



April 15, 2020

Dr. Brad Borum, Director of Research, Policy and Planning
Indiana Utility Regulatory Commission
101 West Washington Street, Suite 1500 E
Indianapolis, Indiana 46204

RE: Indianapolis Power & Light Company's 2019 Integrated Resource Plan

Dear Director Borum,

As one of the largest Indianapolis Power & Light Company (IPL) customers and on behalf of our residents and the community as a whole, the City of Indianapolis respectfully submits comments on the 2019 Integrated Resource Plan (IRP) submitted by IPL on December 16, 2019.

In March of 2017, the City committed to achieving carbon neutrality by 2050 and joined "We Are Still In," a group of governors, mayors, businesses, and universities committed to promoting sustainability and reducing carbon emissions to meet the goals of the Paris Agreement. To carry out these commitments, the City adopted "[Thrive Indianapolis](#)" on February 21, 2019 as a roadmap to reduce greenhouse gas emissions and increase the resiliency of Indianapolis and Marion County in the face of ongoing climate change impacts.

One of the primary elements of "Thrive Indianapolis" is the goal to meet 25 percent of municipal load with renewable energy by 2020, with a pathway to 100 percent by 2028, as well as meet 20 percent of the community-wide load from renewables by 2025, with a pathway to 100 percent by 2050. Secondly, the City seeks a more resilient energy grid using microgrids, energy storage, and increased energy efficiency. Moreover, with 7 percent of Indianapolis households facing energy costs that exceed 10 percent of their income (2.3 times greater than the national average), the City seeks to strategically shape programs that increase affordable access to energy and support low-income residents and families.

IPL was a key partner during the "Thrive Indianapolis" planning process and can continue to be a partner with the City as it pursues these goals. IPL's 2019 IRP is essential to meeting the City of Indianapolis' municipal and community-wide renewable energy targets, shaping a reliable, affordable, and resilient energy system, and ensuring an equitable energy system for all.

The City applauds IPL's four core company objectives: customer centricity, economics, flexibility and balance, and a greener energy future. The City recognizes that two of these objectives, customer centricity and a greener energy future, were not explicitly included in the 2016 IRP and demonstrate a welcome improvement and an acknowledgement of stakeholder feedback. Both objectives are vital to the goals in "Thrive Indianapolis" and important to the residents of Indianapolis and Marion County.

In alignment with the goals stated in "Thrive Indianapolis", the City of Indianapolis offers the following comments regarding the 2019 Integrated Resource Plan:

1. *The City of Indianapolis commends IPL's intentions to retire two units of coal generation and increase renewable energy by 2025 but also encourages future resource planning to cost-effectively accelerate the transition to a renewable energy future in alignment with the City's municipal and community-wide goals.*
 - a. *Positive, Near-Term Actions:* IPL's Preferred Resource Portfolio, portfolio 3b, which retires 630 MW of coal by 2023 and fills the capacity shortfall with a projected mix of demand side management, wind, solar, and storage, is a positive, cost-effective, near-term step for IPL and Indianapolis to achieve its 20 percent community-wide goal by 2025 (IRP 2019, page 161). The City recognizes that the IRP is effectively a concrete 5-year plan with extrapolations out to 2039. Accordingly, the City understands that resource planning decisions beyond the five-year horizon are subject to change based on future analyses and regulatory filings.
 - b. *Longer-Term Planning Gaps:* Although the proposed resource mix in IPL's Preferred Resource Portfolio does meet the City's 2025 goal, this scenario does not effectively position Indianapolis to achieve its 100 percent renewable energy goal by 2050 – with renewables comprising just over 40 percent of the generation mix by 2039 under IPL's preferred portfolio. Thus, the City supports a longer-term resource mix more aligned with those proposed in Portfolio 5, with renewables comprising more than 50 percent of the generation mix by 2039. That better positions IPL and the City to cost-effectively achieve 100 percent renewable energy and carbon neutrality by 2050.
2. *The City of Indianapolis appreciates that IPL valued customer feedback and encourages IPL to continue seeking and evaluating customer-driven scenarios.*
 - a. *Stakeholder Consideration:* The City recognizes that, during the 2019 planning process, IPL incorporated multiple stakeholder suggestions, including scenarios evaluating the retirement of all four Petersburg Units by 2030 and evaluated them with equal weight given to the other scenarios.
 - b. *Modeling for Carbon Neutrality:* While the City recognizes that the IRP process is intended to outline the preferred resource mix for the next 20 years, the City asks that

IPL consider modeling multiple scenarios to achieve carbon neutrality by 2050 in its next IRP – even if outside of the traditional 20-year scope.

- c. *Enable Additional Customer Feedback:* IPL should consider opportunities to solicit customer-driven scenarios and input on criteria for selecting portfolios. Moreover, IPL should increase its transparency around the modeling, reports, and data informing its evaluation of scenarios.
3. *The City of Indianapolis encourages IPL to address assumptions and constraints that may have limited the ability for renewable energy resources to efficiently and effectively compete in portfolio analyses and selection.*

The City is encouraged by IPL’s purposeful consideration of renewables, demand-side, and storage technologies, as well as IPL’s incorporation of carbon pricing into multiple scenarios. However, some of the assumptions used may have prevented IPL from fully considering these resources.

- a. *Carbon Pricing:* IPL commendably includes potential carbon pricing via a carbon tax in three of its five scenarios. The City believes it is prudent for IPL to plan for a price on carbon and agrees that reducing customer exposure to such legislation is important for long-term planning. However, IPL’s carbon pricing assumptions appear conservative compared to utilities nationally and in-state peers. IRP Section 7.3.2 notes that the carbon price IPL used in its IRP is “\$2.45 per ton starting in 2028 and escalating to \$36 per ton by 2039.” Compared to in-state peers, Duke Energy ranges from \$17 to \$78 per ton in 2020, while NIPSCO ranges from \$6 per ton in 2023 to a potential \$52 per ton in 2035, according to a [2017 Resources for the Future report](#).

In its modeling, IPL specifically acknowledges that carbon pricing “had the single largest impact on changes in PVRR for the portfolios”. In the future, the City encourages IPL to use carbon pricing assumptions that are more consistent with leading in-state peers and market projections. This will potentially reduce customer risk and provide a level of statewide consistency in evaluating the economics of renewables with fossil fuel generation.

- b. *Wind Energy:* Given its increasing cost-competitiveness across the country, the City was surprised to see wind comprise so little of the projected Preferred Resource Portfolio – only 100 MW through 2027 of additional installed capacity under portfolio 3b (and only 9.2 percent of additional installed capacity by 2032).

Since the release of IPL’s IRP, the Production Tax Credit (PTC) has been extended by one year. The City recognizes that this was not within IPL’s control and simply encourages IPL to bear in mind this well-timed extension with its current all-source RFP solicitation.

- c. *Demand Response*: If IPL has not already, the City recommends that IPL incorporate competitive bids from demand response providers to better inform costs assumptions.
 - d. *Energy Storage*: IPL's energy storage modeling was also limited to only 4-hour storage considerations. The [Energy Storage Association](#) recommends that varying durations of energy storage, such as sub-hourly or hourly intervals, may be able to better capture the flexibility of storage operations. Shorter durations should be included in future evaluations as a function of additional value streams of batteries, as the economics vary based on what services energy storage provides for IPL.
4. *The City of Indianapolis stresses that a transition to a "Greener Energy Future" can also be reliable and affordable if IPL considers a wide range of supply- and demand-side resources.*

When considering IPL's future grid mix and replacements to existing coal capacity, the City urges IPL to more thoroughly evaluate a full suite of demand- and supply-side resources, including energy efficiency, demand response, and energy storage in addition to renewable energy. The availability of such resources calls into question IPL's assumption that at least 325 MW of new gas generation capacity will be needed regardless of the portfolio selected.

- a. *Renewables, Reliability, and Affordability*: The challenges of managing higher renewable energy integration are highlighted in the MISO study that IPL references in its presentation on September 30, 2019. However, it is worth noting that the referenced study is incomplete, as it does not consider several resource types that could play an important role in balancing a high renewable energy grid mix, including energy storage and demand-side management, both of which IPL already identifies as part of its future resource mix. In fact, multiple recent studies and real-world examples suggest a flexible portfolio could balance a high renewable energy grid mix with the City's and IPL's reliability and affordability needs.
 - i. In its [Renewable Electricity Futures Study](#), the National Renewable Energy Laboratory (NREL) found that "electricity generation from technologies that are commercially available today, in combination with a more flexible electric system, is more than adequate to supply 80 percent of total U.S. electricity generation in 2050... in every region of the country."
 - ii. An [October 2019 report from the Rocky Mountain Institute](#) found that new "clean energy portfolios" have not only declined in cost by 80 percent since 2010, but are "now lower-cost on a levelized basis than new gas plants" and projected to "undercut operating costs of existing gas plants" within 10-20 years.
- b. *A Regional Example*: NIPSCO's recent all-source solicitation might serve as a useful model, and the City is highly encouraged that IPL seems to be moving in this direction with its all-source RFP solicitation. As you are aware, NIPSCO found that a portfolio of wind, solar, storage, and demand-side management, along with a small amount of

electricity bought from MISO, would be the most cost-effective path to replacing its coal capacity – a path expected to save its customers an estimated \$4 billion over 30 years.

- c. *A Portfolio Approach:* NIPSCO is not an isolated case, as utilities in [Arizona](#), [Michigan](#), [Minnesota](#), and [Oregon](#), are planning on replacing their retiring coal fleets not with gas, but with portfolios of renewable energy, storage, energy efficiency, and demand flexibility to modernize infrastructure and improve grid resiliency. This also reduces the risk of potentially [stranded natural gas generation assets](#) beyond 2050.
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Considering the pending all-source request for proposals (RFP), the City of Indianapolis submits the following comments and recommendations:

- 5. *The City of Indianapolis strongly supports IPL’s efforts to pursue an all-source RFP for cost-competitive, sustainable, and reliable electricity and offers recommendations for how IPL can enhance current evaluation process and future RFP solicitations.*
 - a. *Proactive, Market-Based Approach:* The City applauds IPL for their initiative to pursue an all-source RFP procurement. This RFP does not prescribe or pre-suppose a solution and provides room for a wide range of supply- and demand-side resources to meet its upcoming 200 MW capacity needs. With this approach, solutions can include a portfolio of resources rather than a single resource, demand-side measures including demand response, flexibility in ownership options, and flexibility in the location of resources within MISO Zone 6. This all-source RFP is a proactive effort to look beyond a fossil-fuel-generated energy supply and is an essential step to ensuring IPL’s customers are receiving the best solutions the market can offer.
 - b. *Incorporate Emissions as a Criteria for Evaluation:* IPL indicates that it will score bids according to a set of 12 qualitative criteria, including "environmental impacts". However, the definition of this qualitative criterion does not include greenhouse gas emissions or decarbonization of electricity generation. Since multiple scenarios in the 2019 IRP included a carbon tax, IPL should consider incorporating a cost of carbon or, at the very least, explicitly assess greenhouse gas emissions in its evaluation of bids to the extent possible in this review process and for all future all-source RFP solicitations.
- 6. *The City of Indianapolis requests additional information to more fully understand the all-source RFP as it relates to the IRP.*
 - a. *Stakeholder Engagement:* With proposals submitted by February 28, 2020, the City seeks clarity from IPL on how the results of the RFP will inform IPL’s subsequent actions and the extent to which stakeholders will be engaged. For example, during NIPSCO’s 2018 IRP process, the utility provided an overview of the proposals received during the RFP, offered a summary of the pricing structures, communicated preliminary results,

and explained how the RFP results would be integrated into the IRP analysis. This not only informs customers and stakeholders about the process but builds on IPL's productive stakeholder engagements throughout 2019.

In future planning processes, the City requests that IPL more thoroughly reflect and integrate customer goals and more explicitly align with "Thrive Indianapolis". The City recognizes that IPL modeled Portfolio 5 with "Thrive Indianapolis" in mind, but that portfolio only loosely reflected the City's necessarily ambitious carbon neutrality goals.

The City of Indianapolis welcomes further discussion of these comments with the Commission, IPL, and other stakeholders on how to better align IPL's resource planning with the City's community-wide goals. The City is committed to working with IPL in delivering reliable, affordable, and clean electricity to shape a more equitable, sustainable, and resilient Indianapolis.

Thank you for the opportunity to provide comments.

A handwritten signature in black ink that reads "Katie L. Robinson". The signature is written in a cursive, flowing style.

Katie L. Robinson
Director, Office of Sustainability