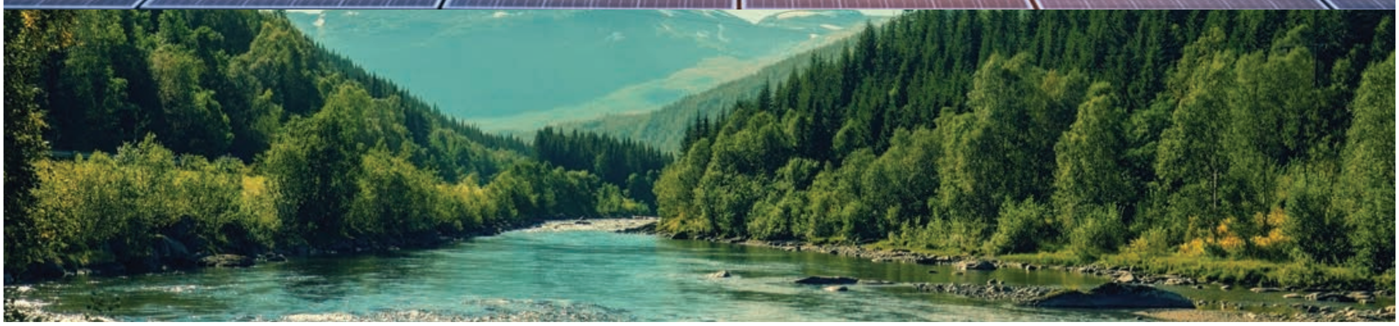



COOPERATIVE POWER.

TRANSFORMED.


TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION, INC.
2019 ANNUAL REPORT

WE ALL HAVE A STORY TO TELL.

Change is the natural progression of life. We must change to meet the evolving demands of today, and better position ourselves for tomorrow. As we embrace that change and move forward, we are transformed.

2019 demonstrated how, driven by our members, we transformed. Our members asked big things of Tri-State. And we worked together to find how best we could change to meet the needs of our cooperative.

But as we embark on our transformation, one thing remains the same: Our mission is still dedicated to empowering the communities we serve. Because we know that at the end of the day, whatever the future holds, we'll power it.

1 **Colorado Farm Brewery**
One of the owners inspects the hops. They saved the farm that had been in the family for years.

2 **La Veta, Colorado**
A local shop owner recognized the support of her cooperative and community in the wake of the Spring Creek Fire of 2018.

3 **Heaven on Earth**
Our territory spans across the West. Not only are these horses lucky enough to call this home, but so are we.

4 **Colorado State Capital**
Duane Highley, our CEO, prepares for a press conference where we unveiled our Responsible Energy Plan.

5 **Bomb Cyclone Repairs**
The bomb cyclone weather event tested our system's resiliency. With our diversity of resources and redundancy in our transmission system, our employees worked together to keep the lights on.

COOPERATIVE POWER.

Everything we do is rooted in our cooperative principles. These principles have served as a guide for our cooperative family for more than 60 years.

As a cooperative, our focus remains on the people and our member systems that banded together to make a better life for their communities. We do this because it still rings true today that we are better when we work together.

Financials and quick facts

$1.4B OPERATING REVENUE	$45M NET MARGIN	1,467 TOTAL EMPLOYEES
$5.0B TOTAL ASSETS	5,671 MILES OF LINE	7.5¢/kWh AVERAGE MEMBER WHOLESALE RATE

Net margin

2017	$62M
2018	$43M
2019	$45M

Energy sold to members

2017	15.9M MWh
2018	16.4M MWh
2019	16.4M MWh

Operating expenses

2017	$1.2B
2018	$1.2B
2019	$1.2B

Member coincident peak demand

2017	2,850MW
2018	2,974MW
2019	3,009MW

Energy sales

16.4M MWh Member sales

0.3M MWh Member generation

1.7M MWh Non-member sales

18.4M MWh Total sales

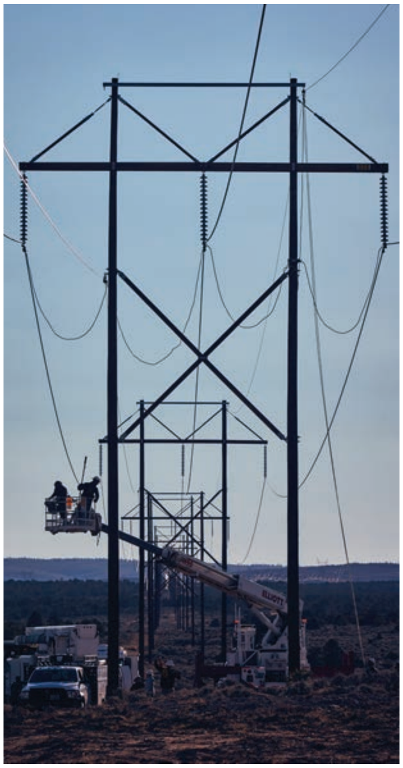
Sources of generation

1,782MW (40%) Coal

1,182MW (26%) Renewables

973MW (21%) Natural gas/oil

573MW (13%) Contracts



"Together, our members advanced flexibility."

There is a strength of character in our cooperative business model that may be best described as grit. It's our collective courage, tireless effort, ability to set goals and resilience to see them through that speaks to who we are and those we serve.

Just as the leaders who served our cooperative made critical decisions in decades past, our members and board of directors entered 2019 determined to define and advance our mission for the decades ahead.

Together, we analyzed and deliberated, ultimately aligning behind meaningful decisions that are transforming Tri-State to ensure our important role in serving power and building communities across the vast reaches of the West remains relevant and impactful.

The culmination of our work is Tri-State's Responsible Energy Plan, which places our cooperative on a clear path to cleaner energy, lower emissions and more flexibility for our members. And we will not stray from our mission of providing reliable and affordable power.

In fact, this year our board strengthened Tri-State's mission statement to reflect our transition by embracing the word responsible, which acknowledges what we have always been as a cooperative; responsible to our members, communities, employees and our environment.

Together, our members advanced flexibility by changing Tri-State's bylaws to provide for new types of membership classes and contracts. A committee of our membership developed options for partial requirements contracts for those members that desire greater self-supply of power, while protecting our other members. Our board accepted the committee's recommendations, including greater community solar opportunities, and we will complete our work in 2020.

There is great value in our cooperative model, and our board welcomed Tri-State's first three non-utility members in 2019. Tri-State became jurisdictional to the Federal Energy Regulatory Commission on rate matters, which supports uniform regulation across all the states in which we operate, and we will comply with new state resource planning, renewable energy and carbon reduction requirements.

What hasn't changed is Tri-State's focus on our performance, knowing that a strong G&T dovetails into the strength of the membership. In 2020 and for the fourth straight year, our wholesale rates are unchanged. In 2019, Tri-State returned $30 million in capital to our members, for a total of $100 million returned over the last four years.

As our membership and board directed change, we also sought a leader who could guide Tri-State through our transition while strengthening our cooperative principles, and we were pleased to welcome Duane Highley as our CEO in April. Duane's grit, and the dedication of all our staff, place Tri-State in good hands.

Rick Gordon, Chairman

"Our Responsible Energy Plan drives us to be increasingly clean."

Our cooperative mission, to provide reliable, affordable and responsible power to our members, inspires us every day to make a real difference in the lives of those we are privileged to serve.

The opportunities for Tri-State, which may disrupt some utilities, create bold new ways for our cooperative to be competitive and serve the changing needs and desires of our members. It's an exciting time to be in the power industry, to dream big and to lead change.

In 2019, Tri-State took transformative steps to capture opportunities and manage risks in our rapidly changing industry, while achieving impressive financial and operational results.

We developed our Responsible Energy Plan, which drives us to be increasingly clean. By 2024, Tri-State will add another gigawatt of renewables, with member-consumers at the end of the line using an energy supply that is 50% renewable.

Tri-State will eliminate our coal emissions in New Mexico by the end of 2020 and in Colorado by 2030 through the retirement of two power plants and a mine. Our employees at these facilities work tirelessly for Tri-State, and we will support them and their communities through this transition.

With our members, we're leveraging the benefits of a cleaner grid by expanding the use of power through beneficial electrification, including advancing electric vehicles, and we are bolstering our energy efficiency efforts.

Our strength and scale allows Tri-State to add the lowest priced renewables, manage costs and transition resources, while forecasting continued stable or lower wholesale rates over the next decade.

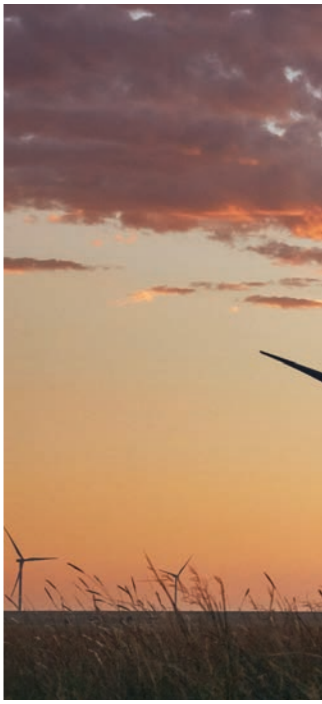
On behalf of our members, we manage all the risks of securing a reliable and affordable power supply. Our expansive transmission network reliably delivers members power, and our generation facilities, power contracts and ability to secure low-cost market power ensures Tri-State can always deliver on our obligations.

I am proud of our staff for their continued excellence in safety performance. Our safety record continues to be above industry averages, and our staff and facilities are reaching impressive safety milestones.

As Tri-State's new CEO, I am humbled by the trust our board of directors has placed in me, and I am grateful to my predecessor, Mike McInnes, for establishing the strong foundation that allows us to confidently move forward with change.

Working together with our members and employees, Tri-State will lead the way, ensuring clean, flexible and competitively-priced power, while delivering all the benefits of membership in a financially strong, not-for-profit, full-service power supplier.

Duane Highley, Chief Executive Officer



WE ARE TAKING BOLD STEPS

to meet the needs of our members and lead the changes in our industry.

As a cooperative, we are changing together, led by our members, to model a responsible way forward for generation and transmission cooperatives and electric utilities. Our aspirations require innovative ideas, challenging conversations and a dedicated group of leaders working together with the benefit of the communities we serve always top of mind.

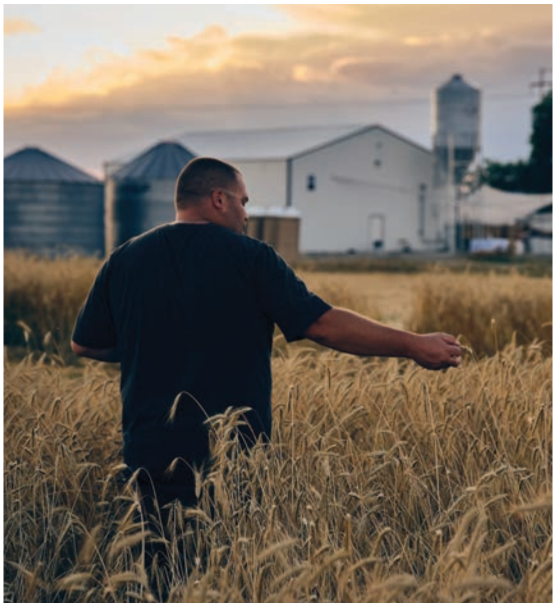
We are leading a clean energy transition. Together with our members, we are expanding renewable energy generation, reducing emissions and extending the benefits of a cleaner grid, while ensuring reliable and affordable electricity for the communities we power. We approach this transition from a position of financial and operational strength, and we intend to maintain that position as we implement these changes.

Our Responsible Energy Plan was developed throughout 2019 to transition Tri-State to be increasingly flexible and clean. It clearly charts our course, stating our commitments and goals to help make our vision a reality. Still, Tri-State's fundamental purpose remains unchanged: to provide power for our members 24 hours a day, 365 days a year.

Our plan was informed by input from a collaboration with an external advisory group – convened and facilitated by Colorado Governor Bill Ritter and the Center for the New Energy Economy – composed of stakeholders gathered from across the region and across interests.

To capture how we approach our work even as we implement our Responsible Energy Plan, our board of directors simplified and clarified our focus, reflected in our new mission statement: "Tri-State's mission is to provide our member systems a reliable, affordable and responsible supply of electricity in accordance with cooperative principles."

Reliability is still our first priority, followed by keeping electricity affordable. These priorities are foundational to all decisions made by our board and management. We've added the word "responsible" to reinforce our ever-present and ongoing attentiveness of our responsibilities to our members, our employees, the communities we serve and our environment.



As part of our responsibility to our members, this year we put even more focus on the flexibility members desire. Our wholesale power supply contracts are central to the way our members relate to one another within our cooperative. As a member-governed cooperative, decisions to change the contract rest with our board, which includes a representative from each of our utility members. At our April 2019 annual meeting, our membership passed a bylaw change allowing the board to approve alternative contract types and membership classes, which would provide current and future members more flexibility.

A Contract Committee of our membership, with representation from board directors and CEOs of our membership, and Tri-State directors, was convened in June 2019 to begin work on more flexible contract structures. This inclusive approach ensured representatives with various perspectives had the opportunity to engage in the process and participate in developing recommendations that would meet the members' needs and best serve the membership.

The committee made great strides and considered member proposals for more flexibility though partial requirements contract options. Our board approved the Contract Committee's recommendation for each member to have greater flexibility to develop community solar projects in addition to the 5% self-supply provisions in their existing contracts. The committee advanced recommendations to the board of directors that will create a partial requirements membership class in 2020.

In 2019, Tri-State welcomed its first three non-utility members, recognizing that the value of the cooperative business model extends to many aspects of the larger community in which we work. With the addition of our non-utility members, Tri-State became jurisdictional to the Federal Energy Regulatory Commission for wholesale rate regulation.

Our board underscored their desire to move toward a cleaner grid when they formally announced in July 2019 that Tri-State would be developing a Responsible Energy Plan. This direction from the board established that we would pursue a transition to a cleaner energy portfolio and set a goal to comply with all applicable environmental and renewable energy requirements, while striving to reduce Tri-State's wholesale rates, preserve electricity reliability and affordability, and maintain financial strength.

Tri-State issued our sixth renewable energy request for proposals, resulting in the selection of six additional wind and solar projects totaling 815 megawatts. By 2024, Tri-State will add more than a gigawatt of new renewable energy projects, bringing the energy consumed at retail though our members to 50% renewable energy.

As we grow our renewable resource portfolio, we recognize the need for robust regional power markets to reduce costs, maintain reliability and increase grid efficiency. In 2019, we joined the Southwest Power Pool's Western Energy Imbalance Service, which we will participate in beginning in early 2021. We continue to advance the value of participating in a fully organized market in our part of the West.

Our Responsible Energy Plan also reduces emissions by retiring Escalante Station in New Mexico by the end of 2020 and Craig Station and Colowyo Mine in northwest Colorado by 2030. These actions will eliminate Tri-State's emissions from coal in both states, and Tri-State will no longer operate coal facilities. In addition, our Nucla Station coal plant in western Colorado was retired in 2019, and we began decommissioning activities. We also completed major reclamation activities at New Horizon Mine, which is also retired.

As we schedule these plant retirements, we recognize our responsibility to our employees and the communities affected by this transition, and we are working closely with our employees, local leaders and state and federal policymakers to provide support.

Along with increasing renewable energy and decreasing emissions, we have an immense opportunity to further reduce emissions though beneficial electrification, which increases consumer use of clean electricity. In Colorado, Tri-State became a founding partner of the first state chapter of the Beneficial Electrification League, and we've created new programs to advance beneficial electrification, including working with our members to expand the use of electric vehicles and charging infrastructure.

None of the transformational initiatives can happen without a solid foundation on which to build. Tri-State staff continued to show its dedication to excellence, responsible management of our cooperative's resources, and diligence in paving the way for the transformation to come.

The safety and security of our employees and operations is paramount. Several facilities were recognized by the National Safety Council, and our key

OUR ASPIRATIONS required hard conversations, innovative ideas and continued dedication.

safety metrics remained better than national averages. We also launched our Cyber Security Center in 2019 to bolster our protection of cyber assets.

Tri-State maintained our strong financial position with stable wholesale rates for the fourth straight year, including 2020. All financial goals were met, and we returned $30 million in patronage capital to our members, totaling $100 million in returned patronage capital in the last four years.

Operationally, our generation and transmission facilities continue to reliably serve our members, and our energy management functions continue to optimize the use of our owned resources, contracted resources and the market. In 2019, we implemented automatic generation control capability on all dispatchable generation and completed $144 million in capital additions and improvements to our transmission grid, including completing construction work on 12 member delivery points, to increase reliability and serve our members.

We continue to provide a wide range of programs to our members, which delivered consumer and business savings through more than $3 million in energy efficiency product incentive rebates, and rebates for electric vehicle charging. We also support technology demonstrations on energy efficient technologies. These close collaborations with members are Tri-State's strength. Our common purpose exemplifies our commitment to each cooperative's community, and our focus to be the best for each member and person we serve.

We maintained compliance with security, safety, reliability and environmental requirements, and our staff are actively engaged on local, state and federal issues affecting our operations to ensure the interests of our members and Tri-State are represented.

With our strong foundation, the meaningful steps we took in 2019 lay the groundwork for the transformation to come. It's an ongoing process, and one we're committed to seeing through to success.

Our members

COLORADO

DM Delta-Montrose Electric Association, Montrose
EM Empire Electric Association, Inc., Cortez
GC Gunnison County Electric Association, Inc., Gunnison
HL Highline Electric Association, Holyoke
KC K.C. Electric Association, Inc., Hugo
LP La Plata Electric Association, Inc., Durango
MC Morgan County Rural Electric Association, Fort Morgan
MP Mountain Parks Electric, Inc., Granby
MV Mountain View Electric Association, Inc., Limon
PV Poudre Valley Rural Electric Association, Inc., Fort Collins
SI San Isabel Electric Association, Inc., Pueblo West
SV San Luis Valley Rural Electric Cooperative, Inc., Monte Vista
SM San Miguel Power Association, Inc., Nucla
SC Sangre de Cristo Electric Association, Inc., Buena Vista
SE Southeast Colorado Power Association, La Junta
UN United Power, Inc., Brighton
WR White River Electric Association, Inc., Meeker
YW Y-W Electric Association, Inc., Akron

NEBRASKA

CR Chimney Rock Public Power District, Bayard
MW Midwest Electric Cooperative Corporation, Grant
NW Northwest Rural Public Power District, Hay Springs
PH Panhandle Rural Electric Membership Association, Alliance
RS Roosevelt Public Power District, Scottsbluff
WB Wheat Belt Public Power District, Sidney

NEW MEXICO

CN Central New Mexico Electric Cooperative, Inc., Mountainair
CO Columbus Electric Cooperative, Inc., Deming
CD Continental Divide Electric Cooperative, Inc., Grants
JM Jemez Mountains Electric Cooperative, Inc., Española
MO Mora-San Miguel Electric Cooperative, Inc., Mora
NR Northern Rio Arriba Electric Cooperative, Inc., Chama
OC Otero County Electric Cooperative, Inc., Cloudcroft
SR Sierra Electric Cooperative, Inc., Elephant Butte
SO Socorro Electric Cooperative, Inc., Socorro
SW Southwestern Electric Cooperative, Inc., Clayton
SP Springer Electric Cooperative, Inc., Springer

WYOMING

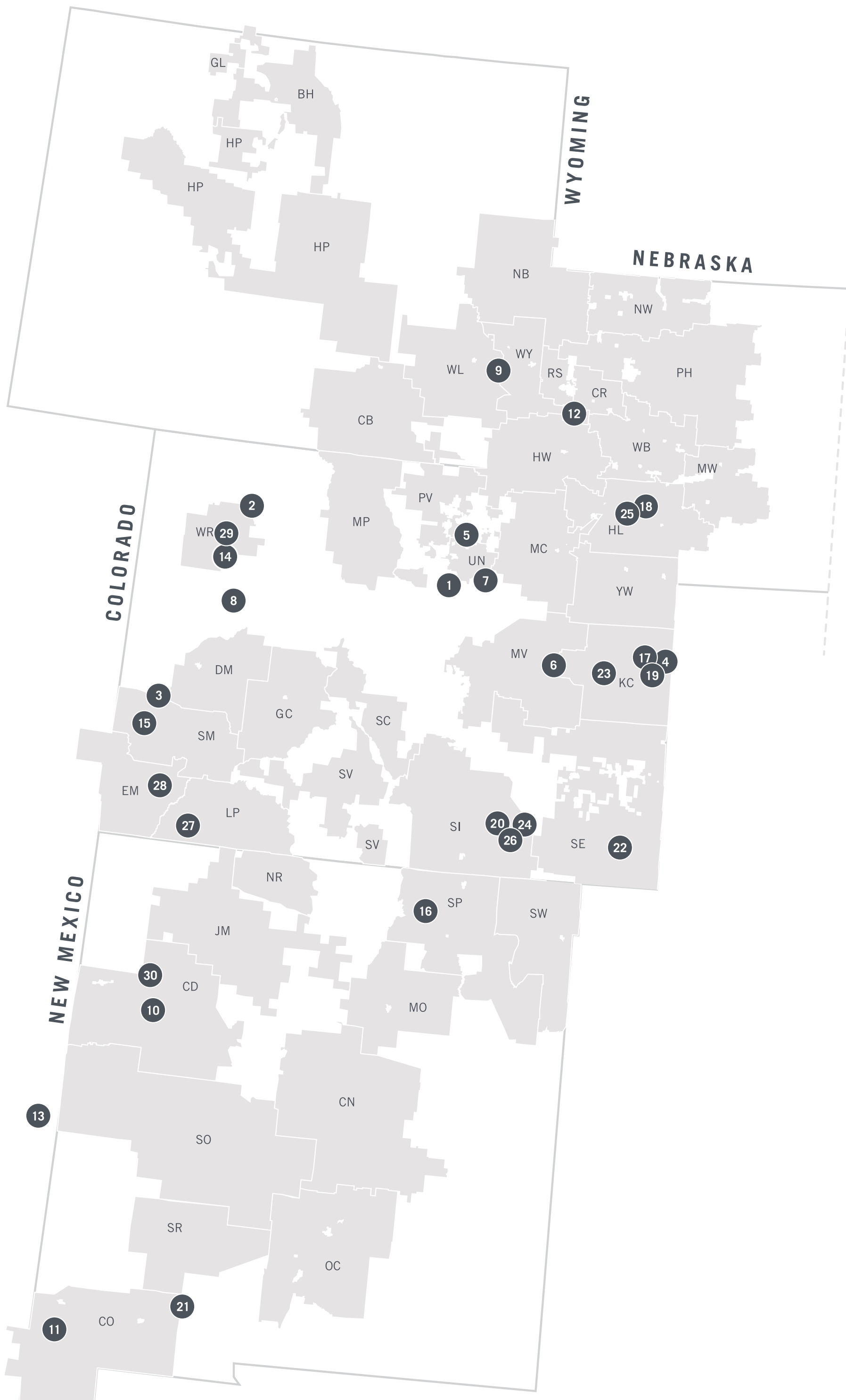
BH Big Horn Rural Electric Company, Basin
CB Carbon Power & Light, Inc., Saratoga
GL Garland Light & Power Company, Powell
HP High Plains Power, Inc., Riverton
HW High West Energy, Inc., Pine Bluffs
NB Niobrara Electric Association, Inc., Lusk
WL Wheatland Rural Electric Association, Wheatland
WY Wyrulec Company, Torrington

NON-UTILITY MEMBERS

Ellgen Ranch Company
MIECO, Inc.
Olson's Greenhouses of Colorado, LLC

Our resources

1. **Headquarters and Operations Center** Westminster, Colorado
2. **Craig Station** Craig, Colorado
3. **Nucla Station (Retired in 2019)** Nucla, Colorado
4. **Burlington Station** Burlington, Colorado
5. **J.M. Shafer Generating Station** Fort Lupton, Colorado
6. **Limon Generating Station** Limon, Colorado
7. **Frank R. Knutson Generating Station** Brighton, Colorado
8. **Rifle Generating Station** Rifle, Colorado
9. **Laramie River Station** Wheatland, Wyoming
10. **Escalante Generating Station** Prewitt, New Mexico
11. **Pyramid Generating Station** Lordsburg, New Mexico
12. **David A. Hamil DC Tie** Stegall, Nebraska
13. **Springerville Generating Station** Springerville, Arizona
14. **Colowyo Mine** Meeker, Colorado
15. **New Horizon Mine** Nucla, Colorado
16. **Cimarron Solar** Colfax County, New Mexico
17. **Kit Carson Windpower** Kit Carson County, Colorado
18. **Colorado Highlands Wind** Logan County, Colorado
19. **Carousel Wind** Kit Carson County, Colorado
20. **San Isabel Solar** Las Animas County, Colorado
21. **Alta Luna Solar** Luna County, New Mexico
22. **Twin Buttes II Wind** Prowers County, Colorado
23. **Crossing Trails Wind (2020)** Kit Carson and Cheyenne Counties, Colorado
24. **Spanish Peaks Solar (2023)** Las Animas County, Colorado
25. **Niyol Wind (2021)** Logan and Washington Counties, Colorado
26. **Spanish Peaks II Solar (2023)** Las Animas County, Colorado
27. **Coyote Gulch Solar (2023)** La Plata County, Colorado
28. **Dolores Canyon Solar (2023)** Dolores County, Colorado
29. **Axial Basin Solar (2023)** Moffat County, Colorado
30. **Escalante Solar (2023)** McKinley County, New Mexico


WYOMING
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NEW MEXICO
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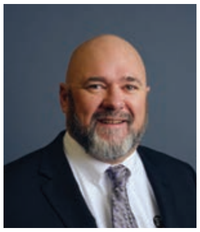
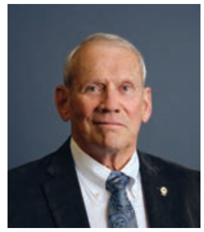
Board of directors

Rick Gordon
Chairman
Mountain View Electric

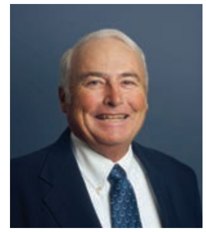


Scott Wolfe
Vice Chairman
San Luis Valley Rural Electric

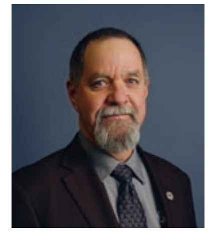
Julie Kilty
Secretary
Wyrulec Company



Stuart Morgan
Treasurer
Wheat Belt Public Power

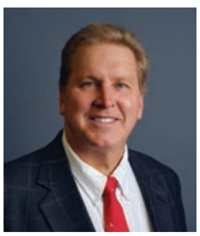


Matt Brown
Assistant Secretary
High Plains Power

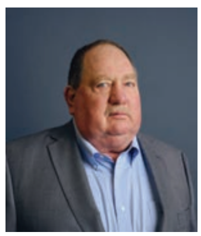


Tim Rabon
Assistant Secretary
Otero County Electric

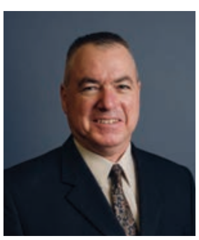
Wayne Connell
Executive Committee
Central New Mexico Electric



Don Keairns
Executive Committee
San Isabel Electric

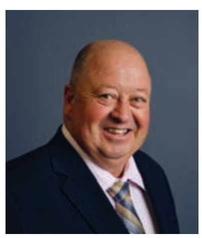


Shawn Turner
Executive Committee
The Midwest Electric Cooperative

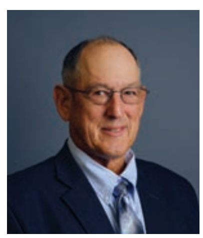


Charles Abel II
Sangre de Cristo Electric

Leroy Anaya
Socorro Electric



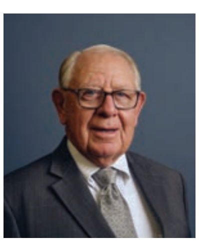
Robert Baca
Mora-San Miguel Electric



Robert Bledsoe
K.C. Electric

Lawrence Brase
Southeast Colorado Power

Leo Brekel
Highline Electric

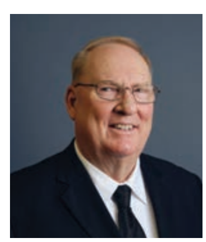


Jerry Burnett
High West Energy

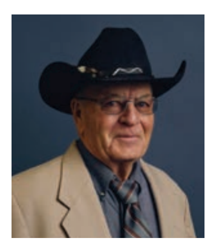
Richard Clifton
Carbon Power & Light

Lucas Cordova Jr.
Jemez Mountains Electric

Mark Daily
Gunnison County Electric



Tim Erickson
United Power



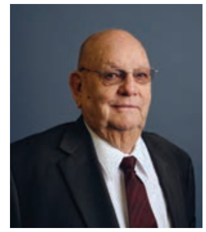
Jack Finnerty
Wheatland Rural Electric

Gary Fuchser
Northwest Rural Public Power

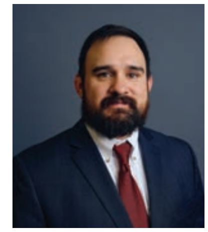
Joel Gilbert
Southwestern Electric

Ron Hilkey
White River Electric

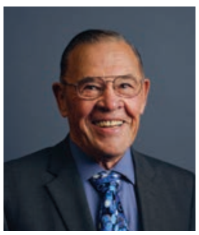
Ralph Hilyard
Roosevelt Public Power



Hal Keeler
Columbus Electric



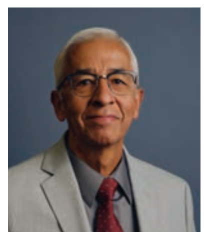
Kyle Martinez
Delta-Montrose Electric



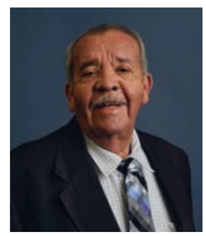
Thaine Michie
Poudre Valley Rural Electric

William Mollenkopf
Empire Electric

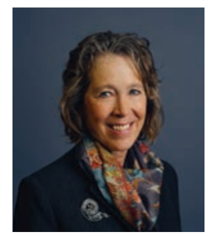
Stan Propp
Chimney Rock Public Power



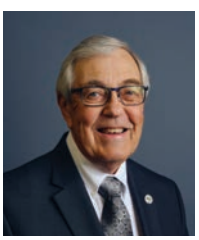
Steve Rendon
Northern Rio Arriba Electric



Claudio Romero
Continental Divide Electric

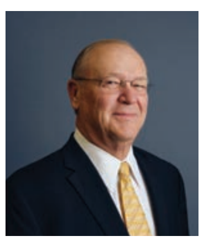


Peggy Ruble
Garland Light & Power



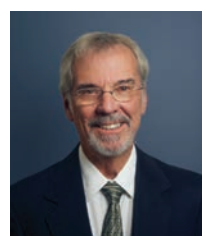
Don Russell
Big Horn Rural Electric

Roger Schenk
Y-W Electric



Brian Schlagel
Morgan County Rural Electric

Gary Shaw
Springer Electric



Jack Sibold
San Miguel Power

Kirsten Skeehan
La Plata Electric

Darryl Sullivan
Sierra Electric

Carl Trick II
Mountain Parks Electric

William Wilson
Niobrara Electric

Phil Zochol
Panhandle Rural Electric

Executive team

Strong leadership in times of transition is crucial, ensuring a healthy approach to change while not losing focus on who we are or who we are here to serve.






Ordered from left to right

Duane Highley
Chief Executive Officer

Joel Bladow
Senior Vice President
Transmission

Pat Bridges
Senior Vice President
Chief Financial Officer

Ellen Connor
Senior Vice President
Organizational Services

Chief Technology Officer

Jennifer Goss
Senior Vice President
Member Relations

Barry Ingold
Senior Vice President
Generation

Ken Reif
Senior Vice President
General Counsel

Brad Nebergall
Senior Vice President
Energy Management

Barbara Walz
Senior Vice President
Policy and Compliance

Chief Compliance Officer

ADDING RENEWABLE ENERGY

As renewable technologies have improved and prices have decreased, Tri-State has accelerated our addition of renewable energy. As a result, 50% of the energy consumed at retail through Tri-State members by 2024 will come from renewable resources. Brad Nebergall leads teams that have responsibility for resource planning and selection of new renewable projects.

Brad Nebergall | SVP Energy Management

WHAT IS TRI-STATE'S STRATEGY WHEN IT COMES TO ADDING RENEWABLE ENERGY?

Our strategy for adding renewables has always tied back to value. Some of our early renewable projects provided some value because we gained the experience we needed as far as working with project developers and learning how to integrate intermittent renewables into our system. However, they came with the higher prices that were the norm 10 years ago.

We started small, and have brought on additional renewables as the economics made sense – that's been a priority for our members. By moving deliberately and gradually adding larger projects over the last decade, we've benefited from the higher efficiencies and lower costs. We've also been able to work with project developers to take advantage of the investment tax credit for solar and the production tax credit for wind before they're phased out, getting the maximum benefits of those subsidies and a lower cost for our members.

TRI-STATE ISSUED ITS SIXTH SOLICITATION FOR NEW RENEWABLE PROJECTS IN 2019. CAN YOU TELL US ABOUT THAT PROCESS AND THE RESULTS?

When our board met for strategic planning in June 2019, they directed Tri-State staff to move forward with another request for proposals (RFP) for renewables. With both our 2018 and 2019 renewable RFPs, we were in a strong position to take advantage of lower prices for power purchase agreements, as well as the advanced technology in both wind and solar, while taking full advantage of the federal subsidies.

As we measure the value of the bids we received, key considerations included the price of energy at the point of interconnection; availability of transmission capacity; cost of any required transmission upgrades; integration costs; geographic location (including whether the project was located where we needed the power and also was within our member system service territory); and technology.

We now have more than 1,000 MW of wind and solar projects in development at a weighted average PPA cost below $17/MWh. By taking the approach we did, we've been able to bring on more and bigger projects as prices came down, and by 2024 we'll be at 50% of our members' power coming from renewables.

The timing of bringing on these new resources makes sense as we look at the rollout of our Responsible Energy Plan. We've made the difficult announcement to close coal facilities that have been reliable and affordable for us for a long time, but with the addition of lower-cost renewables, we're able to make these transitions and help mitigate pressure on our rates.

Additionally, two of the projects selected from the 2019 RFP will be built at locations where we will ultimately be closing coal facilities – Escalante Station in New Mexico and the Colowyo Mine in Colorado. The benefits of siting the projects at these locations include using land that Tri-State already owns, the convenient access to transmission infrastructure already in place, and economic development for the communities that have supported Tri-State for decades.

WITH THE MIX OF GENERATION RESOURCES AVAILABLE, HOW DOES TRI-STATE SELECT WHICH RESOURCES TO DISPATCH AT ANY GIVEN TIME?

Affordability is a priority for our members, so we've always ranked our generation resources based on economics and dispatched them accordingly. Of course, there are other factors that play in, including how air permits restrict our use of certain facilities, and any applicable transmission constraints, but we optimize around those factors to dispatch the most affordable generation. On top of that, we're also able to buy and sell power in the market when it makes economic sense.

In 2019, we announced our decision to join the Southwest Power Pool's (SPP) Western Energy Imbalance Service (WEIS) market, which will launch in 2021. We also will be expanding our presence in the California Independent System Operator (CAISO) Western Energy Imbalance Market (WEIM) in 2021. These more centralized market structures will impact how our generation is dispatched real time. By pooling our resources with more utilities, we will be able to integrate more intermittent generation, while improving reliability, reducing costs and increasing transparency. Ultimately, we want to participate in a fully organized market across our entire geographic footprint to help us even more effectively integrate the renewable energy we're bringing online, while still ensuring reliability for our members.

RESPONSIBLY MANAGING CHANGE

Part of Tri-State's Responsible Energy Plan includes a commitment to close all of the coal facilities Tri-State operates in the coming years. Barry Ingold leads Tri-State's Generation department, and is managing the responsible retirement of these facilities. Partnering with community and government leaders, Barbara Walz's team is helping secure support for the communities and individuals impacted by the upcoming facility closures.

Barry Ingold | SVP Generation

HOW IS TRI-STATE'S GENERATION PORTFOLIO CHANGING?

Tri-State currently has a mix of generation fueled by coal, natural gas and renewable resources including hydro, wind and solar. Looking back at how our generation portfolio came about, it's important to know that in the 1970s and 1980s coal-fired plants were built because gas-fired plants weren't allowed at that time. Our coal-fired plants have been the heartbeat of our generation fleet for decades, and we're now going through a huge transition as we step away from an operation we've been so close to for so many years. That transition includes the announcement of the closure of our Escalante Station in New Mexico by the end of 2020 and the closure of the Craig Station and Colowyo Mine in Colorado by 2030.

WHAT ARE YOUR PRIORITIES DURING THESE CHANGES?

Our coal facilities are run by dedicated employees who work around the clock to keep the lights on for our members. Our number one priority during the transition is to keep our teams safe – it's more critical now than ever, as they're adjusting to these changes. With a safe operation, our next priority is the continued reliability we've always been dedicated to – keeping our units operating smoothly. Finally, we're managing these facility retirements in the most responsible way possible. This means focusing on the most effective use of our resources through this process, while also remaining committed to treating our impacted employees with the respect and care they deserve.

Barbara Walz | SVP Policy and Compliance

HOW IS TRI-STATE SUPPORTING THE LOCAL COMMUNITIES IMPACTED BY THE PLANT AND MINE CLOSURES?

We've had the privilege of being a large employer in the communities where our plants and mines are located for decades. Knowing that these closures would have an impact, we began interfacing regularly and early on with local leadership, including mayors, city councils, county commissioners, state representatives and federal congressional members. These representatives have initiatives for their communities and know the direction they want to go. We're here to be a partner, provide support, and help these communities have a soft landing. Additionally, the Tri-State board has approved a $5 million contribution for local economic development in the area of our Escalante Station, which is on a one-year closure plan. For our Craig Station and Colowyo Mine, we have more time to work with partners to develop the most effective support for the community.

WHAT DOES THE EMPLOYEE SUPPORT LOOK LIKE?

We know that what's good for the employees is what's good for the community. Our Escalante Station employees are feeling the more immediate impacts of the upcoming closure, and we've been able to offer a generous severance package in addition to the support they're receiving from their community. With state and local support in New Mexico, employees have also had access to interviewing and resume writing workshops as well as local job fairs.

For our Colorado facilities that have a longer time to prepare for the closures, our support is ongoing. We've updated our education reimbursement program to offer even more support and flexibility for employees whose jobs are being impacted. We're also working closely with the local communities through participation in stakeholder gatherings and our involvement with Colorado's Just Transition Advisory Committee. Our employees and communities remain a top priority, and we're here to help ease their transition wherever we can.

OUR MISSION

We provide our member systems a reliable, affordable and responsible supply of electricity in accordance with cooperative principles.

Report of Ernst & Young LLP, Independent Registered Public Accounting Firm

To the Members and the Board of Directors of Tri-State Generation and Transmission Association, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of Tri-State Generation and Transmission Association, Inc. (the "Association") as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income, equity and cash flows for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Association at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Association's management. Our responsibility is to express an opinion on the Association's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Association in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB and 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 financial statements are free of material misstatement, whether due to error or fraud. The Association is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Association's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Ernst & Young LLP

We have served as the Association's auditor since 1977.

Denver, Colorado
March 12, 2020

Tri-State Generation and Transmission Association, Inc.
Consolidated Statements of Financial Position
(dollars in thousands)

As of December 31,	2019	2018
ASSETS		
Property, plant and equipment		
Electric plant		
In service	$ 6,090,392	$ 5,899,128
Construction work in progress	164,924	207,732
Total electric plant	6,255,316	6,106,860
Less allowances for depreciation and amortization	(2,641,470)	(2,499,376)
Net electric plant	3,613,846	3,607,484
Other plant	409,051	384,650
Less allowances for depreciation, amortization and depletion	(113,607)	(110,939)
Net other plant	295,444	273,711
Total property, plant and equipment	3,909,290	3,881,195
Other assets and investments		
Investments in other associations	161,945	161,487
Investments in and advances to coal mines	19,681	18,928
Restricted cash and investments	30,516	10,606
Intangible assets, net of accumulated amortization	—	3,662
Other noncurrent assets	8,654	9,022
Total other assets and investments	220,796	203,705
Current assets		
Cash and cash equivalents	83,070	116,858
Restricted cash and investments	182	126
Deposits and advances	28,434	29,641
Accounts receivable—Members	105,371	107,572
Other accounts receivable	28,039	22,434
Coal inventory	50,191	55,883
Materials and supplies	93,632	93,786
Total current assets	388,919	426,300
Deferred charges		
Regulatory assets	497,279	437,377
Prepayment—NRECA Retirement Security Plan	26,862	31,837
Other	42,672	46,453
Total deferred charges	566,813	515,667
Total assets	**$ 5,085,818**	**$ 5,026,867**
EQUITY AND LIABILITIES		
Capitalization		
Patronage capital equity	$ 1,031,063	$ 1,015,754
Accumulated other comprehensive income (loss)	(1,518)	375
Noncontrolling interest	111,717	110,169
Total equity	1,141,262	1,126,298
Long-term debt	3,063,351	3,109,301
Total capitalization	4,204,613	4,235,599
Current liabilities		
Member advances	18,025	13,988
Accounts payable	99,033	105,009
Short-term borrowings	252,323	204,145
Accrued expenses	43,761	40,285
Current asset retirement obligations	2,460	2,183
Accrued interest	29,716	32,070
Accrued property taxes	29,129	28,582
Current maturities of long-term debt	81,555	95,757
Total current liabilities	556,002	522,019
Deferred credits and other liabilities		
Regulatory liabilities	122,169	137,369
Deferred income tax liability	58,937	18,098
Asset retirement and environmental reclamation obligations	76,454	54,589
Other	56,399	50,266
Total deferred credits and other liabilities	313,959	260,322
Accumulated postretirement benefit and postemployment obligations	11,244	8,927
Total equity and liabilities	**$ 5,085,818**	**$ 5,026,867**

The accompanying notes are an integral part of these consolidated financial statements.

Tri-State Generation and Transmission Association, Inc.
Consolidated Statements of Operations
(dollars in thousands)

For the years ended December 31,	2019	2018	2017
Operating revenues			
Member electric sales	$ 1,238,672	$ 1,235,872	$ 1,199,940
Non-member electric sales	95,401	34,763	98,872
Other	51,399	50,202	89,781
	1,385,472	1,320,837	1,388,593
Operating expenses			
Purchased power	328,921	343,509	339,830
Fuel	280,325	237,721	244,328
Production	209,586	212,917	207,993
Transmission	163,757	161,652	153,510
General and administrative	49,607	33,046	28,704
Depreciation, amortization and depletion	157,734	154,975	174,526
Coal mining	10,027	637	40,034
Other	19,090	14,987	15,971
	1,219,047	1,159,444	1,204,896
Operating margins	**166,425**	**161,393**	**183,697**
Other income			
Interest	6,175	5,294	4,723
Capital credits from cooperatives	9,799	27,373	12,934
Membership withdrawal	—	—	5,000
Other	18,427	5,131	3,966
	34,401	37,798	26,623
Interest expense, net of amounts capitalized	151,470	153,704	147,608
Income tax benefit	(307)	(534)	(1,092)
Net margins including noncontrolling interest	49,663	46,021	63,804
Net margin attributable to noncontrolling interest	(4,354)	(3,287)	(2,148)
Net margins attributable to the Association	**$ 45,309**	**$ 42,734**	**$ 61,656**

The accompanying notes are an integral part of these consolidated financial statements.

Tri-State Generation and Transmission Association, Inc.
Consolidated Statements of Comprehensive Income
(dollars in thousands)

For the years ended December 31,	2019	2018	2017
Net margins including noncontrolling interest	$ 49,663	$ 46,021	$ 63,804
Other comprehensive income (loss):			
Unrealized gain on securities available for sale	—	—	43
Unrecognized actuarial gain (loss) on postretirement benefit obligation	(1,341)	456	106
Reclassification of unrealized gain on securities available for sale included in net margin	—	(159)	—
Amortization of actuarial (gain) loss on postretirement benefit obligation included in net margin	(338)	288	(73)
Unrecognized prior service cost (credit)	(214)	—	—
Income tax expense related to components of other comprehensive income (loss)	—	—	—
Other comprehensive income (loss)	(1,893)	585	76
Comprehensive income including noncontrolling interest	47,770	46,606	63,880
Net comprehensive income attributable to noncontrolling interest	(4,354)	(3,287)	(2,148)
Comprehensive income attributable to the Association	**$ 43,416**	**$ 43,319**	**$ 61,732**

The accompanying notes are an integral part of these consolidated financial statements.

Tri-State Generation and Transmission Association, Inc.
Consolidated Statements of Equity
(dollars in thousands)

For the years ended December 31,	2019	2018	2017
Patronage capital equity at beginning of period	$ 1,015,754	$ 1,003,020	$ 961,364
Net margins attributable to the Association	45,309	42,734	61,656
Retirement of patronage capital	(30,000)	(30,000)	(20,000)
Patronage capital equity at end of period	**1,031,063**	**1,015,754**	**1,003,020**
Accumulated other comprehensive income (loss) at beginning of period	375	(210)	(286)
Unrealized gain on securities available for sale	—	—	43
Unrecognized actuarial gain (loss) on postretirement benefit obligation	(1,341)	456	106
Reclassification adjustment for unrealized gain on securities available for sale included in net margin	—	(159)	—
Reclassification adjustment for acturarial (gain) loss on postretirement benefit obligation included in net margin	(338)	288	(73)
Unrecognized prior service cost	(214)	—	—
Accumulated other comprehensive income (loss) at end of year	**(1,518)**	**375**	**(210)**
Noncontrolling interest at beginning of year	110,169	111,295	109,147
Net comprehensive income attributable to noncontrolling interest	4,354	3,287	2,148
Equity distribution to noncontrolling interest	(2,806)	(4,413)	—
Noncontrolling interest at end of year	**111,717**	**110,169**	**111,295**
Total equity at end of year	**$ 1,141,262**	**$ 1,126,298**	**$ 1,114,105**

The accompanying notes are an integral part of these consolidated financial statements.

Tri-State Generation and Transmission Association, Inc.
Consolidated Statements of Cash Flows *(dollars in thousands)*

For the years ended December 31,	2019	2018	2017
Operating activities			
Net margins including noncontrolling interest	$ 49,663	$ 46,021	$ 63,804
Adjustments to reconcile net margins to net cash provided by operating activities:			
Depreciation, amortization and depletion	157,734	154,975	174,526
Amortization of intangible asset	3,662	7,324	7,324
Amortization of NRECA Retirement Security Plan prepayment	5,372	5,372	5,372
Amortization of debt issuance costs	2,375	2,641	1,985
Impairment loss	37,067	—	93,494
Deferred impairment loss	(37,067)	—	(93,494)
Recognition of deferred membership withdrawal income	—	—	(5,000)
Deferred revenue	—	51,679	9,527
Recognition of deferred revenue	(6,153)	—	(15,000)
Capital credit allocations from cooperatives and income from coal mines over refund distributions	(1,276)	(18,090)	(4,417)
Proceeds from settlement of interest rate swap	—	—	4,625
Changes in operating assets and liabilities:			
Accounts receivable	2,383	(5,922)	4,924
Coal inventory	5,692	(8,080)	17,097
Materials and supplies	154	(3,576)	(1,691)
Accounts payable and accrued expenses	1,136	(10,434)	628
Accrued interest	(2,354)	(782)	(1,313)
Accrued property taxes	547	1,446	(448)
Other deferred credits - TEP transmission settlement	—	—	(15,521)
Other	14,328	(6,297)	(6,039)
Net cash provided by operating activities	**233,263**	**216,277**	**240,383**
Investing activities			
Purchases of plant	(212,815)	(280,712)	(214,781)
Changes in deferred charges	9,347	(2,233)	1,112
Proceeds from other investments	65	67	911
Net cash used in investing activities	**(203,403)**	**(282,878)**	**(212,758)**
Financing activities			
Changes in Member advances	(4,177)	(1,717)	(6,852)
Payments of long-term debt	(96,099)	(133,848)	(108,301)
Proceeds from issuance of long-term debt	34,910	150,090	60,000
Debt issuance costs	(13)	(10,697)	(1,450)
Increase in short-term borrowings, net	48,178	59,478	24,767
Retirement of patronage capital	(23,303)	(15,339)	(12,815)
Equity distribution to noncontrolling interest	(2,806)	(4,413)	—
Other	(372)	(328)	101
Net cash provided by (used in) financing activities	**(43,682)**	**43,226**	**(44,550)**
Net decrease in cash, cash equivalents and restricted cash and investments	**(13,822)**	**(23,375)**	**(16,925)**
Cash, cash equivalents and restricted cash and investments – beginning	**127,590**	**150,965**	**167,890**
Cash, cash equivalents and restricted cash and investments – ending	**$ 113,768**	**$ 127,590**	**$ 150,965**
Supplemental cash flow information:			
Cash paid for interest	$ 161,460	$ 161,809	$ 159,112
Cash paid for income taxes	$ —	$ —	$ —
Supplemental disclosure of noncash investing and financing activities:			
Change in plant expenditures included in accounts payable	$ (96)	$ (44)	$ (3,242)

The accompanying notes are an integral part of these consolidated financial statements.

Tri-State Generation and Transmission Association, Inc.

Notes to Consolidated Financial Statements

NOTE 1 – ORGANIZATION

Tri-State Generation and Transmission Association, Inc. (“Tri-State,” “we”, “our,” “us”, or “the Association”) is a taxable wholesale electric power generation and transmission cooperative operating on a not-for-profit basis serving large portions of Colorado, Nebraska, New Mexico and Wyoming. We were incorporated under the laws of the State of Colorado in 1952. We have two classes of members – all requirements electric members known as our Class A members and non-utility members. For our Class A members, we provide electric power to our forty-three electric member distribution systems (“Member(s)”) pursuant to long-term wholesale electric service contracts. We have three non-utility members. The addition of non-utility members in 2019 and specifically the addition of MIECO, Inc. on September 3, 2019 removed the exemption from Federal Energy Regulatory Commission’s (“FERC”) regulation for us, thus subjecting us to full rate and transmission jurisdiction by FERC on September 3, 2019.

We also sell a portion of our electric power to other utilities in our regions pursuant to long-term contracts and short-term sale arrangements. In 2019, 2018 and 2017, total megawatt-hours sold were 18.1, 18.2 and 18.0 million, respectively, of which 90.6, 90.0 and 88.3 percent, respectively, were sold to Members. Total revenue from electric sales was $1.3 billion for 2019, 2018 and 2017 of which 92.8, 97.3, and 92.3 percent in 2019, 2018 and 2017, respectively, was from Member sales. Energy resources were provided by our generation and purchased power, of which 61.5, 58.9 and 61.4 percent in 2019, 2018 and 2017, respectively, were from our generation.

Revenue from one Member, United Power, Inc., was $205.5 million, or 16.6 percent, of our Member revenue and 14.8 percent of our total operating revenues in 2019. No other Member exceeded 10 percent of our Member revenue or our total operating revenues in 2019.

Power is provided to Members at rates determined by our Board of Directors (“Board”), subject to FERC approval. Rates are designed to recover all costs and provide margins to increase Members’ equity and to meet certain financial covenants, including a debt service ratio (“DSR”) requirement and equity to capitalization ratio (“ECR”) requirement.

We supply wholesale power to our Members through the utilization of a portfolio of resources, including generation and transmission facilities, long-term purchase contracts and short-term energy purchases. Our generating facilities also include undivided ownership interests in jointly owned generating facilities. See Note 3—Property, Plant and Equipment. In support of our coal-fired generating facilities, we have direct ownership and investment in coal mines.

We, including our subsidiaries, employ 1,467 people, of which 280 are subject to collective bargaining agreements. None of these agreements expire within one year.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF CONSOLIDATION: Our consolidated financial statements include the accounts of the Association, our wholly-owned and majority-owned subsidiaries, and certain variable interest entities for which we or our subsidiaries are the primary beneficiaries. See Note 14—Variable Interest Entities. Our consolidated financial statements also include our undivided interests in jointly owned facilities.

All significant intercompany balances and transactions have been eliminated in consolidation. The accompanying consolidated statements have been prepared in accordance with accounting principles generally accepted in the United States (“GAAP”) as applied to regulated enterprises.

JOINTLY OWNED FACILITIES: We own undivided interests in two jointly owned generating facilities that are operated by the operating agent of each facility under joint facility ownership agreements with other utilities as tenants in common. These projects include the Yampa Project (operated by us) and the Missouri Basin Power Project

(“MBPP”) (operated by Basin Electric Power Cooperative (“Basin”)). Each participant in these agreements receives a portion of the total output of the generation facilities, which approximates its percentage ownership. Each participant provides its own financing for its share of each facility and accounts for its share of the cost of each facility. The operating agent for each of these projects allocates the fuel and operating expenses to each participant based upon its share of the use of the facility. Therefore, our share of the plant asset cost, interest, depreciation and operating expenses is included in our consolidated financial statements. See Note 3 – Property, Plant and Equipment.

SEGMENT REPORTING: We are organized for the purpose of supplying wholesale power to our Members and do so through the utilization of a portfolio of resources, including generation and transmission facilities, long-term purchase contracts and short-term energy purchases. In support of our coal-fired generating resources, we have direct ownership and investments in coal mines. Our Board serves as our chief operating decision maker who manages and reviews our operating results and allocates resources as one operating segment. Therefore, we have one reportable segment for financial reporting purposes.

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, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results may differ from those estimates.

IMPAIRMENT EVALUATION: Long-lived assets (property, plant and equipment, intangible assets, investments and preliminary surveys and investigation costs) that are held and used are evaluated for impairment whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable. An impairment loss is recognized when estimated undiscounted cash flows expected to result from the use of the asset plus net proceeds expected from disposition of the asset (if any) are less than the carrying value of the asset. When an impairment loss is recognized, the carrying amount of the asset is reduced to its estimated fair value based on quoted market prices or other valuation techniques. In 2019, we recognized an impairment loss of $37.1 million associated with the early retirement of Nucla Generating Station, and in 2017, we determined that the $93.5 million of development costs (which excluded the costs of land and water rights) for a new coal-fired generating unit or units at Holcomb Generating Station were impaired. These impairment losses were deferred in accordance with the accounting requirements related to regulated operations at the discretion of our Board. There were no impairments of long-lived assets recognized in 2018. See Note 2 – Accounting for Rate Regulation.

VARIABLE INTEREST ENTITIES: We evaluate our arrangements and relationships with other entities, including our investments in other associations and investments in coal mines, in accordance with the accounting standard related to consolidation of variable interest entities. This guidance requires us to identify variable interests (contractual, ownership or other financial interests) in other entities and whether any of those entities in which we have a variable interest, meets the criteria of a variable interest entity. An entity is considered to be a variable interest entity when its total equity investment at risk is not sufficient to permit the entity to finance its activities without additional subordinated financial support, or its equity investors, as a group, lack the characteristics of having a controlling financial interest. In making this assessment, we consider the potential that our arrangements and relationships with other entities provide subordinated financial support, the potential for us to absorb losses or rights to residual returns of an entity, the ability to directly or indirectly make decisions about the entity’s activities and other factors. If an entity that we have a variable interest in meets the criteria of a variable interest entity, we must determine whether we are the primary beneficiary of that entity. The primary beneficiary is the entity that has the power to direct the activities of the variable interest entity that most significantly impact the variable interest entity’s economic performance, and the obligation to absorb losses or the right to receive benefits from the variable interest entity that could be potentially significant to the variable interest entity. If we are determined to be the primary beneficiary of (has controlling financial interest in) a variable interest entity, then we would be required to consolidate that entity. In certain situations, it may be determined that power is shared among multiple unrelated parties such that no one party has the power to direct the activities of a variable interest entity that most significantly impact the variable interest entity’s economic performance (decisions about those activities require the consent of each of the parties sharing power). In accordance with the accounting guidance prescribed by consolidation of variable interest entities, if the determination is made that power is shared among multiple unrelated parties, then no party is the primary beneficiary. See Note 14—Variable Interest Entities.

ACCOUNTING FOR RATE REGULATION: We are subject to the accounting requirements related to regulated operations. In accordance with these accounting requirements, some revenues and expenses have been deferred at the discretion of our Board if it is probable that these amounts will be refunded or recovered through future rates. Regulatory assets are costs we expect to recover from our Members based on rates approved by the applicable authority. Regulatory liabilities represent probable future reductions in rates associated with amounts that are expected to be refunded to our Members based on rates approved by the applicable authority. Prior to September 3, 2019, our Board had sole budgetary and rate-setting authority. On September 3, 2019, we became a FERC-jurisdictional public utility and our Board's rate setting authority, including the use of regulatory assets and liabilities, is now subject to FERC approval. Estimates of recovering deferred costs and returning deferred credits are based on specific ratemaking decisions by FERC or precedent for each item. We recognize regulatory assets as expenses and regulatory liabilities as operating revenues, other income, or a reduction in expense concurrent with their recovery in rates.

Regulatory assets and liabilities are as follows (dollars in thousands):

	December 31, 2019	December 31, 2018
Regulatory assets		
Deferred income tax expense (1)	$ 58,937	$ 18,098
Deferred prepaid lease expense – Springerville Unit 3 Lease (2)	83,714	86,005
Goodwill – J.M. Shafer (3)	49,145	51,994
Goodwill – Colowyo Coal (4)	37,194	38,227
Deferred debt prepayment transaction costs (5)	140,931	149,559
Deferred Holcomb expansion impairment loss (6)	93,494	93,494
Deferred Nucla impairment loss (7)	33,864	—
Total regulatory assets	497,279	437,377
Regulatory liabilities		
Interest rate swap - unrealized gain (8)	—	8,576
Interest rate swap - realized gain (9)	3,744	4,215
Deferred revenues (10)	75,853	82,006
Membership withdrawal (11)	42,572	42,572
Total regulatory liabilities	122,169	137,369
Net regulatory asset	$ 375,110	$ 300,008

(1) 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 revenues.
(2) Represents deferral of the loss on acquisition related to the Springerville Generating Station Unit 3 ("Springerville Unit 3") prepaid lease expense upon acquiring a controlling interest in the Springerville Unit 3 Partnership LP ("Springerville Partnership") in 2009. The regulatory asset for the deferred prepaid lease expense is being amortized to depreciation, amortization and depletion expense in the amount of $2.3 million annually through the 47-year period ending in 2056 and recovered from our Members in rates.
(3) Represents goodwill related to our acquisition of Thermo Cogeneration Partnership, LP ("TCP") in December 2011. Goodwill is being amortized to depreciation, amortization and depletion expense in the amount of $2.8 million annually through the 25-year period ending in 2036 and recovered from our Members in rates.
(4) Represents goodwill related to our acquisition of Colowyo Coal Company LP ("Colowyo Coal") in December 2011. Goodwill is being amortized to depreciation, amortization and depletion expense in the amount of $1.0 million annually through the 44-year period ending in 2056 and recovered from our Members in rates.
(5) Represents transaction costs that we incurred related to the prepayment of our long-term debt in 2014. These costs are being amortized to depreciation, amortization and depletion expense in the amount of $8.6 million annually over the 21.4-year period ending in 2036 and recovered from our Members in rates.

(6) Represents deferral of the impairment loss related to development costs, including costs for the option to purchase development rights for the expansion of the Holcomb Generating Station. Beginning January 2020, the deferred impairment loss is expected to be amortized to other operating expenses in the amount of $4.7 million annually over the 20-year period ending in 2039 and recovered from our Members in rates.
(7) In July 2019, the Board took action for the early retirement of the Nucla Generating Station and the deferral of any impairment loss in accordance with accounting for rate regulation. In conjunction with the early retirement, we recognized an impairment loss of $37.1 million during the third quarter of 2019. On September 19, 2019, the Nucla Generating Station was officially retired from service. The deferred impairment loss is being amortized to depreciation, amortization and depletion expense over the 3.3-year period ending in December 2022 and recovered from our Members in rates.
(8) Represented deferral of an unrealized gain related to the change in fair value of a forward starting interest rate swap that was entered into in 2016 in order to hedge interest rates on anticipated future borrowings. This interest rate swap was terminated in June 2019 with no gain or loss being realized.
(9) Represents deferral of a realized gain of $4.6 million related to the October 2017 settlement of a forward starting interest rate swap. This realized gain was deferred as a regulatory liability and is being amortized to interest expense over the 12-year term of the First Mortgage Obligations, Series 2017A and refunded to Members through reduced rates when recognized in future periods.
(10) Represents deferral of the recognition of non-member electric sales revenues. These deferred non-member electric sales revenues will be refunded to Members through reduced rates when recognized in non-member electric sales revenue in future periods.
(11) Represents the deferral of the recognition of other income recorded in connection with the withdrawal of a former member from membership in us. This deferred membership withdrawal income will be refunded to Members through reduced rates when recognized in other income in future periods.

ELECTRIC PLANT AND DEPRECIATION: Electric plant is stated at cost. The cost of internally constructed assets includes payroll, overhead costs and interest charged during construction. Interest rates charged during construction of 4.7 percent were used for 2019, 2018 and 2017. The amount of interest capitalized during construction was $8.7, $8.6 and $11.0 million during 2019, 2018 and 2017, respectively. At the time that units of electric plant are retired, original cost and cost of removal, net of the salvage value, are charged to the allowance for depreciation. Replacements of electric plant that involve less than a designated unit value are charged to maintenance expense when incurred. Electric plant is depreciated based upon estimated depreciation rates and useful lives that are periodically re-evaluated. See Note 3 - Property, Plant and Equipment.

COAL RESERVES AND DEPLETION: Coal reserves are recorded at cost. Depletion of coal reserves is computed using the units-of-production method utilizing only proven and probable reserves.

LEASES: We determine if an arrangement is a lease upon commencement of the contract. If an arrangement is determined to be a long-term lease (greater than 12 months), we recognize a right-of-use asset and lease liability based on the present value of the future minimum lease payments over the lease term at the commencement date. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of future payments. Our lease terms may also include options to extend or terminate the lease when it is reasonably certain that we will exercise those options. Lease expense for minimum lease payments is recognized on a straight-line basis over the lease term. Right-of-use assets are included in other deferred charges, the current portion of lease liabilities is included in current liabilities and the long-term portion of lease liabilities is included in other deferred credits and other liabilities on our consolidated statements of financial position. See Note 11 – Leases.

We have elected to apply the short-term lease exception for contracts that have a lease term of twelve months or less and do not include an option to purchase the underlying asset. Therefore, we do not recognize a right-of-use asset or lease liability for such contracts. We recognize short-term lease payments as expense on a straight-line basis over the lease term. Variable lease payments that do not depend on an index or rate are recognized as incurred.

INVESTMENTS IN OTHER ASSOCIATIONS: Investments in other associations include investments in the patronage capital of other cooperatives and other required investments in the organizations. Our investment in a cooperative increases when a cooperative allocates patronage capital credits to us and it decreases when we receive a cash retirement of the allocated capital credits from the cooperative. A cooperative allocates its patronage capital credits to us based upon our patronage (amount of business done) with the cooperative.

Investments in other associations are as follows (dollars in thousands):

	December 31, **2019**	December 31, **2018**
Basin Electric Power Cooperative	$ 117,368	$ 118,115
National Rural Utilities Cooperative Finance Corporation - patronage capital	11,761	11,704
National Rural Utilities Cooperative Finance Corporation - capital term certificates	15,953	16,018
CoBank, ACB	10,201	9,062
Western Fuels Association, Inc.	2,409	2,392
Other	4,253	4,196
Investments in other associations	$ 161,945	$ 161,487

Our investments in other associations are considered equity securities without readily determinable fair values, and as such are measured at cost minus impairment. We have evaluated these investments for indicators of impairment. There were no impairments of these investments recognized during 2019, 2018 or 2017.

INVESTMENTS IN AND ADVANCES TO COAL MINES: We have direct ownership and investments in coal mines to support our coal-fired generating facilities. We, and certain participants in the Yampa Project, are members of Trapper Mining, Inc. ("Trapper Mining"), which is organized as a cooperative and is the owner and operator of the Trapper Mine near Craig, Colorado. Our investment in Trapper Mining is recorded using the equity method. In addition, we have ownership in Western Fuels Association, Inc. ("WFA"), which is an owner of Western Fuels-Wyoming, Inc. ("WFW"), the owner and operator of the Dry Fork Mine near Gillette, Wyoming. Dry Fork Mine provides coal to the Laramie River Generating Station (owned by the participants of MBPP). We, through our undivided interest in the jointly owned facility MBPP, advance funds to the Dry Fork Mine.

Investments in and advances to coal mines are as follows (dollars in thousands):

	December 31, **2019**	December 31, **2018**
Investment in Trapper Mine	$ 15,881	$ 15,350
Advances to Dry Fork Mine	3,800	3,578
Investments in and advances to coal mines	$ 19,681	$ 18,928

CASH, CASH EQUIVALENTS AND RESTRICTED CASH AND INVESTMENTS: We consider highly liquid investments with an original maturity of three months or less to be cash equivalents. The fair value of cash equivalents approximates their carrying values due to their short-term maturity.

Restricted cash and investments represent funds designated by our Board for specific uses and funds restricted by contract or other legal reasons. A portion of the funds have been restricted by contract and are expected to be settled within one year. These funds are therefore classified as current on our consolidated statements of financial position. The other funds are restricted by contract or other legal reasons and are expected to be settled beyond one year. These funds are classified as noncurrent and are included in other assets and investments on our consolidated statements of financial position.

The following table provides a reconciliation of cash, cash equivalents and restricted cash and investments reported within our consolidated statements of financial position that sum to the total of the same such amount shown in our consolidated statements of cash flows (dollars in thousands):

	December 31, **2019**	December 31, **2018**
Cash and cash equivalents	$ 83,070	$ 116,858
Restricted cash and investments - current	182	126
Restricted cash and investments - noncurrent	30,516	10,606
Cash, cash equivalents and restricted cash and investments	$ 113,768	$ 127,590

Our Board Policy for Financial Goals and Capital Credits was revised in 2018 to provide that our Board will endeavor to fund an internally restricted cash account for the purpose of cash funding deferred revenues and incomes held as regulatory liabilities. In connection with such policy, our Board internally restricted cash in the amount of $25.5 million and $4.6 million as of December 31, 2019 and December 31, 2018, respectively, which is included in restricted cash and investments – noncurrent. Our Board may, at any time and for any reason, unrestrict any internally restricted cash. On March 10, 2020, our Board took action to unrestrict the entire balance of the restricted cash related to deferred revenue in response to volatile market conditions.

MARKETABLE SECURITIES: We hold marketable securities in connection with the directors' and executives' elective deferred compensation plans which consist of investments in stock funds, bond funds and money market funds. These securities are measured at fair value on a recurring basis with changes in fair value recognized in earnings. The estimated fair value of the investments is based upon their active market value (Level 1 inputs) and is included in other noncurrent assets on our consolidated statements of financial position. At December 31, 2019, the cost and estimated fair value of the investments were $0.7 million. At December 31, 2018, the cost and estimated fair value of the investments were $0.8 and $0.7 million, respectively.

INVENTORIES: Coal inventories at our owned generating facilities are stated at LIFO (last-in, first-out) cost and were $21.4 and $24.6 million as of December 31, 2019 and 2018, respectively. The remaining coal inventories, other fuel, and materials and supplies inventories are stated at average cost. In 2019, we realized lower coal fuel expense of $0.5 million as a result of a LIFO inventory liquidation at our generating facilities.

OTHER DEFERRED CHARGES: We make expenditures for preliminary surveys and investigations for the purpose of determining the feasibility of contemplated generation and transmission projects. If construction results, the preliminary survey and investigation expenditures will be reclassified to electric plant—construction work in progress. If the work is abandoned, the related preliminary survey and investigation expenditures will be charged to the appropriate operating expense account or the expense could be deferred as a regulatory asset to be recovered from our Members in rates subject to approval by our Board, which has budgetary and rate-setting authority, subject to FERC approval.

We make advance payments to the operating agents of jointly owned facilities to fund our share of costs expected to be incurred under each project including MBPP – Laramie River Station and Yampa Project – Craig Generating Station Units 1 and 2. We also make advance payments to the operating agent of Springerville Unit 3.

We had entered into a forward starting interest rate swap to hedge a portion of our future long-term debt interest rate exposure. The unrealized gain of $8.6 million as of December 31, 2018 was deferred in accordance with accounting related to regulated operations. This interest rate swap was terminated in June 2019 with no gain or loss being realized. See Note 2 – Accounting for Rate Regulation.

Other deferred charges are as follows (dollars in thousands):

	December 31, 2019	December 31, 2018
Preliminary surveys and investigations	$ 21,261	$ 20,660
Advances to operating agents of jointly owned facilities	3,917	13,161
Interest rate swap	—	8,576
Operating lease right-of-use assets	7,622	—
Other	9,872	4,056
Total other deferred charges	$ 42,672	$ 46,453

DEBT ISSUANCE COSTS: We account for debt issuance costs as a direct deduction of the associated long-term debt carrying amount consistent with the accounting for debt discounts and premiums. Deferred debt issuance costs are amortized to interest expense using an effective interest method over the life of the respective debt.

ASSET RETIREMENT AND ENVIRONMENTAL RECLAMATION OBLIGATIONS: We account for current obligations associated with the future retirement of tangible long-lived assets and environmental reclamation in accordance with the accounting guidance relating to asset retirement and environmental obligations. This guidance requires that legal obligations associated with the retirement of long-lived assets be recognized at fair value at the time the liability is incurred and capitalized as part of the related long-lived asset. Over time, the liability is adjusted to its present value by recognizing accretion expense and the capitalized cost of the long-lived asset is depreciated in a manner consistent with the depreciation of the underlying physical asset. In the absence of quoted market prices, we determine fair value by using present value techniques in which estimates of future cash flows associated with retirement activities are discounted using a credit adjusted risk-free rate and a market risk premium. Upon settlement of an asset retirement obligation, we will apply payment against the estimated liability and incur a gain or loss if the actual retirement costs differ from the estimated recorded liability. These liabilities are included in asset retirement obligations.

Environmental reclamation costs are accrued based on management's best estimate at the end of each period of the costs expected to be incurred. Such cost estimates may include ongoing care, maintenance and monitoring costs. Changes in reclamation estimates are reflected in earnings in the period an estimate is revised. Estimates of future expenditures for environmental reclamation obligations are not discounted.

Coal mines: We have asset retirement obligations for the final reclamation costs and environmental obligations for post-reclamation monitoring related to the Colowyo Mine, the New Horizon Mine, and the Fort Union Mine. New Horizon Mine started final reclamation on June 8, 2017.

Generation: We have asset retirement obligations related to equipment, dams, ponds, wells and underground storage tanks at the generating facilities.

Aggregate carrying amounts of asset retirement obligations and environmental reclamation obligations are as follows (dollars in thousands):

	2019	2018
Obligations at beginning of period	$ 56,772	$ 56,855
Liabilities incurred	23,290	6,065
Liabilities settled	(1,090)	(5,475)
Accretion expense	2,863	2,458
Change in cash flow estimate	(2,921)	(3,131)
Total obligations at end of period	$ 78,914	$ 56,772
Less current obligations at end of period	(2,460)	(2,183)
Long-term obligations at end of period	$ 76,454	$ 54,589

We recorded an additional environmental reclamation obligation liability of $22.4 million due to anticipated revision to the New Horizon mine reclamation plan to accommodate an alternative post mine land use as necessary for final mine reclamation. We continue to evaluate the New Horizon mine post reclamation obligation and will make adjustments to the obligation as needed.

We also have asset retirement obligations with indeterminate settlement dates. These are made up primarily of obligations attached to transmission and other easements that are considered by us to be operated in perpetuity and therefore the measurement of the obligation is not possible. A liability will be recognized in the period in which sufficient information exists to estimate a range of potential settlement dates as is needed to employ a present value technique to estimate fair value.

OTHER DEFERRED CREDITS AND OTHER LIABILITIES: In 2015, we renewed transmission right of way easements on tribal nation lands where certain of our electric transmission lines are located. We will pay $31.2 million for these easements from 2020 through the individual easement terms ending between 2036 and 2040. The present value of the remaining easement payments was $20.5 and $21.0 million as of December 31, 2019 and December 31, 2018, respectively, which is recorded as other deferred credits and other liabilities.

A contract liability represents an entity's obligation to transfer goods or services to a customer for which the entity has received consideration from the customer. We have received deposits from others and these deposits are reflected in contract liabilities (unearned revenue) until recognized in other operating revenues over the life of the agreement. We have received deposits from various parties and those that may still be required to be returned are a liability and these are reflected in customer deposits.

The following other deferred credits and other liabilities are reflected on our consolidated statements of financial position (dollars in thousands):

	December 31, **2019**	December 31, **2018**
Transmission easements	$ 20,549	$ 20,966
Operating lease liabilities - noncurrent	1,846	—
Contract liabilities (unearned revenue) - noncurrent	4,217	4,592
Customer deposits	3,015	2,458
Financial liabilities - reclamation	12,091	4,938
Other	14,681	17,312
Total other deferred credits and other liabilities	$ 56,399	$ 50,266

PATRONAGE CAPITAL: Our net margins are treated as advances of capital from our members and are allocated to our Members on the basis of their electricity purchases from us and to our non-utility members as provided in their respective membership agreement. Margins not yet distributed to members constitute patronage capital. Patronage capital is held for the account of our members and is distributed through patronage capital retirements when our Board deems it appropriate to do so, subject to debt instrument restrictions.

ELECTRIC SALES REVENUE: Revenue from electric energy deliveries is recognized when delivered. See Note 10 – Revenue.

OTHER OPERATING REVENUE: Other operating revenue consists primarily of wheeling, transmission and lease revenues, coal sales and revenue from supplying steam and water to a paper manufacturer located adjacent to the Escalante Generating Station. Other operating revenue also includes revenue we receive from two of our non-utility members. Wheeling revenue is received when we charge other energy companies for transmitting electricity over our transmission lines. Transmission revenue is received from our membership in the Southwest Power Pool, a regional transmission organization. The lease revenue is primarily from a power sales arrangement, which expired on June 30, 2019, that was required to be accounted for as an operating lease since it conveyed to a third party the right to use power generating equipment for a stated period of time. See Note 11 – Leases. Coal sales revenue results from the sale of coal from the Colowyo Mine to third parties. The associated Colowyo Mine expenses are included in coal mining, depreciation, amortization, and depletion and interest expense on our consolidated statements of operations.

INCOME TAXES: We are a taxable cooperative subject to federal and state taxation. As a taxable electric cooperative, we are allowed a tax exclusion for margins allocated as patronage capital. We utilize the liability method of accounting for income taxes. However, in accordance with our regulatory accounting treatment, changes in deferred tax assets or liabilities result in the establishment of a regulatory asset or liability. 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 revenues. Under this regulatory accounting approach, the income tax expense (benefit) on our consolidated statements of operations includes only the current provision. See Note 9 – Income Taxes.

INTERCHANGE POWER: We occasionally engage in interchanges, or non-cash swapping, of energy. Based on the assumption that all energy interchanged will eventually be received or delivered in-kind, interchanged energy is generally valued at the average cost of fuel to generate power. Additionally, portions of the energy interchanged are valued per contract with the utility involved in the interchange. When we are in a net energy advance position, the advanced energy balance is recorded as an asset. If we owe energy, the net energy balance owed to others is recorded as a liability. The net activity for the year is included in purchased power expense. The interchange liability balance of $1.6 and $2.3 million at December 31, 2019 and 2018, respectively, is included in accounts payable. The net interchange activity recorded in purchased power expense was an expense of $0.6 million in 2018 and a credit of $0.4 million in 2019 and 2017.

NOTE 3 – PROPERTY, PLANT AND EQUIPMENT

Our property, plant and equipment consists of electric plant and other plant. Both of these are discussed below and are included on our consolidated statements of financial position.

ELECTRIC PLANT: At December 31, 2019, our investment in electric plant and the related annual rates of depreciation or amortization calculated using the straight-line method are as follows (dollars in thousands):

	Annual Depreciation Rate			Plant In Service	Accumulated Depreciation	Net Book Value
Generation plant	0.89 %	to	6.27 %	$ 3,681,886	$ (1,599,528)	$ 2,082,358
Transmission plant	1.11 %	to	2.09 %	1,679,534	(600,740)	1,078,794
General plant	1.46 %	to	9.53 %	472,592	(321,304)	151,288
Other	2.75 %	to	10.00 %	256,380	(119,898)	136,482
Electric plant in service (at cost)				$ 6,090,392	$ (2,641,470)	3,448,922
Construction work in progress						164,924
Electric plant						$ 3,613,846

At December 31, 2018, our investment in electric plant and the related annual rates of depreciation or amortization calculated using the straight-line method are as follows (dollars in thousands):

	Annual Depreciation Rate			Plant In Service	Accumulated Depreciation	Net Book Value
Generation plant	0.89 %	to	6.27 %	$ 3,601,911	$ (1,504,802)	$ 2,097,109
Transmission plant	1.11 %	to	2.09 %	1,556,860	(562,216)	994,644
General plant	1.46 %	to	9.53 %	492,991	(316,233)	176,758
Other	2.75 %	to	10.00 %	247,366	(116,125)	131,241
Electric plant in service (at cost)				$ 5,899,128	$ (2,499,376)	3,399,752
Construction work in progress						207,732
Electric plant						$ 3,607,484

At December 31, 2019, we had $63.3 million of commitments to complete construction projects, of which approximately $43.7, $18.6 and $1.0 million are expected to be incurred in 2020, 2021 and 2022, respectively.

JOINTLY OWNED FACILITIES: Our share in each jointly owned facility is as follows as of December 31, 2019 (these electric plant in service, accumulated depreciation and construction work in progress amounts are included in the electric plant table above) (dollars in thousands):

	Tri-State Share	Electric Plant in Service	Accumulated Depreciation	Construction Work In Progress
Yampa Project - Craig Generating Station Units 1 and 2	24.00 %	$ 396,292	$ 245,723	$ 21
MBPP - Laramie River Station	27.13 %	490,156	298,465	1,491
Total		$ 886,448	$ 544,188	$ 1,512

OTHER PLANT: Other plant consists of mine assets (discussed below) and non-utility assets (which consist of piping and equipment specifically related to providing steam and water from the Escalante Generating Station to a third party for their use in the production of paper).

We own 100 percent of Elk Ridge Mining and Reclamation, LLC ("Elk Ridge"), organized for the purpose of acquiring coal reserves and supplying coal to us, which is the owner and operator of the New Horizon Mine near Nucla, Colorado. New Horizon Mine is in mine reclamation and no longer produces coal. Elk Ridge also owns Colowyo Coal, which is the owner and operator of the Colowyo Mine, a large surface coal mine near Craig, Colorado. We also own a 50 percent undivided ownership in the land and the rights to mine the property known as Fort Union Mine. The expenses related to this coal used by us are included in fuel expense on our consolidated statements of operations.

Other plant assets are as follows (dollars in thousands):

	December 31, **2019**	December 31, **2018**
Colowyo Mine assets	$ 356,612	$ 326,838
New Horizon Mine assets	38,949	44,589
Fort Union Mine assets	846	846
Accumulated depreciation and depletion	(106,337)	(104,031)
Net mine assets	290,070	268,242
Non-utility assets	12,644	12,377
Accumulated depreciation	(7,270)	(6,908)
Net non-utility assets	5,374	5,469
Net other plant	$ 295,444	$ 273,711

NOTE 4 – INTANGIBLE ASSETS

The December 2011 acquisition of TCP resulted in recording an intangible asset in the amount of $55.5 million related to a contractual obligation that TCP had to a third party under a purchase power agreement. The $55.5 million intangible asset represented the amount that the purchase power agreement contract terms were above market value at the acquisition date and was being amortized on a straight-line basis over the remaining life of the purchase power agreement through June 30, 2019. The straight-line method was consistent with the terms of the purchase power agreement as this contract was for a fixed amount of capacity at a fixed capacity rate that stayed constant over the term of the contract. The purchase power agreement intangible asset was amortized to other operating income as a reduction of the revenue generated by the purchase power agreement in the amount of $7.3 million in each of the years 2018 and

2017. The remaining $3.7 million was amortized to other operating income for the six-month period ending June 30, 2019.

NOTE 5 – CONTRACT ASSETS AND CONTRACT LIABILITIES

Contract Assets

A contract asset represents an entity's right to consideration in exchange for goods or services that the entity has transferred to a customer when that right is conditioned on something other than the passage of time (for example, the entity's future performance). We have no contract assets as of December 31, 2019 and December 31, 2018.

Accounts Receivable

We record accounts receivable for our unconditional rights to consideration arising from our performance under contracts with our members and other parties. Uncollectible amounts, if any, are identified on a specific basis and charged to expense in the period determined to be uncollectible. See Note 10 – Revenue.

Contract liabilities (unearned revenue)

A contract liability represents an entity's obligation to transfer goods or services to a customer for which the entity has received consideration from the customer. We have received deposits from others and these deposits are reflected in unearned revenue (included in other deferred credits and other liabilities on our consolidated statements of financial position) before revenue is recognized, resulting in contract liabilities. We recognized $0.7 million of this unearned revenue in 2019 in other operating revenues on our consolidated statements of operations.

Our contract assets, accounts receivable and liabilities consist of the following (dollars in thousands):

	December 31, **2019**	December 31, **2018**
Accounts receivable - Members	$ 105,371	$ 107,572
Other accounts receivable - trade:		
Non-member electric sales	4,727	6,998
Other	20,628	6,006
Total other accounts receivable - trade	25,355	13,004
Other accounts receivable - nontrade	2,684	9,430
Total other accounts receivable	$ 28,039	$ 22,434
Contract liabilities (unearned revenue)	$ 7,041	$ 7,906

NOTE 6 – LONG-TERM DEBT

We have $3.1 billion of long term debt which consists of mortgage notes payable, pollution control revenue bonds and the Springerville certificates. The mortgage notes payable and pollution control revenue bonds are secured on a parity basis by a Master First Mortgage Indenture, Deed of Trust and Security Agreement ("Master Indenture") except for one unsecured note in the aggregate amount of $27.1 million as of December 31, 2019. Substantially all our assets, rents, revenues and margins are pledged as collateral. The Springerville certificates are secured by the assets of Springerville Unit 3. All long-term debt contains certain restrictive financial covenants, including a DSR requirement on an annual basis and an ECR requirement of at least 18 percent at the end of each fiscal year. Other than long-term debt for the

Springerville certificates that has a DSR requirement of at least 1.02 on an annual basis, all other long-term debt contains a DSR requirement of at least 1.10 on an annual basis.

We have a secured revolving credit facility with National Rural Utilities Cooperative Finance Corporation, as lead arranger and administrative agent, in the amount of $650 million ("Revolving Credit Agreement") that expires on April 25, 2023. We had no outstanding borrowings under the Revolving Credit Agreement as of December 31, 2019. As of December 31, 2019, we had $397 million in availability (including $247 million under the commercial paper back-up sublimit) under the Revolving Credit Agreement.

Long-term debt consists of the following (dollars in thousands):

	December 31, 2019	December 31, 2018
Mortgage notes payable		
3.66% to 8.08% CFC, due through 2028	$ 73,859	$ 77,085
2.63% to 4.43% CoBank, ACB, due through 2042	235,900	245,787
First Mortgage Obligations, Series 2017A, Tranche 1, 3.34%, due through 2029	60,000	60,000
First Mortgage Obligations, Series 2017A, Tranche 2, 3.39%, due through 2029	60,000	60,000
First Mortgage Bonds, Series 2016A, 4.25% due 2046	250,000	250,000
First Mortgage Bonds, Series 2014E-1, 3.70% due 2024	250,000	250,000
First Mortgage Bonds, Series 2014E-2, 4.70% due 2044	250,000	250,000
First Mortgage Bonds, Series 2010A, 6.00% due 2040	500,000	500,000
First Mortgage Obligations, Series 2014B, Tranche 1, 3.90%, due through 2033	180,000	180,000
First Mortgage Obligations, Series 2014B, Tranche 2, 4.30%, due through 2039	20,000	20,000
First Mortgage Obligations, Series 2014B, Tranche 3, 4.45%, due through 2045	550,000	550,000
First Mortgage Obligations, Series 2009C, Tranche 1, 6.00%, due through 2019	—	27,143
First Mortgage Obligations, Series 2009C, Tranche 2, 6.31%, due through 2021	44,000	66,000
Variable rate CFC, as determined by CFC, due through 2026	443	498
Variable rate CFC, LIBOR-based term loan, due through 2049	102,220	102,220
Variable rate CoBank, ACB, LIBOR-based term loans, due through 2044	172,039	137,130
Pollution control revenue bonds		
Moffat County, CO, 2.00% term rate through October 2022, Series 2009, due 2036	46,800	46,800
Springerville certificates		
Series B, 7.14%, due through 2033	371,211	405,000
Total debt	$ 3,166,472	$ 3,227,663
Less debt issuance costs	(27,412)	(29,775)
Less debt discounts	(9,906)	(10,139)
Plus debt premiums	15,752	17,309
Total debt adjusted for discounts, premiums and debt issuance costs	$ 3,144,906	$ 3,205,058
Less current maturities	(81,555)	(95,757)
Long-term debt	$ 3,063,351	$ 3,109,301

Annual maturities of total debt adjusted for debt issuance costs, discounts and premiums at December 31, 2019 are as follows (dollars in thousands):

2020	$ 81,555
2021	87,697
2022	93,143
2023	73,184
2024 (1)	306,157
Thereafter	2,503,170
	$ 3,144,906

(1) Includes $250 million bullet maturity for the First Mortgage Bonds, Series 2014 E-1.

NOTE 7 – SHORT-TERM BORROWINGS

We have a commercial paper program under which we issue unsecured commercial paper in aggregate amounts not exceeding the commercial paper back-up sublimit under our Revolving Credit Agreement, which is the lesser of $500 million or the amount available under our Revolving Credit Agreement. The commercial paper issuances are used to provide an additional financing source for our short-term liquidity needs. The maturities of the commercial paper issuances vary, but may not exceed 397 days from the date of issue. The commercial paper notes are classified as current and are included in current liabilities as short-term borrowings on our consolidated statements of financial position.

Commercial paper consisted of the following as of and for the twelve months ended December 31 (dollars in thousands):

	2019	2018
Commercial paper outstanding, net of discounts	$ 252,323	$ 204,145
Weighted average interest rate	1.88 %	2.65 %

At December 31, 2019, $247 million of the commercial paper back-up sublimit remained available under the Revolving Credit Agreement. See Note 6 – Long-Term Debt.

NOTE 8 – FAIR VALUE

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability between market participants in the principal market, or in the most advantageous market when no principal market exists. The fair value measurements accounting guidance emphasizes that fair value is a market-based measurement, not an entity-specific measurement. Therefore, a fair value measurement should be determined based on the assumptions that market participants would use in pricing the asset or liability (market participants are assumed to be independent, knowledgeable, able and willing to transact an exchange and not under duress). In considering market participant assumptions in fair value measurements, a three-tier fair value hierarchy for measuring fair value was established which prioritizes the inputs used in measuring fair value as follows:

> Level 1 inputs are based upon quoted prices for identical instruments traded in active (exchange-traded) markets. Valuations are obtained from readily available pricing sources for market transactions (observable market data) involving identical assets or liabilities.
>
> Level 2 inputs are based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-based valuation techniques (such as option pricing models and discounted cash flow models) for which all significant assumptions are observable in the market.
>
> Level 3 inputs consist of unobservable market data which is typically based on an entity's own assumptions of what a market participant would use in pricing an asset or liability as there is little, if any, related market activity.

In instances where the determination of the fair value measurement is based on inputs from different levels of the fair value hierarchy, the level in the fair value hierarchy within which the entire fair value measurement falls is based on the lowest level input that is significant to the fair value measurement in its entirety. The assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the asset or liability.

Marketable Securities

We hold marketable securities in connection with the directors' and executives' elective deferred compensation plans which consist of investments in stock funds, bond funds and money market funds. These securities are measured at fair value on a recurring basis with changes in fair value recognized in earnings. The estimated fair value of the investments is based upon their active market value (Level 1 inputs) and is included in other noncurrent assets on our consolidated statements of financial position. The amortized cost and fair values of our marketable securities are as follows (dollars in thousands):

	December 31, 2019		December 31, 2018	
	Cost	Estimated Fair Value	Cost	Estimated Fair Value
Marketable securities	$ 715	$ 654	$ 818	$ 712

Cash Equivalents

We invest portions of our cash and cash equivalents in commercial paper, money market funds, and other highly liquid investments. The fair value of these investments approximates our cost basis in the investments. In aggregate, the fair value was $79.0 million and $107.2 million as of December 31, 2019 and 2018, respectively.

Debt

The fair values of debt were estimated using discounted cash flow analyses based on our current incremental borrowing rates for similar types of borrowing arrangements. These valuation assumptions utilize observable inputs based on market data obtained from independent sources and are therefore considered Level 2 inputs (quoted prices for similar assets, liabilities (adjusted) and market corroborated inputs). The principal amounts and fair values of our debt are as follows (dollars in thousands):

	December 31, 2019		December 31, 2018	
	Principal Amount	Estimated Fair Value	Principal Amount	Estimated Fair Value
Total debt	$ 3,166,472	$ 3,608,341	$ 3,227,663	$ 3,421,753

NOTE 9 – INCOME TAXES

We had an income tax benefit of $0.3 million, $0.5 million and $1.1 million in 2019, 2018 and 2017, respectively. These income tax benefits are due to our election to receive an alternative minimum tax credit refund in lieu of recognizing bonus depreciation.

The liability method of accounting for income taxes is utilized. Under the liability method, deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and for income tax purposes. In accordance with our regulatory accounting treatment, changes in deferred tax assets or liabilities result in the establishment of a regulatory asset or liability. 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 revenues. Under this regulatory accounting approach, the income tax expense (benefit) on our consolidated statements of operations includes only the current portion. FERC may require us to change our regulatory accounting treatment.

Components of our net deferred tax liability are as follows (dollars in thousands):

	December 31, **2019**	December 31, **2018**
Deferred tax assets		
Safe harbor lease receivables	$ 14,552	$ 17,067
Net operating loss carryforwards	116,797	100,565
Alternative minimum tax credit carryforwards	308	615
Deferred revenues and membership withdrawal	28,185	29,650
Operating lease liabilities	131,817	—
Other	26,587	22,483
	318,246	170,380
Less valuation allowance	(30,468)	—
	287,778	170,380
Deferred tax liabilities		
Basis differences- property, plant and equipment	129,427	115,887
Capital credits from other associations	32,789	32,689
Deferred debt prepayment transaction costs	33,542	35,595
Operating lease right-of-use assets	136,930	—
Other	14,027	4,307
	346,715	188,478
Net deferred tax liability	$ (58,937)	$ (18,098)

The $40.8. million increase in net deferred tax liabilities is not recognized as a tax expense in 2019 due to our regulatory accounting treatment of deferred taxes. Instead, the tax expense is deferred and reflected as an increase in the regulatory asset established for deferred income tax expense. This liability method is included in our FERC rate filing, however, FERC may require a different method for the rate recovery of income taxes. The accounting for regulatory assets is discussed further in Note 2—Accounting for Rate Regulation. The regulatory asset balance associated with deferred income tax expense under the liability method is $58.9 and $18.1 million at December 31, 2019 and 2018, respectively.

The reconciliation between the statutory federal income tax rate and the effective tax rate is as follows:

	2019	**2018**	**2017**
Federal income tax expense at statutory rate	21.00 %	21.00 %	35.00 %
State income tax expense, net of federal benefit	2.80	2.80	2.63
Patronage exclusion	(23.80)	(23.80)	(37.63)
Asset retirement obligations	(11.33)	3.57	(0.16)
Deferred revenues and membership withdrawal	3.23	(28.78)	5.11
Operating liabilities, net of right-of-use assets (1)	11.29	—	—
Valuation Allowance	67.24	—	—
Other book tax differences	(2.43)	24.42	(2.82)
Regulatory treatment of deferred taxes	(68.68)	(0.46)	(3.91)
Effective tax rate	(0.68)%	(1.25)%	(1.78)%

(1) Net deferred tax liability established as a result of adopting ASC 842. See Note 11 – Leases.

We had a taxable loss of $46.4 million for 2019. At December 31, 2019, we have a federal net operating loss carryforward of $492.5 million of which pre-2018 tax years are subject to expiration periods between 2031 and 2037. We have $356.2 million of state net operating loss carryforwards subject to expiration periods between 2020 and 2037. We also have $0.3 million of alternative minimum tax credit carryforwards which is fully refundable through 2021. We established a valuation allowance of $30.5 million because it is more likely than not that some of the benefit from the federal and state net operating losses will not be realized in the future.

We file a U.S. federal consolidated income tax return and income tax returns in state jurisdictions where required. The statute of limitations remains open for federal and state returns for the years 2016 forward. We do not have any liabilities recorded for uncertain tax positions.

The Tax Cuts and Jobs Act ("TCJA"), enacted on December 22, 2017, reduced the corporate income tax rate from 35 percent to 21 percent, effective January 1, 2018. The Securities and Exchange Commission issued guidance in Staff Accounting Bulletin 118 ("SAB 118") which allows registrants to record provisional amounts for the accounting effects of TCJA during a measurement period not to extend beyond one year from the date of enactment. As of December 31, 2017, we recorded a $17.2 million provisional estimate to remeasure deferred tax balances at 21 percent.

NOTE 10 - REVENUE

Revenue from Contracts with Customers

Our revenues are derived primarily from the sale of electric power to our Members pursuant to long-term wholesale electric service contracts. Our contracts with our Members extend through 2050 for 42 Members and 2040 for the remaining Member.

Member electric sales

Revenues from electric power sales to our Members are primarily from our Class A rate schedule. Our Class A rate schedule for electric power sales to our Members consist of three billing components: an energy rate and two demand rates. Our Class A rate schedule is variable and is approved by our Board, subject to FERC approval. Energy and demand have the same pattern of transfer to our Members and are both measurements of the electric power provided to our Members. Therefore, the provision of electric power to our Members is one performance obligation. Prior to our Members' requirement for electric power, we do not have a contractual right to consideration as we are not obligated to provide electric power until the Member requires each incremental unit of electric power. We transfer control of the electric power to our Members over time and our Members simultaneously receive and consume the benefits of the electric power. Progress toward completion of our performance obligation is measured using the output method, meter readings are taken at the end of each month for billing purposes, energy and demand are determined after the meter readings and Members are invoiced based on the meter reading. Payments from our Members are received in accordance with the wholesale electric service contracts' terms, which is less than 30 days from the invoice date. Member electric sales revenue is recorded as Member electric sales on our consolidated statements of operations and Accounts receivable – Members on our consolidated statements of financial position.

In addition to our Member electric sales, we have non-member electric sales and other operating revenue which consist of several revenue streams. The following revenue is reflected on our consolidated statements of operations as follows (dollars in thousands):

	2019	2018	2017
Non-member electric sales:			
Long-term contracts	$ 47,224	$ 45,314	$ 62,227
Short-term contracts	42,024	41,127	31,172
Recognition (deferral) of revenue, net	6,153	(51,678)	5,473
Coal Sales	6,662	1,075	40,697
Other	44,737	49,127	49,084
Total non-member electric sales and other operating revenue	$ 146,800	$ 84,965	$ 188,653

Non-member electric sales

Revenues from electric power sales to non-members are primarily from long-term contracts and short-term market sales. We deferred $51.7 million of non-member electric sales revenue for the year ended December 31, 2018, as directed by our Board. We recognized a net of $6.2 million and $5.5 million of deferred non-member electric sales revenue for the years ended December 31, 2019 and December 31, 2017, respectively, as directed by our Board. See Note 2 – Accounting for Rate Regulation.

Prior to our customers' demand for energy, we do not have a contractual right to consideration as we are not obligated to provide energy until the customer demands each incremental unit of energy. We transfer control of the energy to our customer over time and our customer simultaneously receives and consumes the benefits of the electric power. Progress toward completion of our performance obligation is measured using the output method. Payments are received in accordance with the contract terms, which is less than 30 days after the invoice is received by the customer.

Other operating revenue

Other operating revenue consists primarily of wheeling, transmission and lease revenues, coal sales and revenue from supplying steam and water. Other operating revenue also includes revenue we receive from two of our non-utility members. Wheeling revenue is received when we charge other energy companies for transmitting electricity over our transmission lines in the Western Interconnection (payments are received in accordance with the contract terms which is within 20 days of the date of receipt of the invoice). Transmission revenue is from Southwest Power Pool's scheduling of transmission across our transmission assets in the Eastern Interconnection because of our membership in it (Southwest Power Pool collects the revenue from the customer and pays us for the scheduling, system control, dispatch transmission service, and the annual transmission revenue requirement). Steam and water revenue is derived from supplying steam and water to a paper manufacturer located adjacent to the Escalante Generating Station (payments from the customer are received in accordance with the contract terms which is less than 15 days of receipt of the invoice). Each of these services or goods are provided over time and progress toward completion of our performance obligations are measured using the output method. Lease revenue is primarily from a power sales arrangement, which expired on June 30, 2019, that was required to be accounted for as an operating lease since the arrangement conveyed the right to use power generating equipment for a stated period of time. Coal sales revenue results from the sale of coal from the Colowyo Mine to third parties. We have an obligation to deliver coal and progress toward our performance obligation is measured using the output method. Our performance obligation is completed as coal is delivered.

NOTE 11 – LEASES

Leasing Arrangements As Lessee

We have lease agreements as lessee for the right to use various facilities and operational assets and had a lease agreement for the right to use power generating equipment at Brush Generating Station. Under the power purchase arrangement at the Brush Generating Station that expired on December 31, 2019, we were required to account for the arrangement as an operating lease since it conveyed to us the right to direct the use of 70 megawatts at the Brush Generating Station and whereby we provided our own natural gas for generation of electricity. We did not renew this power purchase arrangement.

Rent expense for all short-term and long-term operating leases was $7.4 million in 2019 and $7.9 million in 2018. Rent expense is included in operating expenses on our consolidated statements of operations. As of December 31, 2019, there were no arrangements accounted for as finance leases.

Our consolidated statements of financial position include the following lease components (dollars in thousands):

		December 31, **2019**
Operating leases		
Operating lease right-of-use assets	$	8,376
Less: Accumulated amortization		(754)
Net operating lease right-of-use assets	$	7,622
Operating lease liabilities – current	$	(5,533)
Operating lease liabilities – noncurrent		(1,846)
Total operating lease liabilities	$	(7,379)
Operating leases		
Weighted average remaining lease term (years)		9.5
Weighted average discount rate		3.80%

Future expected minimum lease commitments under operating leases are as follows (dollars in thousands):

Year 1	$	5,660
Year 2		517
Year 3		319
Year 4		275
Year 5		240
Thereafter		856
Total lease payments	$	7,867
Less imputed interest		(488)
Total	$	7,379

Leasing Arrangements As Lessor

We have lease agreements as lessor for certain operational assets and had a lease agreement as lessor for power generating equipment at the J.M. Shafer Generating Station. Under the power sales arrangement at the J.M. Shafer Generating Station that expired on June 30, 2019, we were required to account for the arrangement as an operating lease since it conveyed to a third party the right to direct the use of 122 megawatts of the 272 megawatt generating capability of the J.M. Shafer Generating Station whereby the third party provided its own natural gas for generation of electricity. The revenue from these lease agreements of $12.1 million in 2019 and $17.6 million in 2018 are included in other operating revenue on our consolidated statements of operations.

The lease arrangement with the Springerville Partnership is not reflected in our lease right right-of-use asset or liability balances as the associated revenues and expenses are eliminated in consolidation. See Note 14- Variable Interest Entities. However, as the noncontrolling interest associated with this lease arrangement generates book-tax differences, a deferred tax asset and liability have been recorded. See Note 9 – Income Taxes.

NOTE 12 – RELATED PARTIES

TRAPPER MINING, INC.: We, and certain participants in the Yampa Project, own Trapper Mining. Organized as a cooperative, Trapper Mining supplied 24.7, 31.1 and 24.7 percent in 2019, 2018 and 2017, respectively, of the coal for the Yampa Project. Our 26.57 percent share of coal purchases from Trapper Mining was $18.6, $18.2 and $18.8 million in 2019, 2018 and 2017, respectively. Our membership interest in Trapper Mining of $15.9 and $15.4 million at December 31, 2019 and 2018, respectively, is included in investments in and advances to coal mines on our consolidated statements of financial position.

NOTE 13 – EMPLOYEE BENEFIT PLANS

DEFINED BENEFIT PLAN: Substantially all of our 1,467 employees participate in the National Rural Electric Cooperative Association Retirement Security Plan ("RS Plan") except for the 225 employees of Colowyo Coal. The RS Plan is a defined benefit pension plan qualified under Section 401(a) and tax-exempt under Section 501(a) of the Internal Revenue Code. It is considered a multiemployer plan under the accounting standards for compensation - retirement benefits. The plan sponsor's Employer Identification Number is 53-0116145 and the Plan Number is 333.

A unique characteristic of a multiemployer plan compared to a single employer plan is that all plan assets are available to pay benefits to any plan participant. Separate asset accounts are not maintained for participating employers. This means that assets contributed by one employer may be used to provide benefits to employees of other participating employers.

Our contributions to the RS Plan in each of the years 2019, 2018 and 2017 represented less than 5 percent of the total contributions made each year to the plan by all participating employers. We made contributions to the RS Plan of $25.8, $27.8 and $26.7 million in 2019, 2018 and 2017, respectively.

In December 2012, the National Rural Electric Cooperative Association ("NRECA") approved an option to allow participating cooperatives in the RS Plan to make a contribution prepayment and reduce future required contributions. The prepayment amount is a cooperative's share, as of January 1, 2013, of future contributions required to fund the RS Plan's unfunded value of benefits earned to date using RS Plan actuarial valuation assumptions. The prepayment amount is equal to approximately 2.5 times a cooperative's annual RS Plan required contribution as of January 1, 2013. After making the prepayment, the annual contribution was reduced by approximately 25 percent, retroactive to January 1, 2013. The reduced annual contribution is expected to continue for approximately 15 years. However, changes in interest rates, asset returns and other plan experience different from expected, plan assumption changes and other factors may have an impact on future contributions and the 15-year period.

In May 2013, we elected to make a contribution prepayment of $71.2 million to the RS Plan. This contribution prepayment was determined to be a long-term prepayment and therefore recorded in deferred charges and amortized beginning January 1, 2013 over the 13-year period calculated by subtracting the average age of our workforce from our normal retirement age under the RS Plan.

Our contributions to the RS Plan include contributions for substantially all of the 280 bargaining unit employees that are made in accordance with collective bargaining agreements.

For the RS Plan, a "zone status" determination is not required, and therefore not determined, under the Pension Protection Act ("Act") of 2006. In addition, the accumulated benefit obligations and plan assets are not determined or allocated separately by individual employer. In total, the RS Plan was over 80 percent funded at both January 1, 2019 and January 1, 2018, based on the Act funding target and the Act actuarial value of assets on those dates.

Because the provisions of the Act do not apply to the RS Plan, funding improvement plans and surcharges are not applicable. Future contribution requirements are determined each year as part of the actuarial valuation of the plan and may change as a result of plan experience.

We participate in the NRECA Pension Restoration Plan and the NRECA Executive Benefit Restoration Plan, both of which are intended to provide a supplemental benefit to the defined benefit plan for an eligible group of highly compensated employees. Eligible employees include the Chief Executive Officer and any other employees that become eligible. All our executive employees currently participate in one of the following pension restoration plans: the NRECA Pension Restoration Plan or the NRECA Executive Benefit Restoration Plan. Eligibility is determined annually and is based on January 1 base salary that exceeds the limits of the defined benefit plan. As of December 31, 2019, the executive benefit restoration obligation included in accumulated postretirement benefit and postemployment obligations on our consolidated statements of financial position was $0.7 million.

DEFINED CONTRIBUTION PLAN: We have a qualified savings plan for eligible employees who may make pre-tax and after-tax contributions totaling up to 100 percent of their eligible earnings subject to certain limitations under federal law. We make no contributions for the 280 bargaining unit employees. For all of the eligible non-bargaining unit employees, other than the 225 employees of Colowyo Coal, we contribute 1 percent of an employee's eligible earnings. For the bargaining unit employees of New Horizon Mine, we match 1 percent of employee's contributions. For the employees of Colowyo Coal, we contribute 7 percent of an employee's eligible earnings and also match an employee's contributions up to 5 percent. We made contributions to the plan of $3.5 million, $4.6 million, and $3.2 million in 2019, 2018, and 2017, respectively.

POSTRETIREMENT BENEFITS OTHER THAN PENSIONS: We sponsor three medical plans for all non-bargaining unit employees under the age of 65. Two of the plans provide postretirement medical benefits to full-time non-bargaining unit employees and retirees who receive benefits under those plans, who have attained age 55, and who elect to participate. All three of these non-bargaining unit medical plans offer postemployment medical benefits to employees on long-term disability. The plans were unfunded at December 31, 2019, are contributory (with retiree premium contributions equivalent to employee premiums, adjusted annually) and contain other cost-sharing features such as deductibles.

The postretirement medical benefit and postemployment medical benefit obligations are determined annually (during the fourth quarter) by an independent actuary and are included in accumulated postretirement benefit and postemployment obligations on our consolidated statements of financial position as follows (dollars in thousands):

	2019	2018
Postretirement medical benefit obligation at beginning of period	$ 8,556	$ 8,455
Service cost	563	677
Interest cost	352	288
Benefit payments (net of contributions by participants)	(617)	(408)
Actuarial loss (gain)	1,341	(456)
Postretirement medical benefit obligation at end of period	$ 10,195	$ 8,556
Postemployment medical benefit obligation at end of period	375	371
Total postretirement and postemployment medical obligations at end of period	$ 10,570	$ 8,927

The service cost component of our net periodic benefit cost is included in operating expenses on our consolidated statements of operations. The components of net periodic benefit cost other than the service cost component are included in other income (expense) on our consolidated statements of operations.

In accordance with the accounting standard related to postretirement benefits other than pensions, actuarial gains and losses are not recognized in income but are instead recorded in accumulated other comprehensive income on our consolidated statements of financial position. If the unrecognized amount is in excess of 10 percent of the projected benefit obligation, amounts are reclassified out of accumulated other comprehensive income and included in net income as the excess amount is amortized over the average remaining service lives of the active plan participants. Unrecognized actuarial gains and losses have been determined per actuarial studies for the postretirement medical benefit obligation.

The net unrecognized actuarial gains and losses related to the postretirement medical benefit obligation are included in accumulated other comprehensive income as follows (dollars in thousands):

	2019	2018
Amounts included in accumulated other comprehensive income at beginning of period	$ 375	$ (369)
Amortization of actuarial (gain) loss into income	(342)	367
Amortization of prior service cost into other income	(79)	(79)
Actuarial (loss) gain	(1,341)	456
Amounts included in accumulated other comprehensive income at end of period	$ (1,387)	$ 375

The assumptions used in the 2019 actuarial study performed for our postretirement medical benefit obligation were as follows:

Weighted-average discount rate	4.10 %
Initial health care cost trend (2018)	8.00 %
Ultimate health care cost trend	4.50 %
Year that the rate reached the ultimate health care cost trend rate	2027
Expected return on plan assets (unfunded)	N/A
Average remaining service lives of active plan participants (years)	12.35

Changes in the assumed health care cost trend rates would impact the accumulated postretirement medical benefit obligation and the net periodic postretirement medical benefit expense as follows (dollars in thousands):

	1% Increase	1% Decrease
Accumulated postretirement medical benefit obligation	$ 1,159	$ (992)
Net periodic postretirement medical benefit expense	138	(116)

The following are the expected future benefits to be paid (net of contributions by participants) related to the postretirement medical benefit obligation during the next ten years (dollars in thousands):

2020	$ 621
2021	719
2022	725
2023	685
2024	688
2025 through 2029	3,338
	$ 6,776

NOTE 14 – VARIABLE INTEREST ENTITIES

The following is a description of our financial interests in variable interest entities that we consider significant. This includes an entity for which we are determined to be the primary beneficiary and therefore consolidate and also entities for which we are not the primary beneficiary and therefore do not consolidate.

Consolidated Variable Interest Entity

Springerville Partnership: We own a 51 percent equity interest, including the 1 percent general partner equity interest, in the Springerville Partnership, which is the 100 percent owner of Springerville Unit 3 Holding LLC ("Owner Lessor"). The Owner Lessor is the owner of the Springerville Unit 3. We, as general partner of the Springerville Partnership, have the full, exclusive and complete right, power and discretion to operate, manage and control the affairs of the Springerville Partnership and take certain actions necessary to maintain the Springerville Partnership in good standing without the consent of the limited partners. Additionally, the Owner Lessor has historically not demonstrated an ability to finance its activities without additional financial support. The financial support is provided by our remittance of lease payments in order to permit the Owner Lessor, the holder of the Springerville Unit 3 assets, to pay the debt obligations and equity returns of the Springerville Partnership. We have the primary risk (expense) exposure in operating the Springerville Unit 3 assets and are responsible for 100 percent of the operation, maintenance and capital expenditures of Springerville Unit 3 and the decisions related to those expenditures including budgeting, financing and dispatch of power. Based on all these facts, it was determined that we are the primary beneficiary of the Owner Lessor. Therefore, the Springerville Partnership and Owner Lessor have been consolidated by us.

Assets and liabilities of the Springerville Partnership that are included in our consolidated statements of financial position are as follows (dollars in thousands):

	December 31, 2019	December 31, 2018
Net electric plant	$ 776,411	$ 794,549
Noncontrolling interest	111,717	110,169
Long-term debt	380,867	416,057
Accrued interest	11,050	12,056

Our consolidated statements of operations include the following Springerville Partnership expenses for the years ended December 31 (dollars in thousands):

	2019	2018	2017
Depreciation, amortization and depletion	$ 18,138	$ 18,138	$ 19,592
Interest	25,320	27,511	28,382

The revenue and lease expense associated with the Springerville Partnership lease has been eliminated in consolidation. Income, losses and cash flows of the Springerville Partnership are allocated to the general and limited partners based on their equity ownership percentages. The net income or loss attributable to the 49 percent noncontrolling equity interest in the Springerville Partnership is reflected on our consolidated statements of operations.

Unconsolidated Variable Interest Entities

Western Fuels Association: WFA is a non-profit membership corporation organized for the purpose of acquiring and supplying fuel resources to its members, which includes us. WFA supplies fuel to MBPP for the use of the Laramie River Station through its ownership in WFW. We also receive coal supplies directly from WFA for the Escalante Generating Station in New Mexico. The pricing structure of the coal supply agreements with WFA is designed to recover the mine operating costs of the mine supplying the coal and therefore the coal sales agreements provide the financial support for the mine operations. There is not sufficient equity at risk for WFA to finance its activities without additional financial support. Therefore, WFA is considered a variable interest entity in which we have a variable interest. The power to direct the activities that most significantly impact WFA's economic performance (acquiring and supplying fuel resources) is held by the members who are represented on the WFA board of directors whose actions require joint approval. Therefore, since there is shared power over the significant activities of WFA, we are not the primary beneficiary of WFA and the entity is not consolidated. Our investment in WFA, accounted for using the cost method, was $2.4 million at December 31, 2019 and 2018 and is included in investments in other associations.

Western Fuels – Wyoming: WFW, the owner and operator of the Dry Fork Mine in Gillette, Wyoming, was organized for the purpose of acquiring and supplying coal, through long-term coal supply agreements, to be used in the production of electric energy at the Laramie River Station (owned by the participants of MBPP) and at the Dry Fork Station (owned by Basin). WFA owns 100 percent of the class AA shares and 75 percent of the class BB shares of WFW, while the participants of MBPP (of which we have a 27.13 percent undivided interest) own the remaining 25 percent of class BB shares of WFW. The pricing structure of the coal supply agreements is designed to recover the costs of production of the Dry Fork Mine and therefore the coal supply agreements provide the financial support for the operation of the Dry Fork Mine. There is not sufficient equity at risk at WFW for it to finance its activities without additional financial support. Therefore, WFW is considered a variable interest entity in which we have a variable interest. The power to direct the activities that most significantly impact WFW's economic performance (which includes operations, maintenance and reclamation activities) is shared with the equity interest holders since each member has representation on the WFW board of directors whose actions require joint approval. Therefore, we are not the primary beneficiary of WFW and the entity is not consolidated. Our investment in WFW, accounted for using the cost method, was $0.1 million at December 31, 2019 and 2018 and is included in investments in other associations.

Trapper Mining, Inc.: Trapper Mining is a cooperative organized for the purpose of mining, selling and delivering coal from the Trapper Mine to the Craig Station Units 1 and 2 through long-term coal supply agreements. Trapper Mining is jointly owned by some of the participants of the Yampa Project. We have a 26.57 percent cooperative member interest in Trapper Mining. The pricing structure of the coal supply agreements is designed to recover the costs of production of the Trapper Mine and therefore the coal supply agreements provide the financial support for the operation of the Trapper Mine. There is not sufficient equity at risk for Trapper Mining to finance its activities without additional financial support. Therefore, Trapper Mining is considered a variable interest entity in which we have a variable interest. The power to direct the activities that most significantly impact Trapper Mining's economic performance (which includes operations, maintenance and reclamation activities) is shared with the cooperative members since each member has representation on the Trapper Mining board of directors whose actions require joint approval. Therefore, we are not the primary beneficiary of Trapper Mining and the entity is not consolidated. We record our investment in Trapper Mining using the equity method. Our membership interest in Trapper Mining was $15.9 million and $15.4 million at December 31, 2019 and 2018, respectively, and is included in investments in and advances to coal mines.

NOTE 15 – COMMITMENTS AND CONTINGENCIES

SALES: We have a resource-contingent power sales contract with Salt River Project Agricultural Improvement and Power District of 100 megawatts through August 31, 2036. We also had a resource-contingent firm power sales contract with Public Service Company of Colorado totaling 100 megawatts. This contract expired in March 2017.

COAL PURCHASE REQUIREMENTS: We are committed to purchase coal for our generating plants under contracts that expire between 2020 and 2041. These contracts require us to purchase a minimum quantity of coal at prices subject to escalation reflecting cost increases incurred by the suppliers due to market conditions. The coal purchase projection includes estimated future prices. As of December 31, 2019, the minimum coal to be purchased under these contracts is as follows (dollars in thousands):

2020	$ 91,173
2021	64,637
2022	11,968
2023	7,816
2024	7,361
Thereafter	150,109
	$ 333,064

Our coal purchases were $125.4 million in 2019, $120.5 million in 2018, and $118.0 million in 2017.

ELECTRIC POWER PURCHASE AGREEMENTS: Our largest long-term electric power purchase contracts are with Basin and Western Area Power Administration ("WAPA"). We purchase from Basin power pursuant to two contracts: one relating to all the power which we require to serve our Members' load in the Eastern Interconnection and one relating to fixed scheduled quantities of electric power in the Western Interconnection. Both contracts with Basin continue through December 31, 2050 and are subject to automatic extension thereafter.

We purchase renewable power under long-term contracts, including hydroelectric power from WAPA and from specified renewable generating facilities, including wind, solar and small hydro. We purchase from WAPA pursuant to five contracts, two contracts relating to WAPA's Loveland Area Projects (one which terminates September 30, 2024 and one which commences delivery on October 1, 2024 and terminates September 30, 2054) and three contracts relating to WAPA's Salt Lake City Area Integrated Projects (two which terminate September 30, 2024 and one which commences delivery on October 1, 2024 and terminates September 30, 2057)

As of December 31, 2019, we have entered into renewable power purchase contracts to purchase the entire output from specified renewable facilities totaling approximately 1,498 MWs, including 671 MWs of wind-based power purchase agreements and 800 MWs of solar-based power purchase agreements that expire between 2030 and 2042.

Costs under the above electric power purchase agreements for the years ended December 31 were as follows (dollars in thousands):

	2019	2018	2017
Basin	$ 145,008	$ 149,246	$ 152,977
WAPA	72,504	72,757	78,781
Other renewables	63,677	62,721	53,362

ENVIRONMENTAL: As with most electric utilities, we are subject to extensive federal, state and local environmental requirements that regulate, among other things, air emissions, water discharges and use and the management of hazardous and solid wastes. Compliance with these requirements requires significant expenditures for the installation, maintenance and operation of pollution control equipment, monitoring systems and other equipment or facilities.

Our operations are subject to environmental laws and regulations that are complex, change frequently and have historically become more stringent and numerous over time. Federal, state, and local standards and procedures that regulate environmental impact of our operations are subject to change. Consequently, there is no assurance that environmental regulations applicable to our facilities will not become materially more stringent, or that we will always be able to obtain all required operating permits. More stringent standards may require us to modify the design or operation of existing facilities or purchase emission allowances. An inability to comply with environmental standards could result in reduced operating levels or the complete shutdown of our facilities that are not in compliance. We cannot predict at this time whether any additional legislation or rules will be enacted which will affect our operations, and if such laws or rules are enacted, what the cost to us might be in the future because of such actions or the effect it could have on our financial condition, results of operations and cash flow.

From time to time, we are alleged to be in violation or in default under orders, statutes, rules, regulations, permits or compliance plans relating to the environment. Additionally, we may need to deal with notices of violation, enforcement proceedings or challenges to construction or operating permits. In addition, we may be involved in legal proceedings arising in the ordinary course of business. However, we believe our facilities are currently in compliance with such regulatory and operating permit requirements.

GUARANTEES: We provide guarantees under specified agreements or transactions, including certain reclamation obligations of WFW and our subsidiaries. Our guarantees are for payment or performance by us. Most of the guarantees issued by us limit the exposure to a maximum stated amount. The amount of our guarantees for reclamation obligations, or performance bonds, are based upon applicable state requirements and are different than the asset retirement obligations recognized on our consolidated financial statements in accordance with GAAP.

LEGAL: Pursuant to a long-term transmission agreement with another utility, such utility pays for and has firm rights to transfer power and energy across a transmission path in Colorado. Such right to payment and obligation to provide the transfer is borne equally by us and another entity. Due to the current capacity of the transmission path, such utility's firm rights have been curtailed. The utility disputes its obligation to pay due to the current capacity of the transmission path and claims we, along with the other entity, are in breach of such transmission agreement. The utility notified us and the other entity of its intent to arbitrate in accordance with the agreement and claimed damages caused by the alleged breach of approximately $6.9 million, plus interest, attorney fees, and any future damages. The other entity filed a cross-claim against us claiming we are responsible for such entity's share of any damages. The matter was scheduled for arbitration to commence in January 2020. The arbitration was cancelled and the parties continue to discuss a resolution of this matter. It is not possible to predict whether this matter will be resolved without arbitration or whether we will incur any liability in connection with this matter.

At our July 2019 Board meeting, our Board authorized us to take action to place us under wholesale rate regulation by FERC. On July 23, 2019, we filed with FERC our initial tariff, including our stated rate cost of service filing, market based rate authorization, and transmission Open Access Transmission Tariff. Our FERC tariff filing included our current Class A rate schedule for electric power sales to our Members as the wholesale rates payable by our Members. On September 3, 2019, a membership agreement with a non-utility member, MIECO, Inc., became effective and we notified FERC of such and requested a partial waiver. The admission of the new member that was not an electric cooperative or governmental entity resulted in us no longer being exempt from FERC wholesale rate regulation pursuant to the Federal Power Act ("FPA"). On October 4, 2019, FERC issued an order rejecting our filings without prejudice to us submitting a more complete set of filings that cure the deficiencies set forth in such order. During the week of December 23, 2019, we filed our revised set of filings, including our stated rate cost of service filing, market based rate authorization, and transmission Open Access Transmission Tariff. The request was made to FERC to make the new tariffs retroactive to September 3, 2019. Numerous parties filed interventions or protests with FERC. Some of the interveners and protestors, including some of our Members and the Colorado Public Utilities Commission are alleging that we are not FERC jurisdictional and are still exempt from FERC wholesale rate regulation pursuant to the FPA. Until we made our reapplication in December 2019, we were a FERC-jurisdictional public utility making sales and providing services without satisfying the FPA's filing obligations and FERC's prior notice requirements. FERC may require us to refund to our customers certain amounts collected for the entire period that the rate was collected without FERC's authorization, including Member and non-member electric sales and wheeling revenue. FERC may also impose civil penalties for the time period between when we became a FERC-jurisdictional public utility and when we made our reapplication in December 2019. Furthermore, current practices including our use of regulatory assets are subject to FERC approval and subject to change as a result. We cannot predict the outcome of our tariff filings, but expect FERC to rule on our tariff filings by the end of March 2020. It is not possible to predict if FERC will require us to refund amounts to our customers, if FERC will impose civil penalties, if FERC will approve our current practices regarding use of regulatory assets, or to estimate any liability associated with this matter.

NOTE 16 – QUARTERLY FINANCIAL DATA (UNAUDITED)

Unaudited operating results by quarter for 2019 and 2018 are presented below. Results for the interim periods may fluctuate as a result of seasonal weather conditions, changes in rates and other factors. In the opinion of management, all adjustments (consisting of normal recurring accruals) necessary for the fair statement of our results of operations for such periods have been included (dollars in thousands):

Statement of Operations Data	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2019					
Operating revenues	$ 339,917	$ 314,588	$ 399,053	$ 331,914	$ 1,385,472
Operating margins	40,517	34,945	77,347	13,616	166,425
Net margins attributable to the Association	6,989	(1,385)	55,145	(15,440)(1)	45,309
2018					
Operating revenues	$ 318,508	$ 327,513	$ 398,157	$ 276,659	$ 1,320,837
Operating margins	40,299	41,716	81,393	(2,015)	161,393
Net margins attributable to the Association	8,094	4,378	46,398	(16,136)(2)	42,734

(1) In the fourth quarter of 2019, we recognized $6.2 million of previously deferred non-member electric sales revenue.

(2) In the fourth quarter of 2018, we deferred $51.7 million of non-member electric sales revenue.

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NOTE 17 – SUBSEQUENT EVENTS

We evaluated subsequent events through March 12, 2020, which is the date when the financial statements were issued.

On January 8, 2020, our Board approved the early retirements of Escalante Generating Station, Craig Generating Station Units 2 and 3 and the Colowyo Mine.

The 253-megawatt, coal-fired Escalante Generating Station, which is located near Prewitt, New Mexico, will be retired by the end of 2020. In connection with such early retirement, in the first quarter of 2020, in accordance with accounting requirements, we will recognize a one-time impairment loss of approximately $282 million. Our Board approved the deferral of the impairment loss to be recovered from our Members in rates through the end of 2045, which was the depreciable life of Escalante Generating Station; however, such deferral is subject to approval by FERC. In addition, we expect to incur decommission, employee related, and other expenses for Escalante Generating Station of approximately $26 million through 2022. The early retirement of the Escalante Generating Station is expected to impact approximately 107 employees.

The 410-megawatt Craig Generating Station Unit 2, which is part of a three-unit, coal-fired generating facility in Craig, Colorado, with a net book value of $82.5 million as of December 31, 2019, will be retired by 2030. The 448-megawatt Craig Generating Station Unit 3, with a net book value of $348.6 million as of December 31, 2019, will also be retired by 2030. The retirement date for Craig Generating Station Units 2 and 3 was previously estimated to be 2039 and 2044, respectively. The shortened life increases annual depreciation expense in the amount of approximately $6.6 million for Craig Generating Station Unit 2 and approximately $21.1 million for Craig Generating Station Unit 3; however, such recovery of increased expense through rates is subject to approval by FERC. In addition, we expect to incur decommissioning, employee related, and other expenses for Craig Generating Station Units 2 and 3 of approximately $40 million through 2032. The early retirement of the Craig Generating Station is expected to impact approximately 253 employees.

The Colowyo Mine produces coal used at Craig Generating Station and will cease coal production by 2030, at which time operations would turn entirely to reclamation. The Colowyo Mine has a net book value of $239 million as of December 31, 2019. The shortened life increases annual depreciation, amortization and depletion expense in the amount of approximately $12.7 million for the Colowyo Mine; however, such recovery of increased expense through rates is subject to approval by FERC. We are unable to determine other shutdown costs of the Colowyo Mine at this time. The early retirement of the Colowyo Coal Mine is expected to impact approximately 219 employees.

On March 10, 2020, our Board took action to unrestrict the entire balance of the restricted cash related to deferred revenue in response to volatile market conditions. See Note 2 – Cash, Cash Equivalents and Restricted Cash and Investments.

Notes

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