

Basin Electric Power Cooperative

Expanded Summary of Board of Directors Meeting

Jan. 11-12, 2022

At Basin Electric Headquarters in Bismarck, North Dakota

1. Basin Electric committees met Tuesday morning:

- Finance: The group talked about the cost of removal/decommissioning costs recovery plan. They also discussed the 2021 surplus sales revenue deferral of up to \$50 million and the 2021 early amortization of loss on investment in Dakota Gasification Company's expense deferral of up to \$77.2 million. The group talked about the 2022 accelerated capital recovery plan for Leland Olds Station Unit 2. During soft close, the finance team discovered that the end-of-year margin was about \$30 million less than anticipated due to some Southwest Power Pool price increases, congestion, and purchased power. This means less will be placed in deferred revenue than previously projected. The group also discussed ransomware risks.
- Marketing and Planning: The group talked about renewable energy credits, how they are allocated to members, and how their value has increased in the past year. They discussed PURPA purchase obligations and their assignments, which most members sign theirs over to Basin Electric. They also talked about MISO market pricing and how cold temperatures and congestion related to forced outages have had an impact. They also discussed Basin Electric's west power position.
- Operations: The group talked about several action items related to the bottom ash pond reconstruction at Laramie River Station, and a generator fault at Groton Generation Station. They also discussed a plant trip at the Great Plains Synfuels Plant.

2. Dakota Gasification Company

- Dale Johnson, vice president and Synfuels Plant manager, talked about a flue gas desulfurization unscheduled outage and a plant trip on Dec. 7. Canadian customers have increased their carbon dioxide nominations, which reduces the amount of DAK SUL 45 being produced; the carbon dioxide sales are more lucrative. Also, a new product is being sold: a 40% blend of diesel exhaust fluid, which is in addition to the 32.5% and 50% blends.
- Daniel Gallagher, director of commodity sales and trading, said corn remains profitable despite record high fertilizer prices. High demand is partially the result of high demand from China, as China now has historically high levels of corn reserves. In the long term, demand will also come from sustainable aviation fuel as expectations are for the fuel to be one of the fastest growing segments in biofuels. Ammonia purchasing is down in the last couple weeks with retailers holding off on making purchases due to high values. Urea pricing remains strong, with producers tight on supply due to extended turnarounds and an increase in DEF demand. More than 80,000 barrels per month of tar oil were sold and delivered in the last three months. The team is working with new customers for cresylic acid and naphtha.
- Production (see slides below)

3. Dakota Coal Company

- Colleen Peterson, superintendent of fuel and transportation, said the coal pile at Leland Olds Station is at 24.9 days of burn at the end of December (target is 39.9 days of burn). At Laramie River Station, the coal pile is at 65 days of burn (target is 34.6 days).
- Jacob Dow, engineer III, said the Montana Limestone Company quarry and fine grind plant received safety awards for 2020.
- ACTION: Dakota Coal directors authorized the financing to facilitate the acquisition of 40 acres located within the Freedom Mine.

4. Basin Cooperative Services

- ACTION: Basin Cooperative Services directors renewed the revolving credit agreement between Basin Electric and Basin Cooperative Services.

5. Basin Electric

- Robert Johnston of the Eurasia Group was invited to speak to the board. Johnston presented what the group sees as the ten top risks in 2022. He discussed inflation and interest rates on the move, rising natural gas prices due to global demand and supply imbalances, and the Build Back Better bill not likely to move forward. He also discussed activity the group is watching around the world, especially in China and Russia. He was the keynote speaker at Basin Electric's 2019 annual meeting. The board regularly invites outside experts in to speak, as it helps inform their discussions during strategic planning.
- Mark Foss, senior vice president and general counsel
 - There has been no update in the dispute with Southwest Power Pool.
 - In the Dakota Energy lawsuit, Basin Electric and East River filed motions for summary judgement on Dec. 15, 2021. The judge denied Dakota Energy's appeal on Dec. 22, 2021, regarding a discovery order requiring production of two documents. Production of both was due Jan. 3, 2022. On Jan. 3, Dakota Energy filed a motion to stay compliance with the order pending the court's ruling on summary judgement.
 - On Dec. 21, 2021, there was a prehearing conference regarding Basin Electric FERC proceedings.
 - ACTION: Basin Electric directors renewed the revolving credit agreement between Basin Electric and Basin Cooperative Services.
- Dale Niezwaag, vice president of government relations
 - On Build Back Better Act, U.S. Sen. Joe Manchin said he would not support the bill as written. Majority Leader Chuck Schumer said the Senate will still consider the bill early this year. The question remains whether there is a path forward with fewer programs funded over a longer period. It is unclear whether this will be successful. There is still broad support for the energy and climate package in the bill and technology neutral incentives. If the bill fails to pass, there is no direct pay option or \$85/ton for 45Q tax credits.

- South Dakota: Session convened Jan. 11. There is a move to provide clarification that electric vehicle charging stations can sell electricity at retail only for charging and only if the electricity is purchased from an incumbent utility.
- Wyoming: Legislative session will begin Feb. 14. There will be work done on the bill for state assumption of title for stored carbon dioxide.
- Iowa: Legislative session began on Jan. 10. The solar tax credit is expiring, and it will be revisited. A carbon sequestration task force will focus on ag/ag credits for carbon dioxide.
- North Dakota: The state Public Service Commission (NDPSC) denied a full waiver for Basin Electric for light mitigation technology on the wind turbines at the PrairieWinds ND projects. The U.S. Air Force will not approve the current technology available. Instead, the NDPSC approved a conditional waiver requiring the cooperative to review Federal Aviation Administration-approved light mitigation technology and report back every three years.
- Troy Tweeten, senior vice president of Operations
 - Actual Generation (see slide below)
 - Laramie River Station Unit 3 boiler feed pump turbine had a failure in the lube oil pumps. The turbine rotor, bearings and other related components suffered damage, and the rotor was sent for inspection and repair.
 - Groton Generation Station Unit 2 had a generator rotor fault which resulted in a plant trip. Because of potential damages, parts and materials availability, and lead times, the overall cost of report could exceed \$1 million.
 - Jason Cowan, Leland Olds Station, said there was an extension of the Unit 2 outage due to the need for more maintenance needed than anticipated. Even with the extension, the outage was under budget by \$14 million.
- Becky Kern, vice president of resource planning and rates
 - The agenda for the Jan. 20-21 Class A District meeting includes an update on the Bakken Energy/DGC sale, the 2022 load forecast, a resource planning update, PURPA purchase assignment, and the Rate Schedule A.
 - A Western Electricity Coordinating Council assessment of resource adequacy shows that demand and resource availability variability is increasing. Reserve margin requirements need to be increased, and in some cases, significantly. Resource adequacy risks could get worse if action is not taken immediately to mitigate near-term risks and prevent long-term risks. On the West, if a resource adequacy requirement moves forward, excess capacity will diminish.
 - Responses are due Jan. 28 on a power supply request for proposal released on Dec. 22.

- MISO has filed modifications with FERC on the regional transmission organization's resource adequacy and availability-based accreditation requirements.
- In MISO, Basin Electric continues to plan to acquire options to mitigate long-term market energy exposure with additional renewables and storage, energy options, and dispatchable resources.
- In Southwest Power Pool, additional power supply is needed, and likely more than is currently shown in the load forecast. There is significant risk of additional load growth and concerns regarding available surplus capacity in the market. There is also concern regarding the time needed to acquire or build new resources.
- ACTION: Basin Electric directors approved the 2022 Load Forecast.
- Val Weigel, vice president of asset management and commodity strategy
 - Market conditions continue to drive gas and power market price volatility. January natural gas prices moved up \$2 in two weeks. Basin Electric's generation, purchase power agreements, natural gas and power hedges provide mitigation against higher priced periods driven by volatility.
 - High natural gas demand is being driven largely by exports. In December, overseas buyers purchased 13% of U.S. gas production, which is a seven fold increase from five years ago.
 - Southwest Power Pool issued a cold weather advisory Jan. 1-2. Advisories raise awareness but do not require action.
 - MISO experienced high day-ahead pricing in December which was mitigated in part by hedging.
- Tom Christensen, senior vice president of Transmission, Engineering, and Construction
 - Expansion of markets in the West will continue because of the benefits they provide. The speed at which the transition occurs will be based on variables including public demand for energy change, and utilities' and regulators' comfort with change.
- Pius Fischer, vice president of transmission
 - The Southwest Power Pool's 2021 Project Portfolio includes \$469.7 million in projects in western North Dakota. The portfolio is being considered by the Southwest Power Pool board of directors on Jan. 25.
- Gavin McCollam, vice president of engineering and construction
 - Large Capital Projects (see slide below)
 - A team of employees gave a presentation on Basin Electric's geographic information systems applications.
 - ACTION: Basin Electric directors authorized upgrades to the Antelope Valley Station 345-kV substation.

- ACTION: Basin Electric directors authorized the Laramie River Station Bottom Ash Pond 3 Reconstruction Project.
- ACTION: Basin Electric directors authorized the construction contract for the Laramie River Station Bottom Ash Pond 3 Reconstruction Project.
- ACTION: Basin Electric directors authorized the closure contract for the Laramie River Station Bottom Ash Pond 3 Reconstruction Project.
- Chris Baumgartner, senior vice president of Member Services and Administration
 - The Member Managers Conference is scheduled for Feb. 23-24. Fifty-seven members are currently registered.
 - Wyoming CarbonSAFE Media Day was held Jan. 5 at the Wyoming Integrated Test Center near Dry Fork Station.
 - A strategic planning session is scheduled for February.
- Shelly Wanek, interim director of Human Resources
 - Eighty-four employees retired in 2021.
 - Twenty employees have retired or announced intent to retire in 2022.
 - Headquarters Casual for a Cause has raised \$14,625 for Prevent Child Abuse North Dakota.
- Steve Johnson, chief financial officer and senior vice president
 - Third quarter gross domestic product for 2021 increased at an annual rate of 2.3%.
 - The unemployment rate in December was 3.9%, down .3% from November. A record 4.5 million Americans quit their jobs in November.
 - ACTION: Basin Electric directors approved a 2021 surplus sales revenue deferral of up to \$50 million.
 - ACTION: Basin Electric directors approved the early amortization of up to \$77.2 million of the loss on investment in the Dakota Gas Expense Deferral.
 - ACTION: Basin Electric directors approved the 2022 Accelerated Capital Recovery Plan, which accelerates the depreciation on Leland Olds Station Unit 2 but does not have an effect on the useful life of the asset.

Generation

Total energy available for sale in December was estimated to be 3.1 million megawatt hours (MWh). (Note: This line used to signify total generation from Basin Electric's resource portfolio. This number now includes purchases in the Southwest Power Pool.)

Electricity sold to member systems during December was estimated at 2.6 million MWh compared to the forecast of 2.9 million MWh. Surplus sales were estimated at 454,000 MWh, compared to the forecast of 282,000 MWh.

At the Great Plains Synfuels Plant, deliveries to the pipeline averaged 74.8 million standard cubic feet per day of natural gas produced from coal. The plant operated at 83.4 percent of capacity during the month.

Total tons of saleable fertilizer produced was 50,087 tons. That includes anhydrous ammonia, granular urea, urea content in diesel exhaust fluid, and ammonium sulfate.

Synfuels Plant production

Production data for December 2021 for selected products at the Great Plains Synfuels Plant were as follows:

Anhydrous ammonia – 27,767 tons produced

Urea – 33,516 tons produced

DAK SUL 45 (ammonium sulfate) – 7,610 tons produced

Carbon dioxide – About 3,539 million standard cubic feet were delivered during the month.

Financial data

Basin Electric, Dakota Gasification Company, and Dakota Coal Company financial information was not available for the board meeting, and availability is subject to the completion of annual audits.

Slides of interest:

Dakota Gas Production

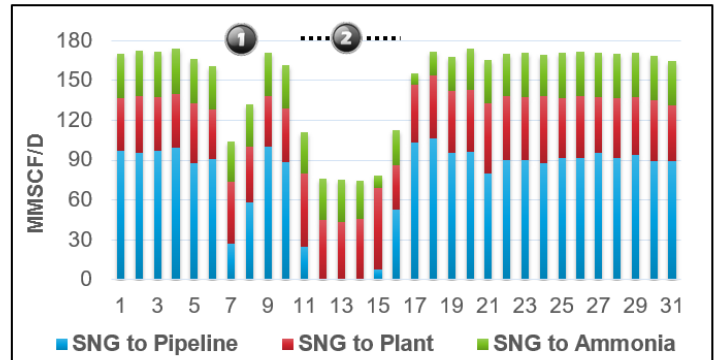
Synthetic Natural Gas (SNG)

Actual Capacity Factor	83.4%
Budgeted Capacity Factor	92.0%
YTD Actual Capacity Factor	83.4%
YTD Budget Capacity Factor	87.8%

Availability	91.9%
Utilization	90.8%

Actual Production (dts)	2,272,494
Budget (dts)	3,122,506
YTD Actual Production (dts)	26,881,361
YTD Budget (dts)	34,319,221

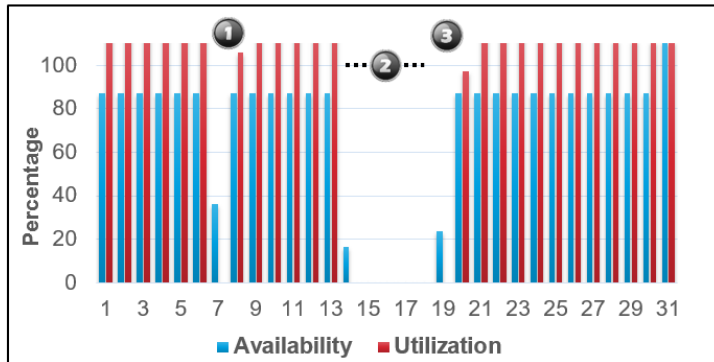
Delivery Average (MMSCF/D)	74.80
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Production Impacts (MMSCF)	
1 Plant trip - instrument air failure	66
2 Flue gas desulfurization failure/repairs	379

Ammonia

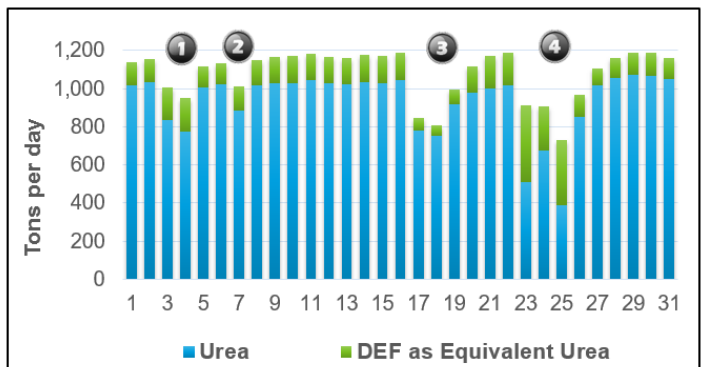
Actual Capacity Factor	81.4%
YTD Capacity Factor	72.8%
Ammonia Production (tons)	27,767
Ammonia Budget (tons)	30,349
YTD Actual Production (tons)	292,205
YTD Budget (tons)	342,641



Production Impacts (tons)	
1 Backend of ammonia plant down - lack of steam - plant upset	624
2 Ammonia refrigeration compressor trip - ammonia product pump failure - control system failure	4,729
3 Flare extinguished	776

Actual Capacity Factor	98.3%
YTD Capacity Factor	81.8%
Urea Independent Capacity Factor	101%
Actual Equivalent Production (tons)	33,516
DEF as Equivalent Urea (tons)	4,515
Budget (tons)	32,581
YTD Actual Equivalent Production (tons)	328,569
YTD Budget (tons)	362,181
Ammonia Consumed (tons)	18,806
YTD Ammonia Consumed (tons)	185,986

Urea



Production Impacts (tons)	
1 Plugged melt header	144
2 Temporary rate reduction due to instrument air loss in plant	38
3 Ammonia plant trip due to control systems loss	500
4 Lump screen plugged	684

Diesel Exhaust Fluid (DEF)

Total Actual Production (gal)	1,899,180
Budget (gal)	1,482,854
YTD Actual Production (gal)	29,355,985
YTD Budget (gal)	16,741,884

Production Impacts (gal)	
No significant production impacts	N/A



Ammonium Sulfate (Dak Sul 45[®])

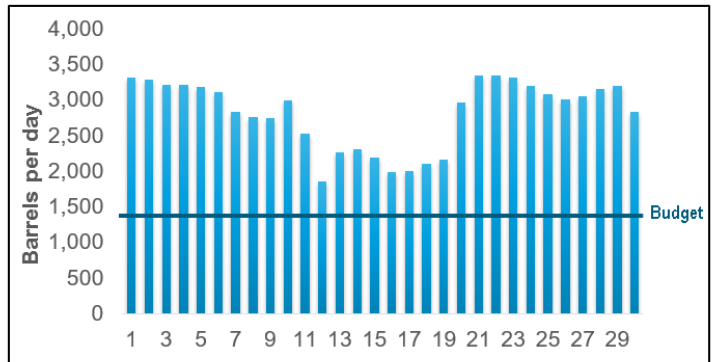
Actual Production (tons)	7,610
Budget (tons)	11,315
YTD Actual Production (tons)	99,034
YTD Budget (tons)	120,542

Production Impacts (tons)	
FGD outage	-
High CO ₂ flow to Canadian customers	-



Fuel Grade Tar Oil

Actual Production (bbl)	88,091
Budget (bbl)	45,000
YTD Actual Production (bbl)	888,823
YTD Budget (bbl)	540,001



Production Impacts (bbl)

1 No significant production impacts	N/A
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Co-Products

	CO ₂	Naphtha	Phenol	Cresylic Acid	Krypton Xenon	Liquid CO ₂	Nitrogen
	MMSCF	gallons	gallons	gallons	liters	tons	gallons
Actual Production	3,539	592,559	231,275	228,926	287,743	1,179	40,405
Budget	2,790	717,464	307,369	281,770	282,627	1,054	78,988
YTD Actual Production	32,124	7,234,777	2,511,115	2,449,322	2,700,256	8,110	609,253
YTD Budget	32,550	8,089,369	3,379,962	3,098,462	3,186,607	11,914	616,616

Production Impacts

- Canadian customers increased CO₂ nominations
- Co-product yields were impacted by low plant rate

Actual Generation

Actual Generation

Facilities	2021 December		%	2021 YTD		%
Coal Plants	Budgeted MWh	2,083,051	-27.6	Budgeted MWh	21,520,206	-11.2
	Actual MWh	1,507,964		Actual MWh	19,105,472	
	Difference	-575,087		Difference	-2,414,734	
Oil / Gas Plants	Budgeted MWh	163,427	54.1	Budgeted MWh	1,493,883	57.8
	Actual MWh	251,923		Actual MWh	2,358,020	
	Difference	88,496		Difference	864,137	
Wind	Budgeted MWh	92,958	-26.6	Budgeted MWh	937,218	-22.8
	Actual MWh	68,273		Actual MWh	723,849	
	Difference	-24,685		Difference	-213,369	
Fleet	Budgeted MWh	2,339,436	-21.9	Budgeted MWh	23,951,307	-7.4
	Actual MWh	1,828,160		Actual MWh	22,187,341	
	Difference	-511,276		Difference	-1,763,965	

Large Capital Projects

Large Capital Projects

Project Name	Approved Budget (M)	Total Committed (M)	Forecast at Completion (M)	Completion Date
Neset to Northshore 230kV	\$57.4	\$29.1	\$52.2	December 2022
LOS 345kV Equipment Upgrades	\$21.8	\$1.0	\$21.8	January 2024
LRS CCR Holding Ponds Closure and Reconstruction	\$41.9	\$19.9	\$35.5	October 2025
LRS U3 480V Switchgear Upgrade	\$13.5	\$7.1	\$12.0	December 2025