April 20, 2018

General Counsel Beth E. Heline
Indiana Utility Regulatory Commission
101 West Washington Street, Suite 1500 E
Indianapolis, IN 46204

Re: Indiana Utility Regulatory Commission's Backup Maintenance Supplemental Power Rate Review

Dear General Counsel Heline,

The Alliance for Industrial Efficiency (the "Alliance") appreciates the opportunity to submit comments in response to the Indiana Utility Regulatory Commission (the "IURC") Backup, Maintenance, and Supplemental Power Rate Review. The Alliance is a diverse coalition that includes representatives from the business, labor, contractor and academic communities, including over 190 members in Indiana alone. We are committed to enhancing manufacturing competitiveness and reducing emissions through industrial energy efficiency, particularly through the use of clean and efficient power generating systems such as combined heat and power (CHP) and waste heat to power (WHP).

We greatly appreciate the effort of the IURC to seek input from stakeholders on the state's electric utilities' backup, maintenance, and supplemental power rates. As elaborated below, standby tariffs can present a significant barrier to CHP deployment by increasing costs for CHP hosts, making it more difficult for projects to pencil out. Our comments include recommendations for standby rate design best practices to help inform your review.

About CHP and WHP in Indiana

By generating both heat (thermal energy) and electricity from a single fuel source, CHP dramatically increases overall fuel efficiency—allowing utilities and host companies to effectively "get more with less." CHP more than doubles the fuel efficiency of a conventional plant, using more than 70 percent of fuel inputs—compared to fossil-fueled power plants, which have an average efficiency of 33 percent.[1] WHP systems recover waste heat and use it to generate electricity with no additional fuel and no incremental emissions. As a consequence, CHP and WHP can produce electricity while lowering costs for both host companies and all Indiana ratepayers.

[1] U.S. Environmental Protection Agency, Mar. 21, 2016, "CHP Benefits" (https://www.epa.gov/chp/chp-benefits).

In addition to its efficiency benefits, CHP enhances electric reliability in two major ways. First, CHP and WHP systems alleviate burdens on transmission and distribution lines because they depend on localized, on-site electricity generation at existing facilities. In this way, CHP and WHP can help avoid costs associated with investment in and construction of transmission infrastructure. Second, because CHP systems have the ability to operate independently of the grid, they can provide reliability during a power outage. Since 2005, the U.S. has experienced numerous natural disasters including tornadoes, Superstorm Sandy, and hurricanes such as Katrina, Rita, Ike, Harvey, Irma and Maria. Critical infrastructure and manufacturing facilities with CHP and an islanding switch have been able to keep the lights on during power outages that occurred during these disasters. Because of its resiliency and reliability benefits, CHP should be a key element of Indiana's broader efforts to modernize its electric grid and make it more reliable.

Fair and reasonable standby rates will help Indiana tap into its substantial remaining opportunity to increase deployment of CHP. According to a technical potential survey from the Department of Energy, Indiana has 4,610 MW of CHP technical potential capacity (identified at 7,273 sites) with 2,151 MW of remaining onsite technical potential in the industrial sector alone.[2] Yet, deployment lags far behind this potential. Currently, the state has 37 CHP sites, generating 2,457 MW of clean and efficient power.[3] A 2016 report from the Alliance for Industrial Efficiency found that if an economically viable portion of the state's CHP and WHP was deployed,[4] Indiana's industrial sector customers would save $1.2 billion on electricity costs from 2016 to 2030,[5] demonstrating the importance of CHP to increasing manufacturing competitiveness.

Indiana is particularly well-positioned for CHP growth because of its large industrial base and the availability of natural gas. Manufacturing accounts for 30 percent ($95 billion in 2013) of the total gross state product and employs over 17 percent of the workforce.[6] Indiana's industrial sector consumed nearly 46 percent of the total energy used statewide in 2013 (or 1,305 trillion

[2] U.S. Department of Energy, Mar. 2016, "Combined Heat and Power (CHP) Technical Potential in the United States" (http://energy.gov/sites/prod/files/2016/03/f30/CHP%20Technical%20Potential%20Study%203-18-2016%20Final.pdf).
[3] U.S. DOE Combined Heat and Power Installation Database, (https://doe.icfwebservices.com/chpdb/state/IN).
[4] To estimate what portion of on-site CHP and WHP potential could be considered economic, we relied on findings from a 2013 AGA study. That study split technical potential into three categories: less than a 5-year payback, a 5- to 10-year payback, and more than a 10-year payback. We limited our analysis to potential in the first two bins (assuming investments with longer payback would not be made). This tells us what percent of technical potential could be considered to have a strong or moderate economic potential in a given state. We applied this percentage to DOE's most recent estimates of total on-site technical potential.
[5] The Alliance for Industrial Efficiency, Sep. 2016, "State Ranking of Potential Carbon Dioxide Emission Reductions through Industrial Energy Efficiency" (http://alliance4industrialefficiency.org/wp-content/uploads/2016/09/FINAL-AIEState-Industrial-Efficiency-Ranking-Report_9_15_16.pdf). Unpublished data on results from CHP and WHP deployment alone.
[6] National Association of Manufacturers, Feb. 2015, "Indiana Manufacturing Facts," (http://www.nam.org/Data-and-Reports/State-Manufacturing-Data/2014-State-Manufacturing-Data/Manufacturing-Facts--Indiana/).

British thermal units).[7] Increasing CHP and WHP deployment in the state will ultimately help Indiana's industrial sector become more efficient, productive, and competitive.

However, CHP has sizable up-front costs that can range from $1,400 to $4,30 per kilowatt (kW) capacity.[8] For a 2 MW CHP system, this translates to a $2.8-million to $8.6-million investment. As elaborated above, CHP systems offer long-term energy and economic savings; however, burdensome standby rates detract from these benefits and make it more difficult for projects to pencil out.

Recommendations for Standby Rates in Indiana

We commend the IURC for working with utilities in the state so that they will adopt fair and transparent standby tariffs, which allow utilities to recover costs and encourage reductions in peak load. As you move forward with this process, we urge to IURC to examine the rates against the following guiding principles:

Actual costs:

- Tariff demand charges should be proportionate to the customer's reliance on the utilities' generation, transmission and distribution resources for standby service (i.e., demand charges should be calculated based on daily kWh used or a daily rate that is proportionate to the monthly rate charged to full-time use customers under the applicable base tariff).
- Where fixed charges (such as Reservation Fees) are employed, they should be based on the CHP system's actual Forced Outage Rate or a good approximation of that rate (e.g. the equipment class outage rate for CHP systems is less than 5 percent) – this will encourage hosts to install more reliable systems.
- Tariffs should distinguish between peak and off-peak outages to encourage scheduled outages to occur during periods of low demand.
- Tariffs should incorporate reasonable price differentials for scheduled and unscheduled maintenance to encourage hosts to perform scheduled maintenance, which will reduce unscheduled outages.
- Charges should take into account not only the marginal impact of the small percentage of random, unplanned outages, but also the off-setting substantial benefit provided by reliable distributed generation in reducing base load demand on the grid during both peak and non-peak periods.
- A tariff should allow for shared transmission and distribution facilities.

[7] U.S. Energy Information Administration, "Indiana: State Profile and Energy Estimates," December 2015 (https://www.eia.gov/state/?sid=IN#tabs-2).
[8] U.S. Environmental Protection Agency, Sept. 2017, "Catalog of CHP Technologies" (https://www.epa.gov/sites/production/files/2015-07/documents/catalog_of_chp_technologies.pdf).

No penalties/ratchets:

- Utilities should eliminate “demand ratchets” – tariffs based on the customer’s maximum metered peak demand, rather than the current month’s power use.

Customer choice:

- Customers should be allowed to purchase standby service on an interruptible basis (if appropriate for their business) and avoid generation reservation demand charges.
- Where regulations permit, customers should be able to purchase standby service (i.e., backup and replacement power) from competitive power providers at prevailing market prices.

Transparency:

- Generation, transmission, and distribution charges should be unbundled.
- Utilities should provide an online bill calculator to enable prospective hosts to make more informed decisions.
- Utilities should include in their Standby Tariff a standardized, brief summary of charges.

Coordination between utilities and customers:

- Utilities should encourage scheduled CHP system maintenance at off-peak times by offering a price reduction or credit for scheduled maintenance.
- CHP hosts should be encouraged to coordinate with their utilities to determine the best times for planned maintenance. By encouraging routine scheduled maintenance, CHP systems will be less likely to experience unexpected outages.
- The IURC may also consider requiring coordination between CHP hosts and utilities, with the goal of shifting maintenance to shoulder months and/or off-peak periods.
- Where market regulations permit, utilities should work with their customers to allow CHP/WHP users to buy backup power at market rates, purchase replacement power, and offer a self-supply option for reserves.

NIPSCO’s Rider 776 embodies many (but not all) of these best practices. This rider better reflects best practices of proportionality of costs imposed on the utility by standby use, than do the other tariffs, which are based on the assumption that a standby customer imposes the same costs as does a full-time customer. The IURC should look to replicate these best practice elements in other tariffs.

Conclusion

For all of the reasons stated above, the Alliance urges the IURC to ensure standby rates are fair and reasonable, thus encouraging more CHP and WHP deployment in the state. Standby rates should be transparent and designed to send a clear price signal for the most efficient interface between utility and CHP and WHP resources. We believe that the recommendations contained herein could help encourage additional deployment by ensuring that standby rates for all Indiana utilities are fair and transparent. Adopting this approach will keep electricity costs lower for all consumers and help cut electricity, heating and cooling costs for Indiana manufacturers, making them more competitive.

We look forward to continuing to work with the IURC as this process continues and are very grateful for your leadership in this area.

Thank you for your consideration.

Sincerely,

Jennifer Kefer
Executive Director
Alliance for Industrial Efficiency