2017 ANNUAL REPORT

SHAPING **OUR FUTURE**

GREAT RIVER ENERGY®

POWERING WHAT'S POSSIBLE

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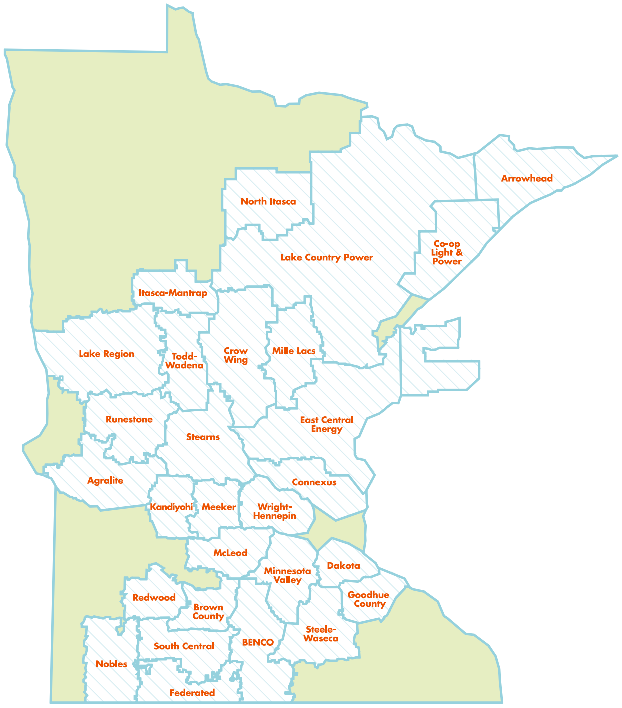
Great River Energy is a not-for-profit electric cooperative that serves approximately 695,000 members, or 1.7 million people, through the 28 electric cooperatives that collectively own Great River Energy. The cooperative crafts and maintains a portfolio of power generation and transmission resources in order to deliver reliable and affordable wholesale electricity to its membership through participation in the regional energy market.



David Saggau
Great River Energy President and Chief Executive Officer

Bob Bruckbauer
Great River Energy Board Chair

TO OUR STAKEHOLDERS

Thank you for taking time to learn more about Great River Energy. In this report, you will read of our many financial and operational achievements. Proud as we are of these, they are evidence of a higher goal: service to our member-owner cooperatives.

We continually evaluate our system to make sure it meets our member-owner cooperatives' needs. Our portfolio of generation and transmission resources is diverse, dependable and well-suited for today's energy market.

Our traditional baseload power resources remain valuable, even as renewables represent an ever-larger portion of the energy serving members. In fact, Great River Energy achieved the state of Minnesota's renewable energy standard of 25 percent renewables in 2017 – a full eight years ahead of schedule.

Our transmission system achieved industry-leading reliability, ensuring our member cooperatives have the energy they need to power the communities they serve.

Together with our member-owner cooperatives, we are building the technological pillars on which we will serve members in the future. New pathways for energy and data are revealing ways to deliver on our shared goals of reliability, cost control and new services.

Our rates are stable, with increases projected to be well below the rate of inflation despite flat energy sales. Another year of strong margins brings Great River Energy nearer to our goal of 20 percent equity by 2020.

Strong 2017 financial results allowed us to save for the future while creating immediate relief for members. We deferred $17.9 million of revenue to offset future rate increases and refunded $6.0 million to our member-owner cooperatives.

Together with our member cooperatives, we continue to seek better ways to use energy. From emerging technologies such as electric vehicles to efficiencies with heating, cooling and motors, we are helping members get more from their electric service.

The electric utility industry has changed dramatically since Great River Energy's formation in 1999. And while our membership and organization have also evolved, our mission has not: to provide reliable, affordable energy in harmony with the environment.

2017 AT A GLANCE

Great River Energy experienced one of its strongest financial performances in 2017, recording strong margins, deferring substantial revenue and issuing a refund to its member-owner cooperatives.

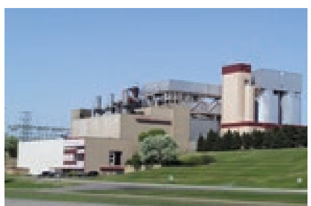
Great River Energy recorded a margin of $34.2 million, while also deferring $17.9 million of revenue to offset future rate increases and issuing a $6.0 million refund to member-owner cooperatives. Without deferrals and refunds, Great River Energy's margin would have been $58.1 million.

With the strong financial performance of 2017, Great River Energy's equity-to-capitalization ratio is 19.0 percent, putting it ahead of its plan to target 20.0 percent by 2020.

Although 2017 was successful, member-owner cooperatives continue to see flat or declining energy sales. Efforts to position Great River Energy's generation portfolio and reduce costs have improved wholesale electricity rate projections and fortified an already strong financial position.


1 | Coal Creek Station


2 | Spiritwood Station


3 | Elk River Energy Recovery Station

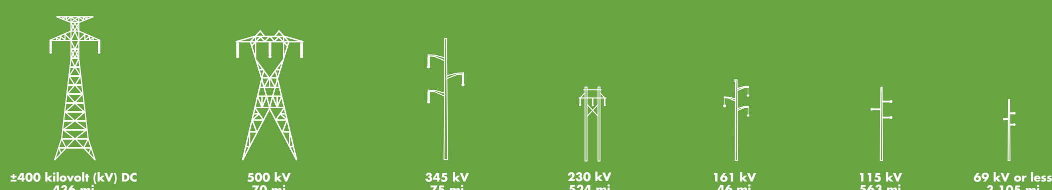

4 | Elk River Peaking Station


5 | Lakefield Junction Station

OUR RESOURCE PORTFOLIO

Great River Energy maintains a diverse, flexible and efficient power supply portfolio that meets the energy needs of its member-owner cooperatives, complies with all environmental regulations and adapts to changes in the regional market. The cooperative's transmission system ensures electricity reliably reaches member-owner cooperatives across the state.

TRANSMISSION



Does not include lines partially owned by Great River Energy

GREAT RIVER ENERGY'S 28 MEMBER-OWNER COOPERATIVES

Number of member accounts
695,000

Sales to members
11,614,000 megawatt hours

Total distribution line
92,000 miles

Average density
7.6 consumers/mile

Distribution substations
563

Combined annual revenue
$1.4 billion

Electric plant in service (net)
$2.1 billion

Distribution employees
1,600

GREAT RIVER ENERGY FINANCIAL HIGHLIGHTS

Revenue
$1.0 billion

Net margin attributable to Great River Energy
$34.2 million

Total assets
$4.1 billion

Utility plant investment (net)
$2.8 billion

GREAT RIVER ENERGY SYSTEMWIDE LOAD CHARACTERISTICS

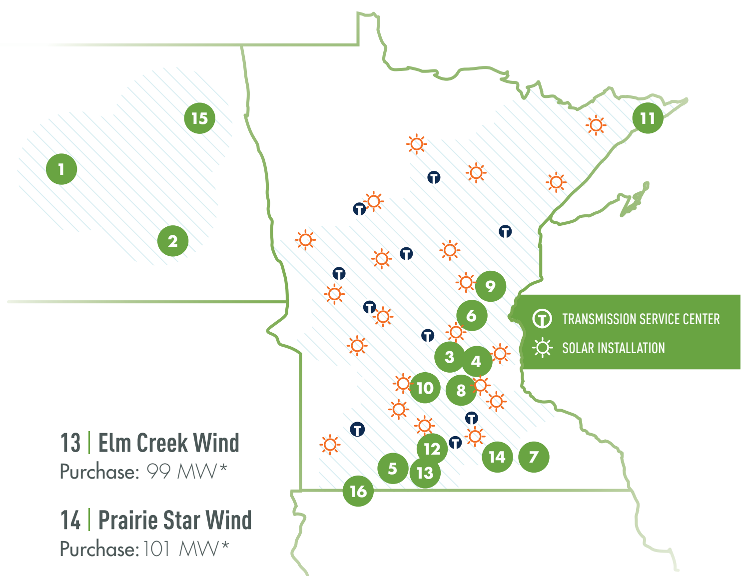
Residential
54.6%

Seasonal
1.5%

Commercial, industrial and other
43.9%

Based on energy sales


14 | Prairie Star Wind



1 | Coal Creek Station
Generating capability: 1,154 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 Energy Recovery Station
Generating capability: 30 MW
Fuel: Refuse-derived fuel

4 | Elk River Peaking Station
Generating capability: 187 MW (summer)
Fuel: Natural gas; backup, fuel oil

5 | Lakefield Junction Station
Generating capability: 496 MW (summer)
Fuel: Natural gas; backup, fuel oil

6 | Cambridge Station
Generating capability: 175 MW (summer)
Fuel: Fuel oil (Unit 1), and natural gas (Unit 2)

7 | Pleasant Valley Station
Generating capability: 424 MW (summer)
Fuel: Natural gas; backup, fuel oil

8 | St. Bonifacius Station
Generating capability: 57 MW (summer)
Fuel: Fuel oil

9 | Rock Lake Station
Generating capability: 21 MW (summer)
Fuel: Fuel oil

10 | Maple Lake Station
Generating capability: 23 MW (summer)
Fuel: Fuel oil

11 | Arrowhead Emergency Generating Station
Generating capability: 18 MW*
Fuel: Fuel oil

12 | Trimont Wind
Purchase: 100 MW*

13 | Elm Creek Wind
Purchase: 99 MW*

14 | Prairie Star Wind
Purchase: 101 MW*

15 | Ashtabula II Wind
Purchase: 51 MW*

16 | Endeavor I Wind
Purchase: 100 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 2018-2019 planning year.

**Nameplate generating capacity*

FUELING **THE FUTURE**

Mounting research suggests that electrifying the economy is needed to achieve ambitious carbon emissions reduction goals worldwide. Great River Energy works with member-owner cooperatives to encourage end-use members to pursue electric uses that save consumers money, reduce greenhouse gas emissions and improve overall efficiency of the electric grid. Using electricity for efficient water heating, space heating and transportation meets these criteria.

Beginning in the fall of 2017, some Minnesota students were transported to and from school on an all-electric school bus as part of a first-of-its-kind program in the state. This opportunity was made possible through a collaboration between Schmitty & Sons, Dakota Electric Association and Great River Energy to demonstrate the use of a battery electric school bus in a cold-weather climate as well as on longer suburban and rural routes.

Great River Energy and its member-owner cooperatives teamed up for Plug Into MN, a program to establish Minnesota's first electric vehicle corridor. Charging infrastructure along Interstate 35 and Highway 61 allows more electric vehicle owners to reach scenic northern Minnesota, a popular road trip in the state.

Great River Energy continues to offer wind energy at no additional cost to fuel electric vehicles owned by cooperative members. Known as Revolt, the program dedicates wind energy to completely cover the electricity used to fuel an electric vehicle for the life of the car.

The program was implemented to build awareness around electric vehicles in Minnesota. Sales of electric vehicles have risen consistently in recent years, and charging infrastructure has grown.

Great River Energy, member cooperative Dakota Electric Association and Schmitty & Sons transportation company teamed up to test a battery electric school bus in a suburban school district. Before the school year started, the bus toured Minnesota, including a stop at Pan-O-Prog, the summer festival of Lakeville, Minn.

STAYING CONNECTED IN THE COUNTRYSIDE

When Great River Energy line crews are dispatched to remote locations or outage areas, they need to be able to talk to each other and to system operators so they can identify where faults are located and fix problems. To do that, they rely on their two-way radio system, or trunked mobile radio.

After two years of work, Great River Energy's analog trunked mobile radio system was upgraded to digital technology, greatly improving communication and connectivity in its service area.

Great River Energy also deployed a modern demand response management system that will help cooperatives better adapt to changes in technology, consumer expectations and market forces by allowing for more precise regulation of load control technologies, such as smart thermostats and Wi-Fi enabled electric devices.

With two-way communication, Great River Energy can more accurately monitor the effectiveness of demand response and analyze data to continually improve its programs.

PARTNERS IN PROGRESS

Great River Energy regularly teams up with its member-owner cooperatives on pilot projects to test new technologies or services. Those discoveries are often shared among the membership, allowing all member-owners to benefit from real-life research.

MEETING MEMBERS' EXPECTATIONS

A growing number of members want control over where their energy comes from. Great River Energy and its member-owner cooperatives offer a number of programs to suit those members' desires.

The Revolt program fuels electric vehicles with 100 percent wind energy at no additional cost.

Many member cooperatives offer subscriptions to community solar installations.

Through the Wellspring program, cooperatives sell blocks of wind or solar energy to residential members.

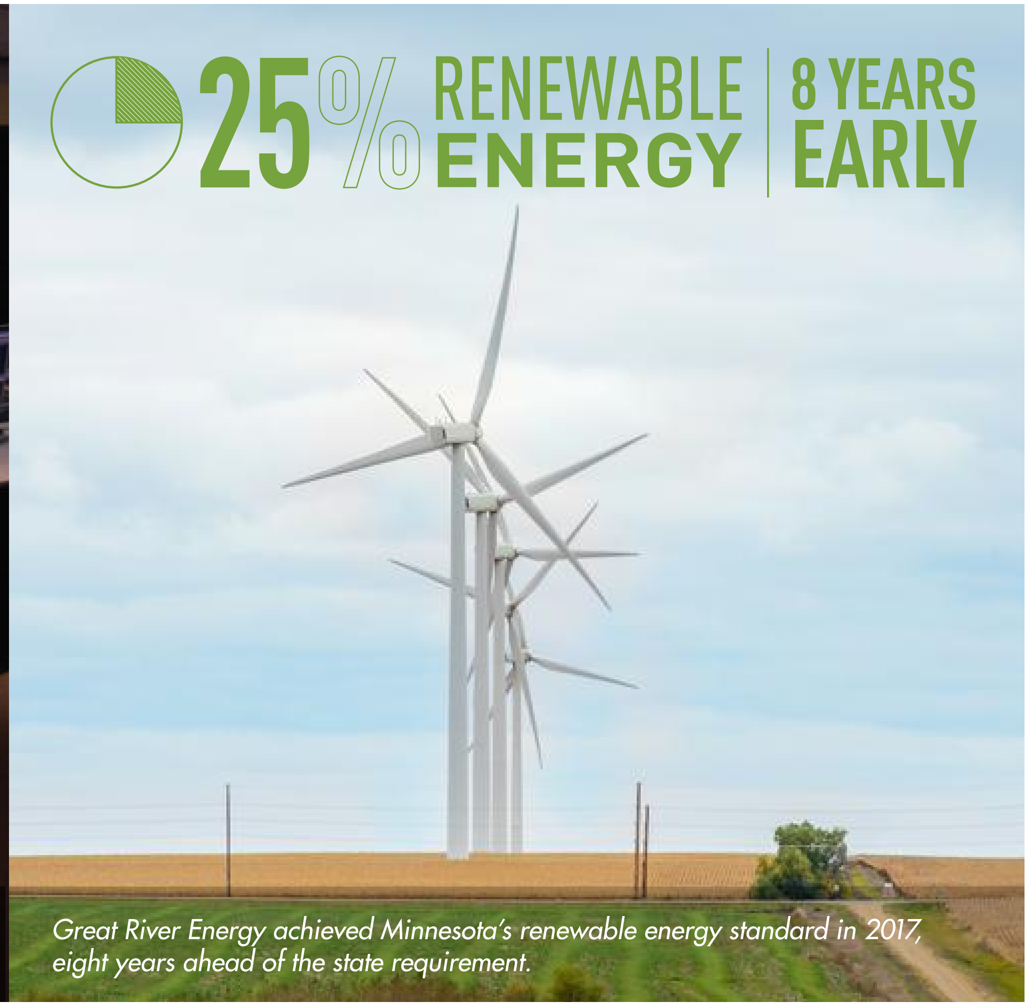
New in 2017, member businesses can participate in the Wellspring wind energy program.

Great River Energy oversees the efficient and reliable operation of the electric system from its system operations facility.

ENERGY **THAT'S ALWAYS THERE**

Electric cooperatives have supplied reliable electricity to Minnesotans for more than 80 years. The way electricity is generated has changed a lot over that time, with new fuels and technologies contributing to greater efficiency and lower emissions.

On April 28, 2017, Great River Energy submitted its integrated resource plan to the Minnesota Public Utilities Commission for review. In it, Great River Energy detailed its plan to reliably and cost-effectively meet its member-owner cooperatives' energy needs in harmony with a sustainable environment for the next 15 years. Great River Energy outlined a continued path of emissions reduction and the addition of carbon-free generation to its power supply portfolio.



Great River Energy achieved Minnesota's renewable energy standard in 2017, eight years ahead of the state requirement.

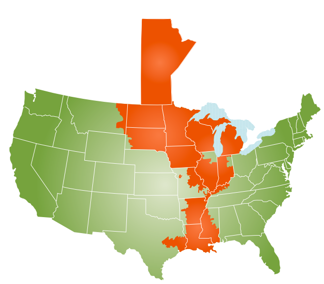
MORE WIND **ON THE WAY**

Great River Energy signed a purchase power agreement for a new 300-megawatt wind project to be constructed in North Dakota in 2019. Another agreement for 100 megawatts of wind in Minnesota will begin in 2021. These two projects will be capable of generating enough clean, renewable energy to power 160,000 homes.

The rise of renewable energy has added up over time, and now represents a significant portion of the energy serving Great River Energy's member-owners. These new wind projects will bring Great River Energy's renewable energy capacity to more than 1,000 megawatts in 2021, including 200 megawatts of hydropower.

Cost-effective renewable development and purchases allowed Great River Energy to meet the state of Minnesota's renewable energy standard of 25 percent renewable energy in 2017 – eight years ahead of the requirement.

Great River Energy's member cooperatives benefit from membership in the Midcontinent Independent System Operator (MISO) energy market, which makes available the most cost-effective energy.



STANTON STATION'S **LASTING LEGACY**

After serving member-owners for 50 years, Great River Energy retired the Stanton Station power plant on May 1, 2017. The plant was no longer economical to operate in the regional energy market. Stanton Station was a valuable resource for decades because of its talented and dedicated employees.

INVESTING IN A **CRITICAL RESOURCE**

Great River Energy continued down its path toward refurbishing the converter stations on either end of the high-voltage, direct-current (HVDC) transmission line to ensure members the continued reliable delivery of power from Coal Creek Station, the cooperative's largest generation source.

The project continued to track on schedule and within the approved budget. At the end of 2017, the project moved from engineering design to equipment testing. The actual refurbishment is scheduled to take place during the spring of 2019.

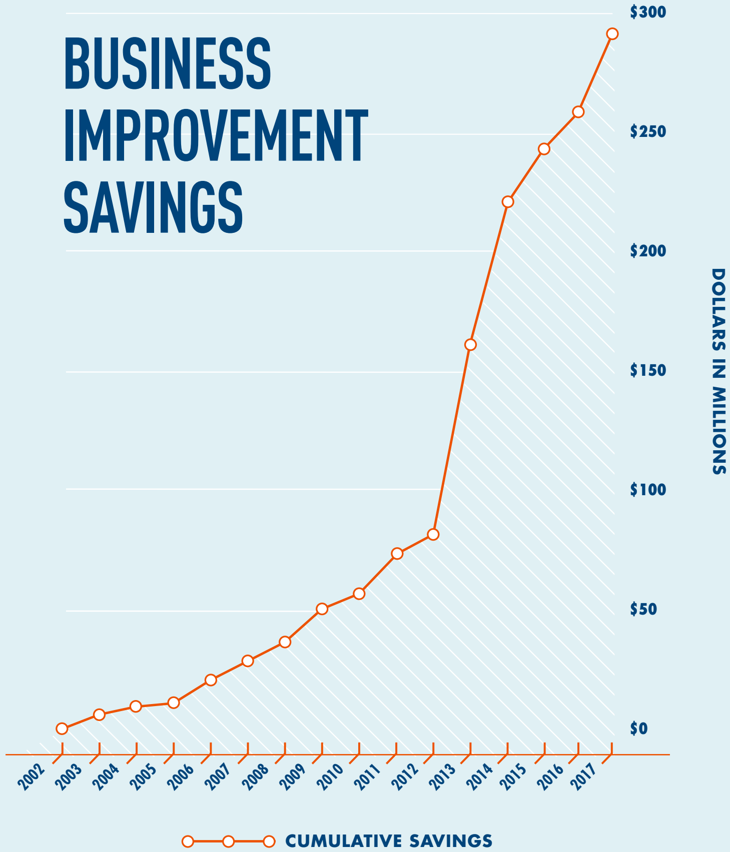
Pollinator plantings have become a common aspect of Great River Energy projects. Pictured here are some of the employees involved, representing several parts of the cooperative: (left to right) Roger Kiefer, transmission construction and maintenance manager; Lori Buffington, communications leader; Jenny Mattson, communications specialist; Craig Poorker, land rights manager; Marsha Parlow, transmission permitting specialist; and Erik Heinen, environmental administrator.

THE COOPERATIVE CULTURE

When your customers are also your owners, extra care is taken to keep them safe, provide excellent service and be a responsible steward of the environment.

One of the ways Great River Energy meets those goals is through pollinator plantings near transmission lines, substations, power plants and office locations. Every acre helps restore the local habitat and promotes healthy bee and butterfly populations.

Low-growing, pollinator-friendly habitat is ideal for planting near transmission lines as it mitigates reliability and safety risks posed by high tree limbs. Since 2004, Great River Energy has restored approximately 200 acres of native habitat.



A QUARTER-BILLION **SAVED**

One of the unique aspects of Great River Energy's culture is the encouragement and acceptance of new ideas from every employee. This continuous search for better methods is known across the company as business improvement.

Since formalizing business improvements in 2002, the cost-focused mindset has become ingrained in the Great River Energy culture. In 2017, business improvements reached a milestone with cumulative savings surpassing $250 million.

A business improvement can be the result of many types of enhancements – a process change, cost reduction, revenue enhancement, safety, security or reliability improvement, just to name a few – and they come from all areas of the company, from plant employees to office staff.

While there are a variety of business improvements over the course of a year, each one amounts to one thing: better service to Great River Energy's member cooperatives and their member-consumers. In 2017, over 70 percent of Great River Energy employees participated in a business improvement.

PUTTING **PEOPLE FIRST**

Great River Energy is an industry-leading utility because the employees are among the best and brightest. The cooperative goes to great lengths to foster a culture of safety, and Great River Energy exceeded its challenging safety goals in 2017.

In 2017, Great River Energy was certified as a great workplace by the independent analysts at Great Place to Work®. An anonymous employee survey revealed that 88 percent of employees say it is a great workplace.

ADVANCING ENVIRONMENTAL **PERFORMANCE**

When facing tighter regulations for mercury emissions at the Coal Creek Station power plant, employees came up with a new, better and more cost-efficient way of reducing emissions. The process resulted in the cooperative receiving a patent.

By adding calcium bromide and other additives to coal before it enters the boiler, mercury can be removed and collected.

2017 **FINANCIALS**

FINANCIAL **CONTENT**

FINANCIAL HIGHLIGHTS

(DOLLARS IN MILLIONS)

	2017	2016	CHANGE
OPERATIONS			
Revenues	$ 1,016.3	$ 1,022.1	$ (5.8)
Purchased Power	$ 177.3	$ 144.8	$ 32.5
Fuel	$ 204.1	$ 219.9	$ (15.8)
Other Operating Expenses	$ 328.5	$ 346.8	$ (18.3)
Depreciation and Amortization	$ 156.9	$ 144.6	$ 12.3
Interest Expense	$ 133.0	$ 137.8	$ (4.8)
Other Income	$ 6.5	$ 5.4	$ 1.1
Nonutility Operations, excluding noncontrolling interest	$ 11.2	$ 4.8	$ 6.4
Net Margin Attributable to GRE	$ 34.2	$ 38.4	$ (4.2)
FINANCIAL POSITION			
Electric Plant	$ 4,573.8	$ 4,460.1	$ 113.7
Utility Plant – net	$ 2,776.6	$ 2,818.5	$ (41.9)
Deferred Charges	$ 414.5	$ 362.2	$ 52.3
Cash and Cash Equivalents	$ 322.9	$ 275.0	$ 47.9
Total Assets	$ 4,062.2	$ 4,019.5	$ 42.7
Long-term Obligations	$ 2,624.7	$ 2,679.0	$ (54.3)
Members' Capital	$ 628.6	$ 594.4	$ 34.2
Equity to Capitalization Ratio	19.0%	18.2%	0.8%

GREAT RIVER ENERGY

FINANCIAL DISCUSSION AND ANALYSIS

Great River Energy's (GRE) financial position continued to benefit from another strong financial performance. Utility operating revenues once again exceeded $1.0 billion due to increased member sales and strong other operating revenues. Favorable operating expense variances produced a very positive net margin heading into the end of 2017 and as a result, the board of directors approved returning $6.0 million in December as a member bill credit and deferring $17.9 million of member electric revenue as a regulatory liability. Without the bill credit and deferral, GRE's 2017 margin would have been $58.1 million. Midcontinent Independent System Operator (MISO) market prices remained low in 2017. GRE responded by reducing its plant generation during the periods of lowest pricing and instead, purchased energy from the market to meet member load. Differences in MISO regional pricing compared to budget resulted in a power cost adjustment (PCA) charge of $5.9 million to GRE's members for 2017. With the strong financial performance of 2017, GRE's equity to capitalization ratio is 19.0 percent, putting it ahead of its plan to target 20.0 percent by 2020. GRE's financial statements are solid and positively position the cooperative for the future.

MARGINS

Net margin attributable to GRE for the year ended December 31, 2017, was $34.2 million and includes the net income from Midwest AgEnergy Group (MAG) of $11.3 million and other equity method investments. This compares to a budget of $23.0 million for 2017. 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 requirement, was $23.0 million for 2017, resulting in an MFI of 1.17x. GRE's board of directors targeted a debt service coverage (DSC) ratio of 1.17x when setting member rates for 2017. GRE's 2017 operations produced a DSC of 1.26x.

ELECTRIC REVENUE

Electric revenue increased $3.3 million or 0.4 percent to $923.9 million in 2017 from $920.6 million in 2016. Electric revenue from member cooperatives was $868.3 million during 2017, an increase of $4.6 million or 0.5 percent from $863.7 million in 2016. Although member megawatt hour (MWh) sales decreased 1.0 percent and megawatt (MW) sales were flat in 2017 compared to 2016, member revenue increased due to a 1.8 percent rate increase for 2017. GRE credited $6.0 million on member December bills and deferred member electric revenue of $17.9 million, which was collected from members in 2017, under regulatory accounting. GRE deferred member electric revenue of $12.0 million as a regulatory liability in 2016. GRE issued a PCA charge of $5.9 million in 2017 and a PCA credit of $7.5 million in 2016. 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 2017 PCA charge was primarily due to an unfavorable budget variance in MISO load purchases expense as market pricing was higher than budgeted. This was partially offset by a favorable budget variance in the MISO market revenue received for generation.

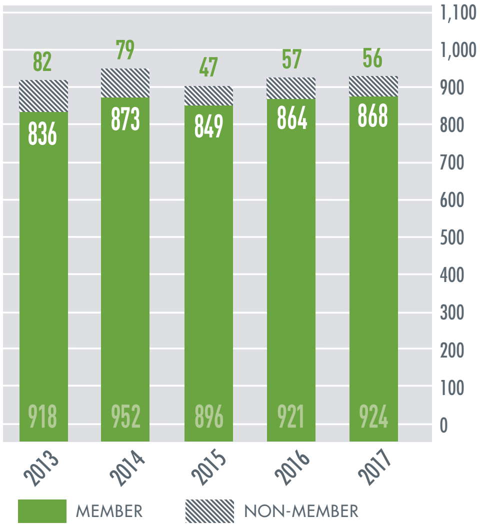
Electric revenue from non-members decreased $1.3 million or 2.3 percent to $55.7 million in 2017 from $57.0 million in 2016. Energy sales decreased $4.8 million compared to 2016. Non-member MWh sales decreased 11.7 percent; however, this was offset by an increase

FINANCIAL DISCUSSION AND ANALYSIS

CONTINUED

ELECTRIC REVENUE BILLED

(DOLLARS IN MILLIONS)



in the average market price for energy of 1.0 percent to $23.48/MWh in 2017. The decrease in energy sales was partially offset by an increase in demand sales to non-members of $3.3 million compared to 2016.

OTHER OPERATING REVENUE

Other operating revenue decreased $9.0 million or 8.9 percent to $92.4 million in 2017 from $101.4 million in 2016. The decrease was due primarily to decreased transmission revenue from the MISO market and inter-utility transmission agreements of $9.9 million as GRE recognized a multi-year transmission agreement settlement with a third party in 2016.

OPERATING EXPENSES

Total operating expenses for 2017 were $866.8 million, an increase of $10.7 million or 1.3 percent from $856.1 million in 2016.

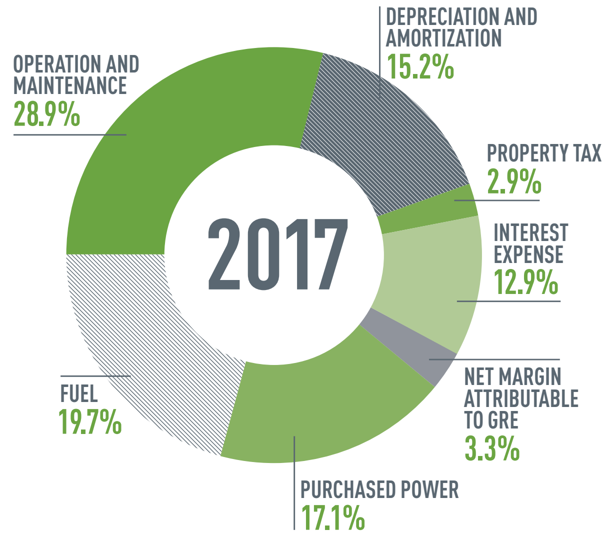
Purchased power increased $32.5 million or 22.4 percent to $177.3 million in 2017 from $144.8 million in 2016. GRE purchased 24.1 percent more MWhs during 2017 compared to 2016 because of an extended scheduled major maintenance outage at Coal Creek Station (CCS), the closing of Stanton Station (Stanton), and a planned strategy to purchase more energy from the market during periods of low market prices using economic dispatch at CCS.

Fuel expense decreased $15.8 million or 7.2 percent to $204.1 million in 2017 from $219.9 million in 2016. Fuel expense at Stanton decreased $17.9 million due to the plant closure in 2017. Fuel expense at the peaking plants decreased $6.7 million or 45.2 percent in 2017 compared to 2016. Peaking generation was 61.3 percent lower in 2017 compared to 2016 (166,000 MWhs in 2017 compared to 429,000 MWhs in 2016); however, this was offset by higher average natural gas prices ($3.25/MMBtu in 2017 compared to $2.41/MMBtu in 2016). These decreases were offset by an increase in fuel expense at CCS of $9.3 million as GRE did not defer Section 45 related fuel costs in 2017. GRE deferred $12.0 million of CCS fuel costs as a regulatory asset in 2016.

Operation and maintenance expense decreased $17.5 million or 5.5 percent to $298.7 million in 2017 from $316.2 million in 2016. Generation operation and maintenance expense decreased $8.0 million. The closure of Stanton reduced expense by $12.7 million. This was partially offset by inflationary increases at CCS and Spiritwood Station. Transmission operation and maintenance expense decreased $12.5 million due to GRE's share of expenses associated with regional and area transmission projects owned by others within the MISO territory and transmission expense to serve member load under inter-utility transmission agreements decreasing $14.5 million in 2017 compared to 2016. These decreases were offset by an increase in general and administrative expense of $3.1 million in 2017 compared to 2016 due to inflationary increases, increased contributions, and conservation improvement program expenditures.

Depreciation and amortization increased $12.3 million or 8.5 percent to $156.9 million in 2017 from $144.6 million in 2016. The increase is due primarily to additional amortization for Stanton closure costs, the impact of sizeable projects being placed in service during 2017, and the impact of adjusting the useful lives for certain components at the peaking plants based on better operational information.

EXPENSES AND MARGIN



OTHER INCOME (EXPENSE)

Interest expense – net of amounts capitalized decreased $4.8 million or 3.5 percent to $133.0 million in 2017 from $137.8 million in 2016. Interest incurred on GRE's long-term obligations decreased due to the repayment of higher rate debt during 2017 and due to the interim borrowings on the syndicated credit facility and the new 2017 debt issuance carrying lower interest rates than the debt being repaid. Capitalized interest increased $1.4 million to $5.1 million for 2017 due to larger multi-year construction projects in process 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 $14.4 million and $6.2 million for the years ended December 31, 2017 and 2016, respectively, of which $11.3 million and $4.9 million, respectively, was attributable to GRE.

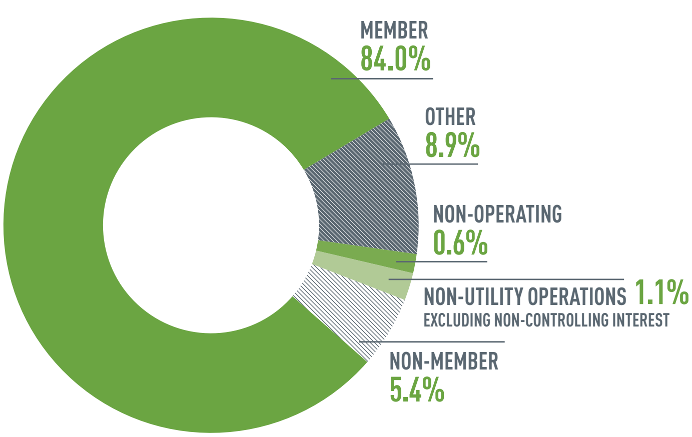
In January 2011, GRE entered into agreements with North Dakota Refined Coal LLC (NDRC) and its subsidiaries for the lease and operation of GRE's DryFining facility. Although GRE does not have any ownership interest in NDRC, it represents a variable interest entity of GRE and is consolidated in the financial statements. NDRC recognized a net loss of $19.1 million and $18.2 million for the years ended December 31, 2017 and 2016, 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

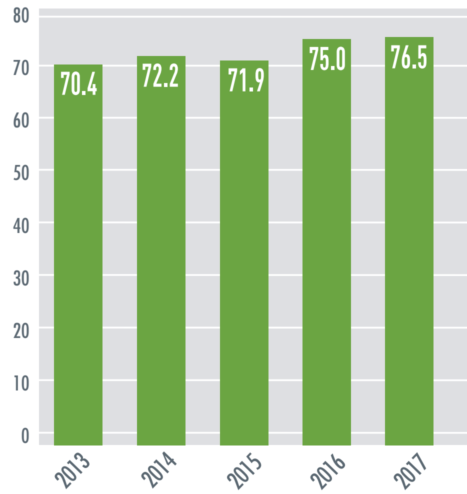


MEMBER RATE

GRE's 2017 member billed rate was 76.48 mills/kilowatt hour (kWh) compared to 74.95 mills/kWh in 2016. The budgeted average member rates were 75.84 mills/kWh and 74.53 mills/kWh for 2017 and 2016, respectively. The increase in the 2017 actual member rate compared to 2016 was due to the 2017 average rate increase of 1.8 percent and the impact of a $5.9 million PCA charge in 2017 compared to a $7.5 million PCA credit in 2016.

MEMBER AVERAGE RATE PER kWh

excluding WAPA | mills per kWh



BALANCE SHEET REVIEW

GRE's total consolidated assets were $4.1 billion in 2017, an increase of $42.7 million.

Utility plant—net decreased $41.9 million to $2.8 billion in 2017. Utility plant decreased due to reclassing the plant to be retired undepreciated assets to a deferred charge as Stanton ceased operations in 2017.

Nonutility plant and equipment—net decreased $3.1 million to $176.6 million in 2017 from $179.7 million in 2016 due to the depreciation of MAG's plant assets, partially offset by 2017 additions.

Other assets and investments increased $56.9 million to $490.8 million in 2017 from $433.9 million in 2016. Deferred charges—retired plant increased $56.9 million due to reclassing Stanton's undepreciated utility plant costs to a regulatory asset and the capitalization of additional estimated decommissioning costs in 2017.

Current assets increased $30.8 million to $618.2 million in 2017 from $587.4 million in 2016. Cash and cash equivalents increased $47.9 million due to cash from operations exceeding investing and financing activities in 2017 as borrowings exceeded cash used for utility plant additions. This increase was offset by a decrease in accounts receivable—others of $11.7 million due primarily to recording the settlement of a transmission agreement with a third party in 2016. Materials and supplies inventory decreased $4.8 million due to the reduction in inventory at Stanton and planned reductions in inventory at GRE facilities and the Falkirk mine.

Members' capital increased $34.2 million to $628.6 million in 2017 as a result of the 2017 net margin attributable to GRE. GRE's equity to capitalization ratio (excluding MAG and NDRC) was 19.0 percent at the end of 2017.

FINANCIAL DISCUSSION AND ANALYSIS

CONCLUDED

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 $38.3 million to $139.2 million in 2017 from $100.9 million in 2016. This increase was due primarily to recording additional asset retirement obligation (ARO) costs at CCS of $35.2 million and accretion related to the AROs of $3.0 million.

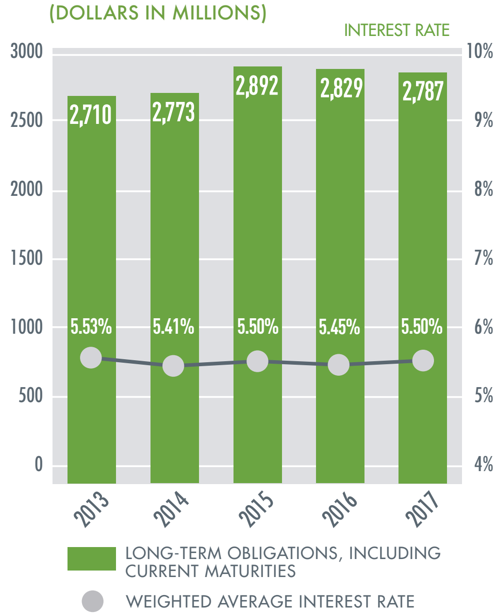
Regulatory liabilities increased $12.8 million to $54.8 million in 2017 from $42.0 million in 2016. This increase was due to the deferral of $17.9 million of member electric revenue in 2017. This increase was offset by a decrease of $4.8 million in the regulatory liability associated with the fair value of interest rate swaps in an asset position.

Long-term obligations decreased $54.4 million to $2.6 billion in 2017. The decrease is due to reclassing scheduled 2018 principal payments to current, decreased borrowings on the unsecured syndicated credit facility of $160.0 million, additional unscheduled debt payments at MAG of $25.0 million, decreased borrowings on MAG's line of credit, and the amortization of debt issue costs. These decreases were offset by the 2017 debt issuance proceeds of $300.0 million and new debt issue costs of $3.0 million.

Current liabilities decreased $8.6 million to $441.4 million in 2017 from $450.0 million in 2016. Accounts payable decreased $18.3 million due to fewer payables related to the retirement of Stanton, the direct current transmission line converter station refurbishment project, and timing. Derivative instruments decreased $17.7 million due to a decrease in the mark-to-market valuation of certain derivative instruments in a liability position at year end 2017 and the settlement of interest rate swaps associated with the 2017 debt issuance. These decreases were offset by an increase in the current portion of long-term debt of $12.6 million as the 2017 debt issuance has $15.0 million due in 2018. Other accrued liabilities and notes payable increased $8.1 million due to an increase in the expected costs for the Stanton ash pond ARO, year end payroll timing, and an increase in accrued expenses at MAG of $1.7 million related to unsettled corn contracts.

LONG-TERM DEBT

(DOLLARS IN MILLIONS)



LIQUIDITY POSITION AND FINANCING

Excluding subsidiaries and variable interest entities, GRE's year end 2017 unrestricted available liquidity of $693.3 million was comprised of cash and cash equivalents of $276.6 million and unused capacity on its existing unsecured credit facilities of $416.7 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 2018. 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, 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.

GRE issued long-term debt in 2017, which was used to reduce its borrowings on the revolving credit facility. 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 has kept member rates competitive within the region, maintained its investment grade credit ratings, sustained its strong liquidity, and is ahead of its target to achieve an equity to capitalization ratio of 20.0 percent by 2020. Once the target of 20.0 percent equity to capitalization ratio is achieved, GRE plans to return patronage capital to its members in amounts that will sustain the 20.0 percent ratio. GRE is pleased with the 2017 financial results and believes it's well positioned to continue to achieve its financial and future 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 7, 2018

INDEPENDENT AUDITORS' REPORT

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, 2017 and 2016, and the related consolidated statements of operations and comprehensive income, changes in capital, and cash flows for each of the three years in the period ended December 31, 2017, 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 6% and 7% of consolidated total assets as of December 31, 2017 and 2016, respectively, and total operating revenues constituting 20%, 18%, and 16% of consolidated total operating revenues for each of the three years in the period ended December 31, 2017. 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, based on our audit and the reports of the other auditors, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Great River Energy as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in accordance with accounting principles generally accepted in the United States of America.

Deloitte & Touche LLP

Minneapolis, Minnesota
March 7, 2018

CONSOLIDATED BALANCE SHEETS

AS OF DECEMBER 31, 2017 AND 2016 (IN THOUSANDS)

ASSETS	**2017**	**2016**
UTILITY PLANT:		
Electric plant	$ 4,573,762	$ 4,460,054
Coal mine plant	334,517	335,480
Plant to be retired—net of accumulated depreciation		53,489
Construction work in progress	97,058	100,570
Less accumulated depreciation and amortization	(2,228,724)	(2,131,129)
Utility plant—net	2,776,613	2,818,464
NONUTILITY PLANT AND EQUIPMENT—Net	176,629	179,741
OTHER ASSETS AND INVESTMENTS:		
Restricted investments—deferred compensation	14,120	12,693
Other investments	30,996	30,249
Deferred charges:		
Financing related	117,503	120,102
Contract settlement	85,406	83,543
Plant retirement	63,125	6,232
Other	148,459	152,285
Other long-term assets	31,150	28,785
Total other assets and investments	490,759	433,889
CURRENT ASSETS:		
Cash and cash equivalents	322,883	274,980
Accounts receivable:		
Members	148,433	144,166
Others	22,114	33,793
Inventories:		
Materials and supplies	60,966	65,733
Fuel	22,184	23,346
Other	19,608	18,092
Prepaids and other current assets	18,564	21,020
Derivative instruments	3,448	6,247
Total current assets	618,200	587,377
TOTAL	$ 4,062,201	$ 4,019,471

CONTINUED

CONSOLIDATED BALANCE SHEETS

AS OF DECEMBER 31, 2017 AND 2016 (IN THOUSANDS)

CAPITAL AND LIABILITIES	**2017**	**2016**
CAPITAL:		
Members:		
Patronage capital	$ 627,415	$ 593,230
Memberships	3	3
Additional paid-in capital—subsidiary—MAG	1,195	1,195
Total members' capital	628,613	594,428
Noncontrolling interest:		
Subsidiary—MAG	24,086	20,959
Variable interest entity—NDRC	131,268	113,646
Total noncontrolling interest	155,354	134,605
Total capital	783,967	729,033
OTHER NONCURRENT LIABILITIES	139,201	100,929
REGULATORY LIABILITIES	54,811	42,015
LONG-TERM OBLIGATIONS—Less current portion	2,624,684	2,679,048
DEFERRED COMPENSATION	14,120	12,693
DEFERRED INCOME TAXES	4,008	5,726
COMMITMENTS AND CONTINGENCIES (Notes 4, 5, and 10)		
CURRENT LIABILITIES:		
Current portion of long-term obligations	162,674	150,124
Notes payable to members	32,063	27,187
Accounts payable	67,570	85,896
Property and other taxes	27,083	25,901
Other accrued liabilities and notes payable	66,167	58,099
Accrued interest payable	61,466	60,691
Derivative instruments	24,387	42,129
Total current liabilities	441,410	450,027
TOTAL	$ 4,062,201	$ 4,019,471

SEE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS.

CONCLUDED

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME

FOR THE YEARS ENDED DECEMBER 31, 2017, 2016, AND 2015 (IN THOUSANDS)

UTILITY OPERATIONS	**2017**	**2016**	**2015**
UTILITY OPERATING REVENUE:			
Electric revenue	$ 923,916	$ 920,625	$ 896,112
Other operating revenue	92,369	101,447	86,937
Total utility operating revenue	1,016,285	1,022,072	983,049
UTILITY OPERATING EXPENSES:			
Purchased power	177,278	144,753	142,550
Fuel	204,074	219,859	233,361
Operation and maintenance	298,704	316,174	309,519
Depreciation and amortization	156,941	144,586	141,030
Property and other taxes	29,822	30,730	30,722
Total utility operating expenses	866,819	856,102	857,182
UTILITY OPERATING MARGIN	149,466	165,970	125,867
OTHER INCOME (EXPENSE):			
Other income—net	3,962	3,777	32,829
Interest income	2,573	1,643	1,319
Interest expense—net of amounts capitalized	(133,001)	(137,845)	(144,015)
Other expense—net	(126,466)	(132,425)	(109,867)
NET UTILITY MARGIN	23,000	33,545	16,000
NONUTILITY OPERATIONS:			
Operating revenue	253,948	246,120	188,622
Operating expense	239,542	239,900	189,646
Operating income (loss)	14,406	6,220	(1,024)
(Loss) income from equity method investments	(94)	(22)	38
Loss from variable interest entity—NDRC	(19,102)	(18,215)	(15,800)
Net nonutility operations	(4,790)	(12,017)	(16,786)
NET MARGIN (LOSS) AND COMPREHENSIVE INCOME (LOSS), INCLUDING NONCONTROLLING INTEREST	18,210	21,528	(786)
NONCONTROLLING INTEREST:			
Subsidiary—MAG	(3,127)	(1,361)	199
Variable interest entity—NDRC	19,102	18,215	15,800
Total noncontrolling interest	15,975	16,854	15,999
NET MARGIN AND COMPREHENSIVE INCOME ATTRIBUTABLE TO GREAT RIVER ENERGY	$ 34,185	$ 38,382	$ 15,213

SEE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS.

CONSOLIDATED STATEMENTS OF CHANGES IN CAPITAL

FOR THE YEARS ENDED DECEMBER 31, 2017, 2016, AND 2015 (IN THOUSANDS)

	Patronage Capital	Memberships	Additional Paid-in Capital	Noncontrolling Interest Subsidiary—MAG	Noncontrolling Interest Variable Interest Entity—NDRC	Total Capital
BALANCE—January 1, 2015	$ 539,635	$ 3	$ 1,195	$ 22,763	$ 75,848	$ 639,444
Net margin (loss) and comprehensive income (loss)	15,213			(199)	(15,800)	(786)
Capital contributed by noncontrolling interest					50,608	50,608
Capital distributed to noncontrolling interest				(2,966)	(12,915)	(15,881)
Dividends paid by noncontrolling interest					(786)	(786)
BALANCE—December 31, 2015	$ 554,848	$ 3	$ 1,195	$ 19,598	$ 96,955	$ 672,599
Net margin (loss) and comprehensive income (loss)	38,382			1,361	(18,215)	21,528
Capital contributed by noncontrolling interest					46,263	46,263
Capital distributed to noncontrolling interest					(10,565)	(10,565)
Dividends paid by noncontrolling interest					(792)	(792)
BALANCE—December 31, 2016	$ 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

SEE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS.

CONSOLIDATED STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED DECEMBER 31, 2017, 2016, AND 2015 (IN THOUSANDS)

	2017	2016	2015
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net margin (loss), including noncontrolling interest	$ 18,210	$ 21,528	$ (786)
Adjustments to reconcile net margin (loss) to net cash provided by operating activities:			
Depreciation and amortization:			
Included in depreciation and amortization	156,941	144,586	141,030
Included in fuel and interest	31,908	29,761	32,272
Included in operation and maintenance	13,382	15,748	
Included in nonutility operating expense	11,374	11,168	
Loss (income) from equity method investments	95	21	(38)
Patronage credits earned from investments	(2,152)	(2,127)	(1,825)
Deferred charges	(37,413)	(29,152)	(79,219)
Regulatory liabilities	17,944	12,000	(42,234)
Changes in working capital (excluding cash, investments, and borrowings):			
Accounts and long-term receivables	7,996	(23,413)	3,422
Inventory and other assets	(2,107)	7,043	(6,676)
Accounts payable, taxes, and other accrued expenses	(28,692)	10,966	8,173
Accrued interest	775	(2,587)	632
Noncurrent liabilities	4,599	1,877	933
Net cash provided by operating activities	192,860	197,419	55,684
CASH FLOWS FROM INVESTING ACTIVITIES:			
Utility plant additions	(127,003)	(150,403)	(151,671)
Nonutility plant and equipment additions	(6,954)	(3,266)	(24,884)
Proceeds from sale of property	531	638	219
Redemption of patronage capital from investments	1,405	1,335	1,153
Net cash used in investing activities	(132,021)	(151,696)	(175,183)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from issuance of long-term obligations	625,000	375,000	630,308
Repayments of long-term obligations	(676,124)	(444,440)	(526,451)
Cost of new debt issuances, leases, and interest rate hedging instruments	(3,412)	(1,200)	(313)
Notes received from (paid to) members—net	4,876	(3,356)	6,657
Subsidiary—MAG:			
Capital distributed to noncontrolling interest			(2,966)
Variable interest entity—NDRC:			
Capital contributed by noncontrolling interest	45,050	46,263	50,608
Capital distributed to noncontrolling interest	(7,520)	(10,565)	(12,915)
Dividends paid by noncontrolling interest	(806)	(792)	(786)
Net cash (used in) provided by financing activities	(12,936)	(39,090)	144,142
NET INCREASE IN CASH AND CASH EQUIVALENTS	47,903	6,633	24,643
CASH AND CASH EQUIVALENTS—Beginning of year	274,980	268,347	243,704
CASH AND CASH EQUIVALENTS—End of year	$ 322,883	$ 274,980	$ 268,347

SEE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

AS OF DECEMBER 31, 2017 AND 2016, AND FOR THE YEARS ENDED DECEMBER 31, 2017, 2016, AND 2015

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 Finance, LLC (DSAF)	Subsidiary of MAG
Dakota Spirit AgEnergy, LLC (DSA)	Subsidiary of DSAF

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, 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 Falkirk's interest expense of $1.4 million, $1.8 million, and $2.4 million in 2017, 2016, and 2015, respectively; income tax expense of $5.3 million, $2.7 million, and $3.0 million in 2017, 2016, and 2015, respectively; and net income of $9.8 million, $12.2 million, and $12.6 million in 2017, 2016, and 2015, respectively, all of which 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, 2017, 2016, and 2015.

Assets and liabilities of Falkirk included in the consolidated balance sheets as of December 31, 2017 and 2016, after intercompany eliminations, are as follows (in thousands):

	2017	2016
Coal mine plant	$ 286,212	$ 287,175
Construction work in progress	774	464
Accumulated depreciation and amortization	(171,511)	(165,680)
Deferred charges	12,951	18,596
Other long-term assets	9,555	6,589
Materials and supplies inventory	19,542	21,259
Fuel inventory	8,426	8,788
Other current assets	1,149	1,654
Other noncurrent liabilities	27,790	29,097
Long-term obligations	33,127	37,871
Current liabilities	27,133	26,583

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. 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 $14.2 million, $13.4 million, and $9.9 million for the years ended December 31, 2017, 2016, and 2015, respectively, related to this agreement. This

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

CONTINUED

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 $19.1 million, $18.2 million, and $15.8 million for the years ended December 31, 2017, 2016, and 2015, 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, 2017 and 2016.

Assets and liabilities of NDRC included in the consolidated balance sheets as of December 31, 2017 and 2016, after intercompany eliminations, are as follows (in thousands):

	2017	**2016**
Cash	$ 7,767	$ 5,871
Prepaids	70	67
Current liabilities	439	176

JPM Capital Corporation and WM Refined Coal, LLC hold a 55% and 45% 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% owner in MAG. During 2014, in exchange for a 21.57% ownership interest, GRE transferred 17,000 ownership units to third-party investors for $17.0 million.

MAG has two wholly owned subsidiaries, Blue Flint and DSAF.

Blue Flint operates an ethanol biorefinery facility located in Underwood, North Dakota. Blue Flint has a production capacity of approximately 65 million gallons of undenatured ethanol per year. Blue Flint is a dry-mill production facility that produces and sells ethanol, dry and modified distillers grain, and distillers oil.

DSAF's wholly owned subsidiary, DSA, completed construction in 2015 of a biorefinery facility located near Jamestown, North Dakota. DSA is a dry-mill production facility that produces and sells ethanol, dry and modified distillers grain, and distillers oil, and has a production capacity of approximately 65 million gallons of undenatured ethanol per year.

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 Spiritwood Station for use in the production of ethanol and related products. Steam and water purchases were $13.4 million, $12.6 million, and $9.4 million for the years ended December 31, 2017, 2016, and 2015, respectively. The sale of steam and water by CCS and Spiritwood Station 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 2017, 2016, and 2015.

Utility net margin and nonutility operating income (loss) as of December 31, 2017, 2016, and 2015, would be as follows had this transaction been eliminated (in thousands):

	2017		**2016**		**2015**	
	As Presented	**With Elimination**	**As Presented**	**With Elimination**	**As Presented**	**With Elimination**
Net utility margin	$ 23,000	$ 9,591	$ 33,545	$ 20,946	$ 16,000	$ 6,650
Nonutility operating income (loss)	11,185	24,594	6,220	18,819	(1,024)	8,326
Total	$ 34,185	$ 34,185	$ 39,765	$ 39,765	$ 14,976	$ 14,976

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

CONTINUED

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 and Cash Equivalents—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.

Supplemental Cash Flow Information—Supplemental cash flow information for the years ended December 31, 2017, 2016, and 2015, is as follows (in thousands):

	2017	2016	2015
Supplemental disclosure of cash flow information:			
Cash paid for interest—net of amounts capitalized	$ 142,334	$ 152,578	$ 148,384
Cash paid for taxes—Falkirk	$ 3,743	$ 2,243	$ 3,825
Noncash investing and financing activities:			
Utility and nonutility plant acquisitions included in accounts payable	$ 9,954	$ 10,140	$ 8,576
Utility plant acquired under capital lease—Falkirk	$ 5,114	$ 3,794	$ 5,336

Interest on borrowed funds in the amount of $5.1 million, $3.7 million, and $5.8 million was capitalized in 2017, 2016, and 2015, 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, chemicals, ethanol, and distillers grain inventory held at MAG. Corn and chemical inventory is stated at the lower of cost (on the first-in, first-out method) or net realizable value. Ethanol and distillers grain 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 at both December 31, 2017 and 2016.

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 $(40.6) million and $(42.6) million at December 31, 2017 and 2016, respectively, that will continue to be amortized. Also included in accumulated depreciation are nonlegal or noncontractual costs of removal components in the amount of $51.5 million and $49.0 million for 2017 and 2016, 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

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Plant To Be Retired—Net of Accumulated Depreciation—Plant to be retired represents the undepreciated book value of Stanton Station (Stanton). The decision to retire Stanton occurred in 2016 and the plant discontinued operations May 1, 2017.

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 3.2%, 3.1%, and 3.1% for 2017, 2016, and 2015, respectively. The range of useful lives for utility plant is three to 50 years. Coal mine equipment is depreciated or amortized using a straight-line method over the estimated useful lives. Amortization of coal lands and leaseholds is calculated on the units-of-production method based upon estimated recoverable tonnages 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 as of December 31, 2017 and 2016, is as follows (in thousands):

	2017	**2016**
Land improvements	$ 16,166	$ 16,166
Buildings and improvements	36,964	36,956
Plant equipment and other	159,683	154,329
Construction work in progress	2,273	763
Less accumulated depreciation	(38,457)	(28,473)
	$ 176,629	$ 179,741

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 liability method. 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 attributable to GRE) 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). 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—Electric revenue is recognized when energy is delivered to GRE's members or to other non-member organizations. The GRE rate schedule includes a power cost adjustment that allows for increases or decreases in member power billings based upon actual power costs compared to plan. The power cost adjustment was a charge to GRE members of $5.9 million for 2017 and a credit of $7.5 million and $18.6 million for 2016 and 2015, respectively. Credits or charges are recorded as a decrease or increase, respectively, in electric revenue in the consolidated statements of operations and comprehensive income. In 2017 and 2016, GRE deferred the recognition of $17.9 million and $12.0 million, respectively, of member electric revenue under regulatory accounting. In 2015, GRE recognized deferred member electric revenue of $11.7 million under regulatory accounting (see Note 11).

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Other Operating Revenue—Other operating revenue includes: revenue related to the processing plant that transforms municipal solid waste into refuse-derived fuel; revenue received from other utilities related to providing transmission service under various integrated transmission agreements; and revenue from the sale of utility plant byproducts, such as steam and fly ash. Other operating revenue is recorded as services are provided.

Nonutility Operations—Nonutility operating revenue and expense represent MAG consolidated operations. Revenue from the production of ethanol and related products is recorded at the time the title of the goods and all risks of ownership transfer to customers and settlement price is realizable. Transfer of ownership generally occurs when the risk of loss is assumed by the customer.

Subsequent Events—GRE has considered subsequent events for recognition or disclosure through March 7, 2018, the date the consolidated financial statements were available to be issued. All material subsequent events have been disclosed in these consolidated financial statements.

3. ACCOUNTING PRONOUNCEMENTS

Recently Adopted

In February 2015, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2015-02, *Amendments to the Consolidation Analysis*, which amends the consolidation requirements in ASC 810, *Consolidations*, and significantly changes the consolidation analysis required under GAAP. GRE implemented the new guidance as required in 2016 and its adoption did not have a material impact on GRE's consolidated financial statements.

In July 2015, the FASB issued ASU 2015-11, *Simplifying the Measurement of Inventory (Topic 330)*. This standard requires entities to measure most inventory "at the lower of cost and net realizable value," thereby simplifying the current guidance under which an entity must measure inventory at the lower of cost or market. GRE implemented the new guidance in 2016 and its adoption did not have a material impact on GRE's consolidated financial statements.

Recently Issued

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*. The core principle of the guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In August 2015, the FASB issued Update 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date*, which defers the effective date of ASU 2014-09 by one year for all entities and permits early adoption on a limited basis. GRE does not believe this ASU will have a material impact on GRE's consolidated financial statements. This ASU is effective for GRE in 2018.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. The ASU will require organizations that lease assets to recognize on the balance sheet the assets and liabilities for the rights and obligations created by those leases. GRE is still in the process of evaluating the impact this guidance will have on GRE. This ASU is effective for GRE in 2019.

In August 2016, the FASB issued 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)*, which amends ASC 230 to add or clarify guidance on the classification of certain cash receipts and payments in the statement of cash flows. GRE does not believe the adoption of this ASU will have a material effect on the consolidated statements of cash flows. This ASU is effective for GRE in 2018.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 320)*. The ASU will require that restricted cash and restricted cash equivalents be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. This standard will require that GRE include MAG's restricted cash as a cash equivalent on the statement of cash flows. MAG's restricted cash was $2.6 million and $3.9 million as of December 31, 2017 and 2016, respectively. This ASU is effective for GRE in 2018.

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 does not believe the adoption of this ASU will have a material effect 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 recognizing income tax expense. This ASU is effective for GRE in 2019.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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4. LEASING TRANSACTIONS

Operating Leases—GRE is the lessee on various operating leases for equipment used in its operations. These transactions are governed by the terms of various master lease agreements. The lease term of each leased item is determined at the time it is added to its respective master lease. Original lease terms ranged from 60 to 96 months. Falkirk is the lessee on various short-term operating leases for equipment. MAG is the lessee on operating leases for railroad cars, equipment, and land, with terms expiring at various times through 2025 for the railroad cars and equipment and 2045, with options to renew, for the land. Lease expense was $10.2 million, $12.5 million, and $11.8 million in 2017, 2016, and 2015, respectively.

The schedule of future minimum lease payments as of December 31, 2017, is as follows (in thousands):

YEARS ENDING DECEMBER 31	MAG	GRE
2018	$ 8,588	$ 1,427
2019	8,398	1,293
2020	8,242	1,026
2021	6,087	879
2022	3,689	466
Thereafter	28,566	461
	$ 63,570	$ 5,552

Capital Leases—GRE entered into a lease agreement for railroad cars used in the operation of Spiritwood Station. The lease expires in 2020. The gross amount of the lease was $7.6 million, with accumulated amortization of $5.5 million and $4.8 million at December 31, 2017 and 2016, respectively. The principal and interest payments were $1.1 million for years 2017, 2016 and 2015.

Falkirk has also leased certain equipment that is used in mining operations. The gross amount of these leases was $98.6 million and $104.6 million and the accumulated amortization was $52.4 million and $53.2 million as of December 31, 2017 and 2016, respectively. These amounts are recorded in coal mine plant and accumulated depreciation and amortization in the consolidated balance sheets.

The schedule of future minimum lease payments as of December 31, 2017, is as follows (in thousands):

YEARS ENDING DECEMBER 31	Falkirk	GRE
2018	$ 14,748	$ 1,056
2019	13,502	1,056
2020	4,833	263
2021	4,395	
2022	2,214	
Total minimum lease payments	39,692	2,375
Amounts representing interest	(1,600)	(180)
Present value of minimum lease payments	38,092	2,195
Current maturities	(13,827)	(934)
Long-term capital lease obligations—net	$ 24,265	$ 1,261

The current and long-term portions of the capital lease obligations are included in current portion of long-term obligations and long-term obligations, respectively, in the consolidated balance sheets (see Note 5).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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5. LONG-TERM OBLIGATIONS

The consolidated long-term obligations as of December 31, 2017 and 2016, are as follows (in thousands):

	2017	2016
First Mortgage Bonds, Series 2007A, 5.829%	$ -	$ 48,500
First Mortgage Bonds, Series 2007A, 6.254%, due 2018–2038	739,100	739,100
First Mortgage Bonds, Series 2008A, 7.233%, due 2018–2038	339,673	345,635
First Mortgage Bonds, Series 2008B, 1.96%, due 2018–2023	10,000	11,667
First Mortgage Notes, Series 2009A, 5.0% to 7.15%, due 2018–2024	57,300	68,400
First Mortgage Bonds, Series 2009B, 5.81% to 6.94%, due 2018–2031	300,000	325,000
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 2018–2030	336,000	349,500
First Mortgage Note, Series 2014A, 2.84%, due 2018–2021	55,000	70,000
First Mortgage Note, Series 2014B, LIBOR plus 1.15%,		
2.72% at December 31, 2017, 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 2018-2045	300,000	
Syndicated Credit Facility, National Rural Utilities Cooperative Finance Corp,		
LIBOR plus 1.25%, 2.81% at December 31, 2017		140,000
Variable, 4.75% at December 31, 2017		20,000
Department of Energy, 0%, due 2018–2028, 5.2% to 6.1% imputed interest	4,586	5,055
Term Note, LIBOR plus 1.375%, 2.94% at December 31, 2017, due 2018–2019	1,000	3,000
Term Note, 2.35%, due 2018–2019	1,584	2,490
Term Note, 2.55%, due 2018–2019	1,356	2,131
Capitalized lease obligations, Spiritwood Station coal cars, 6.9% imputed interest	2,196	3,068
Capitalized lease obligations, Falkirk Mine, 1.2% to 5.9% imputed interest	38,096	46,785
Term Note, Blue Flint, 5.8%, due 2018–2021	7,385	9,231
Term Note, Blue Flint, LIBOR plus 3.75%, 4.99% at December 31, 2017,		
due 2018–2021	4,991	6,745
Term Note, DSAF, EB-5 Program, 7%, due 2019	50,000	75,000
Term Note, DSA, LIBOR plus 5.00%, 6.25% at December 31, 2017, due 2018–2023	33,628	40,781
Revolver Note, DSA, LIBOR plus 5.00%, 6.245% at December 31, 2017		15,000
Other—at various rates and maturities	6,413	7,231
Subtotal	2,811,308	2,857,319
Less unamortized bond issuance costs	(22,195)	(22,013)
Plus deferred lease costs, Falkirk Mine	8,064	4,622
Less unamortized bond discount	(9,819)	(10,756)
	2,787,358	2,829,172
Current maturities	(162,674)	(150,124)
Long-term obligations—net	$ 2,624,684	$ 2,679,048

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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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% 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 and 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, 2017 and 2016, the outstanding balance was $0 and $160.0 million, respectively. These amounts are recorded in long-term obligations in the consolidated balance sheets. 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 2018. There were no amounts outstanding on this facility at December 31, 2017 and 2016.

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

Blue Flint has a revolving line of credit in the amount of $25.0 million that expires on May 1, 2022. There were no amounts outstanding at December 31, 2017 and 2016.

Substantially all of the assets of Blue Flint are pledged as security under the Blue Flint Term Notes. DSAF's and DSA's term notes are collateralized by substantially all of the assets of DSA. Blue Flint, DSAF, and DSA loan agreements contain restrictive covenants on various financial ratios, limits on capital expenditures, net worth, working capital requirements, and distributions. For the year ended December 31, 2017, MAG received a waiver for the capital expenditure limit and complied with all other restrictive covenants.

Future maturities on long-term obligations as of December 31, 2017, are as follows (in thousands):

YEARS ENDING DECEMBER 31	
2018	$ 162,674
2019	213,887
2020	160,565
2021	162,913
2022	162,021
Thereafter	1,949,248
	$ 2,811,308

6. INVESTMENTS

GRE's investments as of December 31, 2017 and 2016, are as follows (in thousands):

	2017	2016
Other investments:		
Capital certificate investments—CFC	$ 19,644	$ 19,644
Cooperative investment patronage allocations	11,352	10,605
Total other investments	30,996	30,249
Restricted investments—investments for deferred compensation	14,120	12,693
	$ 45,116	$ 42,942

The capital certificate investments bear interest at a rate of 5% and a portion of them are required under borrowing arrangements with CFC. At December 31, 2017, 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).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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The investments reported at amortized cost at December 31, 2017 and 2016, are as follows (in thousands):

	Amortized Cost	GROSS Unrealized Gains	GROSS Unrealized Losses	Fair Value
2017				
Long-term investments—held-to-maturity securities—capital certificate investments	$ 19,644	$ -	$ -	$ 19,644
2016				
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 was $2.6 million, $1.6 million, and $1.3 million in 2017, 2016, and 2015, 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, 2017, 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, 2017 and 2016.

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.

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MAG's derivative gains (losses) included in the consolidated statements of operations and comprehensive income for the years ended December 31, 2017, 2016, and 2015, are as follows (in thousands):

	2017	2016	2015
Realized and unrealized gains (losses) recognized from undesignated hedges:			
Nonutility operating revenue	$ 2,949	$ (5,425)	$ 1,552
Nonutility operating expenses	4,361	7,242	1,939

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, 2017 and 2016, are as follows (in thousands):

	Balance Sheet Location	2017	2016
Derivatives in an asset position, none of which are designated as hedging instruments:			
Interest rate contracts	Derivative instruments	$ -	$ 4,786
Commodity contracts	Derivative instruments	3,448	1,461
Total derivative instrument assets		$ 3,448	$ 6,247
Derivatives in a liability position, none of which are designated as hedging instruments:			
Interest rate contracts	Derivative instruments	$ 21,658	$ 37,665
Commodity contracts	Derivative instruments	2,729	4,464
Total derivative instrument liabilities		$ 24,387	$ 42,129

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.

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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, 2017 and 2016, set forth by level within the fair value hierarchy, is as follows (in thousands):

	Assets at Fair Value as of December 31, 2017			
	Total	**Active Markets for Identical Assets (Level 1)**	**Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Assets:				
Cash equivalents—money market funds	$ 235,689	$ 235,689	$ -	$ -
Restricted investments—deferred compensation:				
Money market funds	2,054	2,054		
Mutual funds:				
Domestic stock funds	3,781	3,781		
Balanced funds	4,266	4,266		
Fixed income funds	1,720	1,720		
International stock funds	2,298	2,298		
Commodity derivatives	3,448	3,243	205	
Total assets	$ 253,256	$ 253,051	$ 205	$ -
Liabilities:				
Interest rate contracts	$ 21,658	$ -	$ 21,658	$ -
Commodity derivatives	2,729	195	2,534	
Total liabilities	$ 24,387	$ 195	$ 24,192	$ -

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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	Assets at Fair Value as of December 31, 2016			
	Total	Active Markets for Identical Assets (Level 1)	Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents—money market funds	$ 177,278	$ 177,278	$ -	$ -
Restricted investments—deferred compensation:				
Money market funds	2,438	2,438		
Mutual funds:				
Domestic stock funds	3,318	3,318		
Balanced funds	3,976	3,976		
Fixed income funds	1,344	1,344		
International stock funds	1,617	1,617		
Interest rate contracts	4,786		4,786	
Commodity derivatives	1,461	1,282	179	
Total assets	$ 196,218	$ 191,253	$ 4,965	$ -
Liabilities:				
Interest rate contracts	$ 37,665	$ -	$ 37,665	$ -
Commodity derivatives	4,464	2,720	1,744	
Total liabilities	$ 42,129	$ 2,720	$ 39,409	$ -

For the years ended December 31, 2017 and 2016, 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 capital leases, at December 31, 2017 and 2016, are as follows and are provided for disclosure purposes only (in thousands):

	2017		2016	
	Carrying Cost	Fair Value	Carrying Cost	Fair Value
Long-term receivables	$ 2,158	$ 2,061	$ 2,563	$ 2,534
Long-term obligations	$ 2,761,197	$ 3,253,915	$ 2,796,710	$ 3,299,000

The estimated fair values of long-term receivables and long-term obligations, other than capital 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 regular federal income tax expense during 2017, 2016, or 2015 due to a net tax loss position. 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, 2017 and 2016, are as follows (in thousands):

	2017	2016
GRE		
Deferred tax assets:		
Net operating loss carryforwards	$ 123,371	$ 171,648
Tax and AMT credit carryforwards	8,737	8,547
Other	32,943	41,608
Total deferred tax assets	165,051	221,803
Deferred tax liabilities:		
Property related	(114,025)	(161,896)
Deferred regulatory assets	(26,005)	(26,807)
Other	(26,614)	(34,640)
Total deferred tax liabilities	(166,644)	(223,343)
Valuation allowance	(2,415)	(4,186)
Net deferred tax liability	$ (4,008)	$ (5,726)
Falkirk		
Deferred tax assets	$ 9,903	$ 16,839
Deferred tax liabilities	(7,158)	(11,654)
Net deferred tax asset, reported as deferred charges-other	$ 2,745	$ 5,185

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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, the sale and leaseback transaction that originated in 1996 and terminated in 2008, deferred charges, retirement benefits, and certain financial reserves not deductible for tax purposes until paid.

On December 22, 2017, the President signed into law The Tax Cuts and Jobs Act, which reduces the corporate tax rate to 21 percent effective January 1, 2018. Due to this change in tax law, GRE remeasured its deferred tax assets and deferred tax liabilities, resulting in a decrease of $71.1 million and $73.4 million, respectively, and an increase of $0.4 million to the valuation allowance with a corresponding net reduction to the deferred tax liability and regulatory asset of $1.9 million for the year ended December 31, 2017.

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, 2017, GRE had a federal and state net operating loss (NOL) of $442.5 million and $429.9 million, respectively, that can be used to offset taxable income in the carryforward period. The federal NOLs expire in varying amounts from 2022 through 2037 and the state NOLs expire in varying amounts from 2017 through 2037. GRE has recorded a valuation allowance for the NOLs that GRE believes will not be utilized using the more likely than not threshold. GRE also has a tax credit carryforward of $8.4 million and a prepaid alternative minimum tax (AMT) credit of $0.3 million. The tax credits expire in varying amounts from 2024 through 2037, while the AMT credit has no expiration.

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.

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% 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.

GRE is currently under examination by the Internal Revenue Service (IRS) for taxable years 2012, 2013, and 2014. 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, 2011 through 2017 are still subject to examination under federal tax statutes. In addition, net operating loss carryforwards dating back to 2002 are subject to review and possible adjustment by taxing authorities. GRE has completed examinations by the IRS of taxable year ended December 31, 2010. GRE's taxable years ended December 31, 2010 through 2017, 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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

	2018	2019	2020	2021	2022	THEREAFTER	TOTAL
Wind energy purchases	64.0	63.6	96.9	96.7	90.1	1,490.3	1,901.6
Other purchased power	21.1	19.6	19.8	20.5	20.5	161.2	262.7
Construction contract	41.5	33.5					75.0
Dairyland Power Cooperative	6.1	2.5					8.6
Fuel contract	1.9	2.0					3.9
	$ 134.6	$ 121.2	$ 116.7	$ 117.2	$ 110.6	$ 1,651.5	$ 2,251.8

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 to 2045. 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 $62.2 million, $64.7 million, and $64.0 million for 2017, 2016, and 2015, respectively.

Other purchased power—GRE has long-term agreements for the purchase of energy from various other power suppliers. Agreement terms vary with the longest extending to 2030. GRE is obligated to purchase energy at either fixed or variable prices for the term of the agreements. GRE also had a contract for transmission associated with some of these agreements that expired in 2015. GRE's expenses for energy and transmission purchased under these agreements were $22.2 million, $19.5 million, and $9.2 million for 2017, 2016, and 2015, respectively.

Construction contract—GRE entered into a construction contract with the primary vendor for $134.3 million for the direct current transmission line converter stations refurbishment project. The total budget for this project is approximately $200.0 million. The project commenced 2016 and will extend through 2021. GRE's expenditures under this agreement were $33.5 million and $25.8 million for 2017 and 2016, respectively.

Dairyland Power Cooperative—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. This agreement was to remain in effect until the retirement of the unit from service or until the payment in full of all obligations arising from the construction and operation of the unit, whichever was later. Under the agreement, the capacity costs were shared equally by GRE and DPC, and GRE was required to pay additional amounts for actual energy purchased. In 2015, GRE amended the contract to terminate GRE's obligation to purchase energy and capacity from Genoa 3 for a cash payment of $83.5 million. GRE remains obligated for its share of the plant decommissioning and demolition costs. GRE has recorded an estimate of its share of the final costs as another noncurrent liability. As part of the amendment, GRE entered into a capacity contract with DPC extending through May 2019 at an annual cost of $6.1 million. GRE's expenses for capacity, energy, and transmission charges under the agreement were $6.1 million, $6.1 million, and $24.7 million for 2017, 2016, and 2015, respectively.

Fuel Contract—GRE has agreements that extend through 2019 for the rail delivery of coal for Spiritwood Station. One agreement requires GRE to pay for the delivery of a minimum amount of tons of coal. GRE's rail expense under this agreement was $1.4 million, $1.6 million, and $1.5 million for 2017, 2016, and 2015, respectively, and the minimum annual requirements are included as a fuel contract commitment.

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, 2017, 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, 2017 and 2016. 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 $1.9 million to MISO in connection with its commodity derivatives, two letters of credit totaling $11.0 million related to Spiritwood Station water and infrastructure agreements, and letters of credit totaling $0.4 million for transmission construction projects. No amounts are outstanding as of December 31, 2017 and 2016.

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11. DEFERRED CHARGES AND REGULATORY LIABILITIES

Deferred charges as of December 31, 2017 and 2016, are as follows (in thousands):

	2017	2016
Regulatory assets:		
Premiums on refinanced long-term debt	$ 7,016	$ 7,758
Interest rate derivatives	21,658	37,665
Settled interest rate hedging instruments	88,829	74,679
Purchased power contract settlement	85,406	83,543
Plant retirement	63,125	6,232
Postretirement benefit plans	14,362	17,719
Settled postretirement benefit plan	21,061	22,574
Transaction costs related to NDRC	6,372	7,076
Refined coal purchase costs	66,000	66,000
Interest and plant costs	15,673	16,198
Scheduled major outage maintenance	18,028	11,419
Deferred income taxes	4,008	5,726
Other	210	293
Total regulatory assets	411,748	356,882
Other deferred charges	2,745	5,280
Total deferred charges	$ 414,493	$ 362,162
Reported as:		
Deferred charges:		
Financing related	$ 117,503	$ 120,102
Contract termination	85,406	83,543
Plant retirement	63,125	6,232
Other	148,459	152,285
Total deferred charges	$ 414,493	$ 362,162

Regulatory liabilities as of December 31, 2017 and 2016, are as follows (in thousands):

	2017	2016
Regulatory liabilities:		
Settled interest rate hedging instruments	$ 5,690	$ 5,690
Incentive-based rate treatment	16,291	16,653
Deferred revenue	29,944	12,000
Interest rate derivatives		4,786
Other	2,886	2,886
Total regulatory liabilities	$ 54,811	$ 42,015

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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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, 2017 and 2016. 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. The net proceeds from this termination were recorded as a regulatory liability and $30.5 million was recognized as other revenue in 2015. GRE plans to recognize the remainder as revenue in a future year.

Purchased Power Contract Settlement—GRE recognized as a regulatory asset the cash payment made in 2015 to DPC to terminate the obligation to purchase energy and capacity from Genoa 3 and GRE's share of the estimated future costs for the plant decommissioning and demolition. As determined by the board of directors under regulatory accounting, contract termination costs and obligations will be amortized over a ten year period beginning in 2019.

Plant Retirement—GRE retired Stanton in 2017. Decommissioning and demolition activities are occurring through 2019. Regulatory accounting was approved for the remaining undepreciated net plant value and plant closure costs. The regulatory asset is being amortized through 2028.

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 $4.2 million and $4.3 million, and Falkirk's plans of $10.2 million and $13.4 million at December 31, 2017 and 2016, 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 and it is being amortized over 15 years and included in operation and maintenance expense in the consolidated statements of operations and comprehensive income.

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). This amount is being amortized over the life of the facility lease, which is through 2027. The amortization is included as fuel expense in the consolidated statements of operations and comprehensive income.

Refined Coal Purchase Costs—In connection with the facility lease with NDRC and the related refined coal purchase agreement, GRE is deferring certain refined coal purchase costs until January 31, 2020, which is the exercise date of the purchase option to buy out of the transaction. GRE plans to expense these costs at the time the purchase option is exercised or amortize over the last seven years of the lease agreement in the event the purchase option is not exercised.

Interest and Plant Costs—During 2010 and 2011, GRE deferred facility costs for interest, maintenance, and other costs associated with Spiritwood Station. This amount is being amortized over the useful life of the facility.

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 Deferred Charges—Other deferred charges primarily relate to unamortized patent costs and 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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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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 $17.9 million and $12.0 million of member electric revenue during 2017 and 2016, 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.

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. Approximately 24% of total employees that receive benefits are represented by two local labor unions under three collective bargaining agreements. Two agreements expire at the end of 2018 and will be renegotiated. The third agreement expires at the end of 2020.

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. GRE had a qualified defined benefit plan that covered certain employees. This plan was terminated as of December 31, 2015, freezing all future benefits, and settled in 2016. In 2016, GRE would have recognized net periodic pension benefit cost of $23.1 million related to the settlement of the plan; however, GRE adopted regulatory accounting and established a deferred regulatory asset for $22.7 million (see Note 11).

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, 2017 and 2016, and the amounts recognized in the consolidated balance sheets as of December 31, 2017 and 2016, are as follows (in thousands):

	Falkirk		GRE	
	2017	**2016**	**2017**	**2016**
Change in benefit obligation:				
Benefit obligation—beginning of year	$ 65,464	$ 66,837	$ 4,854	$ 59,327
Interest cost	2,557	2,742	171	1,783
Actuarial loss (gain)	2,464	(1,183)	133	3,804
Settlement				(55,811)
Benefits paid	(3,040)	(2,932)	(490)	(4,249)
Benefit obligation—end of year	67,445	65,464	4,668	4,854
Change in plan assets:				
Fair value of plan assets—beginning of year	63,627	58,414	-	55,931
Actual return on assets	10,107	4,637		3,676
Employer contributions		3,508		453
Settlement				(55,811)
Benefits paid	(3,040)	(2,932)		(4,249)
Fair value of plan assets—end of year	70,694	63,627	-	-
Funded status—end of year and amount recognized in other long-term assets/(other noncurrent liabilities)	$ 3,249	$ (1,837)	$ (4,668)	$ (4,854)

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Amounts not yet recognized as components of net periodic cost as of December 31, 2017 and 2016, are as follows (in thousands):

	Falkirk		GRE	
	2017	**2016**	**2017**	**2016**
Transition obligation	$ -	$ -	$ 18	$ 80
Accumulated loss	6,480	9,684	2,896	2,932
	$ 6,480	$ 9,684	$ 2,914	$ 3,012

The accumulated benefit obligation for the GRE defined benefit pension plans reflected above was $4.7 million and $4.9 million as of December 31, 2017 and 2016, respectively. The accumulated benefit obligation for the Falkirk defined benefit pension plan was $67.4 million and $65.5 million as of December 31, 2017 and 2016, respectively.

Components of net periodic benefit cost as of December 31, 2017, 2016, and 2015, are as follows (in thousands):

	Falkirk			GRE		
	2017	**2016**	**2015**	**2017**	**2016**	**2015**
Service cost	$ -	$ -	$ -	$ -	$ -	$ 128
Interest cost	2,557	2,742	2,734	171	1,783	2,085
Expected return on assets	(4,614)	(4,434)	(4,379)		(1,468)	(1,832)
Amortization of prior service cost	175	255	424			9
Recognized net actuarial loss			10	170	1,240	1,360
Curtailment						67
Amortization of net transition obligation				63	63	63
Settlement					23,133	
Net periodic benefit cost	$ (1,882)	$ (1,437)	$ (1,211)	$ 404	$ 24,751	$ 1,880

GRE recorded a regulatory asset for $22.7 million as of December 31, 2016 related to the settlement, resulting in a net period benefit cost of $2.1 million recognized in 2016.

The estimated amounts to be amortized from deferred charges into net periodic benefit cost in 2018 are $0.2 million for GRE and $0.2 million for Falkirk.

Weighted-average assumptions used to determine benefit obligations as of December 31, 2017 and 2016 are as follows:

	Falkirk		GRE	
	2017	**2016**	**2017**	**2016**
Discount rate	3.55 %	4.00 %	3.35 %	3.70 %

GRE and Falkirk adopted updated mortality tables to determine benefit obligations as of December 31, 2016.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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Weighted-average assumptions used to determine periodic benefit cost as of December 31, 2017, 2016, and 2015, are as follows:

	Falkirk			GRE		
	2017	**2016**	**2015**	**2017**	**2016**	**2015**
Discount rate	4.00 %	4.20 %	3.95 %	3.70 %	3.90 %	3.55 %
Rate of compensation increase	N/A	N/A	N/A	N/A	N/A	3.75
Expected return on assets	7.50	7.50	7.75	N/A	3.50	3.50

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% to 52% in domestic equity securities, 16% to 24% in international equity securities, 30% to 40% in fixed-income securities, and 0% to 10% 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, 2017 and 2016, are as follows (in thousands):

	2017	**2016**
Money market funds	$ 262	$ 244
Domestic equity securities	33,316	29,479
International equity securities	14,884	12,478
Fixed income securities	22,232	21,426
	$ 70,694	$ 63,627

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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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, 2017 and 2016, 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, GRE and 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, 2017, are as follows (in thousands):

YEARS ENDING DECEMBER 31	Falkirk	GRE
2018	$ 3,250	$ 422
2019	3,428	409
2020	3,607	409
2021	3,804	380
2022	3,958	364
2023–2027	20,796	1,580

GRE expects to make a contribution of approximately $0.4 million to the nonqualified supplemental defined benefit plan in 2018 and Falkirk does not expect to make any pension contributions in 2018.

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 $11.0 million, $10.1 million, and $9.4 million in 2017, 2016, and 2015, respectively. Falkirk's contributions to the defined contribution pension plan were $2.7 million, $2.5 million, and $2.4 million for 2017, 2016, and 2015, respectively. Falkirk's contributions to a defined contribution savings plan were $2.2 million, $2.1 million, and $2.0 million for 2017, 2016, and 2015, 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.

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

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Changes in benefit obligations for the years ended December 31, 2017 and 2016, are as follows (in thousands):

	Falkirk		GRE	
	2017	**2016**	**2017**	**2016**
Change in benefit obligation:				
Benefit obligation—beginning of year	$ 5,794	$ 8,182	$ 2,131	$ 2,355
Service cost	64	108	2	2
Interest cost	179	269	73	86
Actuarial (gain) loss	(372)	(2,312)	22	13
Benefits paid	(294)	(453)	(209)	(325)
Benefit obligations—end of year	$ 5,371	$ 5,794	$ 2,019	$ 2,131

Amounts recognized in the consolidated balance sheets as of December 31, 2017 and 2016, are as follows (in thousands):

	Falkirk		GRE	
	2017	**2016**	**2017**	**2016**
Current liabilities	$ 652	$ 728	$ 199	$ 235
Other noncurrent liabilities	4,719	5,066	1,820	1,896
	$ 5,371	$ 5,794	$ 2,019	$ 2,131

Amounts not yet recognized as components of net periodic cost as of December 31, 2017 and 2016, are as follows (in thousands):

	Falkirk		GRE	
	2017	**2016**	**2017**	**2016**
Accumulated (gain) loss	$ (885)	$ (513)	$ 1,243	$ 1,296

Components of net periodic cost as of December 31, 2017, 2016, and 2015, are as follows (in thousands):

	Falkirk			GRE		
	2017	**2016**	**2015**	**2017**	**2016**	**2015**
Service cost	$ 64	$ 108	$ 121	$ 2	$ 2	$ 2
Interest cost	179	269	230	73	86	92
Amortization of prior service credit			18			
Recognized net actuarial losses		253	77	75	74	85
Net periodic cost	$ 243	$ 630	$ 446	$ 150	$ 162	$ 179

The estimated amounts to be amortized from deferred charges into net periodic cost in 2018 are a net cost of less than $0.1 million for GRE and a net gain of less than $0.1 million for Falkirk.

The discount rates used as of December 31, 2017, 2016, and 2015, are as follows:

	Falkirk			GRE		
	2017	**2016**	**2015**	**2017**	**2016**	**2015**
Discount rate used to determine benefit obligations	3.10 %	3.25 %		3.35 %	3.65 %	
Discount rate used to determine net periodic benefit cost	3.25 %	3.40 %	3.25 %	3.65 %	3.90 %	3.55 %

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The expected future benefit payments to be paid as of December 31, 2017, are as follows (in thousands):

YEARS ENDING DECEMBER 31	Falkirk	GRE
2018	$ 652	$ 199
2019	755	190
2020	764	178
2021	694	170
2022	605	164
2023–2027	2,101	662

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 $868.7 million, $864.3 million, and $850.1 million in 2017, 2016, and 2015, respectively, for these services. GRE received 39.5%, 39.9%, and 39.8% of total member revenue from two members for the years ended December 31, 2017, 2016, and 2015, respectively. GRE has accounts receivable from its members of $148.4 million and $144.2 million at December 31, 2017 and 2016, respectively.

GRE also received various services from the members and paid $11.6 million, $10.7 million, and $11.8 million for these services in 2017, 2016, and 2015, respectively. GRE has accounts payable to the members of $1.8 million and $2.8 million at December 31, 2017 and 2016, respectively.

GRE has notes payable to the members of $32.1 million and $27.2 million at December 31, 2017 and 2016, 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, obligations related to future removal and disposal of asbestos, 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 2017, GRE increased its estimated costs to comply with the necessary infrastructure and CCR management modifications for the final ash disposal site closures and monitoring. These additional costs of $24.4 million have been reflected as a change in estimated cash flows to the asset retirement obligation for 2017. New obligations in 2017 result from expanded ash disposal sites.

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.

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A reconciliation of the beginning and ending aggregate carrying amount of the obligations as of December 31, 2017 and 2016, is as follows (in thousands):

	2017	2016
Balance—beginning of year	$ 85,475	$ 80,288
New obligations	10,829	
Obligations recorded as a result of changes in estimated cash flows	24,396	989
Accretion expense	4,373	4,211
Obligations settled	(1,000)	(13)
Balance—end of year	$ 124,073	$ 85,475

These obligations are recorded in other noncurrent liabilities in the consolidated balance sheets with the exception of the obligation related to Stanton, which is reported as current other accrued liabilities. The Stanton obligation was $7.4 million and $5.6 million as of December 31, 2017 and 2016, respectively. The obligations settled are the only transactions recognized as a use of cash in the consolidated statements of cash flows.

* * *

MANAGEMENT AND BOARD OF DIRECTORS

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president and CEO

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vice president and chief power supply officer

Mark Fagan
vice president and chief corporate services officer

Jim Jones
vice president and chief information officer

Rick Lancaster
vice president and chief generation officer

Eric Olsen
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Kandace Olsen
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Mike Littfin
Arrowhead Cooperative, Inc.

Brad Leiding
BENCO Electric

Reuben Kokesch
Brown County Rural Electrical Association

Fran Bator
Connexus Energy

Donald Holl
Connexus Energy

Peggy Kuettel
Cooperative Light & Power

Margaret Schreiner
Dakota Electric Association

Clay Van De Bogart
Dakota Electric Association

Lonnie Johnson
East Central Energy

David Hernke
Goodhue County Cooperative Electric Association

Nancy Utke
Itasca-Mantrap Cooperative Electrical Association

Craig Olson
Lake Country Power

Ken Hendrickx
Lake Region Electric Cooperative

Randy Hlavka
McLeod Cooperative Power Association

Harold Harms
Mille Lacs Energy Cooperative

Bruce Leino
North Itasca Electric Cooperative, Inc.

Audrey Hjelle
Runestone Electric Association

Mike Blenkush
Stearns Electric Association

Gary Wilson
Steele-Waseca Cooperative Electric

Michael Thorson
Todd-Wadena Electric Cooperative

MEMBER-OWNER COOPERATIVE CEOs

Agralite Electric Cooperative,
Benson
Kory Johnson, *general manager*

Arrowhead Cooperative, Inc.,
Lutsen
Joe Pandy Jr., *general manager and CEO*

BENCO Electric,
Mankato
Dave Sunderman, *CEO*

Brown County Rural Electrical Association,
Sleepy Eye
Mike Heidemann, *CEO*

Connexus Energy,
Ramsey
Greg Ridderbusch, *president and CEO*

Cooperative Light & Power,
Two Harbors
Steven Wattnem, *CEO/general manager*

Crow Wing Power,
Brainerd
Bruce Kraemer, *CEO*

Dakota Electric Association,
Farmington
Greg Miller, *president and CEO*

East Central Energy,
Braham
Steve Shurts, *president and CEO*

Federated Rural Electric Association,
Jackson
Scott Reimer, *general manager*

Goodhue County Cooperative Electric Association,
Zumbrota
Kelly Hovel, *general manager*

Itasca-Mantrap Cooperative Electrical Association,
Park Rapids
Michael Monsrud, *president and CEO*

Kandiyohi Power Cooperative,
Spicer
Scott Froemming, *CEO*

Lake Country Power,
Grand Rapids
Greg Randa, *general manager*

Lake Region Electric Cooperative,
Pelican Rapids
Tim Thompson, *CEO*

McLeod Cooperative Power Association,
Glencoe
Carrie Buckley, *general manager*

Meeker Cooperative Light and Power Association,
Litchfield
Tim Mergen, *CEO/general manager*

Mille Lacs Energy Cooperative,
Aitkin
Brian Zelenak, *general manager*

Minnesota Valley Electric Cooperative,
Jordan
Ryan Hentges, *general manager/CEO*

Nobles Cooperative Electric,
Worthington
Adam Tromblay, *general manager*

North Itasca Electric Cooperative, Inc.,
Bigfork
Brad Dolinski, *CEO*

Redwood Electric Cooperative,
Clements
Ron Horman, *general manager*

Runestone Electric Association,
Alexandria
Kristin Dolan, *CEO*

South Central Electric Association,
St. James
Ron Horman, *general manager*

Stearns Electric Association,
Melrose
Dave Gruenes, *CEO*

Steele-Waseca Cooperative Electric,
Owatonna
Syd Briggs, *general manager*

Todd-Wadena Electric Cooperative,
Wadena
Robin Doege, *president and CEO*

Wright-Hennepin Cooperative Electric Association,
Rockford
Tim Sullivan, *president and CEO*