

FINAL Decision Matrix
 Wisconsin Electric Power Company and Wisconsin Gas LLC
 Docket 5-CG-106
 October 11, 2021

Public Service Commission of Wisconsin
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Issue 1: Does the proposed construction project satisfy the requirements of Wis. Stat. § 196.49(3)(b) and the requirements of Wis. Admin. Code ch. PSC 133?

Issue Scope: Wisconsin Electric Power Company-Gas Operations (WE-GO) and Wisconsin Gas LLC (WG) (together, applicants) propose to install and operate liquefied natural gas (LNG) peaking facilities in the Town of La Grange, Walworth County, Wisconsin (Bluff Creek) and in the Town of Ixonia, Jefferson County, Wisconsin (Ixonia). The proposed projects would consist of a feed gas pretreatment system, a liquefaction system, an LNG storage tank, boil-off gas compressors, a truck loading/unloading facility, a fuel gas system, auxiliary transformers, emergency power supply, facility and instrument air systems, refrigerant storage, potable and service water, and a fire water system. The applicants state that the projects are necessary to improve system reliability, deliverability, and resilience in support of rising demand for natural gas among new and existing customers in Wisconsin.

The applicants evaluated two system alternatives (Alternative 1 and Alternative 2). As a result, based on their economic analysis and the operational benefits provided, the applicants assert that the installation and operation of the LNG peaking facilities are in the best interests of their Wisconsin natural gas customers.

Each LNG facility is estimated to cost \$185 million resulting in total estimated costs of \$370 million for both projects. (Ex.-WEGO WG-Application.) The proposed project's revenue requirement impact is estimated to be \$18.8 million, or 4.42 percent, for WE-GO and \$18.5 million, or 4.47 percent, for WG. (Direct-PSC-Schuster-c-2.) The LNG projects are estimated to provide cumulative net present value (NPV) savings between \$224 million and \$267 million (33 percent to 37 percent) over the planning period, when compared to Alternative 1 and Alternative 2. The cumulative NPV savings by applicant assigns between \$103 million and \$121 million (30 percent to 34 percent) to WE-GO and assigns between \$122 million and \$146 million (35 percent to 39 percent) to WG. (Direct-PSC-Rosenwald-cr-3.)

Pursuant to Wis. Stat. § 196.49(3)(b) the Commission "may require by rule or special order under par. (a) that no project may proceed until the commission has certified that public convenience and necessity require the project. The commission may refuse to certify a project if it appears that the completion of the project will do any of the following:

1. Substantially impair the efficiency of the service of the public utility;
2. Provide facilities unreasonably in excess of the probable future requirements;
3. When placed in operation, add to the cost of service without proportionately increasing the value or available quantity of service unless the public utility waives consideration by the Commission, in the fixation of rates, of such consequent increase in the cost of service."

Pursuant to Wis. Admin. Code § PSC 133.06(2), "[t]he commission may grant or deny an application in whole or in part, subject to any modification or condition the general public interest or public convenience and necessity may require."

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Applicants: Support Alternative One. The public convenience and necessity require the LNG Project. Staff and the applicants agree that the modeling assumptions in this docket, which use the same data and methodology as Commission-approved Gas Supply Plans, are reasonable and the applicants require additional capacity to maintain natural gas reliability on the coldest days of winter. The LNG Project is also cost-effective compared to the alternatives and should be approved.		Direct-PSC-Schuster-2; Direct-PSC-Rosenwald-4; Direct-WEGO WG-Kuse-3-4; Direct-WEGO WG-Gerlikowski-4-10, 17
Members of the Public: Some members of the public have opposed the construction and operation of an LNG facility, primarily at the Ixonia site, for a variety of reasons such as safety, proximity to a school, the ability of the local fire department to respond to an emergency, construction and truck traffic in a rural area, groundwater contamination and flooding, carbon-emitting energy production, cost to ratepayers, the effect on local property values, and other reasons.		Ex.-PSC-Public Comment; Tr. 207-266 Public Hearing Session
Sierra Club: Supports Alternative Two. The statutory and regulatory requirements are not supported with record evidence. The applicants' purported need assumes load growth irreconcilable with Governor Evers' and President Biden's carbon commitments, obsolete Foxconn projections, double-counted new load additions, permanent retirement of the Oak Creek storage facility, and an unsupported 5% reserve margin. The applicants also failed to demonstrate that existing pipeline capacity is unavailable at reasonable terms and that load-side alternatives are not feasible or cost-effective.		Sierra Club Initial Br.; Sierra Club Reply Br.; Direct-SC-Hopkins-cr-2-53; Rebuttal-SC-Hopkins-pr-4-17; Surrebuttal-SC-Hopkins-pr-22-23, 26-27, 30; Exs-SC-Hopkins-2r, -3, -6, -8r, -9, 13; Direct-PSC-Schuster-p-6; WEGO WG-Application: Vol. I Appendix G, Attachment 1 p. 4 of 6; Ex.-PSC-Data Request Response- 2.02c; Rebuttal-WEGO WG-Kuse-cr-4; Ex.-WEGO WG-Kuse-3c pp.7, 4; Ex-WEGO WG- Gerlikowski-4 at p.32; Tr. 62:10-17, 68:15-69:10, 97:3-15, 117:17-118:7, 125:18-25, 121:17-122:6, 124:10-21, 134:12-135:15,

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		176:17-178:17, 192:15–18, 195:5-196:4
Commission Staff: The revenue requirement impact is estimated to be \$18.8 million or 4.42 percent for WE-GO, and \$18.5 million or 4.47 percent for WG. One of the critical drivers of the anticipated economic value of the project is the rate of demand growth in the southeastern Wisconsin service area. The applicants' base case economic model assumptions are reasonable, given the current and expected natural gas pipeline capacity constraints in southeast Wisconsin, risks to reliability due to insufficient redundancy, and anticipated demand growth in the applicants' service territory.		Direct-PSC-Schuster-c-2; Direct-PSC-Schuster-p-2; Direct-PSC-Rosenwald-cr-7-8; Direct-PSC-Rosenwald-pr-7-8
COMMISSION ALTERNATIVES		
Alternative One: Yes. The proposed projects, if constructed, will meet the requirements of Wis. Stat. § 196.49(3)(b) and Wis. Admin. Code ch. PSC 133.		
Alternative Two: No. The proposed projects, if constructed, will not meet the requirements of Wis. Stat. § 196.49(3)(b) and Wis. Admin. Code ch. PSC 133.		
Commissioner Notes:		

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Issue 2: Are any Energy Priority Law (EPL) options cost-effective, technically feasible, and environmentally sound alternatives to building the proposed project, per Wis. Stat. §§ 1.12(4) and 196.025(1)?

- a. Energy conservation and efficiency.
- b. Noncombustible renewable energy resources.
- c. Combustible renewable energy resources.
- cm. Advanced nuclear energy using a reactor design or amended reactor design approved after December 31, 2010, by the U.S. Nuclear Regulatory Commission.
- d. Nonrenewable combustible energy resources, in the order listed:
 - 1. Natural gas
 - 2. Oil or coal with a sulphur content of less than 1 percent
 - 3. All other carbon-based fuels

Issue Scope: This issue examines whether the evidence of record demonstrates that, apart from need and cost, the proposed projects comply with the state energy policy's prioritization of fuel choices and the promotion of energy conservation and efficiency. The applicants assert that the purpose of the proposed project is to meet growing firm peak natural gas demand in the applicants' service territories under constrained conditions and that the proposed projects are the most effective way to meet that demand. The applicants state that additional conservation activities, renewable resources, or any other energy priorities listed in Wis. Stat. §1.12(4) cannot provide the means to meet that demand in the applicants' service territories. (Ex.-WEGO WG-Application.)

Sierra Club requested that the applicants should be required, as a condition of approval, to demonstrate that a portfolio of demand-side alternatives sufficient to delay or avoid the proposed projects are not technically feasible or cost-effective, as required by Wis. Stat. § 196.025(1) and Wis. Stat. § 1.12(4). (Direct-SC-Hopkins-c-8.)

PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Support Alternative One. Substantial evidence shows the LNG Project is the only technically feasible and cost-effective option to meet the applicants' need for additional capacity. In contrast, Sierra Club has not shown that its theoretical demand-side management and energy efficiency programs would reduce peak-day demand and avoid the need for the LNG Project. The LNG Project meets the EPL, because it is the most cost-effective, technically feasible option.		Direct-WEGO WG-Gerlikowski-2-27; Rebuttal-WEGO WG-Gerlikowski-18-20; Sur-surrebuttal-WEGO WG-Gerlikowski-3-10; Rebuttal-WEGO WG-Mead-3-12; Sur-surrebuttal-WEGO WG-2-3
Sierra Club: Supports Alternative Two. The applicants failed to meet their burden to demonstrate that load-side alternatives, including energy		Sierra Club Initial Br. at 15-24; Direct-SC-Hopkins-cr-21-50;

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<p>efficiency and demand response, are unavailable or not cost-effective. In fact, the record demonstrates that both are technically feasible and much more cost effective than high marginal cost of capacity provided by the LNG facilities. The applicants controlled the timing of their application and failed to analyze load-side options, so any claim that time constraints or insufficient information precludes load-side alternatives must be rejected.</p>		<p>Surrebuttal-SC-Hopkins-cr-6-13, 18–19, 22-28; Rebuttal-PSC-Horrie-2–9; Tr. 46:4–16, 53:13–17, 133:20–135:15, 136:23–138:6, 139:5–140:13, 141:2–4, 176:17–178:17, 194:23–195:4; <i>see also</i> Rebuttal-SC-Hopkins-pr-6–7 (explaining that Mr. Horrie’s testimony about net vs. gross savings does not impact his analysis), 8–11 (explaining that Mr. Horrie’s testimony about Wisconsin’s modified TRC with carbon pricing does not change Dr. Hopkin’s conclusions); Tr. 178:22–179:17 (Mr. Horrie agreeing that the net to gross distinction does not matter for Dr. Hopkins’s analysis)</p>
<p>Commission Staff: No position.</p>		
<p>COMMISSION ALTERNATIVES</p>		
<p>Alternative One: The Commission finds that the proposed projects comply with the state energy policies on prioritization of fuel choices and the promotion of energy conservation and efficiency and does not require the applicants to demonstrate that a portfolio of demand-side alternatives sufficient to delay or avoid the proposed facilities is not technologically feasible or cost effective.</p>		
<p>Alternative Two: The Commission finds that the proposed projects do not comply with state energy policies on prioritization of fuel choices and the promotion of energy conservation and efficiency and requires the applicants to demonstrate that a portfolio of demand-side alternatives sufficient to delay or avoid the proposed projects are not technically feasible or cost-effective.</p>		
<p>Commissioner Notes:</p>		

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Issue 3: Has the Commission complied with the Wisconsin Environmental Policy Act (WEPA) pursuant to Wis. Stat. § 1.11 and Wis. Admin. Code ch. PSC 4? (Uncontested)		
Issue Scope: Wisconsin Stat. § 1.11 requires that, for major actions significantly affecting the quality of the human environment, the preparation of a detailed statement as to the environmental impact of the proposed action.		
This issue is whether the Commission, in compliance with WEPA and Wis. Admin. Code ch. PSC 4, has properly recognized and assessed potential environmental concerns arising from the construction and subsequent operation of the proposed projects. An environmental assessment (EA) was prepared jointly by Commission and DNR staff, in accordance with WEPA. The purposes of the EA are: (1) to help determine whether an environmental impact statement is required; and (2) to provide a factual investigation of the relevant areas of environmental concern in sufficient depth to permit a reasonably informed preliminary judgment of the environmental consequences of the proposed action, representing the required environmental review under WEPA.		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Support the Uncontested Alternative. The applicants and staff have worked together to ensure the LNG Project will not have any significant impacts on the environment.		Direct-WEGO WG-Zammuto-13; Direct-PSC-Ingwell-3-4
Sierra Club: No position.		
Commission Staff: Commission staff prepared an EA that followed the requirements of Wis. Stat. § 1.11 and Wis. Admin. Code ch. PSC 4.		Direct-PSC-Ingwell-1
COMMISSION ALTERNATIVES		
Uncontested Alternative: Yes. The Commission has complied with WEPA pursuant to Wis. Stat. § 1.11 and Wis. Admin. Code ch. PSC 4.		
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Issue 4: Should the applicants request to accrue 100 percent allowance for funds used during construction (AFUDC) on construction work in progress (CWIP) be granted? (Uncontested)		
Issue Scope: The applicants request that the projects earn 100 percent AFUDC on CWIP at their respective weighted average costs of capital.		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Support the Uncontested Alternative. The applicants requested, and staff supports, 100 percent AFUDC on CWIP associated with the LNG Project.		Ex.-WEGO WG-Application-70, § 4.2.2; Direct-PSC-Schuster-2
Sierra Club: No position.		
Commission Staff: Given the size and scope of the project, Commission staff believes it would be reasonable for the applicants to record 100 percent AFUDC on CWIP associated with the projects.		Direct-PSC-Schuster-c-2
COMMISSION ALTERNATIVES		
Uncontested Alternative: Yes. The applicants request to earn 100 percent AFUDC on CWIP at their respective weighted average costs of capital is granted.		
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Issue 5: What general conditions similar to those that have been included in prior natural gas construction projects should be attached to construction of the proposed projects to meet the requirements of Commission approval?

Issue Scope: Typically, the Commission's Final Decision for natural gas construction projects includes the general conditions similar to the following, which the Commission could consider imposing here:

- a. The applicants shall build the facilities in accordance with the description in the application, data requests, and Commission decision;
- b. The applicants shall notify and obtain approval from the Commission before proceeding with any substantial change in project scope, cost, design, size, or location of the approved project;
- c. If it is discovered or identified that the project cost, including *force majeure* costs, may exceed the estimated cost by more than 10 percent, the applicants shall notify the Commission within 30 days of when it becomes aware of the possible change or cost increase;
- d. The applicants shall construct the approved project in accordance with applicable state and federal law, including Wis. Admin. Code ch. PSC 135 and 49 CFR Parts 192 and 199;
- e. The applicants shall obtain all necessary federal, state, and local permits prior to the commencement of construction of any proposed construction phase, as described in the applicants' application;
- f. The applicants shall notify the Commission within 5 working days of the date actual, on site, physical construction of the approved project is started and shall notify the Commission within 20 working days after the approved facilities are placed in service;
- g. The applicants shall obtain an updated Endangered Resources Review closer to the start date of construction (no more than one year prior to construction start);
- h. The applicants shall file a report with the Commission promptly upon completion of construction of the approved project. The report shall include the final costs for the project segregated by plant account, a table comparing the estimated and actual costs for each of the major components of the project, a table comparing the estimated and actual footage and the actual cost for each type and size of pipe installed, and an explanation of any significant variation between the authorized and actual cost;
- i. The applicants shall conduct post-construction pressure testing of the 6-inch and 12-inch inlet and outlet piping as specified in 49 CFR §§ 192.505 and 192.619(a)(2)(ii), and Wis. Admin. Code § PSC.135.505;
- j. Beginning with the quarter ending [END OF FIRST FULL QUARTER AFTER ORDER SERVED], and within 30 days of the end of each quarter thereafter and continuing until the authorized facilities are fully operational, the applicants shall submit quarterly progress reports to the Commission that include all of the following:
 1. The date that construction commences.
 2. Major construction and environmental milestones, including permits obtained, by agency, subject, and date.

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<div>3. Summaries of the status of construction, the anticipated in service date, and the overall percent of physical completion.</div> <div>4. Actual project costs to-date segregated by line item as reflected in the cost breakdown listed in this Final Decision.</div> <div>5. Once each year, a revised total cost estimate for the project.</div> <div>6. The date that the facilities are placed in service.</div> <div>k. Nothing in the Final Decision authorizes the applicants to perform any of the following actions: purchase additional transportation capacity, balancing, storage, or other pipeline services; or obtain purchased gas adjustment recovery of the costs of additional natural gas supply.</div> <div>l. If the applicants do not commence construction of the authorized project within one year of the effective date of the Final Decision in this proceeding, the certificate authorizing the approved project shall become void unless the applicants:<div>1. file a written request for an extension of time with the Commission before the effective date on which the certificate becomes void, and;</div><div>2. are granted an extension by the Commission;</div></div> <div>m. The Final Decision takes effect one day after the date of service;</div> <div>n. Jurisdiction is retained.</div>		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose Alternative One.		Rebuttal-WEGO WG-O’Conor-r-2-3.
Sierra Club: In addition to conditions 5a. through 5n., Sierra Club requests that, if the Commission approves either or both LNG facility, the order includes a condition holding ratepayers harmless in the event gas use decreases (as likely to reduce greenhouse gas emissions) and the LNG facilities become stranded assets. <i>See</i> Issue 12, below. Absent such protections, ratepayers bear all risk and applicants are incentivized to overbuild and inflate revenues.		Sierra Club Initial Br. 24-27; Direct-SC-Hopkins-pr-51–54; Surrebuttal-SC-Hopkins-pr-29, -37
Commission Staff: Supports all of the conditions listed as 5a. through 5n.		Direct-PSC-Kirschling-cr-13-15; Direct-PSC-Kirschling-pr-13-15
COMMISSION ALTERNATIVES		
Alternative One: Any or all of the conditions listed in 5a. through 5n. are necessary for approval of the proposed projects, as the Commission deems appropriate.		
Alternative Two: None of the conditions listed in 5a. through 5n. are necessary for approval of the proposed projects.		
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Issue 6a: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)		
The applicants shall submit to the Commission, for its review, an updated siting analysis that includes the design liquid spill scenario based on the final design and configuration of the trenches and impounding systems, no less than 60 days prior to commencement of commissioning of the LNG facilities.		
Issue Scope: At the current phase of the projects (preliminary design), the applicants did not evaluate the guillotine rupture of the LNG storage tank withdrawal header as the design liquid spill as required in Table 2.2.3.5 of NFPA 59A. However, during the detailed design phase, the applicants will update the siting analysis to include the design liquid spill scenario based on the final configuration of the trenches and impounding systems.		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative. The applicants will provide an updated siting analysis no less than 60 days prior to commencement of commissioning of the LNG facilities.		Rebuttal-WEGO WG-O’Conor-r-3.
Sierra Club: No position.		
Commission Staff: An updated siting analysis based on the final design and configuration of the trenches and impounding system that includes the design liquid spill is needed for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Direct-PSC-Kirschling-cr-5-6; Direct-PSC-Kirschling-pr-5-6; Ex.-PSC-Kirschling-1; Ex.-PSC-Kirschling-2
COMMISSION ALTERNATIVES		
Uncontested Alternative: Condition 6a. is necessary for approval of the proposed projects.		
Commissioner Notes:		

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Issue 6b: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)

The applicants shall provide to the Commission, the final design piping and instrument diagrams as well as isometric drawings of the following piping once finalized, but no less than 60 days prior to commencement of commissioning of the LNG facilities. The piping and instrument diagrams and the isometric drawings should demonstrate that the piping is located inside enclosed buildings.

1. 4-inch line to vaporizer including the connection to the common sendout line;
2. Boil off gas compressor's outlet line;
3. Tail gas compressor's outlet line; and
4. Tail gas cooler's outlet line.

Issue Scope: LNG operators must calculate vapor dispersion exclusion zones in accordance with 49 CFR § 193.2057. The 4-inch connection to the vaporizer is located inside the vaporizer building; the outlet line from the boil off gas (BOG) compressor is located inside the BOG compressor building; the tail gas compressor outlet and the tail gas cooler outlet are both located inside the tail gas compressor building. Therefore, no flammable vapor dispersions are shown for the above scenarios.

PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative.		Rebuttal-WEGO WG-O'Connor-r-3
Sierra Club: No position.		
Commission Staff: Diagrams and drawings of various piping located inside buildings based on final design are needed for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Ex.-PSC-Kirschling-1; Ex.-PSC-Kirschling-2; Direct-PSC-Kirschling-cr-5-6; Direct-PSC-Kirschling-pr-5-6; Surrebuttal-PSC-Kirschling-1

COMMISSION ALTERNATIVES

Uncontested Alternative: Condition 6b. is necessary for approval of the proposed projects.

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Issue 6c: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)

The applicants shall submit to the Commission, for its review, the final design information of the shrouds once finalized, but no less than 60 days prior to the commencement of commissioning of the LNG facilities. The final design information submitted to the Commission must include drawings and specifications for the shrouds that show the configurations, sizes, and documentation on (a) the shroud locations, (b) materials of construction, (c) compatibility for LNG service (if the shroud is for LNG release), (d) integrity against the momentum of the release, (e) installation procedures, (f) testing criteria, and (g) inspection requirements. The design of the shrouds also needs to demonstrate that it does not create a covered impounding system according to § 193.2167.

- a. The common sendout line;
- b. The sendout line to the vaporizer;
- c. The feed gas inlet line; and
- d. The vaporizer outlet line.

Issue Scope: The applicants proposed to shroud the common LNG sendout line from the top of the LNG storage tank to the ground, the send out line to vaporizer preventing horizontal release but allowing vertical release, the inlet feed gas line at the inlet metering area, and the vaporizer's outlet line, from the vaporizer to the outlet metering area preventing horizontal release but allowing vertical release. The presence of the shrouds would reduce the momentum of the pressurized release, resulting in liquid rainout and accumulation of the LNG directed into the containment trestle and conveyed to the LNG sumps. The applicants stated that the design information of the shrouds would be provided in the final design phase.

PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative.		Rebuttal-WEGO WG-O’Conor-r-3
Sierra Club: No position.		
Commission Staff: Finalized design information on various piping shrouds is needed for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Ex.-PSC-Kirschling-1; Ex.-PSC-Kirschling-2; Direct-PSC-Kirschling-cr-5-6; Direct-PSC-Kirschling-pr-5-6; Surrebuttal-PSC-Kirschling-1
COMMISSION ALTERNATIVES		
Uncontested Alternative: Condition 6c. is necessary for approval of the proposed projects.		
Commissioner Notes:		

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Issue 6d: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)

The applicants shall submit to the Commission, for its review, the final detailed design of the impoundment systems, including cross sectional drawings showing the dimensions and elevations of the impoundment system and swale, to the Commission once finalized, but at least 60 days prior to commencement of commissioning of the LNG facilities.

Issue Scope: In accordance with 49 CFR §§ 193.2051 and 193.2057, and NFPA 59A, Section 2.2.3.2, the applicants evaluated the adverse effects of thermal radiation resulting from the ignition of the evaporated vapor from an LNG pool within the following proposed impoundments:

- One (1) LNG Storage Tank Containment (dimension 260-feet by 260-feet);
- One (1) LNG Truck Loading Containment (dimension 20-feet by 10-feet);
- One (1) LNG Vaporizer Containment (dimension 20-feet by 10-feet);
- One (1) LNG Cold Box Containment (dimension 10-feet by 8-feet).

The applicants stated that the above dimensions of the impoundments are preliminary and will be provided during the detailed design phase of the projects.

PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative.		Rebuttal-WEGO WG-O’Conor-r-2
Sierra Club: No position.		
Commission Staff: The final design and configuration of the trenches and impounding system is needed for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Ex.-PSC-Kirschling-1; Ex.-PSC-Kirschling-2; Direct-PSC-Kirschling-cr-5-6; Direct-PSC-Kirschling-pr-5-6; Surrebuttal-PSC-Kirschling-1

COMMISSION ALTERNATIVES

Uncontested Alternative: Condition 6d. is necessary for approval of the proposed projects.

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Issue 6e: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)

The dimensions of the impoundment wall height and distance from the containers shall comply with NFPA 59A-2001 Section 2.2.2.6.

Issue Scope: In accordance with 49 CFR §§ 193.2051 and 193.2057, and NFPA 59A, Section 2.2.3.2, the applicants evaluated the adverse effects of thermal radiation resulting from the ignition of the evaporated vapor from an LNG pool within the following proposed impoundments:

- One (1) LNG Storage Tank Containment (dimension 260-feet by 260-feet);
- One (1) LNG Truck Loading Containment (dimension 20-feet by 10-feet);
- One (1) LNG Vaporizer Containment (dimension 20-feet by 10-feet);
- One (1) LNG Cold Box Containment (dimension 10-feet by 8-feet).

The applicants stated that the dimensions of the impoundments are preliminary and will be provided during the detailed design phase of the project.

PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative.		Rebuttal-WEGO WG-O’Conor-r-2
Sierra Club: No position.		
Commission Staff: The final design and configuration of the trenches and impounding system is needed for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Ex.-PSC-Kirschling-1; Ex.-PSC-Kirschling-2; Direct-PSC-Kirschling-cr-5-6; Direct-PSC-Kirschling-pr-5-6

COMMISSION ALTERNATIVES

Uncontested Alternative: Condition 6e. is necessary for approval of the proposed projects.

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Issue 6f: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)		
The applicants shall submit to the Commission, for its review, the LNG storage tank structural design details once finalized, but no less than 60 days prior to commencement of commissioning of the LNG facilities, demonstrating that the tanks would withstand an overpressure associated with a vapor cloud explosion in the vaporizer or boil off gas/tail gas buildings.		
Issue Scope: The overpressure hazards for the vaporizer building and tail gas/BOG compressor building remain within the LNG property boundaries. The LNG storage tanks are within the 1-psi boundary and would need to be designed to withstand an overpressure from the buildings. An assessment and refined modeling of the detailed design that takes into account plant features would demonstrate further that vapor cloud explosions would not impact critical safety equipment or cause cascading events.		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative.		Rebuttal-WEGO WG-O’Conor-r-2-3
Sierra Club: No position.		
Commission Staff: Finalized LNG storage tank structural design details demonstrating that the tanks would withstand an overpressure associated with a vapor cloud explosion is needed for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Ex.-PSC-Kirschling-1; Ex.-PSC-Kirschling-2; Direct-PSC-Kirschling-cr-5-6; Direct-PSC-Kirschling-pr-5-6; Surrebuttal-PSC-Kirschling-1
COMMISSION ALTERNATIVES		
Uncontested Alternative: Condition 6f. is necessary for approval of the proposed projects.		
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Issue 6g: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)		
Once the finalized location of critical safety equipment has been determined, the applicants shall submit to the Commission, for its review, after completing the final design but no less than 60 days prior to commencement of commissioning of the LNG facilities, an assessment and refined modeling demonstrating that a vapor cloud explosion would not impact critical safety equipment or cause cascading events.		
Issue Scope: The overpressure hazards for the vaporizer building and tail gas/BOG compressor building remain within the LNG property boundaries. The LNG storage tanks are within the 1-psi boundary and would need to be designed to withstand an overpressure from the buildings. An assessment and refined modeling of the detailed design that takes into account plant features would demonstrate further that vapor cloud explosions would not impact critical safety equipment or cause cascading events.		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative.		Rebuttal-WEGO WG-O’Conor-r-2-3
Sierra Club: No position.		
Commission Staff: Refined modeling demonstrating that a vapor cloud explosion would not impact critical safety equipment or cause cascading events is needed for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Ex.-PSC-Kirschling-1; Ex.-PSC-Kirschling-2; Direct-PSC-Kirschling-cr-5-7; Direct-PSC-Kirschling-pr-5-7; Surrebuttal-PSC-Kirschling-1
COMMISSION ALTERNATIVES		
Uncontested Alternative: Condition 6g. is necessary for approval of the proposed projects.		
Commissioner Notes:		

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Issue 6h: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)

The applicants shall submit to the Commission the final geotechnical report for the Ixonia LNG facility.

Issue Scope: The applicants submitted preliminary site-specific geotechnical investigation reports and a site-specific seismic hazard evaluation report for natural hazards at the Ixonia LNG facility. These studies discussed subsurface soil conditions, soil stabilization, and seismic and natural hazards. The applicants stated that the final geotechnical report will be completed, and a supplemental response will be provided at that time.

PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative.		Rebuttal-WEGO WG-O’Conor-r-2-3
Sierra Club: No position.		
Commission Staff: The finalized geotechnical report for the Ixonia LNG facility is needed for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Ex.-PSC-Kirschling-1; Ex.-PSC-Kirschling-2; Direct-PSC-Kirschling-cr-5-7; Direct-PSC-Kirschling-pr-5-7

COMMISSION ALTERNATIVES

Uncontested Alternative: Condition 6h. is necessary for approval of the proposed project.

Commissioner Notes:

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Issue 6i: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)

The applicants shall submit to the Commission, for its review, the final version of the following documents of the following once finalized, but no less than 60 days prior to commencement of commissioning of the LNG facilities:

- a. Overall plot plans showing the property boundary and unit plot plans for each process area showing all major equipment, structures, buildings, and impoundment systems. The unit plot plans should be detailed enough to allow for measurement of distances between various components with a reasonable degree of accuracy.**
- b. Process flow diagrams, piping and instrument diagrams, and heat and material balances.**

Issue Scope: Preliminary design documents submitted by the applicants were used in the review of the facilities' compliance with 49 CFR Part 193 Subpart B siting requirements, but the detailed design would need to comply with additional requirements in 49 CFR Part 193 and NFPA 59A-2001. Commission staff would use the Pipeline and Hazardous Materials Safety Administration (PHMSA) LNG Inspection Assistant Question Set to inspect the design of the facilities for compliance. Responses to the question set related to design would need to be confirmed before commencement of commissioning of the LNG facilities to ensure that the facilities are constructed in accordance with applicable safety regulations.

PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative.		Rebuttal-WEGO WG-O'Conor-r-2-3
Sierra Club: No position.		
Commission Staff: Final versions of plot plans, process flow diagrams, piping and instrument diagrams, and heat and material balances are needed for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Direct-PSC-Kirschling-cr-7-8; Direct-PSC-Kirschling-pr-7-8; Surrebuttal-PSC-Kirschling-1

COMMISSION ALTERNATIVES

Uncontested Alternative: Condition 6i. is necessary for approval of the proposed projects.

Commissioner Notes:

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Issue 6j: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)

The applicants shall submit to the Commission, for its review, a completed copy of applicable portions of the Pipeline and Hazardous Materials Safety Administration Liquefied Natural Gas Inspection Assistant Question Set. Responses to questions related to the design of specific components shall be provided after completing the final design but no less than 60 days prior to commencement of commissioning of the LNG facilities. Responses to all other questions shall be submitted no later than 60 days prior to the commissioning of the facilities. Responses to questions related to field observations do not need to be provided.

Issue Scope: Preliminary design documents submitted by the applicants were used in the review of the facilities' compliance with 49 CFR Part 193 Subpart B siting requirements, but the detailed design would need to comply with additional requirements in 49 CFR Part 193 and NFPA 59A-2001. Commission staff would use the most up to date version of the PHMSA LNG Inspection Assistant Question Set to inspect the design of the facilities for compliance. Responses to the question set related to design would need to be confirmed before commencement of commissioning of the LNG facilities to ensure that the facilities are constructed in accordance with applicable safety regulations.

PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative.		Rebuttal-WEGO WG-O'Conor-r-2-3
Sierra Club: No position.		
Commission Staff: A full inspection of the final design using PHMSA's LNG Inspection Assistant Question set is needed for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Direct-PSC-Kirschling-cr-7-8; Direct-PSC-Kirschling-pr-7-8; Surrebuttal-PSC-Kirschling-1

COMMISSION ALTERNATIVES

Uncontested Alternative: Condition 6j. is necessary for approval of the proposed projects.

Commissioner Notes:

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Issue 6k: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)		
The applicants shall provide to the Commission, for its review, operating and maintenance plans, including safety procedures and emergency response procedures, not later than 60 days prior to commissioning of the facilities.		
Issue Scope: Operators of LNG facilities are required to have equipment and procedures designed to minimize the consequences from released LNG or other flammable substances consistent with Chapter 9 of NFPA 59A-2001. Operators are also subject to requirements in 49 CFR 193 Subparts F and G for the operation and maintenance of LNG facilities, including emergency procedures in § 193.2059. In response to date requests, the applicants provided details clarifying emergency responsibilities of operator personnel versus fire department personnel, emergency response training topics, which fire departments would receive training to respond to LNG emergencies, and how the applicants would coordinate with local emergency responders.		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative.		Rebuttal-WEGO WG-O’Conor-r-2-3
Sierra Club: No position.		
Commission Staff: Finalized operating and maintenance plans, including safety procedures and emergency response procedures, are needed for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Direct-PSC-Kirschling-cr-8; Direct-PSC-Kirschling-pr-8
COMMISSION ALTERNATIVES		
Uncontested Alternative: Condition 6k. is necessary for approval of the proposed projects.		
Commissioner Notes:		

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Issue 6l: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)

The applicants shall submit to the Commission, for its review, a fire protection analysis after completing the final design but no less than 60 days prior to commencement of commissioning of the LNG facilities, justifying the type, quantity, and location of hazard detection and hazard control, passive fire protection, emergency shutdown and depressurizing systems, firewater, and emergency response equipment, training, and qualifications in accordance with NFPA 59A (2001).

Issue Scope: LNG operators are required to provide and maintain fire protection at LNG plants in accordance with 49 CFR Part 193 Subpart I and NFPA 59A-2001 Sections 9.1 through 9.7 and 9.9. The applicants indicated in data requests that the facilities would have a fire hazard analysis completed, in addition to the following safety investments:

- A fire and gas detection system, complete with the required audible and visual alarm and notifications will be installed to monitor the tanks, containment area, pretreatment area, liquefaction area, vaporization area, and the truck loading/unloading area. Additionally, each occupied building at the facility will have its own fire alarm system. The individual fire alarm and gas detection systems will be looped via a fiber network for facility-wide notification.
- A firewater supply system will be provided for the facility, which will consist of buried and above-ground piping. Sprinkler systems will be provided for buildings where required by the International Building Code.
- An underground looped firewater distribution system will be provided around the facility. Fire hydrants and fixed monitors will be provided for exposure protection of equipment. Firewater system size and demand will be identified by a fire hazard analysis.
- Portable and hand-held dry chemical fire extinguishers will be provided throughout the facility on egress paths in accordance with NFPA 10. Fixed and cart-mounted dry chemical extinguishers and foam suppression systems will be installed adjacent to the containment areas, pretreatment area, vaporization area, and truck loading/unloading areas.

PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative.		Rebuttal-WEGO WG-O’Conor-r-2-3
Sierra Club: No position.		
Commission Staff: A fire protection analysis is needed for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Direct-PSC-Kirschling-cr-8-10; Direct-PSC-Kirschling-pr-8-10; Surrebuttal-PSC-Kirschling-1
COMMISSION ALTERNATIVES		
Uncontested Alternative: Condition 6l. is necessary for approval of the proposed projects.		
Commissioner Notes:		

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Issue 6m: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)		
The applicants shall submit to the Commission, for its review, a safety assessment, after completing the final design of security systems but no less than 60 days prior to commencement of commissioning of the LNG facilities, justifying final design details on security features such as lighting and camera coverage, fencing, and preventing unauthorized access.		
Issue Scope: LNG operators are required to follow requirements for security in 49 CFR Part 193 Subpart J. The applicants indicated in Section 3.1.2.6 of the application that a site security assessment will be performed and will include, at a minimum: <ul style="list-style-type: none">• Security System with controlled access that is designed to prevent entry by unauthorized persons.• Peripheral fence.• Security communication system.• Security monitoring and warning systems.• Warning signs.		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative.		Rebuttal-WEGO WG-O’Conor-r-2-3
Sierra Club: No position.		
Commission Staff: A safety assessment of security systems is needed for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Direct-PSC-Kirschling-cr-10; Direct-PSC-Kirschling-pr-10; Surrebuttal-PSC-Kirschling-1
COMMISSION ALTERNATIVES		
Uncontested Alternative: Condition 6m. is necessary for approval of the proposed projects.		
Commissioner Notes:		

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Issue 6n: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)		
The applicants shall submit to the Commission, for its review, detailed plans and procedures for testing the integrity of on-site mechanical installation, functional tests, introduction of hazardous fluids, operational tests; and placing the equipment into service.		
Issue Scope: After construction, LNG operators must ensure that the facilities are safely put into operation. Having detailed plans and procedures and completing and documenting a pre-start-up safety review before hazardous fluids are introduced to the facility would help ensure the facilities are operated safely during commissioning and operation.		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative.		Rebuttal-WEGO WG-O’Conor-r-2
Sierra Club: No position.		
Commission Staff: Detailed plans and procedures are needed for ensuring the facilities are safely put into operation and for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Direct-PSC-Kirschling-cr-10-11; Direct-PSC-Kirschling-pr-10-11
COMMISSION ALTERNATIVES		
Uncontested Alternative: Condition 6n. is necessary for approval of the proposed projects.		
Commissioner Notes:		

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Issue 60: Is the following project-specific condition reasonable to impose as a condition of approval? (Uncontested)		
The applicants shall complete and document a pre-start-up safety review prior to the introduction of hazardous fluids to ensure the installed equipment meets the design and operating intent of the facilities.		
Issue Scope: After construction, LNG operators must ensure that the facilities are safely put into operation. Having detailed plans and procedures and completing and documenting a pre-start-up safety review before hazardous fluids are introduced to the facility would help ensure the facilities are operated safely during commissioning and operation.		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Do not oppose the Uncontested Alternative.		Rebuttal-WEGO WG-O’Conor-r-2
Sierra Club: No position.		
Commission Staff: A pre-start-up safety review is needed to ensure the facilities are safely put into operation and for Commission staff to confirm compliance with applicable safety regulations in 49 CFR 193 and NFPA 59A.		Direct-PSC-Kirschling-cr-10-11; Direct-PSC-Kirschling-pr-10-11
COMMISSION ALTERNATIVES		
Uncontested Alternative: Condition 60. is necessary for approval of the proposed projects.		
Commissioner Notes:		

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Issue 7: Should an order condition addressing a surcharge waiver request for new customers seeking gas service be implemented as a condition of approval of the proposed project? (Uncontested)

The applicants shall waive any extension rule gas main customer charges for new customers served from the approved project for the first five years, ending December 31, 2026. New customers will still be subject to extension rule service line charges.

Issue Scope: The Commission could implement an order condition waiving main customer charges for new customers signing up for initial service in the project areas. Customers would not be subject to customer contribution requirements under the applicants' rules for new extension of gas mains, and the waiver would apply to new customers who sign up prior to the end of 2026, five years after the start of construction. Customers would still be subject to the service line extension costs (e.g. in excess of 100 feet for residential customers as specified in WE-GO and WG extension rules). The Commission has previously implemented a similar order condition in docket 6650-CG-233 (West Central Lateral).

PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Support the Uncontested Alternative. Waiving surcharges for new customers in areas adjacent to the LNG Project defrays costs for existing customers and provides further benefits to the local communities hosting the project. As described in Mr. O'Connor's testimony, the applicants understand any property that is directly impacted or directly adjacent to the LNG Project, including the Town of Ixonia, will be subject to the waiver, even if not directly served from the approved project.		Direct-WEGO WG-O'Connor-r-12-13; Rebuttal-WEGO WG-O'Connor-r-3; Direct-PSC-Kirschling-r-12-13
Sierra Club: No position.		
Commission Staff: Supports the inclusion of the waiver of extension rule gas main customer charges for new customers served from the projects.		Direct-PSC-Kirschling-cr-12-13; Direct-PSC-Kirschling-pr-12-13

COMMISSION ALTERNATIVES

Uncontested Alternative: Condition 7 is necessary for approval of the proposed projects.

Commissioner Notes:

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Issue 8: Should the applicants revise the planning for winter peak capacity to incorporate a 17 percent reduction in natural gas use by 2030?		
Issue Scope: Sierra Club suggests that the applicants assume continued growth in natural gas demand in the future, and that the applicants rely on that assumption to justify the need for the proposed project. Sierra Club asserts that federal and state commitments to reduce Greenhouse Gas (GHG) emissions, such as the Paris Agreement and the United States Climate Alliance, indicate that natural gas demand in the future will decline. These commitments, Sierra Club suggests, require a 17 percent reduction in natural gas use in facilities by 2030. (Direct-SC-Hopkins-c-10-17.)		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Support Alternative Two. Sierra Club’s assumed 17% reduction in peak-day demand is based on a single “indicative rather than predictive” academic study that does not analyze demand in Wisconsin. There is no evidence in the record that the applicants’ peak-day demand will decrease between now and 2030, much less by 17%. In contrast, the applicants’ peak-day demand projections use an accepted methodology and historical data and demonstrate the LNG Project is needed. The Commission should reject Sierra Club’s position.		Ex.-SC-Hopkins-8, at 3; Direct-PSC-Schuster-2; Direct-WEGO WG-Kuse-5-6; Direct-WEGO WG-Gerlikowski-4-10; Rebuttal-WEGO WG-Gerlikowski-r-13-15; Rebuttal-WEGO WG-Kuse-4-5
Sierra Club: Supports Alternative One. Greenhouse gas emissions must be significantly reduced to meet the Governor and President’s commitments on climate. While there is a range of possible reductions for each sector, there is no evidence that those commitments can be met without reductions in the gas use. The Task Force recommended 1% annual decrease in gas use and to avoid new fossil infrastructure. The application’s premise of exponential growth in gas use is irreconcilable with the Governor and President’s commitments.		Sierra Club Initial Br. 1-7; Sierra Club Reply Br. 1-4; Direct-SC-Hopkins-cr-9–17, 31-32, 53; Rebuttal-SC-Hopkins-pr-4; Surrebuttal-SC-Hopkins-pr-26; Exs-SC-Hopkins-2r, -3, -6, -8r, -9, -16 pp. 20-21, -20; Ex-WEGO WG-Gerlikowski-4 at pp.32, 93; Tr. 82:11–83:25, 97:3–15
Commission Staff: No position.		
COMMISSION ALTERNATIVES		
Alternative One: Yes. The applicants should revise the planning for winter peak capacity to incorporate a 17 percent reduction in natural gas use by 2030.		
Alternative Two: No. The applicants should not revise the planning for winter peak capacity to incorporate a 17 percent reduction in natural gas use by 2030.		

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Issue 9a: Should the near-term commercial and industrial (C&I) load forecasts be revised to eliminate double-counting?		
<p>Issue Scope: Sierra Club suggests that the applicants double-counted new C&I load projections by adding new C&I load projections to projections that already account for new C&I load growth. Sierra Club believes this double-counting results in overstating the necessity for the proposed project. Sierra Club suggested that the applicants use an acceptable sales forecasting methodology such as adding a decay period to its projections that would eliminate the double-counting of new C&I demand growth or remove the growth trend from the C&I portion of the peak load regression and account for specific added C&I loads and energy efficiently separately. (Direct-SC-Hopkins-c-17-19.)</p> <p>The applicants suggest that their forecasts are sufficiently robust to overcome any differences between modeled and actual load. The applicants state that natural growth over time, known changes in firm demand due to customers changing from firm to transportation service, changes due to new customer load, and the loss of existing customer load are the four primary drivers that lead to peak demand changes. The applicants assert that Sierra Club’s claim of double-counting C&I load projections is incorrect. (Rebuttal-WEGO WG-Kuse-1-8.)</p>		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Support Alternative Two. Sierra Club is simply wrong: the applicants did not double count new C&I load. Contrary to Sierra Club’s assertions, the “consensus forecast” does not include yearly growth. In proposing adjustments to the applicants’ forecasts, Sierra Club is proposing a “solution” to a problem that doesn’t exist. The Commission should ignore this distraction.		Direct-WEGO WG-Kuse-5-6; Rebuttal-WEGO WG-Kuse-6-7; Sur-surrebuttal-WEGO WG-Kuse-2; Tr. at 75:13-15
Sierra Club: Supports Alternative One. Contrary to staff’s assertion, no approved gas plan includes the applicants’ growth projection. Moreover, it is undisputed that the applicants’ load forecast adds new load additions to an historic rate of growth that includes new load additions. It is a mathematical fact that doing so double counts growth from new load additions. Staff was unaware of how new loads are accounted for in the historic growth rate.		Sierra Club Initial Br. 8-9; Sierra Club Reply Br. at 4 and n.3; Direct-SC-Hopkins-pr-17; Rebuttal-SC-Hopkins-pr-4-19; Tr. 62:10-17, 66:10-68:14, 142:19-143:3, 184-187, 191-195
Commission Staff: Supports Alternative Two. The methodology described by the applicants is an accepted methodology that has been approved in the applicants’ prior gas plan filings.		Direct-PSC-Schuster-c-3; Direct-PSC-Schuster-p-3; Tr. 191:17-194-5

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COMMISSION ALTERNATIVES
Alternative One: Yes. The applicants should revise near-term C&I load forecasts to incorporate a decay period to its forecasting methodology or remove the growth trend from the C&I portion of the peak load regression and account for specific C&I loads and energy efficiently separately.
Alternative Two: No. The applicants should not revise near-term C&I load forecasts to incorporate a decay period to its forecasting methodology or remove the growth trend from the C&I portion of the peak load regression and account for specific C&I loads and energy efficiently separately.
Commissioner Notes:

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Issue 9b: Should the near-term C&I load forecast for WE-GO be revised?		
<p>Issue Scope: Sierra Club suggests that the applicants should revise near-term C&I load forecast for WE-GO to reflect the best available current knowledge regarding load growth. Sierra Club states that WE-GO has not revised its original demand forecast to account for the absence of the anticipated demand growth once expected of a new large C&I customer. Sierra Club asserts that the new large C&I customer has significantly reduced its original demand for natural gas, and that the applicants have not revised their forecasts to reflect that fact. (Direct-SC-Hopkins-c-17-19.)</p> <p>The applicants state that the new large C&I customer identified by Sierra Club represents only 2 percent of WE-GO’s peak-day demand and is not a meaningful driver of the need for the proposed project. (Rebuttal-WEGO WG-Kuse-1-8.)</p>		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
<p>Applicants: Support Alternative Two. The applicants based their load forecast on the most recent available information from their large C&I customers. Sierra Club based its criticism on news reports, which may not be accurate. Southeast Wisconsin remains an area of rapid economic development. One customer’s plans are not a meaningful driver of the need for the LNG Project and should not be singled out when the pace of growth in southeast Wisconsin continues to increase.</p>		Rebuttal-WEGO WG-Kuse-3-4; Ex.-SC-Hopkins-13, at 5, 10
<p>Sierra Club: Supports Alternative One. It is undisputed that the applicants’ load projections assume Foxconn and related growth at a size many times current Foxconn claims (which, history suggests, may still be revised downward again). There is no basis in the record for retaining a load forecast that includes clearly inflated loads attributable to Foxconn.</p>		Sierra Club Initial Br. at 10-11; Direct-SC-Hopkins-cr-18-19; Rebuttal-SC-Hopkins-pr-17; Rebuttal-WEGO WG-Kuse-cr-4; Ex.-WEGO WG-Kuse-3c pp.7, 4; Ex-SC-Hopkins-13r, -14c; Tr. 68:15–69:10
<p>Commission Staff: No position.</p>		
COMMISSION ALTERNATIVES		
<p>Alternative One: Yes. WE-GO should revise near-term C&I load forecasts to reflect the best available current knowledge regarding load growth.</p>		
<p>Alternative Two: No. WE-GO should not revise near-term C&I load forecasts to reflect the best available current knowledge regarding load growth.</p>		
<p>Commissioner Notes:</p>		

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Issue 10: Should the applicants be required to include the value of alternative options analysis in the comparison of different alternatives to meet the potential capacity gap?		
<p>Issue Scope: Option value measures the value of the ability to not make an irreversible decision. Sierra Club asserts that the value of optionality was not considered in the comparison of different alternatives to meet the potential capacity gap. Sierra Club suggests that deferring the construction of the proposed project for 7 years yields a present optionality value of \$145 million. Sierra Club asserts that the proposed project is an opportunity cost that, once constructed, could represent a sunk cost for the duration of the proposed project’s 40-year life cycle. Sierra Club believes that the applicants’ financial modeling fully discounts any value from deferral and any value associated with climate change mitigation policies. Sierra Club proposes that incremental investments in smaller, shorter-lived, or reversible investments, such as pipelines, fuel trucking, or other supply-side alternatives, or energy efficiency and demand response requirements to reduce peak day capacity needs, should be incorporated into the economic analysis and economic model. (Direct-SC-Hopkins-c-46-51.)</p> <p>The applicants suggest that the proposed projects are the only feasible option to ensure adequate service to meet forecasted demand by the necessary time frame. (Sur-Surrebuttal-WEGO WG-Gerlikowski-11.)</p>		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
<p>Applicants: Support Alternative Two. The summary misstates Sierra Club’s testimony, which does not “yield a present optionality value.” Developing a true option value “would require quantifying the uncertainty of the future load growth (or decline) for each of the Utilities,” which Sierra Club admittedly did not do. Moreover, the applicants’ need for capacity is imminent and Sierra Club does not identify any way to defer construction beyond then. Sierra Club’s “option value” analysis should be rejected.</p>		<p>Direct-SC-Hopkins-47-48 (quote); Direct-WEGO WG-O’Conor-14; Ex.-WEGO WG-Application-33 (timeline for construction); Direct-WEGO WG-Kuse-4; Direct-WEGO WG-Gerlikowski-7-8; Rebuttal-WEGO WG-Gerlikowski-r-18-20; Sur-surrebuttal-WEGO WG-Gerlikowski-2-11</p>
<p>Sierra Club: Supports Alternative One. Increased efficiency, electrification, and transitioning electric generation to renewables would have significant impacts on the economics of the LNG facilities. The applicants did not quantify that risk or its cost. If the LNG facilities are built, their cost is sunk. Paying more on a levelized basis for shorter-term commitments that can be modified, like rights in existing pipelines (not new pipelines as the Issue Scope above implies), fuel trucking, and load</p>		<p>Direct-SC-Hopkins-pr-46–54; Surrebuttal-SC-Hopkins-pr-37; Tr. 183:19-187:14</p>

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side alternatives is actually less costly when risk is accounted for. Staff's analysis did not account for risk and only compared the LNG project to the same narrow set of alternatives as Applicants. This is related to Issue 12, below.		
Commission Staff: Commission staff review did not find material deficiencies in the framing of the analysis in light of the applicants' stated economic objectives, the quality of the model, or the reasonableness of the range of assumptions. Commission staff arrived at this conclusion by stress-testing the applicants' economic modeling assumptions related to these factors, and expanded the variation between base/low/high capital cost assumptions for the proposed LNG project and each alternative by an additional plus/minus 10 percent, and noted that the proposed LNG project retained its relative value when compared to the alternatives.		Direct-PSC-Rosenwald-cr-6; Direct-PSC-Rosenwald-pr-6
COMMISSION ALTERNATIVES		
Alternative One: Yes. The applicants should include the value of alternative options analysis in the comparison of different alternatives to meet the potential capacity gap.		
Alternative Two: No. The applicants should not include the value of alternative options analysis in the comparison of different alternatives to meet the potential capacity gap.		
Commissioner Notes:		

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Issue 11: Should the Commission deny a Certificate of Authority (CA) for the proposed facilities unless and until the applicants demonstrate that the proposed projects are preferable to the demand-side alternatives?		
<p>Issue Scope: Sierra Club states that the applicants did not consider demand-side alternatives to the proposed project. Sierra Club examined several demand-side alternatives for potential consideration, such as temperature controlled rates, which would offer a discount on per-unit gas costs in exchange for an agreement to reduce gas use when temperatures fall below a set level. Sierra Club suggested that the applicants could offer a rate with a discount of 25 cents per therm to all C&I customers with substantial space heating loads in exchange for not using gas when temperatures are below a fixed level, or alternatively the applicants could offer a monthly fixed bill credit proportional to the customer's demand reduction on winter peak days. Sierra Club also suggested the use of a smart thermostat program that pays customers to allow the utility to set their thermostat to a lower set point during events. (Direct-SC-Hopkins-26-46.)</p> <p>The applicants suggest that the demand-side alternatives proposed by Sierra Club are not deployable in the necessary timeframe to meet the forecasted peak day natural gas demand. (Rebuttal-WEGO WG-Gerlikowski-18-20.)</p>		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
<p>Applicants: Support Alternative Two. This summary creates a false choice. Sierra Club's demand-side alternatives are based on speculation and conjecture and are not viable alternatives to the LNG Project. The Commission should not experiment with the welfare of the applicants' customers by denying a CA for the LNG Project based on a few documents from a pilot program in New York. The evidence shows the LNG Project is the only cost-effective and technically feasible option for meeting the applicants' capacity needs.</p>		<p>Direct-SC-Hopkins-35; Rebuttal-WEGO WG-Gerlikowski-18-20; Sur-surrebuttal-WEGO WG-Gerlikowski-3-10; Rebuttal-WEGO WG-Mead-3-12; Sur-surrebuttal-WEGO WG-2-3</p>
<p>Sierra Club: Supports Alternative One. The record is clear that the applicants only considered an expensive supply-side alternative. Efficiency and demand response are technically feasible and cost-effective. The applicants' post hoc rationalizations for ignoring load-side alternatives—insufficient time or lack of demonstrated program in Applicants' service territory—attempt to use the applicants' own failure to develop alternatives and application timing to excuse their failure to meet their burden of proof.</p>		<p>Sierra Club Initial Br. 15-24; Direct-SC-Hopkins-cr-22-46; Rebuttal-PSC-Horrie-2-9; Surrebuttal-SC-Hopkins-cr-21-30; Ex.-SC-Hopkins-22c; Tr. 135:5-139:10, 176:17-178:17</p>
<p>Commission Staff: No position.</p>		

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COMMISSION ALTERNATIVES
Alternative One: Yes. Deny a CA for the proposed facilities unless and until the applicants demonstrate that the proposed projects are preferable to the demand-side alternatives.
Alternative Two: No. Do not require the applicants to demonstrate that the proposed projects are preferable to the demand-side alternatives.
Commissioner Notes:

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Issue 12: Should the applicants be required to evaluate the risk that the proposed project becomes stranded and take appropriate actions to mitigate risk to Wisconsin ratepayers and the applicants' shareholders that the proposed project might become a stranded asset, such as a shorter book life (depreciation schedule) and a condition on any CA precluding the applicants from recovering or earning a return on any costs of the proposed project that become stranded?		
<p>Issue Scope: Sierra Club suggests that the applicants should evaluate the risk in the event that the proposed projects become a stranded asset or attempt to mitigate the risk to Wisconsin ratepayers and the applicants' shareholders. Sierra Club proposed that the Commission could limit risk by requiring that the applicants accelerate the depreciation of the facilities by potentially using a 20-year depreciation schedule and requiring a condition on any CA that applicants are not allowed to earn a return on any costs of the proposed project in the event of abandonment. (Direct-SC-Hopkins-c-51-54.)</p> <p>The applicants suggest that the proposed project offers flexibility to respond to demand growth or reduction scenarios and will not become a stranded asset at any point during its service life cycle. (Rebuttal-WEGO WG-Gerlikowski-20-22.)</p>		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
<p>Applicants: Support approving a CA without additional conditions. There is no factual basis to assume that the LNG Project will become a stranded asset within its service life. If natural gas demand declines precipitously, the applicants will release more of their existing pipeline capacity, avoiding stranded-asset risk related to those assets. Staff has shown that although reducing the book-life of the LNG Project would increase costs to customers, there would still be NPV cost-savings to customers.</p>		<p>Rebuttal-WEGO WG-Gerlikowski-3, 6-7, 20-22</p>
<p>Sierra Club: Supports Alternative One. Staff and the applicants' analyses all assume exponential growth, which is inconsistent with a low carbon future. As staff acknowledges, there is risk that the LNG Project is not economic if load decreases or carbon policies are adopted. Placing that risk on ratepayers, while the applicants reap increased earnings, creates moral hazard. Requiring the applicants to assess and monetize the risk and limiting recovery of and on the LNG facilities if they are no longer useful to ratepayers before the end of book life is necessary to protect ratepayers.</p>		<p>Sierra Club Initial Br. 24-27; Direct-SC-Hopkins-pr-52-54; Surrebuttal-SC-Hopkins-pr-37; Tr. 183:5-187:14</p>

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<p>Commission Staff: Under base conditions, application of a 20-year time period for the pipeline surcharges results in the LNG projects providing cumulative NPV savings between \$121 million and \$216 million (22 percent to 33 percent) over the planning period, when compared to Alternative 1 and Alternative 2. The cumulative NPV savings by applicant assigns between \$49 million and \$90 million (18 percent to 28 percent) to WE-GO and assigns between \$72 million and \$127 million (25 percent to 37 percent) to WG for a 20-year time period. Thus, reducing the life of the LNG projects decreased the cumulative NPV savings over the planning period because of the higher costs.</p>		<p>Direct-PSC-Rosenwald-cr-7; Direct-PSC-Rosenwald-pr-7; Tr. 183:5-187:14</p>
<p>COMMISSION ALTERNATIVES</p>		
<p>Alternative One: Yes. The applicants should evaluate the risk that the proposed project becomes stranded and take appropriate actions to mitigate risk to Wisconsin ratepayers and the applicants' shareholders as detailed by the Commission.</p>		
<p>Alternative Two: No. The applicants should not evaluate the risk that the proposed project becomes stranded and take appropriate actions to mitigate risk to Wisconsin ratepayers and the applicants' shareholders.</p>		
<p>Commissioner Notes:</p>		

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Issue 13: Should the Commission grant a CA for the proposed projects?		
Issue Scope: The Commission may approve an application for a CA if it determines that the proposed projects meet all the criteria listed in Wis. Stat. § 196.49 and Wis. Admin. Code ch. PSC 113.		
PARTY POSITIONS	AMOUNT	TRANSCRIPT REFERENCES
Applicants: Support Alternative One and do not oppose Alternative Two. Substantial evidence in the record supports a finding that the applicants need additional capacity to meet peak-day demand imminently, and the LNG Project is the least costly, technologically feasible solution. There is no evidence in the record that the applicants would be able to meet their customers demand without the LNG Project or a more costly alternatives. The LNG Project should be approved.		Direct-WEGO WG-Gerlikowski-4-10, 23-25; Direct-PSC-Schuster-4-7; Ex.-WEGO WG-Application-18-19
Sierra Club: Supports Alternative Three. The Commission should not grant a CA based on the current record. The applicants did not demonstrate that load projections are consistent with likely future climate policies, existing pipeline capacity is unavailable, load side efficiency and demand response are not feasible, the Oak Creek storage facility should be permanently retired, risk has been adequately assessed, and ratepayers are protected from undue risk.		See generally, Sierra Club Initial Br. and Reply Br.; Direct-SC-Hopkins-pr; Rebuttal-SC-Hopkins-pr; Surrebuttal-SC-Hopkins-pr
Commission Staff: No position.		
COMMISSION ALTERNATIVES		
Alternative One: Yes, the Commission should grant a CA for the proposed project as filed.		
Alternative Two: Yes, the Commission should grant a CA for the proposed project, with conditions.		
Alternative Three: No, the Commission should not grant a CA for the proposed project.		
Commissioner Notes:		

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