

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

COMMONWEALTH EDISON COMPANY)
)
)
Approval of Multi-Year Performance Metrics)
pursuant to Section 16-108.5(f) & (f-5) of the)
Public Utilities Act)

Docket No. 11-0772

INITIAL BRIEF OF THE CITIZENS UTILITY BOARD AND THE CITY OF
CHICAGO

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Now come the Citizens Utility Board (“CUB”) and the City of Chicago (“City”), pursuant to Rules of Practice of the Illinois Commerce Commission (“ICC” or “the Commission”), 83 Ill. Admin. Code Part 200, and pursuant to the briefing schedule established by the Administrative Law Judge (“ALJ”) on January 4, 2012, to herby file this Initial Brief in the above captioned proceeding. This proceeding was initiated to evaluate the Multi-Year Performance Metrics Plan (“Plan”) filed by Commonwealth Edison Company (“ComEd” or “the Company”) pursuant to Section 16-108.5(f) and (f-5) of the Public Utilities Act (“PUA” or “the Act”). See 200 ILCS 5/16-108.5(f). The purpose of this section, as described by the General Assembly, is to ensure that the State’s electric utility infrastructure will promote future economic development in the State and that the State's electric utilities will be able to continue to provide quality electric service to their customers, including innovative technological offerings that will enhance customer experience and choice such as smart meters that are dependent on a modernized smart grid. 220 ILCS 5/16-108.5(a). Because of the magnitude of the investment ComEd is about to make, the Commission should carefully consider how it

can ensure that this enormous investment best serves ComEd's customers. The Commission should establish additional metrics, beyond those explicitly listed in the Act and proposed by ComEd, that would measure whether the utility, the parties, and the Commission have created a logical, ten-year plan to accomplish the broader objectives central to achieving the Act's goals. CUB Ex. 1.0 at 4.

IV. CUB PROPOSED WORKSHOP PROCESS TO IDENTIFY ADDITIONAL METRICS

CUB believes that "smart grid" investments, such as Advanced Metering Infrastructure ("AMI"), distribution automation and other improvements, hold great potential for delivering improved service and lower customer bills. With the investments contemplated by the Act which addresses the performance metrics at issue in this case, customers could see new opportunities for savings through demand response and energy efficiency programs as well as improvements in reliability and billing accuracy. CUB Ex. 1.0 at 3. Most importantly, this legislation for the first time recognizes that a utility's performance in delivering improved customer service to its customers should be measured and evaluated over time. *Id.* This means the Commission is now placed in the position of strategically evaluating how these new investments and new performance expectations can be used to best serve ComEd's customers. However, the Act could potentially result in an overemphasis on the investment dollars as compared to the investment outcomes. *Id.* at 4. Given the breadth and length of investment planning required, the Commission needs to make sure it has

appropriate benchmarks for monitoring ComEd's performance and ensuring that these investments – and this new performance-based formula rate structure – are focused on delivering a better quality of service at a lower cost with greater flexibility in managing energy usage.

The Act requires specific performance metrics to be included in ComEd's Plan, which ComEd outlined in its testimony. 220 ILCS 5/16-108.5(f); ComEd Ex. 2.0 at 4-6. These metrics focus on improvements in customer reliability, billing accuracy and collection as well as on improved opportunities for minority-owned and women-owned businesses:

- *System Average Interruption Frequency Index ("SAIFI")*: ComEd must improve system-wide SAIFI ("System SAIFI") by 20%, ratably over the 10-87 year period. Under this metric, ComEd must improve SAIFI for its Northeastern Region and Southern Region by 20% each, ratably over the 10-year period.
- *Customer Average Interruption Duration Index ("CAIDI")*: ComEd must improve system-wide CAIDI ("System CAIDI") by 15%, ratably over the 10-year period.
- *Service Reliability Targets*: ComEd must improve the total number of customers who exceed the service reliability targets by 75%, ratably over the 10-year period.
- *Estimated Electric Bills*: ComEd must reduce the number of estimated electric bills by 90%, ratably over the 10-year period.
- *Consumption on Inactive Meters ("CIM")*: ComEd must reduce CIM by 99 90%, ratably over the 10-year period.
- *Unaccounted for Energy ("UFE")*: ComEd must reduce UFE by 50%, ratably over the 10-year period.
- *Uncollectible Expense*: ComEd must reduce uncollectible expense by \$30,000,000, ratably over the 10-year period.

- *Opportunities for Minority-Owned and Women-Owned Business Enterprises (“MWBE”)*: It is ComEd’s goal to increase its capital expenditures paid to these enterprises by 15% over the 10-year period.

CUB Ex. 1.0 at 5-6.

By themselves, however, these metrics do not deliver a better customer experience since performance is defined not just by competently keeping lights on, but also by innovation and creativity. *Id.* 9. It is certainly true that improvements in reliability and billing accuracy will benefit customers. *Id.* at 6. As CUB witness Chris Thomas pointed out, reducing the amount of uncollectible expense and lost energy (CIM and UFE) will benefit customers, perhaps even more directly than improvements in reliability since these improvements have a direct dollar value associated with them. *Id.* However, there are additional benefits that the Commission should track over time to maximize the consumer and environmental value of the smart grid:

- Operational benefits through improvements in ComEd’s operational efficiency and system reliability, including reduced metering costs through automated metering and improved asset life through improved information on maintenance issues in wires or in substations, before the equipment failures or outages even occur.
- Consumer benefits through improved usage information and ability to manage energy usage through energy efficiency, demand response and distributed generation investments, not only through expanded rate options that will give additional potential money saving opportunities from energy conservation and load shifting but through new technologies made

practicable by smart grid investments.

- Environmental benefits through smarter long-term generation and transmission investments and more efficient resource utilization, avoided greenhouse gas (“GHG”) emissions associated with peak energy usage and meter reading, and improved renewable resource interconnection.

Id. at 7-8. To meet the requirements of the Act and maintain its participation in a formula rate structure, ComEd is about to undertake a ten-year investment program that positions the Commission, the utility and stakeholders to examine how these investments can be used to identify new technologies, new service offerings and new providers that empower customers to make efficient decisions. *Id.* at 9. No infrastructure investment program, much less one on the scale required by the Act, can be successful unless customers see material benefits to them. *Id.* at 7. These are benefits that the Commission can measure, and in measuring, ensure that ComEd’s investments are focused directly on returning value to the customers who are funding the investments. For example, with respect to the customers’ ability to understand and manage energy usage, the Commission can look at whether ComEd has introduced any new pricing rates which will induce efficient consumption. *Id.* at 7. The Commission can ask ComEd to survey the best practices in the design of customer rates and set forth a schedule for piloting and assessing those practices in Illinois). *Id.* Since customer education is the first step to customer adoption of any rate, the Commission should also include a metric to measure how ComEd is doing teaching customers about how their energy usage affects their bills and the environment, such as using surveys to measure

customer comprehension before and after ComEd undertakes a customer education campaign. *Id.*

While the Act lays out goals related to improved reliability and reduced system energy consumption the Act fails to specify how those goals can be achieved. *Id.* at 8. For example, higher power quality will result in money saved from outages, because smart grid investments can – and should – create and provide more stable and reliable power to reduce down time. *Id.* at 8. The Commission can address this issue by requiring ComEd to perform a voltage optimization study of their distribution system and implement a voltage optimization plan. *Id.* Another example would be how ComEd’s investment in AMI will also allow ComEd to better identify issues of meter tampering. *Id.* Similar to the requirement in the statute that ComEd demonstrate an improvement in line loss unaccounted for energy, ComEd should develop new standards to utilize the new capabilities of AMI to reduce incidents of the improper assessment of “revenue protection” fees.¹ *Id.* AMI can help eliminate these errors, and the Commission can create a metric that will ensure this benefit to customers is realized. *Id.*

The bottom line, as Mr. Thomas explained, is that the Commission should add metrics that can make sure customers see material benefits, and the easiest way to do that is to make sure customers are being empowered to control their energy usage – and by extension their relationship with the utility; increase the potential for viable

¹ “Revenue protection” fees are assessed automatically to accounts on which ComEd suspects meter tampering; those fees are sometimes later reversed when ComEd discovers that its system mistook a meter reading or other error for tampering.

alternatives to the utility to emerge and compete to provide new services, such as promoting distributed generation. CUB Ex. 1.0 at 8. The Commission should establish metrics for determining whether consumers have increased their understanding of (a) ways to lower their bills; (b) ways to consume more efficiently; (c) how bills are computed (so that they understand their responsibility to pay off sunk costs even as they reduce future costs); and (d) ways in which third parties, who are not the utility, can enter the marketplace to provide enhanced services to customers. *Id.* at 9.

Whether or not third parties enter the marketplace depends upon the design of the smart grid. A smart grid should create an open marketplace where alternative energy sources from geographically distant locations can easily be sold to customers wherever they are located. *Id.* at 9. Intelligence in distribution grids should enable small producers to generate and sell electricity at the local level using alternative sources such as rooftop-mounted photo voltaic panels, small-scale wind turbines, and micro hydro generators. *Id.* The Commission should set as its goal that ComEd's investments must enable maximum access by third parties to the grid, creating a welcoming platform for deployment of a wide range of clean energy technologies and energy management services. *Id.* at 10. Potential metrics would include whether or not the utility - in this case ComEd - has established a platform for maximum access by 3rd parties to data such that they can participate competitively in energy markets by, or by how long it takes ComEd to demonstrate full compliance with NIST interoperability standards. *Id.*

With respect to the distributed generation program, the Commission should adopt the goal that ComEd's investments must accommodate all generation and storage options. *Id.* at 10. ComEd's investments must then reduce traditional power loads, and also seamlessly interconnect with renewable energy, micro-turbines, and other distributed generation technologies at local and regional levels. *Id.* The Commission can require ComEd to measure and report how long it takes its customers should be able to interconnect a distributed generation system and by requiring ComEd to put into place a program for the promotion of energy storage, including possible rebates, incentives and/or tariffs. *Id.* at 10-11. A plan like this could also address how ComEd will enable integration of intermittent power sources, including energy storage, energy efficiency, distributed generation and utility scale renewable energy. *Id.* at 11. As climate change and environmental concerns increase, the demand for renewable energy resources will also increase; since these are for the most part intermittent in nature, a smart grid system should enable power systems to operate with larger amounts of such energy resources. *Id.*

The Commission should also consider what the broader implications of ComEd's long-term investments will be. The types of investments required by the Act will allow ComEd to develop the infrastructure and policies necessary to enable and support the sale of demand response, energy efficiency, distributed generation, and storage into wholesale energy markets as a resource. *Id.* at 11. The Commission should require ComEd to take advantage of these opportunities, for example, by requiring ComEd to have a certain percentage of their total capacity in demand response by a certain time,

including requiring ComEd to have a certain percentage in automated demand response.² *Id.*

These investments will also enable new options for customers to lower their bills and manage their energy usage. A smarter grid will enable consumers to change their behavior around dynamic prices or to pay vastly increased rates for the privilege of reliable electrical service during high-demand conditions. *Id.* at 11-12. The Commission can encourage customers to manage energy more efficiently by requiring ComEd to make available to all customers access their energy info through a web portal, by requiring that AMI investments are done with an eye towards supporting the use and adoption of Home Area Networks (“HANs”) to manage energy usage, and by requiring ComEd to establish an ongoing energy meter calibration program. *Id.* at 12.

These types of metrics are being used in other jurisdictions have considered some of the metrics that would be necessary in evaluating smart grid investments. For example, the California Public Utilities Commission led a planning process that included the discussion of smart grid metrics. *Id.* at 12. The investor-owned utilities in California, along with the Environmental Defense Fund, presented the CPUC with a report outlining ideas for metrics that can guide the first smart grid deployment plans filed by the utilities. *Id.* The following metrics were adopted by consensus, meaning the Commission will measure changes in:

- Load impact from smart grid-enabled, utility administered demand response;

² Automated demand response that is enabled through a variety of technologies that are automatically activated upon receiving a demand response event notification or price trigger. The Commission should also measure the cost savings these investments produce for customers using them.

- Demand response program size, both in total megawatts and customer class enrollment, to the extent available;
- Number of customers that are on a time-variant or dynamic pricing tariff (by customer class, CARE, and climate zone, to the extent available);
- Number and percentage of customers with advanced meters to access energy usage information or to enroll in utility energy information programs;
- Number of customers enrolled in time-variant electric vehicles tariffs;
- MW and MWh of grid connected energy storage interconnected at the transmission or distribution system level;
- System load factor and load factor by customer class;
- Number of and total nameplate capacity of customer-owned or operated, grid-connected distributed generation facilities; and
- Total annual electricity deliveries from customer-owned or operated, grid connected distributed generation facilities.

Id. at 12-13. California also addressed how the total environmental footprint of the current electric generation and delivery system can be evaluated, and created specific metrics to track cost savings and avoided GHG emission associated with smart-grid enabled improvements. *Id.* at 13. The metrics measured:

- Intermittent renewable integration that reduce the need for spinning reserves and other ancillary services;
- Line loss reductions in the transmission and distribution system;
- Residential automated demand response programs and energy efficiency programs; and
- Energy storage.

Id.

CUB witness Mr. Thomas provided many suggestions of additional metrics that would help ensure that customer see the maximum potential benefit from upcoming

smart grid investments. *See Id.* at 9-12. The Commission should consider the metrics proposed by Mr. Thomas and should, in its final order, direct ComEd to:

- Convene stakeholders to discuss and recommend specific metrics based on the objectives Mr. Thomas identified;
- Collect data regarding past performance of those metrics;
- Publish a report detailing the Company's methodology and results for measuring past performance and for measuring new activities;
- Hold a workshop to review the report; and
- Propose a plan to measure and improve performance going forward.

Id. at 14. The Commission can use the resulting plan as a baseline for its review of ComEd's in the annual proceedings laid out by the Act, and by doing so, have a means to monitor and evaluate ComEd's improvement every year.

The Commission has a vital role—to effectively and comprehensively regulate public utilities - with a responsibility to ensure that ComEd's customers receive adequate, efficient, reliable, environmentally safe and least-cost public utility services. 220 ILCS 5/1-102. The Commission was statutorily created to exercise general supervision over all Illinois public utilities in accordance with the provisions of the Act. *Sheffler v. Commonwealth Edison Co.* 399 Ill.App.3d 51, 60 (1 Dist.,2010), citing 220 ILCS 5/4-101 and *Alhambra-Grantfork Telephone Co. v. Illinois Commerce Comm'n*, 358 Ill.App.3d 818, 823 (2005) (Illinois Commerce Commission is a creation of the Illinois legislature and possesses the authority and power necessary to supervise all Illinois public utilities and to administer the regulatory laws under the Act).

The General Assembly intended protections for consumers during the course of this ten-year, multi-billion dollar investment, as evidenced by the inclusion of multi-year performance metrics in the statute. 220 ILCS 5/16-108.5(f). The General Assembly's stated intent in enacting Section 16-108.5 is to modernize and upgrade Illinois' electric grid, ensuring that the State's electric utility infrastructure will promote future economic development in the state and will enhance customer experience with innovative technological offerings. 220 ILCS 5/16-108.5(a). The General Assembly further stated, "The introduction of performance metrics will further ensure that reliability and other indicators are not just maintained but improved over the next decade." *Id.*

It is a well established rule that the express grant of authority to an administrative agency also includes the authority to do what is reasonably necessary to accomplish the legislature's objective. *Abbott Laboratories, Inc. v. Illinois Commerce Com'n*, 289 Ill.App.3d 705, 712 (1 Dist.,1997), citing *Lake County Board of Review v. Property Tax Appeal Board*, 119 Ill.2d 419, 427 (1988). For example, courts have held that the Commission was not limited to any set of methods to achieve the legislative objective of securing meter accuracy and upheld a rule imposing a so-called penalty against a gas company for meter failure:

"While the legislature provided many explicit sanctions which may be employed by the Commission, the legislature expressed no intent to limit the Commission to the enumerated methods of enforcement. We do not find the legislature implied in the Act any intent to limit the Commission to any set of specific procedures. Rather, we believe the legislature implicitly authorized the Commission to formulate rules necessary to secure meter accuracy, a goal specifically mentioned by the legislature."

Peoples Gas, Light & Coke Co. v. ICC, 175 Ill.App.3d at 52, 124 Ill.Dec. 690, 529 N.E.2d 671.

Courts have also upheld the authority of the ICC to enact a non-cost based penalty, noting the “broad ratemaking authority and that the Commission appropriately exercised its discretion to formulate reasonable methods of achieving stated legislative objectives.” *Abbott Laboratories, Inc.*, 289 Ill. App. 3d at 712.

The Act specifically provides that the Commission “shall have general supervision of all public utilities” including

the manner in which their plants, equipment and other property * * * are managed, conducted and operated, not only with respect to the adequacy, security and accommodation afforded by their service but also with respect to their compliance with this Act and any other law, with the orders of the Commission and with the charter and franchise requirements.

Sheffler, 399 Ill. App. 3d at 60. Further, authority to order improvements to a public utility's facilities is vested with the Commission in section 8-503 of the Act. *Id.*, citing 220 ILCS 5/8-503. Nothing in the Act limits the Commission’s general oversight powers or indicates that the metrics listed in the Act are the only standards to which the Commission may hold a participating utility. Other metrics that also ensure smart grid investments result in maximum customer benefits are also appropriate. The Commission should adopt the CUB’s recommendations and in its final order, direct ComEd to:

- Convene stakeholders to discuss and recommend specific metrics based on the objectives Mr. Thomas identified;
- Collect data regarding past performance of those metrics;

- Publish a report detailing the Company's methodology and results for measuring past performance and for measuring new activities;
- Hold a workshop to review the report; and
- Propose a plan to measure and improve performance going forward.

Conclusion

The Commission should consider the performance metrics proposed by Mr. Thomas and should require ComEd to abide by additional performance metrics, based upon the recommendations of stakeholders following a workshop process.

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