Montana Public Service Commission
Docket No. 2024.05.053
Electric and Natural Gas Rate Review

DIRECT TESTIMONY

OF BLEAU J. LAFAVE

ON BEHALF OF NORTHWESTERN ENERGY

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Witness Information

Q. Please identify yourself, your employer, and your job title.

A. My name is Bleau J. LaFave and I am the Vice President of Asset Management and Business Development at NorthWestern Corporation d/b/a NorthWestern Energy ("NorthWestern").

Q. Please provide a description of your relevant employment experience and other professional qualifications.

A. I have been in my current position since 2023. I am responsible for distribution and transmission asset management, long-term resources, and business development. In addition to serving as the Vice President of Asset Management and Business Development, I also serve as the Director of Long-Term Resources, a position which I have held for over 10 years. As Director of Long-Term Resources, I am responsible for overseeing the long-term natural gas and electric supply strategies for NorthWestern, including large project development and acquisitions. I originally joined NorthWestern as a Project Engineer in 1994. Since then, I have served in many operational and administrative functions of increasing responsibilities addressing matters such as operations management, procurement, logistics, contracts, fleet, facilities, utility engineering, project development, supply development, planning, acquisitions, and customer service. I hold a Bachelor of Science degree in Mechanical Engineering.

Purpose of Testimony

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to support NorthWestern's proposal for cost recovery of the Yellowstone County Generating Station ("YCGS"). I describe the need for YCGS identified through NorthWestern's resource planning process and the competitive solicitation process by which YCGS was selected. For ease of reference, I also identify the witnesses who speak to the filing requirements identified by the Montana Public Service Commission ("Commission") in ¶ 242 of Final Order No. 7860y in NorthWestern's 2022 Montana Rate Review, Docket No. 2022.07.078, for a prudence review of YCGS.

Q. Did the Commission list requirements for a prudence review of YCGS in the Final Order for NorthWestern's last rate review?

A. As noted above, in ¶ 242 of Final Order No. 7860y in NorthWestern's 2022 Montana Rate Review (Docket 2022.07.078), the Commission identified a list of topics that NorthWestern included in an application for preapproval of YCGS. Specifically it states:

> If NorthWestern files an application pursuant to paragraph 15 of the Settlement Agreement, the Commission expects a full and extensive prudence review will be conducted. In Docket 2021.02.022, NorthWestern's Application for Preapproval of Capacity Resources (later withdrawn by NorthWestern) NorthWestern provided testimony and evidence on the following topics:
>
> a. Regional capacity deficit and the Electric Load Carrying Capability ("ELCC") study;
>
> b. NorthWestern Resource adequacy;

c. Western Imbalance Market;
d. Short-term Request for Production ("RFP");
e. Effect of YCGS NorthWestern's supply portfolio;
f. Effect on NorthWestern's PCCAM;
g. Effect on the Revenue Credit NorthWestern's retail customers receive;
h. The role of the RFP sponsor;
i. The RFP process, including how the RFP was structured to address NorthWestern's need for long-duration capacity;
j. The RFP selection process;
k. The contracting process;
l. Aion's role as the RFP Administrator and with a thorough description of the RFP process;
m. The latest Integrated Resource Plan ("IRP");
n. The modeling of the economic dispatch performance of proposals and portfolios of proposals submitted in response to the RFP;
o. The construction and operation of the YCGS;
p. NorthWestern's transmission system in relation to our capacity need;
q. Electric interconnection of resources;
r. Natural gas transmission for resources;
s. The required Carbon Offset Plan; and
t. The revenue requirement including the anticipated return on equity, debt costs, and capital structure for the YCGS and the related rate design and rate impact.

In addition, ¶ 243 states: "At a minimum, NorthWestern must be prepared to address all of the topics listed above, and any other concerns that intervenors may reasonably raise in compliance with Commission rules."

These above-referenced requirements are identified as requirements in the event NorthWestern were to file an application pursuant to ¶ 15 of the

Settlement. While NorthWestern did not file an application pursuant to ¶ 15 of the settlement,[1] NorthWestern is prepared to address the full and extensive prudence review, and the following witnesses are prepared to speak to the requirements outlined in ¶ 242 of Final Order No. 7860y.

- Scott Leigh of Aion Energy LLC provides testimony regarding the RFP process, which includes items j through l;
- Michael S. Babineaux provides testimony on NorthWestern RFP modeling, which addresses item n;[2]
- Arne Olson of Energy and Environmental Economics ("E3") provides testimony regarding E3's ELCC Study, which addresses parts of item a;[3]

[1] "The Reliability Rider will not be approved in this rate review. The Stipulating Parties agree that NorthWestern may request a one-time PCCAM Base Costs and property tax base reset to be effective on the date the Yellowstone County Generating Station ("YCGS") is placed into service. The filing will reflect the inclusion in PCCAM Base Costs of those costs that are normally eligible for PCCAM recovery including gas transmission reservation charges included in FERC Account 547 (fuel) that are estimated to be $8.4 million annually. This future PCCAM filing will request a prudence review and a determination by the Commission of whether the plant is in the public interest. If YCGS is deemed prudent, capital cost recovery will be addressed in the next general rate review. If NorthWestern makes a filing to modify the PCCAM Base Costs and property tax base consistent with the above, the Stipulating Parties agree to a temporary modification to the PCCAM tariff to allow for the inclusion in PCCAM Base Cost, and subsequent tracking and sharing, the following operating and maintenance costs, as described below and estimated in Exhibit ADD-17:
• Variable non-fuel O&M expenses estimated to be $1.3 million annually included in FERC Account 553 (maintenance of generating and electric plant);
• Variable engine maintenance expenses estimated to be $2.3 million annually included in FERC Account 553 (maintenance of generating and electric plant); and
• Fixed O&M expenses estimated to be $2.7 million annually included in FERC Account 546 (operation, supervision and engineering) and FERC Account 549 (miscellaneous other power generation expenses).
This modification of the PCCAM to allow for operating and maintenance cost recovery related to YCGS will be limited to the time period between the date the plant is placed in service and the implementation of new rates following NorthWestern's next general electric rate review.

[2] n. The modeling of the economic dispatch performance of proposals and portfolios of proposals submitted in response to the RFP;

[3] The Electric Load Carrying Capability study portion of a.Regional capacity deficit and the Electric Load Carrying Capability study;

- John Hines provides testimony regarding the construction and operation of YCGS, which addresses item o;[4]
- Joseph M. Stimatz addresses items f and r;[5] and
- Glenda J. Gibson addresses item g.[6]

Item t - The revenue requirement including the anticipated return on equity, debt costs, and capital structure for the YCGS and the related rate design and rate impact are addressed by Crystal D. Lail, Elaine A. Rich and Cynthia S. Fang. All remaining items (remainder of a, and b, c, e, h, i, j, l, m, p, and q) are addressed in my testimony.

Yellowstone County Generating Station

Q. When did NorthWestern identify the need for YCGS?

A. In NorthWestern's 2019 Electricity Supply Resource Procurement Plan[7] (Docket No. 2019.08.052) and 2020 Supplement[8] to that plan (collectively, "2019 Plan and 2020 Supplement"), NorthWestern identified a need for capacity, both peak and flexible, to reliably serve NorthWestern customers. Our customers' need for peak capacity, need at times when customer loads

[4] o. The construction and operation of the YCGS;
[5] a. Regional capacity deficit as reflected in the June 2020 RFP; d. Short-term Request for Production ("RFP"); f. Effect on NorthWestern's PCCAM; r. Natural gas transmission for resources;
[6] g. Effect on the Revenue Credit NorthWestern's retail customers receive;
[7] NorthWestern's 2019 Plan can be found here: https://www.northwesternenergy.com/docs/default-source/default-document-library/about-us/regulatory/2019-plan/complete-plan-(pdf---11-mb).pdf?sfvrsn=594ee222_5
[8] NorthWestern's 2020 Supplement can be found here: https://www.northwesternenergy.com/docs/default-source/default-document-library/about-us/regulatory/2019-plan/2020-supplement-to-the-2019-electricity-supply-resource-procurement-plan.pdf?sfvrsn=fefde7e9_5

are the highest, often occur during times of extreme weather, either when temperatures are extremely hot or extremely cold. In the 2019 Plan and 2020 Supplement, NorthWestern identified peak times of varying durations, up to multiple days.[9]

NorthWestern's 2019 Plan identified a capacity gap of 645[10] megawatts ("MW"), approximately 45% of our customers' peak capacity needs, at that time, based on NorthWestern's then-current portfolio. That is, our customers were exposed to the market for approximately 45% of their energy needs during peak load times. Our significantly carbon-free portfolio included over 28%[11] nameplate capacity of wind and solar, which are intermittent renewable resources that require flexible capacity resources, i.e., resources that ramp up or ramp down quickly, to meet our customers' everyday energy needs. NorthWestern's 2020 Supplement continued to identify a capacity deficit of approximately 600 MW.[12] The 2020 Supplement also identified a need for capacity over long durations, up to multiple days.[13]

Q. How did NorthWestern determine YCGS would fill the need identified in the 2019 Plan and 2020 Supplement?

[9] Supplement, 15-17.
[10] 2019 IRP Page 4-10.
[11] 2019 IRP Page 4-5.
[12] Page 5.
[13] Page 16.

A. As noted above, the need identified was for a resource that would meet peak and flex capacity needs. More specifically, the planning process identified a need for a dispatchable resource with a short ramp period with the ability to provide capacity over long durations. The actual selection of appropriate resources to fit this need was addressed through a competitive solicitation or RFP process. In January 2020, Northwestern issued an RFP for long-term capacity resources, specifically peaking capacity, flexible capacity and ride-through capacity (resources that are able to sustain peak load needs for various durations) resources.

YCGS was one of three resources that were selected from the RFP. NorthWestern's competitive RFP process is discussed further below.

Q. Please describe how YCGS satisfies the needs identified in the 2019 Plan and 2020 Supplement.

A. YCGS provides approximately 170 MW of fast-ramping and reliable generation capacity to provide customers with reliable energy services. The flexibility offered from YCGS's internal combustion engines will allow greater balancing of load with supply in a portfolio that includes 455 MW of intermittent wind and 177 MW of intermittent solar serving 1,200 MW of retail load. Due to NorthWestern's large amount of wind generation, YCGS must be very flexible to balance variable generation and provide critical supply capacity and transmission system support during times of system stress.

Achieving resource adequacy requires adding resources that are available during peak load hours. Intermittent resources that lack long duration storage capacity, such as wind and solar, cannot be relied upon to solve capacity issues during stagnant wind or low solar conditions. This is why a diverse resource portfolio that includes flexible capacity resources is important.

Q. Does participation in regional markets help solve NorthWestern's capacity deficit problem?

A. No. As explained in Chapter 5 of the 2019 Plan and Chapter 2 in the 2020 supplement**,** NorthWestern's system is integrated into the wider Pacific Northwest system. Regionally, the Pacific Northwest is facing tight supply conditions which are expected to persist with projected coal retirements and a lack of adequate replacement power capacity resources. NorthWestern cannot count on continued energy imports to serve our customers reliably during peak demand given the risk of declining capacity generation in the region. A portfolio that is resource adequate requires that NorthWestern customers become less reliant on volatile and uncertain energy purchases and provides protection against transmission congestion which limits import availability.

For NorthWestern customers, the greater concern is extreme cold weather events as experience in Montana during the last two winters. Both the supply

risks and price volatility that occurred during recent cold weather events are discussed further by Mr. Hines.

The 2019 Plan also described the market opportunities and requirements for NorthWestern. Market coordination continues to increase among entities in the West. Since its establishment in 2014, Western Energy Imbalance Market ("W-EIM") now includes 19 members. Although W-EIM serves to increase the efficiency of existing resources within the market, it does not solve a capacity deficit on NorthWestern's system.

Resource Adequacy (RA) is the term used to describe an electric system's ability to meet demand under a broad range of conditions, subject to an acceptable standard of reliability. In 2019, the Northwest Power Pool, now known as the Western Power Pool (WPP) began the effort now known as Western Resource Adequacy Program ("WRAP"), an initiative to develop a resource adequacy program for the region. The ability of WRAP participants to pool and share resources during tight operating conditions is expected to lead to increased reliability and potential savings opportunities. NorthWestern has participated in WRAP as a founding member with representation on both the Participant Committee and the Operating Committee, as well as a number of ad-hoc committees and work groups. The WRAP is currently in its non-binding phase for all participants. Since WRAP is not yet binding,

NorthWestern has not yet received or provided energy or capacity under the program.

Q. What are the risks associated with NorthWestern relying on market purchases?

A. As NorthWestern explained in the 2019 Electricity Supply Resource Procurement Plan, energy available from the market is less certain at key times and prices can be more volatile.[14] Meeting peak load with market purchases means being exposed to the market at the worst possible time- when the market is volatile and prices are high.[15] NorthWestern determined that assuming the market will always be able to provide customers with sufficient electricity at affordable prices could have reliability and costs consequences.[16] In addition, transmission capacity is necessary for market access to purchase power and is not always available during period of peak demand. In the 2019 Plan, NorthWestern stated that it considers part of the risk associated with over reliance on markets is the availability of transmission capacity on our system and adjoining transmission systems.[17]

Q. Did NorthWestern conduct a competitive solicitation process that provided insight into the market for capacity products?

[14] 2019 Plan, p. 1-1.
[15] 2019 Plan, p. 1-3.
[16] 2019 Plan, p. 1-2.
[17] 2019 Plan, page 6-9.

A. Yes, in addition to NorthWestern's January 2020 RFP, and as described on page 24 of NorthWestern's 2020 Supplement to the 2019 Electricity Supply Resource Procurement Plan, on June 26, 2020 NorthWestern issued a RFP for capacity or energy. The responses to the RFP confirmed NorthWestern's concern that the capacity market lacked depth, with only five entities responding and one of those five entities rescinding its offer due to concerns about the market.

Competitive Solicitation Process

Q. Please describe your role in NorthWestern's RFP process.

A. On January 31, 2020, NorthWestern issued an RFP initiating a competitive solicitation process for long-term, dispatchable capacity resources. This RFP ultimately resulted in NorthWestern selecting YCGS.[18] I served as the RFP Sponsor within NorthWestern. In that role, I assisted in the development of the RFP and coordinated activities during the issuance and evaluation phases. I was engaged with the RFP Administrator, Aion Energy LLC ("Aion"), who NorthWestern hired to administer the competitive solicitation. throughout the process.

Q. Please describe the goals and objectives of the RFP.

[18] YCGS was selected from the RFP with a portfolio of three resources, a natural gas-fired plant in Laurel, Montana to be constructed for NorthWestern's ownership, an ESA for a battery facility located in Yellowstone County, Montana (Beartooth Battery), and a predominantly hydropower based transaction with Powerex Corp., the marketing affiliate of the BC Hydro System (Powerex Agreement).

A. NorthWestern designed the RFP based on its resource needs assessment in the 2019 Plan and 2020 Supplement. The RFP requested approximately 280 MW to be online by 2025, as referenced is Section 1.2 of the RFP.

Q. What priorities did NorthWestern consider when designing the RFP?

A. NorthWestern experiences varying levels of capacity deficiencies in terms of both magnitude and duration. NorthWestern placed a priority in the RFP on flexible resources that can address the risk to reliability that longer duration capacity deficiency periods present. Specifically, NorthWestern requested proposals for dispatchable capacity resources that can provide uninterrupted service over a sustained duration ("Ride-Through Capacity Resources"). NorthWestern identified this need to add Ride-Through Capacity Resources, or long-duration resources, to NorthWestern's portfolio to reduce the risk of unreliable service to NorthWestern's customers.

As part of its strategy identified in the 2019 Plan and 2020 Supplement to address these resource needs, NorthWestern worked with Aion to develop an industry-standard RFP that would solicit a wide range of proposals, under a variety of contracting structures, for long-term, dispatchable, capacity resources. The RFP fully described the overall process, proposal requirements, and the evaluation process. It provided bidders with all of the technical specifications, proposal forms, and contract forms.

Q. What tiers of Ride-Through Capacity Resources did NorthWestern identify in the RFP?

A. As stated in Section 2.3 of the 2020 RFP:

> NorthWestern experiences varying levels of capacity deficiencies in terms of both magnitude and duration and, consequently, this RFP is focused on mitigating risk for NorthWestern customers and improving its capacity position to meet reliability standards in the future. Longer duration capacity deficiency periods present higher risk in terms of meeting reliability standards and requirements in the capacity-constrained Pacific Northwest regional market, where NorthWestern purchases significant quantities of market power to meet retail customer demand. Based on this, NorthWestern has identified tiers of capacity deficiencies stepping up to 280 MW as well as required Ride-Through Capacity Resource durations associated with each tier. As longer capacity deficit durations present increased reliability risks, NorthWestern is placing higher priority on satisfying the deficiency tiers with longer-duration deficits in this RFP. The deficit tiers, durations, and associated prioritization are summarized in the table below.

Table 1. Prioritization of Capacity Additions and Associated Ride-Through Duration.

Priority	Quantity (MW)	Ride-Through Duration for Reliability Standards	Aggregate Addition (MW)
First Tier	150	20 Hours	150
Second Tier	100	10 Hours	250
Third Tier	30	5 Hours	280

Q. How did NorthWestern determine the capacity contribution of the resources in the existing portfolio?

A. For dispatchable and firm resources, such as thermal resources, NorthWestern deducted the historical forced outage rate from the adjusted nameplate capacity. For intermittent, storage, and hybrid resources, NorthWestern used the ELCC method as described in the 2020 Supplement (in Section 3.3 and Appendix 1). In essence, the ELCC of a resource indicates how many MW of perfect (i.e., 100% reliable) capacity the resource

can effectively replace. ELCCs are heavily influenced by expected load patterns, weather, and the other resources in a supply portfolio. NorthWestern used the ELCC metric to assess the capacity contribution from proposals with wind, solar, and storage technologies, and proposals with combinations of these technologies (known as "hybrids"). Aion determined the capacity contribution from proposals for thermal resource technologies.

Q. Prior to selecting the three resources including YCGS in 2021, did NorthWestern experience any events that support the need for longer duration resources?

A. Yes. As an example, in February of 2021, NorthWestern experienced a winter weather event that is not atypical for Montana weather. For nearly three solid days, NorthWestern had to serve customer demand in excess of the 837 MW identified in the 2020 Supplement. NorthWestern's portfolio at this time was not resource adequate for that size load. NorthWestern was able to meet customer demand by purchasing energy from other utilities. But these purchases were only available because those utilities' customers were not able to take the energy due to outages on distribution and transmission lines. Had other utilities in the Northwest not experienced significant storm outages, NorthWestern would not have been able to maintain full service to the system because the energy NorthWestern needed to purchase would not have been available.

Q. Why did NorthWestern choose YCGS from the RFP?

A. As explained in the direct testimony of Scott A. Leigh, the proposal for YCGS ranked favorably in comparison to other proposals submitted in the competitive solicitation. The top 10 portfolios included YCGS to address the 20-hour tier. I presented the top 10 and the top four portfolios to the NorthWestern Board of Directors on February 12, 2021 where I explained the pros and cons of each portfolio. The Board's resolution approved the selection of YCGS. As identified in the 2019 Plan and 2020 Supplement, NorthWestern must have a portfolio that contains resources that can provide service through an entire event at the different load levels. This means that NorthWestern must have resources that can generate throughout the duration of an event and that can also ramp up and down to adjust to the load levels. In addition, resources are required for ancillary services and resource failures to maintain reliability, requirements that are accounted for in typical RA requirements. YCGS has these capabilities.

Q. Did NorthWestern purchase carbon offsets for YCGS?

A. Yes. In 2023, NorthWestern purchased a type of carbon offset know as Carbon Reserve Tonnes ("CRT") from The Climate Trust, an independent non-profit that manages nature-based projects that either involve carbon reduction or the absorption of carbon. Acquiring the carbon offsets for YCGS was a reasonably affordable approach to balance the interests of NorthWestern's stakeholders consistent with the requirement to acquire

resources “in a manner that will help ensure a clean, healthful, safe, and economically productive environment”, as stated in Title 69, Chapter 3, section 1202.

NorthWestern purchased $327,000 worth of CRT which offsets emitting 21,800 tons of CO2. The project NorthWestern selected through The Climate Trust was the Veseth & Veseth Ranch Grasslands Project in Phillips County, Montana.

This project was selected because it has a sufficient number of offset credits with a vintage that generally align with one year of commercial operation of the YCGS, were reasonable priced, and in Montana. The project is a grassland project developed by the Climate Trust and listed on the Climate Action Reserve (“CAR”), a national registry of carbon offset projects. CAR has a rigorous process to verify that the protocol is followed and the carbon offsets are realized as designed. To participate in the program, landowners must report animal grazing days, fuel/electricity/fertilizer use, and fire activity.

Conclusion

Q. Please summarize your testimony.

A. The purpose of my testimony is to support NorthWestern’s proposal for cost recovery of the Yellowstone County Generating Station (“YCGS”). My testimony described the need for YCGS identified through NorthWestern’s

resource planning process and the competitive solicitation process by which YCGS was selected. I recommend that the Commission determine NorthWestern's selection of YCGS was prudent.

Q. Does this conclude your direct testimony?

A. Yes, it does.

Verification

This Direct Testimony of Bleau J. LaFave is true and accurate to the best of my knowledge, information, and belief.

/s/ Bleau J. LaFave
Bleau J. LaFave