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In the Matter of the Commission's )  
Review of Chapter 4901:1-22, Ohio )  
Administrative Code, Regarding )  
Interconnection Services. )

Case No. 12-2051-EL-ORD

COMMENTS

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The purpose of these comments is to offer clarifying information and a few suggestions to assist the electric Interconnection Services rules in Chapter 4901:1-22, Ohio Administrative Code (OAC), comply with Executive Order 2011-02K to "establish a common sense initiative". Under Executive Order 2011-OIK, the Commission must attempt to avoid negative unintended consequences that may unnecessarily impede business growth and to incorporate features into the draft rules to eliminate or adequately reduce any adverse impact defined in Section 107.52, Revised Code.

I offer these comments as the Staff author, now retired, of the original Public Utilities Commission of Ohio (PUCO) Interconnection Rules, crafted five years ago with the able assistance and expertise of colleagues like Staff engineer Majid Khan of the PUCO and others like him from state regulatory commissions and electric distribution systems with Institute of Electrical and Electronics Engineers (IEEE) expertise . Today I congratulate current Staff for their tireless effort to significantly simplify these rules.

**EXPEDITE THE INTERCONNECTION PROCESS**

The proposed simplified rules would maintain a Level Three review as the standard procedure for all systems that do not qualify or fail to meet level 1(simplified review)and level 2 (expedited review) interconnection review requirements and have a nameplate capacity of twenty megawatts or less. The Commission is seeking comments on whether this new procedure will simplify and expedite the interconnection process. This would be of particular interest for advocates of combined heat and power (CHP). The recovery of industrial waste heat for power is a largely untapped type of CHP, which is the

*use of a single fuel source to generate both thermal energy (heating or cooling) and electricity. CHP generally consists of a prime mover, a generator, a heat recovery system, and electrical interconnection equipment configured into an integrated system. CHP is a form of distributed generation, which, unlike central station generation, is located at or near the energy-consuming facility. [http://www.epa.gov/chp/documents/waste\_heat\_power.PDF]*

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Any expedited process that enhances industrial development and-once installed, lowers the cost of production, benefits the natural environment by “turning off the heat“ that would otherwise escape into the atmosphere as greenhouse gas, creates jobs for Ohioans and frees utility generating capacity so it can compete in the wholesale electricity market, is a worthy goal for Ohio. The use of CHP may be unique to each purpose or circumstance when installed by a manufacturer, a hospital, a university or technical school, or a commercial customer. For that reason, wise use should be made of rules for the interconnection process in order to actually expedite CHP deployment.

### FIELD TESTING

In paragraph (9) of the Entry, comments are sought to allow “field testing” of an interconnection customer’s equipment that has not been IEEE or UL certified. Staff suggests that one field test’s results might replace all subsequent testing of identical equipment in a service territory to speed up the process and prevent equipment from being repeatedly tested.. The utility company would maintain a database of “fieldtested”equipment for future reference by developers. Funny this should come up---again. In the early 2000s, a salesman bought up a job lot of secondhand windmills in Wisconsin and began to unload them in northern Ohio. They were large enough that they stood out enticingly on the skyline. Residents dipped into their savings and retirement income to buy a personal windmill. These machines were not certified either by IEEE or UL: they were too old. They featured out-of-date technology, some were bent, others were broken, No amount of “field-testing”was going to make them like new. Some residents--resourceful enough to repair these vintage machines, were also capable of starting them up thus contributing to a brief spate of “windmill” anarchy.

A dozen years ago when the windmill incident occurred, there wasn’t much distributed generation or renewable around, but by 2010, Jay Warmke tells us, renewable energy accounted for 55% of all domestic new generating capacity [*when the biomass hits the wind turbine: how we got ourselves into this mess, and how we are going to get out of it*, BRS Media (2012) at 326]. Not all this capacity is in your neighbor’s back yard, but there may be solar panels on her roof and the Wal\*mart on the corner may be running it own generators. Which is to say that what may work as a “field test”today may be changed by system conditions tomorrow. Better the utility company’s system operator knows what to expect than to be surprised by an unplanned

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event caused by a customer's "mystery" equipment. Thus, where unique CHP projects are concerned, it will be the results of any facilities, system, or impact studies related to the effects the CHP's power production may have on the utility company's system and on other customers that are more important than worrying about non-existent results of an equipment manufacturer's tests.

## FINANCIAL RISK MANAGEMENT

Paragraph (10) of the proposed rules creates a framework for minimizing financial risk-- particularly for the utility company, associated with infrastructure modifications to accommodate a customer's interconnection requirements. Specifically, the Entry asks should the rules be revised to specify certain types of financial security instruments that could be posted by an applicant in a three-phase process for posting securities to guarantee that the utility company's interconnection-related accrued costs are recovered.

It should be noted the existing rules already require the customer to pay proportional filing fees based on the capacity size of the customer's production facility as well as the utility company's actual costs of facilities, system and impact studies, company's engineering time, minor modifications and upgrades to the utility company's system as well as interconnection facilities and distribution upgrades identified in the facilities study. The existing rules "Uniform Requirements for Interconnection Agreements" section (F) Insurance, "prohibit the utility company from requiring insurance... or any other suitable financial instrument to cover construction, operating and liability responsibilities of the interconnection customer [emphasis added]" The "three-phase financial instruments suggested by the proposed rule look suspiciously like an end-run of this prohibition. The utility company should not take on the role of a bank, or a securities trader or "a payday lender." That is not the utility company's core responsibility.

The cost of adding combined heat and power operations to an industrial or large commercial customer's premises may not appear cost effective at the moment (industrial electric rates have traditionally tended to be "negotiated" in Ohio and as such are not subject to a lot of change or any other factors that might add to uncertainty. Most institutional or commercial customers' rates on the other hand are not so liquid and are often stuck in the least politicized rate structure.)

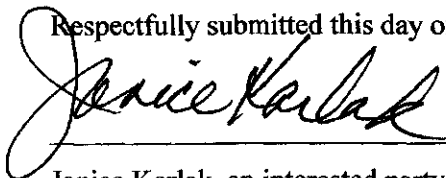
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Warmke tells us, however, that the cost of new coal-fired power plants are ranging from \$3,000 to \$4,000/kW--placing the cost of a new 500MW plant just under \$2billion (Warmke at 304-305) Building a new power plant is not a decision to be taken lightly. (Warmke at 305.) Natural gas-fired plant cost of producing gas from a brand new well = \$6-8.00/MMBtu [one million British thermal units or one thousand cubic feet 1Mcf]. Horizontal hydraulic fracturing adds a dollar or two per MMBtu to the cost of production." (Warmke at 313) When the cumulative cost of central station power and delivery outweighs the long-run marginal cost of using the waste heat generated in the next room, CHP may well turn the corner in the minds and on the spreadsheets of its potential producers.

#### THE INTERCONNECTION QUEUE AND CONFIDENTIALITY

Paragraph (12) The Commission is also seeking comments on whether the interconnection rules should require that the interconnection queue be made publicly available, much like the PJM queue. A publicly available interconnection queue could provide developers and utility companies with greater predictability regarding the feasibility and costs of interconnecting at a certain location. On the other hand, the population of potential industrial and commercial CHP producers in that area may wish to keep the "trade secrets" of their unique industrial processes confidential from competitors for real estate and market share.

Respectfully submitted this day of Monday, November 19, 2012,



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