



OLR RESEARCH REPORT

September 6, 2012

2012-R-0403

RECENT ILLINOIS LEGISLATION ON ENERGY INFRASTRUCTURE MODERNIZATION

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You asked for a summary of energy legislation adopted in Illinois in 2011 (Ill. PA 097-0616), particularly with regard to its provisions on energy infrastructure.

SUMMARY

The act allows the state's two major electric utilities to be subject to performance-based ratemaking (PBR), rather than traditional ratemaking, for their distribution rates if they make substantial investments in infrastructure and meet other requirements. Under traditional ratemaking, rates are based on a utility's costs, including the cost of capital. A key component of the ratemaking process is the determination of the utility's return on equity (ROE). Under PBR, rates are set on a utility's performance on various measures, such as reliability and customer service, as well as costs. The act sets the authorized ROE by formula and allows the actual ROE of participating utilities to vary by up to 0.5% from their authorized level. If the ROE exceeds this amount the utility must provide its customers with a credit; if it falls short of this amount it must impose a surcharge. If a utility does not meet its performance goals, its ROE is reduced.

To be eligible for PBR, Commonwealth Edison, which serves Chicago and the rest of northern Illinois, must invest an estimated \$1.5 billion over ten years to upgrade and modernize its transmission and distribution systems and in smart grid electric system upgrades. Ameren, which serves most of the rest of the state, must invest an estimated \$360 million over a 10-year period. A utility that does not meet its investment target is no longer eligible for PBR. The utilities may invest more than the targeted amounts, but investments beyond \$3 billion, in the case of Commonwealth Edison, and \$720 million, in the case of Ameren, require legislative approval. During the infrastructure investment program's peak year Commonwealth Edison must create 2,000 full-time equivalent jobs and Ameren must create 450 full-time equivalent jobs. If the utilities do not reach these targets, they must pay into a state job training program.

The act also has extensive provisions regarding advanced metering infrastructure (AMI, often called "smart meters"). Each utility must (1) develop an AMI deployment plan; (2) provide funding for programs and projects that support innovative technologies or other methods to modernize the grid; (3) establish a rebate program to reduce peak use; and (4) create or designate a test bed for testing smart grid technologies.

Each participating utility must file a performance-based rate formula and related information with the Illinois Commerce Commission for its approval. Within 30 days after the filing of the information, each participating utility must file multi-year measures designed to improve system reliability over a 10-year period.

The act requires the state agency that buys power for Illinois' equivalent of standard service to enter into new power procurement contracts with an annual rate increase of 2.5% for Commonwealth Edison customers.

Most of the act's provisions end December 31, 2017. By that date, the commission must report to the legislature on the infrastructure program and the performance-based formula rate. The act has many additional provisions, including modification of the state's net metering, renewable portfolio standard, and energy planning laws.

The text of the act is available at <http://www.ilga.gov/legislation/publicacts/97/PDF/097-0616.pdf>.

INFRASTRUCTURE MODERNIZATION

Specific Investments

If Commonwealth Edison participates in the act, it must invest an estimated \$1.1 billion over a 5-year period in electric system upgrades, modernization projects, and training facilities. This investment must include:

1. distribution infrastructure improvements totaling an estimated \$1 billion, including new and refurbished underground residential distribution cables and mainline cable system refurbishment and replacement projects;
2. training facility construction or upgrade projects totaling an estimated \$10 million with at least one facility in Chicago and one in Rockford (the state's second-largest city); and
3. wood pole inspection, treatment, and replacement programs.

Over a 10-year period, Commonwealth Edison must invest \$1.5 billion to upgrade and modernize its transmission and distribution infrastructure and in smart grid upgrades, including: (1) additional smart meters; (2) distribution automation; (3) associated secure data communication network; and (4) substation upgrades.

The act requires Ameren to invest approximately \$265 million over a five-year period in electric system upgrade modernization projects and training facilities. These investments include:

1. distribution infrastructure improvements totaling an estimated \$245 million, which may include substations, transformers, reconductoring, and rebuilding overhead distribution lines, underground residential distribution cable injection, and mainline cable system refurbishment and replacement projects;
2. training facility construction or upgrade projects totaling an estimated \$1 million; and
3. wood pole inspection, treatment, and replacement programs.

The act requires Ameren, over a 10-year period, to invest \$360 million to upgrade and modernize its transmission and distribution infrastructure and in smart grid electric system upgrades, as described above. For both utilities, the required investments must be in addition to those approved under the utilities' capital investment programs.

Each utility must submit its plan for satisfying these requirements to the Illinois Commerce Commission, including the scope, schedule, and staffing of its infrastructure investment program.

Commonwealth Edison's plan anticipates that it will:

1. test, refurbish and replace over 7,800 miles of underground cable to reduce outages due to cable failures;
2. accelerate the inspection of 660,000 wood poles and reinforce or replace deficient poles;
3. harden areas historically vulnerable to weather-related damage by moving equipment underground and installing tree-resistant cable;
4. install distribution automation devices to detect issues on the grid and automatically re-route power to minimize customer outages;
and
5. install 4.1 million advanced meters.

Ameren's plan is similar to Commonwealth Edison's although smaller in scale. For example, it proposes to install approximately 750,000 advanced meters.

Under the act, a utility may invest more than the targeted amounts, but investments beyond \$3 billion, in the case of Commonwealth Edison, and \$720 million, in the case of Ameren, require legislative approval. If a utility's updated cost estimates for satisfying its infrastructure investment program commitments exceeds these limits, it must submit a report to the commission that identifies the increase and explains the reasons for the increased costs no later than the year in which the utility estimates it will exceed the limit. The commission must review the report and, within 90 days after the utility files the report, report to the General Assembly its findings. If the General Assembly does not amend the limit the utility may only modify its plan so as not to exceed the limit.

Job Creation

During the infrastructure investment program's peak program year Commonwealth Edison must create 2,000 full-time equivalent jobs and Ameren must create 450 full-time equivalent jobs. For both utilities the jobs must be in Illinois and related to electric service delivery. The job commitment includes direct jobs, contractor positions, and induced jobs (e.g., people employed as a result of money flowing into the local economy).

In meeting these obligations, to the extent feasible and consistent with state and federal law, the utilities must provide employment opportunities for all segments of the population, including minority- and women-owned businesses. They may not, consistent with state and federal law, discriminate based on race or socioeconomic status.

If the commission finds, after notice and hearing and considering the utility's corrective action plan, that a utility did not satisfy its peak job commitment for reasons reasonably within its control, the commission must determine the size of the shortfall. For each full-time equivalent job deficiency during the peak program year, the participating utility must pay \$3,000 to fund training grants administered by the Department of Commerce and Economic Opportunity. These payments cannot be recovered in electric rates.

SMART GRID/SMART METER PROGRAM

Definitions

Under the act, the "smart grid" means investments and policies that promote goals such as:

1. increased use of digital information and control technology to improve reliability, security, and efficiency of the electric grid;
2. optimizing grid operations and resources, with full cyber security;
3. deploying and integrating distributed (on-site) resources and generation, including renewable resources;
4. developing and incorporating energy efficiency and related resources with the grid;
5. integrating "smart" appliances and consumer devices with the grid;

6. deploying and integrating advanced electric technologies, including plug-in electric and hybrid electric vehicles, thermal-storage air conditioning, and renewable energy generation;
7. providing consumers with timely information and control options;
and
8. identifying and lowering of unreasonable or unnecessary barriers to adoption of smart grid technologies, practices, services, and business models that support energy efficiency, demand-response, and distributed generation.

The act defines AMI as the communications hardware and associated software that (1) enables smart grid functions by creating a network between advanced meters and utility business systems and (2) allows collection and distribution of information to customers and other parties in addition to providing information to the utility. AMI allows customers to (1) take advantage of programs that provide incentives to reduce electric use during peak demand periods, (2) better manage energy use, and (3) use energy management technologies such as smart appliances.

Planning Requirement

Each participating utility must file an AMI deployment plan with the commission. The plan must provide for investment over a 10-year period that is sufficient to implement the plan across the utility's service territory. It must, among other things, contain:

1. an AMI strategy that describes how the utility evaluates and ranks technology choices to create customer value;
2. a deployment schedule and plan that provides for deployment of AMI to all Ameren customers and 62% of Commonwealth Edison's customers;
3. annual milestones and metrics to measure the plan's success in enabling smart grid functions and enhancing consumer benefits from AMI; and
4. a consumer education plan.

The plan must secure the privacy of personal information (including information about electric usage) and give consumers the right to determine whether their personal energy information will be disclosed to third parties. Utilities, their contractors or agents, and any third party

who acquires personal information by working on smart grid technologies may not disclose it for unrelated commercial purposes. Utilities must comply with the consumer privacy requirements of the state personal information protection law. If a utility earns money by selling non-personal information obtained through smart grid technology, it must use this money to offset its revenue requirements.

Commission Review and Approval

After notice and hearing, the commission must approve or modify the plan if it finds that its benefits exceed its costs and it is consistent with the principles established through the Illinois Smart Grid Collaborative. A utility's decision to invest pursuant to an approved plan is not subject to subsequent prudence reviews by the commission, but the commission may review the reasonableness of the costs incurred under the plan. A utility can recover the reasonable costs it incurs in implementing a commission-approved plan, including the costs of retired conventional meters.

Utilities must report annually on their progress in implementing the plan. The commission may investigate the utility's progress. If the commission finds, after notice and hearing, that the utility's progress in implementing the plan is materially deficient, it must order the utility to adopt a corrective action plan, subject to commission approval and oversight, to bring implementation back on schedule. The commission's order must be entered within 90 days after the utility files its annual report. If the commission does not initiate an investigation within 21 days after the utility files its annual report, then the filing is deemed accepted.

Funding Requirements

The council must establish a trust or foundation to provide financial and technical assistance to eligible entities for programs and projects that support, encourage, or use innovative technologies or other methods to modernize the grid and promote economic development. These activities must be supported through grants, loans, contracts, or other programs designed to assist technological advances in grid modernization and operation. The eligible entities are state and local agencies; educational and research institutions; corporations; and charitable, educational, environmental, and community organizations.

The trustees must notify each utility when it forms the trust or foundation. Within 90 days after being notified, Commonwealth Edison must contribute \$15 million and Ameren \$7.5 million, which are not

recoverable from ratepayers. Each utility must also pay a pro rata share, based on the number of its customers, of \$5 million per year to the trust or foundation for each plan year. Seventy percent of this amount can be recovered in rates. The trust or foundation must also be eligible to receive energy and environmental grants from public or private sources.

The trust or foundation must use its funding solely to provide consumer education regarding smart meters and related consumer-facing technologies and services and the peak time rebate program the act establishes. It must use 30% the funds it receives from each participating utility to provide education to the utility's low-income retail customers, including low-income senior citizens.

The trust or foundation must remain self-funding. Its trustees may sign agreements with entities receiving funding for product development that provide for license fees, royalties, or other payments to the trust or foundation. The payments must be contingent on the commercialization of the products, services, or technologies supported by the funding provided by the trust or foundation.

Rebate Program to Reduce Peak Use

Within 60 days after the commission approves a utility's AMI plan, the utility must file a proposed tariff that offers a voluntary market-based peak time rebate program to all residential retail customers with advanced meters. The program must be designed to provide, in a competitively neutral manner, rebates to customers who curtail their use of electricity during peak periods. The amount of rebates must equal the amount of compensation the utility obtains through markets or programs of the regional transmission organization. The utility must make all reasonable attempts to secure funding for this rebate program. The commission must monitor the performance of these programs and order the termination or modification of a program if it determines that it does not, after a reasonable period of time for development, result in net benefits to its residential customers.

Smart Grid Test Bed

Each utility must create or designate a test bed for evaluating smart grid technologies. The test bed must, among other things:

1. provide locations to test potentially innovative technologies and services, including those funded by the trust or foundation;

2. facilitate testing of business models or services that help integrate these technologies into the grid, especially models that may help promote new products and services for retail customers; and
3. offer opportunities to test and showcase these technologies and services, especially those likely to support the state's economic development goals.

The utility must choose the locations of the test bed to maximize the opportunity for real-time and real-world testing of these technologies and services, taking into account the safety and security of its grid and grid operations.

The utility, with input from the council, must develop a plan to create, operate, and administer the test bed. This plan must address:

1. how the utility will comply with the act's objectives;
2. the proposed location of the test bed;
3. how the utility will receive, review, and qualify proposals to use the test bed;
4. the criteria by which the utility will qualify proposals to use the test bed, including safety, reliability, security, customer data security, privacy, and economic development considerations;
5. the engineering and operations support that the utility will provide to test bed users; and
6. the estimated costs to establish, administer, and promote the availability of the test bed.

The test bed must be open to all qualified entities wishing to test programs, technologies, business models, and other smart grid-related activities. But the utility may (1) reject any such initiatives that threaten the grid's reliability, safety, security, or operations or that would threaten the security of customer-identifiable data in its judgment and (2) limit the number of technologies and entities participating in the test bed at any time based on its ability to maintain a secure, safe, and reliable grid.

At the end of the fourth year of operation, the test bed must undergo an independent evaluation to determine if it is meeting the act's objectives or is likely to do so in the future. The evaluation must include the performance of the utility as test bed operator. Subject to the findings, the utility and the trust or foundation may choose to continue operating the test bed.

The utility may recover all prudently incurred and reasonable costs associated with evaluating proposals, engineering, construction, operation, and administration of the test bed through its performance-based formula rates. It may charge fees to test bed users that must recover the utility's incremental costs, with the fees used to offset the utility's costs.

The utility must report to the trust or foundation quarterly on test bed activities, customers, discoveries, and other relevant information. To the extent practicable, the utility and the trust or foundation must jointly pursue resources that enhance the capabilities and capacity of the test bed.

PERFORMANCE-BASED RATEMAKING

Rate Formula

Under traditional rate-making, a utility is allowed to charge rates that just cover its costs, including its cost of capital for its infrastructure investments. The utility obtains part of its capital from debt (bonds) and part from equity. The utility regulator typically sets the utility's ROE at a level comparable to that allowed in other states for similar utilities. If the utility exceeds its ROE, the utility regulator can require it to undergo a rate case. If the utility is unable to achieve its authorized ROE, it can seek a rate case, although this can be a lengthy and expensive proceeding.

Under the act, a participating utility in Illinois may instead choose to be subject a performance-based formula rate for its distribution costs. (These are the utilities' costs in shipping power to its customers, as distinct from the cost of the power itself.) The formula must specify the costs that form the basis of the rate. These costs must be updated annually with information that reflects the utility's actual costs to be recovered during the applicable year.

The formula rate must, among other things:

1. allow the utility to recover its actual costs, consistent with commission practice and law;
2. include an ROE equal to the average yields of 30-year U.S. Treasury bonds for the applicable year plus 6%; and
3. establish protocols, consistent with commission practice and law, for the recovery of incentive compensation expense that is based on achieving operational metrics, including those related to budget controls, outage duration and frequency, safety, customer service, efficiency and productivity, and environmental compliance.

If certain costs exceed \$3.7 million (for Ameren) or \$10 million (for Commonwealth Edison) in a calendar year, they must be amortized over five years. This provision applies to severance costs associated with workforce reductions, changes in law or accounting rules, compliance with any commission-initiated audit, or a single storm or other similar expense. (Utility officials anticipate that the AMI provisions described above will result in layoffs among meter readers.) The utility may earn its authorized rate of return on any unamortized balance.

Commission Approval and Implementation

After the utility files its proposed rate formula and initial rates, the commission must review them. The initial rates take effect within 30 days after the commission approves the formula rate.

If a utility can implement its plan for satisfying its infrastructure investment commitments at less cost than the amounts specified in the act, it may petition the commission to allow it to spend less than these amounts. The commission must, after notice and hearing, approve, modify, or deny each petition within 150 days after it is filed.

If the commission finds, after notice and hearing, that a utility is not satisfying its investment commitments, the utility may no longer annually update the formula rate. The then current rates remain in effect until new rates are set in a rate case, subject to retroactive adjustment, with interest, to reconcile rates charged with actual costs. When performance-based ratemaking ends, so does the utility's investment commitments, other than those already incurred for training grants if it fails to reach its employment target.

The act also requires the utilities to report to the commission on their residential rates by July 1, 2014. If the average amount paid per kilowatt-hour for residential customers who buy power from the utility, exclusive of the effects of energy efficiency programs, increased by more than 2.5% in any of the three prior years, the act's major provisions are suspended. The 2014 rates remain in effect until the next rate case, subject to retroactive adjustment, with interest, to reconcile rates charged with actual costs. The utility's commitments and obligations also end, except for its existing obligation for training grants.

Rate Adjustments

Each year, the utility must update its cost data, plus any additional capital investments, and calculate the resulting rates. The utility must also reconcile its estimated and actual revenue requirements. If it collected more than it needed to meet these requirements, it must provide its customers with a credit. If it collected less than it needed, it must impose a surcharge.

Within 45 days of the utility filing its update, the commission can review the prudence and reasonableness of the costs incurred by the utility to be recovered in the next year. The same evidentiary standards apply as in rate cases but the commission cannot change the PBR formula. The commission must issue its decision within 240 days. If it does not hold a hearing within 45 days after the utility files its update, the filed costs are considered prudent and reasonable and the utility can charge the resulting rates.

If utility's actual ROE for a year is more than 0.5% higher than its authorized ROE, after adjusting for any penalties imposed under the formula for poor performance, the utility must apply a credit through the rate formula that reflects the excess ROE, adjusted for taxes. Conversely, if the utility's ROE misses its allowed return by more than 0.5%, it must apply a charge to make up the shortfall.

IMPROVING SYSTEM RELIABILITY AND OTHER MEASURES

Within 30 days after the filing of the PBR tariff, each participating utility must file with the commission measures designed to improve system reliability over a 10-year period. The measures must result in a (1) 20% improvement in the System Average Interruption Frequency Index (a measure of the frequency of outages) and (2) 15% improvement in its Customer Average Interruption Duration Index (a measure of how long power is out during outages). The data can exclude up to nine extreme weather days per year, i.e., days where storms cause at least

10,000 customers to lose power for at least three hours. Both utilities also must increase by 75% the number of customers who exceed the service reliability targets specified in commission regulations.

In addition, Commonwealth Edison must reduce the number of customers who receive estimated bills (because the utility was unable to read their meters) by 90%; Ameren must achieve a 56% reduction. Commonwealth Edison must reduce its uncollectible expense by at least \$30 million and Ameren must reduce its uncollectible expense by at least \$3.5 million. Both utilities must design a performance measure regarding the creation of opportunities for minority-owned and female-owned business enterprises.

The measures must include incremental performance goals for each year of the 10-year period, designed to demonstrate that the utility is on track to achieve the performance goal in each category at the end of the period. If a utility does not meet its goals, its ROE is reduced, usually by 5 basis points (0.05%) for each year that an individual goal is not met. The utilities must report to the commission annually on how well they met the goals, including a description of any extraordinary events that affected their performance.

POWER PROCUREMENT AND THE INFRASTRUCTURE PROGRAM

In Illinois, the state power agency procures power for small and medium size customers who have not chosen a competitive supplier (i.e., the equivalent of standard service in Connecticut). To promote price stability for these customers during the infrastructure investment program, the act (1) requires the agency to conduct a procurement round for each electric utility and (2) allows it to procure contracts for energy and renewable energy credits (which are used to comply with the state's renewable portfolio standard) for the period June 1, 2013 through December 31, 2017.

These contracts must be entered into through a competitive procurement process. The utilities are entitled to fully recover the costs of these contracts. The winning bidder must pay the cost of administering the procurement event through a supplier fee. For Commonwealth Edison, the energy contracts must be multi-year with prices escalating at 2.5% per annum.

SUNSET REVIEW

Most of the act's provisions end December 31, 2017. By that date, the commission must report to the legislature on the infrastructure program and the performance-based formula rate. The report must include the change in the average amount residential customers paid per kilowatt-hour between June 1, 2011 and May 31, 2017. The report must include separate sections for each utility.

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