



## RURAL ENERGY AT A CROSSROADS: ELECTRIC COOPERATIVES TRAPPED IN SYSTEM CAUSING HIGH ENERGY COSTS

Massive structural changes in U.S. electricity markets over the past 10 years – in particular, rapidly falling prices for natural gas and renewable energy – have created market-based energy alternatives that result in lower electricity prices for consumers. However, some consumers tied to G&T cooperatives are not benefiting from these advancements and instead are trapped in a broken system requiring continual rate increases.

For some G&T consumers located in rural areas of the country facing struggling economic conditions, these increases in consumer energy costs are not sustainable.

This report focuses on a current controversy taking place in western states where a growing number of member cooperatives are attempting to leave Tri-State Generation and Transmission Association (Tri-State) so that they can individually capture the cost savings made available through market competitive advancements in energy production.

Tri-State powers 1.3 million consumers across Colorado, Nebraska, New Mexico, and Wyoming. On average, rural electric cooperatives in the Tri-State system paid wholesale rates as much as 212% higher than rates from competing wholesale electricity providers in the region. This translated into \$839 million in higher electricity costs for rural consumers in the Tri-State system in 2018 compared to urban consumers relying on a competing wholesale provider.

This significant cost discrepancy is likely to grow worse for rural cooperatives tied to the Tri-State system. Tri-State reports total debt of \$3.4 billion with falling net margins. From 2013 to 2018, Tri-State's net margins have fallen from \$73 million to \$43 million despite a 6% increase in rates over that same time period – meaning even higher rate increases appear necessary to maintain its ballooning debt load.

Rural cooperatives in the Tri-State system face difficult choices to protect their members from even higher electricity rate increases. Rural electric cooperatives in the Tri-State system are prohibited from buying cheaper electricity from more competitive wholesale providers. As a result, an increasing number of Tri-State member cooperatives are attempting to leave the Tri-State system.

### EXECUTIVE SUMMARY

- Rural electricity cooperatives are trapped within generation & transmission (G&T) systems charging dramatically higher electricity rates than wholesale providers in same region.
- In western states, Tri-State G&T is now charging up to 212% more for electricity than nearby wholesale competitors in the same region.
- From 2000-2016, Tri-State members experienced 12 rate increases resulting in increases of 103%.
- Tri-State now has over \$3 billion in debt and has been forced to increase rates to maintain that high debt load.
- From 2013 to 2018, Tri-State's net margins fell from \$73 million to \$43 million, meaning even higher electricity rate increases for rural consumers appear inevitable.
- Cooperatives are attempting to leave the Tri-State system to capture cost savings now available through energy advancements in renewables and natural gas.
- State and local leaders must engage to create changes that ensure rural electricity consumers regain access to market competitive energy options.

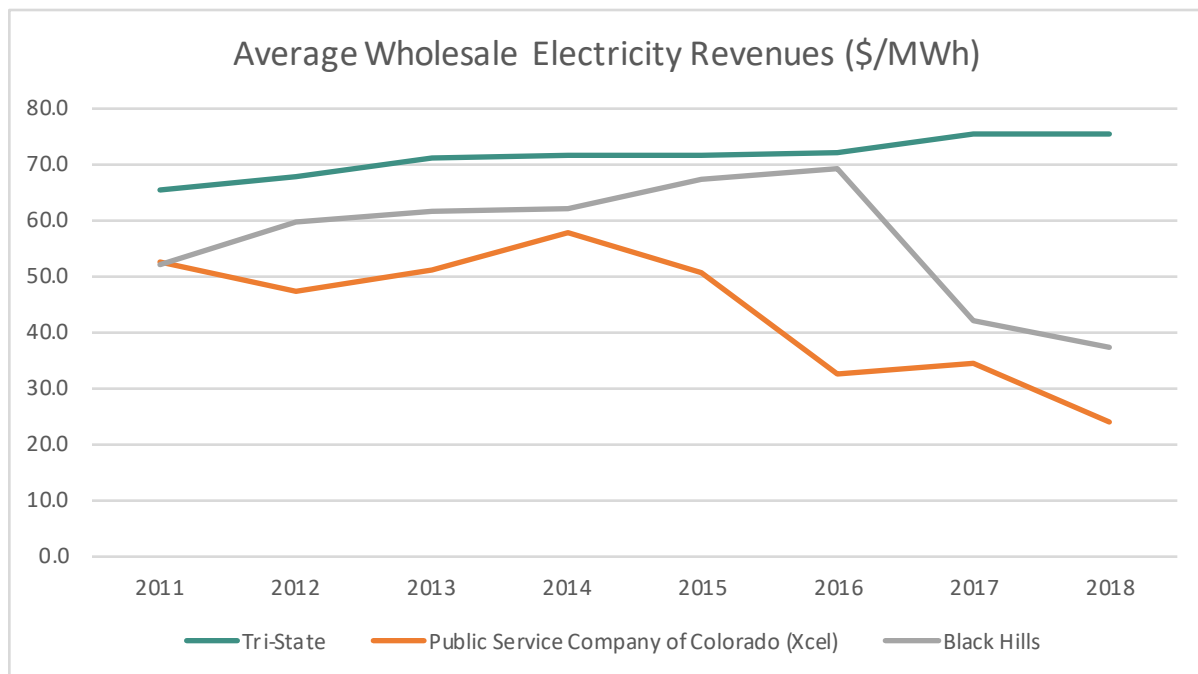
In response, Tri-State has taken an increasingly aggressive stance towards cooperatives looking to exit. As detailed in this report, Tri-State is requiring rural cooperatives to pay multi-million dollar exit fees that have been called “extraordinarily excessive” and “absurd” by a commissioned expert.

Rural economies in the United States are facing challenging economic conditions. Citizens and businesses in these communities cannot sustain the ongoing energy rate increases caused by a breakdown of the G&T cooperative model. This critical situation requires the immediate attention of state and local leaders to direct aggressive changes that ensure rural electricity consumers regain access to market competitive energy options.

This report examines the scope of these public policy challenges, including: the alarming price difference between the Tri-State system and nearby wholesale power markets; the causes of these growing price differences between rural and urban electricity consumers; and the difficulties member cooperatives face in leaving a G&T cooperative to seek market competitive alternatives.

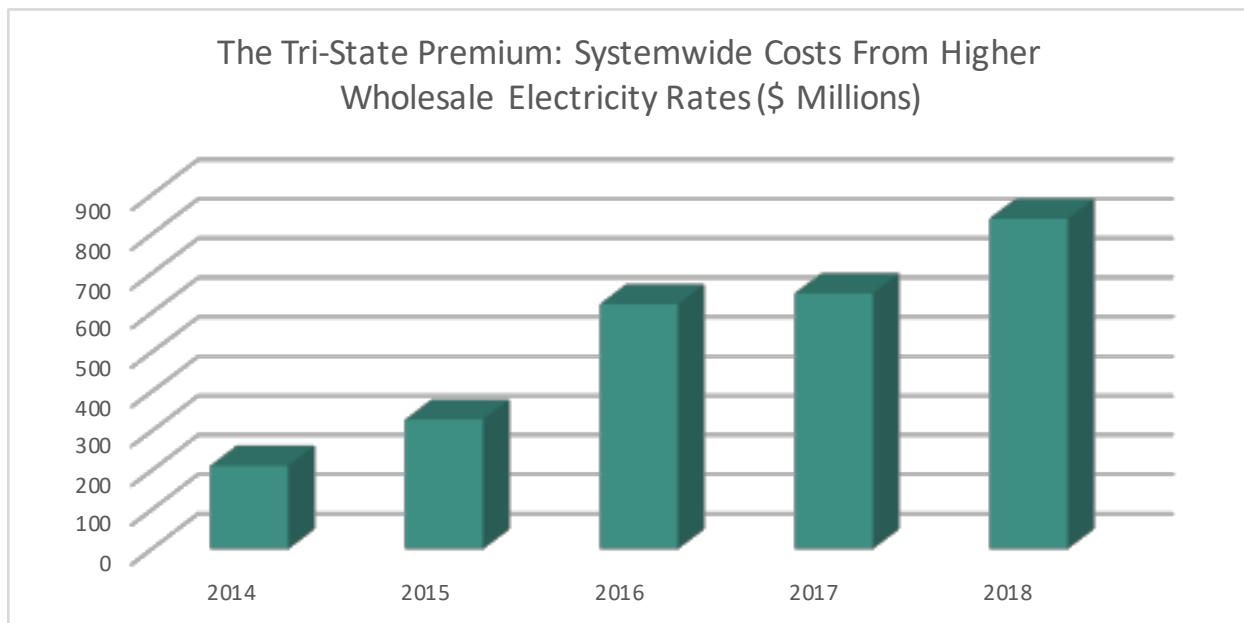
### OUTSIDE TRI-STATE, CHEAPER PRICES AVAILABLE

Indicative wholesale electricity rates filed with the U.S. Securities and Exchange Commission (SEC)<sup>i</sup> show major price differences between Tri-State and nearby wholesale power providers. On average, rural electric cooperatives in the Tri-State system paid a wholesale rate of \$75.43/MWh in 2018. By comparison, average wholesale revenue for neighboring Public Service Company of Colorado – a subsidiary of Xcel Energy – was \$24.20/MWh in 2018. Another neighboring electricity provider, Black Hills Power, reported average wholesale revenue of \$37.40/MWh.



Sources: SEC 10-K filings, Tri-State, Public Service Company of Colorado, Black Hills Power

These differences mean Tri-State member cooperatives are paying significantly more than they would otherwise pay from competing wholesale electricity providers. For example, using annual sales data from Tri-State, the premium over Public Service Company rates – the lowest of the three examined in this analysis – can be calculated in dollar terms. Between 2014 and 2018, Tri-State member cooperatives as a group paid a premium of between \$211 million and \$839 million per year to use electricity from their G&T cooperative instead of purchasing power from nearby competitors in the wholesale market.



Sources: SEC 10-K filings, Tri-State and Public Service Company of Colorado

Some of this extra cost can be attributed to Tri-State rate increases, but much more can be explained by falling wholesale rates from competitors like Public Service Company. As acknowledged in Tri-State filings to the Colorado Public Utility Commission (PUC), tensions are rising with some member cooperatives “because cheaper prices are now available elsewhere.”<sup>ii</sup> But unfortunately for Tri-State, lowering rates will be extremely challenging, if not impossible, due to the cost of managing the G&T cooperative’s debt load.

### DEBT DECISIONS LOCK IN HIGHER RATES

Like many G&T cooperatives, Tri-State relied heavily on subsidized federal loans to build and expand following its creation in the 1950s. However, by the 1990s, significant problems with this loan program and the G&T business model had emerged.

In 1994, a major G&T in Louisiana declared bankruptcy, defaulting on \$4 billion in federal loans. A follow-up investigation from the Government Accountability Office (GAO) found other G&T cooperatives were struggling with “high levels of debt and debt-servicing requirements.” The GAO found 27 G&T cooperatives across the country with higher generating costs than nearby investor-owned utilities, with high debt levels driving up their production costs.

“In the short term, G&Ts will likely be shielded from competition because of the all-requirements wholesale power contracts between the G&T and their member distribution cooperatives,” GAO investigators concluded in their 1998 report. But over the longer term, these contracts “will come under increased scrutiny and potential renegotiation or court challenges as other sources of less expensive power become available,” – GAO predicted.<sup>iii</sup>

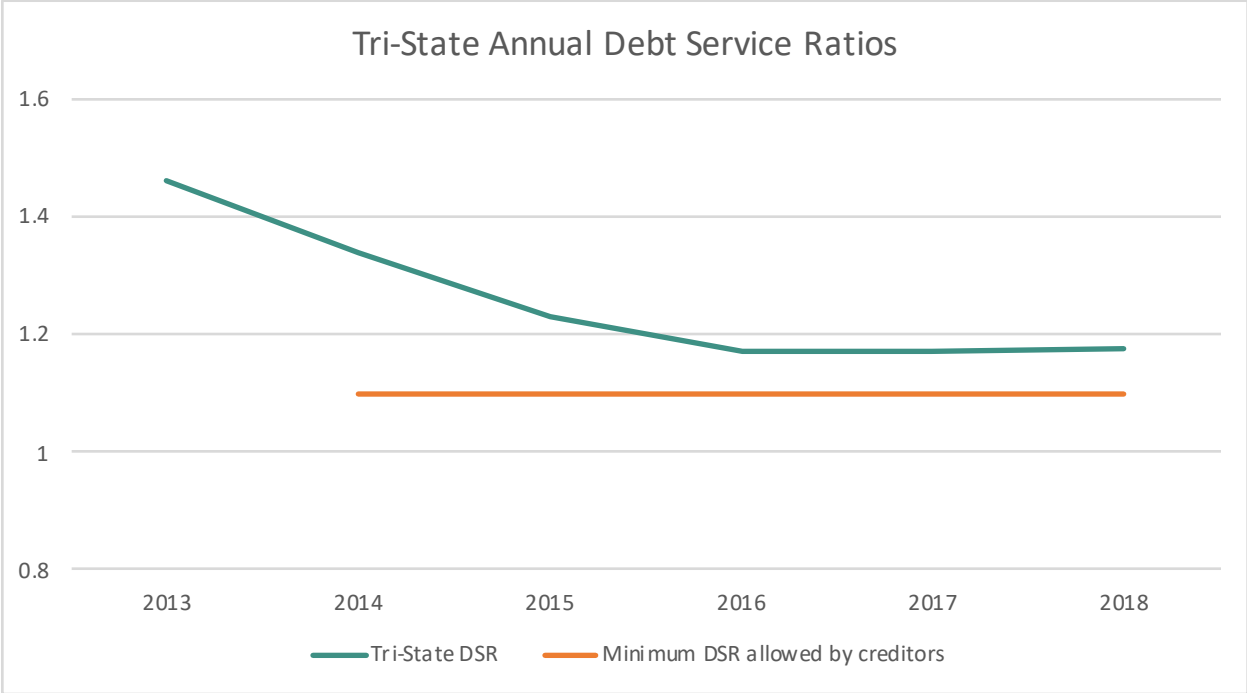
The legacy of debt across the G&T sector goes to the core of the current dispute between Tri-State and rural cooperative members bringing concerns over rates.

In 2014, as federally subsidized loans from the 1980s and 1990s were maturing, Tri-State elected to refinance this debt. RUS loans were not considered a viable option, so the G&T cooperative turned to private debt markets for \$1.6 billion in new loans and bonds. Tri-State also increased its revolving credit facility from \$500 million to \$750 million and noted at the time the entire transaction was “among the largest completed by an electric cooperative in U.S. history.”

According to Fitch Ratings, the refinancing followed two years of annual 5% wholesale rate increases by Tri-State. The new arrangement would delay “additional annual rate increases approximating 5% to 6% a year,” the ratings agency said, but eventually “additional wholesale rate increases will still be required.”<sup>iv</sup> At the time of the refinance, the ratings agency suggested those increases could push Tri-State’s wholesale rates above \$86/MWh – roughly 14% higher than today’s levels.

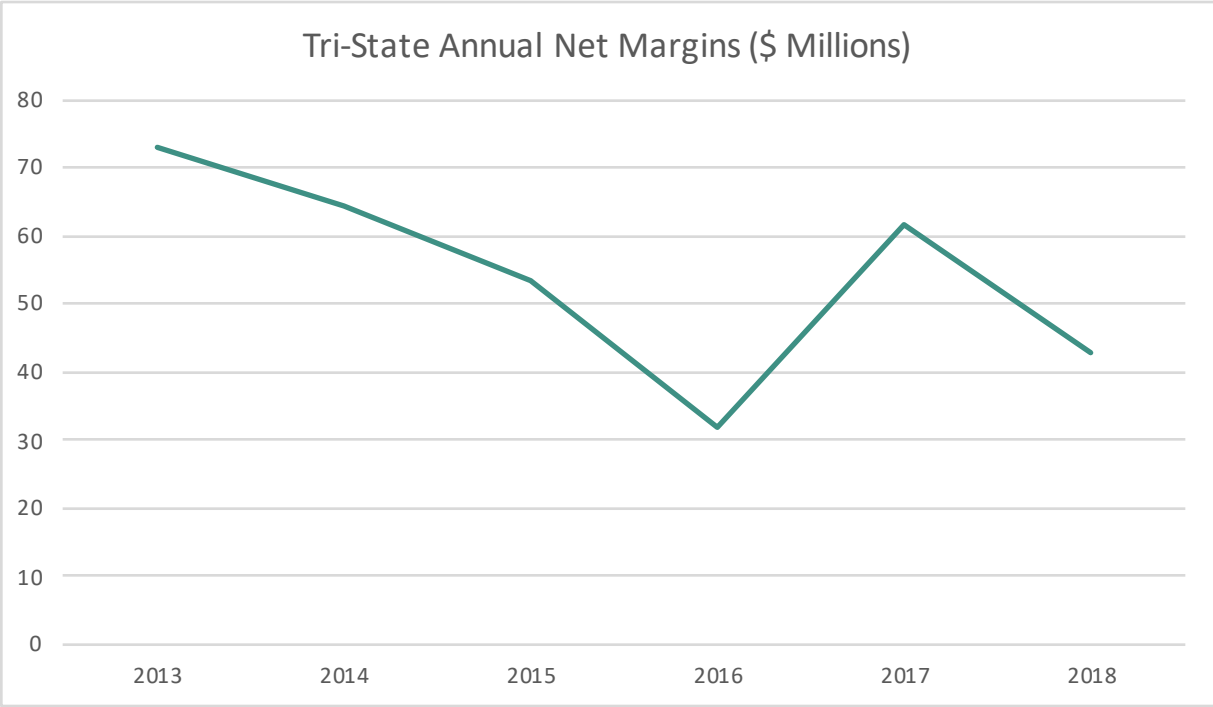
Much of the pressure to increase rates comes from the conditions attached to the bulk of Tri-State’s debt. According to SEC filings, Tri-State’s debt service ratio (DSR) – a financial measure of the cash available to make debt payments – must stay at or above 1.1 to comply with the terms of its Master Indenture, which now accounts for \$2.8 billion of the G&T cooperative’s \$3.4 billion in total debt. Additionally, the Master Indenture “requires us to establish rates that are reasonably expected to achieve a DSR of at least 1.10 on an annual basis” to avoid a potential default, according to Tri-State.<sup>v</sup>

Since 2013, Tri-State’s DSR has fallen from 1.46 to 1.175, according to data from Fitch Ratings and SEC filings. In practical terms, the closer the DSR falls to 1.1, the more pressure Tri-State faces from creditors to increase wholesale electricity rates on its rural electric cooperatives.



*Sources: Fitch Ratings, Tri-State SEC 10-K filings*

The likelihood of further rate increases is underscored by Tri-State’s net margins. From 2013 to 2018, net margins have fallen from \$73 million to \$43 million, despite a 6% increase in the G&T cooperative’s wholesale rates over the same period. At the very least, these financial trends confirm the practical impossibility of Tri-State lowering its rates to compete with other players in the wholesale electricity market. The highly leveraged nature of the G&T cooperative’s business model simply does not allow it.



*Source: Tri-State SEC filings*

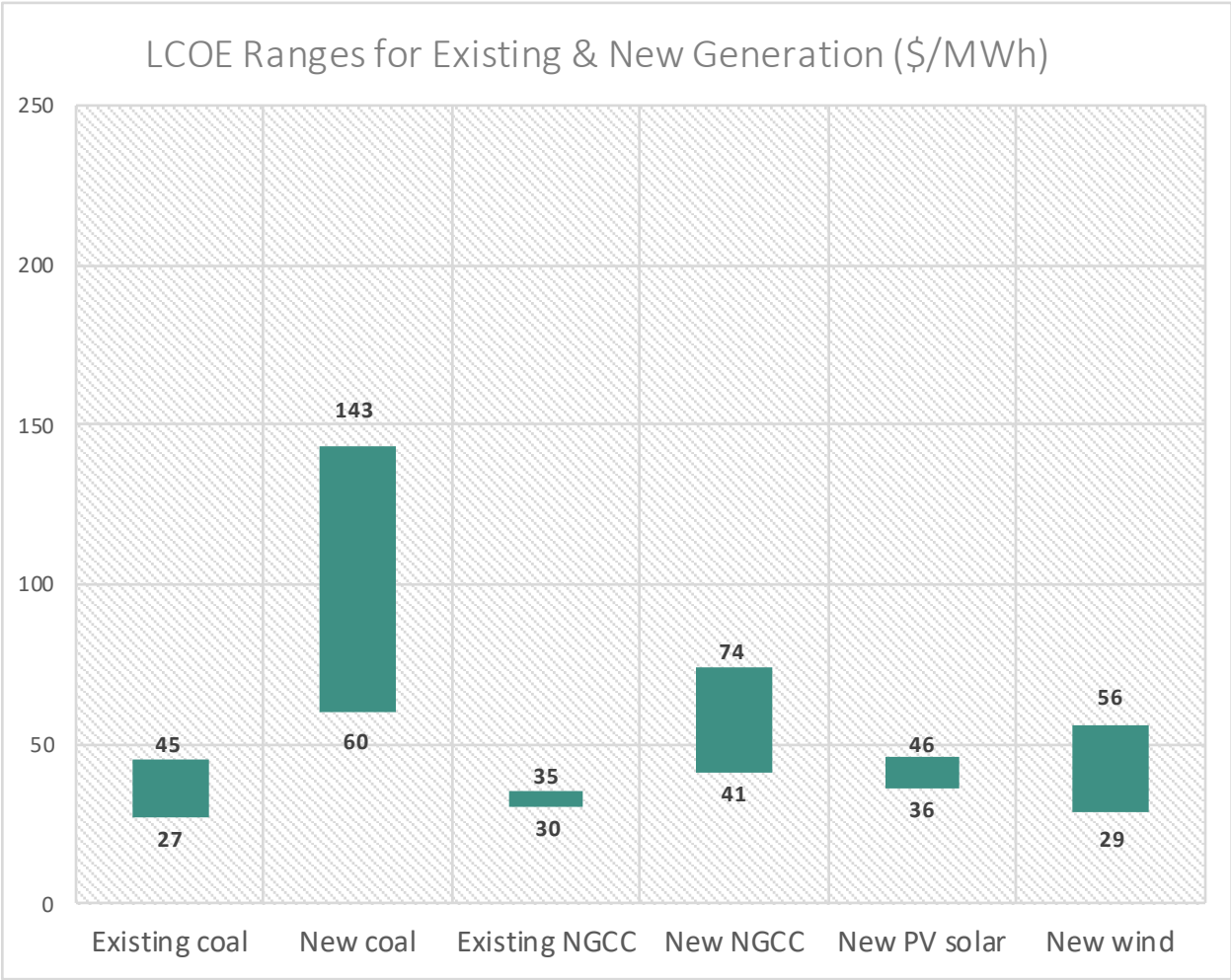
## DECADE OF CHANGE: INCREASED COMPETITION AND FALLING PRICES ON THE GRID

Since the mid-2000s, a remarkable change has occurred in the U.S. electricity market: Natural gas and renewables, which were historically some of the most expensive sources of electricity on the power grid, are now among the cheapest. As the National Renewable Energy Laboratory observed in 2017: “The share of electricity generation in the United States from different sources has arguably changed more rapidly since 2007 than at any time since 1950.”<sup>vi</sup>

For natural gas, technological breakthroughs in directional drilling and hydraulic fracturing unlocked previously inaccessible deposits of the clean-burning fuel. Compared to a record high of \$15.39/MMBtu in 2005, Henry Hub natural gas prices settled at \$3.25/MMBtu on the last day of trading in 2018 – a fall of more than 78%.<sup>vii</sup> Another related trend was increased investment in natural gas combined cycle turbines, which are dramatically more efficient than traditional gas peaker plants and are increasingly being used to meet baseload demand.<sup>viii</sup>

Similarly, the cost of renewable electricity has also fallen. Photovoltaic (PV) solar modules have become dramatically more efficient and the materials used to make them have fallen in cost, for example.<sup>ix</sup> Cheaper and more efficient wind turbines, along with other technology improvements, mean wind farms can harvest much more electricity from the same locations than they could a decade ago.<sup>x</sup>

Before the emergence of these trends, new and existing coal plants were an attractive, low-cost option for power generators, including G&T cooperatives. But as shown in the graphic below, new wind and solar – along with new and existing NGCC plants – are now producing cheaper electricity in some cases than existing coal-fired power plants. In almost all cases, new wind, solar and NGCC also have a lower LCOE than newly built coal-fired power plants.



*Sources: Lazard Levelized Cost of Energy Analysis Version 12.0,  
National Renewable Energy Laboratory Annual Technology Baseline, 2018*

In practice, this means that wholesale power markets are increasingly able to provide a cheaper, more diversified and cleaner mix of electricity sources than G&T cooperatives with large investments in coal-fired power plants. The combination of natural gas and renewable sources also ensures reliability, because NGCC plants are able to quickly increase and decrease their output to support intermittent wind and solar generation.

To be sure, the LCOE is an average measure that cannot substitute for utility-level decisions based on individual circumstances. But these recent trends in U.S. electricity markets, when combined with the legacy issues associated with G&T cooperatives, help explain why some rural electric cooperatives are looking for new ways to provide electricity to their customers.

## SETTING A PRECEDENT: KIT CARSON'S EXIT FROM TRI-STATE

In 2016, a New Mexico rural cooperative – Kit Carson Electric Cooperative (KCEC) – decided to leave Tri-State. After demanding a higher amount, Tri-State eventually agreed to an exit fee of \$37 million. KCEC signed a 10-year contract with a different wholesale electricity provider and moved ahead with new investments in local solar power generation. KCEC anticipates it will save as much as \$70 million over the next decade.<sup>xi</sup>

At the time, Tri-State described the departure as “a mutual and amicable agreement to part ways” in such a manner that “is fair and equitable, and protects the interests of all the association’s members.” “Additionally, Tri-State and KCEC will sell to each other certain transmission and distribution infrastructure facilities and enter into operations agreements for jointly owned or collocated infrastructure,” Tri-State said in a press release announcing the exit.<sup>xii</sup>

More recently, however, Tri-State has taken a hostile stance towards KCEC and its departure. In a letter to New Mexico legislators, for example, Tri-State says the rural electric cooperative’s claimed cost savings are “misleading” and the G&T cooperative “never committed to selling any facilities” in connection with the exit agreement.<sup>xiii</sup>

This prompted the rural electric cooperative to defend its decision to exit in a letter of its own to New Mexico officials.<sup>xiv</sup> Tri-State members “experienced 12 rate increases between 2000-2016,” according to KCEC’s letter, for a combined increase of 103 percent over that time period. Echoing the observations of ratings analysts in 2014, KCEC predicts that payments on Tri-State’s newly refinanced debt will make further rate increases “inevitable.”

However, in the event Tri-State’s wholesale electricity rates remain stable, the availability of cheaper electricity elsewhere still makes exiting the G&T cooperative “a prudent decision,” according to KCEC. “Even if Tri-State’s rate stays flat for the next 7 years, KCEC will still be significantly better off exiting,” the rural electric cooperative said in its letter to State Senator Clemente Sanchez, chair of the Senate Corporations & Transportation Committee.

In the same letter, KCEC acknowledges transitional costs tied to the departure, including the \$37 million exit fee and higher-than-expected payments for using a Tri-State transmission line that did not change hands as KCEC expected. Those transitional costs have “increased slightly” the retail rates paid by KCEC customers since 2016, according to the rural electric cooperative. But once those transitional costs are dealt with, KCEC anticipates a 40% reduction in wholesale electricity rates compared to what it used to pay.

“Even after paying the \$37M, we will have paid significantly less in wholesale rates, accessed much lower rates by building generation inside our own community and off the transmission system, created jobs and increased taxes in our territory, and done what we believe is right for our community and our environment, all with a partner that is aligned with our goals and with whom we enjoy working,” KCEC wrote.



## THE NEXT DEBATE: DELTA-MONTROSE ELECTRIC ASSOCIATION'S DISPUTED EXIT

In the wake of KCEC's departure, another rural electric cooperative in the Tri-State G&T system has also declared its intention to leave. In 2018, Delta-Montrose Electric Association (DMEA), based in Montrose, Colo., petitioned the Colorado PUC to "adjudicate a just, reasonable and nondiscriminatory exit charge."<sup>xv</sup> Tri-State, headquartered in Westminster, Colo., opposed DMEA's petition for PUC involvement.<sup>xvi</sup>

In PUC filings, DMEA argues it has "has pushed Tri-State to stabilize its electric rates and to let DMEA take advantage of even more local, cost-effective renewable resources" but the G&T cooperative has "has resisted DMEA's efforts, leaving retail members helpless as the rate for Tri-State power has increased substantially since the turn of the century."<sup>xvii</sup>

DMEA also commissioned expert testimony to challenge the exit fee proposed by Tri-State. While the proposed exit charge is considered confidential, and redacted from the PUC's publicly available filings, DMEA's expert witness has called the amount "extraordinarily excessive" and "absurd."<sup>xviii</sup> If the amount proposed by Tri-State were aggregated across all 43 of its rural electric cooperative members, it would far exceed the G&T cooperatives total liabilities of \$3.9 billion, including more than \$3 billion of long-term debt.

The DMEA-commissioned expert testimony also disputes Tri-State's roughly \$2 billion valuation of the G&T cooperatives fleet of power plants, providing a much lower estimate of \$912 million, or less than half.

Debt levels and plant valuations are a growing concern for DMEA and some other Tri-State member cooperatives. In December 2018, La Plata Electric Association (LPEA), based in Durango, Colo., wrote to Tri-State about the structure of this debt and its potential impact on electricity rates. The use of "bulleted debt," which pushes out the repayment of principal, and a reliance on refinancing rather than paying down that principal "all point to increase[d] rates," LPEA wrote. Anticipated increases in interest rates over the long term and a potential drop in value of Tri-State's power plants as they get older and more difficult to maintain could also make the cost of refinancing more expensive, leading to additional "upward rate pressure," LPEA said.<sup>xix</sup>

Accordingly, Tri-State has already backed away from a major coal-fired power project: A proposed 895-megawatt facility in Holcomb, Kansas. The project – a joint venture of Tri-State and another G&T cooperative, Sunflower Electric – would have cost \$2.2 billion. However, in 2017, Tri-State said the prospects of building the plant had become "remote" and announced a \$93 million write-off related to preliminary work on the project.<sup>xx</sup> The decision to walk away from the project after already spending \$93 million was even more remarkable because only months earlier, the Kansas Supreme Court had dismissed legal challenges against the plant brought by environmental activists, clearing the way for construction to begin.<sup>xxi</sup>

For its part, Tri-State is fighting DMEA's planned departure from the G&T cooperative. In PUC filings, Tri-State calls it "a scheme to cast aside the wholesale power purchase contract DMEA signed with Tri-State some 18 years ago ... because cheaper prices are now available elsewhere." Tri-State further argues that DMEA's exit charge should not be based upon the \$37 million paid by KCEC, because every departure from a G&T should be considered "unique" and a "one-off" exercise.<sup>xxii</sup>

## CONCLUSION: LOOKING TO SOLUTIONS THROUGH COMPETITIVE MARKETS

Unfortunately, a fascinating irony has been created by rapidly changing energy markets and the high debt carried by G&Ts. Tri-State and other G&T cooperatives were created by rural electric cooperatives in the 1950s to provide electricity at a lower price than the rural cooperatives could generate or purchase on their own.<sup>xxiii</sup> But today, rural electric cooperatives in the Tri-State system are locked into paying significantly higher prices instead. Tri-State members are strictly limited from buying cheaper electricity from other wholesale providers and the amount of electricity a rural electric cooperative can generate itself – at a potentially lower cost than the rates offered by Tri-State – is capped at 5%.

In the view of some rural electric cooperatives, these limits and restrictions no longer make sense, especially in light of recent developments in U.S. electricity markets and their impact on wholesale power prices.

Rural electric cooperatives seeking more choice and competition on behalf of the homes and businesses they serve should not be unfairly penalized – and they should not be held captive to the monopolies of the past. To be sure, an exit charge of some kind is certainly appropriate. But regulators must be careful to ensure the charge is reasonable and does not trap rural cooperatives and their customers in an effective monopoly for decades.

Not every rural electric cooperative is unhappy with the G&T cooperative model, which has been around for more than 60 years. Not every rural electric cooperative will decide, as KCEC and DMEA have decided, that leaving their G&T cooperative to access a wider market of electricity sources and providers is the right move.

But state and local leaders cannot ignore the structural concerns with the G&T model. They must engage with their rural cooperatives and Tri-State to seek a path that can benefit both interests and keep consumer rates stable. After all, it should also be remembered that rural electric cooperatives created G&T cooperatives, not the other way around. And they were created to provide cheaper electricity than individual rural cooperatives could generate or purchase on their own, not more expensive electricity.

### *ABOUT THE AUTHORS:*

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## ENDNOTES

- i Tri-State 10K reports can be accessed here: <https://www.sec.gov/cgi-bin/browse-edgar?action=getcompany&CIK=0001637880&type=10-k&dateb=&owner=exclude&count=40>  
Black Hills Power 10K reports can be accessed here: <https://www.sec.gov/cgi-bin/browse-edgar?action=getcompany&CIK=0000012400&type=10-k&dateb=&owner=exclude&count=40>  
Public Service Company of Colorado 10K reports can be accessed here: <https://www.sec.gov/cgi-bin/browse-edgar?action=getcompany&CIK=0000081018&type=10-k&dateb=&owner=exclude&count=40>
- ii Colorado PUC: Tri-State Motion to Dismiss, Jan. 15, 2019
- iii Government Accountability Office: <https://www.gao.gov/assets/110/107348.pdf>
- iv Fitch Ratings: Fitch Revises Tri-State Generation & Transmission's (CO) Outlook to Negative, Sept. 16, 2014: <https://www.businesswire.com/news/home/20140916006786/en/Fitch-Revises-Tri-State-Generation-Transmissions-Outlook-Negative>
- v Tri-State 10-K, 2018: <https://www.sec.gov/Archives/edgar/data/1637880/000155837019001696/tris-20181231x10k.htm>
- vi U.S. Department of Energy, National Renewable Electricity Laboratory: <https://www.nrel.gov/docs/fy17osti/67645.pdf>
- vii Energy Information Administration: <https://www.eia.gov/dnav/ng/hist/rngwhhdD.htm>
- viii American Electric Power: <https://www.aepsustainability.com/energy/diversity/baseload/gas.aspx>
- ix Energy Policy, Volume 123, December 2018: <https://www.sciencedirect.com/science/article/pii/S0301421518305196?via%253Dihub>
- x International Energy Agency: <https://www.iea.org/topics/renewables/wind/>
- xi Denver Post: <https://www.denverpost.com/2016/09/04/guzman-energy-promises-renewable-power/>
- xii Tri-State press release, July 11, 2016: <https://www.tristategt.org/tri-state-and-kit-carson-electric-cooperative-enter-membership-withdrawal-agreement>
- xiii Tri-State: Letter to Senate Corporations & Transportation Committee Chairman Clemente Sanchez, March 19, 2019
- xiv Kit Carson Electric Cooperative: Letter to Senate Corporations & Transportation Committee Chairman Clemente Sanchez, March 28, 2019
- xv Delta Montrose Electric Association press release, Dec. 6, 2018: <http://www.dmea.com/content/delta-montrose-electric-association-files-puc-seeking-just-and-reasonable-exit-charge-tri>
- xvi Montrose Daily Press: [https://www.montrosepress.com/free\\_access/tri-state-sues-to-block-dmea-move/article\\_9d55c862-1aa0-11e9-a537-2381c786dd7f.html](https://www.montrosepress.com/free_access/tri-state-sues-to-block-dmea-move/article_9d55c862-1aa0-11e9-a537-2381c786dd7f.html)
- xvii Colorado PUC: Direct Testimony and Attachments of Jasen R. Bronec, March 15, 2019
- xviii Colorado PUC: Direct Testimony and Attachments of Kevin C. Higgins, March 15, 2019
- xix La Plata Electric Association: Letter to Tri-State, Dec. 21, 2018
- xx Power Engineering: <https://www.power-eng.com/articles/2017/09/plans-for-new-895-mw-kansas-coal-plant-now-remote.html>
- xxi Power Engineering: <https://www.power-eng.com/articles/2017/03/kansas-court-upholds-decision-supporting-new-coal-plant.html>
- xxii Colorado PUC: Tri-State Motion to Dismiss, Jan. 15, 2019
- xxiii Sunflower Electric Power Corporation: <https://www.sunflower.net/about-sunflower/>