In the Matter of the Application of Enbridge Energy, Limited Partnership, for a Certificate of Need and a Routing Permit for the Proposed Line 3 Replacement Project in Minnesota from the North Dakota Border to the Wisconsin Border.

Filed June 14, 2021
Affirmed
Jesson, Judge
Dissenting, Reyes, Judge

Minnesota Public Utilities Commission

Scott R. Strand, Environmental Law & Policy Center, Minneapolis, Minnesota (for relator Friends of the Headwaters)

Paul C. Blackburn, Minneapolis, Minnesota (for relators Honor the Earth and The Sierra Club)

Joseph Plumer, Red Lake, Minnesota (for relator Red Lake Band of Chippewa Indians)

Frank Bibeau, Deer River, Minnesota (for relators Honor the Earth, The Sierra Club, and White Earth Band of Ojibwe)

Amelia J. Vohs, Brent Murcia (certified student attorney), Minnesota Center for Environmental Advocacy, St. Paul, Minnesota; and

Cresston Gackle, Cresston Law LLC, Minneapolis, Minnesota (for relator Youth Climate Intervenors)


Keith Ellison, Attorney General, Katherine Hinderlie, Cha Xiong, Assistant Attorneys General, St. Paul, Minnesota (for relator Minnesota Department of Commerce)
Before granting a certificate of need for an oil pipeline under Minnesota Statutes section 216B.243 (2020), the Minnesota Public Utilities Commission must evaluate “the accuracy of the applicant’s forecast of demand for the type of energy that would be supplied by the proposed facility.”  Minn. R. 7853.0130(A)(1) (2019).  When an applicant seeks a
certificate of need for a crude-oil pipeline, “demand” is “that quantity of a petroleum product from the applicant’s facilities for which there are willing and able purchasers.” Minn. R. 7853.0010, subp. 8 (2019). The willing and able purchasers of crude oil are refineries. The commission therefore must, in determining whether to grant a certificate of need for a crude-oil pipeline, evaluate a forecast provided by the applicant of the amount of crude oil from the proposed pipeline that refineries will be willing and able to purchase over the forecast period.

**OPINION**

**JESSON**, Judge

Enbridge Energy, Limited Partnership seeks to replace its existing Line 3 pipeline, which transports crude oil across Minnesota, with a new pipeline that will take a different route across the state. In order to build, Enbridge must establish the need for replacement Line 3. That question of necessity divides state agencies—and many Minnesotans. The legislature tasked the Minnesota Public Utilities Commission to decide—after consideration of attendant environmental risks—that central question of need, and to decide (if need exists) on the appropriate pipeline route.

After considering the potential environmental impacts of replacement Line 3, the commission concluded that it was necessary. It did so leaning heavily on the comparative risks of continuing to operate existing Line 3. The commission issued the required certificate of need, and selected a route as well. As part of its decision, the commission ordered Enbridge to remove, at landowner option, existing Line 3.
These decisions were not made in a vacuum. Rather, they followed vigorous public debate. In addition to everyday Minnesotans—some in favor and some opposed to replacement Line 3—the commission heard from interested groups including multiple Indian tribes with interests impacted by existing Line 3 or that would be impacted by the replacement pipeline; environmental organizations opposed to replacing the pipeline; trade organizations that hoped to use the pipeline and unions that hope to build it; and the department of commerce, which asserted a lack of need for the replacement pipeline. And the commission deliberated against a backdrop of a deteriorating existing pipeline and a federal consent decree directing Enbridge to replace existing Line 3, if it could obtain state authority to do so.

That exercise of state authority now comes before us for judicial review—a review that, grounded in the separation of powers between branches of government, is largely deferential to the expertise of the executive branch. As described below, we affirm the commission’s ultimate decisions. The commission addressed our earlier concern regarding the failure, in its environmental review, to consider the impact of an oil spill on the Lake Superior watershed. And, while reasonable minds may differ on the central question of need for replacement Line 3, substantial evidence supports the commission’s decision to issue a certificate of need. Finally, the commission reasonably selected a route for the replacement pipeline based upon respect for tribal sovereignty, while minimizing environmental impacts. Accordingly, we affirm.
FACTS

Enbridge operates a number of pipelines in the United States and Canada that together comprise its “Mainline System.” The Mainline System transports crude oil from the Western Canadian Sedimentary Basin (the tar sands region) of Alberta, Canada, to terminals throughout the United States. Line 3 of the Mainline System begins in Alberta, crosses through North Dakota and into Minnesota before connecting to a terminal at Clearbrook and the Minnesota Pipeline System, which serves Minnesota’s two crude-oil refineries. From Clearbrook, existing Line 3 continues across Minnesota, crossing both the Leech Lake and Fond du Lac Reservations before entering Wisconsin and ending at a Superior, Wisconsin, terminal.

As the commission bluntly described: “Existing Line 3 is an aging, deteriorating pipeline.” The commission, however, has no authority over the operation of existing Line 3. Rather, the operation of existing Line 3 is regulated by the United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration. Yet the commission regulates the construction of new pipelines in Minnesota. And Enbridge is required under a consent decree with the federal government to replace existing Line 3 if it is able to obtain state permission to build a new pipeline.

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1 Different portions of the Mainline System are owned by a number of related entities, including Enbridge Energy, Limited Partnership, the applicant-respondent in this matter. For ease of reference, and because it is not necessary to distinguish between the entities for purposes of the issues raised in these appeals, we use “Enbridge” both individually and collectively.
These appeals stem from Enbridge’s efforts to do just that: replace the part of existing Line 3 that travels through Minnesota with a new pipeline.

*The History of Existing Line 3*

Existing Line 3 was built in the 1960s, before the adoption of modern federal and state laws governing pipeline construction, routing, and operation. The pipeline was constructed with now-outdated methods that have, over time, resulted in external corrosion, stress corrosion cracking, and cracks along longitudinal welds along the pipeline. A 2014/2015 study revealed that over 70 percent of the pipeline’s 140,000 joints exhibited external corrosion, that corrosion deeper than 50 percent of the pipe wall thickness would affect over 3,000 joints by 2016, and that over 25,500 pipe joints will have corrosion depth of 50 percent or more by 2030. And the pipeline is deteriorating at an accelerating rate.

Numerous failures along the pipeline resulted in oil spills, including substantial spills near Grand Rapids in 1991 and Cohasset in 2002. Enbridge attributes the latter spill to pipeline fatigue and construction defects that continue to be present on existing Line 3.²

To address the integrity concerns regarding existing Line 3, Enbridge limited the volume and type of oil transported on it, first voluntarily and then pursuant to the consent decree. The pipeline historically transported about 760 kilo barrels per day of varying types of crude oil. In 2008, Enbridge began limiting the capacity of existing Line 3, and it

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² There have also been failures on other pipelines in the Mainline System, including a catastrophic spill in 2010 near Marshall, Michigan, which over the course of two days released 20,000 barrels of heavy crude oil into the environment, including the Kalamazoo River, and another 2010 spill in Illinois that released approximately 6,427 barrels of crude oil. These spills were the impetus for the federal litigation that resulted in the consent decree that requires replacement of Line 3.
currently is limited to transporting 390 kilo barrels per day of predominantly light crude. In addition to these operational limitations, Enbridge undertakes “integrity digs”\(^3\) to assess and repair corrosion defects. In 2017, Enbridge estimated that it would need to undertake approximately 6,250 integrity digs in Minnesota over the next 15 years if existing Line 3 continued to operate, even with operational limitations. In short, the ongoing integrity management is detrimental—both financially and environmentally—and it cannot return existing Line 3 to its historical capacity.

Apart from the safety risks posed by existing Line 3, its operational limits have contributed to apportionment on the Mainline System. Apportionment occurs when “shippers”\(^4\) of crude oil request transportation of more crude oil than the Mainline System can accommodate. As a common carrier, Enbridge may not discriminate among shippers; therefore, when the system is in apportionment, shipper “nominations”\(^5\) are reduced on a pro rata basis. The Mainline System was in apportionment for heavy crude oil for all but two months between June 2014 and February 2017. Apportionment averaged 22 percent monthly and reached as high as 42 percent during that period.\(^6\) And Enbridge projected

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\(^3\) An integrity dig involves Enbridge excavating around a section of buried pipe so that it can be examined and repaired if needed. Integrity digs disturb the land and may interfere with landowner use of the property.

\(^4\) Enbridge refers to entities seeking to transport crude oil by pipeline as “shippers.” Shippers may be producers and marketers selling crude oil or refineries purchasing crude oil.

\(^5\) Nominations are requests by shippers to transport a particular amount and type of crude oil on the Mainline System. To avoid manipulation of the nomination system, Enbridge verifies nominations with upstream suppliers and downstream delivery points.

\(^6\) The percentage of apportionment is calculated for a particular type of crude oil by subtracting available capacity from nominations and then dividing the difference by nominations.
that apportionment would continue at the rate of 24-27 percent for heavy crude oil from 2019 to 2035 if existing Line 3 was not replaced. When a pipeline that supplies crude oil to a refinery is in apportionment, the refinery must satisfy the balance of its crude-oil needs from other sources, including truck or rail deliveries.

Replacement Line 3

In April 2015, Enbridge filed applications for two forms of permission necessary to build a replacement for existing Line 3: a certificate of need and a routing permit. In doing so, Enbridge sought to replace the 282 miles of existing Line 3 in Minnesota with 337 miles of new pipeline. Replacement Line 3 would follow the same route from Minnesota’s western border to Clearbrook and from Carlton to Minnesota’s eastern border. But replacement Line 3, as proposed by Enbridge, would take a different route from Clearbrook to Carlton.

In its certificate-of-need application, Enbridge asserted that replacing the pipeline would benefit Minnesota and surrounding states in three ways. First, it would address the integrity risks posed by existing Line 3 by replacing the deteriorating pipeline with one constructed with the latest technology and materials. Second, it would reduce apportionment on the Mainline System. Third, it would allow Enbridge to more efficiently operate the Mainline System and reduce power utilization. In support of its assertion of need, Enbridge submitted a market-analysis report prepared by Neil K. Earnest of Muse Stancil & Co. The Muse Report analyzed Minnesota refinery capacity, apportionment on existing Line 3, and Canadian crude oil supply to conclude that Minnesota refinery demand could not be met by existing pipeline capacity and that the increase in pipeline capacity
created by the replacement pipeline would be fully utilized through 2035. In addition to the Muse Report, Enbridge relied on its own analysis of current and future apportionment on its Mainline System to demonstrate need.

In its routing-permit application, Enbridge identified its preferred pipeline route, explaining that it departed from the existing route because of concerns over its ability to obtain permanent right-of-way through the Leech Lake and Fond du Lac Reservations. Its preferred route, Enbridge stated, would share existing pipeline, utility, or transportation corridors for 82 percent of its path.

**Proceedings on the Applications**

Enbridge’s applications for a certificate of need and routing permit triggered a requirement for an environmental-impact statement (EIS). The commission engaged the Minnesota Department of Commerce\(^7\) to prepare the EIS, and in May 2018, the commission issued an order determining adequate a final environmental-impact statement (the FEIS). Several relators filed appeals to challenge the FEIS adequacy decision. *See In

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\(^7\) By statute, the department is charged with providing technical assistance to the commission in relation to pipeline-routing matters. *See* Minn. Stat. § 216E.03, subd. 11 (2020). In this case, two different divisions of the department of commerce were involved. The Energy Environmental Review and Analysis division, referred to by the parties as DOC-EERA, performed the required environmental review. The Division of Energy Resources, or DOC-DER, exercised the department’s right to intervene in the proceedings on Enbridge’s applications before the ALJ and commission. *See* Minn. R. 7829.0800, subp. 3 (2019). We use “department,” depending on the context, to refer to DOC-EERA, DOC-DER, or the department as relator in this appeal.
While the FEIS was being prepared, the commission referred the applications for contested-case proceedings before an administrative-law judge (the ALJ). A number of parties intervened to assert their interests related to the proposed replacement pipeline. Generally speaking, trade and union intervenors supported the replacement pipeline, while environmental organizations opposed it. The positions of tribal intervenors, however, were more complex—particularly with respect to routing the proposed replacement pipeline. The Leech Lake Band of Ojibwe, whose reservation is traversed by existing Line 3, opposed replacing Line 3 in its current corridor. But the White Earth Band of Ojibwe, the Red Lake Band of Chippewa Indians, and the Mille Lacs Band of Ojibwe each asserted hunting, fishing, and gathering rights in ceded territories that would be impacted by replacing the pipeline in Enbridge’s proposed route.

The ALJ held public hearings, took testimony, and developed a substantial record. Enbridge introduced evidence and testimony regarding the need to replace the pipeline based on the age and condition of existing Line 3 and apportionment on the Mainline System. But the ALJ also received evidence from the department questioning whether Enbridge had forecasted demand for crude oil and its refined products that would warrant

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8 The facts underlying those appeals are discussed extensively in *Enbridge*, id. at 17-19, and we do not fully restate them here.
9 The ALJ tallied 27 informational and scoping meetings, 16 public hearings, a three-week evidentiary hearing, and more than 72,000 written comments—not including the thousands of comments received during environmental review.
the certificate of need. Initiatives to reduce dependence on fossil fuels and electric-vehicle use, the department (and others) asserted, would decrease demand for crude oil. In response, Enbridge submitted a rebuttal report from Muse indicating that benefits of the project would not be significantly reduced even if electric vehicles took a 75-percent market share by 2035.

With regard to Enbridge’s preferred route for replacement Line 3, the ALJ received evidence regarding easement agreements—with the tribes and the federal Bureau of Indian Affairs—that Enbridge and its predecessors had obtained in order to build and operate existing Line 3 and other pipelines across reservation lands. Most recently, in 2009, Enbridge was granted 20-year easements over the Leech Lake and Fond du Lac Reservations,\(^\text{10}\) both of which will expire in 2029. But in 2017, the Leech Lake Tribal Council adopted a resolution stating that it would not approve a Line 3 replacement route that crossed the Leech Lake Reservation. State approval of such a route would be an attack on tribal sovereignty, the Tribal Council asserted. In addition to evidence regarding the Leech Lake Band’s opposition to any route that crossed its reservation, the ALJ also heard

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\(^{10}\) The Fond du Lac Band of Lake Superior Chippewa initially opposed the Line 3 project. But ultimately, the Fond du Lac Band reached an agreement with Enbridge allowing construction of the replacement pipeline alongside existing Line 3 as it crosses the Fond du Lac Reservation. This deviation from Enbridge’s original preferred route is effected through a route-segment alternative ordered by the commission.
evidence on the comparative environmental impacts of five route alternatives\textsuperscript{11} and 24 route-segment alternatives.\textsuperscript{12}

In April 2018, the ALJ issued a 368-page report containing 1,405 findings of fact and 44 conclusions of law. The ALJ’s report includes extensive findings on the age and condition of existing Line 3, and the risks posed by its continued operation. For example, the ALJ found that existing Line 3 had the “largest external corrosion anomaly density” of all of Enbridge’s pipelines. “Corrosion fatigue,” the ALJ explained, led to cracks and an “ultimate catastrophic rupture” on another line on the Mainline System, resulting in a major spill. Existing Line 3 presents those same risks—risks which, according to Enbridge, cannot be fully addressed through repair or operational changes. As a result, the ALJ found that continued operation of existing Line 3 posed significant risks to Minnesota. In contrast, “a new line would pose less threat to the environment than the continued use of existing Line 3.”

The ALJ also found that Enbridge had demonstrated that replacing Line 3 would alleviate apportionment on the Mainline System. The ALJ explained that “‘apportionment’ on the Enbridge Mainline System currently exists for heavy crude [oil], has existed for some time, and will continue to exist in the future if this project is denied.” And the ALJ

\textsuperscript{11} Per the ALJ, “[a] ‘route alternative’ is a relative[ly] long section of new pipeline with the same origin, destination, and intermediate points of delivery as those proposed by [Enbridge], and can be evaluated as an entire route.”

\textsuperscript{12} Also per the ALJ, “[a] ‘route segment alternative’ is a short deviation (from a fraction of a mile to a few miles in length) along the [applicant’s preferred route] or a proposed route alternative. These segments begin and end at intermediate points along a route or route alternative, and are proposed to resolve or mitigate a perceived localized resource conflict.”
reasoned that “[r]estoring Line 3 to its original capacity and allowing it to ship both heavy
and light crude oil, will reduce apportionment on the Mainline and allow refiners access to
a more constant, predictable, and economical supply of crude.”

Based on this evidence, the ALJ concluded that Enbridge had demonstrated that
replacement Line 3 was necessary to ensure an adequate, reliable, and efficient energy
supply. But the ALJ also addressed the balance of the societal consequences of replacing
the pipeline versus continuing to operate existing Line 3. The ALJ placed much emphasis
on Enbridge’s plan, at that time, to abandon existing Line 3. And the ALJ found that—
because of the combined environmental consequences of abandonment and opening up a
new pipeline corridor—the balance of benefits and risks would favor replacing Line 3 only
if it remained in its current corridor. Accordingly, the ALJ recommended that the
commission grant the certificate of need and routing permit, but only if it also rejected
Enbridge’s preferred route and instead required in-trench replacement.

In late 2018, the commission issued orders granting the certificate of need and
routing permit. In doing so, the commission largely adopted the findings of the ALJ. But
the commission rejected the ALJ’s recommendation to condition granting the certificate of
need on selection of a particular route.13 Instead, the commission separately analyzed the

13 The commission reasoned:
Incorporating the selection of a particular route to justify the
need for a proposed project appears to be inconsistent with the
statutory schemes for determining a project’s need and its
routing. For that reason [the] commission has not previously
adopted a need analysis that conflates need and routing, and it
decides to do so now.
issues of need and routing. With respect to need, the commission determined that the demand for crude oil justified the continued operation of Line 3 and that the deteriorating condition of existing Line 3 justified replacing it. In balancing societal consequences, the commission determined that Enbridge should be required to remove existing Line 3 (at landowner election) and take other steps to mitigate environmental impacts. With these conditions in place, the commission determined that the societal consequences favored replacement of Line 3 and that other required criteria for the certificate of need were met. And with respect to routing, the commission determined that Enbridge’s preferred route “best optimizes” the various considerations, but the commission required the adoption of two route-segment alternatives.

14 Under the Landowner Choice Program ordered by the commission, landowners whose property is traversed by existing Line 3 will have the option to have the pipeline deactivated in place or removed at Enbridge’s expense. Mitigation measures required by the commission include a guaranty for environmental damages from Enbridge’s parent company and a neutral footprint program, which requires Enbridge to acquire renewable energy credits to offset increases in nonrenewable energy consumed and to plant a new tree on public land in Minnesota for each tree removed in construction of replacement Line 3.

15 In January 2019, the commission issued orders denying petitions for reconsideration of the 2018 orders granting the certificate of need and routing permit. Various relators then filed appeals to challenge the commission’s 2018 decisions to issue a certificate of need and routing permit. We stayed those appeals pending a decision in the FEIS appeals. We subsequently dismissed the appeals from the 2018 certificate-of-need and routing-permit decisions, reasoning that our decision in the FEIS appeals had rendered the certificate of need and routing permit invalid and thus that those appeals were moot. See In re Application of Enbridge Energy, Limited P’Ship for a Certificate of Need, No. A19-0510 (Minn. App. Oct. 29, 2019) (order); In re Application of Enbridge Energy, Ltd. P’Ship for a Routing Permit, No. A19-0267 (Minn. App. Oct. 29, 2019) (order).
Judicial Proceedings and Remand

In June 2019, this court issued a decision in the FEIS appeals reversing the commission’s adequacy decision and remanding to the commission for further proceedings. *Id.* at 36. We held that the commission acted in a manner unsupported by substantial evidence and arbitrary and capricious when it failed to address the issue, raised during scoping and in public comments, of how an oil spill from replacement Line 3 would impact Lake Superior and its watershed. *Id.*

On remand, the commission issued an order determining the FEIS inadequate and requesting that the department prepare a revised final EIS. In December 2019, the department provided the revised FEIS\(^\text{16}\) to the commission. The revised FEIS includes an additional spill-modeling location at Little Otter Creek, within the Lake Superior watershed, as well as narrative discussion of the potential impacts of a spill within the watershed.

Following a public-comment period on the adequacy of the revised FEIS as well as what action should be taken on the again pending certificate-of-need and routing-permit applications, the commission issued a May 2020 order determining the revised FEIS adequate and reissuing as modified its orders granting the certificate of need and routing permit.\(^\text{17}\)

\(^{16}\)The parties refer to this as the second revised FEIS or 2RFEIS. For ease of reference, we use “the revised FEIS.”

\(^{17}\)The commission issued an order in July 2020 denying petitions for reconsideration of the May 2020 order.
These certiorari appeals of the May 2020 order were filed by the department, several tribes, and four environmental organizations, which variously challenge the commission’s three decisions. The department and Youth Climate Intervenors challenge the commission’s decision to grant a certificate of need. The Mille Lacs Band of Ojibwe challenges the decisions to approve the revised FEIS and grant a routing permit. The Red Lake Band of Chippewa Indians, White Earth Band of Ojibwe, The Sierra Club, Honor the Earth, and Friends of the Headwaters challenge all three decisions.

** ISSUES**

I. Did the commission properly approve the revised FEIS?

II. Did the commission properly grant a certificate of need?

III. Did the commission properly grant a routing permit?

** ANALYSIS**

As a threshold matter, we address the limited nature of our review in these certiorari appeals. We exercise restraint that is grounded in separation-of-powers principles and reflected in the Minnesota Administrative Procedure Act, both of which dictate deference to an agency’s (in this case, the commission’s) expertise and special knowledge. See Minn. Stat. §§ 14.69, 216B.52, subd. 1 (2020); In re Excess Surplus Status of Blue Cross & Blue Shield of Minn., 624 N.W.2d 264, 278 (Minn. 2001). With this deference in mind, we

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18 The scope of these appeals is limited to those issues that were raised by relators in their petitions for reconsideration. See Minn. Stat. § 216B.27, subd. 2 (2020) (precluding review of issues on which relator has not sought “rehearing”). Because of the procedural history of these proceedings, relators have now twice sought reconsideration of the commission’s orders granting the certificate of need and routing permit. We construe the scope of this appeal to encompass issues preserved in either set of petitions for reconsideration. We
may reverse, remand, or modify an agency decision only if it is unconstitutional, in excess of the agency’s authority, based on procedural or other errors of law, arbitrary or capricious, or unsupported by substantial evidence. Minn. Stat. § 14.69; In re NorthMet Project Permit to Mine Application, __ N.W.2d __, __, 2021 WL 1652768, at *11 (Minn. Apr. 28, 2021) (NorthMet). We review questions of law de novo. In re Reissuance of an NPDES/SDS Permit to U.S. Steel Corp., 954 N.W.2d 572, 576 (Minn. 2021) (U.S. Steel).

But we review the commission’s factual findings—as well as its quasi-judicial application of the law to those facts—under the substantial-evidence standard. In re Application of Minn. Power for Auth. to Increase Rates for Elec. Serv., 838 N.W.2d 747, 757 (Minn. 2013) (Minn. Power). Under that standard, we must not substitute our decision for that of the commission if it has “adequately explained how it derived its conclusion” and “that conclusion is reasonable in the basis of the record.” Id. (quotation omitted). “Our guiding principle is that if the ruling by the agency decision-maker is supported by substantial evidence, it must be affirmed.” NorthMet, 2021 WL 1652768, at *11 (quotation omitted).

While our primary review focuses on the legal issues raised by the parties, as well as whether the commission adequately explained a decision that is reasonable based upon the record as a whole, we address relators’ additional arguments that the decisions are arbitrary and capricious. In doing so, we are mindful that when “there is room for two opinions” on a topic, we must affirm, even if we would have reached the opposite have reviewed the two sets and conclude that all issues raised by relators were properly preserved.

In sum, except where an issue of law exists, an appellate court plays a limited role when reviewing executive-branch decisions like the commission’s. With that in mind, we address the issues raised by the various relators in this critical case. First, we consider the commission’s approval of the revised FEIS. Then we turn to the commission’s grant of the certificate of need. And finally, we review the commission’s grant of the routing permit.

**I. Relators have not established a basis to reverse the commission’s adequacy decision regarding the revised FEIS.**

Before reaching the questions of pipeline need and routing, the commission must address environmental effects that potentially would flow from a pipeline approval. We described this environmental-review process, governed by the Minnesota Environmental Policy Act, in *Enbridge*. 930 N.W.2d at 19-21. We will not repeat it in detail here. In short, before granting a certificate of need or routing permit, the commission must prepare

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19 In *Minn. Power*, the Minnesota Supreme Court declined to apply the arbitrary-and-capricious standard of review to the commission’s quasi-judicial decision setting interim rates. 838 N.W.2d at 760 n.6. It is not clear whether the supreme court’s decision extends to other quasi-judicial decisions by the commission, and no party has asserted that we may not review the commission’s decision under the arbitrary-and-capricious standard. We therefore focus primarily on reviewing the commission’s decision for the support of substantial evidence, but we also address relators’ arguments that the commission’s decisions were arbitrary and capricious.
an EIS—an investigative tool that pushes an agency to fully and impartially evaluate environmental consequences—before reaching its decisions. *Id.* at 20. Early in the EIS process, “scoping” tees up the necessary content and level of detail for the EIS to address; public comments received also drive the inquiry. *Id.* And before moving to its central decisions (for example, a decision on whether to grant a certificate of need), the commission must deem the EIS “adequate.” *Id.* at 21. During the EIS process for replacement Line 3, the environmental risks of an accidental oil spill loomed large. *See id.* at 27-28. As a result, the EIS incorporated a study modeling the potential spread of oil from spills along the pipeline routes under consideration. *Id.*

In *Enbridge*, we held that the commission acted arbitrarily and capriciously and contrary to substantial evidence by determining the FEIS adequate in May 2018 because it did not address the impact of an oil spill on the Lake Superior watershed, an issue raised in both scoping and public comments. *Id.* at 28. On remand, the commission obtained the revised FEIS, which includes additional spill modeling at a watercourse crossing within the Lake Superior watershed and narrative discussion of the potential oil-spill risk to Lake Superior and its watershed. After receiving the revised FEIS, as well as public comments, the commission determined the revised FEIS adequate. In this second appeal, we review that decision to determine whether the commission adequately explained the reasons for its conclusions and whether the conclusions are reasonable on the basis of the record.

*NorthMet*, 2021 WL 1652768, at *11; *Minn. Power*, 838 N.W.2d at 757.\(^{20}\)

\(^{20}\)Friends of the Headwaters asserts that the commission failed to comply with this court’s instructions on remand. But we did not give any specific instructions in *Enbridge*. Rather,
We turn first to the commission’s explanation. The commission reasoned that the revised FEIS is adequate because it addresses the potential impacts of an oil spill in the Lake Superior watershed by adding an additional spill-modeling location at Little Otter Creek. This location for spill modeling was chosen, the commission explained, because it had a range of physical characteristics—including rapids and waterfalls where there would be potential for sinking oil—that added depth to the spill-modeling analysis as a whole. The commission also reasoned that the area downstream of Little Otter Creek has “large regions of environmentally susceptible receptors,” including Jay Cooke State Park and sturgeon habitat. The sites not chosen—including the Pokegama and Little Pokegama Rivers—were less compelling candidates, according to the commission, because of their slow moving water and industrialized downstream areas. These characteristics, the commission explained, meant that modeling at these sites would provide less useful information because released oil would be less likely to sink or become “entrained” and affect water quality, or to collect on undeveloped streambeds and affect flora and fauna. Given this description of its reasoning, we conclude that the commission adequately explained the basis for its decision that the revised FEIS is adequate.

We remanded for further proceedings consistent with our decision. Enbridge, 930 N.W.2d at 28, 36. The commission held further proceedings, requested a revised FEIS to address the impact of an oil spill into the Lake Superior watershed, and issued a decision determining the revised FEIS adequate. We therefore reject the assertion that the commission failed to comply with our instructions on remand.

21 Entrainment is a process whereby oil mixes vertically in the water column and can be caused by rapids, waterfalls, and dams. Entrainment lowers water quality and negatively affects aquatic life.
Next, we consider whether that adequacy decision is also reasonable on the basis of evidence in the record, namely, the revised FEIS. In doing so, for the reasons explained below, we agree with the commission that the revised FEIS remedies the deficiencies noted in *Enbridge*.  

In our review, we turn first to the selection of Little Otter Creek for additional spill modeling. As the revised FEIS explains, to determine where to conduct the spill modeling, the department considered approximately 150 watercourse crossings within the Lake Superior watershed. It narrowed that list to nine potential sites—six in Minnesota and three in Wisconsin. The Little Otter Creek site was chosen, the revised FEIS states, because it:

- “includes a small watercourse that flows to the east into Otter Creek, before entering the St. Louis River below Thompson Reservoir, which includes rapids, waterfalls, and dams, before widening into the St. Louis Harbor and ultimately draining to Lake Superior”;  

- “has the furthest east crossing of a waterway within Minnesota that is in the Lake Superior watershed that is also hydrologically connected to Lake Superior”;  

- “includes large regions of environmentally-sensitive receptors (e.g., Jay Cooke State Park and sturgeon habitat)”;

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22 The Mille Lacs Band of Ojibwe asserts that the revised FEIS is deficient because it does not include an updated literature review. But the Band cites to no authority requiring an updated literature review when an EIS adequacy determination has been reversed and the matter remanded for additional proceedings. Rather, the Band relies by analogy on the administrative rule governing supplemental environmental-impact statements, Minn. R. 4410.3000, subp. 3 (2019), as well as a line of federal cases rejecting reliance on “stale data” in environmental review, see, e.g., *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1086 (9th Cir. 2011). The Band has not explained what, if any, new information exists that would require a supplemental literature review or render the data in the revised FEIS stale. We therefore conclude that the Band has not met its burden to demonstrate error in this regard.
“was determined to be the location within Minnesota where a hypothetical oil release was most likely to enter the St. Louis River, and ultimately more likely to have the potential to reach Lake Superior than the other options considered.”

For these reasons, the revised FEIS concludes that Little Otter Creek was the most appropriate site to use for modeling the potential consequences of an oil spill in the Lake Superior watershed.

This determination is followed by a narrative analysis of the additional spill modeling, which concludes that, because of the conditions downstream of Little Otter Creek, the oil from a spill was more likely to be deposited on shorelines than to reach Lake Superior. The revised FEIS explains:

Because of the sinuous configuration [of the St. Louis River], a series of continuous shifts in the wind direction would have to occur for the remaining floating oil to be blown across the water surface towards the Spirit Lake and Saint Louis Bay portions of the river and finally out to Lake Superior; this scenario of ever-shifting wind directions is unlikely to occur. As a result, even in an unmitigated release, it is unlikely that any measurable amount of oil would reach Lake Superior.

(Emphasis added.)

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23 Some relators assert that the revised FEIS did not model a spill closer to Lake Superior because of a mistaken belief that spill modeling could not be conducted for sites in Wisconsin. But the record does not support this assertion. Three of the final nine sites selected for possible spill modeling were in Wisconsin. And the record reflects that those sites were rejected not because they are in Wisconsin, but rather because of the environmental characteristics of those sites and because environmental review and construction had already been completed at those sites.
Finally, the revised FEIS incorporates excerpts of an EIS completed for the Wisconsin portion of the Line 3 replacement, which analyzed the potential impacts of a spill from the Wisconsin portion on Lake Superior. The Wisconsin Department of Natural Resources concluded in part:

> With regard to potential oil spills affecting Lake Superior, the proposed projects do not terminate near the shore of Lake Superior (they would terminate approximately 1.5 miles inland) nor do the pipeline routes parallel the lake shore. Spills on to land can be contained using berms and trenches . . . to prevent spills from entering waterways. A crude oil spill that reached the lake would likely result from a release that entered a river or estuary upstream from the location where the river or estuary enters Lake Superior. Impacts to Lake Superior would likely be localized and could include surface sheens or slicks and some localized water contamination. Given the volume of Lake Superior, it is unlikely that a release into a river or estuary would result in significant long-term impacts to its water quality and its aquatic resources.

(Emphasis added.)

In sum, the additional analysis in the revised FEIS explains that an oil spill into the eastern-most watercourse crossing in Minnesota would impact resources in the Lake Superior watershed but would be unlikely to reach Lake Superior itself, and that an oil spill into watercourse crossings in Wisconsin could reach Lake Superior, but that impacts to the lake and its aquatic resources likely would be localized and limited. In short, the revised FEIS considers the likely impact of spills into several watercourses within the Lake Superior watershed. In addition, the revised FEIS retains the analysis of impacts of a spill to resources at all locations along Enbridge’s preferred route and alternative routes for the project. *See Enbridge*, 930 N.W.2d at 27-28. Given this record, we are satisfied that the
revised FEIS addresses the issue, raised in scoping and in public comments, of the impact of an oil spill in the Lake Superior watershed. And, for that reason, the commission’s decision determining the revised FEIS adequate is reasonable on the basis of the record.24

II. Relators have not established a basis to reverse the commission’s decision to grant a certificate of need.

Before a new “large energy facility”25 can be built in Minnesota, the legislature directs the entity seeking to build it to obtain a certificate of need from the commission. See Minn. Stat. § 216B.243. The goal of this requirement is a systematic evaluation of Minnesota’s energy needs and an orderly way to fulfill those needs, consistent with environmental and resource considerations. In re Wilmarth Line of C U Project, 299 N.W.2d 731, 733 (Minn. 1980).

There is no dispute that replacement Line 3 (the “large energy facility,” to use the statutory term) requires a certificate of need. But not only did the legislature require a certificate of need here, it provided a directive to the commission: the commission may not grant a certificate of need for a pipeline unless an applicant demonstrates need. Minn. Stat. § 216B.243. But the legislature did not define “need.” Rather, it set forth certain

24 Some relators seem to suggest that the revised FEIS is inadequate because the additional modeling does not predict a spill that will reach the St. Louis River Estuary, the Duluth-Superior Harbor, or Lake Superior. But the environmental-review process does not presuppose a certain conclusion. Rather, the process requires that a responsible government unit evaluate the potential for environmental effects. Here, the revised EIS concludes—based on the additional spill modeling and the Wisconsin EIS—that a spill would be unlikely to reach Lake Superior and that, if it did, it would be collected without significant impact on water quality.

25 “Large energy facilities” subject to the certificate-of-need requirement include not only power plants and transmission lines but also certain pipelines. See Minn. Stat. § 216B.2421 (2020) (defining “large energy facility” for purposes of Minn. Stat. § 216B.243).
factors that the commission must evaluate. *Id.*, subd. 3. Those factors include the requirement—central to the relators’ argument here—that the commission evaluate “the accuracy of the long-range energy demand forecasts on which the necessity for the facility is based.” *Id.*, subd. 3(1) (emphasis added).

In addition to statutory factors for assessing need, the legislature instructed the commission to adopt measures to assess the central question of need. *Id.*, subd. 1. The commission did just that in rules containing criteria for assessing need for petroleum facilities, including pipelines. *See* Minn. R. 7853.0010-.0800 (2019). 26 Under Minnesota Rule 7853.0130 (the need-criteria rule), the commission shall grant a certificate of need if it determines that four criteria are met:

A. the probable result of denial would adversely affect the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant’s customers, or to the people of Minnesota and neighboring states, considering [five factors];

B. a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record by parties or persons other than the applicant, considering [four factors];

C. the consequences to society of granting the certificate of need are more favorable than the consequences of denying the certificate, considering [four factors]; and

D. it has not been demonstrated on the record that the design, construction, or operation of the proposed facility will fail

26 The commission has adopted separate sets of rules governing different categories of large energy facilities. *See*, e.g., Minn. R. 7849.0010-.2100 (2019) (governing certificates of need for large electric generating facilities and large high voltage transmission lines). Like the certificate-of-need statute, the commission’s rules have “the force and effect of law.” Minn. Stat. § 14.38, subd. 1 (2020).
to comply with those relevant policies, rules, and regulations of other state and federal agencies and local governments.

(Emphasis added.) In contrast to the overarching need criteria (A-D), which must be met in order for a certificate of need to be granted, the underlying factors must be considered by the commission as appropriate. In other words, the need-criteria rule directs consideration of each pertinent factor by the commission when deciding if the criteria are met, but neither the rule nor the statute dictates the weight to be accorded to each factor. See Minn. R. 7853.0100 (each factor “shall be evaluated to the extent that the commission deems them applicable and pertinent to each facility proposed”).

Whether the commission appropriately interpreted and applied these statutory and rule-based considerations in granting Enbridge a certificate of need to build replacement Line 3 is at the crux of relators’ arguments on appeal. In our review of these arguments, we are called upon to interpret the certificate-of-need statute, as well as the need-criteria rule. In doing so when considering the statute, we focus on the words of the law, using their most natural usage, “to ascertain and effectuate the intention of the legislature.” In re Application of Minn. Power for Auth. to Increase Rates for Elec. Serv., 929 N.W.2d 1, 10 (Minn. App. 2019) (quoting Minn. Stat. § 645.16 (2018)), review denied (Minn. Aug. 6, 2019). And we examine the statute as a whole, including the placement of a word or phrase in the statutory scheme, to “give effect to all of its provisions.” In re Schmalz, 945 N.W.2d 46, 50 (Minn. 2020). These same construction considerations apply when we review administrative regulations, such as the need-criteria rule. U.S. Steel, 954 N.W.2d
at 576; see also Minn. Stat. § 645.001 (2020) (providing that provisions of chapter 645, which govern interpretation of statutes, apply to rules).

With these standards of interpretation in mind, we turn to the commission’s application of the four criteria (and the underlying factors reflected both in statute and rule) described above. We do so understanding that the legislature intended a multifaceted analysis, including evaluation of numerous mandatory factors, while also according the commission authority to determine and weigh these factors. Given the deference accorded to the commission, we generally review the commission’s evaluation of the criteria, including the mandatory factors, with a simple two-part question: Did the commission “adequately explain[] its determination” and is that determination “reasonable based on an examination of the record as a whole[?]” Minn. Power, 838 N.W.2d at 759; see also NorthMet, 2021 WL 1652768, at *11. But the commission’s consideration of the first and third criteria implicate questions of law, which we review de novo before reviewing the commission’s determination of those criteria based upon the record. U.S. Steel, 954 N.W.2d at 576.

A. First criteria: would denial of the certificate adversely affect the adequacy, reliability, or efficiency of future energy supply?

In considering the first criteria, the commission generally must weigh five factors. Minn. R. 7853.0130(A). The factors include:

(1) the accuracy of the applicant’s forecast of demand for the type of energy that would be supplied by the proposed facility;
(2) the effects of the applicant’s existing or expected conservation programs and state and federal conservation programs;
(4) the ability of current facilities and planned facilities not requiring certificates of need, and to which the applicant has access, to meet the future demand; and

(5) the effect of the proposed facility, or a suitable modification of it, in making efficient use of resources.

_Id._ (A)(1)-(2), (4)-(5). Based on its consideration of these factors, the commission must make a finding as to whether “the probable result of denial would adversely affect the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant’s customers, or to the people of Minnesota and neighboring states.” Minn. R. 7853.0130(A).

Relators direct our attention to the first factor for the commission’s consideration under the first criteria, which replicates the statutory factor requiring the commission to evaluate the accuracy of the applicant’s “long range energy demand forecasts.” _See_ Minn. Stat. § 216B.243, subd. 3(1). The parties hotly dispute the definition of that statutory term. As a result, we begin by addressing what constitutes a long-range energy demand forecast. After defining the term, we review the commission’s determination that the first criteria is met to determine whether it is adequately explained and reasonable based on the record as a whole.

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27 The commission, with the department’s agreement, granted Enbridge’s request for an exemption from the third factor under the first criteria: “the effects of the applicant’s promotional practices that may have given rise to the increase in the energy demand, particularly promotional practices that have occurred since 1974.” Minn. R. 7853.0130(A)(3). The commission therefore did not consider that factor in its analysis of the first criteria, and we do not discuss it here.
Definition of a Long-Range Energy Demand Forecast

Consistent with the statutory requirement that the commission evaluate long-range energy demand forecasts, the need-criteria rule mandates the same consideration. Minn. R. 7853.0130(A).28 And while the statute does not define a long-range energy demand forecast, the rules define two of the words in that term: demand and forecast. We begin our statutory analysis informed by those definitions.

With regard to oil pipelines subject to the certificate-of-need requirement, “‘demand’ means that quantity of a petroleum product from the applicant’s facilities for which there are willing and able purchasers.” Minn. R. 7853.0010, subp. 8.29 “‘Forecast’ means a prediction of future demand for some specified time period.” Id., subp. 9. And the forecast period for an oil pipeline certificate-of-need application is a 16-year period that includes the year in which application is filed and the 15 years following the application year. Id., subp. 10 (defining “[f]orecast years”).

The plain language of the rules thus expressly defines the general nature of the inquiry that the commission must make to evaluate an applicant’s “long-range energy

28 The statute requires the commission to “evaluate” the accuracy of the long-range energy demand forecasts, Minn. Stat. § 216B.243, subd. 3(1), while the rule requires the commission to “consider” the accuracy of the demand forecast, Minn. R. 7853.0130(A)(1). We construe these terms synonymously, but if there were a distinction between the two terms, the statutory requirement would prevail. See Berglund v. Comm’r of Revenue, 877 N.W.2d 780, 784–85 (Minn. 2016) (explaining that when “rule conflicts with a statute, the statute controls”).

29 “Demand” is alternatively defined as “the burden placed upon the applicant’s interim storage facilities and production processes resulting therefrom.” Id. No party asserts that this portion of the definition is relevant in these appeals, and we conclude that it bears no application here.
demand forecasts” with respect to a pipeline. That is, the commission must evaluate the accuracy of a prediction, provided by the applicant, of the quantity of a petroleum product from the pipeline for which there will be willing and able purchasers.

Still, certain terms remain undefined and require our consideration to determine the precise nature of the commission’s inquiry. First, we must determine: What is the energy for which the applicant must predict demand? *See* Minn. Stat. § 216B.243, subd. 3(1) (requiring evaluation of “energy demand forecast”). Second, and relatedly, we must determine: Who is a *purchaser* of that product? *See* Minn. R. 7853.0010, subp. 8 (defining “demand” with reference to “willing and able purchasers”).

The certificate-of-need statute does not specify the type of “energy” for which a demand forecast must be evaluated. But our natural and contextual understanding of the language is that it requires a demand forecast for the type of energy that will be produced or transported by the facility for which the certificate of need is sought. *See Schmalz*, 945 N.W.2d at 50 (requiring contextual analysis of statutory language). This understanding is consistent with the dictionary definitions offered by the parties. *See The American Heritage Dictionary of the English Language* (5th ed. 2018) at 590 (defining “energy” as “useable heat or power” or “a source of useable heat or power, such as petroleum or coal”); *Merriam-Webster’s Collegiate Dictionary* (11th ed. 2014) at 413 (defining “energy” as “usable power (as heat or electricity)” or “the resources for producing such power”). It is also consistent with the commission’s definition of demand as “that quantity of a petroleum product from the applicant’s facilities for which there are willing and able purchasers.” Minn. R. 7853.0010, subp. 8. The type of petroleum product that
will be transported by replacement Line 3—and will therefore come “from the applicant’s facilities”—is crude oil. Accordingly, we conclude that, in this case, the commission was required to evaluate the accuracy of Enbridge’s predictions of the demand for crude oil.

While the commission and the department agree that the certificate-of-need statute requires evaluation of the accuracy of an applicant’s prediction for crude oil demand, other relators argue that an applicant must demonstrate—and the commission must evaluate—demand for refined products like gasoline. Enbridge, in contrast, asserts that the commission’s rules require evaluation of the demand for transportation of crude oil, rather than the crude oil itself.30 Neither of these interpretations comports with the plain language of the certificate-of-need statute or the need-criteria rule. We therefore reject them.

With regard to the argument that demand for refined products must be evaluated, we turn to the commission’s definition of demand. That refers to demand by “purchasers,” but does not define how far downstream “purchasers” reaches. See Minn. R. 7853.0010, subp. 8. Again applying the natural and contextual meaning of this term, we conclude that “purchasers,” in the context of a pipeline, are the refineries that will purchase the crude oil that will flow through that pipeline. And again, our conclusion is consistent with both dictionary definitions of the word “purchase” and the commission’s definition of demand. See id. (defining “demand” as “that quantity of a petroleum product from the applicant’s

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30 In support of this argument, Enbridge cites to the commission’s rule governing the information that an applicant for a pipeline certificate of need must submit in support of its application. See Minn. R. 7853.0520. The statute, however, obligates the commission to evaluate an applicant’s “long-range energy demand forecast.” Minn. Stat. § 216B.243, subd. 3(1). The commission’s application requirements are not determinative of the meaning of this statutory language.
facilities for which there are willing and able purchasers”); *American Heritage, supra*, at 1430 (defining “purchase” as “[t]o obtain in exchange for money or its equivalent; buy”). Further, the record reflects that refineries are the entities that “buy” crude oil. Because crude oil is the “petroleum product from the applicant’s facilities,” the “purchasers” whose demand must be predicted are the refineries, rather than the entities and individuals who may ultimately buy the refined goods.\(^{31}\)

In contrast to relators who assert that demand by “ultimate purchasers” must be evaluated, Enbridge contends that “purchasers” include not only refineries but also oil producers that will seek to transport crude oil on the pipeline. This assertion relates to Enbridge’s argument that it must forecast *demand for transportation* rather than *demand for crude oil*. Just as we rejected that argument, we reject Enbridge’s contention that purchasers include producers, who are the sellers of crude oil, because that assertion is contrary to logic, as well as the plain language of the commission’s rules. Those rules define demand as the “quantity of petroleum product [crude oil] coming from [the pipeline] for which there are willing and able purchasers.” Minn. R. 7853.0010, subp. 8 (emphasis

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\(^{31}\) In support of their contention that “purchaser” under the rule must include purchasers of refined products, certain relators rely on language in the commission’s rules governing certificates of demand for large electric generating facilities, which require a forecast of demand by “ultimate consumers.” *See* Minn. R. 7849.0270, subp. 2(A)-(B) (2019). But the certificate of need for an oil pipeline is *not* governed by rule 7849.0270, and the rules that do govern the certificate of need in this case do not reference ultimate consumers. *See* Minn. R. 7853.0010, subp. 8, .0130(A)(1). We are not free to add language that the commission has not included in the applicable rules. *Cf.*, e.g., *City of Baxter v. City of Brainerd*, 932 N.W.2d 477, 483 (Minn. App. 2019) (“This court cannot add to a statute what the legislature has either purposefully omitted or inadvertently overlooked.” (quotation omitted)), *review denied* (Minn. Sept. 25, 2019).
added). We do not set aside our common sense when interpreting statutes and rules. Although oil producers will purchase space in the pipeline to transport crude oil, by definition and by logic, the sellers of crude oil cannot be the purchasers whose demand must be forecasted.

Based on the foregoing, we conclude that, under the plain language of the certificate-of-need statute and the need-criteria rule, the commission was required to evaluate a prediction, provided by Enbridge, of the amount of crude oil that refineries will be willing and able to purchase from replacement Line 3 over the 16-year forecast period.

Still, relators—most notably the department—assert that because the information submitted by Enbridge did not constitute an “energy demand forecast,” the commission could not have evaluated such a forecast. As a result, they contend, the commission’s decision is based on legal error. We agree that, by requiring the commission to evaluate “the long-range energy demand forecasts on which the necessity for the facility is based,” Minn. Stat. § 216B.243, subd. 3(1), the statute implicitly requires an applicant to submit such an energy demand forecast. And we agree that Enbridge did not submit an energy demand forecast in the same form or with the same information as it has done in previous proceedings. But nothing in the certificate-of-need statute requires an applicant to submit

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32 The dissent concludes that the commission’s failure to require the same type of information in these proceedings as Enbridge has submitted in other proceedings renders the certificate-of-need decision arbitrary and capricious. We disagree. Notably, the other proceedings cited by the dissent involved entirely new pipeline capacity, in contrast to the replacement pipeline at issue here. Moreover, we note that the commission observed in these proceedings that it has in the past relied upon the type of information submitted by Enbridge to support demand forecasts. On this record, we cannot conclude that the
a forecast in a particular form or with particular information. Absent an express requirement in the certificate-of-need statute for a particular type of information, we cannot conclude the commission legally erred by accepting Enbridge’s energy demand forecast. Rather, although we agree with the department regarding the meaning of the statutory terms, we conclude that the issue of whether particular evidence satisfies the requirement for energy demand forecasts is a factual inquiry. See NorthMet, 2021 WL 1652768, at *8-17 (interpreting language of statutory requirement but deferring to commission’s factual determination of whether that requirement was met); Minn. Power, 838 N.W.2d at 757-58 (same). And, because this inquiry is committed to the commission, it “necessarily requires” the commission to apply its “technical knowledge and expertise to the facts presented.” Minn. Power, 838 N.W.2d at 758 (quotation omitted). Thus, we turn our consideration to whether the commission’s findings on the first criteria—including those regarding Enbridge’s energy demand forecasts—are supported by substantial evidence.

commission’s decision to accept Enbridge’s evidence of crude-oil demand was arbitrary and capricious.

33 The commission’s rules do require an applicant to submit particular forecast data. Minn. R. 7853.0520. The record reflects that Enbridge sought variances from this rule, allowing it to submit different demand data, and that the commission, on the department’s recommendation, granted variances in January 2015. The commission subsequently determined Enbridge’s application complete, again on the department’s recommendation. 34 Youth Climate Intervenors, which also makes this assertion of legal error, separately asserts that the commission’s decision is arbitrary and capricious because it relied on a factor (apportionment) not identified by the legislature. Because the statute does not limit the information the commission may consider in determining the accuracy of forecasted demand, we reject the argument that the commission’s consideration of apportionment evidence was arbitrary and capricious. For similar reasons, we reject the department’s argument that the commission erred by shifting the burden to provide an energy demand forecast from Enbridge to the relators—an argument that is dependent on the department’s assertion that Enbridge did not in fact submit an energy demand forecast.
Put another way, we inquire whether the commission adequately explained its determination and whether that conclusion is reasonable, based on the record as a whole.

*Review of Commission’s Analysis of the First Criteria*

We first examine whether the commission adequately explained its conclusion that denial of the certificate of need would adversely affect energy supply. The commission began with its evaluation of the accuracy of Enbridge’s demand forecast. In doing so, the commission relied upon the forecasted utilization of replacement Line 3 over the 16-year forecast period, as set forth in the Muse Report supplied by Enbridge. The Muse Report relies on a model of the North American crude oil distribution system that “predicts the flow of crude oil to various markets along with crude oil prices that result from such flows.” A key input into the model, the commission explained, was Canadian crude oil supply. The commission acknowledged the weaknesses of this demand forecast, as found by the ALJ,\(^{35}\) noting that “governmental initiatives to reduce fossil fuel consumption to address climate change . . . could, in the future, influence whether the type of supply forecast evidence submitted in this case” will be sufficient in the future. But here, the commission explained, the Muse Report, together with historical demand for crude oil and, as the ALJ

\(^{35}\) As the commission explained:

The ALJ found that the Muse Stancil Report was flawed for several reasons, mainly because the [Canadian Association of Petroleum Producers] forecast lacked transparency and was potentially biased towards the interests of Canadian oil producers, and because the model did not incorporate demand for refined product into its calculations, which the ALJ found was a key component in any analysis of demand for crude oil.
concluded, likely continued apportionment on the pipeline, demonstrated that denial of the certificate would adversely affect the future adequacy of energy supply.

Based on its consideration of demand-forecast accuracy and the other factors under the first criteria, the commission made the ultimate determination that “denying the certificate of need . . . would have the probable result of adversely affecting the future adequacy, reliability, and efficiency of energy supply for Enbridge’s customers and to the people of Minnesota and neighboring states.”

Reviewing the explanations in its orders—and the well-developed ALJ report, which the commission largely adopted—we conclude that the commission adequately explained its conclusion regarding the first criteria addressing the future adequacy, reliability, and efficiency of energy supply. We turn, then, to whether there is a reasonable basis for that conclusion, based on the record as whole.

Like relators, we focus our attention on the first factor of this criteria. And we review the record with the definition of a long-range energy demand forecast in mind. As a result, the question before us is whether there is evidence in the record to support the commission’s finding that Enbridge submitted a prediction of the amount of crude oil that refineries will be willing and able to purchase from replacement Line 3 over the forecast period.

36 With respect to the other factors relevant to the first criteria, the commission found that Enbridge’s conservation efforts do not impact crude oil supply or demand but that it was appropriate to require a neutral footprint program for the project, that current facilities are “insufficient to meet future demand in a reliable or efficient manner,” and that the project would make efficient use of resources. Relators do not challenge the commission’s analysis of these factors.
To meet the energy-demand-forecast requirement, Enbridge submitted the Muse Report together with evidence of apportionment on the existing Line 3. The Muse Report used a model based on refinery and pipeline capacity together with Canadian crude oil supply to conclude that refinery demand in Minnesota and neighboring states could not be met by existing pipeline capacity and that the increase in pipeline capacity created by replacement Line 3 would be fully utilized throughout the 16-year forecast period.

While the bulk of the Muse Report—focused on oil supply and resulting pipeline capacity—does not satisfy the energy demand forecast requirement, portions of the report are reasonable evidence of future demand. The review of Minnesota’s past reliance on crude oil is relevant to the issue of future demand. And the report reviews not only historical demand for refined products, it also opines that renewable energy efforts will not substantially reduce the use of refined products during the forecast period. The report further states that transportation fuel demand in the five-state area (Minnesota, Wisconsin, Iowa, North Dakota, and South Dakota) exceeds local refinery supply, that “demand would have to be cut approximately in half in the five-state area before it could be met by local supply,” and that “[t]here is no combination of renewable fuel or electrical car initiatives that promise to reduce gasoline and diesel demand to this degree over the forecast period.”

The author of the Muse Report, Neil K. Earnest, also provided testimony to the commission.

37 This is not to say that forecasted supply of Canadian crude oil is irrelevant to determining the need for the Line 3 replacement project. Were there no expectation of continued supply, there would be little reason to replace existing Line 3. But here we are focused on the demand forecast requirement, which, as we have explained, required the commission to evaluate the accuracy of a prediction of demand for crude oil.
and submitted a rebuttal report. The rebuttal report includes a lower-refined-product-demand analysis that concludes that replacement Line 3 will be fully utilized even if electric vehicles obtain 75 percent market share by 2035. In sum, the Muse Report and corresponding testimony provide some evidence of an energy demand forecast.\(^{38}\)

And the Muse Report was not the only evidence of energy demand before the commission. Apportionment was central to the commission’s decision and the primary basis for the ALJ’s recommendation. Apportionment evidence submitted by Enbridge included testimony explaining how the limited capacity of existing Line 3 leads to apportionment on the Mainline System, and predicting that replacement Line 3 would reduce or eliminate apportionment. As the commission observed, heavy crude apportionment on the Mainline System averaged approximately 20 percent—and reached 40 percent in certain months—between January 2014 and May 2017, and was forecasted

\(^{38}\) A number of relators further challenge the commission’s reliance on the Muse Report, arguing bias in the supply inputs to the utilization model. The supply inputs were obtained from supply forecasts by the Canadian Association of Petroleum Producers. Relators assert that these forecasts are biased and historically inaccurate. The commission recognized this concern, which was one of the reasons that the ALJ found the Muse Report “flawed.” But reviewing the record as whole, we observe that Enbridge had rerun the model using inputs from the Canada National Energy Board’s (a Canadian regulatory agency) low, reference, and high oil price forecasts, and, as the commission noted, that the results based on this data “did not differ widely” from the results in the Muse Report. More fundamentally, because there is reasonable information in the record as a whole to support the commission’s conclusion regarding the criteria number one—the adequacy of the future energy supply—the fact that some issues (such as the potential bias of Canadian oil producers) would lead to a different conclusion does not alter our analysis. Such is the nature of our deferential standard of review.
to exceed 25 percent throughout the forecast period if existing Line 3 was not replaced.

The ALJ found:

No party has effectively rebutted [Enbridge’s] claims of current or future apportionment. Thus, even if the oil supply and demand forecasts from the Muse Report are viewed with skepticism (which the ALJ recommends), [Enbridge] has established that apportionment of heavy crude on the Mainline [System] currently exists, has existed for at least the last three years, and will likely continue to exist into the near future, unless additional pipeline capacity is added to the Mainline System.

Because apportionment occurs when the demand to transport oil by pipeline exceeds the available capacity, the existence of apportionment supports the commission’s findings of demand for crude oil.

Although not submitted directly by Enbridge, the record further contains letters of support from refinery owners including Flint Hills Resources, which owns one of two crude-oil refineries in Minnesota. Flint Hills submitted five separate letters to the commission emphasizing its support for replacement Line 3. Flint Hills explained that it relies exclusively on Enbridge’s pipelines to deliver oil by pipeline via the Minnesota Pipeline System. Flint Hills also explained how apportionment on Line 3 causes apportionment on the Minnesota Pipeline System, preventing Minnesota refineries from accessing the most economical crude oil and making it difficult to respond to spikes in demand. Perhaps most importantly, Flint Hills stated that it anticipates continuing to increase the amount of crude oil that it processes in Minnesota. Like Enbridge’s evidence of demand and apportionment, the Flint Hills letters support the commission’s findings on the accuracy of the long-range energy demand forecasts.
Based on selections from the Muse Report, apportionment evidence, and refiner comments, we conclude that there is reasonable evidence, based on the record as a whole, to support the commission’s findings regarding the accuracy of Enbridge’s long-range energy demand forecasts. To be sure, Enbridge did not submit what we would consider a conventional forecast of crude-oil demand. And there is evidence in the record that would support a contrary finding on the first criteria. But we observe that these were not conventional certificate-of-need proceedings. Enbridge did not seek to add wholly new pipeline capacity to its Mainline System, but rather to replace and restore the capacity of existing Line 3, an aging and deteriorating pipeline that the commission determined was currently adversely impacting the adequacy, efficiency, and reliability of crude-oil supply.

We further observe that, although a mandatory factor, demand-forecast accuracy is but one of numerous factors that the commission considers in determining whether the need

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39 Indeed, were we the fact-finder, we may have made different findings than the commission. But that is not the standard we apply. “If an administrative agency engages in reasoned decisionmaking, the court will affirm, even though it may have reached a different conclusion had it been the factfinder.” Cable Comms’ns Bd. v. Nor-West Cable Comms’ns P’ship, 356 N.W.2d 658, 669 (Minn. 1984); see also Swenson v. Civil Serv. Comm’n, 151 N.W.2d 254, 258 (Minn. 1967) (explaining that appellate courts “in the absence of manifest injustice” must “refrain from substituting their judgment concerning the inferences to be drawn from the evidence for that of the agency”).

40 The dissent characterizes replacement Line 3 as a new pipeline and asserts that it would double the capacity of existing Line 3. But the record reflects that replacement Line 3 will (as the name suggests) replace and restore the original capacity of existing Line 3, which will be decommissioned and removed at landowner option. The record also reflects that replacement Line 3 will be fully utilized during the forecast period and that, absent the replacement pipeline, crude oil will be transported through other, more environmentally risky modes.
criteria are met. In this case, the commission considered the weaknesses of Enbridge’s energy demand forecast in the context of other factors demonstrating the existence of need. As the commission stated in denying reconsideration of its May 2020 decision to reissue the certificate of need:

[T]he commission’s finding of need for the project is not predicated on an ever-increasing demand for oil. The commission previously found that “the demand for heavy crude oil shipments over the Mainline System significantly exceeded the System’s capacity and shows that the additional capacity that the project would provide is needed today.” . . . The commission has repeatedly acknowledged that our energy system is moving away from fossil fuels. However, the fact remains that we still need safe, reliable oil transportation infrastructure during this transition, and existing Line 3 is badly in need of replacement.

(Emphasis added.) In view of the totality of the record before the commission, and deferring as we must to its expertise, we cannot conclude that the commission’s findings on Enbridge’s energy-demand forecasts—or its ultimate conclusion that replacement Line 3 is necessary to ensure the adequate, reliable, and efficient supply of energy—are unreasonable or lacking support in the record, as we must do before interfering with the commission’s decision.

**B. Second criteria: is there a more reasonable and prudent alternative to replacement Line 3?**

While relators generally focus on the first criteria the commission must consider, it is but one of four criteria. The second asks the commission to assess whether a more
reasonable, prudent alternative to the replacement pipeline exists. Minn. R. 7853.0130(B).

In order to appropriately consider this criteria, the commission must consider four factors:

(1) the appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives;
(2) the cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives;
(3) the effect of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives; and
(4) the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives.

Id. With these factors in mind, and again applying the substantial-evidence standard, we ask first, whether the commission has adequately explained its decision on the second criteria, and second, whether the commission’s explanation is reasonable on the basis of the record.

In assessing the second criteria, the commission considered two potential alternatives to replacement Line 3. With respect to the first alternative—truck and rail transportation—the commission found that moving crude oil by truck or rail would be more expensive, less safe, disruptive to traffic and movement of other goods, and result in the highest greenhouse gas emissions. And the commission concluded it was unclear whether railroads would have sufficient capacity. With respect to the second alternative—other pipelines—the commission analyzed three pipelines proposed as alternatives: the Keystone
XL pipeline and two conceptual pipelines, one proposed as a “system alternative”\textsuperscript{41} by Friends of the Headwaters, and a second proposed by the department. The commission found that none of the pipelines (actual or conceptual) were a reasonable and prudent alternative primarily because they would not serve Minnesota and Wisconsin refineries or would not alleviate apportionment on the Mainline System. The commission also reasoned that the conceptual pipelines would cost billions of dollars more than the project as proposed, and that the route of the alternative proposed by Friends of the Headwaters was substantially longer and raised concerns about karst topography\textsuperscript{42} in southern Minnesota. The commission adequately explained the reasons for its assessment of the second criteria.

The commission’s assessment of the second criteria also finds support in the record. The revised FEIS, in addition to testimony offered by Enbridge and other parties, supports the commission’s findings on the comparative disadvantages of transporting oil by truck and train. Indeed, no relator asserts that truck and train are reasonable alternatives. The commission’s conclusion that pipelines not connecting to the Clearbrook and Superior terminals (which connect to Minnesota and Wisconsin refineries) would be unrealistic is also reasonable based on the record. As the ALJ explained, the alternative proposed by Friends of the Headwaters “would bypass Minnesota’s refineries altogether,” and

\textsuperscript{41} Per the ALJ, “[a] ‘system alternative’ is a conceptual project alternative that provides comparative analysis for a proposed project. Unlike a route alternative, which can be selected by the commission in a [routing permit] proceeding, a system alternative cannot actually be permitted as part of this proceeding. The purpose of a system alternative is to provide a comparative analysis for the proposed project.”

\textsuperscript{42} Karst topography, which is found in southeastern and eastern Minnesota, is characterized by numerous caves, sinkholes, fissures, and underground streams and is vulnerable to groundwater contamination.
“Minnesota would simply be used as a conduit for oil transport without Minnesota’s refineries (and, thus, consumers) receiving any benefits from its existence.” The commission thus reasonably rejected alternatives that would not connect to the Clearbrook and Superior terminals.43

Still, Friends of the Headwaters argues that the commission’s decision was unsupported by substantial evidence because the true purpose of replacement Line 3 is to deliver oil to refineries and export terminals, and that most of the oil is destined for the Gulf Coast or global markets. If that is understood as the goal, it argues, then there are a wide range of alternatives that the commission improperly failed to consider.44 We disagree. The second criteria requires the commission to consider whether “a more reasonable and prudent alternative to the proposed facility” has been demonstrated. Minn. R. 7853.0130(B) (emphasis added). As we explain above, the commission reasonably concluded that alternatives that did not connect to the same terminals as the project would

43 We further observe that a pipeline connecting to different terminals would not replace existing Line 3. And nothing precludes Enbridge from continuing to use existing Line 3, at least until 2029. An alternative that did not result in the decommissioning of existing Line 3 would not ensure adequate, reliable, and efficient supply of crude oil to Minnesota and Wisconsin refineries, a primary consideration on which need for the pipeline was based.

44 This argument corresponds to an argument that Friends of the Headwaters made in the FEIS appeals. See Enbridge, 930 N.W.2d at 24. It argued there, as it does here, that Enbridge’s true purpose is to deliver crude oil to Enbridge’s refinery customers, most of which are located in the lower Midwest, eastern Canada, and the Gulf Coast. Id. We rejected that argument in Enbridge, explaining that it was appropriate to define the project with reference to the stated objectives of the project proponent. Id. at 24-25.
not be reasonable or prudent alternatives, and the record supports that reasonable conclusion.45

C. Third criteria: do the societal consequences favor allowing the Line 3 replacement?

In considering the societal consequences of replacement Line 3, the commission heavily relied upon the poor condition of existing Line 3. It did so because, as the ALJ found, denial of the certificate of need would result in the continued operation of existing Line 3. In short, the commission compared the societal consequences of the two lines, keeping in mind the interests of Minnesotans. To determine whether the commission appropriately weighed this third criteria in making this comparison, we begin with the four factors which it must consider in making this societal assessment:

(1) the relationship of the proposed facility, or a suitable modification of it, to overall state energy needs;
(2) the effect of the proposed facility, or a suitable modification of it, upon the natural and socioeconomic environments compared to the effect of not building the facility;
(3) the effects of the proposed facility or a suitable modification of it, in inducing future development; and

45 For the same reasons, the commission’s consideration of the second criteria was not arbitrary or capricious, as Friends of the Headwaters alternatively asserts. See In re Review of 2005 Annual Automatic Adjustment of Charges for All Elec. & Gas Utils., 768 N.W.2d 112, 120 (Minn. 2009) (2005 Adjustment of Charges) (explaining that “agency’s conclusions are not arbitrary and capricious so long as a rational connection between the facts found and the choice made has been articulated” (quotation omitted)). Friends of the Headwaters also suggests that the commission improperly failed to consider in-trench replacement as an alternative to the project. But the commission reasonably considered in-trench replacement as a matter of routing for the project, rather than an alternative to the project.
socially beneficial uses of the output of the proposed facility, or a suitable modification of it, including its uses to protect or enhance environmental quality.

Minn. R. 7853.0130(C). Based on its consideration of all factors, the commission must make a finding as to whether “the consequences to society of granting the certificate of need are more favorable than the consequences of denying the certificate.” Id.

Commission’s Authority to Consider Condition of Existing Line 3

Before turning to our substantial-evidence review, we address a legal issue raised by a number of the relators—that the commission lacked authority to consider the condition of existing Line 3 in determining whether to grant the certificate of need. These relators assert that the condition of an existing pipeline is not among the factors that the legislature explicitly directed the commission to consider in determining whether to grant a certificate of need for a new pipeline.

That is true—as far as it goes. The legislature, however, delegated to the commission the authority to designate need criteria. Minn. Stat. § 216B.243, subd. 1. And the second factor of the third criteria expressly requires the commission to consider “the effect of the proposed facility . . . upon the natural and socioeconomic environments compared to the effect of not building the facility.” Minn. R. 7853.0130(C)(2) (emphasis added). Not building the pipeline in this case means the continued operation of existing Line 3. By its rules, the commission thus was not only permitted to consider the condition of existing Line 3 (and the impacts of its continued operation) in assessing the third criteria—it was required to do so. Id.; see also Minn. Stat. § 216B.243, subd. 3(5) (requiring commission to evaluate whether proposed projects can be “use[d] to protect or
enhance environmental quality” or “increase reliability of energy supply” (emphasis added)). We therefore reject the argument that the commission was precluded from addressing the condition of existing Line 3 under the certificate-of-need statute and need-criteria rule.

Some relators take the argument one step further, arguing that the federal Pipeline Safety Act preempts the commission’s consideration of safety issues related to existing Line 3. That act states that “[a] State authority may not adopt or continue in force safety standards for interstate pipeline facilities or interstate pipeline transportation.” 49 U.S.C. § 60104(c) (2012); see also, e.g., Wash. Gas Light Co. v. Prince George’s Cty. Council, 711 F.3d 412, 420 (4th Cir. 2013) (“[T]he [Pipeline Safety Act] expressly preempts state and local law in the field of safety.”). We easily reject this preemption argument because the commission has not adopted any safety standards—for existing Line 3 or for the new pipeline. Rather, the commission has considered the safety of existing Line 3 in deciding whether to grant a certificate of need for replacement Line 3—a decision that it clearly has authority to make. See 49 U.S.C. § 60104(e) (2012) (providing that the authority of secretary of transportation does not extend to “location or routing of a pipeline facility”); Minn. Stat. § 216B.243 (authorizing commission to grant certificate of need for pipeline).

Having determined, as a matter of law, that the commission did not exceed its authority in assessing the third criteria, we turn once more to our substantial-evidence review. In doing so, we again review whether the commission adequately explained its determination and whether that conclusion is reasonable, based on the record as a whole.
Review of Commission’s Analysis of Third Criteria

In assessing the first factor of the third criteria—the relationship of the proposed facility to overall state energy needs—the commission found that replacement Line 3 would provide a “net benefit” to overall state energy needs because it would reduce apportionment and “improve the stability and reliability of imported crude oil,” which would benefit Minnesota refineries and consumers. Denying the replacement pipeline, the commission reasoned, could lead to increased rail shipments of crude oil, which is less reliable and more environmentally risky. And continuing to operate existing Line 3 would decrease the reliability and efficiency of crude-oil supply, both because of the maintenance required and because of the risk of accidental release.

On the second factor—the comparative natural and socioeconomic effects—the commission found that either granting or denying the certificate of need would have consequences for the environment of northern Minnesota. The commission considered comparative effects in categories of construction, oil spill risk, climate change, indigenous populations, socioeconomics, and the abandonment of existing Line 3. In each of these categories, the commission concluded that the consequences of granting the certificate were either comparable or more favorable than the consequences of denying it. In particular, the commission found:

- that granting a certificate of need would decrease the risk of an oil spill;

- the environmental impacts of constructing replacement Line 3 would be comparable to the effects of the integrity digs that would be required if Enbridge continued to operate existing Line 3;
the effects of replacement Line 3 on climate change through greenhouse gas emissions would be “a significant consequence,” but that most emissions would be attributable to consumption of refined products, and “the most likely result of denial will . . . be increased transport of crude oil via more dangerous means such as rail, and continued use of the deteriorating existing Line 3”; 46

both existing Line 3 and replacement Line 3 would have impacts on indigenous populations, but that the risk of an

46 Youth Climate Intervenors asserts that the commission acted arbitrarily and capriciously by declining to attach a precise dollar figure to the greenhouse gas emissions from replacement Line 3, rejecting the ALJ’s finding to that effect, and relying on a “blanket assertion of substitution” to conclude that most of the greenhouse gas emissions would occur even if the pipeline were not replaced. The dissent, too, is critical of the commission’s analysis in these respects. But we are aware of no authority requiring the commission to adopt a precise cost of emissions in determining whether to grant a certificate of need. And the commission explained its reason for rejecting the dollar figure adopted by the ALJ—that the figure was based on estimates in the FEIS, which admitted limitations in characterizing lifecycle greenhouse gas emissions. And the revised FEIS explains that there are assumptions and data limitations in the characterization of life-cycle GHG emissions that vary between studies. As a result, the GHG emissions can differ substantially from one study to the next. Since the studies reviewed do not consistently disclose the details of their analysis, and often rely on proprietary models and data, a thorough assessment of the reasons for this variability is not possible.

The commission also explained that, as a replacement for the existing Line 3, the project was not expected to increase the demand for crude oil, but rather the manner in which it is transported. The commission’s reasoning on these issues is not arbitrary or capricious. See 2005 Adjustment of Charges, 768 N.W.2d at 120 (explaining that decision is not arbitrary and capricious if rationally connected to facts found); cf. WildEarth Guardians v. U.S. Bureau of Land Mgmt., 870 F.3d 1222, 1235 (10th Cir. 2017) (holding, in case arising out of expansion of coal mines, that “the blanket assertion that coal would be substituted from other sources, unsupported by hard data” was arbitrary and capricious).
oil spill on reservation lands would be lessened by the replacement project; and

• granting the certificate would allow the commission to require the decommission and removal of existing Line 3 while denying the certificate would preclude the commission from requiring the removal of any portion of existing Line 3.

Having reviewed the second factor involving the comparative natural and socioeconomic impacts, we turn to the third and fourth factors—the effects of the project on inducing future development and the socially beneficial uses of output. Here, the commission found that replacement Line 3 would create jobs and that the refined products created from crude oil are socially beneficial. But the commission also acknowledged that extraction and consumption of crude oil has “serious environmental consequences, most notably air pollution and greenhouse gas emissions that contribute to climate change.” On balance, the commission concluded that the third and fourth factors favored granting the certificate.

47 The commission made clear that the impacts of replacement Line 3 on indigenous populations were of “serious concern” to it, noting that Enbridge’s preferred route would traverse ceded territory on which Ojibwe and Chippewa tribes exercise usufructuary rights to hunt, fish, and gather. The commission also observed that replacing Line 3 would cause certain indigenous populations “disproportionately high and adverse impacts,” the “intensity” of which “will be greater than depicted by quantitative analysis alone because of their cultural and spiritual relationship with the natural environment.” But the commission noted that denying the certificate of need would also adversely impact indigenous populations because it would involve the continued operation of existing Line 3 over reservations and ceded territory. The commission ultimately concluded that “impacts to Reservation lands uniquely and acutely implicate tribal interests and are different in kind than impacts to other lands of importance to indigenous populations.”
Based on our review of the commission’s orders, as summarized above, we conclude that it adequately explained its reasons for concluding that criteria three was met. We further determine that the commission’s assessment of the third criteria finds support in the voluminous record evidence. While job creation (largely short-term) and the benefits of refined products were considerations of the commission, without question the major societal risk/benefit analysis question framed by the commission involved the environmental risks of the existing versus the replacement pipeline. And plentiful evidence from Enbridge outlines the risks of the half-century-old, corroding pipeline. As one witness testified, “there is no feasible technology or operational changes that can arrest or reverse the external corrosion on [existing] Line 3 and/or remove the defects that were inherent in the way the pipe was originally manufactured.” And testimony supported that replacement Line 3 would be “less susceptible to integrity threats.” The revised FEIS, the Muse Report, and numerous witnesses before the ALJ support the commission’s findings regarding the benefits of replacement Line 3 and the risks of continuing to operate existing Line 3. And testimony and exhibits also support the commission’s conclusion that, while denying the certificate will not decrease transportation of crude oil, granting the certificate will decrease the amount of oil that is transported by rail, an environmentally beneficial consequence.

Once again, reasonable minds may differ regarding the balancing of societal harms when it comes to replacing Line 3. But that is not the question before us. Rather, we ask whether the commission’s assessment of the third criteria is reasonable, based on the record. We conclude that it is.
D. Fourth criteria: will replacement Line 3 comply with applicable policies, rules, and regulations?

The fourth and final need criteria requires the commission to consider whether the record demonstrates that “the design, construction, or operation of [replacement Line 3] will fail to comply with those relevant policies, rules, and regulations of other state and federal agencies and local governments.” Minn. R. 7853.0130(D). On this criteria, the commission found that there had been no evidence presented that the project’s design, construction, or operation will be in violation of any applicable laws, rules or regulations. The commission considered arguments that the project would be contrary to the state’s renewable-energy and greenhouse-gas reduction goals. See, e.g., Minn. Stat. §§ 216C.05, subd. 2 (stating renewable-energy goals), 216H.02, subd. 1 (stating greenhouse-gas-reduction goals) (2020). But the commission found no evidence that the project would not comply with those goals. We conclude that the commission has adequately explained its analysis of this criteria and that its conclusion is reasonable on the basis of the record. In particular, the commission’s analysis finds support in evidence that replacement Line 3 will use less power than existing Line 3 and reduce truck and rail deliveries, which could actually reduce greenhouse gas emissions.48

48 Friends of the Headwaters on appeal renews arguments about the statutes governing conservation goals, but also cites generally to the commission’s obligations under Minnesota’s environmental-protection statutes as well as the public-trust doctrine. See Minn. Stat. §§ 116B.09, subd. 2 (requiring agencies to favor feasible and prudent decision alternatives to protect environment), 116D.04, subd. 6 (2020) (same); White Bear Lake Restoration Ass’n ex rel. State v. Minn. Dep’t of Nat. Res., 946 N.W.2d 373, 385 (Minn. 2020) (describing public-trust doctrine). While Friends of the Headwaters accurately describes these various authorities, it does not explain how the commission’s decisions are contrary to its duties under them. And the record reflects that the commission took into
Having reviewed the commission’s application of the need-criteria rule, we return to the central question of “need.” Did Enbridge demonstrate need for a replacement pipeline? To resolve this high-stakes question, the commission balanced a plethora of factors and criteria, as addressed above. It did so against the backdrop of an existing, deteriorating pipeline. It did so based upon a public record developed over multiple years with extraordinary public participation. Then it made a decision to which we must defer—because that decision to grant a certificate of need was adequately explained and reasonable, based on the record. Accordingly, we conclude that relators have not met their burden to demonstrate that the commission erred, acted without the support of substantial evidence, or acted arbitrarily and capriciously in granting the certificate of need.

III. Relators have not established a basis to reverse the commission’s decision to grant a routing permit.

Construction of replacement Line 3 requires not only a certificate of need, but also a routing permit from the commission. See Minn. Stat. §§ 216B.243, subd. 4, 216G.02, subd. 2 (2020). Enbridge proposed a route which follows existing Line 3 until the Clearbrook terminal, but then turns south and, ultimately, east to reconnect with the existing Line 3 corridor at Carlton. This route would avoid construction of the replacement pipeline on reservation lands. Ultimately, the commission approved a route that largely followed Enbridge’s preferred route, although it deviated at two segments.

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account the state’s environmental-protection policies in making its decisions. Accordingly, we conclude that Friends of the Headwaters has not met its burden to demonstrate a basis to reverse the commission’s decisions in this regard.

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While certain arguments related to the routing permit are intertwined with the certificate-of-need issue, the crux of relators’ arguments is that in-trench replacement—following the path of existing Line 3—should have been the selected route. The ALJ, after considering five route alternatives, recommended in-trench replacement. But the commission rejected this recommendation. To assess whether the rejection of in-trench replacement and the commission’s approval of the routing permit was appropriate, we turn once again to the substantial-evidence test. *Minn. Power*, 838 N.W.2d at 757. And for a final time, we review first whether the commission has adequately explained its conclusions, and second whether those explanations are reasonable on the basis of the record. *Id.* In conducting our review, we keep in mind the criteria that the commission must consider in determining a pipeline route, see Minn. R. 7852.1900, subp. 3 (2019), as well as the commission’s environmental-protection duties, see, e.g., Minn. Stat. § 116D.04, subd. 6 (prohibiting actions “significantly affecting the quality of the environment” when there is a “feasible and prudent alternative”).

Turning first to the commission’s explanation for its routing decision, we observe that the commission began its analysis with the five alternative routes identified in the FEIS: Enbridge’s preferred route, a more northerly route, a more southerly route, and two in-trench replacement routes. The commission first considered the in-trench replacement routes, and rejected them after determining that they faced an insurmountable

49 The first in-trench replacement route followed existing Line 3 in its entirety, while the second deviated from the existing Line 3 corridor at some points to avoid certain environmental impacts.
problem: Enbridge’s easements for its pipelines crossing the Leech Lake and Fond du Lac Reservations expire in 2029, and the Leech Lake Band of Ojibwe refuses to grant any extension. The commission explained that limiting the pipeline’s operating life to the duration of the existing easements would “render this investment infeasible—in effect, it would be the equivalent of taking no action on Enbridge’s petition.” And, the commission reasoned, it had already rejected a no-action alternative in granting the certificate of need. The commission therefore concluded that neither of the in-trench replacement routes “remain[ed] viable alternatives,” and it excluded those routes from further analysis.

Based on our review of the commission’s orders, we conclude that it has adequately explained its decision not to order in-trench replacement, and we turn to examining whether that explanation finds support in the record.

The record evidence reflects that, since as early as 2013, the Leech Lake Band expressed its opposition to another pipeline being built in the existing Line 3 corridor.50 In November 2017, based on concerns that its opposition had not been expressed clearly enough, the Band issued an official statement. That statement unequivocally states: “The Leech Lake Band of Ojibwe will not allow any replacement of Line 3 whether in trench or alongside the current Line 3.” The tribal council for the Band also passed a resolution reflecting the Band’s opposition to replacement Line 3 running through the reservation and proclaiming any attempt to build the pipeline across the reservation as “an attack on tribal

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50 In 2013, the Band was responding to efforts to build the Sandpiper Line, which was proposed (but never built) to carry oil from the Bakken region of North Dakota to the Clearbrook and Superior terminals.
sovereignty.”51 And, after the ALJ recommended in-trench replacement, the Leech Lake Band submitted exceptions to the commission re-emphasizing its unyielding opposition. This evidence amply supports the commission’s conclusion that the in-trench route alternatives were not viable.52

Having excluded the in-trench alternatives from further consideration, the commission applied and compared numerous regulatory considerations to the remaining three routes and determined that Enbridge’s preferred route “best optimizes” the considerations. The commission noted that Enbridge’s preferred route was the “most closely studied route,” and that Enbridge had already made multiple adjustments to the route to minimize potential natural and cultural harms. And the commission stated that “among the many factors that influenced the commission’s decision, some of the most prominent factors are the qualities that [Enbridge’s preferred route] does not have.” It would not require clearing large swaths of national forest, like the northerly alternative

51 The statement and resolution by the Band stated that construction attempts would lead to “conflict,” and that the Band would “have no choice but to defend ourselves by any means necessary from this unjust process.” Before the ALJ, a Band representative testified that if the commission authorized in-trench replacement against the Band’s wishes, it would be “way worse than Standing Rock.”

52 The Mille Lacs Band of Ojibwe, which intervened to protect its members’ long-held rights to hunt, fish, and gather near the proposed pipeline corridor, asserts that the commission’s failure to order in-trench replacement violates the principle of nonproliferation articulated by the supreme court in People for Envtl. Enlightenment & Responsibility (PEER), Inc. v. Minn. Envtl. Quality Council, 266 N.W.2d 858, 868 (Minn. 1978). Nonproliferation requires that an existing route be chosen “unless there are extremely strong reasons not to do so.” Id. Certainly tribal sovereignty, as asserted by the Leech Lake Band, is such an extremely strong reason. Moreover, the commission advanced nonproliferation principles in setting the route for the project by adopting two route-segment alternatives so that “all or nearly all of the project [would be] built along existing pipeline and transmission line corridors.”
route. And it would not traverse karst topography and pass through multiple cities, like the southerly alternative route. We conclude that the commission has adequately explained its choice among the three remaining routes, and that choice is reasonable on the basis of the record, including the revised FEIS and the substantial record developed before the ALJ.\textsuperscript{53}

For the foregoing reasons, we conclude that relators have not met their burden to demonstrate that the commission acted without the support of substantial evidence or acted arbitrarily and capriciously in granting the routing permit.

**DECISION**

In making its decisions, the commission did not write on a clean slate. With an existing, deteriorating pipeline carrying crude oil through Minnesota, there was no option without environmental consequences. The challenge: to balance those harms. There was no option without impacts on the rights of indigenous peoples. The challenge: to alleviate those harms to the extent possible. And there was no crystal ball to forecast demand for crude oil in this ever-changing environment.

When balancing harms and predicting future demand, the commission is due deference. It is the agency tasked with these difficult decisions. With this deference in

\textsuperscript{53} No one of the relators asserts that the commission should have chosen the northerly or southerly alternative routes over Enbridge’s preferred route. Rather, relators argue that the commission should have ordered in-trench replacement, which the commission reasonably rejected for the reasons we have already discussed. Friends of the Headwaters also renews its arguments that the commission should have considered the conceptual pipeline that it proposed, which would have bypassed the Clearbrook and Superior terminals to connect with terminals further south. The commission reasonably did not consider that system alternative as a route alternative because it would not have connected to the same terminals.
mind we affirm the commission’s adequacy decision regarding the revised FEIS and its decisions to issue a certificate of need and routing permit for the Line 3 replacement.

Affirmed.
REYES, Judge (dissenting)

This case is about substitution. Substituting supply for demand. Substituting “shippers” for “refineries.” Substituting “pipeline capacity” for “crude oil.” Substituting conclusory, unsupported demand assumptions for reviewable “long-range energy demand forecasts.” And substituting an agency’s will for its judgment.

Respondent Minnesota Public Utilities Commission (the PUC) committed legal errors and acted arbitrarily or capriciously by granting respondent Enbridge Energy, Limited Partnership, a certificate of need that is unsupported by substantial evidence. First, as the majority holds, the statutorily required “long-range energy demand forecasts” means “the amount of crude oil from the pipeline that refineries will be willing and able to purchase over the forecast period.” Minn. Stat. § 216B.243, subd. 3(1) (2020) (emphasis added); Minn. R. 7853.0010, subp. 8 (2019) (emphasis added); see also Minn. R. 7853.0130(A)(1) (2019). But the PUC erred as a matter of law by wrongly interpreting it as the “pipeline capacity” that “shippers” will be willing and able to transport. Second, the PUC’s misinterpretations of law in turn caused it to evaluate erroneously and approve a certificate-of-need application that is not supported by substantial evidence and to focus on supply data of pipeline capacity for shippers. Third, the PUC failed to consider the required “state energy needs,” i.e., Minnesota’s crude oil needs, made unsupported findings regarding the safety of existing Line 3, and failed to evaluate societal costs—an estimated $287 billion—to Minnesota. Minn. R. 7853.0130(C)(1) (2019). Because these errors require reversal, I respectfully dissent.
Standard of Review

In these five consolidated appeals, relators, including the Minnesota Department of Commerce (the DOC), challenge the PUC’s May 20 order granting Enbridge a certificate of need for its new Line 3 project (the project). Although we generally defer to agency expertise, this deference is not without limit. This court, by statute, owes no deference to an agency’s quasi-judicial decision under the Minnesota Administrative Procedure Act if it is based on an error of law, arbitrary or capricious, or not supported by substantial evidence. Minn. Stat. § 14.69 (2020). An error of law, alone, is sufficient to reverse an agency’s decision. Id. (stating that courts may reverse an agency decision if it is “affected by other error of law; or . . . .”); see also In re Reichmann Land & Cattle, LLP, 867 N.W.2d 502, 508 (Minn. 2015) (“the disjunctive conjunction ‘or’ suggest[s] . . . satisf[action] if any one type is present.”). A decision is unsupported by substantial evidence if it is not based on “relevant evidence” that a “reasonable mind might accept as adequate to support a conclusion.” In re NorthMet Project Permit, ___ N.W.2d ___, ___, 2021 WL 1652768, at *11 (Minn. Apr. 28, 2021). An agency’s decision is arbitrary or capricious if it

(a) relie[s] on factors not intended by the legislature;
(b) entirely fail[s] to consider an important aspect of the problem; (c) offer[s] an explanation that runs counter to the evidence; or (d) [] is so implausible that it could not be explained as a difference in view or the result of the agency’s expertise.

Citizens Advocating Responsible Dev. v. Kandiyohi Cty. Bd. of Comm’rs, 713 N.W.2d 817, 832 (Minn. 2006) (CARD). Put another way, “[a]n agency’s decision is arbitrary or capricious if it represents the agency’s will and not its judgment.” In re Review of 2005
Annual Automatic Adjustment of Charges, 768 N.W.2d 112, 118 (Minn. 2009) (2005 Adjustment of Charges). Additionally, reviewing courts must intervene when it is apparent that the agency “has not genuinely engaged in reasoned decision-making.” Reserve Mining Co. v. Herbst, 256 N.W.2d 808, 825 (Minn. 1977) (quotation omitted).

An agency receives no deference when its interpretation of a statute or rule contravenes the plain language or if “there are compelling indications that the agency’s interpretation is wrong.” In re Claim for Benefits by Meuleners, 725 N.W.2d 121, 124 (Minn. App. 2006) (Mueleners) (quotation omitted). The PUC’s interpretation of the applicable statute and rules are legal questions that we review de novo. In re Investigation into the Comm’n’s Jurisdiction over Hutchinson’s Intrastate Nat. Gas Pipeline, 707 N.W.2d 223, 227 (Minn. App. 2005).

Certificate-of-Need Requirements

A party seeking to construct a “large energy facility,” like the project, must obtain a certificate of need from the PUC. Minn. Stat. § 216B.243, subd. 2 (2020); see also Minn. Stat. § 216B.2421, subd. 2(4) (2020). The PUC may not grant a certificate of need unless the applicant, here Enbridge, has “justified its need.” Minn. Stat. § 216B.243, subd. 3 (2020). The PUC has adopted administrative rules with criteria it must evaluate to determine whether a large energy facility is needed, id., subd. 1 (2020), including rules specifically governing oil pipelines, Minn. R. 7853.0010-.0800 (2019).

Those rules require that an application for a certificate of need include a summary of “the major factors that justify the need for the proposed facility,” Minn. R. 7853.0240, as well as historical and forecast demand data, Minn. R. 7853.0510-.520. See Minn. R.
The PUC must evaluate four criteria to determine whether an applicant has satisfied its burden to justify the need for its proposed facility. See Minn. R. 7853.0130(A)-(D). The purpose of the certificate of need is to ensure that there is actually a need for a new large energy facility “consistent with environmental protection and the protection of [the] citizens” of Minnesota. Minn. Stat. §§ 216B.243, subds. 1-2, 216C.05, subd. 1 (2020). It is not to benefit private entities without due consideration of Minnesota’s needs. I now address the PUC’s analysis of criteria (A) and (C) in turn.

I. The PUC erred as a matter of law by interpreting and applying the wrong definition of the “long-range energy demand forecasts” required under Minn. Stat. § 216B.243, subd. 3(1), and Minn. R. 7853.0130(A).

A. The PUC erroneously interpreted “type of energy” as “pipeline capacity” and “willing and able purchasers” as “shippers” contrary to this court’s holding.

The PUC first erred by adopting the wrong statutory definitions of “type of energy” and “able and willing purchasers.” We owe no deference to the PUC’s interpretation of statutes and rules when its “interpretation is wrong.” Meuleners, 725 N.W.2d at 124.

Minn. Stat. § 216B.243, subd. 3(1), requires the PUC to evaluate “the accuracy of the long-range energy demand forecasts on which the necessity for the facility is based.” (Emphasis added.) Similarly, Minn. R. 7853.0130(A)(1) requires the PUC to evaluate “the accuracy of the applicant’s forecast of demand for the type of energy that would be supplied.” (Emphasis added.) I agree with the majority’s conclusion that “energy” is “crude oil” and that the “purchasers” are the “refineries.” I also agree with the majority’s holding that the plain language of this statute and rule requires the PUC to evaluate a
forecast, provided by Enbridge, of the amount of crude oil from the project that refineries will be willing and able to purchase over the 16-year forecast period.

But here, the PUC explicitly defined “willing and able purchasers” as “shippers.” The shippers, like Enbridge, are “common carriers” who transport crude oil and are bound by the demands of the refineries, and in turn the refineries’ customers. In addition, the PUC’s analysis and order consistently refers to the demand for “energy” as a demand for transportation or “pipeline capacity.” The PUC therefore committed an error of law by wrongly defining the required “long-range energy demand forecast” under section 216B.243, subd. 3(1), and rule 7853.0130(A)(1).

B. Because the PUC erroneously applied the wrong definition of a “long-range energy demand forecast,” reversal and remand is required.

Second, in addition to committing an error of law by wrongly defining the “long-range energy demand forecast,” the PUC in turn erred by evaluating the wrong purchasers and type of energy. Rather than evaluate the forecast demand of crude oil by refineries, it erroneously focused on the demand for pipeline capacity by shippers provided by Enbridge. In other words, the PUC evaluated the wrong criteria. The PUC’s evaluation and decision is also arbitrary or capricious because it focused “on factors not intended by the legislature.” CARD, 713 N.W.2d at 832.

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1 The DOC defines the “type of energy” as “crude oil and energy products from crude oil.” See Merriam-Webster’s Collegiate Dictionary 413 (11th ed. 2014) (defining “energy” in part as “usable power (such as heat or electricity)” and also as “the resources for producing such power”). The administrative law judge (ALJ) similarly criticized the Muse Stancil Report for completely ignoring demand for refined products, an important factor in forecasting demand.
This court owes no deference to the PUC’s analysis or decision when it is based on an error of law, arbitrary or capricious, or unsupported by substantial evidence. Minn. Stat. § 14.69. This court has reversed and remanded such decisions for the agency’s reconsideration under the correct interpretation of statutes and rules. See, e.g., In re Enbridge Energy, Ltd. P’ship, 930 N.W.2d 12, 28 (Minn. App. 2019) (reversing and remanding because PUC acted in manner unsupported by substantial evidence and arbitrary or capricious by determining environmental-impact statement adequate despite failure to address “significant issue[] raised in scoping” as required by administrative rules); In re Reissuance of NPDES/SDS Permit to United States Steel Corp., 937 N.W.2d 770, 787-88 (Minn. App. 2019) (reversing and remanding because agency erred in interpreting state administrative rules governing water-quality standards and decision not supported by substantial evidence), rev’d on other grounds, 954 N.W.2d 572 (Minn. 2021); Minn. Ctr. for Envtl. Advocacy v. Minn. Pollution Control Agency, 696 N.W.2d 95, 107 (Minn. App. 2005) (reversing agency decision that was based on error of law, arbitrary or capricious, and unsupported by substantial evidence and remanding for reconsideration of restrictions necessary to comport with statutes and rules). Because the PUC’s analysis suffers from its erroneous definitions and its decision is owed no deference when it wholly failed to consider a statutorily required energy demand forecast, I would reverse and remand.
II. The PUC acted arbitrarily or capriciously and granted the certificate of need unsupported by substantial evidence by relying on unreasonable definitions and, as a result, it failed to analyze an energy demand forecast.

Because the PUC applied the wrong definitions to its analysis of a long-range energy demand forecast, I would reverse and remand based on the analysis in section I. But because the majority undertakes a substantive analysis by applying these correct definitions absent the agency’s prior application of them, I take the opportunity to clarify that the PUC’s decision is nevertheless unsupported by the record and arbitrary or capricious.

A. Enbridge did not provide the statutorily required long-range energy demand forecast.

The PUC’s analysis relied on the Muse Stancil Report and apportionment data from shippers to satisfy the statutory “energy demand forecast” requirement and applicable rules. But this information does not meet those requirements as defined by this court.

First, with respect to the Muse Stancil Report, respondents conceded in oral argument that it contains no information on demand for crude oil from refineries, much less future demand. Instead they “assume[] constant demand” but fail to provide any supporting data. Indeed, the Muse Stancil Report relies primarily on supply data and “pipeline capacity” for “shippers.” But a supply-side forecast for shippers fails to show future demand from refineries. One of Enbridge’s experts acknowledged that the Muse Stancil Report is based on historical data and simply assumes consistent demand now and throughout the 16-year forecast period. This provides no way for the PUC to evaluate that assumption. The DOC’s expert, Dr. Fagan, explained that, with few exceptions, no one consumes crude oil except a refinery, and a refinery does not consume crude oil unless
refined products are expected to be sold, which requires a showing of refinery and consumer demand. Enbridge must submit data on historical demand for crude oil. Minn. R. 7853.0510; see also Minn. R. 7853.0220, .0500. But it also must submit long-range forecast demand data. Minn. R. 7853.0520. It failed to do so.

Second, the PUC’s reliance on apportionment data improperly assumes shippers, rather than refineries, are the willing and able purchasers. In its brief, the PUC summarized its decision that “[a]pportionment occurs when oil shippers request the transportation of more crude oil than the pipeline can accommodate. When the requests to transport volumes of crude oil exceed pipeline capacity, that capacity is ‘apportioned’ on a pro rata basis among the shippers.” (Emphasis added.) Apportionment shows demand for pipeline capacity, but not demand for crude oil. Apportionment data of pipeline capacity for shippers is not a factor intended by the legislature, making the PUC’s reliance on it arbitrary or capricious. CARD, 713 N.W.2d at 832.

Enbridge also relies significantly upon unsworn letters from the two Minnesota refineries: Flint Hills Resources and Andeavor. But Enbridge never submitted these public-comment letters as part of its application, and the PUC did not consider them in its decision. These refineries were not intervenors or witnesses answering questions under oath. More importantly, neither one indicates that it is not receiving the amount of crude oil it needs to meet its refining demands. Nor do the refineries claim a future need through current or planned facility expansions, as they have in prior applications, which would make them “willing and able purchasers” or specify an “amount” necessary to satisfy their
future needs. Finally, as the ALJ found, their letters are completely silent on actual harm to them from apportionment or harm they will suffer if the project is not approved.

The PUC asserts that “[its] decision was in line with the agency’s past practice.” This is not true. The PUC has analyzed the type of future demand data in prior applications that Enbridge failed to submit in this application. Contrary to its current application, Enbridge has historically provided nonaligned, independent demand forecast data based on population growth, driving trends, demand for oil-based products, specific oil-refinery-expansion projects, future refinery demand data, and future consumer demand data. And based on the detailed demand forecasts, the DOC supported those previous applications.

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2 Under statute, the PUC is required to “develop and maintain an effective program of collection, compilation, and analysis of energy statistics.” Minn. Stat. § 216C.17, subd. 1 (2020). This requires every “petroleum supplier and large energy facility in the state” to send yearly forecasts of energy demands. Minn. Stat. § 216C.17, subd. 2 (2020). “The commissioner shall review and evaluate forecasts of energy demand” from these entities, which includes resources and their relation to “the most current population growth and development estimates, statewide and regional land use, transportation, and economic development programs and forecasts.” Minn. Stat. § 216C.17, subd. 5 (2020). The PUC and Enbridge therefore must have this information readily available, but it is lacking in this application.

Additionally, none of the parties cite to, nor am I aware of, any statute or rule that imposes certificate-of-need criteria for a replacement pipeline that are different than for a new pipeline; rather, the criteria apply to a “large energy facility,” which the project is. Minn. Stat §§ 216B.2421, .243; Minn. R. 7853.0030. In any event, the ALJ flatly rejected Enbridge’s assertion that this is a “replacement project.” The ALJ stated that Enbridge “is asking to abandon its current Line 3 and construct an entirely new pipeline – one that is longer and wider, has the capacity to transport more oil, and opens a new corridor through northern Minnesota for nearly half of its route. . . . For Minnesota, as proposed, the Project represents a new oil pipeline.” (Emphasis added.)
The DOC does not here. A comparison between data submitted, and the DOC’s position, in prior Enbridge applications and this application is striking:\(^3\)

<table>
<thead>
<tr>
<th>Comparison of Enbridge Applications for Certificate of Need Over a Ten-year Period(^4)</th>
<th>2008 Alberta Clipper Application</th>
<th>2012 Alberta Clipper Line 67 Station Upgrade</th>
<th>2018 Line 3 Replacement Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DOC position</strong></td>
<td>Supported application</td>
<td>Supported application</td>
<td>Opposes application</td>
</tr>
<tr>
<td><strong>Demand forecast based on demonstrated oil refinery demand through oil refinery expansions</strong></td>
<td>✓</td>
<td>✓</td>
<td>None</td>
</tr>
<tr>
<td><strong>Oil refinery demand for 16-year forecast period</strong></td>
<td>25 years</td>
<td>28 years</td>
<td>None</td>
</tr>
<tr>
<td><strong>Demand forecast information from nonaligned, independent sources such as the U.S. Energy Information Administration</strong></td>
<td>✓</td>
<td>✓</td>
<td>None</td>
</tr>
<tr>
<td><strong>Demand forecast based on consumer demand for oil products</strong></td>
<td>✓</td>
<td>✓</td>
<td>None</td>
</tr>
<tr>
<td><strong>PUC determination</strong></td>
<td>Approved</td>
<td>Approved</td>
<td>Approved</td>
</tr>
</tbody>
</table>

\(^3\) Because (1) the parties and the PUC reference prior applications; (2) the PUC’s failure to explain its action frustrates judicial review; and (3) the PUC failed to consider information relevant to its decision, I take judicial notice of the prior applications. See *Nat’l Audubon Soc’y v. Minn. Pollution Control Agency*, 569 N.W.2d 211, 216 (Minn. App. 1997) (noting courts may look outside administrative record if “agency’s failure to explain its action frustrates judicial review” or it “failed to consider information relevant to making its decision”), review denied (Minn. Dec. 16, 1997).

\(^4\) Although I do not include it in the chart, I note that the 2015 Sandpiper pipeline application also provided nonaligned demand forecast data that showed demand based on oil refinery expansion and consumer demand for oil products through 2040. See *In re Application of N.D. Pipeline Co., LLC for a Certificate of Need for the Sandpiper Pipeline*
Further, much of Enbridge’s purported forecast is built on assumptions. The project would almost double the amount of crude oil flowing through existing Line 3, but Enbridge failed to provide any proof of increasing demand by refineries. Rather, Enbridge assumes that demand will remain the same throughout the 16-year forecast period. Enbridge further fails to explain how its doubled supply will meet its assumed constant demand. Additionally, the ALJ found that: “[t]he evidence shows that Minnesota refiners are currently receiving sufficient amounts of crude oil to meet their production needs.” In other words, Minnesota refineries do not need increased supply of crude oil, much less double the supply as Enbridge proposes to provide with their new Line 3. Enbridge supplied no data to the contrary.

B. Because the PUC granted the certificate of need without evaluating the accuracy of an energy demand forecast, its decision is unsupported by substantial evidence and arbitrary or capricious.

With Enbridge’s lack of adequate forecasts in mind, I next consider the PUC’s errors in its evaluation of the supplied “forecasts.” Relators argue that the PUC failed to evaluate the accuracy of an energy demand forecast because Enbridge’s application is unsupported by substantial evidence and the PUC’s decision is therefore arbitrary or capricious. I agree.

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Project in Minn., Pl-6668/ CN-13-473. Enbridge supported the application and provided expert testimony as the parent company of the applicant.

5 Enbridge’s existing Line 3 is a 1,031 mile, 34-inch diameter pipeline that operates at approximately 50% capacity and transports 390,000 barrels of light crude oil per day. Its new proposed Line 3 would be 36 inches in diameter and transport 760,000 barrels of primarily heavy crude oil per day. Enbridge states that it would operate that new line at nearly 100% capacity. That is approximately double the capacity of the existing line.
The PUC must evaluate “the accuracy of the long-range energy demand forecasts on which the necessity for the facility is based.” Minn. Stat. § 216B.243. subd. 3(1); see also Minn. R. 7853.0130(A)(1). The PUC acknowledged the insufficiency of Enbridge’s energy demand forecast and the absence of refinery and consumer demand data. Similarly, the ALJ recognized Enbridge’s scant data and found Enbridge’s analysis flawed by focusing only on the supply of Canadian crude oil. Nevertheless, the PUC found a need for the project by finding “that apportionment regularly occurs when the volume of oil that shippers request to transport over existing Line 3 exceeds the capacity of the pipeline,” thereby erroneously focusing on “pipeline capacity” to “shippers.” (Emphasis added.) But as discussed in Part I, the PUC applied the wrong definitions, and the information referenced by the PUC therefore cannot constitute a demand forecast. If there is no energy demand forecast, there is nothing for the PUC to review for accuracy.

In addition, the PUC did not adequately explain its conclusions that Enbridge supplied an energy demand forecast that the PUC could accurately evaluate. The record is devoid of data supporting a conclusion that demand for crude oil by willing and able Minnesota refineries will remain constant, let alone increase. And the PUC could not review data underlying Enbridge’s assumed constant demand because Enbridge failed to provide it. It is not “reasonable” to conclude that Enbridge’s application provided the statutorily required data, especially given what Enbridge has provided in other applications in the recent past. Reserve Mining Co., 256 N.W.2d at 825. Therefore, the PUC acted arbitrarily and capriciously by granting the certificate that “entirely failed to consider an
important part of the problem” and making a decision unsupported by relevant evidence, namely, demand data. CARD, 713 N.W.2d at 832.

In sum, Enbridge knows how to provide demand forecast data in a certificate-of-need application, yet conspicuously chose not to do so here. The PUC knows how to evaluate demand forecast data and has in the past, but did not to do so here. The inescapable conclusion is that the PUC acted arbitrarily or capriciously by granting the certificate of need unsupported by substantial evidence. Because we afford an agency no deference if its findings are arbitrary and capricious or unsupported by substantial evidence, I would reverse the PUC’s order granting Enbridge a certificate of need.

III. The PUC’s grant of a certificate of need is legal error, arbitrary or capricious, and unsupported by substantial evidence because the PUC failed to consider state energy needs, made unsupported findings regarding existing Line 3’s safety, and failed to consider greenhouse gas (GHG) emissions under Minn. R. 7853.0130(C).

In order to grant a certificate, the PUC must find that “the consequences to society of granting the certificate of need are more favorable than the consequences of denying the certificate.” Minn. R. 7853.0130(C). Under criterion (C), the PUC must consider four factors, two of which are critical here: “(1) the relationship of the proposed facility . . . to overall state energy needs; [and] (2) the effect of the proposed facility . . . upon the natural and socioeconomic environments compared to the effect of not building the facility.” Minn. R. 7853.0130(C)(1)-(2).
A. The PUC erred as a matter of law and acted arbitrarily or capriciously by failing to adequately consider demand for crude oil in Minnesota under Minn. R. 7853.0130(C)(1).

Minn. R. 7853.0130(C)(1) requires the PUC to consider “the relationship of the proposed facility . . . to overall state energy needs.” (Emphasis added.) This requirement is both broader and narrower than the requirement that the PUC consider the applicant’s energy demand forecast. Need is broader than demand, but an integral part of need is demand by “willing and able purchasers” for crude oil. See Minn. R. 7853.0010, subp. 8. And the requirement to consider state needs narrows the analysis under this factor to Minnesota. But the requirement to consider state needs also broadens the analysis to consumers in Minnesota, because consumer demand informs state energy needs. Thus, under this factor, the PUC must consider the need, including demand, exclusively in Minnesota for crude oil and its products by refineries and consumers.

Here, among other considerations, the PUC stated that granting the certificate would benefit “overall state energy needs by reducing apportionment.” But as discussed in Part I, apportionment focuses on supply data, pipeline capacity, and shipper demand, which is not a prediction of future demand for crude oil from Minnesota consumers. The PUC erred as a matter of law in its analysis of this factor by again relying on flawed definitions.

Further, as demonstrated in Part II, because Enbridge failed to provide demand data, the PUC failed to evaluate under this factor whether there is and will be demand in Minnesota for the crude oil and refined products supplied through the project. The PUC’s decision is arbitrary or capricious because it is based on insubstantial evidence and thereby
failed to consider an important aspect of need, i.e., demand. *CARD*, 713 N.W.2d at 832. I
would therefore reverse the PUC’s order granting the certificate.

B. The PUC made findings unsupported by the record in its consideration
of the safety of existing Line 3 under Minn. R. 7853.0130(C).

Relators argue that the PUC cannot consider pipeline safety in determining whether
to grant a certificate of need. I disagree, and agree with the majority’s reasoning on this
point, insofar as it concludes that the PUC may consider safety. However, the PUC’s
analysis of safety nevertheless suffers a fatal flaw by finding existing Line 3 unsafe despite
significant evidence to the contrary in the record.

The PUC’s discussion about the “consequences to society” in its May 2020 order
granting the certificate focuses overwhelmingly on safety. It called an oil-spill risk the
“central issue.” The PUC stated that continued use of existing Line 3, which it described
as “deteriorating at an accelerating rate” and “badly in need of replacement,” entails “real,
immediate, and potentially catastrophic risks.” (Emphasis added.) It further stated that “a
crucial benefit” of the project is that it would reduce the risk of an oil spill.6

The PUC’s statements asserting that a replacement line is needed because of
integrity problems on the existing line and that the existing line is unsafe are unsupported
by the record. Enbridge noted serious integrity issues, including corrosion and cracking
on up to 70% the existing line. But a pipeline requiring maintenance and repair does not
mean that it is an unsafe pipeline. Rather, Enbridge expressly stated, numerous times, that

6 It is also troubling to note one commissioner’s statement that the safety issue “feels like
a gun to our head . . . that somehow compels us to approve a new line because of the
risks . . . of that existing pipeline.” (Emphasis added.)
it could operate the existing line “safely with timely maintenance” and can “stay in compliance with its applicable permits and regulations” including safety regulations.

Notably, Enbridge can make no argument other than that it can operate existing Line 3 safely: it is bound to do so under a federal consent decree and the Pipeline Safety Act. See 49 U.S.C. § 60117(m)(1) (2012) (authorizing secretary of transportation to require corrective action to remedy any “condition that poses a pipeline integrity risk to public safety, property, or the environment”). If Enbridge were to claim it could not operate existing Line 3 safely now or in the future, it would risk federal enforcement action against it.

Respondents argue that maintenance and repairs to existing Line 3 will be costly for Enbridge. But cost to an applicant to maintain an existing pipeline is not a factor that the PUC may consider in determining whether to grant a certificate. See generally Minn. R. 7853.0130(C). To the extent the PUC’s concern about Enbridge’s costs of maintenance and repairs undergird its safety analysis, this constitutes further error by the PUC by considering a factor not intended by the legislature. Id.; CARD, 713 N.W.2d at 832.

In sum, the PUC’s doom-and-gloom statements finding that the existing Line 3 is unsafe are unsupported by the record, Minn. Stat. § 14.69(e), and constitute an explanation of need that “runs counter to the evidence,” which is arbitrary or capricious. CARD, 713 N.W.2d at 832.
C. The PUC acted arbitrarily or capriciously by failing to consider relevant impacts to the natural and socioeconomic environments under Minn. R. 7853.0130(C)(2).

Relators argue that the PUC acted arbitrarily or capriciously by failing to consider the lifecycle GHG emissions resulting from the project. I agree.

Under Minn. R. 7853.0130(C)(2), the PUC must consider “the effect of the proposed facility . . . upon the natural and socioeconomic environments compared to the effect of not building the facility.” Here, in its analysis of factor (C)(2), the PUC rejected the ALJ’s finding of a $287 billion social cost to Minnesota resulting from GHG emissions from the project, and ultimately failed to consider GHG emissions. The PUC’s analysis, or lack thereof, of the GHG emissions under this factor is erroneous and arbitrary or capricious for numerous reasons.

First, the data underlying the ALJ’s finding of $287 billion in social costs is based in part on Enbridge’s own testimony from Mr. Earnest. Enbridge does not dispute it. Because it is undisputed, the PUC erred as a matter of law by not accepting it.

Second, the PUC rejected the ALJ’s adopted calculation because the GHG studies in the revised final environmental impact statement (revised FEIS) depend on proprietary information and varied “assumptions and data limitations.” It therefore reasoned that “a thorough assessment of the reasons for . . . variability [among various GHG studies] is not possible.” But the PUC accepted the Muse Stancil Report despite that report’s reliance on

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7 I note that the $287 billion may include costs of GHG emissions from oil consumption downstream from the project. However, the PUC did not reject the ALJ’s finding for that reason, nor did it suggest an alternative figure that excluded downstream emissions costs.
the Canadian Association of Petroleum Producers study, which is also based on undisclosed proprietary information. The PUC arbitrarily adopted contrary standards by accepting the Muse Stancil Report while rejecting the GHG studies.

Third, adding to this error, the PUC accepted GHG emissions figures for purposes of the revised FEIS, but rejected the ALJ’s finding for purposes of granting the certificate of need without explaining its contradictory decisions regarding the same application. Notably, agencies may “need to make educated assumptions about an uncertain future.” Sierra Club v. Fed. Energy Regulatory Comm’n, 867 F.3d 1357, 1373-74 (D.C. Cir. 2017) (rejecting FERC’s argument that “it is impossible to know exactly what quantity of greenhouse gases will be emitted as a result of [a pipeline] being approved”). The PUC could have made an “educated assumption” about an estimated range of GHG emissions from the models identified in the revised FEIS. But it neglected to do so here and thereby eliminated an important factor from its analysis.

Fourth, the PUC rejected all findings based on the $287 billion figure, which included a finding noting that the project itself will result in increased GHG emissions. This shows that the PUC eliminated an important factor in the balancing analysis under factor (C)(2).

Fifth, the PUC initially acknowledged that emissions “are a significant consequence” of the project, but then stated that the “lifecycle environmental costs include emissions from [the] ultimate consumption of the oil . . . [which] do not result directly from the Project, but instead result from the continued demand for crude oil to produce refined products used by consumers.” Here, the PUC failed to recognize that the project enables
ultimate consumption, and emissions directly relating to ultimate consumption indirectly relate to the project. Further, in analyzing criterion (C), the PUC noted that the ultimate consumption of oil products is a “beneficial use[].” It is inconsistent to consider the benefits of ultimate consumption while rejecting the costs of that consumption in analyzing this factor. Cf. Enbridge, 930 N.W.2d at 29 (noting that environmental impact statement must address impacts of upstream and downstream emissions related to project).

In sum, by failing to consider GHG emissions, the PUC arbitrarily and capriciously failed to consider an important impact of the project.8 CARD, 713 N.W.2d at 832. Further, its inconsistent decisions in accepting the Muse Stancil Report and the benefits of oil consumption while rejecting the $287 billion in social costs of ultimate consumption show a lack of reasoned decisionmaking. Reserve Mining Co., 256 N.W.2d at 825. For these reasons, I would reverse and remand the PUC’s grant of the certificate of need.

Conclusion

The PUC’s review of Enbridge’s certificate-of-need application fails in three ways. This court accords no deference to the PUC’s decision here because each of these errors amounts to an error of law, arbitrary or capricious action, or a decision unsupported by substantial evidence. First, the PUC erred in defining purchasers and energy, contrary to this court’s holding. Specifically, the PUC erroneously substituted the supply of pipeline capacity to shippers for the required demand for energy of crude oil by refineries who are

8 Even if the PUC did consider GHG emissions, it failed to explain the weight, if any, it gave to GHG emissions under criterion (C). Although we respect the agency’s weighing of different factors, the PUC’s failure to explain its reasoning shows that it exercised its will rather than its judgment. 2005 Adjustment of Charges, 768 N.W.2d at 118.
the willing and able purchasers. The PUC then applied the “wrong” definitions in its analysis of a long-range energy demand forecast. *Meuleners*, 725 N.W.2d at 124. This, alone, requires reversal and remand for the PUC to apply the correct definitions.

Second, even a substantive analysis of the PUC’s evaluation of the statutorily required energy demand forecast reveals a decision that is not supported by the record and is arbitrary or capricious. Because the PUC erroneously focuses on pipeline capacity and shipper information without refinery demand information, I would reverse.

Third, under criterion (C), the PUC erred as a matter of law and acted arbitrarily or capriciously by failing to consider overall “state energy needs,” including demand in Minnesota from refineries and consumers. Further, it substituted its concern about the safety of existing Line 3 for the requisite multifactor analysis, in part by failing to consider $287 billion in societal costs to Minnesota, when it evaluated whether the consequences of granting the certificate of need were more favorable than denying it.

In sum, on this record, the PUC approved a new pipeline that benefits Canadian oil producers but traverses 340 miles of Minnesota land, which among other negative consequences will affect hunting, fishing, and other rights of relators Red Lake Band of Chippewa Indians and White Earth Band of Ojibwe, with no benefit to Minnesota.9 Such a decision cannot stand. Enbridge needs Minnesota for its new pipeline. But Enbridge has not shown that Minnesota needs the pipeline. I would therefore reverse.

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9 The ALJ concluded that “the ‘need’ for this Project is primarily to assist foreign oil producers in transporting their products through (and mostly out of) Minnesota.”