

Ohio Energy Efficiency Rules Finalized

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SB 221: Energy Efficiency and Peak Demand Reductions

On July 31, 2008, Senate Bill 221 took effect — a major part of which requires Ohio utilities to implement energy efficiency and peak demand reduction programs to achieve gradual reductions in energy usage and electricity demand during peak times. To achieve these gradual reductions, SB 221 established annual benchmarks that Ohio investor-owned utilities must satisfy. For more information on the benchmarks, see the April 2008 Bricker & Eckler bulletin [Ohio Senate Bill 221: A Summary of Its Advanced Energy and Energy Efficiency Provisions](#)

Rules Revised and Waiting to be Sent to JCARR

Seeking to implement the energy efficiency and peak demand reductions requirements set forth in SB 221, the Public Utilities Commission of Ohio (the Commission) released proposed rules on August 20, 2008. This began a lengthy 15 month debate on the rules that involved dozens of comments, numerous applications for rehearing and four substantive revisions to the rules by the Commission. Final modifications to the rules were filed on October 28, 2009. Although the Commission granted rehearing for the limited purpose of reviewing Rules 4901:1-39-05 and 4901:1-39-08, the remaining rules are in effect.

Key Provisions

I. Rule 4901:1-39-01 – Definitions

“Demand response” vs. “Energy efficiency”: As noted above, SB 221 established benchmarks for 1) reducing peak electricity demand through demand response programs; and 2) reducing energy usage through energy efficiency programs.

The rule defines demand response as a “change in customer behavior or a change in customer-owned or operated assets that affects the demand for electricity.” In simpler terms, demand response refers to reductions in electricity demand at particular points in time (e.g. peak times). Examples of demand-response programs are financial incentives available to customers who reduce energy usage during peak demand periods or the implementation of interruptible load programs.

NOTE: The Commission explained that a utility’s interruptible load programs will count toward achieving the demand response benchmarks even if an interruption in service does not occur. Rather than actually achieving peak demand reductions, such a program only has to be designed to achieve the goal of reducing peak demand.

On the other hand, the rules define energy efficiency as reducing total energy usage while still maintaining both the customer’s functionality and the reliability of the system. For example, SB 221 expressly recognizes certain customer-sited programs and transmission/distribution infrastructure improvements as qualifying energy efficiency programs. See R.C. 4928.66(A)(2)(d).

II. Rule 4901:1-39-02 – Purpose and Scope

Purpose of Rules: The intent of the energy efficiency and peak demand reduction rules is to establish clear and distinguishable requirements relating to the reporting, verification and design of cost effective energy efficiency and demand response programs, as well as the establishment of a transparent Commission-review process.

Authority to waive alternative energy requirements: The rule states that the Commission may, upon application or motion by a party, “waive any requirement of this chapter [of the rules]” for “good cause shown,” but does not allow for the waiver of statutory requirements.

III. Rule 4901:1-39-03 – Program Planning Requirements

Assessments by Utilities: Before a utility creates its comprehensive energy efficiency and demand response program, there must be an assessment of the “potential energy savings” and demand reductions that would result from energy efficiency and demand response programs. This planning process is intended to promote transparency and meaningful participation by numerous stakeholders. Furthermore, and to encourage resource conservation, the rules expressly allow utilities to collaborate and co-fund program planning and assessment activities.

The assessments themselves take three forms—beginning with a very broad look at all possible energy efficiency and demand response programs (known as technical potential) and then focusing in on those programs with a greater likelihood of success (known as achievable potential).

i. Technical potential.

This is the broadest analysis required of utilities, designed to develop an accurate measure of the potential electricity savings (in kilowatt-hours) of energy efficiency measures. The analysis must include the: 1) characterization of all devices, equipment and processes that use energy in its certified territory; 2) quantification of the amount of actual and projected energy use and peak electricity demands in their certified territories; and 3) identification of any energy efficiency or demand response program (i.e. “material, device, technology, operational practice or educational program” that would allow customers to reduce energy usage or peak electricity demand while maintaining the same quality of electric service). The final part of this analysis requires the utility to use the specified energy efficiency or demand response programs to estimate the reductions that would occur if all homes and businesses adopted the most efficient energy-related equipment and processes regardless of cost.

ii. Economic potential and the Total Resource Cost Test.

The second layer of the assessment determines the cost-effectiveness of the energy efficiency or demand response programs. To measure cost-effectiveness, the Commission borrowed the Total Resource Cost Test from California—a test that determines whether the “present value of the avoided supply costs for the periods of load reduction, valued at marginal cost, are greater than the present value of the monetary costs of the demand side measure or program. . . plus the increase in supply costs for any periods of increased load resulting directly from the measure or program.”

In simpler terms, the Total Resource Cost Test compares the following three factors:

- The avoided costs of supplying energy to customers due to the energy efficiency and/or demand response programs (a utility can use its POLR tariff generation rate rather than avoided capacity, energy and ancillary service costs);
- The net monetary cost of the energy efficiency or demand response programs (i.e. costs of installing/operating/maintaining new equipment + costs of removing old equipment – salvage value of removed

equipment – value of any tax credits); and

- The increased supply costs resulting from the energy efficiency and/or demand response programs.

iii. Achievable potential.

Taking the analysis one step further, the utility ultimately must analyze each cost-effective energy efficiency or demand response program in terms of its “achievable potential.” This analysis is required to “consider the ability of the program design to overcome barriers to customer adoption,” including “market, financial, political, regulatory or attitudinal barriers.”

Energy Efficiency/Demand Response Program Criteria: The rule requires utilities to consider 13 factors when developing an energy efficiency or demand response program as part of its comprehensive portfolio plan. Among these criteria are: 1) cost-effectiveness; 2) potential for broad participation across customer classes; 3) amount of total energy savings; 4) non-energy benefits (i.e. those from low-income participation, reductions in greenhouse gas emissions and enhanced system reliability); and 5) the ability to integrate the program with those offered by other Ohio utilities.

Promising Measures Not Selected: Utilities are specifically required to identify all energy efficiency and/or demand response programs that have potential in the future but are currently not cost-effective.

IV. Rule 4901:1-39-04 – Portfolio Plan and Filing Requirements

Comprehensive Portfolio Plans: The rule requires that every electric utility “design and propose a comprehensive energy efficiency and peak-demand reduction program,” and file an initial program with the Commission prior to January 1, 2010. An updated program must then be filed by April 15, 2013, and every third year thereafter—thereby creating a three-year planning cycle for utilities.

In order for the Commission to approve a utility’s plan, the Commission must analyze the comprehensive portfolio plan from both a macro and micro level. First, the Commission will determine whether the entire portfolio plan as a whole is cost-effective. Then, the Commission will examine whether each specific energy efficiency and/or demand response program is cost-effective. The rules confirm, however, a program that is not cost effective can be included in a utility’s portfolio plan as long as it provides substantial non-energy benefits.

Contents of Portfolio Plan: The rule requires that a utility’s comprehensive portfolio plan contain the following:

- Executive summary;
- Description of how various stakeholders participated in developing the plan;
- Description of coordination efforts with other utilities;
- Description of existing energy efficiency and/or peak demand reduction programs and whether they should continue or be modified; and
- Description of proposed energy efficiency and/or peak demand reduction programs (i.e. objectives, duration, implementation approach, costs)

Objections: Any person can file objections to a utility’s portfolio plan within 60 days after it is filed. The objections must be specific and identify any proposed alternatives or modifications. A hearing then must be held at which the utility bears the “burden to prove that the proposed program portfolio plan is consistent with the policy of the state of Ohio. . . and meets the requirements of section 4928.66 of the Revised Code.”

V. Rule 4901:1-39-05 – Benchmarks and Annual Status Reports

Filing of Initial Benchmark Report: Within 60 days of the effective date of Chapter 4901:1-39, each utility must file an initial benchmark report establishing “energy and demand baselines for kilowatt-hour sales and kilowatt demand for the reporting year.” The rules require that the baselines be normalized to account for weather, changes in number of customers and other changes outside of the utility’s control. Under SB 221, the baseline for measuring energy efficiency constitutes the average of total kilowatt hours utilities sold during the preceding three years, while the baseline for measuring peak demand reduction is the average peak demand on the utility in the preceding three years. See 4928.66(A)(2)(a). In simpler terms, the rule calculates the baseline based on a “rolling average.” For example, in 2010, the baseline would be the average in 2007-2009; while in 2015, the baseline would be the average from 2012-2014. Utilities may file an application requesting a reasonable adjustment to the baseline.

Annual Status Reports: Utilities must file annual status reports by March 15 of each year, beginning on March 15, 2010. As part of the annual status report, a utility must include at least the following information:

- A compliance demonstration, including but not limited to details regarding the actual energy savings and peak demand reductions achieved relative to the corresponding SB 221 baselines;
- An affidavit indicating whether the statutory benchmarks were achieved;
- A program performance assessment, including but not limited to whether the utility successfully implemented the energy efficiency and peak demand reduction programs in its portfolio;
- A recommendation whether each energy efficiency and peak demand reduction program should “be continued, modified or eliminated;” and
- An evaluation, measurement and verification report documenting the energy savings, peak demand reductions and cost-effectiveness of each program.

Measurement and Verification: An emphasis during the rule-making process was the development of measurement and verification guidelines to determine the actual energy savings resulting from the implementation of energy efficiency and demand side management measures. To establish such guidelines (including a technical reference manual establishing measurement and verification protocols), the Commission opened two dockets to address these issues – PUCO Case Nos. 09-512-GE-UNC and 09-714-EL-UNC. The Ohio electric utilities jointly filed a [preliminary technical reference manual](#) on October 15, 2009. Interested parties and stakeholders have since filed numerous comments on the technical reference manual.

Independent Third-Party Evaluators: As part of each annual status report, an independent, third-party evaluator must file a report documenting their activities and conclusions regarding energy savings and peak demand reductions as well as an evaluation of portions of the utility’s annual status report.

The Commission’s Entry on Rehearing clarified that the selection of the third-party evaluator will “mirror the long-established process currently used to select and hire external auditors in gas GCR cases and similar proceedings.” Once selected, and hired by the utilities, the independent third-party will work under the direction of the Commission Staff. Just recently, the Commission selected ECONorthwest as its Independent Program Evaluator through an RFP process.

Adjustments to Programs: The rules indicate that a utility retains the power to “change its program mix or budget allocations” between programs as long as notice is provided to parties involved in the portfolio plan docket. The Commission’s Entry on Rehearing clarified that this power only extends to changes totaling less than 25 percent of the entire portfolio plan. More significant changes will need to be addressed as part of the utility’s next portfolio review.

No Double Counting: The rule prohibits a utility from using energy efficiency and demand response programs required by law to

satisfy their annual benchmarks in SB 221. For example, replacing incandescent lighting with compact fluorescent lighting” would not count toward the energy efficiency benchmark if such a replacement becomes mandatory under the Energy Independence and Security Act of 2007. The Commission justified the rule by pointing out that utilities should not benefit from “measures that would have happened regardless of their efforts.” Additionally, the Commission indicated that it would wait to see whether federal energy efficiency benchmarks were established before addressing the double counting issue in the context of federal/state requirements.

Satisfying Peak Demand Benchmarks – Rule 4901:1-39-05(E): The rules expressly state that the peak demand reduction benchmarks can be achieved by:

1. Coincident peak demand savings from energy efficiency programs (defined as expected energy savings from programs during June-August from 3-6 pm);
2. Demand response programs that actually reduce peak demand; or
3. Demand response programs capable of reducing peak demand, and
 - a. The program is included as a capacity resource under the tariff of a FERC-certified regional transmission organization; or
 - b. The program is similar to one approved by FERC and has been approved by the Commission.

Special Arrangements with Mercantile Customers: The rule specifically allows electric utilities to enter into a special arrangement with any mercantile customer in order to integrate the customers’ energy efficiency and/or peak demand reduction programs with those of the utility. Either the utility or individual customer can initiate proceedings to integrate their resource with those of the utility. Any special arrangement is required to address coordination issues, identify the qualifying circumstances, give the utility and Commission the power to measure and verify energy savings/peak demand reductions, and indicate the penalties for non-compliance by the customer.

Presumption for Mercantile Customer Programs: In order to help mercantile customers qualify their energy efficiency and demand response programs, the Commission created a presumption in the rules. This presumption is that mercantile customer projects are deemed part of a demand response or energy efficiency program to the extent the project either: 1) provides for the early retirement of fully functioning equipment; or 2) achieves energy savings or peak demand reductions that exceed the reductions that would have occurred if the mercantile customer used standard new equipment.

Banking Surplus Energy Savings: The energy savings above and beyond that required to meet the energy efficiency benchmarks may be used toward either the energy efficiency or advanced energy targets (but not both) in a later year. Banking is not allowed for demand response programs.

Waiver of Benchmarks: The rules give the utilities the ability to file an application to waive all, or part, of compliance with the energy efficiency and demand response benchmarks IF the benchmarks are not reasonably achievable based on “regulatory, economic, or technological” reasons beyond the utility’s control. The Commission then retains the discretion whether to grant the waiver. Likewise, to the extent peak demand forecasts “do not materialize for economic reasons,” a utility may be granted a waiver of the “difference between actual performance and expected performance.”

VI. Rule 4901:1-39-06 – Review of Annual Reports and Third-Party Verification

Within 30 days of the filing of the annual status report, any person can file comments with the Commission. Following the close of the comment period, the Commission Staff is to issue its findings and recommendations as part of a Staff Report. The

Commission also retains the power to hold a hearing on such reports and/or take remedial actions (e.g. issue forfeiture penalties) for demonstrated non-compliance with the benchmarks.

VII. Rule 4901:1-39-07 – Recovery Mechanism

Revenue Decoupling Mechanisms: SB 221 allows utilities to recover, through a revenue decoupling mechanism, certain costs associated with the implementation of energy efficiency and demand response programs, lost distribution revenues and shared savings. See R.C. 4928.66. In addition, R.C. 4928.66(D) specifically notes that an application for a revenue decoupling mechanism is not to be considered an application to increase rates. Rule 4901:1-39-07 allows interested persons 30 days after the utility's filing for recovery to file objections. When the application appears unjust or unreasonable, the Commission retains the discretionary power to hold a hearing.

Commission Approval: In order for the Commission to approve a revenue decoupling mechanism, the utility must prove that it: 1) provides for the recovery of revenue that otherwise would be lost by the utility as a result of the energy efficiency or demand response programs; and 2) reasonably aligns the interests of the utility and its customers in favor of the program. See R.C. 4928.66(D). Any approved rate adjustment mechanism is subject to annual reconciliation.

Exemptions from Revenue Decoupling Mechanism: Under this rule, a utility may exempt from any revenue decoupling mechanism a mercantile customer that commits its programs for integration into the utility's own programs. An individual customer may apply individually or jointly with the utility for such an exemption (as discussed more fully below). The only limitation is that the Commission must first determine that such an exemption reasonably encourages such customers to commit their capabilities to the utility's programs.

VIII. Rule 4901:1-39-08 – Integration by Mercantile Customers

Exemption from Recovery Mechanism – OAC 4901:1-39-08(B): As mentioned above, a mercantile customer, either individually or jointly with a utility, can request an exemption from the cost recovery mechanism provided for in OAC 4901:1-39-07. To be eligible for this exemption, the mercantile customer must: 1) agree to provide an annual report on the energy savings and peak electricity demand reductions achieved at the customer's facilities in the most recent year; and 2) demonstrate that the energy savings and peak demand reductions are from investments that meet the Total Resource Cost Test. The contents of the annual report must include the following:

- Statement differing between programs begun before and after January 1, 2009;
- Impacts to the baselines from energy efficiency and peak demand reduction programs committed to the utility;
- The amount of energy savings and/or peak demand reductions for programs initiated before January 1, 2009, in the baseline period;
- An accounting of the energy saved and peak demand reductions in the previous year as a result of the mercantile customers programs calculated "by subtracting the energy use and peak demand associated with the customer's projects from the estimated energy use and peak demand that would have occurred if the customer had used industry standard new equipment or practices to perform the same functions;"
- Recognition that mercantile customer-sited programs integrated into the utility's programs are excluded from the calculation of the utility's baseline;
- A list and description of mercantile customer projects implemented, including the "number, type and efficiency levels both of the installed equipment and the old equipment being replaced;"

- Costs of each project to the mercantile customer; and
- Timeline indicating when each project/measure went into effect and when the energy savings and/or peak demand reductions began.

Authors



Matt Warnock

Partner & Energy Industry Group Chair

Cleveland

614.227.2388

mwarnock@bricker.com