Minnesota Public Utilities Commission

Staff Briefing Papers

Meeting Date: **July 17, 2013 ....** **** Agenda Item # _5_**

Company: Great River Energy

Docket No. ET2/RP-12-1114
In the Matter of Great River Energy's 2012 Integrated Resource Plan

Issue: 1) Should the Commission accept GRE's resource plan?
2) Should the Commission take any action in response to GRE's May 20, 2013 Notice of Changed Circumstances regarding Genoa 3?

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Relevant Documents

Great River Energy, *Initial Filing (Public and Trade Secret)* .... November 1, 2012
Department of Commerce, *Comments* .... March 18, 2012
Joint Intervenors, *Comments* .... March 18, 2013
Al-Corn Clean Fuel, *Petition to Intervene and Initial Comments* .... March 19, 2013
Environmental Intervenors, *Reply Comments (Public and Trade Secret)* ... May 20, 2013
Al-Corn Clean Fuel, *Reply Comments* .... May 20, 2013
Green Plains Otter Tail, LLC, *Intervention Petition*.......................................May 20, 2013
Great River Energy, *Reply Comments* .... May 20, 2013
Great River Energy, *Reply Comments--Supplemental* .... June 7, 2013
Department of Commerce, *Reply Comments--Supplemental* .... June 7, 2013
Joint Intervenors, *Reply Comments--Supplemental* .... June 7, 2013
Great River Energy, *Supplemental Filing* .... June 24, 2013

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Issue

1) Should the Commission accept GRE's resource plan?

2) Should the Commission take any action in response to GRE's May 20, 2013 Notice of Changed Circumstances regarding Genoa 3?

Background

On November 1, 2012, Great River Energy (GRE) filed its Integrated Resource Plan (IRP). Initial comments were filed on March 18, 2013 by parties, including Al-Corn Clean Fuel (Al-Corn). On April 12, 17, and 25, Al-Corn issued a series of Information Requests (IRs) to GRE. GRE objected to several of the IRs, Al-Corn requested an extension of time to file reply comments due to the objection, and the Commission denied Al-Corn's extension request in an Order dated May 28, 2013.

GRE serves 28 member distribution cooperatives. The parties in their comments refer to these members and generally divide them into two categories: All-Requirements (AR) customers and Fixed Obligation (FO) customers. GRE must provide all the power needs for its AR customers so the growth for those members is relevant to the resource plan. For GRE's FO members, GRE's obligation to provide power does not change (that is, its FO members get their supplemental power requirements elsewhere, generally from Basin).

Initial Filing

GRE's initial resource plan filing was made on November 1, 2012. No party alleged that it was incomplete; on December 3, 2012, the Department filed comments recommending that the plan was significantly complete. Staff has not included a lengthy summary of the initial filing since it is discussed in detail in party comments.

Initial Comments

On March 18, 2013, the Department of Commerce, Environmental Intervenors, and Al-Corn filed initial comments.

Department

The Department observed that GRE's planning process involved seven steps:

> 1) Assessing of the total demand forecasts of its AR members;
> 2) Adjusting the load forecast to account for the load of FO members and transmission losses;
> 3) Assessing the load and capability chart (L&C);
> 4) Developing a reference case model that accounts for regulatory and legislative

requirements;
5) Modeling various scenarios to identify potential resource needs;
6) Selecting the preferred plan; and
7) Evaluating impact of key sensitivities on the preferred plan.

GRE has few resource needs over the planning period:

Department Table 1:
GRE's Capacity surplus/(deficit)

Year	MW
2012	661
2013	491
2014	448
2015	513
2016	335
2017	298
2018	360
2019	400
2020	362
2021	323
2022	284
2023	245
2024	206
2025	166
2026	125

As shown above, it has no capacity needs for 15 years, but energy needs must be determined through capacity expansion modeling. GRE's preferred plan is

- Continued conservation and energy efficiency programs;
- Continued use of existing supply-side resources, except where contracts expire;
- Interaction with the wholesale market for cost-effective energy purchases and sales;
- Addition of 600 MW of wind in 2024 to 2026 to meet the RES; and
- No supply-side resources beyond those needed for RES compliance.

The Department reviewed six aspects of the plan (planning method, energy and demand forecast, demand-side resources, resource needs, RES compliance, and environmental issues). The Department concluded that GRE's overall planning approach is reasonable.

The Department reviewed GRE's forecasting. It was unable to replicate the forecasted input variable so was unable to conclude that GRE's forecast was reasonable. GRE projects an average 1.29 percent compound annual growth rate to escalate total energy requirements over the planning period of 2013-2027. The Department's Figure 1 on page 5 of its initial comments lists GRE system requirements in MWh, which begin at 12,878,175 in 2013 and increase to 15,417,454 in 2027. GRE's peak forecast projects an average 1.24 percent increase over the planning period, for 2,333 MW in 2013 to 2,771 MW in 2027. At page 8 of its comments, the Department observed that its forecast analysis resulted in a larger number of residential customers than GRE's forecast, as illustrated on Figure 3 at page 8 of the DOC comments. The Department reported similar results for its forecast of peak energy requirements in Figure 9 at page 4 of the DOC comments. (*Staff note*: GRE explains the difference between the GRE forecast and the DOC forecast in supplemental filing dated June 24, 2013 and this difference now appears to be largely resolved.) The Department asked for two items in reply comments as to the software used to estimate the forecasted values for GRE's all-requirements (AR) residential customers and whether Excel was used to estimate AR residential customers instead of a more sophisticated software package.

The Department also reviewed GRE's demand side management. At page 11 of the Department's comments the Department noted that 48% of its conservation is from residential customers, 3% from low income, and 49% from Commercial and Industrial customers. GRE's CIP was approved by the Department. The resource plan did not include an explicit plan for how much energy and demand savings it would achieve over the next 5 years nor the 15 year period of the resource plan. However, GRE included the results of an EPRI study.

The Department also included Table 4 at page 13 of its comments, and noted that GRE's actual savings from 2008-2011 were several times higher than the savings anticipated by the EPRI study. (According to the Department's comments at page 13, the EPRI study estimated the realistic achievable energy as 31.7 million kWh of annual energy savings between 2015-2025.)

Table 4: GRE's Member Cooperatives Energy Savings Excluding Electric Utility Infrastructure Projects, 2008-2011

	Incremental Savings (kWh/yr)	Total Spending	Percent of Retail Sales
2008	121,543,390	$23,009,820	1.00%
2009	102,023,215	$25,388,861	0.87%
2010	171,634,172	$26,349,773	1.46%
2011	128,395,472	$23,258,263	1.04%
TOTAL	523,596,249	$98,006,717	
AVG	130,899,062	$24,501,679	1.09%

The Department's experience with conservation potential studies is that utilities often exceed the estimates in the studies. The Department recommended that GRE continue to strive to meet the 1.5 percent goal in a cost effective manner. The Department also recommended that GRE evaluate measures included in the EPRI study that passed the total resource cost (TRC) test but are not currently in GRE's portfolio.

GRE's modeling was also reviewed by the Department. Since GRE did not need resources, the Department did not create its own model in Strategist; instead, the Department reviewed inputs, scenarios, and outputs. Modeling inputs are at pages 58-65 of GRE's IRP. (*Staff note*: at page 58 of the IRP, GRE states that one base assumption GRE used in its model <u>is that all existing resources remain in service over the forecast period</u>, which will be relevant to later party comments.) At page 57 of the IRP, GRE stated that the modeling reflected externality values. Since the preferred plan only included renewable resources, the carbon values did not change anything. The Department concluded that the modeling inputs were reasonable.

The Department also reviewed the scenarios modeled. GRE included 12 scenarios where GRE varied the following assumptions:

• externality costs;
• market power prices;
• fuel costs;
• expected load;
• access to the MISO market;
• compliance with Minnesota's renewable energy standards.

GRE included coal cost sensitivity scenarios in this resource plan as requested by the Department.

The Department reviewed modeling outputs. Pages 65-72 of the IRP list the plans selected by SOM for each scenario modeled. In 9 scenarios, the only projected resource need is wind to meet the RES. Figure 4-8 on page 67 of the IRP (shown below) is the preferred plan which includes wind additions of 100 MW in 2024, 300 MW in 2025, and 200 MW in 2026.[1]

Table 4-8 Capacity Expansion Plan B

Year	New Wind (Nameplate MW)	New Peaking (MW)	New Intermediate (MW)	New Baseload (MW)
2013	0	0	0	0
2014	0	0	0	0
2015	0	0	0	0
2016	0	0	0	0
2017	0	0	0	0
2018	0	0	0	0
2019	0	0	0	0
2020	0	0	0	0
2021	0	0	0	0

[1] At page 74 of GRE's initial filing, GRE also states that under this plan, 5 percent of its energy will be from market purchases and 25 percent of its energy will be from renewable resources.

2022	0	0	0	0
2023	0	0	0	0
2024	100	0	0	0
2025	300	0	0	0
2026	200	0	0	0
2027	0	0	0	0

The Department also discussed GRE's expected compliance with the RES. While its initial comments raised some questions on RES compliance, in its supplemental comments dated June 7, 2013, the Department stated that it agreed GRE would not need additional resources until sometime closer to 2024, providing sufficient time to identify and obtain resources.

The Department recommended the following:

> RECOMMENDATIONS FOR ALL CERTIFICATE OF NEED PROCEEDINGS AND FUTURE RESOURCE PLANS
>
> GRE should continue to strive to meet the State's 1.5 percent conservation goal in a cost-effective manner. If GRE projects acquiring new, nonrenewable resources, the Cooperative should provide a plan or plans compliant with Minnesota Statutes §216B.2422, subd. 2.
>
> The Commission should advise GRE to consider making changes to its forecasting process that would yield a forecast that does not require adjustment or, if such changes cannot be made, advise the Cooperative to track the ex post adjustment process in future forecasts.
>
> RECOMMENDATIONS FOR FUTURE RESOURCE PLANS
>
> The Department continues to recommend that GRE evaluate the measures identified in the Electric Power Research Institute (EPRI) study as passing the total resource cost (TRC) test that the Cooperative does not currently include in its Conservation Improvement Program (CIP) portfolio.
> The Department recommends that the Commission advise GRE to continue to track RES compliance, environmental regulations, and environmental compliance in future IRPs.

The Department recommended that Commission accept GRE's resource plan.

Environmental Intervenors

The Environmental Intervenors filed 37 pages of comments on:

- GRE's use of residential development data that may be outdated, affecting its forecasts;
- The impact of GRE's substantial rate increases on its forecasts;
- Whether GRE failed to quantify the impacts of CIP on its forecasts;
- Whether GRE should consider alternative plans such as the retirement of the Stanton Station;
- Whether GRE failed to calculate externality values for its modeled cases, including its preferred plan and base case.

The EIs provided data, some of it trade secret, at pages 2-3 of its comments on GRE's rate increases. They stated that the primary causes of these past and near-term rate increases are higher expenses resulting from GRE's surplus generating capacity, reduced sales, and the increase in the price GRE pays for coal. GRE undertook a number of capacity additions before the recession, including Cambridge 2 (181 MW natural gas peaker), Elk River Peaker (204 MW natural gas peaker), and Spiritwood (99 MW combined baseload/peaker combined heat and power facility, completed but not in commercial operation). The EIs provide information on ongoing expenses related to Spiritwood, such as processed coal purchase obligations, a unit train lease, and interest on bonds used to finance the unit. The EIs estimate the total pre-operational cost of Spiritwood to be in excess of $500 million.

The EIs estimate the increased price of coal passed onto customers as follows[2]:

Year	PCA Charge (millions $)
2006	$17.0
2007	$0.7
2008	$48.9
2009	$2.0
2010	$11.5
2011	$17.3

The EIs also state that GRE's resource plan suffers from a number of critical flaws, including that GRE's forecast demand is overly optimistic, the full effect of statutorily required conservation measures, demand destruction resulting from the effect of rate increases, and structural changes in electricity demand.

GRE, the EIs note, have two types of members: Fixed Members and All-Requirements Members. Eight of GRE's 28 members opted to fix the amount of electricity they require from GRE beginning on November 1, 2006. In 2011, Fixed Member demand accounted for 29% of total system summer peak demand (517 MW of 1,778 MW). Since sales to these Fixed Members will not grow during the forecast period, load growth can come only from the GRE members that

[2] EI comments, page 8.

have entered into All Requirements (AR) contracts with GRE. Further, as 80 percent of the ultimate end-use accounts served indirectly by GRE are residential accounts, the EIs believe that the dramatic decline in residential customer accounts calls into question GRE's forecast. U.S. Census Bureau data shows the number of housing units permitted declining from 2001-2011 (see pages 15-16 of EI comments).

GRE's rate increases and the possibility of structural changes in electrical demand should also be taken into account, the EIs argue. Given public statements about future rate increases and GRE's ongoing Spiritwood costs, retail rates could climb to over 65% by 2015. Those sustained higher prices undoubtedly impact electricity demand. There is also a trend toward lower to flat rates of load growth which GRE has experienced and are being experienced by other utilities and consulting firms. For example, as early as November 2008, Duke Energy's CEO and Chairman concluded that customers' reduced consumption reflected more than the recession. The EIs also include similar quotes from AEP and Xcel executives as well as Wood Mackenzie at pages 21-22 of their initial comments.

Beginning at page 23 of its comments, the EIs also raised concerns that GRE was not correctly calculating environmental externality values. Consistent with the Commission's decision in the most recent OTP resource plan order, the EIs stated, GRE should have included carbon dioxide and the environmental externality values in its preferred plan. Instead, GRE created three separate scenarios for low, middle, and high externalities.

The EIs also raised concern with the EPRI study. That study concludes it is realistic for GRE to achieve levels of energy efficiency that are lower than the levels established by state law. The EPRI study also underestimates energy efficiency by using historical average achievements nationwide and not considering new codes in place.

At page 27, the EIs suggest that GRE consider retirement of Stanton Station to protect ratepayers. The EIs provide trade secret information about revenue requirements and how much retirement of the unit would save customers (see page 28 of the EIs' trade secret comments).

Al-Corn

Al-Corn filed a petition to intervene and 2 pages of initial comments on its concern that GRE is not really operating on a non-for-profit basis, incurring significant, questionable costs and pursuing wasteful projects.

Reply Comments

The Environmental Intervenors, Al-Corn, and Great River Energy filed reply comments on May 20, 2013.

GRE

GRE recapped the status of the resource plan to date. The Department determined that the IRP was complete. GRE has responded to pertinent information requests from the Department, Environmental Intervenors and Al-Corn in a timely manner. GRE's preferred plan includes the following:

- Continued conservation and energy efficiency programs;
- Continued use of existing supply-side resources, except where contracts expire;
- Interaction with the market for cost-effective energy purchases and sales;
- Addition of 600 MW of wind beginning in 2024 to meet the RES; and
- No additional generation resources until after the forecast period.[3]

GRE first responded to the Department. The Department expressed concern over 1) its inability to replicate GRE's load forecasting results and 2) the determination of the year in which GRE would require future renewable resources to meet the RES. On April 12, 2013, GRE met with the Department to discuss both concerns and believes those concerns have been addressed. (*Staff note*: please see summary of supplemental comments filed June 7, 2013, where the Department confirms that it is comfortable concluding no resources are needed during the planning period after receiving additional information from GRE.) As to the first concern, GRE has agreed to maintain an audit trail of "ex post" adjustments that its members made to the initial forecast provided by GRE. As to the second concern, GRE explained at its meeting what accounted for the initial difference between the Department's and GRE's assessment of resources needed for the RES. The 3 reasons were that 1) GRE subtracts transmission and distribution losses from the amount of energy generated to estimate retail sales; 2) GRE subtracts member retail sales supplied by WAPA; and 3) the Fixed Obligation members are required to provide GRE with RECs for a portion of GRE's sales to those members.

GRE also responded to the Environmental Intervenors. The EIs had 4 concerns: 1) the IRP lacks support for the rates of growth predicted in the forecast; 2) the IRP lacks analysis supporting DSM programs; 3) lacks analysis on cost reduction measures such as the retirement of Stanton Station; and 4) fails to calculate externality values for emissions from the plan's modeled cases.

In general, GRE noted that it did not agree with the EIs assertion that GRE's forecast is too optimistic. It explains in detail at pages 5-8 that GRE's 2012 forecast is nearly flat compared to forecasts produced 4 years ago, that GRE takes conservation into account for its forecast, that it would include price elasticity into its next forecast, and that overall changes in how the nation will consume power is a premature conclusion. Finally, GRE notes that even if the Commission were to accept the EIs premise on the forecast, it would be a largely academic exercise since GRE does not plan any resources until well into the future. As to the retirement of Stanton, the EIs did not take into account the MISO revenues GRE receives.

[3] See page 2, GRE reply comments.

As to the EIs concern over GRE's use of externality values, GRE stated that it did apply the Commission-approved values to different scenarios, but since no new resources were needed, the values did not make a difference. GRE points out that the Department found GRE's use of externalities reasonable at page 18 of the Department's comments.

GRE also stated that it continues to optimize its portfolio and has offered a capacity sale proposal in Xcel's competitive resource acquisition docket.

The final piece of GRE's reply comments was a Notice of Changed Circumstances (NoCC). GRE has a PPA with Dairyland Power Cooperative for 50% of the capacity and energy from Genoa 3, a coal unit located in Wisconsin. GRE believes the unit is uneconomic and should be retired; Dairyland disagrees. The matter is now pending before an arbitrator.

Environmental Intervenors

The EIs noted that although the Commission does not have the authority to direct cooperatives to adopt a particular resource plan, the Commission is able to require cooperatives to plan rigorously and thoroughly in full compliance with the planning standards found in Chapter 7843, which include both content requirements and review factors.

In particular, the EIs focused on Minn. Rule part 7843.0500, subpart 3 states that the Commission shall consider the following factors in resource plans' ability to:

> A. maintain or improve the adequacy and reliability of utility service;
>
> B. keep the customers' bills and the utility's rates as low as practicable, given regulatory and other constraints;
>
> C. minimize adverse socioeconomic effects and adverse effects upon the environment;
>
> D. enhance the utility's ability to respond to changes in the financial, social, and technological factors affecting its operations; and
>
> E. limit the risk of adverse effects on the utility and its customers from financial, social, and technological factors that the utility cannot control.

The EIs criticized the Department's omission of a review of the above-listed subparts and instead used the term "reasonable." For example, the EIs stated that a plan may be reasonable (i.e., not irrational) but could still fail to keep GRE's rates "as low as practicable." A reasonableness standard is insufficient, in the view of the EIs.[4]

The EIs also stated that the Department used an inappropriate statistical analysis. GRE's forecast is based ultimately upon data from Woods and Poole, an economic forecasting company. Given that the forecast is inaccurate and overly optimistic, the Department should have discussed the merits of that data set. In addition, at pages 6-10, the EIs also criticized the DOC for not analyzing GRE's housing data, other forecast assumptions, and failing to consider capacity reductions.

The EIs suggested that greater weight be given to more recent data, because it is unreasonable to assume that the variables that drove energy demand from 1970 to 1990 continue to be the same today. Using graphs on pages 5 and 6 of its reply comments, the EIs conclude that GRE is experiencing a fundamental shift in energy demand that is unprecedented in its history. At page 6 of their reply comments, the EIs state the Department failed to analyze GRE's housing data and other forecast assumptions, such as federal data which indicates the recovery in the housing market continues to be slow.

Al-Corn Clean Fuel and Green Plains Otter Tail, LLC

Al-Corn is an ethanol production cooperative and Green Plains, who filed a petition to intervene on the date of reply comments, is a marketer and distributor of ethanol. Staff will refer to them collectively as Al-Corn. Al-Corn stated its overall concerns as follows:

> GRE has failed, and if its Resource Plan is approved, will continue to fail, to provide its customers with electric service "at least cost" as it is required. Al-Corn and Green Plains intervened in this proceeding to make sure that history does not repeat itself and that GRE, a purported non-profit cooperative, does not continue as the electric service provider with the highest rates in the entire state of Minnesota.[5]

Al-Corn acknowledges that the Commission's authority over GRE is limited but alleges that the Commission "has the express authority from the Minnesota Legislature to review and approve, or disapprove, a Resource Plan." Al-Corn states that the Commission must closely scrutinize GRE's plan, especially its forecast, make findings, and draw conclusions.

Al-Corn also points to Commission Rule 7843.0500, subp. 3b, which requires the resource plan to be evaluated on its ability to keep the customers' bills and the utility's rates as low as practicable, given regulatory and other constraints. As a result of this language, Al-Corn argues, the Commission must consider whether GRE's resource plan establishes that it will charge its customers the lowest practicable rates. GRE's resource plan fails to meet this burden.

[4] EI reply comments, page 2.
[5] Ethanol Intervenor comments, page 3.

Specifically, Al-Corn observes that GRE's rates increased 42% from 2006 through 2013, GRE expects to increase rates by 4% per year in 2014 and 2015, and despite these increases, GRE failed to address how its resource planning is impacted. Simply put, Al-Corn states, GRE is required (but has failed) to consider the impact and explain the justification of its rate increases in its Resource Plan. Examples of GRE's previous poor planning and decisions that have resulted in avoidable rate increases for its customers include the Cambridge 2 Station, Elk River Peaker, and the completed but vacant $425 million Spiritwood Station. The cooperative previously presented and attempted to "justify" construction of these facilities on untested assumptions and overly optimistic sales forecasts. The failure of these facilities to earn adequate revenue means that ratepayers have been unfairly left footing the avoidable bill. Respectfully, Al-Corn submits that the resource plan fails to adequately explain how GRE intends to control its members' rates and ensure that costs and rates are as low as practicable.

In addition, Al-Corn recommends that GRE's resource plan should be rejected as its forecasted demand is overstated (Al-Corn believes it has also been overstated in the past). The forecast fails to take into account the slow growth in the Minnesota housing market, the effect of mandated conservation measures, the adverse effect GRE's past and future rate increases will have, and structural changes in electricity demand. The end result of this overstated demand will undoubtedly be even higher rates for Al-Corn and Green Plains as well as all of GRE's customers. Al-Corn provides an example of these assumptions as to residential demand at pages 6-7 of their comments. As suggested by the Environmental Intervenors at pages 27-29 of their initial comments, one possibility that GRE failed to explore is retirement of Stanton Station. GRE's resource plan fails to even address let alone recommend this possibility; as a result, the plan should be rejected.

Supplemental Comments

In response to a Commission Notice seeking comments on the issues raised in reply comments, the EIs, Department, and GRE filed comments on June 7, 2013.

Environmental Intervenors

The Environmental Intervenors filed supplemental comments on three topics: whether Genoa 3 is at the end of its useful life, that the forecasting methodology is unsubstantiated by evidence in the record, and the need for extra discovery and comment.

The EIs expressed concern that GRE filed its Genoa 3 demand for arbitration on April 1 but did not disclose it to the Commission until its May 20 comments. GRE's proposed course of action, to update the Commission once there is an outcome in the arbitration, should be rejected. Retirement of the unit should be included in GRE's public planning regardless of the arbitration. The resource plan is deficient as a matter of law because it fails to plan for the retirement of Genoa 3. Retirement of Genoa 3 would affect other resources. The EIs also stated that GRE's update which it characterized as a Notice of Changed Circumstances does not meet the requirements of the NoCC rule (as listed in more detail at pages 6-7 of its supplemental comments). The EI's due process rights require more time for discovery and comment.

The EIs also expressed additional concern with the GRE forecast. GRE has agreed to provide an audit trail of ex post adjustments for future forecasts, but lack of this information in this docket is inappropriate. The Commission should order GRE to provide information related to the alteration of the residential customer forecast by members, and information substantiating the Woods and Poole forecast. The EIs disagree that GRE's long term growth rate of 1.7% is "virtually flat." GRE's forecasts always err significantly on the high side. The EIs also stated that GRE did not use environmental externalities in its preferred plan, and at page 21 stated three reasons why they should (to allow comparison to alternative plans, to review power purchase changes, and to compare changes over time).

GRE

GRE filed reply comments in response to the comments of the EIs and Al-Corn. First, GRE noted that resource plans are not resource-specific, citing to Minn. Rule part 7843.0400, subpart 2:

> The utility is only required to identify a resource option generically, unless a commitment to a specific resource exists at the time of the filing. The utility shall also discuss plans to reduce existing resources through sales, leases, deratings, or retirements.

GRE also indicated its continued disagreement with the EIs over the forecast and its disagreement with Al-Corn's concerns over its forecast, clarifying that it did not rely solely on Woods and Poole data to develop its forecast and did take the economic downturn in account in its forecast.[6]

Department of Commerce

The Department also filed supplemental comments. The Department stated it originally couldn't replicate the sales forecast but now has successfully done so. The Department states that it can verify the forecast up to the point at which member cooperatives made their ex post adjusments. The Department recommends that the Commission advise GRE to revise its forecasting process so ex post adjustments are not needed. The Department also stated that it was unable to provide a definitive answer on the reasonableness of the forecast since GRE did not document the ex post adjustment process but concludes no resources are needed during the planning period. The Department also continued to recommend that GRE meet the 1.5% conservation requirement,

[6] See pages 2-5 of GRE's supplemental comments for additional detail.

that it track its compliance with the RES, and that it track environmental regulations compliance in future IRPs.

The Department included the overall recommendation to accept the resource plan.

Supplemental Information

During the week of June 17, staff contacted GRE to file the supplemental information GRE and the Department referenced in their supplemental comments. GRE filed it on June 24.

The supplemental information includes information about the software used to estimate the forecasted values for AR residential customers (Microsoft Excel), why a more sophisticated software package was not used (GRE needed software that its AR members had access to and knowledge of), and why a different software package was not needed (when comparing forecast projections, there was no difference between Excel and other software packages such as Metrix ND). GRE also included an explanation related to replicating the residential consumer forecast.

GRE also explained why it uses ex post adjustments. GRE explained that the ex post adjustments are an iterative process between GRE and its twenty AR members; GRE's experience is that managers of distribution cooperatives have an excellent feel for consumer growth. Ex post adjustments can include: shifting the y intercept of the residential consumer forecast; adjusting for short term economic cycles; reducing or increasing long and short-term growth rates. Figure 3 at page 9 of its supplemental filing compares its historic residential accounts to forecasted residential accounts with and without ex post adjustments.

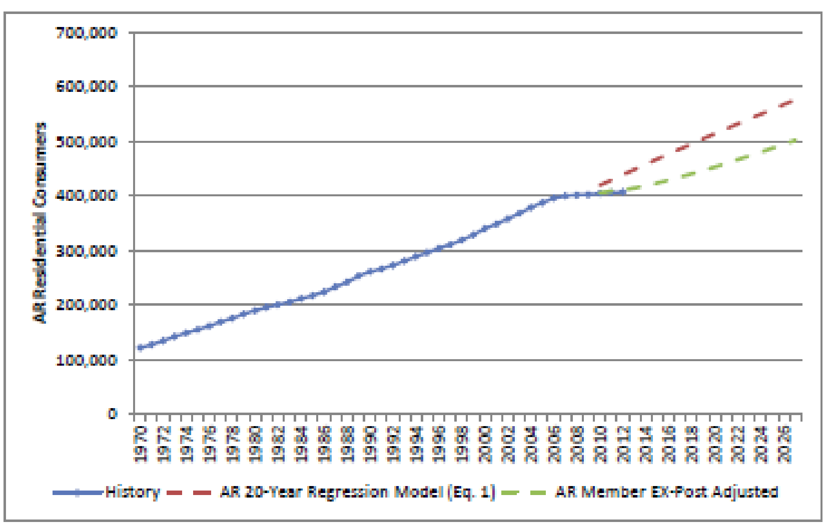

Figure 3. Comparison of GRE's historic residential accounts verse forecast residential accounts with and without Ex Post adjustments.

Staff Comment

The parties have presented a number of options for the Commission to consider:

1) The Commission could determine that the information and analysis provided by GRE is reasonable, and accept the plan;
2) The Commission could reject the plan due to defects in the forecast and modeling;
3) The Commission could determine that more information and analysis is necessary, particularly on the possible retirement of Stanton Station and on the ongoing Genoa 3 arbitration.

Arguments in support of accepting the plan

There could be valid reasons in support of accepting the plan and moving on. The Commission's role on non-rate-regulated utilities' IRPs is advisory. The forecast, while not perfect, is not required to be perfect and relies on both Woods and Poole data and a review by member coops (ex post adjustments) which actually adjusted the forecast downward. In addition, while the EIs and Al-Corn look to the last few years to argue that GRE's past forecasts have been inaccurate, many utilities did not expect the economic downturn to be as severe as it was.[7] Even if the Commission were to conclude that GRE's forecasting process is defective, GRE does not plan to add any resources so the debate, as GRE points out, is an academic one. In addition, the newly filed information on Genoa 3 is interesting but the dispute is in arbitration, the generating unit is not owned by GRE, and GRE is long on capacity.[8] Staff notes that the EIs and GRE refer to GRE's next IRP as being due in 2015; staff believes that it is clear under the Commission's rules GRE's next IRP would be due November 1, 2014 unless a variance is granted to the Commission's resource plan rules.[9] Since no resources will be acquired for several years, it may not make sense to prolong this docket when the parties will be able to take a fresh look at a November 2014 plan. One option, given the EIs' and Al-Corn's concern over the forecast, is to accept the plan but make no finding on the forecast. The Commission has done this in past IRP Orders to memorialize the fact that it is not endorsing a particular utility's methodology on forecasting.[10] The Commission could also "neither accept nor reject" the plan, which is what it did with GRE's 2005 resource plan. This action closed the docket and moved on with recommendations for additional information and analysis in the next plan.

[7] In granting OTP cost recovery for development costs related to Big Stone II, the Commission noted that "[N]o one challenged the prudence and reasonableness of the Company's withdrawal from the project in the face of unforeseeable and substantial changes in…general economic conditions, among other factors." Docket E017/GR-10-239, FINDINGS OF FACT, CONCLUSIONS, AND ORDER, Issued April 25, 2011.

[8] There is also an argument that even if the issue should be explored, it would more properly be reviewed in Dairyland's resource report since Dairyland owns the unit.

[9] Minn. Rules part 7843.0300, subp. 2 requires a plan to be filed every two years. The pending plan was filed on November 1, 2012.

[10] ORDER ACCEPTING RESOURCE PLAN AND REQUIRING COMPLIANCE FILINGS, Docket No. E015/RP-09-1088, Issued May 6, 2011, Ordering Paragraph 1, page 8.

Another decision the Commission could make is to send a signal to move some issues to the completeness phase of an IRP proceeding. Both the EIs and Al-Corn criticize the plan for not analyzing the retirement of units such as Stanton Station. However, GRE's initial filing was very clear:

> *The base assumptions GRE used in our model are listed below:*
>
> - *All existing resources remain in service over the forecast period*.[11]

If the Commission so chose, it could find that if any party had a concern over GRE not analyzing the retirement of existing units, they should have raised the concern in completeness comments since GRE was clear in its original filing. There is somewhat of a gray area in that some issues could be considered either completeness issues or issues suitable for initial comments on the merits. In this case, however, the EIs and Al-Corn recommend that the Commission reject the plan—a position that the resource plan is so defective that it cannot be resolved by modification or supplemental information. Staff does not mean to suggest that comments to reject a plan should be raised only in completeness comments. Instead, the fact that rejection of the plan is made in part on a modeling assumption GRE was clear about in its initial filing, combined with the light touch the Commission takes on non-rate-regulated IRPs, may lead the Commission to prefer a more robust completeness review by parties in specific situations such as this. However, staff also understands that there is a short window of time in which to file completeness comments and an alternate approach is to determine that the completeness review is only at a very high level. Staff notes that the current process uses a very brief completeness review and staff's suggestion might represent a shift in thinking. Staff has included a decision option relating to a more thorough completeness review in GRE's next plan if the Commission is interested in this option.

A closely related issue is whether the Commission shares the views of two commenters that there should be an indepth analysis on possible retirement of existing units. For the rate-regulated utilities, the Commission has ordered "baseload diversification studies" (BDS) which provide a more focused review of existing generation and whether any retirements should occur.[12] Neither the EIs nor Al-Corn specifically request a BDS for GRE but the effect of rejecting a plan on the basis that existing units should be more thoroughly reviewed has a similar effect to ordering GRE to provide a BDS. Staff believes that the BDS's were ordered in part because of the rate-regulated status of a utility and the larger role of the Commission to review resource decisions for ratepayer impact. The Commission would need to determine if it wishes to devote its resources and stakeholder resources to a more thorough review of cooperatives' existing generation units.

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[11] Initial filing, page 58.
[12] Xcel's study was called a "Life Cycle Study."

Arguments in support of requiring additional information

If the Commission decided that this resource plan needs more analysis and development, it could do so for valid reasons. Many recently filed resource plans contain detailed analysis of existing generation resources and whether they should be retired or repowered; in this docket, there is only one paragraph on GRE's May 20 reply comments about whether Stanton Station should not be retired.[13] GRE provides one helpful explanation in its supplemental reply comments on why Stanton should not be retired (that the Environmental Intervenors inadvertently excluded consideration of MISO revenues attributable to Stanton), but the Commission could decide that it would like more supporting data from GRE. One particular concern the Commission may have is the resource plan statute's requirement that the Commission's findings and conclusions in a resource plan constitute prima facie evidence in other proceedings.[14] In addition, while GRE is correct that the Commission's resource plans rules expect resource options to be discussed generically, the rules also make clear that specific resources can be discussed if the utility has a commitment to that specific resource:

> The utility is only required to identify a resource option generically, unless a commitment to a specific resource exists at the time of the filing.[15]

If the Commission believes that its advisory role in IRPs means it can and should still analyze the data provided in plans to provide advice on specific units, it may want to choose this option.

GRE's Notice of Changed Circumstances

Somewhat separate to the quality of analysis issue raised in comments is the Notice of Changed Circumstances (NoCC) GRE filed in its May 20, 2013 reply comments. GRE notified the Commission that it and Dairyland are in a dispute over the fate of Genoa 3, a coal unit in Wisconsin. GRE purchases 50% of the capacity and energy of that unit, which is owned by Dairyland. GRE believes the unit is no longer economic to operate and believes it should be retired; Dairyland disagrees. The matter is being arbitrated. The Environmental Intervenors believe that because GRE only notified parties and the Commission recently, there should be an additional opportunity for discovery and comments. If the Commission agrees that this development merits additional time for the parties to review, the Commission could defer action

[13] At page 27 of the IRP, there is a description of the unit; at page 36, descriptions of Clean Air Act requirements on the unit, and at various other pages there are brief references to the unit when discussing various environmental requirements.

[14] "In the resource plans of all other [non-rate-regulated] utilities, the commission's order shall be advisory and the order's findings and conclusions shall constitute prima facie evidence which may be rebutted by substantial evidence in all other proceedings." Minn. Stat. §216B.2422, subd. 2.

[15] Minn. Rules part 7843.0400, subp. 2. Staff notes that this subpart is referring to what information must be filed in the resource plan.

on the plan for this reason.[16] However, staff notes that no one has alleged that the case is not properly in arbitration. In addition, if the matter is to be examined in a Commission docket, it could also be examined in the Dairyland resource report docket since Dairyland is the owner and operator of the unit.[17]

Staff also notes that the Environmental Intervenors discuss at length why they believe GRE's characterization of this update as a Notice of Changed Circumstances is incorrect. Minnesota Rules part 7843.0500, subp. 5 requires a utility to file an NoCC when there are "changed circumstances that may significantly influence the selection of resource plans." The Joint Intervenors focus on the language in the rule which states "the last resource plan proceeding…" to mean that the rule does not apply to currently pending resource plans. Staff opposes this interpretation for two reasons: first, it would exclude utilities from having to update the Commission and parties of new developments to pending resource plans; and second, the Commission in many resource plan proceedings has accepted NoCCs during the course of a resource plan, including in past GRE plans.[18] In any event the Environmental Intervenors believe that GRE should update the resource plan with new information which is what the NoCC rule requires.

Environmental Externalities

The Environmental Intervenors fault the GRE plan for not using the Commission-approved environmental externality values in GRE's preferred plan; GRE instead created three separate scenarios for low, middle, and high externalities. The EIs pointed out that the Commission's most recent OTP resource plan order required carbon dioxide and environmental externality values in its preferred plan.

Staff agrees that the Commission has required those values in the preferred plan for rate regulated utilities, in a series of orders. However, the Commission has not done so for non-rate-regulated utilities; it has only recommended they be included for the next IRP, as shown below:

Utility	Required in Base Case	Order
OTP	Sulfur dioxide, carbon dioxide	2/9/12, Docket 10-623
Xcel	Environmental externality values and carbon dioxide	11/30/12, Docket 10-825
IPL	Carbon dioxide	3/2/12, Docket 08-673
MRES	Not required: recommended	2/21/12, Docket 10-735

[16] Staff observes that GRE's initial resource plan at page 58 that it assumed all existing resources remain in service over the forecast period; however, its May 20th reply comments and Notice of Changed Circumstances state that GRE's position is Genoa 3 is uneconomic and should be retired.

[17] Dairyland now has the option of filing a streamlined "resource report" rather than a full report pursuant to legislation passed in 2012. The scope of these reports has not been fully determined by the Commission; however, the statute governing the reports states that the filing shall include "projected demand levels for the next 15 years and generation resources to meet any projected generation deficiencies." See Minn. Stat. §216B.2422, subd. 2b.

[18] See Docket No. ET2/RP-08-784, for example.

	carbon dioxide and environmental externalities	
MMPA	Not required: recommended carbon dioxide and environmental externalities	3/27/12, Docket 11-771

Staff is not aware of a cooperative resource plan where the Commission mandated these values be used in a preferred plan; it has only recommended they be used, and as part of the next resource plan. If the Commission chose to be consistent with past practice, it could recommend that GRE use both values in its base case in its next resource plan. Staff has included this decision option for the Commission's consideration.

Commission Rule on rate reviews in resource plans

Staff offers a final comment on the requests to reject the GRE plan on the basis of rates. Al-Corn cites to Minn. Rules part 7843.0500, subp. 3's requirement that resource plans must be evaluated on their ability to keep customers' bills and utility rates as low as possible as the basis for rejecting the plan. Staff offers two thoughts for the Commission's consideration. First, assuming the Commission agrees with this interpretation of the rule, for the Commission to reject GRE's plan on the basis of this rule, it would need to be aware that the proposed plan will not be the least cost plan in comparison to some other plan. It is not clear in the record that an alternate course of action would lower GRE's wholesale rates compared to GRE's preferred plan. Second, there is an implication in Al-Corn's comments that the Commission is legally obligated to determine that the plan will result in the lowest rates possible for GRE's customers. That "rates" requirement is not located in the IRP statute and only in rule, which the Commission can interpret at its discretion. Most Orders accepting the plans of non-rate-regulated utilities do not discuss how the Commission has applied the "rates" rule to the plan. [19] Those orders that have discussed the rule have done so only at a high level.[20] Al-Corn's interpretation of the rule as to cooperatives would reflect somewhat of a shift in the review of non-rate-regulated utilities' IRPs by more actively providing advice on the possible rate impacts of planning decisions.

[19] To be more direct, the Commission's resource plan rules were not adopted pursuant to the resource plan statute; they were adopted before the legislature passed the IRP statute. The IRP rules were adopted pursuant to the Commission's general ratemaking authority over investor-owned utilities and were written with IOUs in mind in 1990 (Docket No. E999/R-89-201). The IRP statute was then passed in 1993 and expanded the IRP filing requirement to G&T cooperatives and municipal power agencies who indirectly served at least 10,000 Minnesota customers. Because the rules were broad enough and also set procedure for IRPs, the Commission and parties have applied them to non-rate-regulated utilities for practical reasons. However, the Commission has never specifically spoken to whether and how it would choose to interpret the "rate" provisions of the IRP rules for non-rate-regulated utilities.

[20] See Docket ET9/RP-97-954, Order Issued March 26, 1998, page 5 and ET10/RP-98-938, Order Issued May 28, 1999, page 5.

Filing of Next Resource Plan

GRE refers to a 2015 filing date for its next resource plan. Under the Commission's Rules, GRE's next IRP would normally be due on November 1, 2014. If the Commission prefers, it could extend the due date by one year. Staff has included this as a decision option.

Decision Options

I. Current Resource Plan

A. Accept Great River Energy's resource plan.

B. Accept Great River Energy's resource plan but make no finding as to the acceptance of the Company's or other parties' forecast. (*Staff note: this language is identical to the language the Commission adopted in MP's 2009 resource plan*.)

C. Set additional comment periods for further examination of the following two issues:

1. The economics of retiring or continuing to run the Genoa 3 unit.
2. The economics of retiring Stanton Station.

D. Reject GRE's resource plan. (*Al-Corn, Environmental Intervenors Recommendation*)

E. Neither accept nor reject GRE's plan due to missing information and analytical deficiencies. However, find that GRE's filing is useful for resource planning purposes and will maintain reliability over at least the last several years in the Cooperative's system. (*Staff note: this language is similar to the language the Commission adopted for GRE's 2005 resource plan.)*

II. GRE's Future Resource Plans

A. List GRE's evaluation of the measures identified in the Electric Power Research Institute (EPRI) study as passing the total resource cost (TRC) test that the Cooperative does not currently include in its Conservation Improvement Program (CIP) portfolio. (*Department recommendation*)

B. GRE shall to continue to track RES compliance, environmental regulations, and environmental compliance in future IRPs. (*Department recommendation*)

C. The Commission recommends that GRE include Commission-approved carbon dioxide and externality values in its base case in its future IRPs. (*Language was adopted in MRES and MMUA resource plan orders*)

D. The Commission may consider, at the request of a party or on its own motion, extending the completeness review comment deadline in GRE's next resource plan to review modeling assumptions listed in GRE's initial resource plan filing as part of its completeness review.

III. Recommendations for All Certificate of Need Proceedings and Future Resource Plans

A. GRE should continue to strive to meet the State's 1.5 percent conservation goal in a cost-effective manner. (*Department recommendation*)

B. If GRE projects acquiring new, nonrenewable resources, the Cooperative should provide a plan or plans compliant with Minnesota Statutes §216B.2422, subd. 2. (*Department recommendation*)

C. GRE should consider making changes to its forecasting process that would yield a forecast that does not require adjustment. If such changes cannot be made, GRE shall track the ex post adjustment process in future forecasts. (*Department recommendation*)

IV. Deadline for GRE's Next Resource Plan

A. Acknowledge the deadline for Great River Energy's next resource plan as November 1, 2014, pursuant to Minnesota Rules part 7843.0300, subpart 2's requirement that a resource plan be filed every two years.

B. Vary Minnesota Rules part 7843.0300, subpart 2 and set the date for GRE's next resource plan at November 1, 2015.