**AUGUST 15TH, 2025**

Dr. Bradley Borum
Director of Research, Policy, and Planning
Indiana Utility Regulatory Commission
Via electronic mail (bborum@urc.in.gov)

**Re: ACEEE Comments on Indiana Michigan Power Company's 2024 Integrated Resource Plan**

Dear Dr. Borum,

The American Council for an Energy-Efficient Economy (ACEEE) is a nonprofit research organization based in Washington, D.C. that for more than four decades has been a leader on energy efficiency (EE) research and analysis. We engage on related policy issues at the national, state, and local levels and share these comments on Indiana Michigan Power Company's (I&M) 2024 Integrated Resource Plan (IRP) with the Indiana Utility Regulatory Commission (Commission).

As you know, electricity demand and costs are rising rapidly, especially in areas served by PJM. I&M's IRP forecasts a doubling of peak load from 2023 levels by the end of 2030 "primarily associated with hyperscale (HSL) business development", which is projected to make up an astonishing 60% of I&M's peak load that year. With a retiring coal plant, constrained supply and interconnection queues for new generation, and federal tax credits for new generation ending prematurely, the challenges for keeping the lights on at an affordable cost are clear. We believe some of the solutions for I&M are as well: increasing investment in efficiency and demand flexibility.

ACEEE is currently undertaking a major research initiative on the role of demand-side management to address the rapid, unprecedented load growth that is occurring across the country, to be published this winter. Energy efficiency and demand flexibility have long been recognized as least-cost energy resources, which can be deployed faster than construction of new power plants while avoiding the risk of stranded assets if load forecasts exceed actual load growth. In addition to our comments below, we hope that our forthcoming research can provide information to help I&M and the Commission develop, evaluate, approve, and implement additional efficiency and demand flexibility programs that lower energy costs and help meet the needs identified by the IRP.

We commend I&M for undertaking a market potential study, and attempting to apply that market potential study into the IRP process. While we have not had the time or resources to fully examine every aspect of either the market potential study or how that study was incorporated into the IRP and the Preferred Portfolio Development (PPD), the summary data appears to show some areas where the company could achieve significantly higher levels of savings than were ultimately incorporated into the PPD.

As a starting point, the PPD adds just 33 MW of capacity from demand resources (efficiency, demand response, distributed resources, and conservation voltage reductions) in 2026, then adds subsequently less incrementally in each year until it peaks at 148 cumulative MW in 2031, and cumulative achievement then declines through the end of the plan. However the 'realistic potential' in I&M's own market potential study – for the moment setting aside any concerns with the study itself– show that more than twice that the proposed level of cumulative MW is realistically achievable from those same sources through 2031 and continuing through the 20-year time frame. At a minimum this suggests that I&M could realistically double its proposed achievement of energy efficiency and demand flexibility in the short term through 2031 - and increase it ten times the levels in the PPD by 2044 to more than 1,000 MW. Why I&M's preferred portfolio would gradually decrease annual incremental achievement of demand resources until those incremental resources vanished entirely after 2031 is unclear and will result in significantly higher costs for customers.

In regards to demand flexibility and energy efficiency program savings, the PPD is completely contrary to the experience of demand resources from peer utilities and states. Indeed, neighboring Michigan utilities have been consistently increasing the level of achievement of efficiency and demand response for years, far exceeding the levels proposed by I&M for Indiana in the time period covered by this IRP. While Michigan customers benefitting from more energy efficiency investments it would be a shame for Indiana customers to be left behind paying higher and higher bills. The most recent Form 861 data from the Energy Information Administration shows that 2024 annual incremental savings for I&M in Indiana were just 0.63% relative to total retail sales compared to savings that were between three and four times higher in Michigan at DTE (2.3%) and Consumers Energy (1.91%). I&M itself delivered exactly twice as much energy savings (1.26%) in Michigan than it did in Indiana last year.[1] At a time when energy affordability and resource adequacy are serious challenges for resource planning, it is clear that deeper investment in demand-side resources is warranted.

While still showing that far more energy efficiency is available, cost-effective, and achievable, I&M's market potential study data also appears to be extremely conservative. For instance the demand response potential essentially flatlines starting in 2031. The study appears to presume that demand response as a resource is fully saturated after just five years. Such a situation would defy both the experience of comparable programs and research into the potential of the resource.[2] In a similar vein, the market potential study appeared to suggest that only around 1% of the total nonresidential energy efficiency potential through 2045 was in data centers. Part of ACEEE's current research is specifically looking into the potential to improve the energy efficiency and demand flexibility of data centers. Given that I&M's assumption in the IRP is that 60% of the load will be from those sources, and that the market potential study suggested such a surprisingly low potential, we expect that the results of this research could be particularly useful in the Commission's review of the IRP.

This initial review provides just a brief snapshot into what appear to be significant shortcomings in both the market potential study and how that study was incorporated into the PPD – and point to opportunities for the Commission and I&M to lower costs and meet a larger share of future energy and capacity needs thorugh demand-side resources. At a minimum demand-side resources could likely be doubled in the short term and continue to rise toward levels ten times higher than those included in the PPD in the later portion of the IRP planning period. The cost savings for customers would likely be tremendous, helping avoid significantly more expensive and limited sources of new generation. Going forward, we encourage I&M and the Commission to additionally consider the following recommendations.

**Additional forward looking recommendations:**

Optimize demand resource selection in the IRP

Given the projected surge in hyperscale load growth—expected to comprise 60% of I&M's peak load by 2030—the Commission should require utilities to **evaluate all supply- and demand-side options in an integrated manner**. This includes energy EE, demand response (DR), distributed energy resources (DERs), and conservation voltage reduction (CVR), especially for new large loads. While I&M's IRP filing suggests that demand side resources were optimized, the disconnect between the MPS and limited inclusion of demand resources in the PPD suggests that significant improvements are needed to ensure cost-effective efficiency potential is truly optimized.

The Commission should direct I&M to **optimize its resource portfolio by fully incorporating demand resources** based on realistic market potential. ACEEE's review shows that I&M could double its procurement of demand resources by 2031 and increase them tenfold by 2044, compared to what's

[1] https://www.eia.gov/electricity/data/eia861/

[2] https://docs.nrel.gov/docs/fy21osti/78196.pdf

proposed in the PPD. This would reduce reliance on expensive new generation and mitigate risks of stranded assets.

Incentivize load shifting over infrastructure building

The Commission should **direct I&M to assess the flexibility potential of new large loads and propose solutions that incorporate robust demand-side flexibility**. I&M should be mandated to engage directly with large load customers—not just through economic development teams, but via technical planning discussions—to evaluate their ability to shift or shed load during peak periods and to connect them with utility programs to do so. This includes options like managed electric vehicle fleet charging, industrial flexibility, and data center flexibility. These assessments would enable stakeholders—including data centers and industrial operators—to explore demand-side strategies that reduce grid stress and defer costly infrastructure investments.

Expand investment in energy efficiency retrofit programs

Given that peak demand requirements drive resource acquisition needs and heating and cooling are major contributors to peak demand, the Commission should require I&M to **expand demand-side programs that reduce thermal loads** (i.e., heating and cooling). This includes replacing electric resistance heating systems with high-efficiency electric heat pumps and upgrading HVAC systems across residential and commercial sectors.

To maximize the impact of HVAC upgrades, the Commission should require I&M to bundle these improvements with building envelope upgrades including insulation for ceilings, walls, and rim joists, air sealing, and duct leak mitigation. Water heating is another significant load that coincides with winter peak periods. Promoting grid-interactive heat pump water heaters can help save energy and shift load to off-peak hours while maintaining customer comfort.

These measures reduce the total heating and cooling load, thereby lowering peak demand, freeing up more capacity on existing grid infrastructure, and improving customer comfort and affordability. These measures are particularly urgent in I&M's service territory, where peak load is projected to double by 2030 due to hyperscale development.

Expand demand flexibility, using available headroom to meet new load

Even though load growth is pushing up against the limits of the grid, this only happens a small percentage of the time. The average load factor in PJM is 59.5%, and about 66% and 69% in summer and winter, respectively. In other words, for any given hour, on average, about 40% of existing generation and transmission infrastructure is unused. In addition, PJM load only exceeds 80% of its max peak in about 5% of hours per year, and 90% of its max peak less than 2% of hours. The entire power system is designed to accommodate these very occasional system peaks—often during extreme weather events.

The Commission should direct I&M to **develop DR programs for highly flexible loads**. Not every load is amenable to load shifting (e.g., medical equipment, air traffic control systems, and some industrial processes are exeptions), but a great many are, including many that are responsible for projected load growth. These include:

- Cryptomining (not time-sensitive, very flexible)
- Thermal space conditioning (usually for some fraction of an hour during peak)
- Water heating (minimal customer impact)
- Electric vehicle charging (highly flexible through managed charging)
- Data centers (especially if uninterruptable power supplies and backup storage are present)

These loads are often responsible for significant projected load growth and can be shifted with minimal customer impact. For example, curtailing just 0.5% of new data center load could unlock 17.8 GW of headroom in PJM—enough to accommodate a substantial number of new data centers without new infrastructure. The Commission should direct I&M to work recruit data center operators to participate in demand response programs during peak events. Curtailing just a small amount of load during a limited number of hours per year can free up significant electric grid capacity, reduce system stress, and keep additional infrastructure costs low.

Making new loads efficient

In February, the Commission approved a settlement agreement that sets the terms for connecting data centers and other large loads to the grid. It ensures that grid upgrade costs are paid by the large load customers, and not passed on to existing ratepayers. In the spirit of this agreement, the Commission should require that I&M work with data centers to explore all viable options for serving data center load, including demand-side measures. Demand-side resources can be acquired and deployed in a couple different ways.

First, the Commission could require that **interconnection approval for new data centers be contingent on demonstrable, permanent reductions in grid load**. These reductions could stem from energy-efficient hardware, cooling systems, or repurposing waste heat to nearby facilities. Without this requirement, efficiency gains (including those realized through utility EE programs) may simply enable more compute load, especially in AI-focused centers, resulting in no net benefit to the grid.

The Commission should direct I&M to work with data centers to adopt best efficiency practices. Two quality resources come from Lawrence Berkeley National Lab's Center of Expertise for Energy Efficiency in Data Centers[3] and the National Renewable Energy Laboratory's *Best Practices Guide for Energy-Efficient Data Center Design*.[4] These resources offer proven strategies for improving energy performance and demand flexibility, which are critical for managing I&M's rapid load growth.

In light of Indiana's allowance for loads greater than 1 MW to opt out of utility EE programs, the Commission should **require I&M to meet a portion of its load requirement by securing commitments from large loads to opt in and make annual payments toward cost-effective utility EE programs during the interconnection process** – perhaps in exchange for accelerating their connection to the grid. The annual payment should be scaled with the data center's load. Proceeds can be used to limit the data center's impact on the grid by, for example, supporting efficiency upgrades in parts of the distribution system that would be stressed by the data center's presence. Such an approach would also help fund energy efficiency programs without placing additional pressure on ratepayers. This is an action that only I&M can undertake since large load centers lack the knowledge and capability to meet their resource needs via energy efficiency realized outside the walls of their facilities.

Foster an environment of transparency

The Commission should require I&M to establish interconnection conditions that large load customers—including data centers—**provide key non-sensitive energy-related data as part of the interconnection process** to enable holistic planning, even if under a nondisclosure agreement. These data include anticipated energy demand, load shape, and flexibility potential. For a model, the Commission could look to New Jersey legislation S4293,[5] which mandates reporting of total energy consumption, cooling

[3] https://datacenters.lbl.gov

[4] https://www.energy.gov/sites/default/files/2024-07/best-practice-guide-data-center-design_0.pdf

[5] https://pub.njleg.state.nj.us/Bills/2024/S4500/4293_I1.PDF

energy use, on-site power sources, renewable energy share, waste heat reuse, and performance indicators like power usage effectiveness and energy reuse factor.

The Commission should also **support the development of national standards and platforms for collecting and reporting data center energy metrics**. This would reduce compliance costs and enable consistent lifecycle analyses of data center impacts on the grid and environment. Such assessments are essential for evaluating tradeoffs—like delaying fossil plant retirements—and for developing alternative scenarios that minimize adverse impacts.

**Conclusion:**

Utilizing additional demand resources is the no regrets option to serve load growth and lower costs for customers

Acquiring large quantities of additional supply-side resources comes with a cost to ratepayers, who bear considerable financial risk should new generation be built for ambitious load forecasts that may not fully materialize. By contrast, energy efficiency and demand flexibility act as a hedge against uncertain load growth. Should the new load actually emerge, demand-side solutions provide additional headroom, lightening the load that must be met with generation resources. Should the load not fully materialize, the utility will have procured a least-cost energy resource that benefits both participating customers and ratepayers as a whole by reducing utility system energy and capacity costs. Either way, there are considerable financial advantages to more deeply investing in Indiana's abundant and largely untapped demand-side resources. These resources cost less, can free up existing energy and capacity on the grid faster than building new power generation, while de-risking the resource acquisition process. In short, demand-side options offer a no-regrets approach to load growth.

Amidst current uncertainty we need such no-regrets options. ACEEE's forthcoming research on demand-side solutions to explosive electric load growth aims to increase awareness and expand options for utilities and regulators in exactly these circumstances. We appreciate the opportunity to provide these comments and would welcome the chance to further assist in any way we can as Indiana navigates the unique challenges of resource planning during these highly dynamic times.

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