


Staff Briefing Papers

Meeting Date	March 17, 2022	Agenda Item **3
Company	Great River Energy (GRE)	
Docket No.	ET2/RP-22-75 In the Matter of Great River Energy’s 2022-2036 Integrated Resource Plan ET2/RP-17-286 In the Matter of Great River Energy’s 2018-2032 Integrated Resource Plan	
Issue	<ol style="list-style-type: none"> 1. Should the Commission grant Great River Energy’s request to extend the due date for filing its Integrated Resource Plan (IRP) from April 1, 2022 to April 1, 2023? 2. Should the Commission consider an alternative date? 3. If a one-year extension is granted, should the Commission direct GRE to file an interim update? If so, what information should the update include? 	
Staff	Sean Stalpes	sean.stalpes@state.mn.us 651-201-2252

 Relevant Documents	Date
Great River Energy, <i>April 1, 2021 Update</i>	April 1, 2021
Great River Energy, <i>Extension Request</i>	January 21, 2022
Department of Commerce, <i>Comments</i>	February 9, 2022
Clean Up the River Environment, <i>Comments</i>	February 11, 2022
LIUNA Minnesota & North Dakota, <i>Reply Comments</i>	February 18, 2022
Great River Energy, <i>Reply Comments</i>	February 18, 2022

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The attached materials are work papers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless noted otherwise.

I. Statement of the Issues

1. Should the Commission grant Great River Energy's request to extend the due date for filing its Integrated Resource Plan (IRP) from April 1, 2022 to April 1, 2023?
2. Should the Commission consider an alternative date?
3. If a one-year extension is granted, should the Commission direct GRE to file an interim update? If so, what information should the update include?

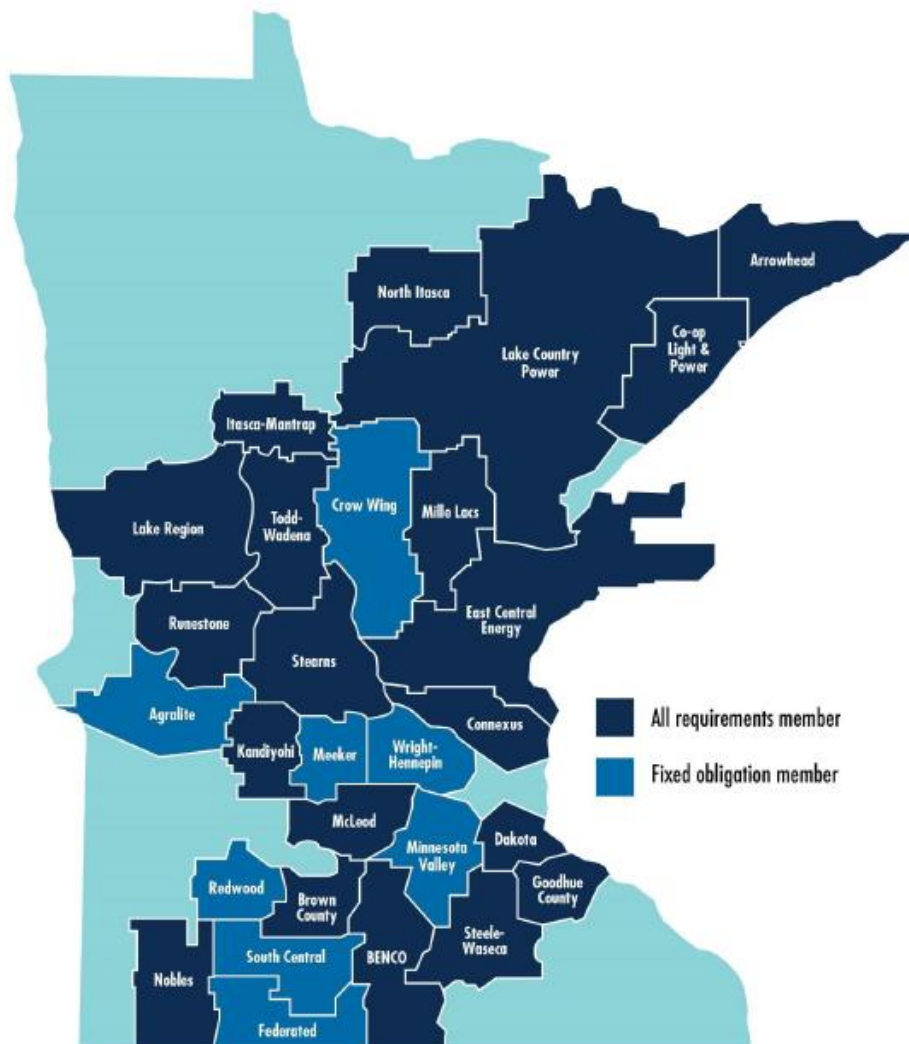
II. Background

A. GRE Background

GRE is a not-for-profit electric generation and transmission (G&T) cooperative serving 28 member electric distribution cooperatives, who are located throughout Minnesota and into northwestern Wisconsin. As of GRE's 2017 IRP, GRE's members served a total of 685,000 end-use consumers; in terms of energy sales, 56 percent were residential sales, 42 percent were commercial and industrial, and 2 percent were seasonal.

GRE provides services to two types of members: All Requirements (AR) members and Fixed Obligation (Fixed) members. The 20 AR members purchase all of their power and energy requirements from GRE, subject to limited exceptions.¹ The eight Fixed members purchase a fixed portion of their power and energy requirements from GRE and all supplemental requirements from an alternate power supplier. The figure below shows GRE's AR members (dark blue) and Fixed members (light blue) in Minnesota.

¹ For instance, the AR members have the option to self-supply up to five percent of their power and energy requirements from renewable resources.



B. GRE 2017 IRP

GRE last filed an IRP on April 28, 2017, which covered the 2018-2032 planning period. GRE proposed a plan that included:

- Striving to meet the 1.5 percent per year Minnesota goal;
- Closing its 187-MW Stanton coal generating plant in 2017;
- Entering into power purchase agreements (PPA) for 300 MW of wind in 2020 and 100 MW of wind in 2021; and
- Procuring an additional 600 MW of wind in the 2029-2032 timeframe.

The Commission accepted GRE's IRP on November 28, 2018 and required that GRE file its next resource plan no later than April 1, 2021.

C. June 26, 2020 IRP Extension Request

On June 26, 2020, GRE requested an extension from April 1, 2021 to April 1, 2022 to file its next IRP. GRE cited the need to conduct analysis pertaining to its announcement to shut down Coal Creek Station. The Commission approved GRE's request but required GRE to submit an interim report by April 1, 2021.

D. April 1, 2021 Interim Report

On April 1, 2021, GRE filed its interim report. GRE discussed its plans to shut down or sell Coal Creek Station by the end of 2022; modify Spiritwood Station to operate primarily on natural gas; and add 900 MW of new wind resources by the end of 2023, including:

- Deuel Harvest Wind: 200 MW, Deuel County, South Dakota, effective 2023;
- Buffalo Ridge Wind: 109 MW, Lincoln County, Minnesota, effective 2023;
- Dodge County Wind: 259 MW, Dodge and Steele counties in Minnesota, effective 2023; and
- Three Waters Wind: 200 MW, Jackson County, Minnesota, effective 2024.

GRE also reported that it plans to add 200 MW of capacity by upgrading existing Minnesota peaking stations and to source another 200 MW of market capacity. The peaking station upgrades enable GRE to extract additional capacity from peaking generation, and the bilateral capacity contracts offer members low-cost market capacity for multi-year terms.

Staff notes that the April 1 report stated that the peaking station upgrades and bilateral agreements were needed to “begin to address the portion of capacity lost due to the sale or retirement of [Coal Creek Station].”² However, this need may have changed due to the nature of the sale of Coal Creek Station and the high-voltage direct-current (HVDC) transmission system (Sale Transaction) to Rainbow Energy Center, LLC and Nexus Line, LLC. Specifically, in an October 8, 2021 filing in Docket No. ET-2/TL-21-434, GRE and Nexus Line, LLC stated that, under a new PPA GRE signed with Rainbow Energy Center, GRE will purchase 1,050 MW of power from Rainbow Energy Center for approximately two years, followed by 300 MW for approximately eight years:

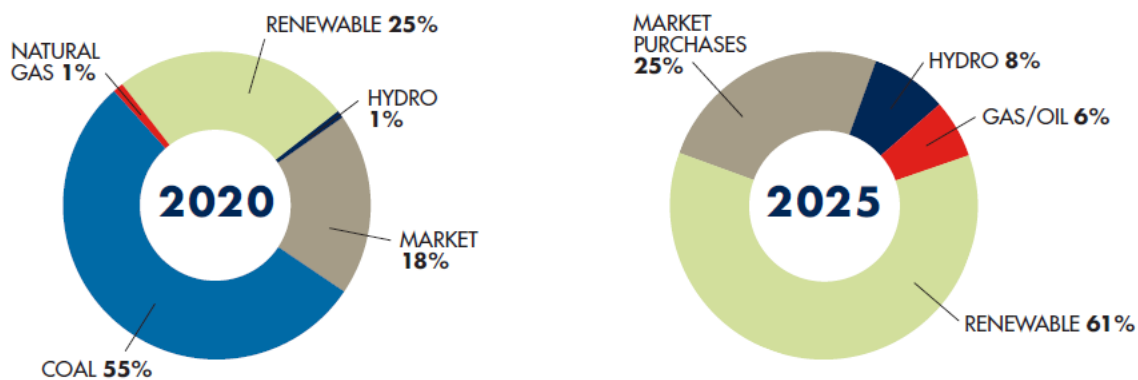
[U]nder the PPA, REC is obligated to provide GRE (a) 1,050 MWs of capacity via MISO Zonal Resource Credits (ZRCs) through May 31, 2023, and (b) 300 MWs of ZRCs from June 1, 2023 through May 31, 2031. GRE expects that, at least in the near term, the ZRCs will come from the accredited capacity of Coal Creek Station. However, REC's obligation to supply ZRCs to GRE is not dependent on Coal Creek Station's accreditation or availability, nor is it tied to the unit contractually.³

² GRE April 1, 2021 Update, p. 2.

³ Docket No. ET-2/TL-21-434, *In the Matter of the Petition to Transfer a Portion of the Route Permit for the HVDC Transmission Line System and Associated Facilities in Minnesota*, Response to Order Requiring Additional Information, October 8, 2021, p. 5.

Finally, the April 1 report described GRE's plan to install a first-of-its-kind, 1 MW long-duration battery demonstration system project – the Cambridge Energy Storage Project – that GRE is developing with Form Energy. Long-duration storage can help maintain grid reliability in the future during extreme conditions, such as a heat wave or polar vortex, and the Cambridge Energy Storage Project will be capable of delivering its rated power continuously for 150 hours, which is far longer than the four-hour usage period available from utility-scale lithium-ion batteries today.

With these developments, GRE projected that its energy supply mix will change significantly from 2020-2025; as shown in the figure below, renewable energy and market purchases will soon supply the majority of GRE's energy:



E. January 21, 2022 Second Extension Request

On January 21, 2022, GRE filed a second extension request, which proposed a new IRP filing date of April 1, 2023. GRE provided two main reasons why another full year is necessary to develop its IRP:

First, GRE stated that additional time is needed to update the IRP to accurately reflect the timing of the closing of the Sale Transaction. Upon the sale of Coal Creek Station, GRE's Fixed members' demand and energy quantities may be reduced in accordance with the processes set forth in GRE's contractual arrangements with those members. Extending the due date after the closing date of the Sale Transaction will allow GRE to use a more accurate load forecast, as it would incorporate the extent and timing of any reduction of the Fixed members' purchases from GRE.

Second, GRE reached an agreement in principle with Apex Clean Energy for GRE's purchase of output from a 400 MW wind project, Discovery Wind, to be developed in McLean County, North Dakota. Discovery Wind is anticipated to be in commercial operation in 2025, and the energy it produces will be delivered to GRE in Minnesota over the HVDC transmission system.

III. Party Positions

The following parties filed comments on GRE's requested extension:

- Department of Commerce (Department);
- Clean Up the River Environment (CURE); and
- LIUNA Minnesota & North Dakota (LIUNA).

The Department and LIUNA support GRE's requested extension, but CURE does not.

A. Department

The Department supports GRE's request for two reasons:

First, the Department echoed GRE's comments that the Sale Transaction triggers the ability of GRE's eight Fixed members to reduce the demand and energy they purchase from GRE. The potential changes in GRE's forecast could be significant.

Second, due to the Department's involvement in several rate cases and other IRPs at this time, the Department would likely have to request one or more extension requests if the extension is not approved.

However, the Department recommends that the Commission require GRE to provide an interim update on issues impacting GRE's future IRP by October 3, 2022. The Department recommended that the report should include, at a minimum, updated information concerning changes in Fixed members' demand and energy purchases from GRE.

B. Clean Up the River Environment

CURE recommends the Commission deny GRE's request. CURE stated that "the fact that GRE is currently considering pending decisions does not exempt it from completing an IRP on schedule with whatever information is currently available and has informed its recent major planning decisions."⁴

Since its last extension request, GRE has made significant resource planning decisions that will drive its customers' electricity costs for the next decade, which includes the sale of Coal Creek Station and the HVDC line to Rainbow Energy. Granting another extension would negatively impact GRE's member-owners because IRPs provide transparency into how planning decisions will impact utility rates. According to CURE, GRE has not made public even the most basic, high-level facts about its contract with Rainbow Energy, including the price member cooperatives can expect to pay for electricity, how much the average residential member-owner can expect to pay per month, or whether member-owners can expect their rates and bills to go up or down.

If the Commission decides to extend the deadline for the IRP a second time, then it should also require GRE to file an interim update that provides information regarding, at minimum, the following critical elements regarding its deal with Rainbow Energy:

- The price (\$/kWh) that GRE will pay for electricity from Rainbow;

⁴ CURE comments, p. 1.

- Any capacity price or demand change (\$/MW);
- Average residential bill estimates;
- Key contract provisions explaining how the cost of carbon capture and sequestration may be passed on to member-owners, and any consumer protections regarding the same;
- GRE's analysis of why this deal is in its member cooperatives' interest and why this deal is better for member-owners than its previous plan to retire Coal Creek; and
- GRE's underlying analysis for all of the above.

Regarding the timing of the requested information, CURE does not believe that GRE requires more time to provide it. This is because CURE's request is for GRE to merely provide the Commission with the analysis GRE already undertook to evaluate whether its recent agreements were in its member cooperatives' and member-owners' interests.

C. LIUNA Minnesota & North Dakota

LIUNA supports GRE's request. LIUNA believes extending GRE's IRP would free up time to focus on other pressing matters, and an IRP filed on April 1, 2023 would contain the most accurate and up-to-date information. LIUNA stated that "an IRP filed on April 1 could contain outdated information, analysis of which would be a poor use of time for Department of Commerce and Commission staff, and for stakeholders such as LIUNA that are already struggling to cover similar proceedings including but not limited to the Minnesota Power and Otter Tail Power IRPs."

D. GRE Reply Comments

In Reply Comments, GRE supports the recommendation from the Department, including the recommended October 2022 interim update.

GRE rejected CURE's assertion that GRE is requesting "perpetual extensions." GRE responded that changes to the forecast as a result of the Sale Transaction are significant enough to warrant an extension until they can be properly reflected in an IRP filing.

GRE also rejected CURE's request for additional data to be submitted in an interim update, arguing the requested information goes beyond the scope of the IRP.

IV. Staff Discussion

Staff does not oppose extending the due date for GRE's next IRP, and in fact, given other utility IRPs, it would be unrealistic to expect that GRE's next IRP could come before the Commission in 2022. However, extensions of time can come at a cost, especially considering that GRE has not filed an IRP since 2017. IRP filings provide value not limited to parties; they provide all interested stakeholders with transparency and an opportunity to understand GRE's plans for the future, as well as the underlying analysis supporting those plans. Thus, while staff agrees with GRE, the Department, and LIUNA that the deadline should be extended, staff does not

believe a full year is required to account for the Sale Transaction or Discovery Wind. Moreover, earlier dates could be considered to recognize the length of time since GRE's last IRP process.

Essentially, there are three questions that may inform how much time is needed:

- How much time is needed to account for the Sale Transaction?
- What role should Discovery Wind play in the timing of the IRP?
- How should the due date for GRE's next IRP account for other utility IRPs, if at all?

A. Sale Transaction and Discovery Wind

According to GRE's website, on February 9, 2022, GRE's member cooperatives approved the updated agreement for the sale of Coal Creek Station and the HVDC system to Rainbow Energy Center, LLC and Nexus Line, LLC, respectively. At the same meeting, GRE's AR members also approved the PPA with Apex for Discovery Wind. Regarding the closing date, GRE's website states, "The sale of Coal Creek Station and the HVDC system is expected to close no earlier than May 1."⁵

The Sale Transaction and Discovery Wind are the two developments that GRE described to justify the IRP extension. To take the latter first, staff believes GRE's plans for Discovery Wind should have no influence on the filing date for GRE's next IRP. An agreement in principle was already in place prior to GRE's January 21, 2022 extension request, and there appears to be approval from GRE's AR members. To the extent there is remaining uncertainty, GRE can address this through a scenario analysis.

The Sale Transaction was approved by GRE's member cooperatives, and the Commission approved a partial transfer of the Construction Permit from GRE to Nexus Line, LLC; however, given the magnitude of the Sale Transaction on GRE's IRP, staff believes it is reasonable to extend the IRP filing date until after the closing date.

B. Alignment with Other IRPs

GRE's last IRP was filed on April 28, 2017 – roughly five years ago – and the Commission accepted GRE's 2017 IRP on November 28, 2018 – 19 months after the initial filing date. As with other utilities filing IRPs, incorporating the most accurate, up-to-date information possible while recognizing the biennial filing dates envisioned by the Commission's IRP rules is always a balancing act. Five years in-between IRP filings, however, raises issues such as a lack of transparency and participation in GRE's planning processes.

Indeed, there are considerations regarding the ability for parties to evaluate the IRP, as the Department's comments stated. The table below shows IRP filing dates and, where applicable, comment deadlines for Minnesota Power, Otter Tail Power Company, GRE, and Xcel; the IRPs are presented in the order in which they have been, or will be, filed.

⁵ Accessed online at <https://greatriverenergy.com/great-river-energy-members-reaffirm-approval-of-sale-of-coal-creek-station-hvdc-transmission-system-approve-400-mw-discovery-wind-project/>

Utility	IRP Filing Date	Initial Comments	Reply Comments
Minnesota Power	February 1, 2021	April 29, 2022	June 29, 2022
Otter Tail Power	September 1, 2021	June 13, 2022	August 15, 2022
Great River Energy	April 1, 2022	N/A	N/A
Xcel Energy	February 1, 2024	N/A	N/A

Note that the Initial Comments for Minnesota Power's IRP now comes after the current deadline for GRE's IRP,⁶ with Otter Tail's IRP comments due two months later.⁷ Thus, when taking into account other utilities' IRP dockets, staff agrees with the Department that GRE's current April 1, 2022 IRP filing will lead to inevitable delays. With this in mind, staff believes that given recent changes to GRE's power supply portfolio and load forecast, it is reasonable to allow GRE additional time to incorporate these changes into its capacity expansion modeling.

However, staff does not agree that a full year is necessarily the best starting point. For instance, if a one-year extension is granted, this leaves only about ten months before Xcel's next IRP. GRE's last IRP took 19 months to complete, and staff prefers to have GRE's IRP completed by Xcel's next IRP filing. In addition, several IRP-adjacent, resource acquisition dockets could begin by the end of 2022 or early-2023; for example, Xcel's implementation of its recently-approved IRP.

Thus, as an alternative date, staff suggests the Commission consider a December 1, 2022 filing, which would equate to an 8-month extension to GRE's IRP, which allows 15 months before Xcel's next IRP. Since GRE's Sale Transaction and Discovery Wind do not appear to require a full year to incorporate, staff believes a shorter extension than GRE requests reasonably balances incorporating recent changes without needlessly extending IRP an deadline far into the future.

C. Additional Information

When the Commission grants IRP extensions, it is common for the Commission to request additional information to be part of future filings. For example, when the Commission approved Minnesota Power's request for an extension, the Commission required, among other things, an interim report that discussed stakeholder engagement done to date, assumptions used in the modeling, and utilizing economic dispatch at each Boswell unit. When the Commission addressed the completeness of Xcel's IRP, the Commission requested, among other things, analysis of different technologies and additional scenarios to be examined as part of a supplemental filing. While staff did not identify any areas that demand further exploration, the Commission could request GRE to explore certain areas of interest in its IRP filing.

⁶ On March 3, 2022, the Commission approved the Department's Seventh Request for Extension of Time to File Comments.

⁷ On March 7, 2022, the Commission approved the CEOs' Request for Extension of Time to File Comments.

V. Decision Options

1. Approve GRE's request for an extension to the due date for filing its IRP from April 1, 2022 to April 1, 2023.

AND

- a. Require GRE file an interim update on October 3, 2022, conditioned upon the following: GRE provide an interim update on issues impacting GRE's future IRP by Monday, October 3, 2022. At a minimum, the interim update should provide updated information concerning changes in Fixed Members' demand and energy purchases from GRE. (*Department*)

AND

- b. Direct GRE provide the following critical elements in the Interim Update regarding its deal with Rainbow Energy:
 - i. The price (\$/kWh) that GRE will pay for electricity from Rainbow
 - ii. Any capacity price or demand change (\$/MW)
 - iii. Average residential bill estimates
 - iv. Key contract provisions explaining how the cost of carbon capture and sequestration may be passed on to member-owners, and any consumer protections regarding the same
 - v. GRE's analysis of why this deal is in its member cooperatives' interest and why this deal is better for member-owners than its previous plan to retire Coal Creek
 - vi. GRE's underlying analysis for all of the above. (*CURE*)

OR

2. Extend the due date for GRE's next IRP to December 1, 2022. (*Staff variant of GRE's request.*)

AND

3. Include all information recommended by CURE in Decision Option 1.b. (*Staff note: With an earlier filing date, there would be no need for an interim update as recommended by the Department.*)

AND/OR

4. Direct GRE to file additional information in an interim update and/or its next IRP on topics of interest to the Commission. (*Staff option*)
5. Deny GRE's request. (*CURE*)