

**STATE OF IOWA**  
**BEFORE THE IOWA UTILITIES BOARD**

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IN RE: )  
 ) DOCKET NO. RPU-2022-0001  
 )  
MIDAMERICAN ENERGY COMPANY )  
 )  
 ) SUPPLEMENTAL DIRECT AND  
 ) REBUTTAL TESTIMONY  
 )

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**PUBLIC**

**SUPPLEMENTAL DIRECT AND  
REBUTTAL TESTIMONY OF  
STEVEN C. GUYER  
ON BEHALF OF  
ENVIRONMENTAL LAW & POLICY CENTER  
IOWA ENVIRONMENTAL COUNCIL  
SIERRA CLUB**

**NOVEMBER 21, 2022**

1           **Introduction**

2       **Q:    Please state your name, business name and address, and role in this**  
3       **proceeding.**

4       A:    My name is Steven C. Guyer. I am the Energy Policy Manager with the Iowa  
5       Environmental Council, located at 505 Fifth Ave, Suite 850, in Des Moines, Iowa.  
6       I appear here in my capacity as a witness on behalf of the Environmental Law and  
7       Policy Center, the Iowa Environmental Council, and Sierra Club (collectively  
8       “Environmental Intervenors”).

9       **Q:    Are you the same Steven C. Guyer who previously submitted direct**  
10       **testimony in this proceeding?**

11      A:    Yes. I submitted direct testimony concerning MidAmerican’s proposed Wind  
12      PRIME Project (“Wind PRIME” or “Project”).

13      **Q:    What is the purpose of your rebuttal testimony?**

14      A:    The purpose of my rebuttal testimony is to clarify my position regarding the  
15      reasonableness of the Wind PRIME proposal given new information and  
16      circumstances, including the passage of the Inflation Reduction Act and the new  
17      availability of MidAmerican’s Zero Emissions Study, and to respond to  
18      MidAmerican rebuttal testimony by witnesses Brown, McIvor, Hammer, and  
19      Fehr.

20      **Q:    How is your rebuttal testimony organized?**

21      A:    My testimony is divided into three sections that address:

- 22           I.       Reasonableness of MidAmerican’s resource selection process.
- 23           II.      Implications of the Inflation Reduction Act on resource planning.

1 III. Technology study rate making principle.

2 **MidAmerican’s Zero Emissions Study further supports a finding that**  
3 **MidAmerican should conduct resource expansion modeling to demonstrate**  
4 **the reasonableness of the Wind PRIME additions**

5 **Q: Has MidAmerican demonstrated that Wind PRIME is reasonable when**  
6 **compared to other feasible alternative sources of supply?**

7 A: MidAmerican has not provided evidence that it considered other reasonable  
8 sources of electric supply, such as more solar or battery storage, using any kind  
9 standard utility resource evaluation process. MidAmerican selected the Wind  
10 PRIME resources without a thorough quantitative analysis of how it will impact  
11 future resource needs. Instead, MidAmerican continues to use a subjective  
12 qualitative analysis (the “nine factor needs analysis”), which is used by no other  
13 utility in the country, to justify the reasonableness of Wind PRIME.<sup>1</sup> As I  
14 demonstrated in my direct testimony using MidAmerican’s nine factor analysis,  
15 an alternative set of resource additions could provide greater benefits. The lack of  
16 comparison to feasible alternative supply options means that MidAmerican has  
17 not met its burden to demonstrate that Wind PRIME is reasonable.

18 **Q: Is there evidence that MidAmerican should have considered an alternative**  
19 **portfolio of resources?**

20 A: Yes. Among other sources of evidence outlined in my initial testimony (such as  
21 the MISO interconnection queue), MidAmerican conducted a Zero Emissions

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<sup>1</sup> See Guyer Exhibit 13 (MidAmerican Response to EI DR 148).

1 Study in 2019 (filed by MidAmerican on October 20, 2022) that showed  
2 MidAmerican should have quantitatively considered an alternative portfolio of  
3 resources.

4 **Q: What was the scope of the Zero Emissions Study?**

5 A: [REDACTED]  
6 [REDACTED]  
7 [REDACTED] (Zero Emissions Study at  
8 6.)

9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED] (*Id.* at 3, 7-8.)

15 **Q: What were the key conclusions of MidAmerican's Zero Emissions Study?**

16 A: The study concluded:

- 17 • [REDACTED]  
18 [REDACTED]
- 19 • [REDACTED]  
20 [REDACTED]  
21 [REDACTED]
- 22 • [REDACTED]

1 [REDACTED] (*Id.* at 14.)

2 **Q: Did MidAmerican present any evidence that it used the results of the Zero**  
3 **Emissions Study as a comparison of a feasible alternative to the Wind**  
4 **PRIME proposal?**

5 A: No.

6 **Q: Why should MidAmerican consider an alternative portfolio with more solar**  
7 **generation?**

8 MidAmerican CEO Kelcey Brown testified that Wind PRIME completes  
9 MidAmerican’s 100% renewable vision. (Brown Direct at 2-3.) MidAmerican has  
10 also announced a goal of net zero greenhouse gas emissions.<sup>2</sup> Witness Brown  
11 specifically noted that Wind PRIME will provide “[e]nvironmental benefits of  
12 emissions-free energy and capacity.” (Brown Rebuttal at 6.)

13 However, MidAmerican’s own analysis of how to achieve a true zero emissions  
14 future [REDACTED]

15 [REDACTED] While there have been changes in the  
16 markets and to policy since MidAmerican completed this analysis that could alter  
17 the mix of generation resources in a reasonable portfolio, the failure to  
18 quantitatively evaluate alternative portfolios more aligned with its Zero Emissions  
19 Study means that MidAmerican has not demonstrated its \$4 billion dollar  
20 investment is reasonable.

21 **Q: Did MidAmerican identify next steps in evaluating the solar generation**

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<sup>2</sup> See MidAmerican Energy Company, *Destination Net Zero* available at [www.midamericanenergy.com/net-zero-greenhouse-emissions](http://www.midamericanenergy.com/net-zero-greenhouse-emissions) (last visited Oct. 19, 2022).

1 **resources identified in its Zero Emissions Study?**

2 A: Yes. [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED] (Zero Emission  
6 Study at 15.)

7 **Q: Did MidAmerican conduct this analysis?**

8 A: To my knowledge and based on what MidAmerican produced in the record, the  
9 utility has not done this analysis.

10 **Q: How could MidAmerican use Aurora or another resource capacity expansion  
11 model to support the reasonableness of the resource selection?**

12 A: MidAmerican could have used Energy Exemplar's Aurora model to conduct a  
13 resource portfolio analysis to create an optimized (or even reasonable) resource  
14 expansion plan. This would be consistent with steps identified in its own Zero  
15 Emissions Study. MidAmerican used the Aurora model to develop hourly unit  
16 generation output, production costs, the electric price forecast over a 20-year  
17 planning horizon, and Generator Revenue forecasts for cases with and without  
18 Wind PRIME. However, MidAmerican stopped short of allowing the Aurora  
19 model to optimize the resource selection. MidAmerican also could have used  
20 Aurora to compare two or more alternative resource mixes to compare the energy,  
21 capacity, affordability, and reliability benefits of each portfolio. The use of the  
22 full set of Aurora model functions would allow for a quantitatively informed  
23 decision demonstrating reasonableness and ensuring the resource selection is the

1 right resource at the right time.

2 **Q: Does Iowa Code section 476.53 specify how to demonstrate the**  
3 **reasonableness of a resource selection?**

4 A: Iowa Code section 476.53 specifies that the Board must make a finding that “The  
5 rate-regulated public utility has demonstrated to the board that the public utility  
6 has considered other sources for long-term electric supply and that the facility or  
7 lease is reasonable when compared to other feasible alternative sources of  
8 supply.” Iowa Code section 476.53(c)(2). MidAmerican chose to interpret this  
9 statute by creating a qualitative nine-factor artificial construct that is used by no  
10 other utility in the country, but nothing in the Iowa Code called for the creation of  
11 a nine-factor test to demonstrate reasonableness. It arguably would be more  
12 reasonable for MidAmerican to use capacity expansion modeling to demonstrate  
13 that Wind PRIME is reasonable by comparing it to other reasonable portfolios of  
14 long-term electric supply. This is the method used by other utilities around the  
15 country, including utilities that are not required to conduct integrated resource  
16 plans. (Glick Direct at 29.) Using capacity expansion modeling provides  
17 consistency in comparing resource options, and optimizes the resource selections  
18 to best meet the long-term electric supply needs of customers.

19 **Q: Do you agree with MidAmerican witnesses Brown and Hammer’s rebuttal**  
20 **testimony regarding the value of resource modeling?**

21 A: No. In her rebuttal testimony, Ms. Brown testified that:

22 “any value derived from modeling for an optimal resource mix is limited  
23 at best because modeling cannot currently capture the operational  
24 complexities created by the industry-wide transition to renewable

1 resources, the Midcontinent Independent System Operator’s increased  
2 focus on year-round resource adequacy, and the need for dispatchable  
3 units to provide ramping and balancing functions.”  
4 (Brown Rebuttal at 10)

5  
6 and Mr. Hammer testified that:

7  
8 “Capacity optimization software oversimplifies many complex issues and  
9 is not capable of considering some issues or uncertainty in the future.”  
10 (Hammer Rebuttal at 13)

11  
12 Yet, MidAmerican used the Aurora model to develop hourly unit generation  
13 output, production costs, the electric price forecast over a 20-year planning  
14 horizon, and Generator Revenue forecasts, which are at the very core of  
15 MidAmerican’s argument that Wind PRIME is a reasonable and cost-effective  
16 resource selection. Moreover, in the Zero Emissions Study, [REDACTED]  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED] (Zero  
20 Emissions Study at 15.)

21 **Q: Are complexities and uncertainty a justifiable reason to not use it for**  
22 **optimization modeling?**

23 **A:** No. In fact, optimization modeling provides the most appropriate way to assess  
24 those very issues. Modeling allows for informed decisions based on the model  
25 results from countless scenarios. As stated on the Energy Exemplar website for  
26 Aurora:

27 New paradigm shifts toward renewable generation and the repowering of  
28 the world’s grid are driving a power generation and investment  
29 renaissance. *Given the complexity and the various uncertainties, you need*  
30 *a model that is fast yet comprehensive and consistent.*



1  
2           With your market knowledge and Aurora's speed, robust algorithms, and  
3           flexible design, you'll have what you need to answer the most important  
4           questions. Aurora gives you the power to quickly bring in your data,  
5           evaluate countless scenarios with fast simulation times, and automate  
6           insights with reports and charts.<sup>3</sup> (emphasis added)  
7

8           The right way to evaluate the risks of various resource portfolios is to test the  
9           resource mix under key sensitivities. For example, a portfolio can be tested to  
10          assess how vulnerable its costs and reliability is to high natural gas prices or to  
11          different load forecasts. By testing the performance of different resource mixes  
12          under various sensitivities, a utility can determine which resource mix holds up  
13          best under a range of possible futures, with some futures being more likely than  
14          others.

15          MidAmerican's own assessment of the revenues of the Wind PRIME portfolio  
16          confirms that the utility knows that testing its resources' performance under  
17          various sensitivities is the appropriate way to account for uncertainties.

18          MidAmerican used Aurora to analyze three different scenarios to predict energy  
19          market prices that were then used to assess Wind PRIME's potential revenues.

20          The scenarios MidAmerican analyzed were:

- 21                   (1) a "Reference Case" price forecast that contains a natural gas price, a  
22                   carbon dispatch adder, and other forecasts in MidAmerican's reference  
23                   electric price forecast;  
24                   (2) a "No-CO2" price forecast sensitivity that removes the carbon  
25                   dispatch adder from the Reference Case forecast and thereby reduces  
26                   electric prices relative to the Reference Case;  
27                   (3) a "Low Gas, No-CO2" price forecast sensitivity that both lowers  
28                   natural gas prices and removes the carbon dispatch adder, further reducing  
29                   electric prices relative to the Reference Case.

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<sup>3</sup> [Aurora Electric Forecasting and Analysis Software | Energy Exemplar](https://www.energyexemplar.com/aurora)  
<https://www.energyexemplar.com/aurora>

1 The quantitative modeling of scenarios by MidAmerican allows for a comparison  
2 of the economic impact of Wind PRIME based on uncertainties expressed as  
3 sensitivity model runs. Again, though, MidAmerican did not use Aurora to  
4 evaluate the appropriate mix of resource additions; instead, it limited the use of  
5 Aurora to evaluating Wind PRIME's likely energy revenues under three different  
6 futures. Using Aurora to compare MidAmerican's preferred resource mix (Wind  
7 PRIME) to other feasible clean energy additions offers a quantitative perspective  
8 that cannot be obtained from a series of one-off subjective analyses, including  
9 MidAmerican's nine-factor test.

10 **Q: Do you believe MidAmerican should use modeling to demonstrate the**  
11 **reasonableness of Wind PRIME?**

12 A: Yes. MidAmerican relied on Aurora modeling to establish its electric price  
13 forecast over a 20-year planning horizon, and took into account the "operational  
14 complexities" and "uncertainty of the future" by modeling those electricity prices  
15 under three different futures. MidAmerican relies on the energy revenues forecast  
16 it developed for Wind PRIME to justify the benefits of Wind PRIME to  
17 customers, and to support its case that Wind PRIME can be added at no net cost.  
18 It would be very reasonable to ask MidAmerican to use Aurora to demonstrate  
19 that the Wind PRIME portfolio is reasonable when compared to other feasible  
20 clean energy additions.

21 MidAmerican's own internal analysis identified that a very different portfolio of  
22 renewable resources should be added in order to advance a zero emissions future.

1 MidAmerican should provide more than a highly subjective qualitative nine-  
2 factor analysis to justify its \$4 billion dollar investment in new generation.

3 A reasonableness determination that is supported by the objective and quantitative  
4 analysis provided by resource modeling facilitates informed decision making that  
5 better aligns with meeting the long-term interests of customers by selecting the  
6 right resource at the right time.

7 **MidAmerican has not assessed whether the passage of the Inflation**  
8 **Reduction Act supports the addition of a different set of zero emissions**  
9 **resources.**

10 **Q: Does the Inflation Reduction Act have an overall objective for electric**  
11 **generation?**

12 A: Yes. The Inflation Reduction Act (IRA) includes tax credits, incentives and other  
13 provisions intended to help companies tackle climate change through investments  
14 in renewable energy and energy efficiency. Billed as the largest climate  
15 legislation in US history, the IRA provides a 10-year window of opportunity and  
16 certainty within which to dramatically reduce greenhouse gas emissions.

17 **Q: Does the IRA provide a greenhouse gas reduction target for fossil fueled**  
18 **electric generation?**

19 A: Yes. Both the investment tax credit and the production tax credit phase downs  
20 after 2032 are contingent on meeting an emissions reduction target. The phase  
21 down is the later of 2032 or

22 “the calendar year in which the Secretary determines that the annual  
23 greenhouse gas emissions from the production of electricity in the United

1 States are equal to or less than 25 percent of the annual greenhouse gas  
2 emissions from the production of electricity in the United States for  
3 calendar year 2022.”  
4

5 MidAmerican witness Fehr discussed this IRA reduction target in his rebuttal  
6 testimony. (Fehr Rebuttal at 5).

7 **Q: Will Wind PRIME allow MidAmerican to meet or exceed this target?**

8 A: No. As shown in Guyer (confidential) Exhibit 1, MidAmerican projects its 2023  
9 CO2 Emissions to be [REDACTED] (Guyer Direct (confidential) Exhibit 1) To  
10 meet the target of equal to or less than 25 percent of its annual 2022 greenhouse  
11 gas emissions, MidAmerican would need to reduce its 2032 CO2 emissions to  
12 [REDACTED] The MidAmerican projections shown in Guyer (confidential)  
13 Exhibit 1 show projected 2032 CO2 emissions of [REDACTED] with a carbon  
14 adder, and projected 2032 CO2 emissions of [REDACTED] in the reference case  
15 without a carbon adder and low natural gas prices. Neither of the 2032 projections  
16 for MidAmerican CO2 emissions are on target to meet the 2032 target in the IRA.  
17 (And note that what MidAmerican’s analysis is showing is that a carbon cost  
18 adder – or any other set of higher costs imposed on coal plants – drives down  
19 carbon emissions; it is not the Wind PRIME portfolio that leads to the carbon  
20 reductions.)

21 **Q: Did the IRA clarify that CO2 emissions are likely to be regulated?**

22 A: Yes. The IRA defines the term “greenhouse gas” as carbon dioxide,  
23 hydrofluorocarbons, methane, nitrous oxide, perfluorocarbons and sulfur  
24 hexafluoride. Additionally, by adding Section 135 to the Clean Air Act (CAA),  
25 Congress made it clear that the Environmental Protection Agency (EPA) has a

1 mandate to regulate greenhouse gas emissions.

2 **Q: Do you believe the IRA signals the need for MidAmerican to conduct**  
3 **resource planning to make material progress towards reducing its carbon**  
4 **emissions by 2035?**

5 A: Yes. Although MidAmerican witness McIvor agreed with my definition of net-  
6 zero greenhouse gas emissions, and discusses the likelihood of future carbon  
7 regulation, she did not address the fact that the United States has set a target of  
8 achieving carbon free electricity by 2035, and that MidAmerican is not on track to  
9 achieve this goal. (McIvor Rebuttal at 2-5.) As I discussed in my direct testimony  
10 (Guyer Direct at 11–15), the United States has set a goal to reach 100 percent  
11 carbon pollution-free electricity by 2035. The Inflation Reduction Act now  
12 codifies a GHG reduction target, and amended the CAA making it clear that EPA  
13 has a mandate to regulate greenhouse gas emissions.

14 Beyond the climate imperative of reducing greenhouse gases, the IRA also offers  
15 significant financial benefits for utilities that transition to a cleaner generation  
16 mix. As the monopoly utility, MidAmerican should be examining how to ensure  
17 that it is maximizing these benefits for Iowa customers.

18 **Q: Did MidAmerican’s evaluation of the appropriate set of resource additions**  
19 **take into account the new IRA incentives?**

20 A: No. MidAmerican did not take into account the new IRA incentives at the  
21 resource selection stage. MidAmerican proposed the Wind PRIME project before  
22 the IRA passed, and MidAmerican did not re-evaluate whether the Wind PRIME

1 resource mix was the reasonable set of resource additions after the law's passage.  
2 MidAmerican only considered the economic impact of the new IRA incentives on  
3 its proposed 2042 MW of wind and 50 MW of solar.

4 **Q: Was it reasonable for MidAmerican not to have re-evaluated its proposed**  
5 **resource additions in light of the IRA's passage?**

6 A: No. The failure to re-evaluate the set of resource additions to propose based on  
7 the IRA incentives was not reasonable. With higher incentives available for solar,  
8 the production tax credit now available for both wind and solar, the 30 percent tax  
9 credit available for storage, and the 10 percent domestic content and 10 percent  
10 energy community bonuses, the comparative costs of solar, wind, and storage  
11 have changed. It is quite possible that significantly greater amounts of solar and  
12 storage might be more beneficial for customers than is included in the Wind  
13 PRIME proposal. Additionally, the IRA provides \$5 billion to back \$250 billion  
14 in low-cost loans for utilities to reduce coal debt and reinvest in clean  
15 technologies. Conducting resource expansion modeling that takes these new  
16 incentives into account would allow for an informed decision demonstrating  
17 whether Wind PRIME will meet the long-term interests of customers.  
18 MidAmerican witness Fehr discussed the potential bonus credits, but did not  
19 incorporate the bonus credits into his financial analysis, stating:

20 Qualification requirements for the potential bonus credits are not well  
21 defined, and the availability of qualifying equipment and sites is not  
22 known at this time. Accordingly, MidAmerican is not certain what  
23 level, if any, of bonus credits Wind PRIME may qualify for and has  
24 not included any amount of bonus credits in its economic modeling of  
25 Wind PRIME.  
26 (Fehr Rebuttal at 7)  
27

1 **Q: Is it true that the bonus credits for “energy communities” is not well defined?**

2 A: No. The IRA defines “energy community” to include census tracts or adjoining  
3 census tracts where coal-fired electric generating units have retired since 2009.  
4 One option MidAmerican could and should assess is whether locating new clean  
5 energy projects in the same or adjoining census tracts to its Walter Scott and Neal  
6 coal units could provide an economic benefit to customers, securing additional  
7 investment tax credit (ITC) or production tax credit (PTC) dollars while providing  
8 economic redevelopment value to communities in the transition away from fossil  
9 generation. The credits can also be stacked: for example, a storage project sited in  
10 an energy community that satisfies the domestic content and labor requirements  
11 would secure a 50% ITC.

12 All of these credit levels could be assessed through a proper evaluation by  
13 MidAmerican. MidAmerican could issue a Request for Information or for  
14 Proposals for wind, solar and storage projects in potential energy communities to  
15 gather information regarding this potential. The new IRA incentives could also be  
16 incorporated into resource capacity expansion modeling.

17 It is possible that modeling would support the resource selection and timing of  
18 Wind PRIME. It is also possible that modeling would support a different mix of  
19 wind, solar, and storage resources. However, MidAmerican has submitted nothing  
20 to demonstrate that the Wind PRIME proposed projects are the right resources at  
21 the right time.

22 **Q: Can you provide an example of how the tax credits stack?**

1 A: The PTC under the IRA for utility scale solar and wind provides for a base PTC  
2 of 0.5 ¢/kwh for all projects, 0.1 ¢/kwh for meeting the domestic content  
3 requirements and 0.1 ¢/kwh for a project sited in an energy community. As a  
4 result, a project located in an energy community and meeting the domestic  
5 content requirements would qualify for a PTC of 0.7 ¢/kwh. However, if the  
6 project meets the labor requirements of paying prevailing wage and having a  
7 qualifying apprentice program, the project would qualify for a base PTC adder of  
8 2.1 ¢/kwh, a 0.2 ¢/kwh adder for meeting the domestic content requirements and  
9 a 0.2 ¢/kwh adder for a project sited in an energy community. As a result, a  
10 project meeting the labor requirements located in an energy community and  
11 meeting the domestic content requirements would qualify for a PTC of 3.2 ¢/kwh.  
12 The PTC is adjusted for inflation each year by the IRS. In the chart below from  
13 the Solar Energy Industry Association (SEIA),<sup>4</sup> the levels reported for years 2023  
14 and after assume an annual inflation of 2% for illustrative purposes.

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<sup>4</sup> [Inflation Reduction Act Summary PDF \(seia.org\)](https://www.seia.org/sites/default/files/2022-10/Inflation%20Reduction%20Act%20Summary%20PDF%2010.13.22.pdf), <https://www.seia.org/sites/default/files/2022-10/Inflation%20Reduction%20Act%20Summary%20PDF%2010.13.22.pdf>



	2022 <sup>†</sup>	2023	2024	2025	2026	2027	2028	2029
<b>PTC Under IRA</b>								
<b>Projects Under 1 MWac</b>								
Base PTC*	2.6 ¢/kWh	2.7 ¢/kWh	2.7 ¢/kWh	2.8 ¢/kWh	2.8 ¢/kWh	2.9 ¢/kWh	2.9 ¢/kWh	3.0 ¢/kWh
Bonus for Meeting Domestic Content Minimums***		0.3 ¢/kWh	0.3 ¢/kWh	0.3 ¢/kWh	0.3 ¢/kWh	0.3 ¢/kWh	0.3 ¢/kWh	0.3 ¢/kWh
Bonus for Siting in "Energy Community"		0.3 ¢/kWh	0.3 ¢/kWh	0.3 ¢/kWh	0.3 ¢/kWh	0.3 ¢/kWh	0.3 ¢/kWh	0.3 ¢/kWh
<b>Projects Over 1 MWac that Begin Construction Less than 60 Days After Dept. of Treasury Issues Guidance</b>								
Base PTC*	2.6 ¢/kWh	2.7 ¢/kWh	2.7 ¢/kWh					
Bonus for Meeting Domestic Content Minimums***		0.3 ¢/kWh	0.3 ¢/kWh					
Bonus for Siting in "Energy Community"		0.3 ¢/kWh	0.3 ¢/kWh					
<b>Projects Over 1 MWac that Begin Construction 60 Days After Dept. of Treasury Issues Guidance</b>								
<b>Base for All Projects</b>								
Base PTC*	0.5 ¢/kWh	0.5 ¢/kWh	0.5 ¢/kWh	0.6 ¢/kWh	0.6 ¢/kWh	0.6 ¢/kWh	0.6 ¢/kWh	0.6 ¢/kWh
Bonus for Meeting Domestic Content Minimums***		0.1 ¢/kWh	0.1 ¢/kWh	0.1 ¢/kWh	0.1 ¢/kWh	0.1 ¢/kWh	0.1 ¢/kWh	0.1 ¢/kWh
Bonus for Siting in "Energy Community"		0.1 ¢/kWh	0.1 ¢/kWh	0.1 ¢/kWh	0.1 ¢/kWh	0.1 ¢/kWh	0.1 ¢/kWh	0.1 ¢/kWh
<b>Adders for Projects that Meet Labor Requirements</b>								
Base PTC*	2.1 ¢/kWh	2.1 ¢/kWh	2.2 ¢/kWh	2.2 ¢/kWh	2.3 ¢/kWh	2.3 ¢/kWh	2.3 ¢/kWh	2.4 ¢/kWh
Bonus for Meeting Domestic Content Minimums***		0.2 ¢/kWh	0.2 ¢/kWh	0.2 ¢/kWh	0.2 ¢/kWh	0.2 ¢/kWh	0.2 ¢/kWh	0.2 ¢/kWh
Bonus for Siting in "Energy Community"		0.2 ¢/kWh	0.2 ¢/kWh	0.2 ¢/kWh	0.2 ¢/kWh	0.2 ¢/kWh	0.2 ¢/kWh	0.2 ¢/kWh
Source: SEIA Summary of Inflation Reduction Act (H.R. 5376)								

1

2

**Technology study rate making principle**

3

**Q: Did MidAmerican provide any additional support for the technology study rate making principle?**

4

5

**A:** No. MidAmerican witness Fehr acknowledges that the characteristics of battery storage are well known and commonly deployed, yet believes the rate making principle is appropriate because other yet-to-be-developed storage technologies are envisioned as part of the study. (Fehr Rebuttal at 13-14.) Similarly, he believes that the rate making principle is appropriate for small modular nuclear reactors (SMRs) in order to study the operational characteristics, yet notes that SMRs do not have a commercial operation record. (Fehr Rebuttal at 14.) Finally, Mr. Fehr believes that a rate making principle is necessary to study the cost effectiveness of carbon capture and storage. (Fehr Rebuttal at 13.) MidAmerican has not shown why ratepayers, rather than shareholders, should bear the high risks associated with its exploration SMRs and carbon capture and sequestration

15

1 (CCS).

2 **Q: Are utilities in MISO moving forward with plans for battery storage since**  
3 **the passage of the IRA?**

4 A: Yes. In addition to the utilities discussed previously that announced storage  
5 projects prior to the passage of the IRA (Guyer Direct at 28-29), the MISO queue  
6 on October 18, 2022, showed the following active storage projects submitted to  
7 MISO since the passage of the IRA in MISO North:

Active Reviews	Storage (MW)
Iowa	870
Indiana	3,030
Illinois	2,820
Michigan	840
Minnesota	675
Missouri	425
North Dakota	200
Wisconsin	1,417
<b>Total</b>	<b>10,277</b>

8

9 Additionally, 3,778.5 MW of battery storage entered the MISO queue after the  
10 passage of the IRA in MISO South.

11 **Q: Has anything changed that supports the technology rate making principle for**  
12 **carbon capture and storage or small nuclear reactors?**

13 A: No. MidAmerican has not shown that Louisa and Walter Scott 4 are currently

1 economic sources of generation, let alone that they will continue to be economic  
2 with the additional costs to construct and operate CCS. Additionally, I do not  
3 believe MidAmerican provided sufficient justification for studying small modular  
4 nuclear reactors at this time given the lack of commercial operating data. The  
5 same concerns regarding the technology study rate making principle addressed in  
6 Guyer Direct testimony are still unaddressed by MidAmerican. (Guyer Direct at  
7 34-40.)

8 **Conclusion**

9 **Q: Do you support the MidAmerican Wind Prime proposal to add 2042 MW of**  
10 **Wind, 50 MW of solar, and the Technology Study Rate Making Principle?**

11 A: As I noted in my Direct Testimony, I do not believe that MidAmerican has yet  
12 demonstrated the reasonableness of adding 2,042 MW of wind generation and 50  
13 MW of solar generation particularly since MidAmerican has not demonstrated  
14 that it has adequately considered other sources for long-term supply, such as  
15 portfolios with a different mix of solar, storage, and energy efficiency.  
16 MidAmerican has not addressed this shortcoming in its application. With the  
17 passage of the IRA, it is important to recognize that a reasonableness  
18 determination that is supported by the objective and quantitative analysis provided  
19 by resource modeling facilitates informed decision making that better aligns with  
20 meeting the long-term interests of customers by selecting the right resource at the  
21 right time. Resource optimization modeling brings consistency that cannot be  
22 obtained from a series of one-off subjective analyses using MidAmerican's nine-  
23 factor test. The IRA signals the need for MidAmerican to do resource planning to

1 facilitate the transition to 100% carbon free generation by 2035 and to fully  
2 capture the benefits for customers. MidAmerican should supplement the record  
3 with resource expansion planning modeling to properly assess the potential  
4 system benefits of Wind PRIME. For the reasons discussed above, I do not  
5 support the technology study rate making principle sought by MidAmerican  
6 Energy Company (MEC) in this Advance Ratemaking Principles docket.

7 **Q: Does this conclude your testimony?**

8 A: Yes.

AFFADAVIT OF STEVEN C. GUYER

STATE OF ILLINOIS    )  
COUNTY OF            )  
COOK

ss.

I, Steven C. Guyer, being first duly sworn on oath, state that I am the same Steven C. Guyer identified in the testimony being filed with this affidavit, that I have caused the testimony to be prepared and am familiar with its contents, and that the testimony is true and correct to the best of my knowledge and belief as of the date of this affidavit.

/s/ Steven C. Guyer  
Steven C. Guyer

State of Illinois County of Cook

Subscribed and sworn before me the 18th day of November, 2022.

/s/ Heather Vogel  
Notary Public in and for the  
State of Illinois