

PUBLIC SERVICE COMMISSION OF WISCONSIN

Memorandum

August 11, 2021

FOR COMMISSION AGENDA

TO: The Commission

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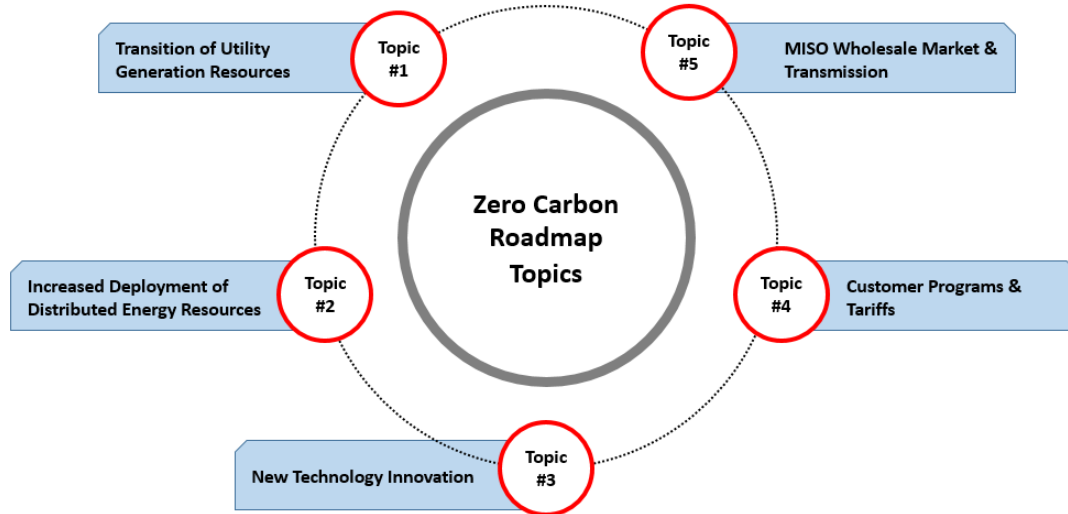
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RE: Roadmap to Zero Carbon Investigation 5-EI-158

Suggested Minute: The Commission directed Commission staff to draft an order consistent with its discussion.

On March 11, 2021 the Commission issued a Notice of Investigation to consider the ongoing transition to zero-carbon electricity generation in Wisconsin. ([PSC REF#: 406664.](#)) The Notice indicated that the investigation would help the Commission gather information to identify approaches to achieve the economic and environmental benefits the transition can provide, while maintaining adequate electric supply, reliability, and affordability for all customers. As a starting point for the investigation, the Notice identified five core topics contributing to the clean energy transition, summarized in Figure 1.

Figure 1 Summary of Investigation Topics



The Notice also established that the investigation would consider a range of existing initiatives addressing these issues, including but not limited to publicly announced utility goals to reduce carbon dioxide emissions; recommendations from the Wisconsin Energy Distribution and Technology Initiative (WEDTI) ([PSC REF#: 406723](#)); recommendations from the Governor’s Task Force on Climate Change (GTFCC) ([PSC REF#: 406724](#)); and recommendations from the state Clean Energy Plan developed through Executive Order 38. On April 2, 2021 the Commission issued for public comment a memorandum summarizing the existing proposals related to the Clean Energy Transition identified by published utility plans, WEDTI, and GTFCC,¹ and requesting comments to help set initial priorities for the investigation. The Commission requested that commenters identify between one and three specific issues to be prioritized for attention, which could include issues identified in the memorandum or other issues

¹ State Clean Energy Plan work is ongoing and has not issued formal recommendations to date.

not listed. The Commission also requested that commenters identify how they believe the Commission should address the issue, taking into account the Commission’s existing jurisdiction and authority. ([PSC REF#: 408370.](#))

As shown in Table 1, the Commission received 48 responses to its request for comment, from 8 utilities and utility representatives, 28 organizations, and 12 individuals.

Table 1 Comments Received in Response to April 2021 Request for Comment

Utilities/Representatives		Organizations	
Municipal Electric Utilities of Wisconsin	PSC REF#: 411403	350 Madison	PSC REF#: 410719 , PSC REF#: 411387
Manitowoc Public Utilities	PSC REF#: 411442	RENEW Wisconsin	PSC REF#: 411392
WPPI Energy	PSC REF#: 411467	Wisconsin’s Green Fire	PSC REF#: 411405
Northern States Power – Wisconsin	PSC REF#: 411470	Midwest Energy Efficiency Alliance	PSC REF#: 411443
Wisconsin Power and Light	PSC REF#: 411471	UW-Madison WEREWOLF Team	PSC REF#: 411447
Madison Gas and Electric	PSC REF#: 411478	Rocky Mountain Institute	PSC REF#: 411448
Wisconsin Utilities Association	PSC REF#: 411480	Clean Grid Alliance	PSC REF#: 411450
WEC Energy Group	PSC REF#: 411504	NRDC, Sustainable FERC Project, and Union of Concerned Scientists	PSC REF#: 411452
Individuals		Physicians for Social Responsibility	PSC REF#: 411453
Robert Owen	PSC REF#: 409769 , PSC REF#: 409770 , PSC REF#: 411113 , PSC REF#: 411717	Wisconsin Local Government Climate Coalition	PSC REF#: 411458
Dana LaFontsee	PSC REF#: 411375	SOUL of Wisconsin	PSC REF#: 411561
Lila Zastrow and Dave Hendrickson	PSC REF#: 411410	The Nature Conservancy	PSC REF#: 411469
Jean Luecke	PSC REF#: 411446	Coalition for Community Solar Access	PSC REF#: 411473
George Schwarzmman, Jr.	PSC REF#: 411455	Iowa County Clean Local Energy Alliance- Now (CLEA-N)	PSC REF#: 411474
Don Leix	PSC REF#: 411466	Slipstream	PSC REF#: 411476
Linda Grice	PSC REF#: 411472	Clean Wisconsin	PSC REF#: 411477

Utilities/Representatives		Organizations	
Kathryn Mummah	PSC REF#: 411475	Wisconsin Laborers District Council	PSC REF#: 411479
Tom Wilson	PSC REF#: 411505	Citizens Utility Board	PSC REF#: 411491
Chris Klopp	PSC REF#: 411507	ITC Midwest	PSC REF#: 411494
Annie Carrell	PSC REF#: 411515	APTIM	PSC REF#: 411501
		Advocate Aurora Healthcare	PSC REF#: 411502
		Nuclear Energy Institute	PSC REF#: 411503
		Wisconsin Industrial Energy Group	PSC REF#: 411506
		Wisconsin Office of Sustainability and Clean Energy	PSC REF#: 411508
		Forest County Potawatomi Community	PSC REF#: 411509
		Sierra Club Beyond Coal Campaign	PSC REF#: 411510
		Customers First	PSC REF#: 411511
		Environmental Groups	PSC REF#: 411523
		Utility Workers Coalition	PSC REF#: 411560

Commenters proposed a range of different priorities in response to the Commission’s request. As a next step in the investigation, this memorandum presents action options for Commission review and decisions that are informed by the comments received.

In order to align the scope with available Commission staff resources, and support concentrated and timely action, Commission staff sought to identify a limited number of topics for initial consideration. In selecting topics from the larger number of distinct priorities suggested by commenters, Commission staff took into account multiple considerations, including: (1) how frequently commenters named a topic as a priority; (2) the presence of identifiable options for addressing the topic within the Commission’s jurisdiction and authority, including any options to address the topic in connection with existing Commission work; and (3) the value in addressing the issue upfront, which can be higher for broad-scale topics that could support opportunities to consider additional priorities at a later date.

Based on these considerations, this memorandum addresses the following five topics:

1. Utility resource planning;
2. Performance-based regulation;
3. Pilot programming;
4. Energy efficiency; and
5. Customer affordability.

For each topic, this memorandum summarizes input provided by commenters as well as the existing state of activity on the issue at the Commission, and requests determination on whether the Commission should take further action to address each issue. The memorandum also identifies a range of procedural options the Commission could use to pursue further action, and requests guidance on the appropriate option to be used for each issue where the Commission decides to proceed.

Action Options

As the Commission reviews whether and how to proceed with the range of substantive issues outlined below, it may consider a range of procedural options. Several general procedural options have been considered by the Commission in other investigations ([PSC REF#: 406268](#)) and may provide options adaptable to a range of topics. These include:

- **Ordering utilities to address the issue in rate cases.** This method is appropriate to implement changes to utility tariffs on a case-by-case basis. Given that many utilities have already filed rate cases and settlements earlier in 2021, an order would likely be appropriate to apply to case filings in future years. Other options in this list could be pursued in advance of utility-specific dockets if the Commission desires to first more clearly define how the issue is to be addressed.

- **Commencing a proceeding.** Proceedings represent another method for using contested case procedures to implement utility tariff changes. Depending on their design, proceedings could enable changes to be made for utilities independent of the timing of their next rate case, or enable the Commission to jointly address the same issue across multiple utilities.
- **Conducting a workshop.** Workshops have been used in other generic investigations ([PSC REF#: 379765](#)) to facilitate stakeholder discussion. Workshops could be scoped to gather additional information or encourage further discussion to identify acceptable approaches to addressing an issue.
- **Requesting reply comments.** Requests could be designed to solicit additional written information from commenters in response to existing comments.
- **Developing a Commission staff straw proposal for comment.** Straw proposals could serve as a vehicle to define a potential resolution for an issue and gather comments in reaction to that proposal to inform future Commission decisions.
- **Conducting further analysis.** Further analysis from Commission staff and/or outside entities could independently assess substantive questions related to an issue.
- **Request decision alternatives from Commission staff.** Commission staff could draw on information collected through other alternatives above—such as workshops, reply comments, and/or additional analysis—and develop proposed decision alternatives to guide Commission decision-making.

In addition, Commission staff have identified topic-specific options for several of the issues below that emerged from commenter input and staff review of existing work and research

on each issue. The Commission may also identify additional procedural options that may be appropriate for a given issue.

Utility Resource Planning

Establishing enhanced and transparent utility planning processes was among commenters' frequently stated priorities. A range of different commenters emphasized the importance of facilitating more analysis and discussion of utility resource decisions, in order to assess progress in reducing carbon emissions as well as the impacts on reliability, affordability, and resource adequacy.

Commenters stated that information on utility resource planning is commonly provided in individual case applications, and said the information there has frequently provided only a partial view of utilities' overall system analysis, often with little or no information specific to carbon emissions. Commenters desired a more transparent view of each generation-owning utility's comprehensive plans for resource additions, continuations, and retirements, placed in the context of the decarbonization goals set by many of those utilities as well as their other goals of reliability and affordability. Those commenters stated that such plans would provide a more effective context for assessing individual case decisions, and emphasized that clear and thorough planning is especially important given the unusually rapid pace of generation retirements and additions occurring in the coming years. ([PSC REF#: 411392](#), [PSC REF#: 411477](#), [PSC REF#: 411491](#).)

Multiple commenters specified that desirable resource plans should allow the Commission and stakeholders to clearly identify the timing of future changes in generation sources and a utility's associated progress towards achieving emissions reductions. Commenters also emphasized the importance of establishing planning processes that support extensive

discussion and engagement with stakeholders, and noted that effective plans and engagement could provide opportunities to address a range of more specific topics of interest to the clean energy transition. ([PSC REF#: 411453](#), [PSC REF#: 411458](#), [PSC REF#: 411508](#), [PSC REF#: 411523](#).)

A number of commenters noted that preparation of Integrated Resource Plans (IRP), consistent with those prepared in some other states, would meet their standards for effective resource planning across utilities statewide. However, several of those commenters acknowledged that IRP processes are typically established through legislative authorization, which has not taken place in Wisconsin. ([PSC REF#: 411450](#), [PSC REF#: 411452](#), [PSC REF#: 411507](#).) Other commenters suggested that the Commission explore opportunities for pursuing their desired enhanced planning efforts through the Strategic Energy Assessment (SEA), the Commission's current statutorily authorized platform for statewide review of the electric system. ([PSC REF#: 411392](#), [PSC REF#: 411458](#), [PSC REF#: 411523](#).)

As several commenters noted, their desired resource planning efforts would involve pursuing information collection and analysis beyond what has been provided in previous biennial SEA reports. (*Id.*, [PSC REF#: 411477](#), [PSC REF#: 411508](#).) The existing SEA framework does offer some flexibility for a modified approach to future reports. The Commission has statutory authority to promulgate rules that establish procedures and requirements for reporting information that is necessary for the Commission to prepare the SEA,² and the statute and administrative code provisions associated with the SEA provide some defined parameters for report content, including a list of information and analysis each report must include,³ a list of

² Wis. Stat. § 196.491(2)(ag).

³ Wis. Stat. § 196.491(2)(a).

information the Commission shall request from utilities,⁴ and specification that the SEA data collection and analysis should cover a period that includes 2 years before and 5 future calendar years after the date of publication.⁵ Furthermore, Wis. Admin. Code § PSC 111.07 authorizes the Commission to request additional information from state utilities for purposes of preparing the SEA, a provision the Commission used to request carbon emissions data for review in the most recently completed SEA. ([PSC REF#: 374400](#).) However, the Commission has historically exercised discretion over whether to incorporate more information and analysis in SEA reports than the baseline requirements in statute and code.

Utility data requests for the next SEA will be issued in fall 2021, and the Commission could consider directing staff to incorporate increased data collection on resource planning. Minimum SEA data collection requirements already include identification of planned generation additions and retirements within the SEA timeframe, which previous SEA reports have typically presented as a descriptive list. Expanding the data request to include more information on the analysis utilities conducted to inform all of their addition and retirement decisions could allow the SEA to support a more comprehensive understanding of the rationale and effects of utilities' planned resource decisions than the partial information commonly found in case-specific dockets, and support greater transparency and engagement for the Commission and stakeholders. Additional information that is commonly present in detailed resource plans, and could be of value in an SEA review, may include:

- A narrative description of the driving factors behind additions and retirements, including an explanation of the rationales for each retirement and the role of new generation additions, as well as other considerations such as forecasted customer

⁴ Wis. Admin. Code ch. PSC 111, Subchapters II through V.

⁵ Wis. Admin. Code § PSC 111.03.

demand, in ensuring the utility meets future capacity and generation needs. This narrative can also explain the influence of utilities' carbon reduction goals on their decisions, and project the impacts of additions and retirements on achievement of its carbon reduction goals;

- Explanations of the analysis procedures used by the utility to determine addition and retirement decisions, including the analytical models used and rationale for election of those models, and the methodological procedures used by the utility to ensure accurate and reliable modeling results;
- A description of the goals and standards used by the utility to set initial parameters for modeling, such as its definition of standards for maintaining system reliability, required reserve margins for resource adequacy, and the application of any carbon reduction goals the utility has set;
- Specification of the key input assumptions used to model system and market conditions, as well as any alternative assumptions used to conduct sensitivity analysis on the effects of different generation alternatives;
- Specification of all generation scenarios considered in analysis; and
- A presentation of modeling results that explains how the utility selected the proposed generation scenario reflected in its reported additions and retirements, and how the utility concluded this scenario was superior to other scenarios considered.

The Commission could also consider directing Commission staff to explore incorporating independent, statewide resource planning analysis as part of the SEA. Requesting the information above could provide greater insight on each utility's own system-level decisions, but would not

necessarily fully address the generation planning implications for Wisconsin as a whole. Conducting statewide analysis that encompasses activities across individual utilities—through internal work by Commission staff, review and outreach of external sources, or both—may be able to provide additional information that help the SEA evaluate the impacts on Wisconsin’s electric system. Independent analysis may also go beyond the analysis associated with announced additions and retirements and assess how the implementation of those generation changes could influence future resource planning decisions. For example, system analysis that takes into account already-announced solar construction and coal plant retirements may provide advance insight for the Commission, utilities, and stakeholders on how future additions and retirements of different generation sources could impact reliability, resource adequacy, affordability and achievement of carbon emissions reductions.

Other procedural options may also offer opportunities for the Commission to help provide for more transparent utility resource planning, in addition to or instead of the SEA-specific options above. For example, reply comments, workshops, or further Commission staff analysis could facilitate further information-gathering and stakeholder input on how to define and pursue more transparent resource planning. In considering other procedural options, the Commission may wish to consider how the content and timing of any additional procedures may align with that of the SEA, which will begin with data requests this fall; result in a published draft no later than July 1, 2022;⁶ and include a public hearing on the draft SEA within 90 days after the draft report is released.⁷

⁶ Wis. Stat. § 196.491(2)(b).

⁷ Wis. Stat. § 196.491(2)(g).

Commission Alternatives – Utility Resource Planning

Alternative One: Address utility resource planning through one or more of the following procedures:

- a. Direct Commission staff to collect more information on utility resource planning analysis and decisions as part of the next SEA.
- b. Direct Commission staff to explore incorporating independent, statewide resource planning analysis in the next SEA.
- c. Order utilities to address resource planning in their next rate case.
- d. Commence a proceeding.
- e. Conduct a workshop.
- f. Request reply comments.
- g. Direct Commission staff to develop a straw proposal.
- h. Conduct further analysis on resource planning.
- i. Direct Commission staff to prepare decision alternatives.
- j. Other procedures as determined by the Commission.

Alternative Two: Take no further action at this time.

Performance-Based Regulation

Several commenters supported prioritizing the exploration of performance-based regulation as a general method that could encourage better utility outcomes on a range of desired goals, by establishing financial incentives for utility performance on desired outcomes.

Multiple commenters specified their interest in establishing performance-based regulation to encourage increased activity on demand-side activities such as demand response and energy efficiency. ([PSC REF#: 411405](#), [PSC REF#: 411443](#), [PSC REF#: 411471](#), [PSC REF#: 411491](#).)

Demand-side activities have been one common focus for performance-based regulation initiatives to date in other states, since incentives can help offset the financial impacts of the reduced energy sales associated with activities that reduce energy use, and counterbalance the financial incentives utilities can have for constructing and owning generation sources.⁸ Some commenters linked their interest in performance-based regulation to support for encouraging the “utility as a conductor” concept established in the WEDTI report. ([PSC REF#: 411458](#), [PSC REF#: 411470](#).) As outlined in WEDTI recommendation #1, positioning utilities as conductors would charge them with optimizing the benefits of electric system operations for utilities and customers in ways that take account of increasing efficiency and demand response as well as the impacts of increases in electric vehicle usage, battery storage deployment, and customer-owned generation such as rooftop solar. ([PSC REF#: 406723](#) at 15-17.)

A growing number of states have explored performance-based regulation approaches in recent years.⁹ While the details of state initiatives can vary significantly, those initiatives consistently focus on two pillars of the performance-based regulation concept: setting performance metrics and establishing “performance incentive mechanisms” that connect performance on the metrics with utilities’ financial outcomes.

Performance metrics can vary across jurisdictions, based on policy goals, available data, and Commission and stakeholder priorities. WEDTI’s utility as a conductor recommendation offers six general outcomes that “utilities should optimize for:” (1) safety, (2) affordability, (3) reliability and resilience, (4) customer service quality, (5) environmental performance, and

⁸ See i.e. Performance-Based Regulation: An Overview. Regulatory Assistance Project.

https://www.raponline.org/wp-content/uploads/2020/09/rap_shenot_pbr-intro_co-puc2020_aug_28.pdf.

⁹ See i.e. Chloe Holden. “More States Explore Performance-Based Ratemaking, but Few Incentives Are In Place.” Greentech Media. June 13, 2019. <https://www.greentechmedia.com/articles/read/more-states-explore-performance-based-ratemaking-but-few-incentives-in-plac>.

(6) cost-effective alignment of generation and load. (*Id.* at 17.) Initiatives in other states have used comparable general outcome categories as a starting point and conducted collaborative processes to identify specific performance metrics to apply within each category. For example, Minnesota’s ongoing performance-based regulation initiative, which established a list of general goals similar to WEDTI’s, subsequently convened a stakeholder group to review more than one hundred options for metrics and select appropriate individual metrics to apply to each outcome.¹⁰ Performance-based regulation initiatives can consider a number of factors in selecting appropriate metrics, including the accuracy of individual metrics in reflecting general goals, the ability of utilities to control their performance on the metrics, the metric options available in existing data sources, and the ability of utilities and others to accurately and cost-effectively collect necessary the data needed to establish new metrics.

After metrics are established, performance incentive mechanisms can be implemented to formally connect performance outcomes and utility finances. Multiple commenters noted that one mechanism option would be to reduce or increase utilities’ return on equity based on their performance on selected metrics. ([PSC REF#: 411458](#), [PSC REF#: 411491](#).) Other available mechanisms could include, but are not limited to, establishing multi-year rate plans that approve rates several years in advance but allow for adjustment based on interim performance outcomes; earnings sharing mechanisms which allow utilities and customers to share the financial savings from demand-side interventions such as demand response and energy efficiency; and modifying accounting treatments for certain utility activities.

¹⁰ Carl Linvill, et. al. “Sharing the Good Stuff: Best Practices From Three Minnesota Initiatives.” June 2021. <https://www.raonline.org/wp-content/uploads/2021/06/rap-linvill-anderson-littell-kadoch-farnsworth-good-stuff-minnesota-initiatives-2021-june.pdf>.

The Commission may wish to consider a range of procedural options for further exploration of performance-based regulation options. Multiple options, such as workshops, reply comments, straw proposals, and staff analysis, could support collecting more information on options for metrics and incentive mechanisms, including experiences in other states. Those options could also facilitate further stakeholder input and discussion on desirable approaches for Wisconsin.

Commission Alternatives – Performance-Based Regulation

Alternative One: Address performance-based regulation through one or more of the following procedures:

- a. Order utilities to address performance-based regulation in their next rate case.
- b. Commence a proceeding.
- c. Conduct a workshop.
- d. Request reply comments.
- e. Direct Commission staff to develop a straw proposal.
- f. Conduct further analysis on performance-based regulation.
- g. Direct Commission staff to prepare decision alternatives.
- h. Other procedures as determined by the Commission.

Alternative Two: Take no further action at this time.

Pilot Programming

Commenters from multiple different perspectives supported prioritizing Commission action to encourage pilot programs that explore emerging and innovative technologies and programs. Those commenters specified a wide range of distinct topics where they believed pilot

efforts could be beneficial, including demand response, grid development, electrification, storage, microgrids, and rate design. ([PSC REF#: 411405](#), [PSC REF#: 411467](#), [PSC REF#: 411471](#), [PSC REF#: 411511](#).)

Some commenters offered general principles for pilot efforts, drawing on established “innovation sandbox” concepts used elsewhere to state that pilot efforts should be developed collaboratively, through small-scale efforts that limit upfront costs but allow for the ability to pursue larger-scale efforts if initial pilots prove successful. ([PSC REF#: 411387](#), [PSC REF#: 411405](#).) Other commenters expressed specific support for the Innovative Technologies Initiative framework recommended in the WEDTI report. ([PSC REF#: 411467](#), [PSC REF#: 411470](#).) WEDTI recommendation #3 proposes to encourage expanded utility efforts by establishing a standardized and streamlined process for Commission review and approval, which establishes “clear reporting requirements” and assures utility cost recovery for projects that adhere to the goals of the initiative. The WEDTI report suggests that the scope of the initiative could encompass the topics specified by commenters and multiple other topics such as cybersecurity, support for customers facing affordability needs, and any other goals approved or accepted by the Commission. WEDTI also suggests that the Commission establish a “statewide target” for the level of financial investment under the initiative to communicate its desire for broad-scale efforts. ([PSC REF#: 406723](#) at 21-24.)

As one commenter noted ([PSC REF#: 411504](#)), the Commission’s electric vehicle (EV) order in docket 5-EI-156, issued subsequent to the WEDTI report, also provides a reference point for Commission engagement with pilot activities. The Commission’s order of December 23, 2020 encourages utilities to propose EV pilot programs, and outlines a framework for the information utilities should provide in EV pilot proposals, including information on program

budgets and timeframes, description of the benefits the program is designed to provide, and plans for performance measurement and reporting. The Commission’s order emphasizes that the framework is intended to provide regulatory clarity to applicants on the development of pilot filings, while avoiding the prescription of “specific approaches” and allowing utilities flexibility to design programs customized to their customers and organizations. ([PSC REF#: 402117.](#)) Other recent Commission approvals related to pilot programming and innovative technologies can provide additional reference points for further consideration of whether and how to support additional activities, including the Commission’s July 2021 approval of a resiliency service pilot program ([PSC REF#: 416900](#)), its approved program design for the Office of Energy Innovation’s Critical Infrastructure Microgrid and Community Resilience Center Pilot Grant Program ([PSC REF#: 413223](#)), and its awards under the Energy Innovation Grant Program (EIGP) ([PSC REF#: 410918](#)).

The Commission initiated action on its EV pilot framework by requesting public comment on a draft order ([PSC REF#: 396191](#)), and reviewing commenter input to inform its final decision. If the Commission wishes to take action to encourage pilot programming more generally, it could consider following that precedent and issuing a draft order for comment, with content informed by the EV order and suggestions made by commenters or the WEDTI report. Alternatively, the Commission could consider using other procedural approaches to gather more information and stakeholder input on desired topics and processes for pursuing pilot programs, or directing utilities to take action on pilot programming through future rate cases or proceedings.

Commission Alternatives – Pilot Programming

Alternative One: Address utility pilot programming through one or more of the following procedures:

- a. Issue a draft order for comment encouraging utilities to propose pilot programming.
- b. Order utilities to address pilot programming in their next rate case.
- c. Commence a proceeding.
- d. Conduct a workshop.
- e. Request reply comments.
- f. Direct Commission staff to develop a straw proposal.
- g. Conduct further analysis on utility pilot programming.
- h. Direct Commission staff to prepare decision alternatives.
- i. Other procedures as determined by the Commission.

Alternative Two: Take no further action at this time.

Energy Efficiency

Numerous commenters highlighted energy efficiency as a valuable component of carbon reduction efforts. Those commenters expressed support for Focus on Energy's (Focus) existing statewide efficiency programming, and made multiple different suggestions to prioritize initiatives to expand, modify, and complement Focus' current activities.

The most common suggestion was to take further action to align Focus's program offerings and performance metrics with carbon reduction goals. Carbon emissions reductions from Focus activities are already quantified by the program evaluator and incorporated into the program's cost-effectiveness calculations. However, program performance goals are based primarily on electricity and natural gas savings and do not currently include quantified emissions goals. ([PSC REF#: 411501.](#)) Some commenters suggested that the Commission should explore

setting carbon reduction goals to encourage greater emphasis on designing program offerings to maximize emissions reductions. ([PSC REF#: 411515](#).)

Multiple commenters also suggested that Focus could increase its emissions reductions impacts through increased emphasis on offerings that support electrification of energy technologies that typically rely on carbon-emitting fuels such as natural gas and propane, which would support reduced emissions as the electric grid increasingly transitions to zero-carbon sources. Several of those commenters specifically suggested that Focus further explore options for deploying heat pumps in place of gas and propane furnaces. ([PSC REF#: 411392](#), [PSC REF#: 411448](#), [PSC REF#: 411476](#).)

A number of commenters separately expressed interest in increasing Focus' emphasis on supporting customer equity and affordability. Commenters noted that Focus does not currently set formal goals related to service for customers facing affordability challenges, and suggested that exploring formal goals and adjustments to program offerings could enhance program impacts for those customers. ([PSC REF#: 411501](#).) One approach originally offered by the WEDTI report was to allocate a specified percentage of the Focus residential budget to low-income programs, in order to reserve adequate minimum funding levels for those programs. ([PSC REF#: 406723](#) at 24.)

Individual commenters made two additional suggestions for energy efficiency initiatives. First, one commenter proposed further exploration of the role Focus can play in supporting utility demand response and load management initiatives, noting that those programs may be able to benefit from leveraging Focus's program infrastructure and market knowledge to make programs more impactful and cost-effective. ([PSC REF#: 411501](#).) Second, one commenter proposed exploring whether to provide utilities financial incentives to achieve increased energy

savings through their own voluntary energy efficiency programs. The commenter suggested that in light of Focus's currently stable annual funding budget, increased utility efficiency efforts could help capture additional available savings opportunities and complement Focus offerings. The commenter also noted that existing, efficiency related performance incentive mechanisms in other states could be reviewed to consider whether and how they could be adapted to Wisconsin's own efficiency program structure. ([PSC REF#: 411443](#).)

Under Wis. Stat. § 196.374(3)(b)1., the Commission's Quadrennial Planning processes "evaluate" Focus and utility voluntary programs every four years and "set or revise goals, priorities, or measurable targets" for those programs. The Commission has historically carried out the Quadrennial Planning process by establishing a scope of issues for Commission staff to review; releasing for public comment a staff memorandum providing analysis and alternatives on each issue in the scope; and making final decisions informed by the staff memorandum and commenter input. For its most recently completed Quadrennial Plan, in docket 5-FE-101, the Commission established a scope of issues in fall 2017 and issued final decisions in June 2018. Accordingly, Commission staff have started preparing for the Commission to address the scope of the next Quadrennial Plan in fall 2021, in docket 5-FE-104.

All five suggested issues described above address efficiency goals, priorities, and measurable targets. If the Commission wishes to take action on some of all of these issues, it could consider incorporating those issues into the scope of the upcoming Quadrennial Plan. Collaboration on demand response programming and utility voluntary programming were both reviewed within the scope in the 2017-2018 Quadrennial Plan and the analysis provided there could be reviewed and updated. ([PSC REF#: 339941](#) at 72-77 and 85-91.) Customer equity and affordability issues have also been reviewed in the Commission's recently completed energy

efficiency potential study, and the findings could inform further analysis and development of decision options as part of the quadrennial plan. Any scoping decisions made in this docket could be reflected in the final Commission staff scoping memorandum issued later in 2021.

The Commission may also wish to consider other procedural alternatives, and in doing so could consider whether it is appropriate to also integrate those actions into the Quadrennial Planning docket. As Commission staff and other participants engage in the implementation of any Commission actions on this topic, they may also wish to monitor and identify opportunities for further alignment and integration with any other relevant actions the Commission may choose to take on resource planning, performance-based regulation, pilot programming, or affordability.

Commission Alternatives – Energy Efficiency

Alternative One: Address one or more of the following energy efficiency issues identified in this memorandum—(1) Aligning Focus performance goals and program offerings with decarbonization goals; (2) Electrification programs and offerings; (3) Programs and offerings for low-income customers; (4) Collaboration between Focus and utility demand response programs; (5) Utility voluntary programs—through one or more of the following procedures:

- a. Include the issue(s) in the scope of the Commission’s upcoming Quadrennial Planning process in docket 5-FE-104.
- b. Order utilities to address the issue(s) in their next rate case.
- c. Commence a proceeding.
- d. Conduct a workshop.
- e. Request reply comments.

- f. Direct Commission staff to develop a straw proposal.
- g. Conduct further analysis on the energy efficiency issue(s).
- h. Direct Commission staff to prepare decision alternatives.
- i. Other procedures as determined by the Commission.

Alternative Two: Take no further action at this time.

Customer Affordability

Several commenters stated that the investigation should prioritize addressing the affordability challenges faced by lower-income customers. Some commenters specified their interest in using a range of customer programs and tariffs to expand support for those customers. ([PSC REF#: 411387](#), [PSC REF#: 411511](#).) Other commenters emphasized the importance of conducting planning and decision-making through a “lens” that emphasized customer equity and service to communities facing the greatest affordability challenges. ([PSC REF#: 411453](#), [PSC REF#: 411469](#), [PSC REF#: 411476](#).)

The Commission has taken multiple recent affordability-related actions that could establish starting points for consideration of further opportunities in this investigation, including many related to managing customer costs associated with the transition to zero-carbon generation. In its financing order of November 17, 2020, the Commission approved Wisconsin Electric Power Company’s (WEPCO) application to use environmental trust bonds to finance environmental costs associated with the retired Pleasant Prairie coal plant, in order to reduce the associated costs to customers by an estimated \$40 million. ([PSC REF#: 400098](#).) In its Order of June 8, 2021, the Commission allocated \$500,000 of State Energy Program funds for the Office of Energy Innovation to develop and implement Wisconsin’s Inclusive Solar Community Offering (WISCO), a new program to implement two community solar installations designed to

serve low-to-moderate income (LMI) households. This offering, by facilitating low-income customers' access to renewable energy measures, has the potential to provide economic, environmental, and public health benefits while reducing participants' energy bills. The WISCO program has partnered with two Wisconsin electric cooperatives, who will develop and offer rate structures that allows LMI households to limit the upfront costs commonly associated with existing community solar subscriptions and allow customers to achieve ongoing bill savings through their solar access. Enrollment will also be coordinated with the Wisconsin Department of Administration's existing LMI energy programs to encourage customer uptake and pursue administrative efficiencies. ([PSC REF#: 413323](#) at 5-7.) Implementation of WISCO is now underway, with the solar community gardens expected to be operational in 2022.

In February 2021, the Commission announced that it would begin requiring investor-owned utilities with at least 15,000 customers to include additional affordability reporting as part of their annual reports to the Commission. Those utilities are now required to file energy burden analyses, which assess the cost of utility bills as a percentage of household income for each county in the utility's service territory and allow for further insight on the scale and geographic distribution of customer affordability challenges.¹¹ The first set of energy burden analyses were submitted in mid-2021 as part of utilities' 2020 annual reports, and are currently under review by Commission staff.

The Commission has collected a broad range of affordability-related information in docket 5-UI-120, its ongoing investigation to address safe, reliable, and affordable access to utility services during the COVID-19 pandemic. As part of the investigation, the Commission has required regular reporting from utilities since early 2020 on metrics that include arrears

¹¹ PSC Announces Requirement for Utilities to File Workforce and Supplier Diversity, Affordability Data. February 15, 2021. https://apps.psc.wi.gov/APPS/NewsReleases/content/PDF_download.aspx?id=679.

balances and customers in arrears, deferred payment agreements (DPA) and terms, and information regarding utilities' plans for communicating with customers about collections, arrears management, and service disconnections. ([PSC REF#: 394202.](#)) The Commission's most recent order in the investigation:

- Directed utilities to remain flexible when working with customers to establish a DPA and adhere to the guidelines in the Wisconsin Administrative Code that requires DPA down payments to be reasonable and consider the customer's ability to pay;
- Required utilities that seek to disconnect residential service after April 15, 2021 to, until further order of the Commission, offer a DPA to any low-income customer who is unable to pay a bill in full prior to disconnecting service for nonpayment, including situations in which the terms of a previous DPA were unfulfilled, without limitation; and
- Expanded reporting requirements to address the more recent impacts of expanded DPAs, as well as the impacts of recently released federal financial assistance on customer arrearages. ([PSC REF#: 410917.](#))

Future activity in the investigation will review the new reporting to provide an updated assessment of customer affordability considerations.

The Commission may wish to consider whether this Roadmap to Zero Carbon Investigation (Roadmap) can provide opportunities to further explore electric affordability issues, in general, in connection with the other priorities in this investigation, or both. Further data collection will continue to occur through the initiatives above, and the Commission may consider whether that work presents opportunities to support further analysis and public dialogue

through options such as workshops, Commission staff analysis, or reply comments. The Commission may wish to consider whether any actions it chooses to take on other issues, such as performance-based regulation and pilot programming, can be designed to incorporate affordability considerations or interact with the affordability-specific actions chosen from the alternatives below.

Commission Alternatives – Customer Affordability

Alternative One: Address customer affordability through one or more of the following procedures:

- a. Order utilities to address affordability in their next rate case.
- b. Commence a proceeding.
- c. Conduct a workshop.
- d. Request reply comments.
- e. Direct Commission staff to develop a straw proposal.
- f. Conduct further analysis on customer affordability issues.
- g. Direct Commission staff to prepare decision alternatives.
- h. Other procedures as determined by the Commission.

Alternative Two: Take no further action at this time.

MRD:JF:jlt:DL: 01820053

Key Background Documents

[Notice of Investigation Signed and Served 03/11/2021 - PSC REF#: 406664](#)

[Final Report- Wisconsin Energy Distribution and Technology Initiative \(WEDTI\) - PSC REF#: 406723](#)

[Governor's Task Force on Climate Change Report - PSC REF#: 406724](#)

[Cover Letter and Commission Memo for Comment - PSC REF#: 408370](#)

[Municipal utilities' comments in 5-EI-158 - PSC REF#: 411403](#)

[350 Madison Comment on Motion #409769 - PSC REF#: 410719](#)

[350 Madison Response to PSCW April 2 2021 Memo - PSC REF#: 411387](#)

[Manitowoc Public Utilities' Comments on Roadmap to Zero Carbon Investigation - PSC REF#: 411442](#)

[RENEW Comments - 1st round - 5-EI-158 - PSC REF#: 411392](#)

[WPPI Energy Comments on Commission Memo dated 4-2-21 - PSC REF#: 411467](#)

[Wisconsin Green Fire Roadmap to Zero Carbon - PSC REF#: 411405](#)

[NSPW Comments - Roadmap to Zero Carbon Investigation - PSC REF#: 411470](#)
[MEEA Comments- Zero-Carbon Generation Docket - PSC REF#: 411443](#)
[WPL Comments on Docket Topics - PSC REF#: 411471](#)
[Comments by WEREWOLF team \(Ferris, Christensen, Philpott, Arnold\) - PSC REF#: 411447](#)
[MGE's Comments on Roadmap to Zero Carbon Investigation - PSC REF#: 411478](#)
[RMI Comments on Zero Carbon Roadmap Docket No. 5-EI-158 - PSC REF#: 411448](#)
[WUA Comments on Docket 5 EI 158 - PSC REF#: 411480](#)
[Comments - PSC REF#: 411450](#)
[WEC Comments 5-EI-158 - PSC REF#: 411504](#)
[Comments from NRDC, Union of Concerned Scientists and Sustainable FERC Project - PSC REF#: 411452](#)
[Public Comment by Physicians for Social Responsibility Wisconsin - PSC REF#: 411453](#)
[MOTION OF ROBERT H. OWEN, JR. TO ADD GAS UTILITIES AS PARTIES, EXPAND ISSUES, AND RENDER A MORE COMPLETE DECARBONIZATION ROADMAP - PSC REF#: 409769](#)
[MEMORANDUM OF ROBERT H. OWEN, JR. IN SUPPORT OF MOTION TO EXPAND PARTIES AND ISSUES - PSC REF#: 409770](#)
[COMMENT OF ROBERT H. OWEN, JR. - PSC REF#: 411113](#)
[Second Memorandum of Robert H. Owen, Jr. in Support of Motion to Expand Parties and Issues - PSC REF#: 411717](#)
[Public Comments from Wisconsin Local Government Climate Coalition - PSC REF#: 411458](#)
[Public Comment by Dana LaFontsee - PSC REF#: 411375](#)
[SOUL of Wisconsin - Comments on Priorities - Corrected - PSC REF#: 411561](#)
[comments - Roadmap to Zero Carbon Investigation - PSC REF#: 411410](#)
[The Nature Conservancy - Public Comments on Roadmap to Zero Carbon - PSC REF#: 411469](#)
[Jean Luecke - First Comments on Investigation Priorities - PSC REF#: 411446](#)
[CCSA comments on Carbon Investigation - PSC REF#: 411473](#)
[Public Comment by george schwarzmannJr. - PSC REF#: 411455](#)
[Public Comment by Chuck Tennesen for CLEA-N - PSC REF#: 411474](#)
[Public Comment by Don Leix - PSC REF#: 411466](#)
[Slipstream Comments on Roadmap to Zero Carbon Investigation 5-EI-158 - PSC REF#: 411476](#)
[Financing Order Signed and Served 11/17/2020 - PSC REF#: 400098](#)
[Public Comment by Linda Grice - PSC REF#: 411472](#)
[Clean Wisconsin's Comments - PSC REF#: 411477](#)
[Public Comment by Kathryn Mumma - PSC REF#: 411475](#)
[Wisconsin Laborers District Council - PSC REF#: 411479](#)
[Public Comment by Tom Wilson - PSC REF#: 411505](#)
[CUB comments on April 2 memo - PSC REF#: 411491](#)
[Klopp Comments on the Roadmap to Zero Carbon - PSC REF#: 411507](#)
[ITC Midwest SEA Comments to PSCW - PSC REF#: 411494](#)
[Public Comment by Annie Carrell - PSC REF#: 411515](#)
[APTIM Comments - Zero Carbon Investigation - PSC REF#: 411501](#)
[AAH Comments on Staff Memo - PSC REF#: 411502](#)
[Nuclear Energy Institute Comments re: Roadmap to Zero Carbon - PSC REF#: 411503](#)
[WIEG Comments - PSC REF#: 411506](#)
[WI Office of Sustainability and Clean Energy Comments on Roadmap to Zero Carbon Investigation - PSC REF#: 411508](#)
[FCPC Comments Roadmap to Zero Carbon Investigation - PSC REF#: 411509](#)
[Public Comments on Path to Zero Docket - PSC REF#: 411510](#)
[CFC Comments Regarding Initial Priorities - PSC REF#: 411511](#)
[Environmental Groups' Comments on the Roadmap - PSC REF#: 411523](#)
[Comments regarding docket from UWC - PSC REF#: 411560](#)
[Commission Memorandum - PSC REF#: 406268](#)
[Notice of Workshop Scheduled December 5, 2019 - PSC REF#: 379765](#)
[SEA 2026 Data Request Letter Primary Respondents - PSC REF#: 374400](#)
[Final Decision Signed and Served 7/26/2021 - PSC REF#: 416900](#)
[Final Decision Signed & Served 06/04/2021 - PSC REF#: 413223](#)
[2020 EIGP Awards Final Order Signed and Served 5/5/2021 - PSC REF#: 410918](#)

[Cover Letter and Draft Order for Comment - PSC REF#: 396191](#)
[Memorandum PSC Cover Letter and Quadrennial Planning Process Memorandum for Comment - PSC REF#: 339941](#)
[9705-FG-2021 Final Decision Signed and Served 6/8/2021 - PSC REF#: 413323](#)
[Order on Residential Disconnection Signed and Served 07/24/2020 - PSC REF#: 394202](#)
[Order on Arrearage Management Plan Signed and Served 5/5/2021 - PSC REF#: 410917](#)