

Indiana Utility Regulatory Commission (“IURC”)  
ATTN: Ryan Heater  
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Indianapolis, Indiana 46204  
[URCCComments@urc.in.gov](mailto:URCCComments@urc.in.gov)

Re: Response to Request for Comments on Energy Study Methodologies

Dear Mr. Heater,

Citizens Action Coalition (“CAC”) appreciates the opportunity to participate in this process. Enclosed are our comments on Energy Study Methodologies as part of the IURC’s statewide study. We welcome the opportunity to discuss our comments with the State Utility Forecasting Group (“SUFG”) and the IURC. Please feel free to reach out to us with any questions or requests for further clarification.

## 1 Scenarios for SUFG Modeling

### 1.1 Unit Retirements in SUFG Scenarios

We are unclear how SUFG intends to model unit retirements. The study document gives the impression that a reference scenario and updated reference scenario will be run with potentially different treatment of unit retirements. Table 1 outlines the retirement scenarios proposed by SUFG.

**Table 1. SUFG Retirement Scenarios to Model**

Scenario	Retirements
Updated Reference Scenario	Consistent with IRPs
Reference Scenario	Exceptions include Duke’s Gallagher Units 2 and 4 and I&M’s Rockport Unit 2
Defer all coal retirements to 2030	Exceptions include Duke’s Gallagher Units 2 and 4 and I&M’s Rockport Unit 2 and Rockport Unit 1

We presume that the Updated Reference Scenario includes retirements in Duke Energy Indiana (“Duke”), Indiana Michigan Power Company (“I&M”), Northern Indiana Public Service Company (“NIPSCO”), Indianapolis Power & Light Company (“IPL”), and Southern Indiana Gas & Electric Company d/b/a Vectren’s (“Vectren”) most recent Integrated Resource Plans (“IRP”), but would like clarification of that fact. We are unclear what assumptions will actually be made in the Reference Scenario. Will retirements be delayed until 2025 for all units except Gallagher 2 and 4 and Rockport Unit 2 or will unit retirements be “consistent with recent utility IRPs”? Both cannot be true. And how will SUFG treat the announced retirement of the Merom station? In general, we think that a better reference case assumption is to include the retirements as announced by utilities in their IRPs.

We also are interested in clarification around how retirements of remaining resources will be treated. In general, we think it is a good idea to let the model optimize the retirement of generating units, but we're not clear if SUFG intends to do so.

## 1.2 Energy Efficiency Scenario

Without knowing the energy efficiency savings included in SUFG's base case scenario, CAC cannot determine whether SUFG's approach for the high energy efficiency scenario is appropriate. CAC recommends that the level of energy efficiency under the high energy efficiency ("EE") scenario should be at least 1.75% incremental savings. The level of EE modeled should have the same per unit rate as the base case though we are concerned that the data SUFG intends to rely upon to characterize EE costs will overstate expenditures. All of the Indiana utilities have a history of overestimating EE costs compared to actual, incurred costs. We previously provided data to the IURC that we think better characterizes EE costs, and would recommend a first year cost, i.e., cost divided by first year savings, of \$0.21 per kWh. However, costs should be levelized rather than modeled as as-spent dollars in order to avoid an end effects problem that would bias the results against EE.

## 1.3 Renewable Pricing

SUFG describes the low renewable price scenario as a way to "evaluate how Indiana's resource portfolio might change if renewable prices are even lower than currently projected to be the case."<sup>1</sup> The problem is that SUFG is not using the best available data to characterize renewable pricing to begin with. As Vectren pointed out in its request for comments on scenario variables and sensitivities, National Renewable Energy Laboratory's ("NREL") estimated overnight capital cost for solar is about \$1,450/kWac compared to the U.S. Energy Information Administration's ("EIA") estimate of about \$1,880/kWac.<sup>2</sup> NIPSCO also recommended using the NREL Annual Technology Baseline ("ATB") in their comments on scenario variables and sensitivities. NIPSCO wrote in their comments, "NIPSCO's recent IRP experience confirmed that EIA's Annual Energy Outlook often has dated new build cost assumptions for certain resource types, especially renewables and emerging technologies."<sup>3</sup> CAC is extremely concerned that relying on EIA data as the source for renewable capital costs in most scenarios will render the study results meaningless. The vast majority of IRPs that we and our consulting experts work on use the ATB to partially or entirely characterize renewable pricing in recognition that this is a much more reliable source of data than EIA. Using the ATB data to characterize the low renewable price scenario is just correcting the problem of using EIA data, it does not actually constitute a low renewable pricing scenario.

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<sup>1</sup><https://www.in.gov/iurc/files/Scenarios%20for%20SUFG%20Modeling%20for%20Report%20to%20Energy%20Policy%20Task%20Force%20-Final%201-21-20.pdf>

<sup>2</sup> <https://www.in.gov/iurc/files/IURC%20Ryan%20Heater.pdf>

<sup>3</sup> <https://www.in.gov/iurc/files/NIPSCO%20Comments%20on%20Commission%20Study%209.6.19.pdf>

CAC recommends that SUFG use NREL’s Annual Technology Baseline for 2019<sup>4</sup> and the low case cost trajectory to characterize the low renewable pricing scenario. This is a conservative approach since we have found that the ATB has overstated solar costs in previous iterations. If NREL’s ATB is not used for the capital costs of renewables for the reference scenario, CAC has serious concerns about the meaningfulness of that scenario.

We also want to clarify that SUFG will assume the Production Tax Credit (“PTC”) and higher level of the Investment Tax Credit (“ITC”) can be captured for four years beyond their expirations through safe harbor provisions. We have found that it is typically the case that developers meet the safe harbor provisions so that they may capture those tax benefits for a longer period.

## 1.4 Modeling of Energy Storage

Based on the information provided in the SUFG scenario methodology, it is not clear how SUFG plans to include energy storage in their modeling of resources. Item number 6 in the SUFG scenario document says, “Distributed resources, electric vehicles, and energy storage scenarios.” It seems like the work performed by NREL is going to focus on distributed energy resources (“DER”), including behind the meter energy storage. CAC seeks clarification on whether Lawrence Berkley National Laboratory (“LBNL”) is developing electric vehicle and energy storage scenarios, since the LBNL document seems to indicate that their focus is on distributed resources and not utility-scale battery storage. In addition, CAC would like to understand how SUFG plans to model energy storage in Aurora for this study. For instance, will SUFG be modeling energy storage as a resource or will it be modeled as a load modifier? CAC is also interested in whether SUFG plans to model battery and solar hybrid resources to take advantage of the tax credits before they expire. As seen with the Xcel Request for Proposal (“RFP”)<sup>5</sup> and NIPSCO’s RFP, hybrid resource bids were competitively priced.

If SUFG is planning on including utility scale energy storage as a supply side resource, CAC recommends that SUFG provide stakeholders with the capital cost forecast they plan to use and whether sensitivities will be performed on energy storage capital costs. Incorporating battery storage as a supply-side resource is key to providing credibility to this modeling exercise. Without it, SUFG is overlooking a key resource that Indiana utilities are already acquiring.

## 1.5 Comments across all Scenarios

Unless explicitly stated in the scenario descriptions, we assume that SUFG intends to hold all other assumptions constant across each scenario. In reviewing SUFG’s 2019 Forecast Report, which SUFG says will be the basis for most scenario assumptions, we noted that SUFG used a 19.1 percent reserve margin requirement. In that report, SUFG states, “Applying the individual reserve requirements and adjusting for peak load diversity among the utilities provides a

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<sup>4</sup> <https://atb.nrel.gov/electricity/>

<sup>5</sup> Hybrid resources bid into the Xcel RFP at \$36 per MWH. Please see <https://www.utilitydive.com/news/xcel-solicitation-returns-incredible-renewable-energy-storage-bids/514287/>

statewide reserve requirement of approximately 19.1 percent.” Respectfully, we do not know how this could possibly be the case. First, we presume this is an installed capacity (“ICAP”) planning reserve margin (“PRM”). If it is unforced capacity (“UCAP”), then we are doubly concerned about its use. Midcontinent Independent System Operator’s (“MISO”) most recent loss of load expectation (“LOLE”) report, which determines the regional transmission organization (“RTO”) wide reserve margin requirement, arrived at an ICAP PRM of 18 percent.<sup>6</sup> This should be the *maximum* reserve margin requirement that is used; and if it is adjusted for each utility’s diversity with respect to MISO’s peak, it should be lower. Put another way, it is not possible for a utility to have more than 100 percent coincidence with MISO’s peak so it is not possible for the effective reserve margin requirement to exceed 18 percent. Indeed, it is more likely that the Indiana utilities have a 99 percent (or lower) coincidence factor and so the effective reserve margin ought to be more on the order of  $99\% \times 18\% = 17.8\%$ .

We would also like to at least see a lower load sensitivity. SUFG’s forecasts typically seem to have a tail that trends dramatically upward in a way that is not consistent with current trends in load. We think a sensitivity that keeps load relatively flat would be very useful.

## **2 Lawrence Berkeley National Laboratory**

It is not clear how the work LBNL is proposing to undertake will interface with the eight scenarios proposed by SUFG. For instance, will each of the 6 DER scenarios be paired with the scenarios outlined by SUFG, or will the DER scenarios be analyzed outside of the modeling performed by SUFG? If SUFG is planning to model DER resources within Aurora, CAC would very much like to know whether they will be modeled as a load modifier or as a supply-side resource, and what costs will be assigned to those resources. The Aurora modeling is akin to a utility cost test, so only those costs that would be incurred by the utility on behalf of ratepayers should apply to DERs.

The LBNL report also indicates that the six scenarios will cover a short-term horizon (2025) and a long-term horizon (2040). It is unclear to CAC how these horizons impact the scenarios. CAC would appreciate further clarification on this question.

## **3 Indiana University**

The information provided by Indiana University indicates that they will look at the economic, fiscal, and social analysis of replacement generation, and this will include natural gas, solar, and wind. CAC believes energy storage and energy efficiency ought to be included in this analysis. If they are not, Indiana University’s analysis will be necessarily incomplete. In addition, CAC would appreciate clarification on the definition of the “social impacts” that Indiana University will be looking at for the replacement resources. Indiana University says that “the research team will conduct an economic and fiscal analysis to assess the macro-effects of coal-fired generation plant closures on employment and taxes” using IMPLAN. But we do not see how this analysis

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<sup>6</sup> See <https://cdn.misoenergy.org/2020%20LOLE%20Study%20Report397064.pdf>

could be considered even handed in the slightest if it ignores the countervailing impacts of replacement resources.

With respect to the “economic, fiscal, and social analyses” Indiana University intends to conduct in general, these analyses can only be complete if the same categories are being assessed across all resource types including battery storage and energy efficiency. For example, if property tax revenue is a consideration for coal plants, it also ought to be for renewables and battery storage.

#### **4 Additional Comments**

In order to provide the best possible outcome for this study, CAC recommends that another stakeholder workshop or one-on-one meetings be held following the comment deadline. While CAC understands the study timeframe is short, we strongly believe that it will be a more fruitful study if there is engagement with the stakeholders on the modeling inputs and assumptions. Indeed, it is our understanding SUFG cannot make its modeling files available for stakeholder review, so providing all the information that it can to stakeholders ahead of time will bring a greater level of transparency to this important exercise. Similar to the IRP process, being able to review the inputs for the scenarios and sensitivities prior to modeling is crucial for allowing stakeholders to better understand the inputs and for incorporating stakeholder suggestions. Some of the modeling inputs CAC is interested in include: model constraints, fixed and variable operations and maintenance (“O&M”) for renewable resources, production profiles for wind and solar, the carbon price forecast, capital costs for new thermal supply side resources, how SUFG plans to model existing resources like demand response, and energy efficiency savings and costs. CAC would also appreciate having a discussion on how the scenarios will be evaluated and whether metrics will be used for evaluating scenarios.

We welcome a discussion with or any inquiries from the IURC study group about these recommendations and are eager to provide assistance however we can. Please feel free to reach out to Kerwin Olson at [kolson@citact.org](mailto:kolson@citact.org), 317-735-7727, or Jennifer Washburn at [jwashburn@citact.org](mailto:jwashburn@citact.org), 317-735-7764.

Respectfully submitted,

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