GREAT RIVER ENERGY

2019 ANNUAL REPORT

POWERING WHAT'S POSSIBLE

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REPORT

POWERING WHAT'S POSSIBLE

Great River Energy provides reliable, affordable and environmentally responsible wholesale electricity to 28 member-owner cooperatives that serve 700,000 member accounts in Minnesota and parts of Wisconsin.

Great River Energy serves members through a diverse portfolio of power supply resources and dependable transmission system, all of which are part of the region's energy market. Great River Energy committed to reaching 50% renewable energy by 2030. The cooperative is on schedule to reach that goal, with plans to provide 30% renewable energy in 2020.

Great River Energy is a cooperative. It is governed by a democratically elected board of directors. It is guided by the cooperative principles. Great River Energy is dedicated to providing excellent service to cooperative members.

Bob Bruckbauer
Board Chair

David Saggau
President and Chief Executive Officer

TO OUR STAKEHOLDERS

The electricity members receive comes with more renewable energy and lower carbon emissions than ever before – all while remaining safe, reliable and affordable.

Twenty years ago, Great River Energy began receiving electricity from three wind turbines in southern Minnesota. Today, we have nearly 350 turbines spinning to provide us emission-free electricity.

Great River Energy is striving to serve members with energy that is 50% renewable by 2030. We are on schedule, too, reaching 30% in 2020.

Meanwhile, Great River Energy's average wholesale electric rates have remained flat, we are surpassing our financial goals, and we have begun returning patronage capital to members.

Great River Energy and its 28 member-owner cooperatives are committed to providing clean energy that remains affordable and reliable

CARBON DIOXIDE EMISSIONS ARE DECLINING

Great River Energy has long sought strategic ways to reduce the carbon dioxide emissions on its system, and we have made real progress.

We exited two contracts for coal-based electricity and closed a long-running coal power plant. We recently began receiving energy from a 200-megawatt wind farm, our largest renewable energy purchase to date.

Those decisions were made for economic benefit while also providing for reductions in carbon emissions.

USING ELECTRICITY IN NEW WAYS

Electricity is improving so rapidly that it has become a promising energy source for transportation, which is currently the state's largest source of carbon dioxide emissions.

Minnesota is encouraging the adoption of electric vehicles to reduce carbon emissions because they have no tailpipe emissions. Members are drawn to them because they require no stops at the gas station and very few trips to the mechanic.

Great River Energy's member-owner cooperatives offer programs that make it easier to purchase an electric vehicle and at-home charger, as well as other efficient electric devices such as air conditioners, water heaters, forklifts and heat pumps.

MORE RENEWABLES, LOWER EMISSIONS

Great River Energy makes decisions in the best interest of our membership. Our research shows that members strongly believe adding more renewables is a good idea and support our efforts to reduce carbon emissions. We are proud of the progress we have made and excited about the opportunities ahead.

Cooperative members want electricity that is affordable, reliable and clean. As the wholesale power supplier to 28 member-owner cooperatives who serve more than 700,000 members, that is what we will continue to provide.

OUR PROMISE TO MEMBERS: CLEAN ENERGY, WITHOUT THE ADDED COST.

JON BREKKE, VICE PRESIDENT AND CHIEF POWER SUPPLY OFFICER

"WE REMAIN FOCUSED ON OUR MISSION **TO PROVIDE OUR MEMBER-OWNERS AFFORDABLE, RELIABLE ENERGY IN HARMONY WITH A SUSTAINABLE ENVIRONMENT.**"

$5 MILLION REFUNDED TO MEMBERS

$23 MILLION SAVED IN 2019 THROUGH EMPLOYEE BUSINESS IMPROVEMENTS

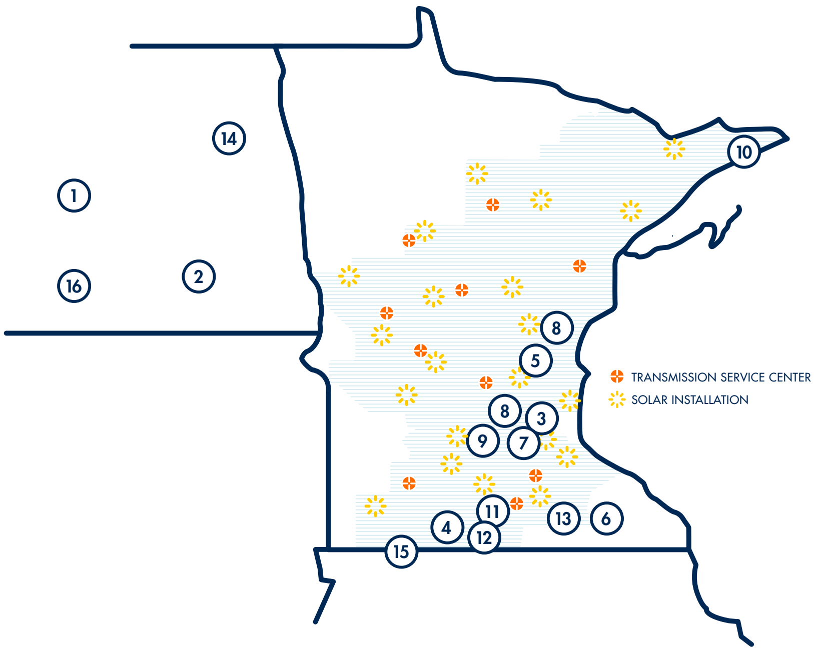
50% RENEWABLE ENERGY BY 2030

CERTIFIED GREAT PLACE TO WORK

$15 MILLION OF PATRONAGE CAPITAL RETURNED TO MEMBERS

99.99% RELIABILITY

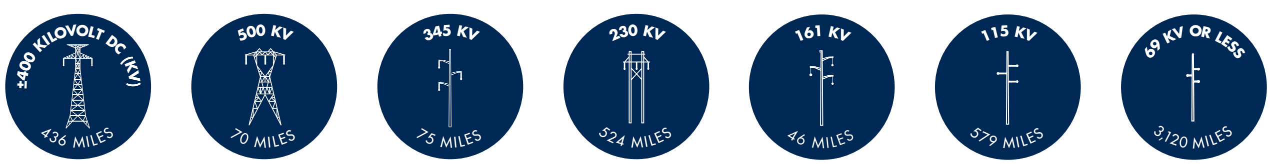
700,000 MEMBERS SERVED

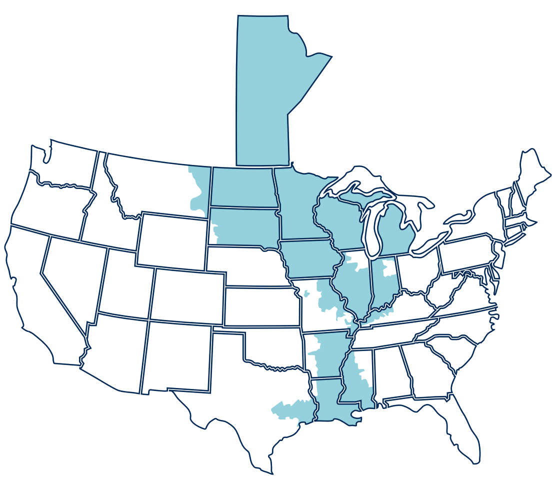


OUR RESOURCE PORTFOLIO

DIVERSE, DEPENDABLE POWER SUPPLY RESOURCES COMBINED WITH ACCESS TO THE MIDWEST ENERGY MARKET PROVIDE AROUND-THE-CLOCK ENERGY FOR GREAT RIVER ENERGY'S MEMBER-OWNER COOPERATIVES

Great River Energy generates or procures electricity and transmits it across thousands of miles of high-voltage transmission lines. Every resource has an important role in supplying reliable energy to Great River Energy's member-owner cooperatives.





Great River Energy is a member of the Midcontinent Independent System Operator (MISO), which provides access to a diverse energy market and allows Great River Energy to sell electricity across a wider footprint.

1. **Coal Creek Station**
   Generating capability: 1,151 MW
   Fuel: Lignite coal and DryFine™ lignite coal
2. **Spiritwood Station**
   Generating capability: 99 MW*
   Fuel: DryFine lignite coal and natural gas
3. **Elk River Peaking Station**
   Generating capability: 189 MW (summer)
   Fuel: Natural gas; backup: fuel oil
4. **Lakefield Junction Peaking Station**
   Generating capability: 468 MW (summer)
   Fuel: Natural gas; backup: fuel oil
5. **Cambridge Peaking Station**
   Generating capability: 171 MW (summer)
   Fuel: Fuel oil (Unit 1), and natural gas (Unit 2)
6. **Pleasant Valley Peaking Station**
   Generating capability: 414 MW (summer)
   Fuel: Natural gas; backup: fuel oil
7. **St. Bonifacius Station**
   Generating capability: 61 MW (summer)
   Fuel: Fuel oil
8. **Rock Lake Station**
   Generating capability: 22 MW (summer)
   Fuel: Fuel oil
9. **Maple Lake Station**
   Generating capability: 19 MW (summer)
   Fuel: Fuel oil
10. **Arrowhead Emergency Generating Station**
    Generating capability: 18 MW*
    Fuel: Fuel oil
11. **Trimont Wind**
    Purchase: 100 MW*
12. **Elm Creek Wind**
    Purchase: 99 MW*
13. **Prairie Star Wind**
    Purchase: 101 MW*
14. **Ashtabula II Wind**
    Purchase: 51 MW*
15. **Endeavor I Wind**
    Purchase: 100 MW*
16. **Emmons-Logan Wind**
    Purchase: 200 MW*

Other renewable energy
200 MW* (summer) from Manitoba Hydro
12 MW* from two wind farms.
Approximately 3 MW* from 21 solar installations.

Generating capability based on summer generating capability for 2020-2021 planning year.

**Nameplate generating capacity*

MEMBER MINDED

Great River Energy is serving its members better than ever with energy that is getting cleaner all the time without raising costs to members.

For the second consecutive year, Great River Energy shared financial gains with its member-owner cooperatives, issuing a $5 million refund in January 2019.

For the first time in its history, Great River Energy returned patronage capital through cash payments to its member-owner cooperatives. In March, Great River Energy returned more than $15 million to its membership.

At the same time, Great River Energy's average wholesale electric rate has not changed.

SYSTEM PERFORMS DURING HISTORIC WEATHER

The Great River Energy system performed admirably as temperatures plunged to record lows across the Midwest in January 2019. During severe winter events, Great River Energy's generation and transmission assets are carefully operated and monitored to ensure electricity continues to power member-consumers' homes.

Great River Energy also worked closely with the Midcontinent Independent System Operator and neighboring utilities to prepare for possible scenarios. The cooperative's resilient transmission system met the test with no outages or issues despite temperatures of -30 degrees Fahrenheit.

Great River Energy and its member-owner cooperatives worked together to deploy all of their load-control resources during the dangerous temperatures. Load control programs cycle or shut off electric devices to alleviate stress on the electric system and reduce energy purchases. Participating members benefit financially through lower electric rates. The load control system reduced electric demand by an all-time record amount during the polar vortex.

When Winter Storm Wesley ripped through southern Minnesota on April 11, crews from Great River Energy, neighboring utilities and member-owner cooperatives teamed up to restore power to more than 8,300 member-consumers. More than 350 power poles were downed or damaged, by far the most recorded in Great River Energy's history.

BETTER SERVICE TO THE SOUTHWEST

Great River Energy unveiled a 20,000 square-foot transmission service center in St. James, Minnesota. The decision to build a new facility was motivated by a desire to best serve member-owner cooperatives in southwest Minnesota for the long-term.

ONE–STOP FOR ELECTRIC VEHICLES

Great River Energy and its participating member-owner cooperatives created a one-stop shop for member-consumers to purchase and install an electric vehicle charger in their garage. They are also offering steep discounts on home chargers to spur the adoption of electric vehicles among cooperative members.

Cooperative members were invited to explore their electric vehicle options and learn from experienced drivers at the Electric Vehicle Show and Tell hosted by Great River Energy and several of its member-owner cooperatives in October 2019.

89%

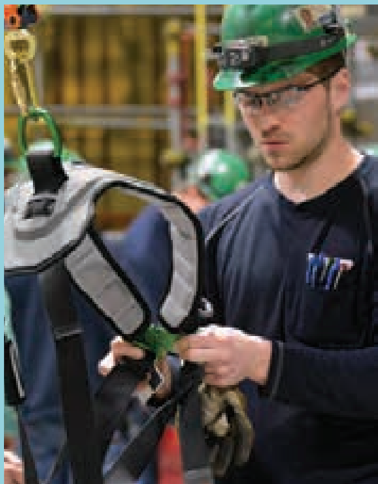
OF MEMBER-CONSUMERS SUPPORT THE TRANSITION TO CLEAN ENERGY.

5 YEARS

OVER THE PAST FIVE YEARS, ALL OF GREAT RIVER ENERGY'S NEW ENERGY RESOURCES HAVE BEEN RENEWABLE.

MARK FAGAN, VICE PRESIDENT AND CHIEF CORPORATE SERVICES OFFICER

"WE MAKE DECISIONS BASED ON **THE BEST INTERESTS OF THE 28 MEMBER-OWNER COOPERATIVES WE SERVE."**

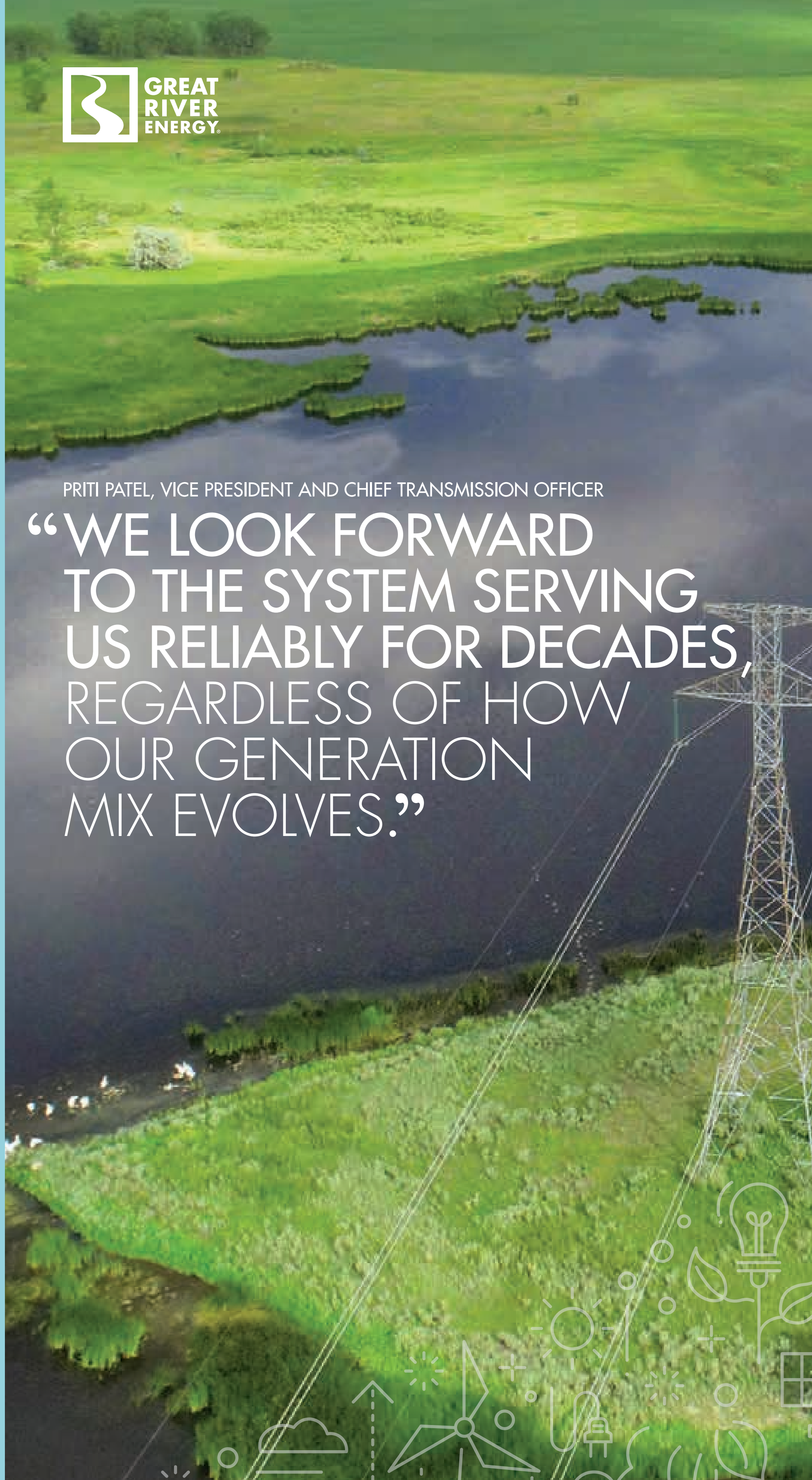


A 'GREAT PLACE TO WORK'

Great River Energy was again certified as a Great Place to Work, an honor awarded to companies with high-trust and high-performing workplace cultures.

ENERGY EDUCATION

Great River Energy employees provide educational opportunities for students in communities where it has employees and member-owner cooperatives.



PRITI PATEL, VICE PRESIDENT AND CHIEF TRANSMISSION OFFICER

"WE LOOK FORWARD TO THE SYSTEM SERVING US RELIABLY FOR DECADES, REGARDLESS OF HOW OUR GENERATION MIX EVOLVES."

FUTURE FOCUSED

Great River Energy is making strategic investments in its transmission system and power supply portfolio.

A critical transmission resource that has served members for 40 years received new life as Great River Energy upgraded its high-voltage, direct-current system. The unique 436-mile transmission line delivers power directly from the 1,151-megawatt Coal Creek Station power plant in central North Dakota to Minnesota. The upgrade will assure the line continues to provide value to members by operating reliably for decades to come.

Great River Energy began preparations for the upgrade in 2011 and completed work during a 74-day stretch in the early summer of 2019. Nearly all the equipment housed in two converter stations was removed and replaced with advanced technologies.

This project has been one of Great River Energy's most significant capital investments over the last several years and was completed on time and under budget.

RESPONSIBLE LAND MANAGEMENT RECOGNIZED

The North Dakota Public Service Commission presented Great River Energy with a reclamation award for outstanding stewardship of the land during the decommissioning and demolition of the Stanton Station power plant.

WASTE-TO-ENERGY PROJECT RETIRED

Operations of Great River Energy's Elk River Resource Recovery Project concluded in January 2019. In the 30 years of operation as a waste-to-energy project, the energy recovery station generated 4.6 million megawatt-hours of renewable energy and processed more than 10 million tons of municipal solid waste. Decommissioning is underway and the plant is scheduled to be demolished in 2020.

STUDYING THE LOW-CARBON GRID

Great River Energy joined nine other utilities to study what system improvements and infrastructure upgrades will be needed to achieve ambitious carbon reduction goals.

The study is critical to the eventual development of a comprehensive plan that will ensure the continued reliable delivery of low-cost electricity in a cost-effective manner.

2019 FINANCIALS

2019
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REPORT

FINANCIAL HIGHLIGHTS
(DOLLARS IN MILLIONS)

	2019	2018	CHANGE
OPERATIONS			
Revenues	$ 990.6	$ 1,039.8	$ (49.2)
Purchased power	$ 163.1	$ 163.0	$ 0.1
Purchased power-deferred charge write-off	$ -	$ 25.8	$ (25.8)
Fuel	$ 192.1	$ 215.1	$ (23.0)
Other operating expenses	$ 320.3	$ 331.6	$ (11.3)
Depreciation and amortization	$ 178.9	$ 160.0	$ 18.9
Interest expense	$ 128.9	$ 131.2	$ (2.3)
Other income	$ 15.7	$ 9.9	$ 5.8
Nonutility operations, excluding noncontrolling interest	$ 1.8	$ 1.1	$ 0.7
Net margin attributable to Great River Energy	$ 24.8	$ 24.1	$ 0.7
FINANCIAL POSITION			
Electric plant	$ 4,704.6	$ 4,518.9	$ 185.7
Utility plant—net	$ 2,664.2	$ 2,764.2	$ (100.0)
Deferred charges	$ 411.0	$ 369.1	$ 41.9
Cash and cash equivalents	$ 238.4	$ 276.8	$ (38.4)
Total assets	$ 3,872.2	$ 3,933.8	$ (61.6)
Long-term obligations	$ 2,361.2	$ 2,456.8	$ (95.6)
Members' capital	$ 662.4	$ 652.8	$ 9.6
Equity to capitalization ratio	21.2%	20.5%	0.7%

Great River Energy

FINANCIAL DISCUSSION AND ANALYSIS

Great River Energy's (GRE) financial position continued to benefit from another strong financial performance. In 2019, GRE returned $15.2 million of patronage capital back to its members and has plans to return another $10.2 million in 2020. Utility operating revenues ended the year at $990.6 million, which was down $49.2 million from 2018. While member sales remained strong, the retirement of the Elk River Resource Recovery Project (Elk River) and fewer non-member market sales were the primary drivers for the reduction in 2019. Despite the decrease in revenue, operating expense variances were favorable and produced a very positive net margin. As a result, the board of directors approved returning $5.0 million in December as a member refund, deferring another $8.2 million of member electric revenue as a regulatory liability, and writing off $8.3 million of deferred charges on the balance sheet. Without the refund, deferral, and write off, GRE's 2019 margin would have been $46.4 million. Positive actual variances versus budget from member unit sales, fuel expenses, purchase power contracts, and member unit sales resulted in a power cost adjustment (PCA) credit of $4.0 million to GRE's members for 2019. With the strong financial performance of 2019, GRE's equity to capitalization ratio ended the year at 21.2 percent. GRE's financial statements remain solid and positively position the cooperative for the future.

MARGINS

Net margin attributable to GRE for the year ended December 31, 2019 was $24.8 million and includes the net income from Midwest AgEnergy Group (MAG) and other equity method investments of $1.8 million. This compares to a budget of $23.0 million for 2019. GRE's indenture requires the maintenance of a margin-for-interest (MFI) ratio of 1.1x, excluding the operating results of subsidiaries and equity method investments. GRE's net utility margin, which is used to calculate the MFI ratio, was $23.0 million for 2019, resulting in an MFI ratio of 1.17x. GRE's board of directors targeted a debt service coverage (DSC) ratio of 1.17x when setting member rates for 2019. GRE's 2019 operations produced a DSC ratio of 1.26x.

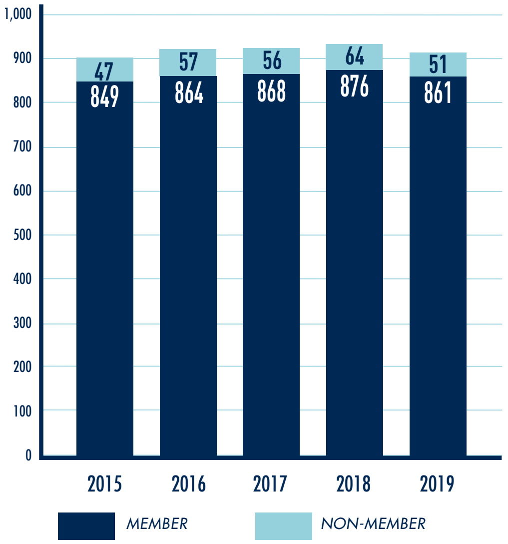
ELECTRIC REVENUE

Electric revenue decreased $27.6 million or 2.9 percent to $912.5 million in 2019 from $940.1 million in 2018. Electric revenue from member cooperatives was $861.3 million during 2019, a decrease of $14.4 million or 1.6 percent from $875.7 million in 2018. The decrease was related to milder weather in 2019 compared to 2018 and the expiration of two municipal customer contracts. This resulted in a 4.1 percent decrease in member megawatt hour (MWh) sales and a 5.6 percent decrease in megawatt (MW) sales. GRE refunded $5.0 million on member December bills and deferred member electric revenue of $8.2 million, which was collected from members in 2019, under regulatory accounting. GRE deferred member electric revenue of $10.0 million as a regulatory liability in 2018. GRE issued PCA credits of $4.0 million and $17.9 million in 2019 and 2018, respectively. The PCA allows GRE to credit or collect differences between actual and budgeted results in MISO market activity, purchased power, non-member revenue, and fuel. The 2019 PCA credit was primarily due to favorable budget variances in fuel expense, purchase power contracts, and member unit sales. This was partially offset by an unfavorable budget variance in the MISO market generation revenue.

Electric revenue from non-members decreased $13.2 million or 20.5 percent to $51.2 million in 2019 from $64.4 million in 2018. Energy sales decreased $10.4 million and demand sales decreased $1.7 million compared to 2018. This decrease was driven by a 9.1 percent reduction in non-member MWh sales and an average market price for energy that was down 15.8 percent to $25.17/MWh in 2019.

ELECTRIC REVENUE BILLED

(Dollars in millions)



OTHER OPERATING REVENUE

Other operating revenue decreased $21.6 million or 21.7 percent to $78.1 million in 2019 from $99.7 million in 2018. The decrease was primarily due to the retirement of Elk River and the loss of $23.9 million of refuse-derived fuel revenue, as well as decreased transmission revenue from the MISO market and inter-utility transmission agreements of $7.0 million due to less extreme weather in 2019 compared to 2018, which decreased transmission load from others. These decreases were partially offset by a $10.8 million gain recognized in 2019 related to the settlement of a steam contract with a third party.

OPERATING EXPENSES

Total operating expenses for 2019 were $854.4 million, a decrease of $41.1 million or 4.6 percent from $895.5 million in 2018.

Purchased power increased $0.1 million or 0.1 percent to $163.1 million in 2019 from $163.0 million in 2018. This was driven by increased MISO market purchases in 2019 compared to 2018, offset by decreased wind, hydro-electric, and other contractual purchases for energy (MWh) and demand (MW) output.

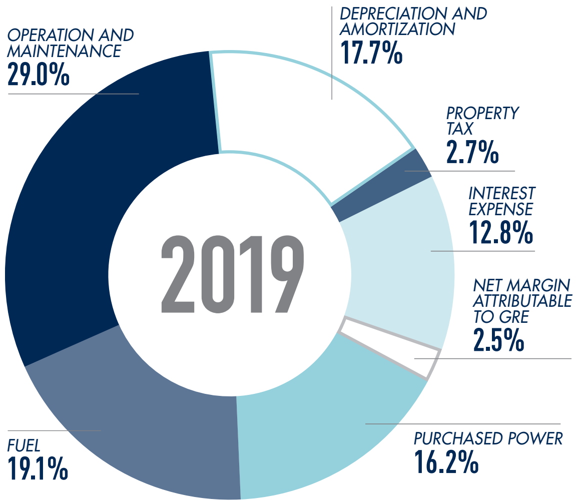
In 2018, GRE wrote off $25.8 million of the Genoa 3 contract settlement deferred asset as a charge to purchased power in accordance with regulatory accounting requirements.

Fuel expense decreased $23.0 million or 10.7 percent to $192.1 million in 2019 from $215.1 million in 2018. Fuel expense at the baseload facilities decreased $17.7 million or 8.8 percent in 2019 compared to 2018. This was primarily due to the major outage at Coal Creek Station (CCS) in 2019 (there was no major outage at CCS in 2018) and the retirement of Elk River, which in prior years included the costs of operating the refuse-derived fuel processing facility as fuel expense. These factors also drove an 11.8 percent decrease in baseload generation. Baseload output was lower (8,380 gigawatt-hours [GWhs] in 2019 compared to 9,500 GWhs in 2018), which increased the the average cost per GWh by 3.4 percent due to certain fixed fuel costs. Fuel expense at the peaking plants decreased $5.4 million or 37.4 percent in 2019 compared to 2018 due to market conditions that drove fewer dispatches. Overall, peaking generation was 51.6 percent lower in 2019 compared to 2018 (161 GWhs in 2019 compared to 333 GWhs in 2018) and average natural gas prices were 11.1 percent lower ($2.63/MMBtu in 2019 compared to $2.96/MMBtu in 2018).

Operation and maintenance expense decreased $12.0 million or 3.9 percent to $292.9 million in 2019 from $304.9 million in 2018. Power supply operation and maintenance expense decreased $12.8 million due largely to the retirement of Elk River in 2019 as well as less routine maintenance expenses incurred at CCS as a result of the major outage. Transmission operation and maintenance expense decreased $1.0 million due largely to a decrease in GRE's share of expenses associated with regional and area transmission projects owned by others within the MISO territory, as well as a decrease in transmission expenses to serve member load under inter-utility transmission agreements. These decreases were partially offset by an increase in general and administrative expense of $1.8 million in 2019 compared to 2018 due to inflationary increases as well as increases in benefit contributions, legal and consulting, and information and technology hardware and software maintenance expenses.

Depreciation and amortization increased $18.9 million or 11.8 percent to $178.9 million in 2019 from $160.0 million in 2018. The increase is due primarily to the impact of placing the direct-current transmission upgrade project in service during 2019, the one-time write off of $8.3 million of the interest and plant costs regulatory asset associated with Spiritwood Station (SWS), and the amortization of the regulatory asset related to the retirement of Elk River. In prior years, the depreciation associated with the refuse-derived fuel processing facility at Elk River was recorded as fuel expense.

EXPENSES AND MARGIN



OTHER INCOME (EXPENSE)

Other income—net increased $5.8 million to $10.5 million in 2019 from $4.7 million in 2018. The increase was due to the recognition of a deferred interest rate hedge settlement gain of $5.7 million in 2019. Interest expense—net of amounts capitalized decreased $2.3 million or 1.8 percent to $128.9 million in 2019 from $131.2 million in 2018. Interest incurred on GRE's long-term obligations decreased in line with the decrease in principal outstanding during 2019. Capitalized interest decreased $2.8 million to $3.4 million for 2019 due to the completion of large multi-year construction projects during the year.

FINANCIAL DISCUSSION AND ANALYSIS
CONTINUED

NONUTILITY OPERATIONS

Nonutility operating revenue and expense represent the operations of MAG, a subsidiary of GRE. MAG's operating income represents the operations of its two biorefinery plants, Blue Flint Ethanol and Dakota Spirit AgEnergy. MAG's operating income was $2.4 million and $1.2 million for the years ended December 31, 2019 and 2018, respectively, of which $1.9 million and $0.9 million, respectively, was attributable to GRE. The results for 2018 include the one-time write-off charge of $1.4 million of debt issuance costs related to MAG's refinancing of long-term debt.

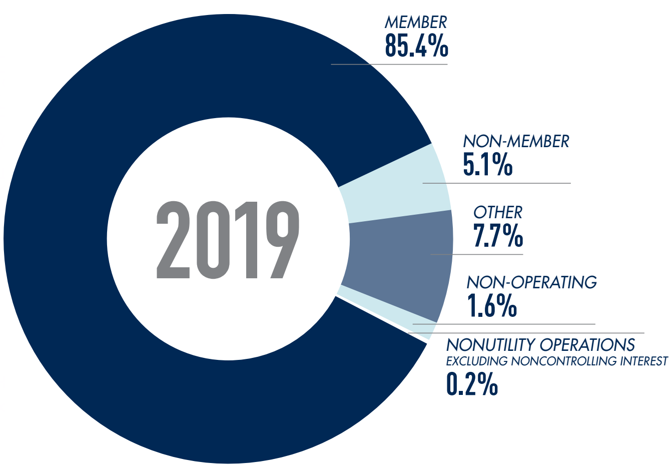
In January 2011, GRE entered into agreements with North Dakota Refined Coal LLC (NDRC) and its subsidiaries for the lease and operation of GRE's DryFining™ facility. Although GRE does not have any ownership interest in NDRC, it represents a variable interest entity of GRE and is consolidated in the financial statements. NDRC recognized a net loss of $20.0 million and $16.0 million for the years ended December 31, 2019 and 2018, respectively.

NONCONTROLLING INTEREST

GRE owns 78.43 percent of MAG and has reflected the third-party investors' 21.57 percent share of MAG's operating income as noncontrolling interest.

Because GRE does not have any ownership interest, NDRC's entire net loss is reflected as noncontrolling interest.

REVENUES

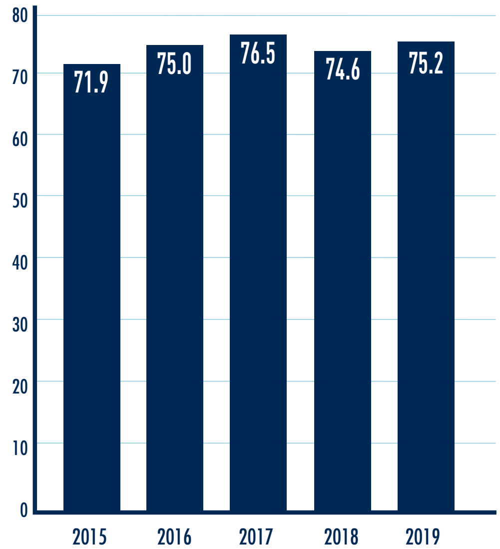


MEMBER RATE

GRE's 2019 member billed rate was 75.20 mills/kilowatt-hour (kWh) compared to 74.55 mills/kWh in 2018. The budgeted average member rates were 76.06 mills/kWh and 76.41 mills/kWh for 2019 and 2018, respectively. The increase in the 2019 actual average member rate compared to 2018 was due to an increase in the 2019 blended average rate collected of 0.9 percent, and the impact of a $4.0 million PCA credit in 2019 compared to a $17.9 million PCA credit in 2018. The 2019 and 2018 member billed rates reflect the refunds issued to members of $5.0 million and $10.0 million in 2019 and 2018, respectively. The member refunds were provided in December of each year under regulatory accounting due to the strong financial results for the year.

MEMBER AVERAGE RATE PER kWh

Excluding WAPA | mills per kWh



BALANCE SHEET REVIEW

GRE's total consolidated assets were $3,872.2 million in 2019, a decrease of $61.6 million year-over-year from 2018.

Utility plant—net decreased $100.0 million to $2,664.2 million in 2019 from $2,764.2 million in 2018. Utility plant decreased primarily as a result of the depreciation of existing utility and coal mine plant assets, the transfer of the net book value of Elk River to deferred charges—plant retirements, and the reclassification of certain leased coal mine assets to other assets and investments as operating leases with the adoption of Accounting Standard Update (ASU) 2016-02, *Leases (Topic 842)*. This decrease was offset partially by an increase in electric plant due to continued construction of the direct-current transmission project. This project was placed into service during 2019.

Nonutility plant and equipment—net decreased $10.4 million to $156.4 million in 2019 from $166.8 million in 2018 due to the depreciation of MAG's plant assets.

Other assets and investments increased $84.2 million to $529.1 million in 2019 from $444.9 million in 2018. Deferred charges—financing related increased $11.9 million due to the change in the fair value of open interest rate hedges, offset partially by the amortization of settled interest rate hedges. Deferred charges—plant retirements increased $29.1 million due to the retirement and transfer of the net book value of Elk River as well as an increase in the demolition accrual, offset partially by amortization and a reduction in the Stanton Station demolition accrual. Deferred charges—other increased $4.3 million due to the deferral of CCS outage expenses from the major outage in 2019 and the establishment of a tax settlement accrual, offset partially by amortization and the one-time write off of $8.3 million of the interest and plant costs regulatory asset associated with SWS. Additionally, other long-term assets increased $39.6 million, of which $37.5 million was due to the adoption of ASU 2016-02, *Leases (Topic 842)*. This required GRE, Falkirk mine, and MAG to record right-of-use assets of $6.6 million, $8.2 million, and $22.7 million, respectively, for leases classified as operating leases.

Current assets decreased $35.3 million to $522.6 million in 2019 from $557.9 million in 2018. Cash and cash equivalents decreased $38.3 million due to cash used for plant additions and repayment of long-term obligations exceeding cash provided by operating activities. Accounts receivable—others decreased $8.1 million as a result of the retirement of Elk River and the loss of the refuse-derived fuel revenue as well as a decrease in GRE HERC Services, LLC (HERC) receivables in 2019. Prepaids and other current assets decreased $3.5 million due to the ending of a prepaid capacity contract during 2019. These decreases were offset partially by an increase in accounts receivable—members of $16.9 million. This was due to increased sales in November and December 2019 when compared with the same period in 2018 and the impact of a $5.0 million member refund in 2019 compared to a $10.0 million member refund in 2018.

Members' capital increased $9.6 million to $662.4 million in 2019 as a result of $24.8 million of net margin attributable to GRE added in 2019, offset partially by the retirement of $15.2 million of patronage capital returned to members. GRE's equity to capitalization ratio (excluding MAG and NDRC) was 21.2 percent at the end of 2019.

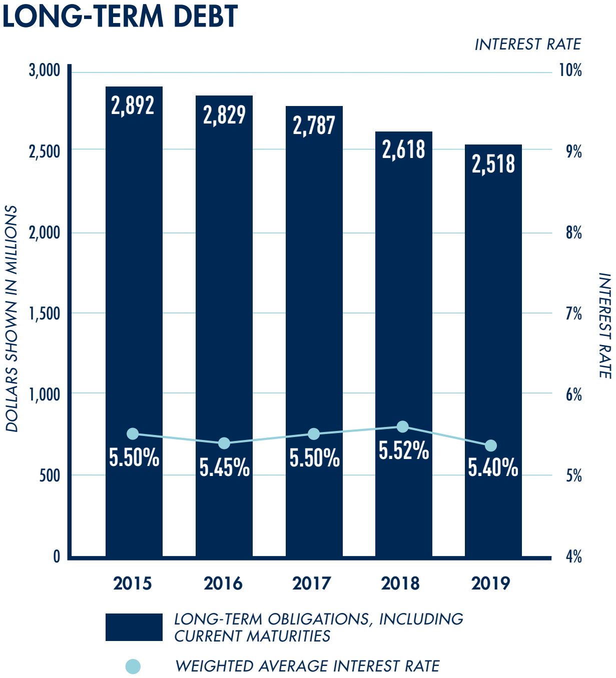
Noncontrolling interest—subsidiary represents the capital attributable to MAG's third-party investors, which own 21.57 percent of MAG.

Noncontrolling interest—variable interest entity represents the capital attributable to NDRC.

Other noncurrent liabilities increased $24.2 million to $164.8 million in 2019 from $140.6 million in 2018. This increase was due to the adoption of ASU 2016-02, *Leases (Topic 842)*, which required GRE to record a liability for the noncurrent portion of leases classified as operating leases.

Regulatory liabilities decreased $11.6 million to $52.0 million in 2019 from $63.6 million in 2018. The decrease was due to the recognition of the remaining $5.7 million of deferred interest rate hedge settlement gain originally deferred in 2013 and the recognition of $15.4 million of deferred member revenue. This decrease was partially offset by the deferral of $8.2 million of member electric revenue in 2019 and the amortization of other regulatory liabilities.

LONG-TERM DEBT



Long-term obligations decreased $95.6 million to $2,361.1 million in 2019 from $2,456.7 million in 2018. The decrease is due to scheduled principal payments made during the year of $141.6. million from GRE and $7.1 million from MAG, as well as a $17.4 million decrease from Falkirk Mine due to scheduled finance lease payments and the impact of reclassifying certain leases as operating leases with the adoption of ASU 2016-02, *Leases (Topic 842)*. These decreases were offset partially by a $70.0 million increase in the unsecured revolving credit facility.

Current liabilities decreased $6.9 million to $424.4 million in 2019 from $431.3 million in 2018. Current portion of long-term obligations decreased $4.1 million due to Falkirk Mine reclassifying certain leases as operating leases with the adoption of ASU 2016-02, *Leases (Topic 842)*. Accounts payable decreased $11.6 million due to decreases at GRE, Falkirk Mine, and HERC. Accrued interest payable decreased $43.6 million due to the January 2020 interest payments being made in December 2019. These decreases were offset partially by increases in notes payable to members of $9.7 million, other accrued liabilities and notes payable of $24.4 million, and derivative instruments of $15.9 million. The notes payable increase was driven by increased member investments in December 2019. The other accrued liabilities and notes payable increase was driven by the inclusion of the current portion of operating lease liabilities due to the adoption of ASU 2016-02, *Leases (Topic 842)*, the inclusion of a MISO Attachment O accrual, the establishment of a tax settlement accrual, and an increase in the Elk River demolition estimate. The derivative instruments increase was due to an increase in the mark-to-market valuation of certain interest rate derivative instruments in a liability position at year end 2019.

LIQUIDITY POSITION AND FINANCING

Excluding subsidiaries, GRE's year end 2019 unrestricted available liquidity of $562.8 million was comprised of cash and cash equivalents of $215.2 million and unused capacity on its existing unsecured credit facilities of $347.6 million. GRE's unsecured credit facilities include a $400.0 million revolving credit agreement that expires in May 2021 and a $30.0 million line of credit with CoBank ACB (CoBank) that expires in October 2020. GRE uses its unsecured credit facilities for general working capital and for financing its construction program. GRE has the option to increase the aggregate amount of credit extended to $525.0 million under the revolving credit agreement, subject to certain terms and conditions.

Construction borrowings on the unsecured credit facilities are repaid periodically with issuances of long-term secured debt under GRE's Indenture of Mortgage, Security Agreement and Financing Statement. Since GRE's 2007 prepayment of its debt under the RUS Mortgage with the issuance of the $1.3 billion Series 2007A bonds, GRE has issued an additional $2.35 billion of secured debt.

Utilizing existing available cash and cash equivalents, budgeted internally generated funds, and planned short-term borrowings under credit facilities, GRE anticipates being able to fund planned additions and upgrades to existing generation, transmission, and other general plant facilities until the next forecasted debt issuance.

GRE's financial position continues to strengthen. GRE returned $15.2 million of patronage capital to its members in 2019 and based on the financial position at December 31, 2019, has plans to return an additional $10.2 million in early 2020. In addition to this, GRE has maintained its competitive member rates within the region, investment grade credit ratings, and strong liquidity position. GRE is pleased with its strong 2019 financial results and believes it is well positioned to continue achieving its future financial and operational goals.

MANAGEMENT REPORT

TO THE BOARD OF DIRECTORS AND MEMBERS OF GREAT RIVER ENERGY:

Management is responsible for the fairness and accuracy of the financial information presented in this annual report. The accompanying financial statements have been prepared in accordance with generally accepted accounting principles, using management's best estimates and judgments where appropriate. Great River Energy maintains an internal accounting control system that provides reasonable assurance of the integrity and reliability of the financial statements and the protection of assets from loss or unauthorized use or disposition. Directors, who are not employees, make up the Finance and Audit Committee of the Board of Directors. The committee meets regularly with management and independent public accountants to review and discuss Great River Energy's internal accounting controls and financial reports. The independent public accountants have free access to the committee and the board of directors, without management present, to discuss the findings of their audits.

David Saggau
President and CEO
Great River Energy
Maple Grove, Minnesota
March 12, 2020

TO THE BOARD OF DIRECTORS OF GREAT RIVER ENERGY

Maple Grove, Minnesota

We have audited the accompanying consolidated financial statements of Great River Energy (the "Company"), which comprise the consolidated balance sheets as of December 31, 2019 and 2018, and the related consolidated statements of operations and comprehensive income, changes in capital, and cash flows for the years then ended and the related notes to the consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We did not audit the consolidated financial statements of Midwest AgEnergy (MAG), a consolidated subsidiary, or The Falkirk Mining Company (Falkirk), a variable interest entity, whose statements reflect total assets constituting 5% and 5% of consolidated total assets as of December 31, 2019 and 2018, respectively, and total operating revenues constituting 21%, 20%, and 20% of consolidated total operating revenues for each of the three years in the period ended December 31, 2019. Those statements were audited by other auditors, whose reports have been furnished to us, and our opinion, insofar as it relates to the amounts included for MAG and Falkirk, is based solely on the reports of the other auditors. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Company's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Great River Energy as of December 31, 2019 and 2018, and the results of their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Deloitte & Touche LLP

Minneapolis, Minnesota
March 12, 2020

CONSOLIDATED BALANCE SHEETS

AS OF DECEMBER 31, 2019 AND 2018 (IN THOUSANDS)

ASSETS	2019	2018
UTILITY PLANT:		
Electric plant	$ 4,704,572	$ 4,518,851
Coal mine plant	248,183	322,407
Plant to be retired—net of accumulated depreciation	-	35,138
Construction work in progress	46,492	164,432
Less accumulated depreciation and amortization	(2,334,998)	(2,276,628)
Utility plant—net	2,664,249	2,764,200
NONUTILITY PLANT AND EQUIPMENT—Net	156,361	166,835
OTHER ASSETS AND INVESTMENTS:		
Restricted investments—deferred compensation	13,591	11,682
Other investments	32,605	31,754
Deferred charges:		
Financing related	118,927	106,996
Contract settlement	56,092	59,567
Plant retirements	95,252	66,132
Other	140,701	136,430
Other long-term assets	71,910	32,324
Total other assets and investments	529,078	444,885
CURRENT ASSETS:		
Cash and cash equivalents	238,444	276,772
Restricted cash	2,293	2,743
Accounts receivable:		
Members	143,119	126,196
Others	23,855	31,956
Inventories:		
Materials and supplies	63,576	64,013
Fuel	20,189	19,855
Other	17,849	19,762
Prepaids and other current assets	8,133	11,589
Derivative instruments	5,099	4,984
Total current assets	522,557	557,870
TOTAL	$ 3,872,245	$ 3,933,790

CONTINUED

CONSOLIDATED BALANCE SHEETS

AS OF DECEMBER 31, 2019 AND 2018 (IN THOUSANDS)

CAPITAL AND LIABILITIES	2019	2018
CAPITAL:		
Members:		
Patronage capital	$ 661,158	$ 651,552
Memberships	3	3
Additional paid-in capital—subsidiary—MAG	1,195	1,195
Total members' capital	662,356	652,750
Noncontrolling interest:		
Subsidiary—MAG	24,951	24,421
Variable interest entity—NDRC	166,841	150,948
Total noncontrolling interest	191,792	175,369
Total capital	854,148	828,119
OTHER NONCURRENT LIABILITIES	164,842	140,568
REGULATORY LIABILITIES	52,017	63,634
LONG-TERM OBLIGATIONS—Less current portion	2,361,160	2,456,760
DEFERRED COMPENSATION	13,591	11,682
DEFERRED INCOME TAXES	2,110	1,715
COMMITMENTS AND CONTINGENCIES		
CURRENT LIABILITIES:		
Current portion of long-term obligations	157,099	161,217
Notes payable to members	44,420	34,679
Accounts payable	60,477	72,047
Property and other taxes	24,271	21,970
Other accrued liabilities and notes payable	90,131	65,758
Accrued interest payable	13,617	57,213
Derivative instruments	34,362	18,428
Total current liabilities	424,377	431,312
TOTAL	$ 3,872,245	$ 3,933,790

SEE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS.

CONCLUDED

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME

FOR THE YEARS ENDED DECEMBER 31, 2019, 2018, AND 2017 (IN THOUSANDS)

UTILITY OPERATIONS	2019	2018	2017
UTILITY OPERATING REVENUE:			
Electric revenue	$ 912,514	$ 940,054	$ 923,916
Other operating revenue	78,099	99,735	92,369
Total utility operating revenue	990,613	1,039,789	1,016,285
UTILITY OPERATING EXPENSES:			
Purchased power	163,107	162,996	177,278
Purchased power—deferred charge write-off	-	25,840	-
Fuel	192,068	215,096	204,074
Operation and maintenance	292,922	304,892	298,704
Depreciation and amortization	178,938	160,033	156,941
Property and other taxes	27,381	26,635	29,822
Total utility operating expenses	854,416	895,492	866,819
UTILITY OPERATING MARGIN	136,197	144,297	149,466
OTHER INCOME (EXPENSE):			
Other income—net	10,520	4,707	3,962
Interest income	5,203	5,215	2,573
Interest expense—net of amounts capitalized	(128,920)	(131,219)	(133,001)
Other expense—net	(113,197)	(121,297)	(126,466)
NET UTILITY MARGIN	23,000	23,000	23,000
NONUTILITY OPERATIONS:			
Operating revenue	263,996	256,104	253,948
Operating expense	261,577	253,494	239,542
Loss on debt extinguishment	-	1,372	-
Operating income	2,419	1,238	14,406
(Loss) income from equity method investments	(72)	234	(94)
Loss from variable interest entity—NDRC	(20,036)	(16,022)	(19,102)
Total nonutility operations	(17,689)	(14,550)	(4,790)
NET MARGIN AND COMPREHENSIVE INCOME, INCLUDING NONCONTROLLING INTEREST	5,311	8,450	18,210
NONCONTROLLING INTEREST:			
Subsidiary—MAG	(530)	(335)	(3,127)
Variable interest entity—NDRC	20,036	16,022	19,102
Total noncontrolling interest	19,506	15,687	15,975
NET MARGIN AND COMPREHENSIVE INCOME ATTRIBUTABLE TO GREAT RIVER ENERGY	$ 24,817	$ 24,137	$ 34,185

SEE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS.

CONSOLIDATED STATEMENTS OF CHANGES IN CAPITAL

FOR THE YEARS ENDED DECEMBER 31, 2019, 2018, AND 2017 (IN THOUSANDS)

				Noncontrolling Interest		
	Patronage Capital	Memberships	Additional Paid-in Capital	Subsidiary—MAG	Variable Interest Entity—NDRC	Total Capital
BALANCE—January 1, 2017	$ 593,230	$ 3	$ 1,195	$ 20,959	$ 113,646	$ 729,033
Net margin (loss) and comprehensive income (loss)	34,185	-	-	3,127	(19,102)	18,210
Capital contributed by noncontrolling interest	-	-	-	-	45,050	45,050
Capital distributed to noncontrolling interest	-	-	-	-	(7,520)	(7,520)
Dividends paid by noncontrolling interest	-	-	-	-	(806)	(806)
BALANCE—December 31, 2017	$ 627,415	$ 3	$ 1,195	$ 24,086	$ 131,268	$ 783,967
Net margin (loss) and comprehensive income (loss)	24,137	-	-	335	(16,022)	8,450
Capital contributed by noncontrolling interest	-	-	-	-	50,753	50,753
Capital distributed to noncontrolling interest	-	-	-	-	(14,061)	(14,061)
Dividends paid by noncontrolling interest	-	-	-	-	(990)	(990)
BALANCE—December 31, 2018	$ 651,552	$ 3	$ 1,195	$ 24,421	$ 150,948	$ 828,119
Net margin (loss) and comprehensive income (loss)	24,817	-	-	530	(20,036)	5,311
Return of members' patronage capital	(15,211)	-	-	-	-	(15,211)
Capital contributed by noncontrolling interest	-	-	-	-	47,611	47,611
Capital distributed to noncontrolling interest	-	-	-	-	(10,656)	(10,656)
Dividends paid by noncontrolling interest	-	-	-	-	(1,026)	(1,026)
BALANCE—December 31, 2019	$ 661,158	$ 3	$ 1,195	$ 24,951	$ 166,841	$ 854,148

SEE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS.

CONSOLIDATED STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED DECEMBER 31, 2019, 2018, AND 2017 (IN THOUSANDS)

	2019	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net margin, including noncontrolling interest	$ 5,311	$ 8,450	$ 18,210
Adjustments to reconcile net margin to net cash provided by operating activities:			
Depreciation and amortization:			
Included in depreciation and amortization	178,938	160,033	156,941
Included in fuel and interest	21,890	30,091	31,908
Included in operation and maintenance	19,288	13,382	13,382
Included in nonutility operating expense	10,475	11,583	11,374
Loss (income) from equity method investments	72	(234)	94
Patronage credits earned from investments	(1,773)	(2,207)	(2,152)
Deferred charges	(27,747)	22,840	(37,413)
Regulatory liabilities	(12,875)	10,000	17,944
Changes in working capital (excluding cash, investments, and borrowings):			
Accounts and long-term receivables	(7,763)	12,477	7,996
Inventory and other assets	16,223	694	(8,166)
Accounts payable, taxes, and other accrued expenses	(6,121)	(19,640)	(28,691)
Accrued interest	(43,596)	(4,253)	775
Noncurrent liabilities	(10,596)	(7,386)	4,599
Net cash provided by operating activities	141,726	235,830	186,801
CASH FLOWS FROM INVESTING ACTIVITIES:			
Utility plant additions	(127,221)	(149,770)	(127,003)
Nonutility plant and equipment additions	(415)	(1,353)	(6,954)
Proceeds from sale of property	876	219	531
Investment in equity method investments	-	(1,000)	-
Redemption of patronage capital from investments	922	1,449	1,405
Net cash used in investing activities	(125,838)	(150,455)	(132,021)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from issuance of long-term obligations	304,900	78,570	625,000
Repayments of long-term obligations	(390,025)	(247,978)	(676,124)
Return of members' patronage capital	(15,211)	-	-
Cost of new debt issuances, leases, and interest rate hedging instruments	-	(957)	(3,412)
Notes received from members—net	9,741	2,616	4,876
Variable interest entity—NDRC:			
Capital contributed by noncontrolling interest	47,611	50,753	45,050
Capital distributed to noncontrolling interest	(10,656)	(14,061)	(7,520)
Dividends paid by noncontrolling interest	(1,026)	(990)	(806)
Net cash used in financing activities	(54,666)	(132,047)	(12,936)
NET (DECREASE) INCREASE IN CASH, CASH EQUIVALENTS, AND RESTRICTED CASH	(38,778)	(46,672)	41,844
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH—Beginning of year	279,515	326,187	284,343
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH—End of year	$ 240,737	$ 279,515	$ 326,187

SEE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS.

1. ORGANIZATION

Organization—Great River Energy (GRE) is a Minnesota electric generation and transmission cooperative corporation providing wholesale electric service to member distribution cooperatives engaged in the retail sale of electricity to member consumers in Minnesota and a small section of Wisconsin. This service is provided in accordance with the terms of the power purchase and transmission service contracts between GRE and the members. These contracts have expiration dates of December 31, 2045, and December 31, 2050, respectively.

Basis of Accounting—The consolidated financial statements are prepared on the accrual basis of accounting and include the accounts of GRE as well as the following entities:

ENTITY	RELATIONSHIP
The Falkirk Mining Company (Falkirk)	Variable interest entity
North Dakota Refined Coal LLC (NDRC)	Variable interest entity
Midwest AgEnergy Group, LLC (MAG)	Subsidiary of GRE
Blue Flint Ethanol LLC (Blue Flint)	Subsidiary of MAG
Dakota Spirit AgEnergy, LLC (DSA)	Subsidiary of MAG

The consolidation of NDRC also includes NDRC's wholly owned subsidiaries, North Dakota Refined Coal Project Company A LLC and North Dakota Refined Coal Project Company B LLC.

All intercompany balances and transactions have been eliminated in consolidation, except for the steam sales between GRE and MAG discussed within Note 1.

Falkirk—GRE has an agreement with Falkirk for the development and operation of a lignite coal mine. Falkirk is the coal supplier for the Coal Creek Station (CCS), GRE's facility located near Underwood, North Dakota, and Spiritwood Station (SWS), GRE's facility located near Jamestown, North Dakota. Falkirk is a wholly owned subsidiary of the North American Coal Corporation (NACC), which is a wholly owned subsidiary of NACCO Industries, Inc. Falkirk is principally engaged in lignite mining through the operation of a surface mine in North Dakota.

GRE is required to provide financing for all costs associated with the mine development and operation. Accounting principles generally accepted in the United States of America (GAAP) require GRE to consolidate Falkirk in its financial statements since Falkirk qualifies as a variable interest entity for which GRE is the primary beneficiary.

The coal purchase price includes all costs incurred by Falkirk for development and operation of the mine, including the following (in thousands):

	2019	2018	2017
Interest expense	$ 414	$ 956	$ 1,436
Income tax expense	2,305	2,462	5,259
Net income	13,557	13,879	9,841

These costs are part of the contract cost of coal purchased under the coal sales agreement and included in fuel expense on the consolidated statements of operations and comprehensive income. Accordingly, the net effect of consolidating the income statement of Falkirk had no impact on GRE's margin for the years ended December 31, 2019, 2018, and 2017.

Assets and liabilities of Falkirk included in the consolidated balance sheets as of December 31, 2019 and 2018, after intercompany eliminations, are as follows (in thousands):

	2019	2018
Coal mine plant	$ 199,878	$ 283,102
Construction work in progress	6,895	703
Accumulated depreciation and amortization	(122,597)	(168,289)
Deferred charges	13,653	14,915
Other long-term assets	19,161	8,227
Materials and supplies inventory	22,091	20,138
Fuel inventory	6,179	5,462
Other current assets	1,335	2,850
Other noncurrent liabilities	32,740	25,748
Long-term obligations	9,986	27,403
Current liabilities	16,214	29,258

NDRC—Beginning on January 21, 2011, GRE has an agreement with NDRC, or its wholly owned subsidiaries, for the lease and operation of the DryFining facility at CCS. NDRC purchases coal from GRE under fixed pricing, refines the coal in the DryFining facility, and sells the refined coal to GRE under fixed pricing. GRE provides certain other services to NDRC under fee arrangements. The lease and related agreements have a 16-year term; however, included in the participation agreement is a purchase option to buy out the remaining term of the transaction on January 31, 2020. During 2019, GRE exercised the purchase option and agreed to buy out the remaining term for $17.0 million. The transaction closed on January 31, 2020 (see Note 15).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
CONTINUED

GAAP requires GRE to consolidate NDRC in its financial statements since NDRC qualifies as a variable interest entity for which GRE is the primary beneficiary. NDRC entered into an operating and maintenance agreement with NoDak Energy Services LLC (NoDak) to perform the day-to-day operation and maintenance of the DryFining facility. NoDak qualifies as a variable interest entity for which NDRC is the primary beneficiary. As a result, GRE is also consolidating NoDak as part of NDRC. The utility fuel operating expense in the consolidated statements of operations and comprehensive income includes a net benefit to GRE of $14.7 million, $10.5 million, and $14.2 million for the years ended December 31, 2019, 2018, and 2017, respectively, related to this agreement. This includes the revenue from the lease and other agreements partially offset by the costs incurred for the purchase of refined coal from NDRC. The net loss incurred by NDRC of $20.0 million, $16.0 million, and $19.1 million for the years ended December 31, 2019, 2018, and 2017, respectively, is reported as nonutility operations in the consolidated statements of operations and comprehensive income and is all attributed to the noncontrolling interest owners.

The agreements include various operational metrics, such as minimum requirements on the tons of refined coal purchased by GRE and the achievement of qualified emission reductions. In the event that the operational metrics are not met over the life of the transaction, GRE may be required to pay specified amounts to NDRC at transaction termination. No liability has been recorded by GRE in the consolidated financial statements related to these operational metrics as of December 31, 2019 and 2018 (see Note 15).

Assets and liabilities of NDRC included in the consolidated balance sheets as of December 31, 2019 and 2018, after intercompany eliminations, are as follows (in thousands):

	2019	2018
Cash	$ 7,386	$ 8,032
Prepaids and other current assets	1	92
Current liabilities	889	813

JPM Capital Corporation and WM Refined Coal, LLC hold a 55 percent and 45 percent membership interest, respectively, in NDRC. NoDak is a wholly owned subsidiary of TRU Global Energy Services LLC, a wholly owned subsidiary of NACC.

MAG—GRE is a 78.43 percent owner in MAG. MAG has two wholly owned subsidiaries, Blue Flint and DSA. Blue Flint operates an ethanol biorefinery facility located in Underwood, North Dakota. DSA operates a biorefinery located near Jamestown, North Dakota. Blue Flint and DSA each have a production capacity of approximately 75-80 million gallons of undenatured ethanol per year. Both facilities are dry-mill production facilities that produce and sell ethanol, dry and modified distillers grain, and distillers oil.

Blue Flint purchases steam and water under a long-term contract from CCS, and DSA purchases steam and water under a long-term contract from SWS for use in the production of ethanol and related products. Steam and water purchases were $12.5 million, $12.9 million, and $13.4 million for the years ended December 31, 2019, 2018, and 2017, respectively. The sale of steam and water by CCS and SWS is recorded as utility other operating revenue, and the purchase by Blue Flint and DSA is recorded as nonutility operating expense. This transaction was not eliminated in consolidation for 2019, 2018, and 2017.

Utility net margin and nonutility operating income as of December 31, 2019, 2018, and 2017, would be as follows had this transaction been eliminated (in thousands):

	2019		2018		2017	
	As Presented	With Elimination	As Presented	With Elimination	As Presented	With Elimination
Net utility margin	$ 23,000	$ 10,512	$ 23,000	$ 10,084	$ 23,000	$ 9,591
Nonutility operating income	1,817	14,305	1,137	14,053	11,185	24,594
Total	$ 24,817	$ 24,817	$ 24,137	$ 24,137	$ 34,185	$ 34,185

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Regulatory Accounting—As the board of directors sets rates on a cost-of-service basis, GRE follows GAAP related to the effects of certain types of regulation, which provide for the reporting of assets and liabilities consistent with the economic effect of the rate structure. As such, regulatory assets are recorded to reflect probable future revenues associated with certain costs that are expected to be recovered from customers through the ratemaking process. Regulatory liabilities are recorded to reflect probable future reductions in revenues associated with amounts that are expected to be credited to customers through the ratemaking process. For further information, see Note 11.

Public Business Entity—GRE believes it meets the definition of a public business entity due to the issuance of debt securities that are traded on an over-the-counter market.

Cash, Cash Equivalents, and Restricted Cash—Cash equivalents include all highly liquid investments with original maturities of three months or less (e.g., money market funds). Certain cash and cash equivalents are classified as investments when they relate to trust funds held for long-term purposes.

Restricted cash represents MAG cash deposits with commodity investment brokers as collateral to cover settlements of futures and options contracts.

Supplemental Cash Flow Information—Supplemental cash flow information for the years ended December 31, 2019, 2018, and 2017, is as follows (in thousands):

	2019	2018	2017
Supplemental disclosure of cash flow information:			
Cash paid for interest—net of amounts capitalized	$ 178,440	$ 143,799	$ 142,334
Cash paid for taxes—Falkirk	$ 945	$ 2,359	$ 3,743
Noncash investing and financing activities:			
Utility and nonutility plant acquisitions included in accounts payable	$ 6,199	$ 6,613	$ 9,954

Interest on borrowed funds in the amount of $3.4 million, $6.2 million, and $5.1 million was capitalized in 2019, 2018, and 2017, respectively, and these amounts are excluded from the cash payments for interest noted above.

Inventories—Fuel inventory is carried at average cost and includes coal, lime, oil, and gas used for electric generation. Other inventory represents corn, work in process, chemicals, ethanol, distillers grains, and corn oil inventory held at MAG. Corn, work in process, and chemical inventory is stated at the lower of cost (first-in, first-out method) or net realizable value. Ethanol, distillers grains, and corn oil inventory is stated at the lower of cost (average monthly cost) or net realizable value. Materials and supplies inventory is stated at lower of average cost or net realizable value.

Emission allowances are also accounted for as fuel inventory and recorded at the lower of cost or net realizable value. The U.S. Environmental Protection Agency (EPA) has requirements limiting the amount of sulfur dioxide and nitrogen oxides that can be emitted from GRE-owned power plants. GRE is allotted allowances under the Acid Rain and the Cross-State Air Pollution Rule Programs for its use. Renewable energy credits (RECs) are either purchased or acquired in the course of generation, or purchased as a result of meeting load obligations, and are recorded as fuel inventory at cost. GRE's allowances and RECs in inventory have a recorded cost of $0.4 million and $0.6 at December 31, 2019 and 2018, respectively.

Utility Plant—Utility plant is stated at original cost, which includes materials, contract and direct labor, overhead, and interest during construction. Interest charged to construction on borrowed funds are included as a component of utility plant cost and credited to interest expense. The rates applied reflect the actual rates for borrowed funds. Repairs and maintenance are charged to operations as incurred. When generation and transmission assets are retired, sold, or otherwise disposed of, the original cost, plus the cost of removal, less salvage, is charged to accumulated depreciation and the corresponding gain or loss is amortized over the remaining life of the plant. Included in accumulated depreciation are retired assets totaling $(36.5) million and $(38.4) million at December 31, 2019 and 2018, respectively, that will continue to be amortized. Also included in accumulated depreciation are nonlegal or noncontractual costs of removal components in the amount of $55.4 million and $53.2 million for 2019 and 2018, respectively. When other property assets are retired or sold, the cost and related accumulated depreciation are eliminated and any gain or loss is reflected in depreciation expense.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
CONTINUED

Plant To Be Retired—Net of Accumulated Depreciation—Plant to be retired represents the undepreciated net book value of the Elk River Resource Recovery Project (Elk River) as of December 31, 2018. During 2019, Elk River discontinued operations and regulatory accounting commenced for the remaining undepreciated net book value, which was transferred to deferred charges—plant retirements. For further information, see Note 11.

Depreciation and Amortization—Depreciation for financial reporting purposes is provided based upon the straight-line method at rates designed to amortize the original cost of properties over their estimated service lives. The effective depreciation rate was 3.3 percent, 3.2 percent, and 3.2 percent for 2019, 2018, and 2017, respectively. The range of useful lives for utility plant is three to 50 years. Coal mine equipment is depreciated or amortized over the estimated useful lives using either the straight-line method or the units-of-production method based on estimated recoverable tonnage and is included in utility fuel expense in the consolidated statements of operations and comprehensive income. Amortization of coal lands and leaseholds is calculated on the units-of-production method based upon estimated recoverable tonnage and is included in utility fuel expense in the consolidated statements of operations and comprehensive income. Amortization expense also includes the accretion expense related to asset retirement obligations and the amortization of deferred charges, except as described in Note 11.

Nonutility Plant and Equipment—Net—Nonutility plant and equipment represents the plant and equipment assets of MAG. Depreciation for financial reporting purposes is provided based upon the straight-line method. The range of useful lives for nonutility plant and equipment is three to 40 years.

A summary of nonutility plant and equipment—net as of December 31, 2019 and 2018, is as follows (in thousands):

	2019	2018
Land improvements	$ 16,166	$ 16,166
Buildings and improvements	36,993	36,993
Plant equipment and other	161,703	162,498
Construction work in progress	6	121
Less accumulated depreciation	(58,507)	(48,943)
	$ 156,361	$ 166,835

Recoverability of Long-Lived Assets—GRE reviews its long-lived assets whenever events or changes in circumstances indicate the carrying value of the assets may not be recoverable. GRE determines potential impairment by comparing the carrying value of the asset with the net cash flows expected to be provided by the operating activities of the business or related products. Should the sum of the expected cash flows be less than the carrying values, GRE would determine whether an impairment loss should be recognized. No impairment losses have been identified in the consolidated financial statements.

Income Taxes—GRE accounts for income taxes using the asset/liability method prescribed under ASC 740, *Income Taxes*. Under this method, deferred income taxes are recognized for temporary differences between the tax and financial reporting bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. GRE establishes a regulatory asset or liability to account for the difference between GRE's deferred tax assets or liabilities. A regulatory asset or liability associated with deferred income taxes generally represents the future increase or decrease in income taxes payable that will be received or settled through future rate increases.

Members' Patronage Capital—Revenues in excess of current-period costs (net margin and comprehensive income attributable to GRE in the consolidated statements of operations and comprehensive income) in any year are designated as assignable margins. These assignable margins are considered capital furnished by the members and are credited to the members' individual accounts. Assignable margins are held by GRE until they are retired and returned, without interest, at the discretion of the board of directors and subject to long-term obligation agreement restrictions (see Note 5). The board of directors has adopted a policy of retiring and returning assignable margins (patronage capital) on a first-in, first-out basis. Upon approval by the board of directors, GRE retired and returned patronage capital of $15.2 million in 2019. Retained assignable margins are designated as patronage capital in the consolidated balance sheets.

Use of Estimates—The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. The significant estimates in the consolidated financial statements relate to key inputs to actuarial calculations of defined benefit obligations, compensation and benefit accruals, asset retirement obligation liabilities, accrued property and other taxes, useful lives of utility and nonutility plant, recoverability of deferred tax assets, and contingencies and other reserves. Actual results could differ from those estimates.

Revenue Recognition—On January 1, 2018, GRE adopted Account Standard Update (ASU) 2014-09, *Revenue from Contracts with Customers (Topic 606)*, using the modified retrospective approach. GRE did not record a cumulative effect adjustment to retained earnings because the adoption did not have a material impact on the timing of revenue recognition as of the adoption date.

The revenue recognition principle in ASU 2014-19 is that an entity should recognize revenue to depict the transfer of goods and services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those good or services. The related disclosures below provide further understanding about the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers.

Revenues from Contracts with Customers

The revenues of GRE are primarily derived from providing wholesale electric service to members. Revenues from contracts with customers represent over 99 percent of all GRE revenues. Below is a disaggregated view of GRE's revenues from contracts with customers as well as other revenues, including their location on the statement of operations and comprehensive income (in thousands):

YEAR ENDED DECEMBER 31, 2019

Revenue Streams	Electric Revenue	Other Operating Revenue	Other Income-Net	Nonutility Operating Revenue
Member revenue	$ 861,300	$ -	$ -	$ -
Non-member revenue – MISO	29,403	-	-	-
Non-member revenue	21,811	-	-	-
Transmission revenue – related to others	-	46,817	-	-
Utility plant byproduct revenue	-	18,397	-	-
Other income – net	-	-	10,520	-
Ethanol sales	-	-	-	196,805
Ethanol byproduct revenue	-	-	-	61,164
Other revenue	-	11,745	-	9,167
Total revenue from contracts with customers	912,514	76,959	10,520	267,136
Interest income	-	-	5,203	-
Lease income	-	1,140	-	-
Realized and unrealized losses on commodity contracts	-	-	-	(3,140)
Total revenue	$ 912,514	$ 78,099	$ 15,723	$ 263,996
Timing of Revenue Recognition				
Services transferred over time	$ 912,514	$ 59,718	$ -	$ -
Goods transferred at a point in time	-	17,241	10,520	267,136
Total revenue from contracts with customers	$ 912,514	$ 76,959	$ 10,520	$ 267,136

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
CONTINUED

YEAR ENDED DECEMBER 31, 2018

Revenue Streams	Electric Revenue	Other Operating Revenue	Other Income-Net	Nonutility Operating Revenue
Member revenue	$ 875,623	$ -	$ -	$ -
Non-member revenue – MISO	41,446	-	-	-
Non-member revenue	22,985	-	-	-
Transmission revenue – related to others	-	53,806	-	-
Refuse-derived fuel revenue	-	24,799	-	-
Utility plant byproduct revenue	-	19,466	-	-
Other income – net	-	-	4,707	-
Ethanol sales	-	-	-	185,190
Ethanol byproduct revenue	-	-	-	56,802
Other revenue	-	-	-	8,538
Total revenue from contracts with customers	940,054	98,071	4,707	250,530
Interest income	-	-	5,215	-
Lease income	-	1,664	-	-
Realized and unrealized gains on commodity contracts	-	-	-	5,574
Total revenue	$ 940,054	$ 99,735	$ 9,922	$ 256,104
Timing of Revenue Recognition				
Services transferred over time	$ 940,054	$ 67,723	$ -	$ -
Goods transferred at a point in time	-	30,348	4,707	250,530
Total revenue from contracts with customers	$ 940,054	$ 98,071	$ 4,707	$ 250,530

Electric revenue

Electric revenues consist of wholesale electric power sales to members through the member power purchase and transmission service contracts, to non-members through bilateral contracts, and from participation in the Midcontinent Independent System Operator (MISO) market. All of the electric revenues meet the criteria to be classified as revenue from contracts with customers and are recognized over time as energy is delivered or transmitted. Revenue is recognized based on the metered quantity of electricity delivered or transmitted at the applicable contractual or market rates.

The rate schedules within the member contracts include a power cost adjustment, which allows for increases or decreases in member power billings based upon actual power costs compared to plan for certain categories of revenues and expenses. The power cost adjustment was a credit to GRE members of $4.0 million for 2019, $17.9 million for 2018, and a charge of $5.9 million for 2017. Credits or charges are recorded as a decrease or increase, respectively, in member revenues and are recorded in electric revenue in the consolidated statements of operations and comprehensive income.

In 2019, 2018, and 2017, GRE deferred the recognition of $8.2 million, $10.0 million, and $17.9 million, respectively, of member electric revenue under regulatory accounting (see Note 11). In 2019, GRE recognized deferred member electric revenues of $15.4 million under regulatory accounting (see Note 11). Deferred member electric revenues are recorded in electric revenue in the consolidated statements of operations and comprehensive income.

Other operating revenue

Other operating revenue primarily includes: revenue received from the transmission of electricity for others under MISO rate tariffs or under various integrated transmission agreements; revenue from the sale of utility plant byproducts, such as steam and fly ash; revenue related to the processing plant that transforms municipal solid waste into refuse-derived fuel; and other revenue. All of these revenue streams meet the criteria to be classified as revenue from contracts with customer. Transmission revenue for others is recognized over time as GRE stands ready to serve the load with its transmission assets per the agreements. Steam revenue is derived from supplying steam to Blue Flint and DSA located adjacent to CCS and SWS, respectively, and is recognized over time as the steam is transferred through and measured at the interconnection point. Fly ash is marketed and sold to external customers by a third party with whom GRE has a marketing agreement. Fly ash revenue is recognized as of the point in time when the third party completes the resale to the external customer. Refuse-derived fuel revenue consists of the fees charged to municipal waste haulers for receiving waste at the processing plant. Revenue is recognized as of a point in time based on the rate per ton of waste received. With the closure of Elk River in 2019, GRE no longer receives refuse-derived fuel revenue. For the year ended December 31, 2019, other revenue primarily consists of a gain recognized upon the settlement of a steam contract.

Other income – net

Other income – net primarily includes income from miscellaneous work performed for others and the operation of an energy recovery plant. The work for others relates to services provided by GRE to its members (or third parties) that is not included in the rate charged for electricity under the member power purchase and transmission service contracts. In 2019, GRE recognized a gain of $5.7 million in accordance with regulatory accounting. The gain resulted from the termination of certain derivative instruments in 2013 (see Note 11).

Nonutility operating revenue

Nonutility operating revenue represents revenues from MAG consolidated operations. Revenue from the production of ethanol and related byproducts is recognized when obligations under the terms of the respective contracts with customers are satisfied. This occurs with the transfer of control of products and risk of loss is assumed by customers, generally when the product is shipped from the facility. Revenue is measured as the amount of consideration expected to be received in exchange for transferring goods. This recognition represents a point in time satisfaction of the performance obligation. Revenue is also recognized on certain ethanol contracts that utilize future price indexes at the time of title transfer, when the price is estimable using a methodology which reflects future commodity price averages for the settlement month. This recognition represents a point in time satisfaction of the performance obligation.

Revenue Recognition Prior to ASU 2014-09

For the year ended December 31, 2017, electric revenue is recognized when energy is delivered to GRE's members and non-member organizations. Other operating revenue is recognized as services are provided. Nonutility operating revenue is recognized at the time the title of the goods and all risks of ownership transfer to the customers and settlement price is realizable.

Subsequent Events—GRE has considered subsequent events for recognition or disclosure through March 12, 2020, the date the consolidated financial statements were available to be issued. All material subsequent events have been disclosed in these consolidated financial statements (see Note 15).

3. ACCOUNTING PRONOUNCEMENTS

Recently Adopted

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, followed by related amendments (collectively, "the new lease standard"). The new lease standard supersedes the lease recognition requirements in ASC 840, *Leases (Topic 840)*. GRE adopted the new lease standard on January 1, 2019, using the comparable under ASC 840 approach. As a result, GRE did not adjust the comparative period financial information or make the new required lease disclosures for periods before the effective date. GRE elected the package of practical expedients to not reassess prior conclusions related to contracts containing leases, lease classification, and initial direct costs. For land easement contracts, GRE has elected the practical expedient provided by ASU No. 2018-01 *Leases: Land Easement Practical Expedient for Transition to Topic 842*, and as a result, only those easement contracts entered on or after January 1, 2019, will be evaluated to determine if lease treatment is appropriate. In addition, GRE did not elect to apply the hindsight practical expedient. Other than first-time recognition of operating leases on its consolidated balance sheet, the implementation of the new lease standard did not have a significant impact on GRE's consolidated financial statements. Adoption resulted in recognition of approximately $51.3 million of operating lease right-of-use assets and current/noncurrent operating lease liabilities. See Note 4 for GRE's new lease accounting policy and disclosures related to this guidance.

In February 2018, the FASB issued ASU 2018-02, *Income Statement – Reporting Comprehensive Income (Topic 220)*. The ASU allows a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. GRE adopted the amendments in this ASU effective January 1, 2019. The adoption did not have a material impact on the consolidated financial statements as GRE uses regulatory accounting to account for the difference between the accrual-based method of accounting for income taxes and the cash-based method of accounting for and recognizing income tax expense.

On January 1, 2018, GRE adopted ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments (a consensus of the Emerging Issues Task Force)* and ASU 2017-07, *Compensation-Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.* Also, as of

December 31, 2018, GRE adopted ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement* and ASU 2018-14, *Compensation – Retirement Benefits – Defined Benefit Plans – General (Subtopic 715-20): Disclosure Framework – Changes to the Disclosure Requirements for Defined Benefit Plans*. The adoption of these ASUs did not have a material impact on the consolidated financial statements or to the disclosures in the notes to the consolidated financial statements.

Recently Issued

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments—Credit Losses (Topic 326)*, which changes how entities account for credit losses on receivables and certain other assets. The guidance requires use of a current expected loss model, which may result in earlier recognition of credit losses than under previous accounting standards. ASU 2016-13 is effective for reporting periods beginning on or after December 15, 2020. GRE does not expect adoption of the new standard to have a material impact on its consolidated financial statements.

In August 2018, the FASB issued ASU 2018-15, *Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*. The ASU aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). The accounting for the service element of a hosting arrangement that is a service contract is not affected by this ASU. ASU 2018-15 is effective for reporting periods beginning on or after December 15, 2019, with early adoption permitted. GRE will adopt the amendments in ASU 2018-15 in 2020 and expects there will be no material impact to its consolidated financial statements.

4. LEASING TRANSACTIONS

GRE evaluates contracts that may contain leases, including PPAs and arrangements for the use of equipment, railroad cars, and vehicles. Under the new leases standard adopted by GRE in the current year, a contract contains a lease if it conveys the exclusive right to control the use of a specific asset. A contract determined to contain a lease is evaluated further to determine if the arrangement is a finance lease.

GRE has elected the practical expedient under which non-lease components, such as asset maintenance costs included in payments, are not deducted from minimum lease payments for the purposes of lease accounting and disclosure. In addition, leases with an initial term of 12 months or less are classified as short-term leases and are not recognized on the consolidated balance sheet.

If a lease contains an option to extend and there is reasonable certainty the option will be exercised, the option is considered in the lease term at inception. If a lease contains an option for early buy-out and there is reasonable certainty the option will be exercised, the option is considered in the lease term and cash flows from inception. Our lease agreements do not contain any material residual value guarantees, material bargain purchase options or material restrictive covenants.

Operating Leases—GRE enters various leases for equipment used in its operations under varying terms and conditions, expiring at various times through 2027. Falkirk enters various leases for land and equipment with terms expiring at various times through 2023. MAG enters various leases for railroad cars, equipment, and land with terms expiring at various times through 2045. The right-of-use asset for operating leases in place at the time of adoption were capitalized on the basis of their remaining payment obligation balances, discounted to present value based on the rate implicit in the lease or on the incremental borrowing rates appropriate for the entity, the leased asset, and the lease terms. The remaining payments for operating lease right-of-use assets are being charged to expense on a straight-line basis over the life of the lease.

Finance Leases— GRE entered into two lease agreements which were classified as financing leases. The leases were for railroad cars used in the operation of SWS and equipment used in transmission operations and have terms that expire in 2025. Falkirk has also leased certain equipment that is used in mining operations and have terms expiring at various times through 2024. MAG does not have any material finance leases.

Components of lease expense for the year ended December 31, 2019, include the following (in thousands):

	2019
Operating lease expense:	
Included in operation and maintenance	$ 1,982
Included in fuel	5,279
Included in nonutility operating expense	9,324
	$ 16,585
Finance lease expense:	
Amortization of right-of-use assets	$ 2,264
Interest on lease liabilities	572
	$ 2,836

Costs associated with short-term leases, variable rent, and subleases were immaterial for the year ended December 31, 2019. For the years ended December 31, 2018 and 2017, operating lease expense was $10.7 million and $10.2 million, respectively.

Supplemental balance sheet information related to operating and finance leases was as follows (in thousands):

	Classification	December 31, 2019	January 1, 2019
Assets:			
Operating leases	Other long-term assets	$ 37,490	$ 51,261
Finance leases	Utility plant—net	14,745	8,068
Finance leases	Nonutility plant and equipment—net	36	50
Liabilities:			
Current			
Operating leases	Other accrued liabilities and notes payable	$ 11,932	$ 13,505
Finance leases	Current portion of long-term obligations	2,555	7,706
Noncurrent			
Operating leases	Other noncurrent liabilities	$ 26,261	$ 37,756
Finance leases	Long-term obligations—less current portion	11,685	298

The weighted average remaining lease terms and weighted average discount rates are as follows:

		December 31, 2019	
	MAG	FALKIRK	GRE
Weighted average remaining lease term (in years)			
Operating leases	5.6	2.4	4.7
Finance leases	2.6	4.1	5.2
Weighted average discount rate			
Operating leases	5.87%	2.54%	2.95%
Finance leases	5.82%	4.82%	2.98%

As of December 31, 2019, maturities of lease liabilities were as follows (in thousands):

YEARS ENDING DECEMBER 31	Operating Leases	Financing Leases
2020	$ 13,422	$ 3,078
2021	11,121	3,078
2022	6,083	3,070
2023	3,527	3,062
2024	3,265	3,110
Thereafter	5,853	331
Total minimum lease payments	43,271	15,729
Amounts representing interest	(5,078)	(1,489)
Present value of minimum lease payments	38,193	14,240
Current maturities	(11,932)	(2,555)
Noncurrent lease liabilities	$ 26,261	$ 11,685

As of December 31, 2019, there were no material additional operating or financing leases that have not yet commenced.

Supplemental cash flow information related to leases is as follows:

YEAR ENDING DECEMBER 31	2019
Cash paid for amounts included in the measurement of lease liabilities	
Operating cash flows from operating leases	$ (12,648)
Operating cash flows from financing leases	(571)
Financing cash flows from financing leases	(6,360)

5. LONG-TERM OBLIGATIONS

The consolidated long-term obligations as of December 31, 2019 and 2018, are as follows (in thousands):

	2019	2018
First Mortgage Bonds, Series 2007A, 6.254%, due 2020–2038	$ 630,300	$ 683,800
First Mortgage Bonds, Series 2008A, 7.233%, due 2020–2038	334,499	337,191
First Mortgage Bonds, Series 2008B, 3.107%, due 2020–2023	6,667	8,333
First Mortgage Notes, Series 2009A, 6.65% to 7.15%, due 2020–2024	39,000	46,500
First Mortgage Bonds, Series 2009B, 5.81% to 6.94%, due 2020–2031	250,000	280,000
First Mortgage Note, Series 2010A, 4.875%, due 2026	23,000	23,000
First Mortgage Note, Series 2010B, 5.15%, due 2040	50,000	50,000
First Mortgage Bonds, Series 2010D, 4.478%, due 2020–2030	304,500	322,500
First Mortgage Note, Series 2014A, 2.84%, due 2020–2021	25,000	40,000
First Mortgage Note, Series 2014B, LIBOR plus 1.125%, 2.93% at December 31, 2019, due 2033–2038	100,000	100,000
First Mortgage Note, Series 2015A, 3.76%, due 2021-2028	100,000	100,000
First Mortgage Note, Series 2015B, 4.11%, due 2028-2035	100,000	100,000
First Mortgage Note, Series 2015C, 4.62%, due 2036-2044	100,000	100,000
First Mortgage Note, Series 2015D, 4.70%, due 2036-2044	50,000	50,000
First Mortgage Note, Series 2017A, 3.59%, due 2020-2045	275,000	285,000
Syndicated Credit Facility, National Rural Utilities Cooperative Finance Corp, ABR plus 0.25%, 5.00% at December 31, 2019	70,000	-
Department of Energy, 0%, due 2020–2028, 5.2% to 6.1% imputed interest	3,648	4,117
Term Note, 2.35%, due 2019	-	679
Term Note, 2.55%, due 2019	-	581
Finance lease obligation, Spiritwood Station railroad cars, 2.75% imputed interest	5,081	1,261
Finance lease obligation, 4.811% imputed interest	605	-
Finance lease obligations, Falkirk Mine, 3.54% to 5.09% imputed interest	8,517	25,196
Term Note, MAG, 5.92%, due 2020-2028	61,195	68,250
Other—at various rates and maturities	7,762	8,639
Subtotal	2,544,774	2,635,047
Less unamortized bond issuance costs	(18,066)	(19,369)
Plus deferred lease costs, Falkirk Mine	-	11,424
Less unamortized bond discount	(8,449)	(9,125)
	2,518,259	2,617,977
Current maturities	(157,099)	(161,217)
Long-term obligations—net	$ 2,361,160	$ 2,456,760

GRE issues secured debt under an Indenture of Mortgage, Security Agreement, and Financing Statement (Indenture). The Indenture requires GRE to establish and collect rates reasonably expected to yield a specified margins-for-interest level. Under the Indenture, GRE has limitations on the retirement of patronage capital if, after the distribution, an event of default would exist or GRE's members' capital would be less than 20 percent of total long-term debt and members' capital. Substantially all of the tangible assets of GRE and the power purchase and transmission service contracts with the members (see Note 1) are pledged as security under the Indenture.

The fixed interest rate on the First Mortgage Note, Series 2008B resets every five years. The final rate reset occurred in 2018 at a rate of 3.107 percent. The First Mortgage Note, Series 2014B debt agreement has a feature that allows GRE to periodically change how the variable rate is determined or change to a fixed interest rate option, at its election, subject to the applicable provisions in the debt agreement.

GRE has a $400.0 million unsecured revolving credit facility for which National Rural Utilities Cooperative Finance Corporation (CFC) is the administrative agent. This facility expires in May 2021. This facility can be increased, at GRE's option, to $525.0 million subject to certain terms and conditions. At December 31, 2019 and 2018, the outstanding balance was $70.0 million and $0 respectively. GRE also has an unsecured line of credit facility with CoBank, ACB (CoBank) for $30.0 million. This facility's terms and conditions are renewable annually, and the principal balance must be paid in full within one business day of expiration, unless unilaterally extended by CoBank. This facility expires in October 2020. There were no amounts outstanding on this facility at December 31, 2019 and 2018.

GRE is subject to a number of customary covenants under the Indenture, other debt agreements, and the revolving credit facility.

In November 2018, MAG obtained financing in the form of a Term Note to consolidate the debt of its subsidiaries. As a result, the Term Notes of Blue Flint, DSAF, and DSA, as well as the Blue Flint revolving line of credit, were extinguished. This resulted in the recognition of a loss on debt extinguishment of $1.4 million for the write off of unamortized financing costs for the year ended December 31, 2018. Substantially all of the assets of MAG are pledged as security for the Term Note. The loan documents contain restrictive covenants on financial ratios, capital expenditures, and net worth. MAG and its subsidiaries were in compliance with their covenants for the years ended December 31, 2019 and 2018.

MAG has a secured revolving line of credit in the amount of $25.0 million that expires on November 30, 2023. There were no amounts outstanding on this facility at December 31, 2019 and 2018.

Future maturities on long-term obligations as of December 31, 2019, are as follows (in thousands):

YEARS ENDING DECEMBER 31	
2020	$ 157,099
2021	160,807
2022	163,957
2023	169,953
2024	183,141
Thereafter	1,709,817
	$2,544,774

6. INVESTMENTS

GRE's investments as of December 31, 2019 and 2018, are as follows (in thousands):

	2019	2018
Other investments:		
Capital certificate investments—CFC	$ 19,644	$ 19,644
Cooperative investment patronage allocations	12,961	12,110
Total other investments	32,605	31,754
Restricted investments—investments for deferred compensation	13,591	11,682
	$ 46,196	$ 43,436

The capital certificate investments bear interest at a rate of 5 percent and a portion of them are required under borrowing arrangements with CFC. At December 31, 2019, GRE had no commitments to purchase additional capital certificate investments from CFC. Capital certificate investments are classified as held-to-maturity and reported at amortized cost using the specific identification method.

GRE's cooperative investment patronage allocations are reported at cost plus allocated equities.

GRE's investments held for deferred compensation are reported at fair value (see Note 8).

The investments reported at amortized cost at December 31, 2019 and 2018, are as follows (in thousands):

	Amortized Cost	GROSS Unrealized Gains	GROSS Unrealized Losses	Fair Value
2019				
Long-term investments—held-to-maturity securities—capital certificate investments	$ 19,644	$ -	$ -	$ 19,644
2018				
Long-term investments—held-to-maturity securities—capital certificate investments	$ 19,644	$ -	$ -	$ 19,644

Capital certificate investments have maturities greater than 10 years.

Interest income received on all investments, including cash and cash equivalents, was $5.2 million, $5.2 million, and $2.6 million, in 2019, 2018, and 2017, respectively.

7. DERIVATIVE INSTRUMENTS

As part of its risk management program, GRE may periodically use interest rate swaps and swaptions to manage market exposures. Terms and tenor of the swap and swaption agreements are generally structured to match the terms of the risk being managed. Mark-to-market gains and losses related to the interest rate hedging agreements are deferred as regulatory assets or liabilities until the execution of the related debt transaction and the agreements are settled. The amount paid or received at settlement is then deferred as a regulatory asset or liability and amortized to the consolidated statements of operations and comprehensive income as a component of interest expense over the term of the related debt issuance.

GRE is exposed to credit risk as a result of entering into these interest rate hedging agreements. Interest rate hedging contracts entered into by GRE are governed by an International Swap Dealers Association Master Agreement. As of December 31, 2019, all of the counterparties with transaction amounts outstanding under GRE's hedging program are rated investment grade by the major rating agencies. The contractual agreements contain provisions that could require GRE or the counterparty to post collateral or credit support. No amounts have been posted by GRE or the counterparties as of December 31, 2019 and 2018.

See additional information regarding the fair value of these instruments in Note 8 and amounts recorded in deferred charges and regulatory liabilities in Note 11.

GRE enters into contracts for the purchase and sale of commodities for use in its business operations. GAAP requires an evaluation of these contracts to determine whether the contracts are derivatives. Certain contracts that meet the definition of a derivative may be exempted from derivative accounting as normal purchases or normal sales. GRE evaluates all of its contracts at inception to determine if they are derivatives and if they meet the normal purchases or normal sales designation requirements. All of the contracts for the purchase and sale of commodities used in business operations, with a few limited exceptions, qualify for a normal purchases or normal sales designation. The commodity contracts that do not qualify for a normal purchases or normal sales designation are recorded at fair value, and the gains or losses are deferred as regulatory assets or liabilities. The realized gains and losses on settled commodity derivatives, which include exchange-traded futures contracts and financial transmission rights, are recognized as purchased power. See additional information regarding the fair value of these derivatives in Note 8.

MAG enters into derivative transactions to hedge its exposure to commodity price fluctuations. In connection with the execution of forward commodity contracts, MAG normally elects to create a hedging relationship by executing an exchange-traded futures contract as an offsetting position. In this situation, the forward commodity contract is valued at market price until delivery is made against the contract. MAG does not enter into derivative transactions for trading purposes.

MAG's derivative gains and losses are included in the consolidated statements of operations and comprehensive income for the years ended December 31, 2019, 2018, and 2017, are as follows (in thousands):

	2019	2018	2017
Realized and unrealized (losses) gains recognized from undesignated hedges:			
Nonutility operating revenue	$ (3,141)	$ 5,574	$ 2,949
Nonutility operating expenses	6,219	5,509	4,361

MAG is exposed to credit and market risk as a result of entering into these contracts. MAG manages the credit risk by entering into transactions with high-quality counterparties. Futures contracts entered into by MAG are governed by an International Swap Dealers Association Master Agreement. MAG manages market risk associated with commodity price contracts by establishing and monitoring parameters that limit the types and degree of market risk that may be undertaken. Actual results could materially differ based on the changes in commodity prices.

The location and fair value of derivative instruments in the consolidated balance sheets as of December 31, 2019 and 2018, are as follows (in thousands):

	Location	2019	2018
Derivatives in an asset position, none of which are designated as hedging instruments:			
Commodity contracts	Derivative instruments	$ 5,099	$ 4,984
Derivatives in a liability position, none of which are designated as hedging instruments:			
Interest rate contracts	Derivative instruments	$ 33,884	$ 16,280
Commodity contracts	Derivative instruments	478	2,148
Total derivative instrument liabilities		$ 34,362	$ 18,428

8. FAIR VALUE OF FINANCIAL INSTRUMENTS

GAAP establishes a framework for measuring fair value by creating a hierarchy for observable independent market inputs and unobservable market assumptions and provide for required disclosures about fair value measurements. Considerable judgment may be required in interpreting market data used to develop the estimates of fair value. Accordingly, the estimates presented herein are not necessarily indicative of the amounts that could be realized in a current market exchange. The use of different market assumptions and/or estimation methodologies may have a material effect on the estimated fair value.

A description of the inputs used in the valuation of assets and liabilities is as follows:

Level 1—Inputs represent unadjusted quoted prices for identical assets or liabilities exchanged in active markets.

Level 2—Inputs include direct or indirect observable inputs other than Level 1 inputs, such as quoted prices for similar assets or liabilities exchanged in active or inactive markets, quoted prices for identical assets or liabilities exchanged in inactive markets, and other inputs that are considered in fair value determinations of the assets or liabilities.

Level 3—Inputs include unobservable inputs used in the measurement of assets and liabilities. Management is required to use its own assumptions regarding unobservable inputs because there is little, if any, market activity in the assets or liabilities or related observable inputs that can be corroborated at the measurement date.

Assets are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. GRE's policy is to recognize significant transfers between levels at December 31.

A summary of the assets and liabilities at fair value at December 31, 2019 and 2018, set forth by level within the fair value hierarchy, is as follows (in thousands):

	Assets at Fair Value as of December 31, 2019			
	Total	Active Markets for Identical Assets (Level 1)	Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents—money market funds	$ 172,904	$ 172,904	$ -	$ -
Restricted investments—deferred compensation:				
Money market funds	1,318	1,318	-	-
Mutual funds:				
Domestic stock funds	3,908	3,908	-	-
Balanced funds	5,250	5,250	-	-
Fixed income funds	2,115	2,115	-	-
International stock funds	1,000	1,000	-	-
Commodity derivatives	5,099	3,712	1,387	-
Total assets	$ 191,594	$ 190,207	$ 1,387	$ -
Liabilities:				
Interest rate contracts	$ 33,884	$ -	$ 33,884	$ -
Commodity derivatives	478	366	112	-
Total liabilities	$ 34,362	$ 366	$ 33,996	$ -

	Assets at Fair Value as of December 31, 2018			
	Total	Active Markets for Identical Assets (Level 1)	Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents—money market funds	$ 215,343	$ 215,343	$ -	$ -
Restricted investments—deferred compensation:				
Money market funds	1,333	1,333	-	-
Mutual funds:				
Domestic stock funds	3,039	3,039	-	-
Balanced funds	4,629	4,629	-	-
Fixed income funds	1,135	1,135	-	-
International stock funds	1,546	1,546	-	-
Commodity derivatives	4,984	1,377	3,607	-
Total assets	$ 232,009	$ 228,402	$ 3,607	$ -
Liabilities:				
Interest rate contracts	$ 16,280	$ -	$ 16,280	$ -
Commodity derivatives	2,148	44	2,104	-
Total liabilities	$ 18,428	$ 44	$ 18,384	$ -

For the years ended December 31, 2019 and 2018, there were no significant transfers in or out of Levels 1, 2, or 3.

Money Market Accounts—Fair value is determined using quoted prices in active markets for identical assets.

Mutual Funds—Shares of registered investment companies (mutual funds) are categorized as Level 1. They are valued at quoted market prices available on an active clearing exchange for identical assets.

Interest Rate Contracts—Fair value is determined by comparing the difference between the net present value of the cash flows for the swaps at their initial fixed rate and the current market fixed rate. The initial fixed rate is quoted in the swap agreement and the current market fixed rate is corroborated by observable market data and categorized as Level 2.

Commodity Derivatives—Exchange-traded futures contracts and financial transmission rights are valued at active quoted market prices and are categorized as Level 1. Fair value for forward contracts is determined by comparing the difference between the net present value of the cash flows at the initial price and the current market price. The initial price is quoted in the contract and the market price is corroborated by observable market data. These contracts are categorized as Level 2.

GRE continuously monitors the creditworthiness of the counterparties to its derivative contracts and assesses the counterparties' ability to perform on the transactions set forth in the contracts. Liability positions are generally not adjusted as GRE has the ability and intent to perform under each of the contracts. In the instance of asset positions, GRE considers: general market conditions and the observable financial health and outlook of specific counterparties; forward-looking data, such as credit default swaps, when available; and historical default probabilities from credit rating agencies in evaluating the potential impact of nonperformance risk to derivative positions. Given this assessment, when determining the fair value of derivative assets, the impact of considering credit risk was immaterial to the fair value of derivative assets presented in the consolidated balance sheets.

The estimated fair values of financial instruments carried at cost, other than finance leases, at December 31, 2019 and 2018, are as follows and are provided for disclosure purposes only (in thousands):

	2019		2018	
	Carrying Cost	Fair Value	Carrying Cost	Fair Value
Long-term receivables	$ 2,667	$ 2,731	$ 2,873	$ 3,001
Long-term obligations	2,522,121	2,715,437	2,599,465	2,649,482

The estimated fair values of long-term receivables and long-term obligations, other than finance leases, were based on present value models using current rates available for similar issues with similar credit ratings. These fair value measurements would be characterized as Level 2.

The carrying amounts of remaining financial instruments included in current assets and current liabilities approximate their fair value. For other investments—capital certificate investments, the carrying amount is assumed to approximate fair value as these instruments generally must be held as a condition of financing.

9. INCOME TAXES

GRE is a nonprofit taxable cooperative subject to federal and state income taxation and is allowed a deduction for margins allocated to members as patronage capital.

GRE had no federal income tax expense in 2019, 2018, or 2017 due to the utilization of net operating losses in 2018, and net tax loss positions in 2019 and 2017. This net tax loss position was primarily the result of the allocation of margins to members, the retirement of utility plant, and the deduction of certain costs for income tax reporting purposes, which were deferred for financial reporting purposes.

The consolidated deferred income taxes as of December 31, 2019 and 2018, are as follows (in thousands):

	2019	2018
GRE		
Deferred tax assets:		
Net operating loss carryforwards	$ 107,734	$ 107,634
Tax credit carryforwards	12,366	8,786
Other	39,151	38,759
Total deferred tax assets	159,251	155,179
Deferred tax liabilities:		
Property related	(114,959)	(110,809)
Deferred regulatory assets	(23,522)	(21,609)
Other	(22,880)	(24,476)
Total deferred tax liabilities	(161,361)	(156,894)
Valuation allowance	-	-
Net deferred tax liability	$ (2,110)	$ (1,715)
Falkirk		
Deferred tax assets	$ 8,786	$ 8,912
Deferred tax liabilities	(8,268)	(7,664)
Net deferred tax asset, reported as deferred charges-other	$ 518	$ 1,248

These deferred income taxes result from differences in the recognition of accounting transactions for tax and financial reporting purposes. The primary temporary differences relate to depreciation, retirement benefits, the sale and leaseback transaction that originated in 1996 and terminated in 2008, deferred charges, and certain financial reserves not deductible for tax purposes until paid.

GRE uses regulatory accounting to account for the difference between the accrual based method of accounting for income taxes and the cash based method of accounting for recognizing income tax expense in the consolidated statements of operations and comprehensive income as member rates include actual income taxes paid (see Note 11).

As of December 31, 2019, GRE had a federal and state net operating loss (NOL) of $384.6 million and $409.1 million, respectively, that can be used to offset taxable income in the carryforward period. The federal NOLs expire in varying amounts from 2026 through 2037 and the state NOLs expire in varying amounts from 2020 through 2037. GRE also has a federal tax credit carryforward of $12.4 million. The tax credits expire in varying amounts from 2024 through 2039.

In the ordinary course of business, there is inherent uncertainty in quantifying GRE's income tax positions. GRE assesses its income tax positions and records tax benefits for all years subject to examination based upon management's evaluation of the facts, circumstances, and information available at the reporting dates. For those tax positions where it is more likely than not that a tax benefit will be sustained, GRE records the largest amount of tax benefit with a greater than 50 percent likelihood of being realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. For those income tax positions where it is not more likely than not that a tax benefit will be sustained, no tax benefit has been recognized in the consolidated financial statements. Where applicable, associated interest and penalties will also be recognized as income tax expense.

While there were no uncertain tax positions that were material to GRE's results of operations or financial position, and GRE does not expect any change to these positions in the next 12 months, GRE is currently under examination by the Internal Revenue Service (IRS) for taxable years 2012, 2013, and 2014. Based on the status of the examination, GRE has recorded a settlement contingency of $5.0 million using regulatory accounting (see Note 11). GRE does not anticipate any material adjustments as a result of the IRS audit, and based on the technical merits of positions taken on the 2012, 2013, and 2014 tax returns, believes it is more likely than not that the positions will be sustained.

GRE has determined that its taxable years ended December 31, 2012 through 2019, are still subject to examination under federal tax statutes. In addition, NOL carryforwards dating back to 2006 are subject to review and possible adjustment by taxing authorities. GRE's taxable years ended December 31, 2012 through 2019, are still subject to examination under state tax statutes.

10. PENDING LITIGATION, CONTINGENCIES, AND COMMITMENTS

Midcontinent Independent System Operator (MISO)—GRE is a member of the MISO market, and due to the nature of the market, various disputes and resettlements have taken place and some are still in process. It is the opinion of management that the resolution of the various open MISO disputes and resettlements will not have a material effect on the consolidated financial position, results of operations, or cash flows.

Litigation—GRE is involved in various legal actions arising in the normal course of business. It is the opinion of management that the resolution of such actions will not have a material adverse effect on the consolidated financial position, results of operations, or cash flows.

Future Commitments—GRE is committed to the following estimated expenditures under the various contracts discussed below (in millions):

	2020	2021	2022	2023	2024	THEREAFTER	TOTAL
Wind energy purchases	$ 78.5	$ 86.7	$ 84.5	$ 103.1	$ 103.5	$ 1,590.8	$ 2,047.1
Other purchased power	20.2	19.6	19.2	17.0	15.8	97.9	189.7
	$ 98.7	$ 106.3	$ 103.7	$ 120.1	$ 119.3	$ 1,688.7	$ 2,236.8

Wind Energy Purchases—GRE has long-term agreements for the purchase of wind energy from various power suppliers. The agreements have varying terms, and some have extension options. The longest contract term extends through 2047. GRE is obligated to purchase the energy generated from these facilities at fixed prices for the term of the agreements. GRE's expenses for energy purchased under these agreements were $55.4 million, $57.6 million, and $62.2 million for 2019, 2018, and 2017, respectively.

Other Purchased Power—GRE has long-term agreements for the purchase of energy from various other power suppliers. The agreements have varying terms, with the longest extending to 2045. GRE is obligated to purchase energy at either fixed or variable prices for the term of the agreements. GRE's expenses for energy and transmission purchased under these agreements were $12.1 million, $11.2 million, and $22.2 million for 2019, 2018, and 2017, respectively.

Reclamation Guarantee—Falkirk is required by the North Dakota Public Service Commission (PSC) to carry bonds to cover reclamation of mined lands in the event the surface mining and reclamation permit is revoked. These bonds are released by the PSC after a period of time, generally at least 10 years after final reclamation is complete, and it has been determined that the land has been returned to its approved postmining use. Under the PSC's self-bond program, GRE provides a guarantee for the majority of Falkirk's reclamation obligation. As of December 31, 2019, the aggregated value of this guarantee is $79.8 million. No liability has been recorded in the consolidated financial statements related to this guarantee as of December 31, 2019 and 2018. Falkirk has recorded an asset retirement obligation for the costs to cover final reclamation (see Note 14).

Letters of Credit—GRE has issued a letter of credit for $1.3 million to MISO in connection with its commodity derivatives, two letters of credit totaling $11.0 million related to SWS water and infrastructure agreements, and letters of credit totaling $0.1 million for transmission construction projects. No amounts are outstanding as of December 31, 2019 and 2018.

11. DEFERRED CHARGES AND REGULATORY LIABILITIES

Deferred charges as of December 31, 2019 and 2018, are as follows (in thousands):

	2019	2018
Regulatory assets:		
Premiums on refinanced long-term debt	$ 6,331	$ 6,674
Interest rate derivatives	33,884	16,280
Settled interest rate hedging instruments	78,712	84,042
Purchased power contract settlement	56,092	59,567
Plant retirements	95,252	66,132
Postretirement benefit plans	16,786	17,570
Settled postretirement benefit plan	18,034	19,547
Transaction costs related to NDRC	5,055	5,668
Refined coal purchase costs	66,000	66,000
Interest and plant costs	6,204	15,113
Scheduled major outage maintenance	20,498	9,159
Deferred income taxes	2,110	1,715
Other	5,496	410
Total regulatory assets	410,454	367,877
Other deferred charges	518	1,248
Total deferred charges	$ 410,972	$ 369,125
Reported as:		
Deferred charges:		
Financing related	$ 118,927	$ 106,996
Contract settlement	56,092	59,567
Plant retirements	95,252	66,132
Other	140,701	136,430
Total deferred charges	$ 410,972	$ 369,125

Regulatory liabilities as of December 31, 2019 and 2018, are as follows (in thousands):

	2019	2018
Regulatory liabilities:		
Settled interest rate hedging instruments	$ -	$ 5,690
Incentive-based rate treatment	15,315	15,802
Deferred revenue	32,758	39,944
Other	3,944	2,198
Total regulatory liabilities	$ 52,017	$ 63,634

Premiums on Refinanced Long-Term Debt—GRE has refinanced various issues of long-term debt, which resulted in the payment of premiums. This amount will be fully amortized by 2038, the maturity date of the 2007A bonds.

Interest Rate Derivatives—GRE has interest rate swaps that have not been settled as of December 31, 2019 and 2018. A regulatory asset or liability is recorded offsetting the fair value liability or asset, respectively. Once these interest rate derivatives are settled, any deferred regulatory asset or liability will be amortized over the life of the related debt, unless there is no related debt issuance, and then the amortization period will be determined by the board of directors under regulatory accounting.

Settled Interest Rate Hedging Instruments—GRE settled interest rate swaps related to bond issuances, resulting in payments to the swap counterparties. These settled swaps are amortized over the life of the related debt and the amortization is included in interest expense in the consolidated statements of operations and comprehensive income.

During 2013, GRE terminated certain interest rate swaps and a swaption without a related debt issuance for net proceeds of $36.2 million. In accordance with a board resolution, the net proceeds from this termination were recorded as a regulatory liability and $30.5 million was recognized as other revenue in 2015. The resolution also stated that the remaining deferred proceeds were to be recognized as other revenue no later than 2019. As such, during 2019 GRE recognized the remaining $5.7 million as other income-net in the consolidated statements of operations and comprehensive income.

Purchased Power Contract Settlement— GRE had a power agreement with Dairyland Power Cooperative (DPC) to share costs and benefits of a 379 megawatt generating unit (Genoa 3) located near Genoa, Wisconsin. GRE's obligation to purchase energy and capacity through this agreement was terminated through an amendment in 2015 for a cash payment of $83.5 million. GRE recognized this payment as a regulatory asset of which a portion related to the termination of GRE's obligation to purchase energy and capacity, and another portion related to the settlement of GRE's share of the estimated future costs for the plant decommissioning and demolition. GRE remains obligated for its share of the plant decommissioning and demolition costs and has recorded an estimate of its share of the final costs as an other noncurrent liability in the consolidated balance sheets. In January 2020, DPC announced the plan to retire of Genoa 3 by mid-to-late 2021.

In 2018, GRE wrote off $25.8 million of the regulatory asset in accordance with regulatory accounting requirements as a charge to purchased power in the consolidated statements of operations and comprehensive income. The remaining obligation was written off in 2020, as described in Note 15.

Plant Retirements—GRE retired Stanton Station in 2017. Regulatory accounting was approved for the remaining undepreciated net plant value and plant closure costs. Decommissioning and demolition activities are occurring through 2020. During 2019, closure cost estimates were re-evaluated and reduced by $4.5 million. The regulatory asset is being amortized through 2028.

During 2018, the board of directors approved regulatory accounting for the closure and decommissioning or sale of the Elk River. During 2019, Elk River discontinued operations and regulatory accounting commenced for the remaining undepreciated net plant value, which was transferred from plant to be retired—net of accumulated depreciation, and plant closure costs. Decommissioning and demolition activities are occurring through 2020. Amortization of the regulatory asset commenced in 2019 and will continue through 2038.

Postretirement Benefit Plans—GRE and Falkirk have defined benefit pension plans and postretirement medical plans for certain employees. GRE records regulatory assets for the amounts that are normally reported as accumulated other comprehensive income as these amounts will be recovered in future rates. A regulatory asset has been recorded for GRE's plans of $3.7 million and $3.9 million, and Falkirk's plans of $13.1 million and $13.7 million at December 31, 2019 and 2018, respectively. These amounts are adjusted each year as a result of the actuarial remeasurement of the obligations related to these plans.

Settled Postretirement Benefit Plans—During 2016, GRE settled its qualified defined benefit plan, which would have required the recognition of the unamortized actuarial loss as pension expense (see Note 12). GRE recorded $22.7 million related to the settlement as a regulatory asset that is being amortized over 15 years and included in operation and maintenance expense in the consolidated statements of operations and comprehensive income. As described in Note 15, $9.0 million was written off in 2020.

Transaction Costs Related to NDRC—GRE incurred external transaction costs in connection with executing agreements with NDRC, or its subsidiaries, for the sale and purchase of lignite and coal and for the lease of GRE's refined coal processing facility (see Note 1). The remaining obligation was written off in 2020, as described in Note 15.

Refined Coal Purchase Costs—In connection with the facility lease with NDRC and the related refined coal purchase agreement, GRE deferred certain refined coal purchase costs. The remaining obligation was written off in 2020, as described in Note 15.

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Interest and Plant Costs—During 2010 and 2011, GRE deferred facility costs for interest, maintenance, and other costs associated with SWS. This amount is being amortized over the useful life of the facility. In 2019, GRE wrote off $8.3 million of the regulatory asset in accordance with regulatory accounting requirements as a charge to depreciation and amortization expense in the consolidated statements of operations and comprehensive income.

Scheduled Major Outage Maintenance—GRE defers scheduled major outage maintenance costs for CCS and amortizes these costs over the maintenance cycle period, which is three years. The amortization is included in operation and maintenance expense in the consolidated statements of operations and comprehensive income.

Deferred Income Taxes—GRE records income tax expense as income taxes are paid; a regulatory asset is recorded for the difference between deferred tax assets and liabilities. The regulatory asset is adjusted each year for changes in income tax timing differences.

Other Regulatory Assets—Other regulatory assets primarily represent a $5.0 million settlement contingency related to the ongoing IRS examination (see Note 9).

Other Deferred Charges—Other deferred charges represent Falkirk's deferred tax asset.

Incentive-Based Rate Treatment—GRE received approval from the Federal Energy Regulatory Commission for incentive-based rate treatment for the CapX2020 transmission projects and collected a return on investment from MISO while these projects were under construction. GRE recorded amortization expense in an amount equal to the interest capitalized to the project and recorded an offsetting regulatory liability. Now that the project is complete, the regulatory liability is being amortized over the useful life of the underlying assets and recorded as a reduction to depreciation expense.

Deferred Revenue—GRE deferred the recognition of $8.2 million, $10.0 million, and $17.9 million of member electric revenue during 2019, 2018, and 2017, respectively, in accordance with regulatory accounting requirements. This deferred revenue will be recognized in member electric revenue in the future as determined by the board of directors. In 2019, GRE recognized $15.4 million as member electric revenue.

Other Regulatory Liabilities—Other regulatory liabilities include the unamortized bond discount on certain borrowings as well as the liability offset to the fair value determination of certain commodity contracts recorded as derivative instruments.

The regulatory assets and regulatory liabilities are recorded in accordance with regulatory accounting requirements and have all been approved by the board of directors.

12. EMPLOYEE BENEFIT PLANS

GRE offers various benefit plans to its employees, including health/welfare and retirement plans. Approximately 18 percent of total employees eligible for these benefit plans are represented by two labor unions under two collective bargaining agreements. One agreement expires at the end of 2020 and the second expires at the end of 2022 with wages open for negotiation in 2021 and 2022.

Defined Benefit Plans—GRE has a nonqualified supplemental defined benefit plan covering certain former employees and retirees that is frozen, a qualified defined contribution retirement plan for all employees, and a nonqualified defined contribution plan for certain employees.

Falkirk has a defined benefit plan that covers employees hired before January 1, 2000, and a defined contribution plan for other employees.

Changes in benefit obligations and plan assets for the years ended December 31, 2019 and 2018, and the amounts recognized in the consolidated balance sheets as of December 31, 2019 and 2018, are as follows (in thousands):

	Falkirk		GRE	
	2019	**2018**	**2019**	**2018**
Change in benefit obligation:				
Benefit obligation—beginning of year	$ 62,000	$ 67,445	$ 4,407	$ 4,668
Interest cost	2,533	2,337	167	157
Actuarial loss (gain)	7,582	(4,393)	-	35
Benefits paid	(3,706)	(3,389)	(431)	(453)
Benefit obligation—end of year	68,409	62,000	4,143	4,407
Change in plan assets:				
Fair value of plan assets—beginning of year	64,045	70,694	-	-
Actual return on assets	12,958	(3,261)	-	-
Benefits paid	(3,706)	(3,388)	-	-
Fair value of plan assets—end of year	73,297	64,045	-	-
Funded status—end of year and amount recognized in other long-term assets/(other noncurrent liabilities)	$ 4,888	$ 2,045	$ (4,143)	$ (4,407)

Amounts not yet recognized as components of net periodic cost as of December 31, 2019 and 2018, are as follows (in thousands):

	Falkirk		GRE	
	2019	**2018**	**2019**	**2018**
Accumulated loss	$ 9,408	$ 9,940	$ 2,546	$ 2,727

The accumulated benefit obligation for the GRE defined benefit pension plans reflected above was $4.1 million and $4.4 million as of December 31, 2019 and 2018, respectively. The accumulated benefit obligation for the Falkirk defined benefit pension plan was $68.4 million and $62.0 million as of December 31, 2019 and 2018, respectively.

Components of net periodic benefit or cost as of December 31, 2019, 2018, and 2017, are as follows (in thousands):

	Falkirk			GRE		
	2019	**2018**	**2017**	**2019**	**2018**	**2017**
Interest cost	$ 2,533	$ 2,337	$ 2,557	$ 167	$ 157	$ 171
Expected return on assets	(4,875)	(4,819)	(4,614)	-	-	-
Recognized net actuarial loss	32	225	175	181	203	170
Amortization of net transition obligation	-	-	-	-	18	63
Net periodic (benefit) cost	$ (2,310)	$ (2,257)	$ (1,882)	$ 348	$ 378	$ 404

The estimated amounts to be amortized from deferred charges related to the benefit obligation into net periodic benefit cost in 2020 are $0.2 million for GRE and less than $0.1 million for Falkirk.

Weighted-average assumptions used to determine benefit obligations as of December 31, 2019 and 2018 are as follows:

	Falkirk		GRE	
	2019	2018	2019	2018
Discount rate	3.20%	4.20%	4.00%	4.00%

Weighted-average assumptions used to determine periodic benefit or cost as of December 31, 2019, 2018, and 2017, are as follows:

	Falkirk			GRE		
	2019	2018	2017	2019	2018	2017
Discount rate	4.20%	3.55%	4.00%	4.00%	3.35%	3.70%
Expected return on assets	7.50	7.50	7.50	N/A	N/A	N/A

The Falkirk plan maintains an investment policy that, among other things, establishes a portfolio asset allocation methodology with percentage allocation bands for individual asset classes. This investment policy sets target allocations for the plan assets ranging from approximately 36 percent to 54 percent in domestic equity securities, 16 percent to 24 percent in international equity securities, 30 percent to 40 percent in fixed-income securities, and 0 percent to 10 percent in money market funds. The investment policy further divides investments in equity securities among U.S. and non-U.S. companies. The investment policy provides that investments be reallocated between classes as balances exceed or fall below the appropriate allocation bands.

Falkirk's defined benefit plan investments at December 31, 2019 and 2018, are as follows (in thousands):

	2019	2018
Money market funds	$ 313	$ 298
Domestic equity securities	33,592	27,178
International equity securities	14,917	12,442
Fixed income securities	24,475	24,127
	$ 73,297	$ 64,045

The invested funds are stated at fair value using quoted market prices in active markets for identical assets as the fair value measurement (Level 1). For the years ended December 31, 2019 and 2018, there were no significant transfers in or out of Levels 1, 2, or 3.

To develop the expected long-term rate of return on asset assumptions, Falkirk considered the historical returns and the future expectations for returns on each asset class, as well as target allocation of the pension portfolio.

The expected future benefits to be paid as of December 31, 2019, are as follows (in thousands):

DECEMBER 31	Falkirk	GRE
2020	$ 3,723	$ 416
2021	3,856	400
2022	3,953	383
2023	4,023	366
2024	4,093	348
2025–2029	20,648	1,478

GRE expects to make a contribution of approximately $0.4 million to the nonqualified supplemental defined benefit plan in 2020 and Falkirk does not expect to make any pension contributions in 2020.

Defined Contribution Plans—GRE makes defined contributions to all employees and matching contributions to all eligible employees under a defined contribution retirement plan. GRE made savings and matching contributions to its defined contribution retirement plan of $11.3 million, $11.4 million, and $11.0 million in 2019, 2018, and 2017, respectively. Falkirk's contributions to its defined contribution pension and defined contribution savings plans were $5.4 million, $5.3 million, and $4.9 million for 2019, 2018, and 2017, respectively.

Postretirement Medical Benefits—Under a previously offered postretirement benefit plan, certain employees are entitled to participate in the GRE medical insurance plan until they reach age 65. Benefits to the retirees are in the form of monthly payments to cover a portion of the premium charged for participation in the program. Employees retiring from Falkirk also are eligible to participate in Falkirk's medical insurance plan with the benefit in the form of a supplement to the premium. In 2018, Falkirk made changes to the plans offered under the medical insurance plan through an amendment. The change resulted in a decrease to the benefit obligation of $0.5 million.

Costs for the unfunded postretirement medical plan are recognized in the year the employees render service.

Changes in benefit obligations for the years ended December 31, 2019 and 2018, are as follows (in thousands):

	Falkirk		GRE	
	2019	2018	2019	2018
Change in benefit obligation:				
Benefit obligation—beginning of year	$ 2,528	$ 5,371	$ 1,826	$ 2,019
Service cost	20	59	-	-
Interest cost	89	158	70	66
Plan amendments	-	(501)	-	-
Actuarial (gain) loss	(244)	(2,247)	-	8
Benefits paid	(124)	(312)	(194)	(267)
Benefit obligations—end of year	$ 2,269	$ 2,528	$ 1,702	$ 1,826

Amounts recognized in the consolidated balance sheets as of December 31, 2019 and 2018, are as follows (in thousands):

	Falkirk		GRE	
	2019	2018	2019	2018
Current liabilities	$ 410	$ 419	$ 178	$ 194
Other noncurrent liabilities	1,859	2,109	1,524	1,632
	$ 2,269	$ 2,528	$ 1,702	$ 1,826

Amounts not yet recognized as components of net periodic cost as of December 31, 2019 and 2018, are as follows (in thousands):

	Falkirk		GRE	
	2019	2018	2019	2018
Accumulated (gain) loss	$ (2,697)	$ (3,061)	$ 1,105	$ 1,176
Prior service credit	(387)	(501)	-	-
	$ (3,084)	$ (3,562)	$ 1,105	$ 1,176

Components of net periodic benefit or cost as of December 31, 2019, 2018, and 2017, are as follows (in thousands):

	Falkirk			GRE		
	2019	**2018**	**2017**	**2019**	**2018**	**2017**
Service cost	$ 20	$ 59	$ 64	$ 1	$ -	$ 2
Interest cost	89	158	179	69	66	73
Amortization of credit	(114)	-	-	-	-	-
Recognized net actuarial (gain) loss	(608)	(71)	-	71	75	75
Net periodic (benefit) cost	$ (613)	$ 146	$ 243	$ 141	$ 141	$ 150

The estimated amounts to be amortized from deferred charges into net periodic benefit or cost in 2020 are a net cost of less than $0.1 million for GRE and a net benefit of $0.3 million for Falkirk.

The discount rates used as of December 31, 2019, 2018, and 2017, are as follows:

	Falkirk			GRE		
	2019	**2018**	**2017**	**2019**	**2018**	**2017**
Discount rate used to determine benefit obligations	2.65%	3.80%	3.10%	4.00%	4.00%	3.35%
Discount rate used to determine net periodic benefit cost	3.80%	3.10%	3.25%	4.00%	3.35%	3.65%

The expected future benefit payments to be paid as of December 31, 2019, are as follows (in thousands):

DECEMBER 31	**Falkirk**	**GRE**
2020	$ 416	$ 178
2021	336	171
2022	287	164
2023	271	151
2024	261	138
2025-2029	716	598

The effect of a one percentage point change in health care cost trend rates on service and interest costs is not material in relation to the consolidated financial statements taken as a whole.

13. MEMBER RELATED-PARTY TRANSACTIONS

GRE provides electric and other services to its members. GRE received revenue of $861.8 million, $876.1 million, and $868.7 million in 2019, 2018, and 2017, respectively, for these services. GRE received 37.5 percent, 39.6 percent, and 39.5 percent of total member revenue from two members for the years ended December 31, 2019, 2018, and 2017, respectively. GRE had accounts receivable from its members of $143.1 million and $126.2 million at December 31, 2019 and 2018, respectively.

GRE also received various services from the members and paid $7.3 million, $11.7 million, and $11.6 million for these services in 2019, 2018, and 2017, respectively. GRE had accounts payable to the members of $2.2 million and $2.1 million at December 31, 2019 and 2018, respectively.

GRE has notes payable to the members of $44.4 million and $34.7 million at December 31, 2019 and 2018, respectively. These notes relate to funds invested with GRE by the members under a member investment program. These funds are used by GRE to reduce short-term borrowings. The members receive investment earnings based on GRE's blended rate of return for specified investments, adjusted for administrative costs.

14. ASSET RETIREMENT OBLIGATIONS

GAAP requires the recording of liabilities related to asset retirement obligations. An asset retirement obligation is the result of legal or contractual obligations associated with the retirement of a tangible long-lived asset that result from the acquisition, construction, or development and/or the normal operation of a long-lived asset. GRE determines these obligations based on an estimated asset retirement cost adjusted for inflation and projected to the estimated settlement dates, and discounted using a credit-adjusted, risk-free interest rate. GRE allocates the amortization for the offsetting capitalized asset retirement cost to expense using the straight-line method over the remaining useful life of the related long-lived asset being retired.

GRE has recorded obligations related to capping and reclamation of ash disposal sites for certain power plants and obligations related to the disposal of equipment containing polychlorinated biphenyls.

The EPA regulation of coal combustion residuals (CCRs) requires increased groundwater monitoring, reporting, recordkeeping, and posting related information to the internet. The rule also established requirements related to CCR management, impoundments, landfills, and storage. The rule does allow GRE to continue its byproduct beneficial use program. During 2019, GRE decreased its estimated costs to comply with the necessary infrastructure and CCR management modifications for the final ash disposal site closures. The $6.3 million decrease resulted from approval obtained by GRE to transfer land previously used for final ash disposal to Falkirk for incorporation in their mining plan.

There were no new obligations or obligations recorded as a result of a change in estimated cash flows recorded during 2018.

Falkirk has recorded an obligation related to the final costs to close its surface mines and reclaim the land disturbed as a result of normal mining operations. There are no assets legally restricted for purpose of settling these obligations.

GRE also has an obligation to retire its direct-current transmission line upon abandonment. This line transmits the energy from CCS in North Dakota to the GRE service territory in Minnesota. GRE has not recorded a liability related to this obligation because the fair value cannot be reasonably estimated due to the retirement date being indefinite at this time.

A reconciliation of the beginning and ending aggregate carrying amount of the obligations as of December 31, 2019 and 2018, is as follows (in thousands):

	2019	2018
Balance—beginning of year	$ 128,140	$ 124,073
Obligations recorded as a result of changes in estimated cash flows	(6,340)	-
Accretion expense	5,419	5,253
Obligations settled	(1,713)	(1,186)
Balance—end of year	$ 125,506	$ 128,140

These obligations are recorded in other noncurrent liabilities in the consolidated balance sheets with the exception of the obligation related to Stanton Station, which is reported as current other accrued liabilities and notes payable. The Stanton Station obligation was $5.6 million and $7.3 million as of December 31, 2019 and 2018, respectively. The obligations settled are the only transactions recognized as a use of cash in the consolidated statements of cash flows.

15. SUBSEQUENT EVENTS

As discussed in Note 1, GRE and NDRC closed a transaction on January 31, 2020 in which GRE bought out of the remaining term of the lease and related agreements for $17.0 million.

The result of the transaction is further summarized below (in thousands):

(Revenue) Expense	**2020**
Deferred lease revenue recognized	$ (166,957)
Purchase option price	17,000
Refined coal purchase costs regulatory asset	66,000
Transaction costs related to NDRC regulatory asset	5,055
Net gain recognized on transaction	$ (78,902)

In accordance with regulatory accounting, GRE utilized the net gain on transaction to write off the remaining $56.1 million purchase power contract settlement regulatory asset as a charge to purchased power expense and write off $9.0 million of the settled postretirement benefit plans regulatory asset as a charge to operation and maintenance expense. The remaining net gain of $13.8 million was recognized as net income in 2020.

For NDRC, the transaction resulted in the recognition of a net loss of $150.0 million, representing the expensing of net prepaid lease payments, reducing their equity to $0. The financial statement auditors of NDRC have issued a going concern audit opinion for the year ended December 31, 2019. All operational metrics included in the lease and related agreements were met over the life of the transaction. As a result, no amounts related to these metrics were paid to NDRC at transaction closing.

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