there is no consistent methodology (see Rocky Mountain Institute Review of Solar PV Benefit and Cost Studies 2013 for a comparison). The benefits of PV include: the generation and capacity value, transmission and distribution deferrals, line loss savings, fuel price hedge, and environmental benefits. Costs can include: administrative costs, interconnection costs, and integration costs.

- Some considerations in using the value-of-solar approach are challenges in gaining consensus on calculating the value, determining what benefits/costs to include, and the methodology to use. One advantage is that customers continue paying fully embedded rates. Some concerns include potential tax implications of a two-way rate, uncertainty for the solar market if the calculation changes frequently, and if the value of solar tariff is below the levelized cost of energy (LCOE) of solar, then the market could stagnate or other incentives may be needed.

- Other rate options include: fixed charges, demand charges, and time of use rates. Fixed charges can be easily administered, but can be regressive and do not account for consumption patterns. A minimum bill concept, which has not been implemented to date, could vary depending on the amount of consumption offset by PV. Demand charges could be confusing to residential customers, but are based on usage patterns so aligned more directly with costs. Time-of-use rates account for the value of energy consumed/delivered and are important for PV economics, but could be confusing or challenging for some customers.

- Cost of service-based rates (or a pay for services business model) are another option, but the use of these would represent a significant shift in rate design. These have not yet been implemented. Under this approach, customers that use a particular service pay for the costs of that utility service, and customers that don't use the service are not required to pay for it. DG owners could be compensated for the services they provide to the grid.

- New utility business models could address concerns about lost revenues. Options include: utility build-own-operate, utility-led community solar projects, utility partnership and investments in 3rd-party leasing companies, value added consulting services, virtual power plant operator, and energy services utility model. Impact on utility revenues depends on the utility role. For regulators, considerations include competition, customer choice, and provision of customer services.

- 3rd-party ownership continues to dominate the residential sector in several markets. The fraction of 3rd party owned systems in AZ & CA has leveled off in the past year with continued sales of host-owned systems and new availability of residential loans. Rebounding of the housing market allows systems to be financed through mortgages or home equity loans. 3rd-party ownership in the large-scale CA Solar Initiative market dropped from 64% in 2008 to 23% in 2013.

- Some key questions that may help frame this discussion are: Are utilities positioned to capture the net benefits of placing distributed PV at specific locations on the utility system? Are utilities positioned to undertake infrastructure upgrades necessary to accommodate higher levels of distributed PV? Given the expected penetration levels, how will distributed PV affect each stakeholder group? What are the costs/benefits of distributed PV for different stakeholders? Are stranded assets a possibility? What regulatory changes need to occur to facilitate the development of new utility business models?

Bob Gibson, Vice President, Education & Outreach
Solar Electric Power Association (SEPA)

Presented at CCIF Summit 3 (Boston) on May 12, 2014

The Future of Solar and Electric Utilities: Is Solar Simply "Disruptive" or Will it Become "A Part of What We Do"?

In 2014, two important trends in solar are affecting the electric utility industry.

One, new solar growth is starting to be driven by economics. While virtually all of the dramatic growth of solar in the U.S. over the past several years has been fueled by policy and mandates, solar is on the verge of seeing its continued growth driven more and more by cost. A quiet turning point came in 2013 when David Eves, CEO of Public Service of Colorado (part of Xcel), told the Denver Business Journal that responses to an RFP for new power generation had brought surprising results. "This is the first time that we've seen, purely on a price basis, that the solar projects made the cut—without considering carbon costs or the need to comply with a renewable energy standard," Eves said. Other examples of increasingly cost-effective utility-scale solar have emerged in 2014. This trend suggests that utilities should see solar as an increasingly attractive option for meeting new demand for electricity through their 'traditional' resource planning and procurement process.

Two, despite solar still meeting less than one percent of U.S. electric generation, distributed solar has emerged as a leading influence for change in the central-station focused electric utility business. This is highlighted by the rise of solar leasing arrangements in a dozen states that give electricity customers an option to save money on utility bills through self-generation with solar. The offer to install solar with no upfront cost and a promise to see immediate utility bill savings has turned the solar value proposition on its head. Affordable distributed solar challenges electric utilities to rethink their relationship with the customer and assess the business services they are best positioned to provide in order to survive and thrive in a more competitive market.

One of the current sticking points in the distributed solar discussion is over value. Solar's value seems obvious to many. The gleaming blue and black photovoltaic panels absorbing sunshine are daily advertisements for the value of solar power—clean, fuel- and pollution-free electricity located right at the point of use. Less obvious is the value of the connection to the grid. It is the rare electricity customer who understands that the photovoltaic panels do not work without the grid, barring a significant investment in batteries and a willingness to manage one's electricity supply. But the grid is largely invisible to all users, a system that is universally depended upon to be always-on and reliable, such a constant in our lives that we don't even think about it, that is unless a storm knocks down a power line.

In 2014 there is regulatory and legislative movement in states across the country to assess and adjust the solar transaction, from revisiting net metering policies to considering new tariffs that attempt to balance the value of solar and the value of the grid.

Utilities are increasingly focused on turning solar into an asset, rather than just dealing with it as something disruptive. In addition to assessing solar as a competitive generation source in integrated resource planning and procurement, one that can provide both energy and capacity, utilities are investigating making solar a part of a wide variety of new services and business offerings. For regulated utilities, expanding into some of these areas may require regulatory change.

Utilities are assessing how they can strengthen their distribution (and to a degree, transmission) systems to more effectively manage variable and distributed generation. As solar penetration grows, it becomes part of the fabric of utility operations. A few years ago, interconnection requests at the California utility PG&E was a hands-on, time-consuming process. Today, PG&E reviews 3,000 solar interconnection requests a month and the process is almost entirely automated. It now takes an average of four days to approve an interconnection request and PG&E's goal is to shrink that to one day.

Managing solar growth puts emphasis on what utilities already do well—operating the grid—and adds value to ongoing 'smart grid' investments. Utilities are incorporating solar forecasting into planning and operations. It also brings focus to the feasibility of utilities managing—and possibly owning—solar-related assets such as networked 'smart' inverters of PV systems and energy storage in a variety of sizes, technologies, and applications.

Solar will become part of a suite of inter-related resources and tools that include energy efficiency and demand response. The bottom line is that to leverage the full value of solar as part of the grid of the future, solar will not be treated in isolation but as part of an integrated solution.

The rise of distributed solar is a wake-up call for utilities to the need to become genuinely and thoughtfully focused on the customer. This includes responding to customer interest in choices in solar, particularly in solar as a cost-effective alternative.

Utilities are procuring utility scale solar to serve all customers, assessing opportunities to have a share in the rooftop solar market (both residential and commercial), and expanding their role as a partner and provider of community solar. Community solar installations provide a solar option to the 75% of homeowners who want to purchase solar but do not have roofs suitable for PV.

"The rising utility interest in community solar is a sign that utilities are more and more thinking about solar not as a threat...but as a part of 'something we do'", says Stephen Frantz, solar program planner at the Sacramento Municipal Utility District, one the most 'solar-experienced' utilities in the country. "It's a very good way for the utility to play a role that it plays well while responding to increasing customer interest in solar."

David Ozment, Senior Director of Energy
Walmart

Presented at CCIF Summit 3 (Boston) on May 12, 2014

Background/Overall Thoughts on Distributed Generation:

- In 2005 Walmart announced three broad environmental sustainability goals:
  - — To be supplied by 100% renewable energy
  - — Create zero waste
  - — Sell sustainable products
- In April 2013 Walmart announced two renewable energy and energy efficiency goals to be accomplished by the end of 2020:
  - — Globally drive the production or procurement of 7 Billion renewable khw
  - — Globally reduce the kwh/sq.ft. energy intensity required to power our buildings by 20% versus 2010
- Renewable Energy/distributed generation examples: In the U.S. we have over 250 onsite solar systems in 12 different states and Puerto Rico; roughly 40 Bloom Fuel Cell Systems in CA; have tested micro wind turbines on parking lots; have a 1MW utility scale wind turbine at a distribution center in CA, and are testing approximately 12 small battery storage systems. In addition to onsite renewable generation we have purchased the output from a windfarm in the Texas deregulated market.
- The majority of our onsite projects have been financed through Power Purchase Agreements or operating leases. We like this approach for a couple of reasons. One, it allows our partners to do what they do best, install and operate the systems and allows Walmart to do what it does best which is operate retail stores; secondly, it allows us to focus our capital on building new stores, and investing in energy efficiency.
- The cost of renewable energy and other distributed generation has dropped significantly over the past five years and will continue to drop.
- Companies are turning to renewable energy and distributed generation for a number of reasons such as: adoption of Corporate Sustainability goals, business continuity, security, and as a means to provide long term cost/budget certainty for one of their largest operating expenses.
- We're not opposed to partnering with utilities on distributed generation projects, but to date only one of our onsite solar projects is with a utility.
- Distributed Generation is a "game changer" and will play a key role in the Utility Grid of the future.
  - — Successful utilities will reinvent themselves; utilities are not immune from product substitution
  - — Utility regulation will go through the same transition

Financial & Regulatory Issues:

Net metering:

- Net metering is an enabler for successful onsite generation programs/installations
- Net metering rules are needed for various sizes and application of onsite generation; in CA, rules address systems less than 1 MW and systems larger than 1 MW
- It's not Walmart's goal to be a net producer/exporter of generation as a result of our onsite solar installations

Standby Charges/Stranded Investment:

- Standby charges need to be carefully designed to reflect various customer classes, loads, so forth, to reflect the cost and benefit to the system. As with net metering rules, standby charges can be an enabler, or roadblock to distributed generation. One size does not fit all in this area; a lot of independent analysis needs to done on this subject to design rate structures that balance customer and utility needs.
- Most Industrial and Commercial customers pay their full cost of service through demand charges. The recent CA study indicated commercial customers were paying more than 100% of their cost under existing rate structures.
- Even residential customer net usage can cover the utility's investment to serve, regardless of having or not having solar on their rooftop.
- Stranded investment may not be as big an issue as some may suggest, but will also vary by customer class, current rate design, type and size of distributed generation, so forth. So long as customers' energy use covers the utility's investment to serve there is no stranded investment.
- In real life applications, utility system design/transformer sizing is not that exact/precise (even at the residential level). For example, at a new Walmart store, the transformer size chosen rarely changes, regardless of having solar. Utility transformer purchasing practices for transformer sizes (1000 KVA, 1500 KVA, 2000 KVA) generally dictate the transformer that will be used, and solar that impacts peak demand 10%–15% will not change the transformer size used.
- In states like GA, NC, SC, TX, OK, LA, where customers can choose between utilities due to utility territorial allocation rules within the states, revenue generated from the store with solar would support the investment to serve without harming other ratepayers and the utility would compete (and not ask for a stranded investment contribution) to serve the project.
- Utilities do not ask for stranded investment cost recovery when customers take load off of the system through investments in energy efficiency (that has an equal to or greater than impact than solar).
- For those utilities advocating standby charges in traditionally regulated states, should their rates be unbundled as a first step to remove the energy component from the analysis?

Market Development & Deployment Issues:

- Utilities are moving towards rate designs giving customers choices/options to procure renewable energy. Examples include Duke Energy's recent Green Tariff; Dominion VA Power's Green Tariff; Utah legislation creating opportunities for customers to purchase renewable energy.

- Net metering rules, Standby Charges, Interconnection Agreements, the ability of customers to use third party financing such as Power Purchase Agreements (PPAs), the ability for customers to use Operating Leases can either promote distributed generation growth or inhibit distributed generation growth.
- PPAs: Customers view PPAs as a way to finance distributed generation such as solar, not as means to break the utility compact.
- Best Practices: We should take advantage of and leverage what customers, other states and utilities have learned to continue developing better rates, options, overall approaches.

Consumer Issues (further divided into subcategories "Consumer Protections" and "Consumer Education & Engagement"):

- There was discussion among attendees on the issue of consumer protection, education, and engagement specifically in the area of residential solar PPAs and Leases in certain states, and the status and need for more work in this area.

Safety, Reliability & System Planning Issues:

- Under the Utility of Future Model safety, reliability, systems planning, resource planning must be different. For the first time, distributed generation, coordination, synchronization, traditional utility generation, T&D design, all have to come together to provide the energy supply and distribution system of the future. Utilities will continue to play a predominant role, but they will no longer be 100% end-to-end owners.

CCIF
Critical Consumer Issues Forum

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CCIF

Critical Consumer Issues Forum

The Challenges of a Changing Regulatory Environment

Focus on the Regulatory Process

July 2012

Prepared by: Katrina McMurrian

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Regulatory Process

Table of Contents

Appendices

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Critical Consumer Issues Forum

Regulatory Process

I. Introduction

Following its successful initiative on grid modernization, the Critical Consumer Issues Forum (CCIF) again brought state regulators, consumer advocates, and electric utilities together for candid, productive dialogue. While focused on a new topic, CCIF used its signature process, including:

(1) a large, open kickoff event to introduce a topic and initiate discussion among the three groups;
(2) a series of smaller, invitation-only summits where the three groups engage in facilitated dialogue; and
(3) a report to share takeaways with the broad stakeholder community.

CCIF's Fall 2011 Kickoff Forum in St. Louis was based on a recognition of the challenges of the changing regulatory environment and the increasing pressure on electric rates that have occurred during a prolonged economic downturn. The focus was on mitigating rate impacts to consumers while preserving reliability, complying with applicable federal and state mandates (environmental, transmission, efficiency, renewables, etc.), responding to other federal and state initiatives (cybersecurity, grid modernization, demand response, economic development, etc.), and investing in new and replacement infrastructure. Initially, CCIF expected panelists to identify and debate innovative approaches and tools to address the impacts of these numerous challenges on rates. However, as the discussion progressed, it became clear that there was considerable angst among the participants regarding the underlying regulatory process and that foundational issues with respect to the process needed to be examined before addressing alternative regulatory tools. To be responsive to this critical need and because CCIF initiatives are shaped by participants from the three communities, we adjusted the topic accordingly, focusing on four recurring themes from the kickoff discussion – transparency, communication, prioritization, and collaboration – within the regulatory process.

In the spring summits, participants drilled down into these four themes, and it was evident that they were indeed ripe for discussion, of considerable interest to all three communities, and critical to success of the regulatory process. With respect to each theme, participants identified initiatives already underway (that could be duplicated) and additional ideas for improvement. It was generally agreed that many of these ideas, if implemented, would strengthen the regulatory process, better enabling that process to deal with the current challenges and with alternative regulatory approaches that may be necessary in the future. Not only were the discussions valuable to the participants in real time, suggestions memorialized in this report may lead to regulatory process improvements in a number of states.

This report includes a section dedicated to each of the four key themes – transparency, communication, prioritization, and collaboration. It also incorporates a section highlighting selected priority issues that may be overlooked as we focus on other challenges and priorities. Finally, this report includes a number of existing initiatives put in place to improve one or more of the key themes in some way, as identified by participants (see Appendix A). While many of the suggestions within may seem obvious, participants believe that there is value in sharing even the simplest approaches and new ideas with each other and the broader stakeholder community. Based on the discussion at the kickoff forum and in the summits that followed, challenges with the regulatory process clearly remain, and perhaps the ideas shared here will contribute to mitigating them.

II. Key Theme 1: Transparency

A. Meaning & Value of Transparency

Transparency involves making information both available and reasonably accessible to those interested. Participants overwhelmingly held that transparency is critical to providing consumers and other stakeholders with trust in the regulatory process and decisions rendered.

Although some cautioned about overloading consumers with information in the name of transparency, others countered that it is better to err on the side of too much information to avoid the appearance of impropriety. Transparency serves to allay mistrust and highlight the differences between perception and reality. Regardless of whether the public reads or absorbs the information, said participants, providing it is inherently valuable. Some went as far as to suggest that the existence of transparency may be more valuable to consumers than the underlying substantive information made available. Finally, transparency may contribute to consumer acceptance that their interests are being adequately represented.

Participants stressed that transparency alone is insufficient and must be paired with communication. Consumers need to generally understand that this information is available to them and other stakeholders *and* how such information is used in the regulatory process to identify issues and reach decisions in the public interest.

B. Challenges & Barriers

Participants candidly discussed the following challenges and barriers associated with providing and improving transparency in the regulatory process – for consumers and stakeholders:

- Overwhelming consumers with the complexity of the process, the issues, and the sheer amount of detailed information;
- Providing for easier navigation of websites and access to information of interest;
- Gauging the level of interest in access to the information;
- Giving the wrong impression to the public about a state commission's authority due to filings or other information made available that may concern subjects or seek remedies the commission lacks authority to address;
- Obtaining necessary resources, such as information technology (IT) expertise and equipment and ongoing training for customer service reps;
- Providing accessibility to consumers without access to or uncomfortable with computers or the Internet;
- Making available, presenting, and organizing similar information more consistently with similar organizations across state boundaries;
- Protecting sensitive data; and
- Being transparent with the public while avoiding misperceptions about regulator pre-judgment.

C. Ideas for Improving Transparency

Recognizing that transparency is critical to the regulatory process despite the challenges, participants discussed both existing initiatives to improve transparency (see Appendix A) and ideas for further improvement as noted below:

Website-Related Improvements

Noting websites are the primary vehicle used by almost all the stakeholders for providing transparency, participants discussed the following potential website-related improvements:

- Providing access to more information on key items and the process itself;
- Developing content based on value to consumers;
- Highlighting important issues, cases, and frequently requested information;
- Linking to other credible websites on key issues; and
  Posting summaries of certain pleadings.

Perhaps using association resources or other collaborative efforts, participants suggested identifying web design best practices, models, and simple fixes to improve availability, accessibility, navigation, and uniformity. Such an undertaking would be particularly valuable for stakeholders who work across state boundaries, saving them time and resources by better knowing where to find needed information. Additionally, the organizations responsible for the websites might avoid some IT expense associated with reviewing other models and proposing solutions. Participants suggested this may be a suitable project for the appropriate committees or subcommittees of the National Association of Regulatory Utility Commissioners (NARUC), the National Association of State Utility Consumer Advocates (NASUCA), the Edison Electric Institute (EEI), or perhaps some collaboration of these and other stakeholder representatives, such as CCIF. Other options mentioned for entities with limited IT capabilities were pooling resources of multiple organizations or seeking federal grants (if available) to fund website improvements.

Improvements for those without Computer Access or Ability

Providing transparency to those without or uncomfortable with computers remains a challenge. However, participants suggested improvements that may address the needs of these consumers, while likewise appealing to the broader population:

- Using mobile and smart phone applications;
- Making certain information and events accessible by phone;
- Sharing information at public meetings; and
- Using other communication channels to make the public aware of available information, specifically through publications by media, legislators, and government agencies.

Stakeholder-Focused Improvements

The following suggestions center on providing greater transparency via improved stakeholder communications:

- Making stakeholders aware of planned company actions as early as possible;
- Being open and consistent in all communications; and
- Communicating to better determine and respond to precise discovery needs.

Because many ideas for improving transparency are inextricably linked to ideas for effective communication, please refer to the ideas for improving communication in the following section.

III. Key Theme 2: Communication

A. Meaning & Value of Communication

Perhaps the greatest challenge is going beyond transparency (making information available and accessible) and proactively reaching out to consumers as well as stakeholders, policymakers, and the media. Effective communication involves two-way interaction – conveying information in a way that is intended to reach the target audience and also listening to their input.

Acknowledging that the benefits of improved communication are difficult to quantify, participants nonetheless believed that communication is an integral part of the regulatory process. Some commissioners stressed the obligation of state commissions to provide for full and fair litigation, including consideration of the consumer impacts. Thus, hearing from consumers – in addition to other parties – is a requirement. It also helps to satisfy consumers if they believe that their concerns are being heard and provides an opportunity for commissions, consumer advocates, and utilities to learn about and respond to things that they may not have otherwise known (e.g., local office closures, vegetation management issues, misperceptions about utilities and government). In addition to listening to consumers, consumer outreach by all three groups is likewise important and should result in more knowledgeable, empowered consumers and quicker, more satisfying resolution of consumer concerns. Not only is there a duty to provide better communication, it is expected in today's information-rich environment.

Participants also stressed the value of good communication among the three communities represented, other stakeholders, legislators, the media, and federal officials. Experts from all three groups seemed to agree that frequent and open stakeholder communication (consistent with applicable rules) serves to strengthen the regulatory process and reinforced that belief with suggestions for improving those communications.

B. Challenges & Barriers

Effective communication with consumers and stakeholders presents a continuous challenge, particularly as the electric sector faces near constant change. Given our propensity to use industry jargon and acronyms, it can be a struggle to respectfully communicate with the public so that they can understand what is at stake and what can be done about it. If they don't fully understand the issue, or don't see how it impacts them directly, they tend to tune out. Compounding that, there is no one-size-fits-all solution that addresses the constantly varying levels of consumer knowledge and interest. Therefore, targeting what a consumer needs and/or wants to know at the optimal time without overloading them or causing them to tune out is especially challenging. At the same time, consumers may receive misinformation or inconsistent messages from a number of sources over a number of different media, are less likely to have personal relationships with utility employees in their communities or to speak with a live representative when they call the utility, and may have developed mistrust or misperceptions of utilities or government or both. Even when accurate information makes it past those barriers, it often takes time for the message to be absorbed, and progress is difficult to measure. Probably due to a combination of these challenges, resources (including time, staff, and expertise) to devote to communication efforts may be scarce, and in leaner budget times, consumer outreach is often one of the first items cut.

Participants also identified barriers with respect to communicating with legislators, commissioners, and stakeholders. Regarding legislators, high turnover due to either election turnovers or term limits makes it increasingly difficult to provide continuing education on the basics of regulation as well as on more current issues. For commissioners who have a quasi-judicial role, a

number of rules aimed to provide transparency and prevent ex parte communications may limit open communication to some extent. They may be prevented from public comments related to pending matters, discussions without all parties present or without proper advance noticing, and discussions with legislators that may be viewed as "lobbying," etc. Additionally, stakeholders may be barred from sharing information due to some of these same rules or may be unwilling to share because of the adversarial nature of their relationship with other parties.

C. Ideas for Improving Communication

More effective communication, particularly with consumers, is a goal for which all three groups strive. As you can see in Appendix A, a plethora of initiatives are underway to improve communication. Participants also shared a host of ideas for further improving communication with consumers, each other (stakeholders), legislators, and the media, which are included here:

Improving Communication with Consumers – Listening

To create more successful opportunities to hear from consumers, participants suggested:

- Taking public comments in proceedings;
- Providing means for consumers to appear by phone;
- Holding regular consumer forums (generic or topic-specific);
- Attending or organizing community events; and
- Being clear about an event's purpose, the game rules, and how input will be used.

Improving Communication with Consumers – Outreach & Education

On the consumer outreach and education side, participants suggested:

- Recognizing the shared responsibility of the three groups to educate consumers once a need is identified;
- Collaborating with stakeholders to develop and share consistent messages on complicated subjects while being cautious about public perception;
- Organizing or participating in community events for public outreach;
- Holding webcasts and webinars about the process and key issues;
- Relaying brief and precise messages directly on utility bills (instead of inserts);
- Framing messages so that consumers understand what is at stake, what can be done, and what their rates pay for and why, avoiding utility brand messaging;
- Developing consumer-focused fact sheets or frequently asked questions (FAQs) on the regulatory process, the limitations on information that may be shared or considered, and on key issues and cases, avoiding confusing industry jargon;
- Identifying the best communicator for a given message;
- Linking to existing electronic networks of municipalities, townships, and associations to share information on the process;
- Customizing messages for different consumer segments;
- Providing options so consumers can choose how to receive communications;
- Building trust by communicating about issues not immediately impacting rates;
- Ensuring call centers are giving accurate restoration information;
- Producing videos on such topics as "how rates are set" that can be used at public comment hearings in rate cases and in public presentations and made available online;
- Expanding the use of social media (Twitter, YouTube), smartphone apps, and podcasts;

- Ensuring websites are empowering customers to self-select issues of interest;
- Developing a method for measuring the benefits of outreach activities; and
- Pooling resources to develop a repository of educational materials on the regulatory process, best communication practices, and reference materials on key issues.

Improving Communication with Stakeholders

Regarding communication with stakeholders, participants suggested:

- Providing opportunities for adversaries to talk in non-adversarial settings;
- Providing opportunities for others to join the "club" of regulatory stakeholders; and
- Reaching out to stakeholders or holding webinars on potential issues of interest in order to educate and gather feedback in advance of future filings.

Improving Communication with Legislators

Despite restrictions on commissioners "lobbying" legislators in some jurisdictions, participants suggested approaches for improving the lines of communication with legislators, including:

- Holding educational forums on utility regulation basics and key issues in the off-season with House and Senate members in leadership and on energy committees;
- Inviting legislators and key staff to issue discussions as appropriate;
- Speaking to their constituents or providing information for constituent newsletters;
- Assisting with constituent complaints about utility service;
- Giving key legislators a heads up regarding major or controversial decisions, reports, or announcements as permitted and appropriate;
- Providing reports on specific issues and feedback on impacts of passed legislation; and
- Communicating positions on pending bills directly to legislators if allowed.

Improving Communication with the Media

With respect to the media, participants suggested:

- Establishing a relationship with them;
- Becoming a source as appropriate;
- Educating them on the process and the issues to better inform stories and add value to the process; and
- Hiring media expertise if possible.

IV. Key Theme 3: Prioritization

A. Meaning & Value of Prioritization

Prioritization involves arranging or dealing with things in order of importance. It requires a holistic and strategic approach – starting broad and working through a series of levels before finalizing a plan that will guide the allocation of limited resources. Recognizing that consumers have limits on how many more "priorities" they can fund, panelists at the kickoff forum suggested that prioritization had to become a priority.

While voicing agreement that prioritization is a valuable exercise, summit participants recognized that it is increasingly challenging for electric sector experts to set or influence priorities because of mandates enacted or initiatives promoted by the legislative and executive branches of both state and federal government.

B. Challenges & Barriers

Participants expressed frustration that most priorities are dictated by forces largely outside their control – whether by state legislatures, federal actions (see Section VII), or current circumstances (e.g., storm damage). While opportunities to influence these forces may be limited, the three groups ultimately must adjust as priorities are reordered.

Well-intentioned legislators may not understand the impacts of proposed legislation on the industry and consumers, and educating them is challenging, particularly because of high turnover due to elections and/or term limits. Utilities should not be the only ones raising concerns; however, some state commissioners and consumer advocates may resist offering input due to legislative roles in their appointment and oversight. In some cases, commissions are explicitly prohibited from lobbying, while others may be limited to providing input when asked.

Finally, while prioritization is important, utilities are expected to manage all aspects of their operations well at all times. If not, the consequences may go well beyond a particular utility's territory and impact other utilities and consumers across the country.

C. Ideas for Improving Prioritization

To the extent opportunities to set or influence priorities arise in spite of these challenges, participants suggested several ideas, including:

- Assigning the highest priority to safe and reliable service at affordable prices;
- Doing the best possible job of balancing costs, environmental issues, and reliability concerns;
- Considering consumer wants and expectations in addition to public policy goals;
- Developing a framework to determine cost impacts of mandates and initiatives;
- Not skipping the low-hanging fruit (e.g., energy efficiency, weatherization, caulking);
- Using carrots and sticks to bring utility programs in line with public priorities;
- Expecting utilities to engage in advanced planning to identify a vision, set priorities, collaborate with stakeholders before making investments, and implement the vision;
- Building flexibility into plans and regularly evaluating them for potential adjustments;
- Considering new technologies from diverse market participants;

- Identifying different and less costly ways to meet public policy objectives and effectively communicating those to policymakers;
- Trying to help shape legal mandates in light of all relevant policy goals and mandates;
- Building relationships and discussing with legislators the impacts of legislative proposals in conjunction with existing priorities; and
- Forming stakeholder groups to deeply consider these issues and propose alternatives.

Existing approaches on prioritization are captured in Appendix A.

V. Key Theme 4: Collaboration

A. Meaning & Value of Collaboration

Collaboration is working together to achieve a goal. While effective communication among stakeholders is both a precursor to and an integral part of collaboration, communication and collaboration are distinguishable concepts.

Participants deem collaboration a valuable tool in the regulatory process, recognizing that it may reduce costs, narrow issues, and result in negotiated settlements. However, settlements are not always considered to be the product of true collaboration (where stakeholders meaningfully contribute), and collaboration is valuable even if it does not result in settlement of all issues.

B. Challenges & Barriers

Given the nature of the regulatory process, collaboration involving regulators and utilities can be challenging because it potentially decreases transparency and thus increases public suspicion. In fact, the appearance of being "too cozy" with utilities can limit opportunities for collaboration by both state commissions and consumer advocates. Because of certain legal restrictions and prohibitions (e.g., ex parte laws) or concerns about the appearance, commissioners (and in some cases, the commission staff) may be unable to participate in collaboration related to adversarial issues or matters that are likely to come before them for resolution. However, commissioners are usually able to participate in collaboratives with utilities, consumer advocates, and other stakeholders pertaining to non-adversarial matters.

While participants expressed concern with labeling settlements in contested cases as collaboration, they acknowledged that stakeholders with opposing positions may work together to find a middle ground to settle rate cases and other adversarial proceedings. Therefore, the challenges identified with this type of collaboration are included here:

- Settlements that are presented to commissions as black boxes (i.e., with settled parameters but no indication as to how those parameters were arrived at), which provide the appearance of less transparency;
- Backlash from peers and or the public over settlements if rate increases result;
- State processes and circumstances that may not be conducive to settlements;
- Settlements timed early in the process, making it tougher for regulators and parties to demonstrate full examination of a case, especially in the context of rate increases;
- Intervention by politicians not in agreement with the outcome; and
- The threat of pursuit of legislative alternatives if parties are unable to satisfy their concerns via the settlement negotiations.

Identifying the right representatives to participate in a collaborative effort can make or break it. Organizers do not always know all groups affected and may leave them out unintentionally. However, it may be necessary to purposely limit participation to be effective. Whether or not all parties are represented, some will not perceive it as true collaboration if participant input does not appear to be equally valued or represented.

Collaboration also may be hindered by a lack of resources. Collaboration often requires one or more parties to travel to others, and particularly in lean budget times, travel prohibitions may limit full participation. In addition, invited participants may not be able to allocate scarce resources to the collaborative effort because of the time lost on other priorities.

C. Ideas for Improving Collaboration

The specific approaches that participants identified as having been employed in some of their states and organizations (see Appendix A) may serve as good models to improve collaboration but are not repeated here. Instead, this section focuses on ideas for improving collaborative efforts more generally, including:

- Clearly defining the subject, goals, and scope of the collaboration;
- Identifying the incentives for collaboration;
- Building opportunities for collaboration into a hearing schedule;
- Identifying whether the collaboration is to be procedural or substantive and formal or informal (which impacts the level of participation and role of the state commission);
- Using less formal, legislative-type procedures, as permitted and appropriate, to work toward policy statements or other guidance documents issued by the state commission to clarify its views on certain policy issues that can later be presented in more formal proceedings;
- Establishing a finite timeline for accomplishing the collaborative's purpose;
- Developing procedures for collaboration in advance to outline the rules of engagement;
- Defining who should be at the table given the subject, applicable statutes and rules, and market structure, erring generally toward more inclusion;
- Making sure key stakeholders are represented fairly and on an "equal" playing field;
- Determining whether legislative and/or federal participation is valuable;
- Determining the appropriate level of public involvement;
- Encouraging collaboration (particularly state commissions, even if not participating);
- Building trust through regularly-scheduled stakeholder meetings; and
- Considering use of an independent facilitator, alternative dispute resolution, mediation, or similar techniques as appropriate.

Collaborative efforts may be used to address a wide range of topics, such as the impacts of rate increases generally, plans for or responses to federal regulations, or other generic issues. Because participants consider the three communities to have a shared responsibility in communicating with and educating consumers, collaborative efforts aimed at consumer outreach and education appeared to be an area of particular interest. The need to educate state legislators, federal officials, and perhaps other stakeholder groups regarding state processes and concerns may also be ripe for future collaboration. Finally, in response to vibrant discussion at the summits, participants specifically suggested a future session for commissioners, advocates, and utilities to discuss how different states handle their rate cases and associated settlement proposals.

VI. Selected Priority Issues

While discussing how to prioritize the numerous issues facing the industry and consumers, participants identified a number of priority issues that may need further consideration. They also shared information about efforts related to these issues and their thoughts about what more might be done:

A. Cybersecurity

Participants discussed the need to ensure that existing cybersecurity standards are being met and that there are adequate plans in place at the state level in the event of an attack or breach. Concerns raised include:

- How to deal with sensitive information given public records requirements;
- How to justify rate recovery with little or no documentation;
- The lack of resources and expertise to address issues; and
- State/federal jurisdiction.

Since the summits concluded, NARUC issued a report containing sample questions for state commissions to ask utilities within their jurisdiction about cybersecurity plans and calling for state commissions to:

- Create expertise within their own organizations;
- Ask the right questions of utilities;
- Assess their own cybersecurity and information protection capabilities; and
- Engage with other efforts led by the private sector, State agencies or federal officials, as well as engaging with processes that link these sectors.

See "Cybersecurity for State Regulators with Sample Questions for Regulators to Ask Utilities" at: http://www.naruc.org/Grants/Documents/NARUC%20Cybersecurity%20Primer%20June%202012.pdf.

Additionally, some state commissions have asked utilities to certify that they have met basic cybersecurity standards by the North American Electric Reliability Corporation (NERC) or government agencies. For example, all Missouri's investor-owned utilities certified compliance with Federal Energy Regulatory Commission (FERC) Order 706 (http://www.ferc.gov/whats-new/comm-meet/2008/011708/e-2.pdf) in response to a request by the Missouri Public Service Commission.

Still, further discussion of a cybersecurity framework that connects all the pieces – threat scenarios, guideline development, risk mitigation plans, jurisdictional issues, possible public records exemptions, and collaboration with NERC, the Department of Energy (DOE), the Department of Homeland Security (DHS), etc. – is needed.

B. Environmental Protection Agency (EPA) Rules

State commissions and stakeholders are struggling with proper investment decisions to ensure reliable service at affordable rates given the significant uncertainty about impacts of EPA rules on existing and planned generation sources. Regardless of individual opinions about EPA rules, participants appeared to agree that policymakers and the public should be informed about the potential cost impacts to consumers and the potential impacts on reliability. The lack of a framework for determining the cost impact of these and other mandates was mentioned repeatedly. To that end, one suggestion posed was the use of modeling

tools to show a range of potential impacts of the EPA rules (e.g., Duke University's Nicholas Institute model scenario planning tool).

Efforts to begin addressing some of these concerns include policy statements by NARUC and NASUCA as well as educational and collaborative efforts spearheaded by NARUC, as referenced here.

Building on its "Resolution on Increased Flexibility for the Implementation of EPA Rulemakings" (http://www.naruc.org/Resolutions/Resolution%20on%20Increased%20Flexibility%20for%20the%20Implementation%20of%20EPA%20Rulemakings.pdf) passed in July 2011, NARUC established the Task Force on Environmental Regulation and Generation in February 2012 (see http://www.naruc.org/committees.cfm?c=58) to assist in responses to EPA proposed regulations and education of NARUC members, EPA officials, and others about potential cost and reliability impacts. The Task Force also works with the FERC to plan future joint meetings through the FERC-NARUC Forum on Reliability and the Environment.

Since the summits concluded, NASUCA also passed a "Resolution Urging the Environmental Protection Agency to Establish Compliance Timelines that Provide Sufficient Time to Consider Appropriate Least Cost Responses so as to Avoid Rate Shock to Electric Utility Customers" (http://www.nasuca.org/archive/Electric%20Committee%20Resolution%202012%20-05%20FINAL.doc) at its June 2012 meeting.

C. Energy Efficiency

Still identified as low-hanging fruit in helping to address today's challenges, energy efficiency generally entails utilities asking their customers to use less of their product, which is a somewhat challenging concept. To address this, participants suggested:

- Going back to the drawing board to figure out how to make energy efficiency work for customers, consumer advocates, commissioners, and utilities;
- Evaluating carrot and stick approaches as well as use of third party providers that manufacture a competitive environment;
- Promoting the value of energy efficiency by showing positive impacts from weatherization efforts through the Low-Income Home Energy Assistance Program (LIHEAP) and other low-income programs; and
- Promoting the broader system benefits from partnering together on energy efficiency.

D. Other Issues

Other priority issues identified and discussed to a lesser extent were storm restoration issues, generation and transmission needs of the future (for which the Electric Power Research Institute was identified as a valuable resource), and cost allocation issues.

VII. Federal Issues

Although federal level actions directly impact utility consumers, participants suggested that the cooperation between the state and federal levels is below par and that confidence in the existing processes is lacking. Recognizing that it may have been better had federal agencies been included in the discussion, participants candidly shared their thoughts about the regulatory processes at the federal level in light of the four key themes and suggested certain improvements. Commissioners, consumer advocates, and utility representatives seemed eager to explore ways to work together with federal counterparts for the good of the consumer on issues of mutual concern and overlapping jurisdiction.

A. Transparency

A range of concerns were expressed with respect to transparency at the federal level. Some participants characterized it more as a lack of clarity than lack of transparency, others cited the opacity of the federal process and the lack of cooperation, and still others referenced certain processes as merely providing a "guise of transparency." Specifically, they explained that some federal processes do not necessarily give stakeholders a voice despite opportunities to watch and listen. Participants also shared that some federal processes are overly cumbersome and resource-intensive. Finally, they suggested that some transparency concerns may be tied to the size of the agencies and their interaction (or lack thereof) with each other. The level of coordination among EPA, NERC, FERC, regional transmission organizations (RTOs), and states with respect to EPA's development of utility emissions rules was noted as a concern by some participants.

There were a number of suggestions about improving transparency at the federal level. Notably, participants supported including federal agencies, as well as RTOs and independent system operators (ISOs), in the transparency discussion going forward. They also called for clarifying the roles and responsibilities between the state and federal levels, identifying common interests and ways to work together, and ensuring that the process is more inclusive, honest, and open. Another suggestion for improving transparency was to remove the need to file certain service complaints at the federal level by providing more support and availability for consumers to lodge complaints at the state or local levels. Finally, participants stressed the need for additional resources (time, staff, and expertise) to adequately focus on federal issues, and along those lines, some consumer advocates expressed support for a consumer advocate office at FERC, a greater consumer presence at RTOs, and resources to support that presence.

B. Communication

Participants expressed concern about effective communication with federal officials and the need to form or strengthen lines of communication with many agencies. Although acknowledging that NARUC collaboratives and initiatives with FERC, DOE, EPA, and others provide for better communication between state commissions and their federal counterparts and stakeholders, they suggested more be done.

Specifically, participants suggested communicating more with state energy offices and air regulators. One such effort, dubbed the "3N Meeting," was held shortly after the CCIF summits concluded and brought together representatives of NARUC, the National Association of Clean Air Agencies (NACAA), and the National Association of State Energy Officials (NASEO) to coordinate efforts on environmental protection, energy and utility policy (http://www.naruc.org/News/default.cfm?pr=323).

C. Prioritization

Federal level mandates and initiatives present significant obstacles to successful prioritization. Not only is state participation in the federal arena constrained by limited resources, federal mandates and directives may be issued without consideration and input from stakeholders at the state level (e.g., ARRA funding). When that occurs, state- and utility-level priorities suddenly must be re-examined and adjusted in light of new federal priorities. Also, the inability to determine the cost impacts of proposed federal actions is an ongoing concern.

To address these concerns, participants suggested open discussions with key federal officials about the impacts of federal mandates and initiatives in conjunction with existing priorities as well as those selected priority issues identified in the previous section. In addition, an appropriate framework to determine cost impacts of mandates and initiatives over the short, mid, and long term should be developed.

D. Collaboration

For reasons previously identified, collaboration among federal agencies as well as collaboration among state commissions, consumer advocates, utilities, and federal agencies is needed to improve regulatory processes at the state and federal levels. Participants suggested collaborating with federal counterparts to address issues that reach across federal/state jurisdictional lines. NARUC and FERC have established a number of collaboratives to facilitate state/federal collaboration. Though seemingly not favored by FERC, the idea of joint boards was identified as another option that is used in the telecommunications arena on a number of issues of overlapping federal and state interest.

VIII. Conclusion

This report captures the essence of the dialogue among the participants in this series examining the regulatory process and four key elements – transparency, communications, prioritization, and collaboration. While not designed to serve as a consensus document, participants in the kickoff and all three summits had an opportunity for review and input. They may not agree with every statement but recognize that other points of view are represented. Statements within are not intended to override individual or collective policies or positions developed by a participant's organization or by NARUC, NASUCA, AARP, or EEI. Instead, the report is an outcome of the robust discussion spurred by the process and is solely meant to complement efforts of participants and their organizations and associations.

CCIF hopes this report will be a valuable resource and thanks the participants (acknowledged in Appendix G) for their dedication and contributions to the important topics addressed within. We trust that other stakeholders will benefit from the input of those state commissioners, consumer advocates, and utility representatives who play an integral part in the regulatory process. Finally, CCIF encourages the constructive debate that has begun on these issues to continue.

APPENDIX A: EXISTING INITIATIVES REGARDING 4 KEY THEMES

As raised at CCIF's Fall 2011 Kickoff Forum and reinforced during the summits, challenges with the regulatory process remain. Participants from the state commission, consumer advocate, and utility communities identified numerous existing initiatives aimed at improving four key elements of the regulatory process – transparency, communication, prioritization, and collaboration. By sharing those initiatives here, participants hope that they will serve as useful models for others, contribute to mitigating the challenges identified, and improve the regulatory process upon which the participants, other stakeholders, and consumers across the country rely.

Within each section, the initiatives are categorized based on whether they are employed by state commissions, consumer advocates, utilities, or some combination, in which case they are labeled as "general initiatives." For ideas to further improve the regulatory process in the context of each of the four key themes, please refer to Subsection C of Sections II – V of the report.

A. Transparency

Participants highlighted initiatives underway to provide greater transparency.

General Initiatives

- Maintaining websites with public access to relevant documents and information; and
- Employing and training consumer service representatives to be prepared to provide information on a range of topics in response to consumer inquiries.

State Commission Initiatives – General

- Broadcasting meetings via the web or television;
- Establishing electronic filing capabilities;
- Making decisions available to searchable case law databases; and
- Using dissenting or concurring opinions to provide transparency about individual views.

State Commission & Consumer Advocate Initiatives – Specific

- Michigan Public Service Commission:
  - Invested in IT to provide information electronically and found it saved money over time by avoiding the printing and postage expenses of the past.
- Pennsylvania Public Utility Commission and Pennsylvania Office of Consumer Advocate:
  - Provide links for consumers and stakeholders to access electricity provider switching information and shopping guides on the Pennsylvania Public Utility Commission's website (http://www.papowerswitch.com) and the Pennsylvania Office of Consumer Advocate's website (http://www.oca.state.pa.us/Industry/Electric/elecomp/ElectricGuides.htm), both of which Pennsylvania utility providers link to from their websites.

Utility Initiatives

- Several utilities:
  - Afford access to consumers about their individual electricity usage data.

APPENDIX A: EXISTING INITIATIVES REGARDING 4 KEY THEMES (CONT.)

B. Communication

Communication with Consumers

General Initiatives

- Communications during significant outages;
- Social media (Twitter, Facebook, YouTube);
- Newsletters/magazines; and
- Community public outreach events (e.g., Montana electric cooperative community events and Florida Lifeline Rally events about telecommunications bill assistance program).

State Commission Initiatives

- Arizona Corporation Commission:
  - Allows people to appear before the commission telephonically for open meetings.
- Florida Public Service Commission:
  - Initiated "Super Tuesday Consumer Forum" to share information (on making wise spending choices, avoiding scams, saving energy, getting help with utility bills, etc.) from numerous state agencies with state consumer group leaders and to learn how agencies can better address consumer group needs and raise consumer awareness.
- Illinois Commerce Commission:
  - Built a curriculum around LIHEAP and low-income assistance programs;
  - Provided relevant information on ICC website when utility-related referenda on Illinois ballots; and
  - Takes consumer comments online.
  - Provides "Plug In Illinois" website with information for consumers to choose a competitive electric supplier and learn about electric competition, utility rates, real-time electricity pricing, and energy conservation (www.pluginillinois.org/)
- Kentucky Public Service Commission:
  - Staff Public Information Officer conducts hour-long question and answer session at a public meeting before the commissioners come into the process.
- Michigan Public Service Commission:
  - Produces 10-15 minute cable public broadcast slots; and
  - Conducts interactive consumer forums across the state in which commissioners, staff, and utilities discuss the PSC's role and issues impacting the region.
- Minnesota Public Utilities Commission:
  - Holds public hearings and posts outcomes on commission website;
  - Has extensive public notification policies in statute; and
  - Conducts an annual hearing that is webcast to discuss the process and relevant state issues, giving citizens the opportunity to talk about how the process has worked.
- Missouri Public Service Commission:
  - Established a Speakers Bureau (http://psc.mo.gov/General/Request_for_Speaker) and periodic "Utility Days" (http://psc.mo.gov/General/PR-12-34%20--%20PSC%20To%20Hold%20'Utility%20Days'%20Oct.%2014%20At%20Chesterfield%20Mall) to educate the public about utility regulation;

APPENDIX A: EXISTING INITIATIVES REGARDING 4 KEY THEMES (CONT.)

  - Webcasts agendas and hearings;
  - Publishes PSConnection magazine and distributes them at local hearings (http://psc.mo.gov/General/PSConnectionMagazine);
  - Uses continuing education to introduce more people to the regulatory process; and
  - In public hearings, conducts Q&A before the testimony phase, resulting in better information on the record for Commissioners (similar to town hall meetings with utility and consumer advocate reps).
- Public Utility Commission of Texas:
  - Works with Texas educational agencies on grade and high school curricula; and
  - Provides applications through I-Tunes.
- Washington Utilities and Transportation Commission:
  - Produced a video titled "About Energy Rates" for use at public comment hearings in rate cases and in public presentations and made available online (http://www.utc.wa.gov/consumers/energy/Pages/aboutenergyrates.aspx).

Consumer Advocate Initiatives

- AARP:
  - Provides volunteer training, tele-town hall meetings, and webcasts.
- DC Office of People's Counsel:
  - Uses email blasts and list serves;
  - Participates in community meetings and City Council meetings; and
  - Produces public service messages for DC cable channel.
- Maryland Office of People's Counsel:
  - Arranges webinars on consumer protections through legal services, including information on related state commission rules; and
  - Experimenting with podcasts to communicate consumer protection information.
- Texas Office of Public Utility Counsel:
  - Provides outreach to military bases;
  - Informs the public about energy efficiency initiatives;
  - Collaborates with state workforce agencies; and
  - Produces brochures and business cards for consumers with contact and website information.

Utility Initiatives

- Ameren Illinois:
  - Holds public meetings to educate the public on utility transmission siting plans.
- Duke Energy Corporation:
  - Produced web tool and related video for reporting street light outages.
- National Grid:
  - Worked with a city to get information from a variety of consumers using "appreciative inquiry" method.
- Oncor:
  - Conducts road shows;
  - Sets up "Ask Oncor" kiosks at malls/stores with a kids' area; and

APPENDIX A: EXISTING INITIATIVES REGARDING 4 KEY THEMES (CONT.)

  - Conducts customer contests associated with smart meters.

Communication with Stakeholders

General Initiatives

- CCIF:
  - Facilitates communication among state commissioners, consumer advocates, and utilities.

State Commission Initiatives

- Missouri Public Service Commission:
  - Holds open meetings at law schools to spark interest in the field.

Consumer Advocate Initiatives

- Georgia Watch:
  - Provides speakers for college classes and arranges state commission tours.

Utility Initiatives

- Consolidated Edison Company of New York, Inc.:
  - Hosted webinar on distributed generation (DG) to explain a tariff filing, an effective way to communicate to a targeted audience, including commission staff.
- Missouri utilities:
  - Reach out to consumer advocates in advance when something unusual comes up.

Communication with Legislators

State Commission Initiatives

- Kentucky Public Service Commission:
  - Provides a heads up to key legislators simultaneous with the release of Commission decisions on major or controversial cases.
- Maryland Public Service Commission and New Jersey Board of Public Utilities:
  - Provide verbal and written testimony on pending bills, much of it informational.
- Michigan Public Service Commission:
  - Reports on specific issues that are sent to the legislators; and
  - Conducts a one-day Michigan Forum out of session, focusing on one or two key utility issues with legislators (includes utilities and consumer advocates).
- Minnesota Public Utilities Commission:
  - Invites legislators to planning meetings (open to public) and issue discussions; and
  - Shares the effects of the previous year's legislation (not lobbying but focused more on general information).
- Missouri Public Service Commission:
  - Provides PSC/Regulation 101 to legislators on utility committees during off-season that explains the basics of regulation.

APPENDIX A: EXISTING INITIATIVES REGARDING 4 KEY THEMES (CONT.)

- Several states:
  - Track legislation that have impact on utility regulation but more likely to communicate through orders.

Consumer Advocate Initiatives

- Maryland Office of People's Counsel:
  - Discuss specific bills with legislators.

C. Prioritization

Utility participants shared that they set priorities that factor in mandates and current circumstances. With respect to state legislative initiatives, utilities, some consumer advocates, and some state commissions regularly provide information and feedback to their legislatures on utility-related measures and the impacts on consumers and limited resources. Regarding federal level actions, utilities, some consumer advocates, some state commissions, NARUC, NASUCA, and EEI regularly provide information and feedback to Congress and federal agencies regarding utility-related measures and their impacts on consumers.

D. Collaboration

Collaboration Identified by Participants

Participants identified a number of collaboratives for which they have been involved or are aware:

Collaboratives with a State or Local Scope

- Montana Public Service Commission:
  - Conducted roundtable with EPA regional director and stakeholders regarding pending EPA regulations.
- North Carolina Utilities Commission:
  - Collaborative working group developed legislative proposals for both a renewable portfolio standard (RPS) and construction work in progress (CWIP).
- Kentucky Attorney General Office of Rate Intervention:
  - Participated in a collaborative approach on energy efficiency funding that used a third-party facilitator (Midwest Energy Efficiency Association).
- Duke Energy Corporation:
  - Participated in a hydro relicensing collaborative process with 70 stakeholders; and
  - Participated in a collaborative process with stakeholders on energy efficiency and demand side management (DSM) in which new programs are vetted and defined.
- NorthWestern Energy:
  - Conducted a public meeting before publishing distribution infrastructure plan and report to state commission and others quarterly.
- Washington Utilities and Transportation Commission:
  - Used less formal, legislative-type procedures, with a goal toward issuing policy statements or other guidance documents

APPENDIX A: EXISTING INITIATIVES REGARDING 4 KEY THEMES (CONT.)

that clarify the Commission's views on certain policy issues that can later be presented in more formal proceedings.

Collaboratives with a Multi-State or National Scope

- Collaborative workgroup, including NARUC, NASUCA, and EEI, regarding LIHEAP;
- Regional State Committees (e.g., Southwest Power Pool RSC, Entergy RSC, etc.);
- Interconnection transmission planning collaborative processes, including the Eastern Interconnection Planning Collaborative (http://www.eipconline.com/) and the Committee on Regional Electric Power Cooperation (http://www.westgov.org/wieb/site/crepcpage/); and
- FERC-NARUC Collaboratives, including the FERC-NARUC Forum on Reliability and the Environment (http://www.naruc.org/News/default.cfm?pr=291) and the FERC-NARUC Collaborative on Smart Response (http://www.naruc.org/Policy/Ferc/default.cfm?c=3).

Collaboration in Adversarial Cases

While participants were more comfortable with the types of collaboration identified above, collaboration in the context of adversarial cases was also discussed. Participants highlighted the following types, largely differentiated by the timing with respect to the case:

- Pre-filing case collaboration between utility and potential parties other than the state commission – can help shape the case and reduce number of contested issues;
- Collaboration during the case on procedural, discovery, or confidentiality matters;
- Post-case collaboration to follow up on items ordered in the decision, such as further study of issues; and
- Settlement negotiations on specific issues or the entire case which may occur before, during, or after the case is heard.

Some participants questioned whether settlements should be considered a form of collaboration and had strongest concerns with settlements that preceded testimony and discovery. Participants also noted that negotiation can be built into the hearing schedule but that set deadlines may limit collaboration.

* * * * *

CCIF participants hope the initiatives identified in this appendix will serve as useful models or spur new ideas for state commissions, consumer advocates, utilities, and other stakeholders who share the commitment to improving the regulatory process. You may also refer to Subsection C of Sections II – V of the CCIF report, "The Challenges of a Changing Regulatory Environment: Focus on the Regulatory Process," for additional ideas generated during the summits.

CCIF
Critical Consumer Issues Forum

APPENDIX B: CCIF EXECUTIVE COMMITTEE

David A. Wright

South Carolina PSC Chairman
& NARUC President

Paula M. Carmody

Maryland People's Counsel
& NASUCA President

David K. Owens

EEI Executive Vice President
of Business Operations

APPENDIX C: CCIF ADVISORY COMMITTEE

		
Maureen F. Harris Commissioner New York State Public Service Commission	**Erin M. O'Connell-Diaz** Commissioner Illinois Commerce Commission	**Betsy Wergin** Commissioner Minnesota Public Utilities Commission
		
Joe Como Acting Director California Division of Ratepayer Advocates	**Craig F. Graziano** Attorney Iowa Office of Consumer Advocate	**Lewis Mills** Public Counsel Missouri Office of Public Counsel
		
Wayne Harbaugh VP of Pricing & Regulatory Services Baltimore Gas & Electric Co.	**Phillip R. May** VP of Regulatory Services Entergy Services, Inc.	**Diane Munns** VP of Reg. Relations & Energy Efficiency MidAmerican Energy Company

APPENDIX D: CCIF EVENTS ON REGULATORY PROCESS

Fall Kickoff Forum:

- **Collocated with the NARUC and NASUCA Annual Meetings in St. Louis**
- **November 15, 2011 ♦ 2:30 pm – 5:30 pm**

  Renaissance St. Louis Grand Hotel ♦ St. Louis, MO
- **Approximately 200 participants**

Spring Summit 1:

- **March 29-30, 2012**

  Dallas/ Fort Worth Airport Marriott North ♦ Dallas, TX

Spring Summit 2:

- **April 25-26, 2012**

  Atlanta Airport Marriott Gateway ♦ Atlanta, GA

Spring Summit 3:

- **May 9-10, 2012**

  Renaissance Chicago O'Hare Suites Hotel ♦ Chicago, IL

APPENDIX E: CCIF KICKOFF AGENDA

CCIF Critical Consumer Issues Forum

Presents...

THE CHALLENGES OF A CHANGING REGULATORY ENVIRONMENT

Tuesday, November 15, 2011 ♦ 2:30 pm – 5:30 pm

Renaissance St. Louis Grand Hotel ♦ 800 Washington Avenue ♦ St. Louis, MO 63101
Majestic D (2nd Floor)

AGENDA

2:30-2:35 **Welcome & Overview of CCIF**
CCIF Executive Director Katrina McMurrian

2:35-2:40 **Introduction of Topic**
CCIF Executive Committee Member Paula Carmody, NASUCA President & Maryland People's Counsel

2:40-3:00 **Keynote: Challenges of Today's Changing Regulatory Environment**
Mark Jamison, Director, Public Utility Research Center at University of Florida

3:00-3:30 **Panel 1: Impacts of Challenges on Regulators, Consumers, and Utilities**

Moderator: *CCIF Executive Director Katrina McMurrian*

Panelists:
- *Susan Ackerman, Commissioner, Oregon Public Utility Commission*
- *Lewis R. Mills, Jr., Public Counsel, Missouri Office of Public Counsel*
- *Scott A. Cisel, President and Chief Executive Officer, Ameren Illinois*

3:30-3:45 **Break**

3:45-5:25 **Panel 2: Potential Solutions**

Moderator: *CCIF Executive Committee Member David K. Owens, EEI Executive Vice President*

Panelists:
- *Jeffrey D. Goltz, Chairman, Washington Utilities & Transportation Commission*
- *Robert S. Kenney, Commissioner, Missouri Public Service Commission*
- *Sandra Mattavous-Frye, People's Counsel, District of Columbia Office of the People's Counsel*
- *David Springe, Consumer Counsel, Kansas Citizens' Utility Ratepayer Board*
- *Diane Munns, VP-Regulatory Relations & Energy Efficiency, MidAmerican Energy Company*
- *Richard T. Thigpen, VP-State Governmental Affairs, PSEG Services Corporation*

5:25-5:30 **Closing & Next Steps**
CCIF Executive Committee Member Tony Clark, NARUC President & North Dakota PSC Chairman

APPENDIX F: CCIF SAMPLE SUMMIT AGENDA

Presents…

The Challenges of a Changing Regulatory Environment: *Focus on the Regulatory Process*

May 9-10, 2012

Renaissance Chicago O'Hare Suites Hotel
Jazz I & II (2nd Floor)

Agenda

State commissioners, consumer advocates, and electric utilities continuously grapple with the challenges of today's changing regulatory environment and the increasing pressure on electric rates during a prolonged economic downturn. In recognition, CCIF's 2011 forum focused on mitigating rate impacts to consumers while preserving reliability, complying with applicable federal and state mandates (environmental, transmission, efficiency, renewables, etc.), responding to other federal and state initiatives (cybersecurity, grid modernization, demand response, economic development, etc.), and investing in new and replacement infrastructure. In the course of that dynamic discussion, a number of recurring themes were expressed by the commissioner, consumer advocate, and utility panelists – transparency, communication, prioritization, and collaboration. During CCIF's 2012 summit series, participants will thoroughly explore whether and how these four recurring themes pertaining to the regulatory process may be used to address the challenges of today's regulatory environment and the impacts on electric consumers.

Wednesday, May 9th

9:00 **Registration Open** *(Meeting begins at 10:00)*

10:00 – 10:30 **Welcome & Opening Remarks**

Katrina McMurrian, CCIF Executive Director

- CCIF Purpose, Signature Elements, and Goals for Summit Series
- Introduction of Topic
- Expectations for Post-Summit Series Deliverable
- Introduction of Participants

10:30 – 12:00 **Key Theme 1: Transparency**

- Availability and accessibility of relevant information by consumers and other stakeholders
- Types of information that should be available and accessible
- How and when that information should be made available and accessible
- New ideas and recommendations for providing increased transparency
- Identification of action items and potential strategies for implementing recommendations for transparency

12:00 – 1:00 **Lunch** *(Provided)*

1:00 – 3:00 **Key Theme 2: Communication**

- Conveying information verbally or in writing to consumers, stakeholders, and state and federal policymakers
- Different communications approaches, communicators, and message recipients for different purposes

APPENDIX F: CCIF SAMPLE SUMMIT AGENDA (CONT.)

- Communication with consumers, stakeholders, and policymakers – identify purpose (to educate/inform, to persuade, or to elicit feedback or otherwise induce action), clear message, credible communicator, and optimal timing and amount of communication
- Ongoing generic communications efforts and issue-specific outreach
- Existing, trusted, and cost-effective channels to reach consumers and stakeholders
- New ideas and approaches to reach consumers and stakeholders
- Ideas for communicating more effectively with federal policymakers
- Identification of action items and potential strategies for implementing recommendations for communication

3:00 – 3:15 **Break**

3:15 – 5:15 **Key Theme 3: Prioritization & Identification of Gaps**

- How to determine and focus on what's most important given limited consumer resources (and limited flexibility due to state and federal mandated priorities)
- Identification of issues within our control or subject to our influence at the state and federal policy levels and how to positively influence the outcome
- New ideas for incorporating more prioritization (formal processes, etc.)
- Identification of potential "high-priority" issues (such as cybersecurity) that may be overlooked as we focus on other priorities
- How to initiate necessary action on such "gaps" and/or remove barriers to action (without trying to resolve the issues)

5:30 – 6:30 **Networking Reception** *(Mezzanine)*

6:30 – 8:30 **Dinner and Continued Issue Discussion** *(Swing Room, 2nd Floor)*

Thursday, May 10th

8:00 – 8:30 **Breakfast** *(Provided)*

8:30 – 9:00 **Welcome & Overview of Progress**

Katrina McMurrian, CCIF Executive Director

9:00 – 10:15 **Key Theme 4: Collaboration**

- Working together to address the challenges of today's changing regulatory environment and to mitigate negative impacts on consumers
- Different approaches for different purposes: collaboration in adversarial cases versus on topics of mutual interest/concern – participants, issues, timing, barriers
- Existing, innovative models and new ideas for collaboration with colleagues (both within and beyond your organizations), consumers and their representatives, other stakeholders, and state and federal policymakers
- How to collaborate to address recommendations identified in previous key themes discussions
- How to collaborate to address "high-priority gaps" identified in previous section
- Ideas for removing barriers to effective collaboration with federal policymakers
- Identification of action items and potential strategies for implementing recommendations for collaboration

10:15 – 10:30 **Break**

10:30 – 11:45 **Key Theme 4: Collaboration** *(Continued)*

11:45 – 12:15 **Break** *(Boxed Lunches Provided)*

12:15 – 2:00 **Review & Next Steps**

Participants will recap progress on the 4 themes, share final thoughts, develop action items, and discuss plans for a work product to memorialize the discussion and ideas generated throughout the summit series.

Appendix G: Acknowledgment of CCIF Participants

The Critical Consumer Issues Forum Executive Committee and Advisory Committee would like to acknowledge the valuable contributions of the following individuals and organizations:

- NARUC, NASUCA, AARP, and EEI, particularly the guidance of their respective leaders and the valuable input and hard work of their respective teams.
- All state commissioners, consumer advocates, and investor-owned utility participants in the CCIF Spring Summits in Dallas, Atlanta, and Chicago.
- All speakers, panelists, and attendees participating in the November 2011 Kickoff in St. Louis, where many issues addressed within this report were first introduced.

Due to the nature of the collaborative process and the extensive degree of participation, specific statements within this report should not be attributed to specific individuals or to the organizations that he or she represents. With that understanding, CCIF would like to acknowledge the following individuals who participated in CCIF events focused on the regulatory process:

Charlie Acquard
NASUCA

Commissioner Nicholas Asselta
New Jersey Board of Public Utilities

Noel W. Black
Southern Company

Joan Bray
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Janee Briesemeister
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Rebecca Devens
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Commissioner Lisa Polak Edgar
Florida Public Service Commission

Charles Elk
Oncor

Chairman Edward S. Finley, Jr.
North Carolina Utilities Commission

Commissioner Joseph Fiordaliso
New Jersey Board of Public Utilities

Vice Chairman James W. Gardner
Kentucky Public Service Commission

Chairman Elia Germani
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APPENDIX G: ACKNOWLEDGMENT OF CCIF PARTICIPANTS (CONT.)

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APPENDIX G: ACKNOWLEDGMENT OF CCIF PARTICIPANTS (CONT.)

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Commissioner Greg R. White
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Chairman David A. Wright
Public Service Commission of South Carolina

Barbara G. Yarbrough
Duke Energy

Irma Zaragoza
Commonwealth Edison

APPENDIX H: CCIF EXECUTIVE DIRECTOR BIO

MCMURRIAN

- Executive Director, CCIF
- Former Commissioner, Florida PSC (2006-2009)
- MBA, Florida State University
- B.S. in Finance, Florida State University

Katrina J. McMurrian, Executive Director
Critical Consumer Issues Forum (CCIF)

A former Florida Public Service Commissioner, Katrina McMurrian has drawn on fifteen years of government service to become a recognized expert on policy issues involving the energy, water, and advanced communications sectors.

Currently, McMurrian organizes and facilitates policy forums and advises an array of entities on key regulatory and public policy matters. She manages the Critical Consumer Issues Forum (CCIF), a unique opportunity for state commissioners, consumer advocates, and electric industry representatives to collectively address issues of importance to electric consumers through a series of interactive dialogues.

As a Commissioner on the Florida PSC, McMurrian decided numerous multi-million dollar cases, appeared before Congress, worked with other state and federal agencies, and participated on a number of influential national policy boards. She served on several National Association of Regulatory Utility Commissioners (NARUC) committees, including Electricity, Nuclear Issues (Vice Chair), Consumer Affairs, and Education & Research, as well as on collaboratives with FERC, including Demand Response (Co-Chair), Smart Grid, and Competitive Procurement. She also served on the Executive Committee of the Nuclear Waste Strategy Coalition, Advisory Council to the EPRI Board, EPRI Energy Efficiency/ Smart Grid Group, Keystone Energy Board, Eastern Interconnect States Planning Council, and SEARUC. Additionally, McMurrian Co-Chaired the 2009 NARUC/DOE National Electricity Delivery Forum.

Prior to her appointment, McMurrian used interdisciplinary core competencies in leadership roles on numerous matters at the Florida Commission. She received a Bachelor's degree in finance from Florida State University in 1994 and an MBA from FSU in 1998.

CCIF

Critical Consumer Issues Forum

Grid Modernization Issues with a Focus on Consumers

July 2011

Prepared by: Katrina McMurrian

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CCIF
Critical Consumer Issues Forum

Grid Modernization Issues with a Focus on Consumers

TABLE OF CONTENTS

Grid Modernization Issues with a Focus on Consumers

INTRODUCTION

CCIF Formation & Focus

The Critical Consumer Issues Forum (CCIF) was formed in 2010 to provide an opportunity for state commissioners, consumer advocates, and electric industry representatives to collectively tackle tough consumer issues through unique, highly interactive discourse and debate, to find consensus when possible, and at a minimum, to achieve a clearer understanding of – and appreciation for – each group's specific concerns and positions. To guide the initiative and assist with program development, CCIF established an Executive Committee and an Advisory Committee, each with balanced representation from the state commissioner, consumer advocate, and investor-owned electric utility communities. The CCIF is meant to be a continuing, long-term effort to provide these groups the opportunity to identify and address a variety of important consumer issues in a collaborative, proactive manner.

It is important to note that any and all outcomes (e.g., principles) that come from CCIF discussions, either now or in the future, are not intended to override any individual or collective policies or positions developed by a participant's organization or by the National Association of Regulatory Utility Commissioners (NARUC), the National Association of State Utility Consumer Advocates (NASUCA), or Edison Electric Institute (EEI). Instead, CCIF work products are meant only to complement any such policies or positions.

Importance of CCIF

Consumer issues are at the forefront of the energy policy debate. State commissioners, consumer advocates, and investor-owned electric utilities are uniquely positioned to understand those issues and how to best mitigate any potential negative impacts on consumers. These three groups play an important role in influencing the policies and decisions with respect to energy at the state level, and these state policies and decisions are often drivers of broader energy policy. Therefore, it stands to reason that state commissioners, consumer advocates, and electric utilities take the lead on addressing consumer issues so that our energy policies benefit from their experience, expertise, and insights on consumer preferences and concerns.

Importance of CCIF Work on Grid Modernization

With an understanding that CCIF will address other important consumer issues in the future, the CCIF committee members selected those residential consumer-centric issues associated with grid modernization as the first area for CCIF concentration. Given the number of current public and private sector initiatives aimed at addressing grid modernization issues, CCIF committee members felt this topic was both extremely ripe and important for debate among the groups. Without question, state commissioners, consumer advocates, and investor-owned electric utilities have both individual and collective perspectives that should be considered as policies are formed regarding grid modernization development, deployment, and consumer protection. This report shares a slice of their collective perspective on some of these critical consumer issues. In addition, it demonstrates that these groups are clearly able and ready to lead the state and national debates on tough consumer issues – those pertaining to grid modernization and countless others.

Grid Modernization Topic Areas

The principles that follow memorialize the hard work of a significant number of state commissioners, consumer advocates, and investor-owned electric utility representatives who participated in the CCIF process to collectively address a number of grid modernization issues, with a focus on those of particular importance to residential consumers.

While recognizing broad acceptance and use of the term "smart grid," CCIF participants ultimately decided that the term "grid modernization" better captured the scope of their dialogue and the principles that flowed from it. The term "smart grid" is often used interchangeably with the term "smart meters," and participants hoped to avoid perpetuating the confusion resulting from that and other misuse of terminology.

INTRODUCTION (CONT.)

Resulting in consensus on 30 principles, discussions focused on the following five grid modernization topics:

Consideration of Grid Modernization Investments (Benefits, Costs & Risks)

This section focuses on the benefits, costs, and risks to be considered with respect to grid modernization investments and includes extensive examples that may or may not materialize depending on a number of factors. Particularly with respect to the benefits, examples include both direct and indirect potential benefits to consumers and to society as a whole. Participants repeatedly recognized that there are likely to be a number of consumer-facing applications developed in the future that we simply cannot contemplate today. Therefore, the benefits, costs, and risks listed are not intended to be exhaustive.

Consumer Protections

A number of issues in the consumer protection area are addressed in this section. Specific principles address a need for timely delivery to consumers of energy usage and price data; for appropriate safeguards to address issues that low-income or at-risk consumers who participate in new variable rate and service programs confront; and for continued consumer protections, especially in the areas of remote disconnection and pre-paid services.

Privacy & Security

Principles in this section stress the importance of consumer privacy and data security. Many principles address the access to consumer energy usage data that should be afforded consumers, utilities, utility contractors, and third parties. Others address the requirements (e.g., affirmative consumer consent) that should be met prior to any disclosure of that information. With respect to both utilities and third parties, protection of the information and the privacy of the consumer are paramount. Principles also call for clear and conspicuous disclosure to the consumer. Finally, a review of best practices in other data-intensive industries is sought, along with a re-examination of certification standards and other requirements and protections.

Consumer Education & Communication

In this section, the importance of consumer education and bi-directional communication is emphasized. Participants stressed the need for accurate and complete communications to consumers so that they are aware of the benefits of grid modernization as well as the costs and risks involved. The principles state that more information and research are needed in certain areas and that consumer education and communication should be a long-term endeavor that includes evolving communication channels. Finally, the principles call for informing consumers about the nature, process, costs, and timing of grid modernization deployment, specifically highlighting the changes in their energy management experience due to grid modernization and its components.

Federal/State Relations

This section addresses core competencies of state and federal government as they pertain to grid modernization issues. While recognizing the benefit of collaboration, the principles stress that states must retain their full regulatory authority over retail utility pricing and customer service matters and that federal initiatives should be informed by and not preempt state regulatory processes. With respect to privacy, data security, and interoperability standards, more specific suggestions are included.

PRINCIPLES ON GRID MODERNIZATION

CONSIDERATION OF GRID MODERNIZATION INVESTMENTS (BENEFITS, COSTS & RISKS)

(1) The goals of grid modernization investments and technologies include:
- Greater system reliability;
- Better outage management;
- The opportunity for consumers to monitor and use energy more efficiently; and
- Maintained and enhanced access to affordable utility service.

(2) Grid modernization investments must be cost-effective, and costs and benefits must be evaluated over the same time frame.

(3) When considering significant grid modernization projects, utilities should include a thorough analysis that identifies and articulates the broadest range of costs and benefits to the utilities and consumers in a consistent, transparent manner and that quantifies and verifies such costs and benefits, to the extent reasonably practicable (acknowledging various market structures).

(4) Significant grid modernization projects must be thoroughly analyzed through a process that affords due process (such as an evidentiary proceeding or other similar process) to all stakeholders.

(5) Grid modernization has the potential to provide new opportunities for innovative technologies and other direct and indirect benefits to consumers. The following list is indicative of the types of benefits that may accrue, some of which depend on customer participation. Such benefits may include, but are not limited to:
- Predictive maintenance;
- Distribution system management;
- Increased operational efficiencies such as better asset utilization;
- Reduced line losses;
- Reduced transmission congestion;
- Facilitation of the delivery and measurement and verification of demand response and energy efficiency;
- Deferral of capital investments;
- Increased productivity;
- Improved level of service with fewer inconveniences (fewer outage calls) and reduced economic losses caused by outages and poor power quality;
- Improved environmental conditions and economic growth;
- Increased capability, opportunity, and motivation to better manage energy budgets and consumption, in part through consumer-facing applications (e.g., home energy management devices, smart appliances);
- Distributed technology integration, including renewable energy;
- Improved outage prevention, detection and restoration; and
- Facilitation of electric vehicles into the electric grid.

Likewise, the costs and risks associated with grid modernization should be considered. Depending on the particular grid modernization project and its underlying circumstances, such costs and risks may include, but are not limited to:
- Cyber attacks and vulnerability of the grid;
- Obsolescence and stranded costs;
- Privacy breaches;
- Customer costs of participation and acceptance;
- Negative bill impacts;

PRINCIPLES ON GRID MODERNIZATION (CONT.)

- Regulatory consumer protection policies (e.g., disconnection rules for non-payment, including late and partial payments) not keeping up with new technology capabilities and new service offerings;
- Unforeseen future costs;
- Unpredictable and unstable prices resulting from variable pricing programs; and
- Customers making inadequately informed decisions regarding rate plans.

CONSUMER PROTECTIONS

(6) Systems should be developed to provide timely delivery of energy usage and price data, in order to enable the active participation by consumers in better managing their energy consumption and costs.

(7) Programs should be designed so that consumers, including low-income or at-risk consumers, may respond to, and benefit from, variable pricing associated with smart meters.

(8) If low-income or at-risk consumers participate in new variable rate and service programs, appropriate safeguards should be considered to address the specific issues they confront.

(9) Grid modernization investments must not diminish consumer protections, especially related to the implementation of remote disconnection. Billing, dispute resolution policies and pre-paid services should be reviewed to ensure that consumer protections are retained or enhanced as technology evolves.

PRIVACY & SECURITY

(10) Protecting individual consumer information (e.g., customer name, address, account number, energy usage, etc.) from unauthorized disclosure is essential to successful grid modernization.

(11) Consumers must have timely access to their own energy usage data.

(12) Utilities and utility contractors must continue to protect consumer electricity usage data from unauthorized access. Utilities and utility contractors must have affirmative consent of consumers prior to disclosure of a consumer's personally identifiable energy usage data to any third party.

(13) Electric utilities must continue to have access to and the ability to use customer-specific energy usage data (CEUD), including operational data, to effectively render regulated services (e.g., to maintain safety and reliability, to properly and timely bill customers). Utilities must handle CEUD in a manner that protects the information and the privacy of the consumer. Unless other uses are affirmatively authorized by a state or federal regulatory authority or affirmatively authorized by the consumer, utilities must limit their use of CEUD to that necessary for the provision of regulated services.

(14) A consumer must affirmatively authorize disclosure by the utility of his or her energy usage data to a third party. Such third party must handle this data in a manner that protects the information and the privacy of the consumer, as well as limits the use of such data to the specific purpose for which it was authorized. Such third party must also provide a clear and conspicuous disclosure as part of the authorization process.

PRINCIPLES ON GRID MODERNIZATION (CONT.)

(15) Any authorized third party utilizing consumer energy usage data must fully disclose to the authorizing consumer how that information will be used.

(16) Utilities and commissions and other government agencies should review best practices in other data-intensive industries (e.g., telecommunication, financial and healthcare organizations), and re-examine, in the context of grid modernization, government certification standards, codes of conduct, and consumer safeguards.

(17) States should consider whether requirements are necessary to protect consumer energy usage data transferred to a third party directly by the consumer.

(18) Cyber security is a key component of digital communications. Utilities and commissions should continue to address cyber security prior to implementation of grid modernization and on an ongoing basis.

CONSUMER EDUCATION & COMMUNICATION

(19) All communications to consumers should be accurate and complete with respect to the benefits, costs and risks of grid modernization, with representative examples encouraged where available.

(20) All stakeholders have a continued interest in successful communication and should do the best job possible of listening to and communicating with each other and consumers about grid modernization and how it will impact consumers' lives, including consumer protection information. State commissions, consumer advocates, and utilities should initiate this dialogue.

(21) An active and continuing effort is needed to collect more information and research, and observe and report results, regarding:

- Evolving motivations of different consumer segments;
- Consumer expectations of their energy providers;
- Consumer expectations and understanding of grid modernization;
- Consumer response to dynamic pricing and grid modernization pilots, projects and programs;
- Consumer bill impacts; and
- Best scientific evidence available to address consumer concerns about radio frequency emissions associated with wireless smart meter systems.

(22) Consumer education and communication regarding grid modernization should be a long-term endeavor, beginning as soon as reasonably practicable, ideally in the design phase, and continuing through project deployment and related program implementation (e.g., smart meter installations, cost recovery, alternative rate design, program goals and results, etc.). The education and communication should include evolving communication channels.

(23) The appropriate stakeholders must be mindful of, and make all reasonable efforts to inform consumers of, the overall nature, process, costs and timing of grid modernization deployment.

(24) Consumer education and communication need to explain how the consumer energy management experience will change through grid modernization and its components (e.g., alternative rate design that will allow active management of energy consumption).

PRINCIPLES ON GRID MODERNIZATION (CONT.)

FEDERAL/STATE RELATIONS

(25) States must retain full regulatory authority over retail utility pricing and customer service matters.

(26) In determining jurisdictional issues, each level of government should focus on its core competencies. Federal initiatives should be informed by and should not preempt state regulatory processes.

(27) Collaboration among the states and the federal government, each operating within their respective jurisdictions, as well as consumer advocates, industry, and other stakeholders, can be beneficial in grid modernization development.

(28) If any federal standards on privacy and data security pertaining to grid modernization are necessary, they should allow states the maximum flexibility to provide additional or alternative consumer protections and enforcement powers to ensure compliance.

(29) Grid modernization interoperability standards should facilitate the development of new consumer-facing technologies and applications, while mitigating the risk of premature obsolescence.

(30) Grid modernization interoperability standards should provide utilities the flexibility to implement the best available technology to provide the level of reliability and customer satisfaction expected by their customers, while maintaining reasonable rates for all customers.

CONCLUSION

Recognizing that these principles address many but not all grid modernization issues, the consensus achieved by participating state commissioners, consumer advocates, and utility representatives is significant, and it provides a solid foundation upon which to build future constructive discussion and good policy. Again, it is important to note these principles are not meant to override any individual or collective policies or positions developed by state commissioners, consumer advocates, or the electric utility industry, but are meant only to complement any such policies or positions.

CCIF participants discussed a few issues that did not manifest into stand-alone principles for various reasons. These issues included: opt-in versus opt-out of dynamic pricing programs; liability with respect to third party access to consumer energy usage data; consumer concerns about possible health effects associated with certain smart meter systems; and preservation of grid modernization project funding committed by the federal government. As appropriate, CCIF encourages the constructive debate that has begun on these and other grid modernization issues to continue.

ACKNOWLEDGMENTS

The Critical Consumer Issues Forum Executive Committee and Advisory Committee (see Appendices for members) would like to acknowledge the valuable contributions of the following individuals and organizations:

- NARUC, NASUCA, and EEI, particularly the guidance of their respective leaders and the valuable input and hard work of their respective teams.
- All state commissioners, consumer advocates, and investor-owned utility participants in the CCIF Spring Summits in Phoenix, New Orleans, and Baltimore, who worked tirelessly to draft and revise the grid modernization principles.
- AARP, the National Consumer Law Center, Public Citizen, and Consumers Union for their valuable input into our summit discussions.
- All speakers, panelists, and attendees participating in the November 13, 2010, CCIF Kickoff in Atlanta, where many of the issues addressed within this report were first introduced.

Due to the nature of the collaborative process and the extensive degree of participation, specific statements and principles within this report should not be attributed to specific individuals or to the organizations that he or she represents. With that understanding, CCIF would like to acknowledge the following individuals who participated in CCIF events focused on grid modernization issues of importance to consumers:

Commissioner Susan Ackerman
Oregon Public Utility Commission

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NASUCA

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Commissioner Greg White
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Chairman Stan Wise
Georgia Public Service Commission

Lisa Wood
Institute for Electric Efficiency

Chairman Thomas Wright
Kansas Corporation Commission

APPENDICES

APPENDIX A: CCIF EXECUTIVE COMMITTEE

The CCIF Executive Committee members represent leaders from the state commission, consumer advocate, and electric industry communities. They provide guidance and set the tone for all CCIF initiatives and events. Additionally, members assist in raising awareness of CCIF initiatives, and they appoint members of their respective communities to participate in the 9-member CCIF Advisory Committee.

Tony Clark

North Dakota PSC Chairman
& NARUC President

Mary J. Healey

Connecticut Consumer Counsel
& NASUCA President

David K. Owens

EEI Executive Vice President,
Business Operations

David C. Coen*

Vermont PSB Commissioner
& NARUC President Emeritus

(*Serves in an emeritus capacity.)

APPENDIX B: CCIF ADVISORY COMMITTEE

The 9-member CCIF Advisory Committee provides input to the planning for CCIF events at a much more granular level, advising on all aspects of agenda development.

Maureen F. Harris
Commissioner
New York State Public Service Commission

Monica Martinez
Commissioner
Michigan Public Service Commission

Erin M. O'Connell-Diaz
Commissioner
Illinois Commerce Commission

Paula M. Carmody
People's Counsel
Maryland Office of People's Counsel

Joe Como
Acting Director
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Craig F. Graziano
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Dundeana K. Doyle
Senior Vice President-Energy Delivery
Alliant Energy

Wayne Harbaugh
VP Pricing & Regulatory Services
Baltimore Gas & Electric Co.

Diane Munns
VP of Regulatory Relations &
Energy Efficiency
MidAmerican Energy Company

APPENDIX C: CCIF EVENTS ON GRID MODERNIZATION

Kickoff: *Focusing on Grid Modernization from the Consumer Perspective*

- **Atlanta: November 13, 2010 ♦ 2:00 pm – 6:00 pm**

  Omni Hotel at CNN Center ♦ Atlanta, GA

Spring Summits: *Grid Modernization from the Consumer Perspective*

- **Phoenix Summit: March 29-30, 2011**

  Hyatt Regency Phoenix ♦ Phoenix, AZ

- **New Orleans Summit: April 14-15, 2011**

  Westin New Orleans Canal Place ♦ New Orleans, LA

- **Baltimore Summit: May 3-4, 2011**

  Baltimore Marriott Waterfront ♦ Baltimore, MD

CCIF
Critical Consumer Issues Forum

Grid Modernization Issues with a Focus on Consumers

APPENDIX D: CCIF KICKOFF AGENDA

Focusing on Grid Modernization from the Consumer Perspective

Saturday, November 13, 2010 ♦ 2:00 pm – 6:00 pm

Omni Hotel at CNN Center ♦ 100 CNN Center ♦ Atlanta, GA 30303

International Ballrooms B & C (North Tower)

Agenda

2:00 pm – 2:10 pm	**Welcome, Overview & Introductions**
	Katrina McMurrian, Principal, K2M Strategies, LLC
2:10 pm – 2:15 pm	**Remarks & Keynote Introduction by CCIF Executive Committee Member Coen**
	David C. Coen, Commissioner, Vermont Public Service Board, & NARUC President
2:15 pm – 2:35 pm	**Keynote: Our Nation's Energy Future & Implications for Consumers**
	The Honorable Sam J. "Jimmy" Ervin, IV, Judge, North Carolina Court of Appeals, and Commissioner Emeritus, North Carolina
2:35 pm – 2:45 pm	**Remarks by CCIF Executive Committee Members Healey & Owens**
	Mary J. Healey, Consumer Counsel, Connecticut OCC, & NASUCA President
	David K. Owens, Executive VP of Business Operations, Edison Electric Institute
2:45 pm – 3:45 pm	**Facilitated Discussion 1: Mitigating Grid Modernization Costs and Rate Impacts on Consumers**
	Bob Anthony, Chairman, Oklahoma Corporation Commission
	David Ashuckian, Deputy Director, California Division of Ratepayer Advocates
	Wayne Harbaugh, VP Pricing & Regulatory Services, Baltimore Gas & Electric Co.
3:45 pm – 4:00 pm	**Refreshment Break**
4:00 pm – 5:00 pm	**Facilitated Discussion 2: Communicating with Consumers about Grid Modernization**
	Susan Ackerman, Commissioner, Oregon Public Utility Commission
	Chris Thomas, Policy Director, Illinois Citizens Utility Board
	Dundeana K. Doyle, Senior VP - Energy Delivery, Alliant Energy
5:00 pm – 6:00 pm	**Facilitated Discussion 3: Preserving Consumer Privacy in the Grid Modernization Era**
	Maureen F. Harris, Commissioner, New York State Public Service Commission
	Janine L. Migden-Ostrander, Consumers' Counsel, Office of the Ohio Consumers' Counsel
	Diane Munns, VP – Regulatory Relations & Energy Efficiency, MidAmerican Energy Co.
6:00 pm – 7:00 pm	**Wine & Cheese Reception**

APPENDIX E: CCIF SAMPLE SUMMIT AGENDA

Spring Summit: Grid Modernization from the Consumer Perspective

April 14-15, 2011

Westin New Orleans Canal Place ♦ New Orleans, LA

Terrace Room (12th Floor)

Agenda

THURSDAY, APRIL 14TH

11:00	**Registration Open**
12:00 – 1:00	**Welcome & Opening Remarks** *(Lunch will be provided)*
	Katrina McMurrian
	CCIF History
	CCIF Mission Statement & Goals of the Meeting
	Process & Ground Rules
	Introduction of Participants
1:00 – 2:00	**ISSUE DISCUSSION 1: Examining Impacts on Consumers**
	Identifying Grid Modernization Benefits
	Evaluating Cost-Effectiveness (Costs vs. Benefits)
	Interaction with Consumers
	Stimulus Funding for Grid Modernization Projects
2:00 – 2:15	**Break**
2:15 – 3:30	**ISSUE DISCUSSION 1: Examining Impacts on Consumers** *(Continued)*
3:30 – 4:30	**ISSUE DISCUSSION 2: Preserving Consumer Privacy and Security**
	Access to Data: Consumers, Utilities, & Third Parties
	Security
4:30 – 4:45	**Break**
4:45 – 6:00	**ISSUE DISCUSSION 2: Preserving Consumer Privacy and Security** *(Continued)*
6:30 – 8:30	**Networking Reception & Dinner and Issue Discussion** *(Executive Room, 12th Floor)*

FRIDAY, APRIL 15TH

7:30 – 8:30	**Breakfast**
8:30 – 9:00	**Welcome & Remarks from CCIF Executive Committee**
	David K. Owens
9:00 – 9:30	**Overview of Progress and Next Steps**
	Katrina McMurrian
9:30 – 9:45	**Break**
9:45 – 11:15	**ISSUE DISCUSSION 3: Consumer Education & Communication**
	Comprehensive Consumer Education & Communication
	Message Development
11:15 – 11:30	**Break** *(Boxed Lunches Provided)*
11:30 – 12:30	**ISSUE DISCUSSION 4: FEDERAL / STATE COLLABORATION**
12:30 – 1:30	**STRATEGY FOR COMMUNICATING RESULTS**
1:30 – 2:00	**Review and Revise**
2:00	**Meeting Adjourns**

APPENDIX F: CCIF EXECUTIVE DIRECTOR BIO

MCMURRIAN

- Executive Director, CCIF
- Former Commissioner, Florida PSC (2006-2009)
- MBA, Florida State University
- B.S. in Finance, Florida State University

Katrina J. McMurrian, Executive Director
Critical Consumer Issues Forum (CCIF)

A former Florida Public Service Commissioner, Katrina McMurrian has drawn on fifteen years of government service to become a recognized expert on policy issues involving the energy, water, and advanced communications sectors.

Currently, McMurrian organizes and facilitates policy forums and advises an array of entities on key regulatory and public policy matters. She manages the Critical Consumer Issues Forum (CCIF), a unique opportunity for state commissioners, consumer advocates, and electric industry representatives to collectively address issues of importance to electric consumers through a series of interactive dialogues.

As a Commissioner on the Florida PSC, McMurrian decided numerous multi-million dollar cases, appeared before Congress, worked with other state and federal agencies, and participated on a number of influential national policy boards. She served on several National Association of Regulatory Utility Commissioners (NARUC) committees, including Electricity, Nuclear Issues (Vice Chair), Consumer Affairs, and Education & Research, as well as on collaboratives with FERC, including Demand Response (Co-Chair), Smart Grid, and Competitive Procurement. She also served on the Executive Committee of the Nuclear Waste Strategy Coalition, Advisory Council to the EPRI Board, EPRI Energy Efficiency/Smart Grid Group, Keystone Energy Board, Eastern Interconnect States Planning Council, and SEARUC. Additionally, McMurrian Co-Chaired the 2009 NARUC/DOE National Electricity Delivery Forum.

Prior to her appointment, McMurrian used interdisciplinary core competencies in leadership roles on numerous matters at the Florida Commission. She received a Bachelor's degree in finance from Florida State University in 1994 and an MBA from FSU in 1998.