

**Comments on Proposed Rule Review of Ohio's Energy Efficiency Programs (Case No. 13-651-EL-ORD),
Alternative Energy Resource Standard (Case No. 13-652-EL-ORD), and to Implement Am. Sub. S.B.
315 (Case No. 12-2156-EL-ORD)**

Comments Filed Jointly by Ormat, Broad USA, American Council for an Energy Efficient Economy (ACEEE), CHP Association, Heat is Power Association, New Morning Energy LLC, Environmental Defense Fund, Medical Center Company, Ohio Environmental Council, and the Energy Resources Center at the University of Illinois at Chicago

I. General Comments:

Case No. 13-651-EL-ORD - Energy Efficiency Programs:

1. The proposed rule provides guidance on how a customer can seek an incentive through the state's mercantile self-direct program, but the rule does not provide directions to electric distribution utilities (EDUs) on how to incorporate Combined Heat and Power (CHP) and Waste Energy Recovery (WER) into their energy efficiency portfolio plans. This is problematic because program consistency across utility territories is essential. Too much variation among EDUs in how they calculate savings from a CHP system, how they are structure incentive payments, the length of time savings can be committed to the utility, etc., will establish at best a very confusing environment for CHP and WER developers, and at worst, a very unfair system in which some customers miss out on incentives due to poorly designed programs in their territory. This is not to say that utilities should not have the flexibility to offer a different rate per kilowatt hour for an incentive, but a universal methodology for calculating savings and a structure of how incentives are earned is absolutely essential to meaningful market development.

2. The proposed rule is too vague in some critical areas and too prescriptive in others. On the one hand, utilities have complete discretion to determine the length of savings credit and the timing of cash payments. In addition, the proposed rule gives no direction to EDUs on whether a CHP or WER system can qualify under EDU custom programs, or what minimum requirements should go into a CHP/WER-specific program designed by the utility in its energy efficiency portfolio plans. This lack of clarity raises many questions among customers and CHP and WER developers and vendors, including: can customers get a portion of their total incentive up front or must it be an annual incentive earned beginning 12 months after a system has been installed? Are there maximum incentives that can be earned on a project basis that are not apparent in the proposed rule?

On the other hand, the proposed rule is very prescriptive. Despite all the EDU discretion, if the customer chooses to seek an incentive through the mercantile self-direct cash option, the proposed rule sets a maximum per kilowatt-hour incentive for CHP and WER. The maximum rate stated in the draft application materials of \$0.005 per kilowatt hour raises many questions as well. The most obvious is whether this is sufficient incentive to promote new projects in Ohio as envisaged by SB 315 (see discussion below). In addition, does this maximum rate for the mercantile self-direct cash option preclude an EDU from offering a different incentive rate in a custom program, in a CHP/WER-specific program or via a reasonable arrangement?

3. While it is known that this rate was selected based on what EDUs pay for behavioral programs, it is not entirely accurate that behavioral programs and CHP/WER systems can be compared one-for-one. Unlike behavioral programs, CHP and WER systems often become systems within a facility's operations, and are critical to the overall electrical and thermal functions within the facility. Customers and CHP/WER developers more often than not make commitments to minimum hours of annual operation, and systems use well-established technologies, with well-established efficiencies, including manufacturer guarantees. Historical data demonstrates that CHP and WER systems are highly reliable, with only 4% down-time on average. While they are scheduled for maintenance that requires them to shut off from time to time, scheduled maintenance can occur during off-peak hours. Scheduling planned maintenance during off-peak hours leads to a CHP and WER system being online and operational 98% of the time. These factors place CHP and WER systems into their own category - not entirely like a traditional energy efficiency measure, but not entirely like a behavioral program. These reasons support a strong argument for a higher per kilowatt hour incentive.

Case No. 13-652-EL-ORD - Alternative Energy Resource Standard:

1. Per the policy set forth in Ohio Senate Bill 315, WER technologies are qualified resources for meeting the renewable energy resource benchmarks. The proposed rule essentially incorporates WER into the existing system to certify electricity produced from recovered waste energy for renewable energy certificates or RECs. We commend this simple inclusion, as it is easy to understand from the WER developer and customer standpoint, and easy to administer on behalf of the Commission and the Ohio Power Siting Board.

II. Proposed Rule Attachment - Timing of Cash Payments, and the "Life of the Measure"

Timing of Cash Payment:

On account of the capital-intensity of CHP/WER system installations receiving cash payments in a timely manner is very critical to getting a project developed. Beyond actual installation of a system that often comes with some periodic interruption of operations at the site that must be timed adequately, systems must be highly engineered in order to ensure proper sizing for thermal load, and achievement of highest efficiencies. In short, developing a CHP or WER system involves extensive planning, design and engineering prior to actual construction, installation and finally, operation. It would be highly desirable to allow for compensation during this preliminary design and engineering phase.

The Life of the Measure:

For what period of time can the utility claim the savings, i.e., what will be considered "the life of the measure"? For the cash payment option under the mercantile self-direct program, it is unclear for how long the utility can claim energy savings, and for how long the customer can commit those savings to their utility. Equally important, the proposed rule does not set a standard or issue guidance for EDUs on how to incorporate any EDU-run custom program or CHP/WER-specific program within their current or future energy efficiency portfolio plans. Standardizing how long energy savings can be committed to the EDU for *all* the paths to developing CHP and WER as an efficiency measure (EDU efficiency custom program, EDU portfolio program, mercantile self-direct program) will ensure consistency across all EDU service territories. This consistency is key to establishing certainty in the CHP/WER development marketplace, as customers, vendors and developers will be able to calculate anticipated cash payment level, the timing of the payment, and the length of time the customer is able to commit their savings to the EDU. These considerations are critical in determining the economics of a potential project, return-on-investment, payback periods, etc.

If the proposed rule does not prevent a customer from claiming energy savings for the maximum time period (11 years based on the Energy Efficiency Resource Standard sunset in 2025), this would be a boon to the first projects developed in 2014 and 2015, but would put other customers and developers at a disadvantage. For example, if a customer begins construction on their project in 2017, and is eligible to receive a maximum of 1/2 cent per kilowatt hour for the maximum number of years, it will only be able to receive a payment for eight years, shrinking the total amount it could receive. This scenario is undesirable because it will cause a precipitous drop in CHP and WER deployment in the later years of the EERS.

Recommendations:

1. Provide rule clarity by explicitly stating the maximum number of years energy savings can be claimed and energy savings can be committed to the EDU whether the project is developed under the mercantile self-direct cash option, an EDU custom program, or an EDU-specific program. We recommend using the anticipated sunset date of the EERS in 2025. This will establish consistency with the criteria for customers who have chosen the mercantile self-direct rider exemption option, and ensure predictability for customers, developers and vendors no matter where they are developing a project.
2. Establish clearly in the rule that customers have the ability to seek, and receive, some of their total incentive at the time of project commissioning or during the design and engineering phase of the project, no matter which way a customer chooses to seek the incentive - the mercantile self-direct cash payment option, an EDU custom program or a CHP/WER-specific efficiency program. This would allow for an incentive to be front-loaded at the beginning of the development of a CHP and WER project.

III. Proposed Rule Attachment - Calculation Method for Determining Electrical Savings of CHP & WER Systems

One of the goals of Ohio Senate Bill 315 was to establish a friendlier marketplace for CHP and WER deployment in Ohio. Prior to Ohio Senate Bill 315, it was unclear where CHP and WER technologies were situated in terms of utility programs and overall utility systems. Senate Bill 315 established that the policy of the state is to treat CHP and WER as energy-saving technologies under the state's EERS, and WER can also qualify as a renewable resource under the state's Alternative Energy Resource Standard (AERS). As such, the newly-defined marketplace for CHP and WER development in Ohio should be encouraged state-wide, regardless of the EDU territory in which a system is installed/constructed.

Having a standard approach for calculating the amount of kilowatt hours saved, particularly for CHP systems, is of the utmost importance to establishing a predictable and consistent market for system developers, vendors and customers. If there is too much variation on how energy savings are calculated between each EDU, then meeting the intent of Ohio Senate Bill 315 will be tremendously difficult.

The rule, as drafted, seems to establish an energy savings calculation method that is one-for-one. In other words, 100% of electrical output in kilowatt hours equals kilowatt hours saved, for the purpose of committing savings to the utility, and the utility applying those savings towards its annual benchmarks.

For WER projects this is a completely logical approach, as Section 4928.01(A)(38) of the Ohio Revised Code defines an eligible WER project in a way that requires only energy generated by exhaust heat or waste energy from gas line pressure drop technologies, given that the electricity generated requires no additional fuel.

In regards to conventional CHP, some would argue that this approach does not account for total energy savings, and under the goals of the EERS policy of saving electricity, an output-equals-savings model does not necessarily incentivize the appropriate aspects of a CHP or WER system. However, it is clear that the proposed rule intends for the incentive provided through the mercantile self-direct program to be the equivalent of a production incentive. Accordingly, as long as the CHP system meets the minimum efficiency threshold of 60%, with 20% of the useful energy being thermal energy, full credit can be given for kilowatt hours generated.

However, the draft rule does not seem to preclude an EDU from establishing its own CHP/WER program that could potentially mandate an electrical savings calculation that, by design (intentionally or unintentionally) underestimates or overestimates electrical savings. By comparison, a different EDU could establish a CHP/WER program with an entirely different electrical savings calculation method that appropriately assesses kilowatt-hours saved. This scenario would be unfair to customers and/or system owners because it would mean that depending on which utility a customer or developer would be working with could yield entirely different results in terms of how many kilowatt hours could be committed to the EDU, and thereby inflate or deflate the total available incentive.

The draft rule stipulates that customers who have received an incentive for CHP or WER project via the mercantile self direct program must submit an annual report to the Commission that includes a number of elements about system performance, customer baseline, kilowatt hours saved, etc. The requirement for this report, in conjunction with the information required at the outset in the application, seems to indicate that there be some level of performance metrics established and then measured and verified after a period of the system's operation. Therefore, can it be construed that the draft rule is establishing a performance-based system in which the level of incentive is granted to the customer based on the actual performance of the system? If so, we commend the Commission for utilizing this approach as it is highly administrable, predictable from a market standpoint and allocates utility incentives based on actual performance in lieu of incentives being awarded based on a predictive formula that may or may not accurately or consistently assess electricity savings.

Recommendation:

1. In order to ensure that each option for customers provides a predictable method by which electrical savings will be assessed, we recommend that the Commission clearly state in the rule a universal electrical savings counting method. The draft rule should include instruction to the EDUs that the universal savings calculation method is to be used for any existing custom or pilot program, as well as any future program for CHP and WER. This universal savings calculation method would also be prescribed for any customer seeking an incentive through the mercantile self-direct program.

A universal electrical savings calculation method is ideal for establishing predictable market conditions for CHP and WER development in Ohio. While there may be some variation between utilities in terms of how much they will pay per kilowatt hour, having a process for determining energy savings that provides certainty and is easy to administer will carry out the intent of Senate Bill 315, which was to improve the market and regulatory environment for CHP and WER.

IV. Proposed Rule Attachment - Maximum Per Kilowatt-hour Incentive

Generally speaking, there are four key elements that need to be considered in order to determine a cash payment through the mercantile self-direct program. They are: 1) how many kilowatt hours will be counted as savings; 2) the price per kilowatt hour that the utility will pay; 3) the life of the measure, i.e., how long the savings will be committed to the utility by the customer; and, 4) the schedule for incentive payments. Assessing a reasonable approach and figure in each of these categories will ensure a fair exchange between the customer and the utility. However, the proposed rule locks in only one of these elements - the price per kilowatt hour paid by the utility - making the incentive offered under the mercantile self-direct cash option woefully low.

If a customer is able to account for multiple years – 7, 10 or 15 for example – then the proposed maximum per kilowatt hour incentive may be adequate. However, if a customer installs a system in 2016 or 2017, for example, the total incentive available to them is even lower.

When examining other states' programs, performance-based incentives have been shown to be an effective way to encourage more CHP and WER deployment. For example, the State of Maryland's EmPOWER Act of 2008 initiated a program by which all three of the state's IOUs have similar performance-based incentive programs for certain CHP system types that meet a minimum efficiency of 65 percent. The programs provide eligible CHP systems with a "production incentive" of \$0.07/kWh for the first 18 months of the system's operation. In 2012, Baltimore Gas & Electric (BGE) approved 16 CHP system applications, with potential annual savings of 102,000 MWh.

Another example is the Massachusetts's Green Communities Act of 2008. This law called for a number of energy reforms in the state, including the establishment of an Energy Efficiency Resource Standard (EERS), termed the *Energy Efficient First Fuel Requirement*. Under the EERS, electric and gas utilities must prioritize cost-effective energy efficiency and demand reduction resources over supply resources, and submit three-year plans outlining how they plan to meet the requirement. Similarly, the MassSAVE Act programs provide rebates to CHP systems that pass a benefit/cost ratio test. Rebates are \$750/kW and funding is also provided for 50 percent of cost feasibility studies. Program results for 2011 showed that CHP systems represented 30 percent of commercial/industrial energy efficiency target savings; and the \$/kWh savings from CHP have been the least expensive of all Mass SAVE measures.

Lastly, a case currently pending before the Commission for a mercantile self-direct cash option, for a CHP system to be installed at Jay Plastics (Case No. 13-2440-EL-ORD), proposes a reasonable incentive of more than triple the draft rule's stated maximum incentive of \$0.005/kwh at \$0.01875/kwh

Recommendations:

1. Increase the allowable per kilowatt hour incentive of \$0.005/kwh for the mercantile self-direct cash payment option, to be on par with other states' programs, or at least on par with what utilities pay for other energy efficiency measures under their prescriptive and custom programs.
2. Clearly state in the rule that the total allowable incentive for the mercantile self-direct program does not preclude a utility from offering a higher incentive rate.
3. Clearly state in the rule that the guidance provided on the mercantile self-direct program does not preclude individual EDUs from designing a specific program for customers installing CHP or WER. The rule should encourage all EDUs to work with stakeholders through the quarterly collaborative meetings on possible program design, incentive structures, etc. and that each EDU should consider including a CHP/WER-specific program in their next energy efficiency portfolio plan.

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Summary: Comments Comments of the Ohio Coalition for Combined Heat & Power
electronically filed by Mr. Trent A Dougherty on behalf of Ohio Coalition for Combined Heat &
Power