To: Illinois Power Agency, ipa.contactus@illinois.gov

From: Members of the Renewables and Decarbonization Subcommittees of the Illinois Clean Jobs Coalition

Re: Response to Request for Stakeholder Feedback on *House Bill 3445 Policy Study*

Date: October 20, 2023

The Renewables and Decarbonization Subcommittees of the Illinois Clean Jobs Coalition (ICJC) are pleased to offer the following comments in response to the Illinois Power Agency's (IPA) September 29, 2023, Request for Stakeholder Feedback on the proposed *House Bill 3445 Policy Study* (Policy Study). The ICJC is made up of many environmental advocacy organizations, businesses, community leaders, consumer advocates, environmental justice groups, and faith-based and student organizations working together to improve public health and the environment, protect consumers, and create equitable, clean jobs across the state.

The below-signed members of the ICJC Renewables and Decarbonization Subcommittees thank the IPA for an opportunity to provide input on the Policy Study and commend the Agency for initiating this important work despite the uncertainty over the disposition of the underlying legislation. The Policy Study provides a crucial chance to model pathways to meet the state's goals under the Climate and Equitable Jobs Act (CEJA) in a cost-effective manner. In our comments, we urge the IPA to take a broad, comprehensive modeling approach. The three proposed policies specified in HB 3445 should be evaluated in the context of the overall clean energy transition and to understand their potential contributions to achieving the state's energy and equity goals rather than in isolation.

The modeling should start with a baseline scenario for CEJA compliance and then optimize for costs, reliability, and emissions reductions. This will provide essential context for policy-makers and the public. For each policy area, whether energy storage, offshore wind, or transmission, the ICJC recommends robust scenario modeling based on Illinois' needs and CEJA's goals. The broad policy objective of the Policy Study should be mapping out an optimized portfolio to meet climate goals affordably and reliably, not just analyzing individual proposals. With rigorous analysis, this study can provide a roadmap to guide policymaking as Illinois transitions to a 100% clean energy future. We look forward to ongoing collaboration with the IPA.

I. Broad Policy Objective: Achieve CEJAs Goals for Affordability, Reliability, Decarbonization, and Equity

The Climate and Equitable Jobs Act (CEJA) laid out ambitious decarbonization goals and provided two important policy tools that would put us on a path to achieving those goals:

- Specific emission reduction timelines for fossil fuel power plants, which reach zero over the 2030 to 2045 time frame, and
- Clean energy procurement goals for utility-scale wind, utility-scale solar, distributed solar, and brownfield solar.

These two frameworks are designed to *set us on path to achieving* our decarbonization goals while continuing to provide clean, safe, affordable, reliable and equitable energy supply. However, we do not have an energy plan in place that tells us the optimal portfolio of generating resources and energy storage that will allow us to meet CEJA's requirements.

A. Benefits of Comprehensive Energy Planning

In states where integrated resource planning is practiced, integrated resource plans (IRPs) have consistently demonstrated the economic and environmental advantages of a swift transition to clean energy. This transition, driven by a clear roadmap and centralized planning, stands in stark contrast to the fragmented approach in Illinois. The resistance and skepticism to CEJA's goals, largely fueled by vested fossil fuel interests, have proven to be both counterproductive and expensive. Such hindrances obstruct a clean energy transition that could bring significant benefits to Illinois ratepayers.

The forthcoming Policy Study by the IPA presents a golden opportunity. We advocate for the study to commence with a clear understanding of the "business as usual" scenario under CEJA. This foundational understanding will set the stage for a more advanced analysis, where an optimization can be run to pinpoint a portfolio that not only aligns with our clean energy goals but also minimizes costs. While traditional metrics like the Net Present Value of Revenue Requirements (NPVRR) might not be directly applicable in our deregulated market, the essence remains: the General Assembly should be equipped with insights into what a reliable, optimized clean energy portfolio looks like.

As described in the IPA's August 23, 2023, announcement of the study, it appears that Levitan and Associates will be bringing all of the modeling and software tools that would be needed to conduct the analysis we propose. In fact, it appears to us given the suite of tools proposed that the plan is to conduct a broader analysis within which the recommendations for the three policy proposals can be evaluated. As such, our suggestion is not so much an expansion of the scope of the study as a more complete explanation of the work that will be done. However, it is important that the three specific analyses requested in HB 3445, as mentioned in the IPA's August 23 announcement, are not viewed in isolation. They should be contextualized within a broader, comprehensive model that captures the intricacies of our energy landscape.

A piecemeal approach will not suffice. A thorough analysis of proposed projects, such as energy storage, is infeasible without a comprehensive understanding of the optimal portfolio. Energy

storage, for instance, is undeniably a cornerstone of a modern energy mix. However, its value is maximized only when it isstrategically integrated and orchestrated to leverage other components of the energy landscape to deliver maximum value to ratepayers and market participants.

B. Modeling Suggestions

While we expect some of the modeling for this Policy Study has already begun, we have several suggestions about the "business as usual" scenario that will form the basis for this study. To that end, we have several specific considerations for the IPA and Levitan & Associates:

We propose a 15-year timeline for the model. This extended timeframe will provide a more holistic view of the energy landscape, allowing for a thorough evaluation of long-term strategies and their potential impacts. In addition, this is consistent with the most common timeframe for utility IRPs in the region.

A critical component of this study will be the assumptions regarding future demand and load shape. These assumptions will play a pivotal role in determining our energy needs in terms of quantity and timing. It's essential that these projections are not based solely on historical data but are also informed by the electrification goals set forth in CEJA and up-to-date assumptions about building and vehicle electrification. As we transition to a more electrified economy, our energy and capacity requirements will inevitably shift, and the study must be prepared to account for these changes.

Furthermore, the business as usual case should at a minimum fully comply with CEJA's targets for renewable builds, energy efficiency, fossil generation restrictions, and building and transportation electrification assumptions. By integrating these metrics into the baseline, the study will be grounded in the state's established energy objectives. However, it's crucial that the model retains the flexibility to exceed these baselines if deemed beneficial. If the model identifies opportunities to surpass CEJA's targets in a feasible and advantageous manner, it should be allowed to do so.

Lastly, the proposals outlined in House Bill 3445 (HB 3445) should be run as a distinct scenario within the model. This scenario should be evaluated alongside the 2030 target specified in the bill, providing a side-by-side comparison of the potential outcomes. Such an approach will offer valuable insights into the viability and impact of the proposals, ensuring that policy decisions are made with a full understanding of their implications.

II. Discussion of Legislative Proposals

As we delve into the specific questions surrounding the three legislative proposals, we note that certain questions are tailored specifically for the developers or proponents of the individual

projects. Given our position and expertise, we will be focusing on those questions on which we have alignment as a coalition. A number of the specific questions are more appropriately addressed by the project developers themselves. Our aim is to provide insights and feedback that are both relevant and constructive.

A. Energy Storage

It is widely acknowledged that energy storage will play a pivotal role in shaping an optimized energy portfolio for the future. Its potential to balance supply and demand, enhance grid reliability, and facilitate the integration of renewable energy sources is undeniable. However, the precise target for energy storage—how much we need and when—remains an area of uncertainty. We believe this study will provide important information to help policymakers set targets that will balance the goals of affordability, reliability and decarbonization.

Energy storage is used in a number of different ways in optimized energy systems. It can provide energy arbitrage, load shaping, locational transmission & distribution benefits, and ancillary services. Recognizing its versatility is crucial, but we must also acknowledge our current limitations in understanding what we NEED. We do not yet believe we have sufficient information about the precise role energy storage will play or when it will be most valuable to the system. Given this uncertainty, we must understand the role of energy storage in an optimized system before designing policies and incentives that ensure these storage solutions are available and participate in ways that both minimize costs and maximize grid benefits.

In sum, we do not recommend any specific set MW target of storage build in the absence of modeling and analysis. Rather, we suggest that the modeling undertaken here be used to determine the appropriate location, amount, and use of energy storage in Illinois.

B. High Voltage Direct Current Transmission Line

Members of the Illinois Clean Jobs Coalition are active participants in the MISO Environmental Sector stakeholder group. We encourage the IPA study to not just focus on the Soo Green project, but to explore the potential for High Voltage Direct Current (HVDC) transmission technologies to cost-effectively enable Illinois's clean energy ambitions more generally. HVDC transmission technologies have the potential to be a critical resource in meeting Illinois's clean energy and fossil fuel phaseout targets. HVDC carries electricity over long distances very efficiently and has unique capabilities to provide grid support or "ancillary" services such as voltage support, frequency response, black start, and a level of dispatchability. (See suggested resources below.).

We have observed, however, that one of the significant hurdles to modeling high voltage direct current lines is the current lack of consensus or methodology on how to capture the various benefits of HVDC, in particular its grid reliability benefits, in system planning processes.

Quantifying the full suite of benefits offered by HVDC technologies in a way that feeds into a comprehensive cost/benefit analysis of HVDC compared to more traditional transmission applications is necessary—the IPA's Policy Study can inform regional learnings on how best to assess HVDC options versus alternatives.

In addition, while the Soo Green project is a significant advancement in HVDC transmission, it's essential to recognize the broader landscape of transmission projects. MISO recently approved a portfolio of 18 transmission projects, with an investment of $10.3 billion, aimed at ensuring a reliable, resilient, and cost-effective transmission system. These projects, spread across the MISO Midwest subregions, are set to benefit multiple states, MISO members, and customers. As Illinois considers its transmission infrastructure, it's crucial to integrate these broader regional developments into its planning. The benefits of such a comprehensive approach include reliability, congestion and fuel savings, improved renewable energy distribution, and reduced carbon emissions. Therefore, while Soo Green is a step in the right direction, a more interconnected and diverse transmission network is vital for a resilient and efficient energy grid.

Some recent resources on HVDC that may be informative and useful include:

- The Brattle Group, *The Operational and Market Benefits of HVDC to System Operators* (September 2023)
- Stakeholder presentations to MISO's Planning Advisory Committee (PAC) on *Consideration of 765 kV and HVDC in Future Transmission Plans* (May 31-June 1, 2023)
    - ESIG
    - Minnesota Power/RBJ Engineering
    - DNV
    - Brattle Group
    - AEP
    - Invenergy
    - Transmission Owners Sector
- MISO presentation to Planning Advisory Committee (PAC), *Discussion of Legacy, 765 kV, and HVDC Bulk Transmission* (March 8, 2023)

C. Offshore Wind

Exploring careful, responsible, and equitable development of offshore wind in Lake Michigan can be part of the overall approach for Illinois to ensure that CEJA goals are met. Offshore wind in the United States is poised for growth in 2023—as of April 2023 there were 42 megawatts installed in US waters with *20 times* that capacity in development near places such as Cape Cod

and Long Island.[1] State policy has been a major driver for offshore wind, and Illinois can join states such as Massachusetts and New York in prompting responsibly designed projects.

Responsible offshore wind power as a source of clean electricity is an additional way to displace polluting fossil fuel power and improve public health, and also drive job creation and economic development. Responsible and equitable deployment of offshore wind includes at least three critical components: offshore wind should (1) ensure a just transition for workers; (2) prioritize engagement with marginalized communities; (3) seek to protect wildlife, and (4) allow sustainable port initiatives that advance green energy hubs.[2]

As Illinois takes steps toward potentially deploying wind energy in Lake Michigan, we recommend prioritizing and finding effective ways to consult and engage with frontline communities, Native American populations, and wildlife specialists. The oil and gas industry has set a precarious precedent by disrespecting Indigenous people's sacred areas. It is imperative to properly engage Native American communities to understand how to better advance offshore wind in relation to Indigenous land and natural resources.

As the potential of offshore wind in Lake Michigan continues to garner attention, it is also imperative that we approach its development with a data-driven mindset. We advocate for comprehensive modeling of offshore wind projects to gain a clear understanding of both the costs and the resources they can provide. We expect that modeling the economic feasibility, potential energy output, and integration challenges of offshore wind in the region will ensure that decisions regarding offshore wind are grounded in empirical evidence.

In sum, offshore wind should be considered as a means to meet our clean energy goals to the extent it can provide needed energy services cost-effectively compared to other clean resources.

III. Summary and Conclusions

In conclusion, ICJC Commenters signed below thank the IPA for the opportunity to provide feedback on the proposed House Bill 3445 Policy Study. Our comments emphasize the importance of a holistic approach to energy planning, urging the IPA to consider the broader context of the state's clean energy transition.

- Broad Modeling Approach: The ICJC advocates for a comprehensive modeling approach that evaluates the three proposed policies of HB 3445 in the context of the overall clean energy transition.

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[1] John Rogers, *Offshore Wind: What to Watch For in 2023*, UCS blog (January 12, 2023), available at: https://blog.ucsusa.org/john-rogers/offshore-wind-what-to-watch-for-in-2023/.

[2] Paula Garcia, *US Offshore Wind: 3 Key Opportunities to Advance Equity*, UCS blog (November 17, 2021), available at: https://blog.ucsusa.org/paula-garcia/us-offshore-wind-3-key-opportunities-to-advance-equity/.

- CEJA's Goals: The Climate and Equitable Jobs Act (CEJA) has set ambitious decarbonization targets. The ICJC emphasizes the need for a clear energy plan that aligns with these targets.
- Strategic Resource Planning and Developing a Policy Roadmap: The ICJC highlights the benefits of integrated resource planning, as seen in other states, and the potential pitfalls of a fragmented approach.
- Specific Policy Areas: Detailed feedback is provided on energy storage, HVDC transmission lines, and offshore wind. The ICJC emphasizes the importance of data-driven decision-making and the need for comprehensive modeling to understand costs, benefits, and integration challenges.

The ICJC appreciates the opportunity to provide input on the Policy Study and looks forward to continued collaboration with the IPA. The coalition believes that with rigorous analysis and a comprehensive approach, the Policy Study can serve as a roadmap for Illinois as it transitions to a 100% clean energy future. The emphasis is on ensuring that decisions are grounded in empirical evidence, align with the state's broader clean energy goals, and prioritize affordability, reliability, decarbonization, and equity.

Thank you for your consideration,

Members of the Illinois Clean Jobs Coalition Decarbonization and Renewables Subcommittees

- A Just Harvest
- Climate Reality Project, Chicago Metro Chapter
- Environmental Defense Fund
- Illinois Environmental Council
- Natural Resources Defense Council
- Prairie Rivers Network
- Sierra Club Illinois
- Union of Concerned Scientists
- Vote Solar