



Electronically delivered

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Re: Comments of Energy Matters Community Coalition, Inc. – 2021 Integrated Resource Plan of Duke Energy Indiana, LLC

Dear Director Borum, Chief Technical Advisor Pauley, and Assistant General Counsel Comeau,

Pursuant to the Indiana Utility Regulatory Commission’s (“IURC” or “Commission”) Integrated Resource Planning Rule, 170 Ind. Admin. Code 4-7, Energy Matters Community Coalition, Inc. (“EMCC”) hereby submits its comments re the 2021 Integrated Resource Plan (“IRP”) of Duke Energy Indiana, LLC (“DEI”), supported by the attached public version of the report of Synapse Energy Economics, Inc. (“Synapse”) entitled Deep Decarbonization and Rapid Electrification of the Duke Energy Indiana Service Territory.

Background

In 2019, EMCC submitted its comments on the 2018 DEI IRP supported by the Synapse report entitled Incorporating the Costs of Climate Change in Duke Energy Indiana’s 2018 Integrated Resource Plan. In addition to a detailed critique by Synapse of certain substantive aspects of the 2018 DEI IRP, EMCC offered the following general critique of the overall DEI approach to its 2018

IRP:

DEI's 2018 IRP fails to adequately incorporate the impacts of climate change into its resource planning based on current best practices. While it is now too late to make the IRP framework and modeling changes required to correct this failing in the 2018 IRP, we urgently recommend that DEI include the following elements in all of its future resource planning, beginning before its 2021 IRP:

- A. DEI should include a scenario that incorporates a reasonable estimate of the social cost of carbon, which is likely to exceed the expected regulatory cost of carbon, at least within the IRP planning period.
- B. DEI should include at least one scenario and corresponding optimized portfolio with reference case technology costs that results in rapid reductions in carbon emissions, in line with Intergovernmental Panel on Climate Change ("IPCC") recommendations.
- C. As part of a deep decarbonization scenario, DEI should include increases in load due to electrification in the transportation and buildings sectors that will be necessary for achieving economy-wide deep decarbonization.

Following the filing of these recommendations in 2019, EMCC and Synapse undertook a collaboration with DEI prior to the submittal of its 2021 IRP with the objective of the Company implementing their recommendations. This collaboration was quite extensive as to duration, effort and cost on the parts of both DEI and EMCC/Synapse. From the EMCC/Synapse perspective, this collaboration was also productive to the extent that DEI incorporated the Encompass modeling software into its overall IRP modeling platform and incorporated certain additional scenarios and optimized portfolios into its 2021 IRP. Thus, EMCC/Synapse jointly express their sincere and deep appreciation to DEI and its most talented IRP modeling staff for their engagement in this extensive collaboration.

Ultimately, however, the collaboration fell short of EMCC/Synapse's objective for it. As a result, EMCC/Synapse made the joint decision to allocate their limited resources to developing their own Deep Decarbonization and Rapid Electrification (DDRE) scenario and optimized portfolio to supplement the 2021 DEI IRP as submitted, while leaving to other stakeholders the detailed critique of specific substantive aspects of the DEI IRP as submitted. The attached Synapse report reflects the results of that EMCC/Synapse project.

This EMCC/Synapse project is necessarily a "work in progress," hopefully involving further, future collaboration with DEI regarding its next IRP. For EMCC/Synapse, the DDRE scenario and optimized portfolio for DEI are simply too important in the context of the existential threat of climate change to follow any course of future action other than to do our best to achieve the objective of DEI itself submitting a DDRE scenario and optimized portfolio (hopefully, the Company's preferred portfolio) in its next IRP submittal, whenever that may be. In that context, please see the Next Steps section of these EMCC comments.

The 2022 Version of the EMCC/Synapse DDRE Scenario and Optimized Portfolio

EMCC commends the attached Synapse report to the Commission and the Company in its entirety. Nonetheless, we offer the following highlights for special consideration:

1. The clearest pathway to achieving the IPCC recommendations for the rapid reductions in carbon emissions (in shorthand, “Net Zero” by 2050) required to avoid the most dire consequences of climate change necessarily entails “deep decarbonization” of the power sector in conjunction with “rapid electrification” of the transportation, buildings and industrial sectors of the global economy.
2. The clearest pathway for DEI and its service territory economy to contribute their “fair share” to achieving the IPCC recommendation of “Net Zero” by 2050 globally is to achieve that goal locally for DEI and its service territory economy.
3. In order to achieve the carbon reduction goals required through electrification in the transportation, buildings and industrial sectors of the DEI service territory economy by 2050, it is essential for the power sector of that economy (including principally but not exclusively DEI) to decarbonize even more rapidly than the rest of that economy.
4. The most cost effective way for the power sector of the DEI service territory economy to decarbonize as rapidly as required for that entire economy to reach “Net Zero” by 2050 is most likely through rapid deployment of (a) wind and solar generating resources in combination with storage resources (both long and short duration) at utility scale, (b) solar generating resources in combination with storage at distributed scale, and (c) end-use efficiency in all sectors of the DEI service territory economy (including especially but not exclusively the transportation, buildings and industrial sectors).

Next Steps for the DDRE Scenario and Optimized Portfolio

As stated earlier in these comments, the 2022 EMCC/Synapse DDRE Scenario and Optimized Portfolio are necessarily a “work in progress.” In this context, the next steps which EMCC and Synapse envision would include especially but not exclusively:

1. DEI itself submitting a DDRE scenario and optimized portfolio (hopefully, the Company’s preferred portfolio) in its next IRP submittal, whenever that may be. It hopefully goes without saying (but we will say it anyway), there is a huge difference between EMCC/Synapse submitting this DDRE scenario and optimized portfolio for the Commission’s and the Company’s consideration and the Company submitting such a scenario and optimized portfolio for the Commission’s consideration. First, of course, such a submittal by the Company greatly increases the likelihood of such a scenario and optimized portfolio being achieved in reality within its service territory. Second, such a submittal by the Company greatly increases the likelihood of Duke Energy as a total corporate enterprise achieving “Net Zero” by 2050 throughout its various electric service territories. And, third, Duke Energy as a total corporate enterprise achieving “Net Zero” by 2050 would set an instructive example which would increase the likelihood of the power sector as a whole achieving that goal both nationally and globally.

2. Development in detail of a DDRE scenario and optimized portfolio for an electric utility and a service territory of the size and character of DEI would necessarily be instructive regarding the public policies the adoption of which would facilitate such a scenario and portfolio becoming reality, especially in the time frame contemplated by the IPCC recommendations. Such public policies would be instrumental not only in the power sector, but in the transportation, buildings and industrial sectors of the economy as well.

3. Development in detail by DEI of a DDRE scenario and optimized portfolio would necessarily be instructive for DEI's own transmission and distribution planning and execution. Moreover, given the size and character of DEI and its service territory, such a scenario and portfolio would also be instructive for MISO and other RTOs in the development of future transmission and distribution plans for their respective footprints.

4. Development in detail by DEI of a DDRE scenario and optimized portfolio would necessarily focus additional consideration on the delineation and quantification of mitigated environmental damages resulting from related emissions reductions in all sectors of the economy as well as avoided costs associated with electrification in the transportation, buildings and industrial sectors of the economy.

5. Development in detail by DEI of a DDRE scenario and optimized portfolio would necessarily provide additional context for the evaluation of "utility of the future" business and regulatory models which might be better adapted to the dramatic technological change and market transformation which are occurring in the electric industry concurrent with meeting the emissions reduction challenges of addressing global climate change.

Thank you for your consideration of these comments. We look forward to the issuance of and opportunity to comment on the Director's Draft Report. Please feel free to contact Mike Mullett (mullettgen@aol.com) or Barry Kastner (barry.s.kastner@gmail.com) of EMCC or Jason Frost (jfrost@synapse-energy.com) of Synapse with any questions or concerns. Requests for Excel workbooks relating to the figures and tables included in the Synapse report should be directed to Mr. Frost with a copy to Mr. Mullett.

Respectfully,

The Board of Directors of Energy Matters Community Coalition, Inc.

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