URBAN INGENUITY

Comments of Urban Ingenuity on Formal Case No. 1130

In the Matter of the Investigation into Modernizing the Energy Delivery System for Increased Sustainability

A response to Order No. 18144,

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April 28th 2016

Urban Ingenuity: Background

- ***Urban Ingenuity (UI)*** is a DC company dedicated to providing financial services and analysis to property owners, developers, and others deploying distributed clean energy and microgrids.

- UI is leading a District-wide ***study of microgrid potential*** in DC under grant from the ***DOEE Green Building Fund***.

- This DOEE study includes ***assessment of the current enabling policy environment*** and financing resources available to innovative clean energy and microgrid projects in DC.

Microgrid Definitions

What's a microgrid?

- A network of loads, resources, and controls
- Distributing & managing electricity / Usually heat & cooling
- Serves end users within a defined geographic area
- Connected to regional grid through single aggregated interface
- Capable of operating with or without the regional grid

Kinds of microgrids?

- Utility-owned microgrids (with or without generation)
- Publicly-owned microgrids (miniature municipal utilities)
- Privately-owned non-utility microgrids (focus of our remarks)

Why microgrids?

- Valuable strategy for modernizing the grid, and delivering benefits to energy users, ratepayers & District as a whole

Microgrid Regulation: History & Context

- The fundamental ***pattern of utility regulation*** was established throughout the U.S. – including D.C. – about 100 years ago.
- Significant change happened in 1999 for DC establishing a ***distribution-only utility*** that could not own generation.
- A ***new wave of restructuring*** is getting underway in many states and now DC, emphasizing DG & microgrids in particular.
- UI proposes ***4 straightforward principles*** for a balanced, productive approach to microgrid regulation in DC

Urban Ingenuity Recommendations For Formal Case No. 1130

4 Principles of Microgrid Regulation

Recommended principles for appropriate PSC regulation of microgrids within Washington DC…

1. Immediately encourage near-term ***pilot projects***
2. ***Allow competition*** to provide diversity in service
3. Establish ***"light touch" regulation*** for DC microgrids
4. Recognize ***different microgrid categories*** in setting standards

I. Encourage Near-Term Pilot Projects

Context & Factual Basis:

- Microgrids depart from traditional distribution grid regulation
- Effects are largely confined to users within the microgrid
- Regulatory uncertainty inhibits investment and slows learning
- Innovation will allow more effective and robust long-term regime

Recommendations:

- Don't wait for final rules to allow new approaches at key locations
- Establish a framework to learn from each new microgrid pilot
- Emphasize projects with voluntary participation and lower risks
- Ensure regulatory continuity to allow for long-term investment

II. Allow Competition & Service Diversity

Context & Factual Basis:

- Microgrids represent "Back to the Future" competition
- Historically multiple wires companies competed for business DC
- Consolidation of non-exclusive distribution rights
- Regulatory environment has moved toward greater competition

Recommendations:

- Recognize economic basis for some redundancy in resilience
- Allow diverse ownership of microgrids by multiple companies
- Permit microgrids to beneficially compete with default service
- Use PSC jurisdiction over safety and code compliance to ensure a sound foundation no matter who owns wires

III. Establish "Light Touch" Regulation

Context & Factual Basis:

- Electric utility regulatory assumptions don't all apply to microgrids
  - *Microgrids don't seek a guaranteed rate of return*
  - *Not generally a vehicle for establishing broad obligation to serve*
  - *Participation is generally voluntarily*
- Contractual protections can bar predatory or monopoly pricing
- PSC regulatory obligation for rate regulation is not monolithic

Recommendations:

- Where necessary, establish "light touch" regulation of microgrids
- PSC has necessary authority to fit obligations to individual cases
- Explore work with DC Council on appropriate "light touch" regime

IV. Recognize Different Microgrid Categories

Context & Factual Basis:

- Microgrids are customized & adaptable, not "one size fits all"
- Microgrid design can vary based on many concerns, including:
  - *Single facility vs. Campus scale vs. Broader area*
  - *Single off-taker vs. Multi-user service*
  - *Self owned vs. 3rd party vs. Public vs. Utility-owned*
  - *Area microgrid w/alternatives vs. Universal service*

Recommendations:

- Apply different rules to different categories of microgrids
- Simple categories allow straightforward packages of regulation
- Offer regulatory certainty to allow investment & innovation

Conclusions

The PSC has an important role in enabling microgrids as a tool for ***modernization & sustainability*** of energy distribution.

Both ***flexibility*** to real circumstances and regulatory ***certainty*** are essential for ***allowing near term microgrid investment***.

By advancing these 4 principles, ***regulatory clarity is achievable***:

1. Immediately encourage near-term ***pilot projects***
2. ***Allow competition*** to provide diversity in service
3. Establish ***"light touch" regulation*** for DC microgrids
4. Recognize ***different microgrid categories*** in setting standards

Thank You

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