WGL Energy
A WGL Entity

FC 1130 WORKSHOP

WGL PRESENTATION APRIL 28, 2016

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166-YEAR HISTORY

UNRIVALED EXPERIENCE

DIVERSIFIED SPECTRUM OF ENERGY SOLUTIONS

Washington Gas
A WGL Company

Washington Gas Light Company is a regulated natural gas utility serving approximately 1.1 million customers in the metropolitan Washington, D.C. area.

WGL Energy
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WGL Energy is a leader in efficient and environmentally friendly energy technology solutions that provide electricity, natural gas, renewable energy and green products to public and private sector customers across the United States.

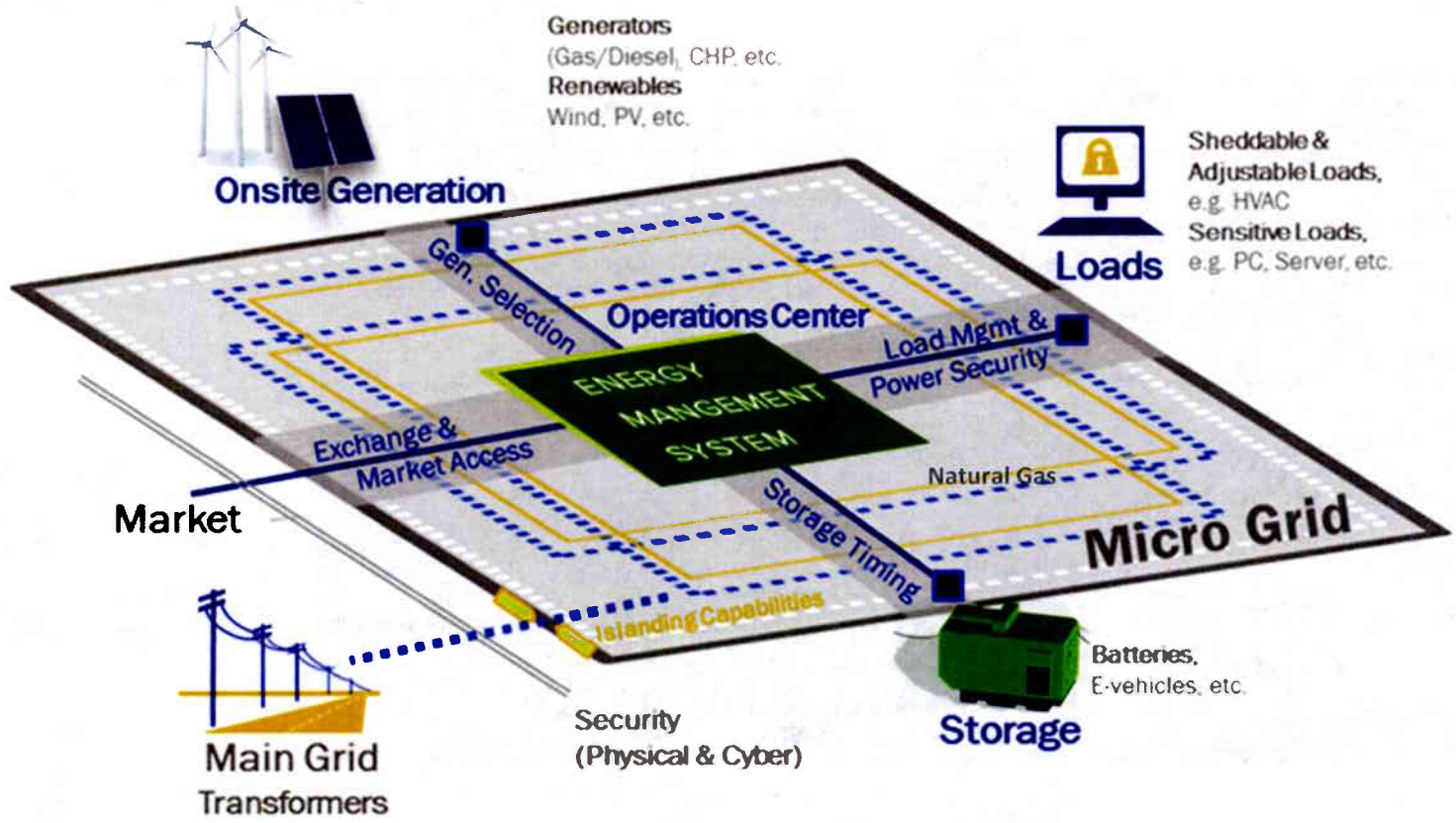
WGL Midstream
A WGL Company

WGL Midstream is a wholesale energy solutions business that invests in and optimizes natural gas pipelines and storage facilities in the Midwest and Eastern United States.

Hampshire Gas
A WGL Company

Hampshire Gas is a natural gas storage business which owns and operates facilities in and around Hampshire County, West Virginia.

WHAT IS A MICROGRID?



Sensors & Controllers
Natural Gas & Power & distribution
Chilled/Hot water distribution
IT

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DISTRIBUTED IMPACT

MANAGING DISTRIBUTED GENERATION OVER TIME

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THRESHOLD QUESTIONS FROM THE COMMISSION

IN ORDER NO. 18144 ABOUT DISTRIBUTED GENERATION

Q1. Will DC Code 34-1516 be applicable to microgrids?

Q2. What legal and regulatory framework will facilitate the development of microgrids?

Q3. What type of regulatory review process will be most helpful? Environmental, safety, zoning?

Q4. Are Commission's current regulations adequate for distributed generation?

Q5. What other existing regulations should the Commission consider?

Q6. What agency should govern demand response facilities?

Q7. Should demand response facilities shed load by ramping up distributed generation? If so does that harm the reliability of the electric grid?

Q8. Is voltage support (wholesale or retail) an electricity transaction?

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Q1. DOES §34-1516 APPLY TO MICROGRIDS?

WGL ENERGY RESPONSE

When §34-1516 applies streamlined regulation should be used as with other forms of distributed generation, e.g. solar.

It may be appropriate to carve out certain microgrids when they include "customer generation"

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Q1. DOES §34-1516 APPLY TO MICROGRIDS?

RECOMMENDATIONS

- Commission should revise its regulations to extend the streamlined certification that governs solar generation facilities to include all microgrids that include combined heat and power plants up to 20 megawatts and fuel cell facilities
- Commission shouldn't allow electric utility ownership of generation including microgrids even as pilots. If an electric utility is allowed rate recovery:
  - competitive providers could not compete.
  - no public interest is served by preventing competition in this market
- Competitive microgrid providers should bear the economic risk of providing competitive microgrid services
- Commission should continue its safety oversight of microgrid facilities

Q2: REGULATORY FRAMEWORK FOR MICROGRIDS

WGL ENERGY RESPONSE

Streamlined regulation that fosters competitive market while ensuring safe and reliable service

Interconnection policies that create a level playing field between macrogrid generation and the microgrid generation . . .

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Q2: REGULATORY FRAMEWORK FOR MICROGRIDS

ADDITIONAL RECOMMENDATIONS

- Enforceable timelines for interconnection
- Microgrid technologies require next generation interconnection rules and procedures
- Standardized interconnection procedures that allow for smart inverter deployment or contain islanding standards for distributed generation
- Revisions of the IEEE 1547 standards may provide guidance
- Pepco has agreed to enhancements to the interconnection process in the Exelon merger and these enhancements must be realized
- Penalties must be in place to ensure timely interconnection to avoid competitive projects never coming into being due to unnecessary delays in obtaining interconnection