

3/1/18 Opening Remarks
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Once again it is my pleasure to welcome you all to the Chicago Advanced Energy Series Breakfast Meeting and the Chicago office of Holland & Knight. I'm an energy partner with the firm based in our New York City office. As in the past, my Chicago colleague Barb Adams is here to welcome you and join in the conversations.

Thank you once again H.G. Chissell and thanks to all of you, our growing group of loyal sponsors that have been supporting the Chicago Advanced Energy Group. For four years now, we have been meeting here about quarterly and collaborating on important issues and opportunities for advancing energy projects especially in advanced energy opportunities, including energy efficiency, storage and demand resources. This time, we've got a great panel of speakers and thought leaders ready to talk to us about reliability, critical infrastructure and microgrids.

At this time, I'd like to thank the Illinois Commerce Commission for its impeccable timing in issuing a very important Final Order yesterday (right before our program this morning) in respect of ComEd's request for permission to develop the Bronzeville Microgrid. It's exciting to have such an important development here in Chicago and a panel that can share many details on the Project and the regulatory and legal issues the ICC had to deal with in approving ComEd's plan.

ComEd proposed the Bronzeville Microgrid as a pilot project and opportunity to deploy about \$5 million in federal DOE grant funds to support the development. They studied their

entire grid and selected Bronzeville because of the critical public service customers in the area, its density, the neighborhood's adjacent Illinois Institute of Technology existing microgrid, which allows industry leading clustering between microgrids to coordinate load and resources. The critical customers in the Bronzeville project area include the City of Chicago Police Department HQ along with a number of healthcare, nursing homes and educational facilities. The project includes a total of 1,060 customers. The microgrid requires reconfiguration of existing feeders, cables and switch gear and features installation of battery storage and solar PV. ConEd may redeploy some of its existing diesel generators used for emergency purposes during testing phases. The \$25 million project will eventually include a mix of DER resources that will be procured through a competitive process. When completed, the Bronzeville microgrid will be capable of being islanded from the distribution network so that if there is a power failure on the network, Bronzeville customers will still have power. And the network will connect to ITT's microgrid, enabling ComEd to study the ability to cluster more than one microgrid.

The project demonstrates a lot of interesting issues and the Commission approved ComEd's approach for dealing with them. Recognizing that we are in a competitive choice state and that ComEd is not allowed to own generation, ComEd's plan includes coordination and cooperation with third-party ownership of distributed energy resources, such as solar. ComEd will seek to acquire rights to use privately-owned non-storage DER for the project through competitive procurement processes. ComEd will own the battery storage resources, which will be fully integrated into the grid. The Commission emphasized that the Project should incorporate more renewable distributed energy resources, recognizing that the electrical grid is evolving towards the integration of increasingly high levels of DERs. "With the passage of the Future Energy Jobs Act (FEJA), the State of Illinois has also expressed strong support for the

development of carbon free sources of energy including the creation of robust targets and incentives for the deployment of solar PV especially including community solar and in low-income areas. Among the most important drivers of this project—in the Commission’s view—should be the development of innovative solutions, and experience in the design and operation of distribution resources that allow the management of decentralized, multi-directional power flows to accommodate high-penetration of DERs.”

The Final Order also deals with an issue of importance to utilities generally, namely prudence. A utility needs to be able to recover and earn on invested capital and risky or speculative project investments could be disallowed if determined later to have been unwise. Utilities are generally risk averse and that goes for their capital deployment decisions as well. So in this case, the ICC stated that the issue in this case is whether the costs of the Project -- \$25 million are outweighed by the benefits. The Commission adopted ComEd’s proposal for Phase I and II in full, stating “The Commission encourages the kind of innovative pilots such as the Project which have the ability to inform myriad stakeholders about DER and the use of grids. The Commission notes that DOE has indicated its interest in promoting microgrid studies, as demonstrated by the grants it is offering. Pilot programs, such as the Project, are appropriate ways to test new technologies because of the smaller-scale, lower-cost abilities of a distinct sample size, which has wide-reaching application both in Illinois and across the country. Further, the Commission agrees with ComEd that pilots and demonstration projects help stakeholders and regulators learn whether larger-scale, more-permanent or longer-term deployments might be worthwhile and, if so, to learn more about how to take those steps.” So now ComEd has pre-approval of the project as prudent even though this really amounts to a 10-year study of the benefits of a microgrid.

Despite opposition from a number of interested parties in the case, the Commission approved the project and allowed the costs of the project to be rolled into rate base to be recovered by all customers.

So thank you, ICC, for an excellent starting point for our discussion today.

As someone who is advising the State of New York on microgrids, resiliency and critical infrastructure right now, I can tell you that Illinois is not alone. State commissions and energy policy leaders in leading states are grappling with such issues as presented in the ICC Final Order. These include:

- What should the utility's role be, recognizing that in choice states the utility monopoly model has been diminished?
- Can third party owners of microgrid infrastructure cross or occupy the public right of way that probably is the exclusive legal right of the utility?
- Should microgrids include existing diesel generators – many buildings especially in urban centers have well established diesel generators, but they are permitted for emergency use, usually 500 hours a year or less, and their emissions are inconsistent with clean energy priorities.
- Who should pay for microgrids?

These are just some of the issues and there are many others.

We've got a great panel of speakers here today who are better qualified than me to discuss electric grid resiliency, critical infrastructure and microgrids and these thought leaders

are able to help us to dive deeper into these issues. And so, without further ado, it is my pleasure to bring up HG to introduce our speakers and kick off our collaborations. Please enjoy the meeting and stay involved for future programs as our collaborations continue.

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