



## **Working Group 6: Regulatory and Environmental Policy Issues**

Meeting No. 3 – Beneficial Electrification

**Date:** July 25, 2018

**Time:** 1:00 – 4:00 pm

**Location:** Main Hearing Room, Illinois Commerce Commission  
160 North LaSalle, Suite C-800  
Chicago, Illinois 60601

### **WebEx Information:**

**Meeting number** (access code): 807 363 529

**Meeting password:** VGCpAtXr

### **Meeting Summary**

*[Note: descriptions of comments and discussion are condensed summaries and paraphrases]*

### **Attendee List**

#### **Working Group members:**

##### **In-Person:**

- Mark Templeton, *University of Chicago School of Law*
- Andrew Barbeau, *The Accelerate Group*
- Martin Montes, *ComEd*
- Phil O'Connor, *Proactive Strategies*
- Rob Weinstock, *Clinical Professor at University of Chicago Abraham Environmental Law Clinic.*
- Kate Tomford, *City Transit Authority (CTA)*
- Toba Pearlman, *National Resources Defense Council*
- Bev Hall, *Ameren IL*
- Jim Blessing, *Ameren IL*
- Stacy O'Brien, *ComEd*
- Kristin Munsch, *Citizen's Utility Board*
- Christie Hicks, *Environmental Defense Fund*
- Demi Charalab, *Exelon*
- Sean Brady, *Wind on the Wires*
- Will Kenworthy, *Vote Solar*

- Chris Townsend, *NextGrid Coalition*
- Leonard Jones, *Ameren IL*
- Suzanne Stelmasek, *Elevate Energy*
- James Gignac, *Union of Concerned Scientists*

WebEx:

- Chris Skey, *Clark Hill PLC*
- *Freeborn and Peters LLP*
- Gerard T. Fox, *Retail Energy Supplier Association*
- Michael Abba, *Ameren Illinois*
- Paul Centolella, *Centolella and Associates*
- Ali Al Jabir, *Brubaker and Associates, Inc.*

Absent:

- Amy Heart, *Sunrun*
- Brad Klein, *ELPC*
- Daniel Bloom, *Advanced Energy Economy*
- Danny Waggoner, *Advanced Energy Economy*
- Gary Helm, *PJM Interconnection*
- Ian Adams, *Clean Energy Trust*
- Janice Dale and Karen Lusson, *Attorney General*
- Julia Pino, *Little Village Environmental Justice Organization*
- Katie Bell, *Tesla*
- Katie Stonewater, *Illinois Chamber of Commerce*
- Leah Scull, *Midwest Energy Efficiency Alliance (MEEA)*
- Madeline Klein, *SoCore Energy*
- Paul Alvarez, *Wired Group*
- Roa Konidena, *MISO*
- Rebeca Judd, *Sierra Club*
- Ross Hemphill, *RCHemphill Solutions LLC*
- Tom Wolf, *BP*
- William S. Haas, *AECOM*

## **Members of the public:**

### In-person:

- David Farnsworth, *Regulatory Assistance Project*
- M. Asad Khan, *Northwestern University*
- Charley Gibson, *University of Chicago Law Student*
- James R. Weinberger, *John R. Weinberger, LLC*
- Korbin Huston, *Illinois Commerce Commission*
- Terrance Garmon, *Illinois Commerce Commission*
- Katharine McErlean, *Illinois Commerce Commission*
- Molly Blondell, *University of Chicago Law Student*
- Justin Behrens, *University of Chicago Law Student*
- Simona Brook, *University of Chicago Law Student*
- Charley Gibson, *University of Chicago Law Student*

### WebEx:

- Mike Munson, *Building Owners and Managers Association*
- RS Smith
- Brad Futls
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## **Agenda Item I: Welcome and Introductions**

Working Group 6 Facilitator Mary Gade made welcoming remarks and introduced the topic for the working group meeting as “Beneficial Electrification.”

*(for additional detail, see PowerPoint presentation)*

## **Agenda Item II: Presentation by David Farnsworth, Regulatory Assistance Project**

David Farnsworth, Senior Advisor for the Regulatory Assistance Project (RAP), presented on beneficial electrification, including a survey of changing energy trends, a definition of beneficial electrification, principles for operationalizing beneficial electrification, and initial steps for putting beneficial electrification into practice. RAP characterizes electrification as “beneficial” if a change provides a benefit to either customers, the environment, or the grid, without also

adversely impacting any of those categories. The six principles identified by RAP for operationalizing beneficial electrification include:

- 1) Put efficiency first.
- 2) Recognize the value of flexible load for grid operations.
- 3) Understand the emissions effects of changes in load.
- 4) Use emissions efficiency to measure the air impacts of beneficial electrification.
- 5) Life cycle matters.
- 6) Design rates to encourage beneficial electrification.

*(for additional detail, see PowerPoint presentation)*

### **Agenda Item III: Group Discussion**

#### *Facilitated Breakout Discussions*

Working Group 6 participants were divided into three breakout discussion groups to address three additional discussion questions. The questions were discussed internally by each group before being reported out to the entire working group for further discussion.

- **Discussion Q1:** What are the benefits Illinois might expect from pursuing a strategy of beneficial electrification?
- **Discussion Q1 Responses:**

#### **Group 1**

- Benefits could include environmental benefits, cost benefits, economic development benefits, and procedural benefits.
- Benefits could include improvements in local air quality and overall improvements in public health and quality of life.
  - Could improve visibility.
  - Could reduce noise from vehicles.
- Less contamination of land and groundwater from generation and from repurposing property used for traditional fuel storage.
- Potential public safety improvements from lower risks of explosion and fire.

- Enables more customer management of electrical bills, with potentially lowered costs.
- Lower cost of electricity.
  - Especially over time (downslope of cost curve as more measures are developed and adopted).
- Local job creation.
- Opportunities for Illinois to be a leader in technological development.
- Investment in infrastructure, which could also benefit utility companies.
- Provides examples to the public of how beneficial electrification can provide benefits.
- Potential unanticipated benefits of collaboration.

## **Group 2**

- Lower emissions.
  - Lower diesel emissions.
- Lower costs for customers.
- More consumer control over energy use to reduce cost for customers.
- Local pollution impacts.
  - Environmental justice communities.
- Better environmental health.
- Lower cost of integrating DER and better grid managements yielding lower system costs.
- Long-term cost benefits of EVs.
- Lower cost of ownership of vehicles associated with EVs.
- Fewer kw/hours on electrical system.
- More control over in-house use of electricity.
- Breaking down costs.
  - Lower bills for customers.
  - Enables greater customer control over costs/pricing.

- Broader system costs (more efficient use of system, integration, managed networks, etc.).
- Broader pollution impacts (less carbon emitted) and local impacts (less diesel, smaller impacts on local communities).
- Potential benefits for rural communities.

### **Group 3**

- Reduced costs in number of ways.
- Opportunities for reduced peaks.
- Changing load shape.
- Reduced emissions.
- Overall environmental. Benefits
  - Less waste water pollution.
- Opportunity for Illinois to be considered nationwide leader.
- Economic development and investment.
- Opportunities to leverage existing smart grid.
- More grid resiliency.
- More consumer control.
- **Discussion Q2:** What are the potential challenges to Illinois adopting such an approach?
- **Discussion Q2 Responses:**

### **Group 1**

- Lack of price on carbon.
- Current practice of volumetrically pricing electricity.
  - Potential for mispricing.
  - Low marginal cost for renewables inconsistent with volumetric pricing.
- Question of what to do with nuclear plants.
- Difficulty in building required transmission (and distribution) infrastructure.
- Insufficient storage capacity.
- Need for technological improvements to overcome initial capital investments.
- Question of who is paying costs.

- Potential for stranded assets.
- General risk.
- Ensuring equity.
  - Energy justice.
  - Equitably distributing costs and benefits.
- Level of coordination or lack of coordination between entities.
- Difficulty in quantifying benefits and measuring achievements.
- Slow rate of policy changes.
  - Particularly compared to rate of technological changes.
- Lack of clear forum for developing policy.
- Increased reliance on single energy source (i.e. electricity) makes grid disaster more dangerous (as compared to having natural gas as a source also).
- Customer education.
- NIMBY/political challenges to building new generation.
- Cost of renewables compared to natural gas.

## **Group 2**

- Current market design challenge to addressing customer costs.
- Existing rate structure limits flexibility.
- Current system generation costs are so low.
- Designing cost-benefit analysis for electrification and switching environmental policy as natural gas share.
- Potential for stranded assets (gas).
- Ensuring equity/sharing of benefits.
  - Question of how to ensure all customers directly benefit.
- Costs of supporting infrastructure.
  - Extensive EV infrastructure.
- Hurting resilience of grid when more reliant on electricity for recovery (many current backup systems using fuels like diesel).
- Security of system (data).

- Creating new rate structure (time-of-use.)
  - Current rate design may not allow desired results.
- Cost of infrastructure investments
- Diverse customer and load base (urban, downstate).
- Timing.
  - Potential for new technology other than wind/solar.
  - Lag time between policy changes and feeling full impact.
- Upfront capital costs passed on to customers.
- Managing new load profiles or other unidentified impacts.
- Need for clear case for legislative action.
- Political considerations.
- Question of how to electrify fleets and avoid disproportionate impact on distributional system.
- Understanding life-cycle of equipment/when to replace home equipment.

### **Group 3**

- How to meet all three criteria of “beneficial” definition.
- Equity.
- Required upgrades to distribution system.
- Limits on ability for some buildings to switch to new system.
- Educating policymakers and consumers.
- Potential political challenges.
- **Discussion Q3:** How can these challenges be addressed?
- **Discussion Q3 Responses:**

### **Group 1**

- Develop pricing for carbon and other emissions.
- Improve knowledge of topic.
- Develop and deploy technology.
- Create incentives to nudge people to adopt technologies/approaches.
- Identify easiest targets to electrify

- Minimize conflict between contrasting policy and legal goals, i.e. reducing load, but increasing electrification.
- Incentivize the use of smart appliances to power more efficiently.
- Identify areas of electrification to maximize “bang for buck.”
- More analysis, such as that done by RAP.
- Develop rate structure that accommodates desired goals.
- Multi-state standard for appliance efficiency.
- Tax incentives for customers to install efficient heating and cooling systems.
- Investigate and identify existing cross-subsidies.
- Identify opportunities that market can address now.
- Continuing NextGrid process to establish forum.
  - Get General Assembly involved.
- Continue investing in renewables, energy efficiency, storage.
- Cap and invest carbon pricing.
- More options for time-varying rates.
- More programs like Illinois Solar for All.
- Integrated distribution planning.
  - Driven by distributed solar.
- Securitization of stranded investments.
- More location-specific analyses for whether projects meet the "beneficial" definition.
- Develop consumer-friendly metrics and marketing.
- Align rates with actual costs of electricity.
- Ensure process involves environmental justice communities.
- Building up funds for cleanups and transition.

**Group 2**

- Expand customer education/stakeholder education.
- Develop pilots to demonstrate technology.
- Develop time of use rates.

- Begin with corporate/public sector to establish proof of concept.
- Legislation to incentivize market changes.
- Develop dynamic rate design, distribution rate design
- Market design (state, wholesale, local)
- Establish value for DER.
- Changing utility incentives.
- Focus on low-income customer benefits (so they are not solely paying for others to benefit).
  - Potential for subsidies.
- Develop streetlight charging for EVs.
- Focus on solutions for last-mile connectivity to transit.
- Incentivize electrification of fleets.
- Reduce upfront capital costs
- Develop rural EV corridors/address range anxiety.
- Incentivize community solar fleet charging.
- Incentivize flexibility capacity.
- Price on carbon/pollution tied to marginal emissions.
- Develop autonomous/electrified/ride-sharing technologies.

### **Group 3**

- Rate design solutions.
- Regulatory structural changes.
- Educational changes (consumers, customers, policymakers).
- Address equity issues.
- Develop carbon pricing.
- Reexamine processes & planning (municipal planning changes, metric changes).

### **Agenda Item IV: Public Comment**

Following the final breakout session, Working Group 6 Facilitator Mary Gade invited members of the public present at the working group meeting and on the telephone so provide comments. No members of the public provided comments at the meeting.

**Agenda Item V: Next Steps / Session 4 Topics**

Working Group 6 Facilitator Mary Gade concluded the meeting with a reminder of the logistics for the fourth and final scheduled working group meeting.

The fourth and final working group meeting is scheduled for July 31 with the topic of “Pathways to Decarbonization.”

Meeting Adjourned.