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RE: Letter to the Membership of Upshur Rural Electric Cooperative

It is the truest pleasure to live in Northeast Texas and serve the members of Upshur Rural Electric Cooperative, which serves a large part of Northeast Texas. Northeast Texas is such a unique and beautiful place, and it is, of course, located in the greatest state (some might call it an independent territory) in the United States. Every year we see new members, new faces, and future friends move into our humble abode of Northeast Texas because of its open land, abundant towering trees, and lots of fresh flowing water. East Texas is a beautiful place to live, with some of the best, most friendly people.

As always, URECC focuses on our mission to bring affordable, reliable, and diverse electric energy to our members. Sometimes our mission is steady and forward, but sometimes it's difficult and full of unexpected circumstances. Working toward our mission goals, URECC has made many improvements and upgrades and introduced new technologies to our system over the last few years. There are specific details later in this letter (video).

However, there are also some issues and changes on the horizon that I feel all URECC members should know. These matters will impact the cooperative's own power bills, member's bills, and all our business and household economics for some time to come. The purpose of making you aware of these issues is not to create worry, but to simply provide you a heads-up and preparatory opportunity with the facts that we see. There will be some bumpy days ahead in power supply and pricing. At URECC, our power supply makes up about 70 cents on every \$1 of a member's bill. It is not uncommon for URECC to pay between \$5 million and \$6 million per month to purchase power for its members. And our suppliers have tight financial controls on our payment. Keeping that thought in mind, let's look at some of the issues we will be facing.

Summary:

In summary, these issues revolve around four main points: 1) the February winter storm and its results that induced energy spot markets at the time to rapidly rise and subsequent government actions taken to prevent the same in the future; 2) the effects of a green energy transition policy, both in the U.S. and around the world, that have caused a seismic shift in how capital is being allocated by utilities leaving a gap between the current and future energy supply; 3) in a similar vein to # 1 and #2 but more regionally focused, a gap has opened in supply due to the current federal subsidies and rising risk of further federal intervention on CO2 is skewing regional energy markets to favoring renewable energy and thus mothballing legacy generation leaving a potential gap in generation during extreme events as exemplified in the February storm, 4) the rising cost of materials, labor, and operation of the system while annual sales are dropping due to lower residential usage and installation of local solar meanwhile facing an uncertain future due to electric vehicles other changes coming.

Details:

- 1) The February winter storm impacted all of Texas in significant ways. Many parts of the ERCOT Texas transmission grid experienced days of outages during the coldest air ever recorded in Texas. Wind turbines, which now make up a large part of the generation supply, failed to show up and generate as they iced over and succumbed to the cold, wet air. Some coal units experienced frozen coal, which hampered but did not completely stop generation. Many gas pipeline companies forced natural gas generators offline by calling a Force Majeure on the line capacity forcing them to shut in for several days in some cases. The pipelines simply could not provide the gas that the power companies had reserved or otherwise needed on the spot. These

issues exacerbated the supply problem as it forced electric outages causing natural gas compression on the pipelines to stop compressing the gas and further hampering delivery.

Thanks to URECC's location in the Southwest Power Pool (SPP) transmission grid, URECC did not have those issues, but the system got very close, razor-thin close. Benefits of the larger SPP region include that some generation was further from the icy weather leaving SPP with other generation options, more access to legacy coal units, and newer natural gas units not so affected by the cold. In addition, the URECC system withstood the load and the ice with minimal outages thanks to the very hard work of its crews and engineers in the days leading into the storm.

In the end, the only issue that hit URECC and its members was the bill. Gas prices for the three days of the main storm spiked from the normal \$2-\$3 range to over \$60 in some hours as the gas markets had the advantage of the supply and demand crunch. And our local large gas plant in Harrison County experienced one of the Force Majeure calls on its delivery pipeline for a few hours when it could have been acting as a hedge in the electric market to offset the extremely high cost. All totaled URECC was stuck with a \$30 million bill. That money must now be paid. While it is a lot of money, URECC fared better than many Texas utilities, some of which will be using state-authorized bonds or just have gone bankrupt over the storm. The plans are to stretch the payments out over a period, but it's a lot of money. URECC expects that its PCRf from its suppliers will soon rise approximately \$5.50 to \$6 per 1,000 kWh per month. Meanwhile, the power markets are still in shock over last winter, causing futures to rise in the short term. Some power suppliers are taking a hedge in the short-term winter, thus driving higher-than-normal prices to protect against another winter storm event.

- 2) Some may have read that in recent weeks of the fuel crunch in Europe and the world has spiked their energy prices far above normal. Like Texas in February, their wind just has not provided generation when it was most needed. To replace this missing generation, they have turned on their now limited coal and natural gas turbines. That has, in turn, eaten into their limited fuel reserves significantly, and they are now going into winter. Further, the COVID-19 event has created a labor shortage worldwide, just as demand from shutdowns has started to rise rapidly.

You may ask, "how does that affect us in Texas?" As gas traders and producers do, they flock to markets where supply and demand are unbalanced, and prices are best. U.S. gas shipments have significantly increased into this void, and by some estimates, about 10% of U.S. production is leaving the States. This has left the U.S. markets shorter than normal on stored gas for winter and pushing current and forward prices higher. The U.S. storage is in no way as high as Europe's or the February storm; natural gas prices recently closed around \$5.50 to \$6.50 per MMBtu, where the last few years have been in the \$2.50 to \$3.25 range. Neither does it appear that local storage is seeing a chance for shortages, unlike Europe. But for every \$1 increase in gas cost, power cost tends to rise about \$3 per 1,000 kWh. The simple math would say that current prices will drive electric prices up this winter. To our relief, market analysts expect these prices to subside to normal prices again once winter goes away, as labor fills supplier needs, and when other suppliers like Russia start to deliver.

- 3) Under the Biden Clean Power deal, the Federal government is proposing that all Load Serving Entities (LSE's), which includes URECC, provide a growing part of its supply to members with renewables and lessen the need for gas or coal, which will add new investment into current production. This policy will sit on top of multiple years of federally subsidized green energy production. These policies have created a situation where investment in carbon fuels and generation has decreased, effectively limiting production with legacy generation. This limit on current electric production has created a gap between supply and demand that greener energy struggles to fill. What is typically true, and is occurring here, is when the government intervenes into markets, it usually skews the pricing. On some windy days in the SPP, for example, there is so much subsidized wind energy that energy prices in the market will go negative to keep the federal production credits, creating a situation where energy

prices of coal and gas plants have no incentive to invest more because they run less as they struggle to compete with the subsidized renewables. As part of their cost model, many of the older units were built and priced to run for 30 to 40 years and 70%+ of the hours in a year. We already see some policy effects as both Pirkey, and Dolet Hills coal units are in a shutdown strategy, priced out of the market. As these policies continue, they will have a rising effect on all members' bills and have some impacts on the overall system reliability. Eventually, enough replacement units that are carbon neutral will get built, transmission lines moving the output will be constructed, and the older units will pass off the books of their owners. In the meantime, the gap that will only show on high peak situations typically will continue. Issues that remain include the fact that solar units will have to be replaced in a 3 to 1 ratio to traditional generation to account for the limited hours when solar generates versus those hours it does not. It will also take storage options to spread those solar units into nighttime hours. It will take some time as this plays out.

- 4) Costs are rapidly rising while energy sales are dropping on a per-member basis, but growth in connections has strengthened. Material costs are rising rapidly. At URECC, we are experiencing double-digit inflation cost for some materials like wooden poles and transformers. By some recent measures, the cost of wooden poles, steel, and transformers (made of oil, steel, and paper) has increased some 30% over the prices 18-24 months ago. Some say these increases are transient, but that is not our experience. Recent purchased items are now requiring us to buy in volume or do without.

This hits a time when growth has restarted post Covid-19. URECC has experienced an uptick in new service work orders that had averaged roughly 650 per year that are now closing in on 1,000 for 2021.

All those increases are added to a backdrop where the average residential use of energy has dropped over the last ten years. This is a common theme across the entire U.S., as LED bulbs, higher efficiency appliances, and solar rooftops are being added. Specifically, URECC has seen the average user drop from some 1,350kWh per month ten years ago to almost 1,200 kwh a month now. This means the rate structure aimed at charging for energy usage is becoming less effective at recovering costs. In addition, the current structure allows those who can afford a solar unit to shift costs to those who cannot or don't install one. These rate structure issues will need addressing sometime in the future but not necessarily now. Future impacts on rates must be considered before a significant structural change occurs, such as the addition of Electric Vehicles to load, the rate at which solar rooftop continues to add, and whether the Federal government directly requires URECC to move to larger amounts of renewables in its supply. Add these factors to the material cost, labor, and transportation costs it all adds up to increased cost and an increased need for rates.

What can be done? In the immediate, URECC is working with its suppliers out in the market to mitigate gas and material prices by using some market hedging strategies, when they make sense while exploring fuel supports like gas storage and alternative fuels, to gain more pipeline capacity access as it becomes economically viable, and by working with state regulators to meet new requirements intended to make the Texas system more resilient. This does not mean that Force Majeure events will not occur again or that the next major weather event will not also create a problem.

Over the longer term, URECC is looking at strategies to provide more local solar and take advantage of renewable opportunities when the economics are solid. URECC is also working with its suppliers to make the local Harrison County gas plant more hardened against weather events, efficient, and profitable for the changing markets to offset costs. And finally, URECC is looking at various demand control and storage options to offset system demand charges, which make up about 60% of the total power bill and will reduce SPP transmission cost. Battery storage is a new but costly example of storage options. The science of batteries has some work to do so that battery storage is more affordable, lasts longer, and is more efficient before utility batteries will be impactful.

The net effect of all these factors will only increase prices in the intermediate term. New generation costs money, and existing generators that are shut down before their useful lives have occurred leave stranded costs passed

on to the consumer. Meanwhile, hardening power plants, improving gas delivery, and increasing transmission lines will add to transmission/distribution costs while adding fuel supply guards like more pipe access and protections against Force Majeure of critical loads like gas compressors only add to fuel costs.

For Upshur Rural Electric Cooperative (URECC), the focus for the members relates to our Mission Statement set out by our Board of Directors – *To provide affordable, reliable, electric energy consistent with a sound economy, safety, and quality to our members and the communities we serve.* The mission is the heartbeat and focus of what we try to do daily.

URECC has worked to keep rates stable since the last rate increase six years ago and worked diligently with our power suppliers to keep the Power Cost Recovery Factor (PCRF) negative and relatively stable since that same time. Things like extensive hydroelectric projects, low gas prices ranging in the upper-\$1 to mid-\$2 range for several years, managing transmission and demand costs in peak times, along with continuing the ownership in local coal units like Pirkey and Dolet Hills have made that feasible. Further, continuing current transmission projects like the line from near I-20 to Hallsville, that will create a network feed for about 35% of the system will not only improve reliability and resiliency, but will also allow URECC to recoup transmission costs from the SPP that would otherwise be a straight expense to the membership. There are future key transmission projects like this one that will add to these benefits down the road.

Regarding reliability, the key is “maintenance” and, secondarily, good engineering and construction practices. Over the last ten years, URECC has plowed some \$100 million into its electric system. Some key items include upgrading power transformers, high-voltage breakers, and control relays in substations that had aged well past their useful life (some were manufactured in the late 1950s and early 1960s and on the verge of failure). These upgrades alone have eliminated many outages that often occurred and took out more members than were warranted. Other reliability projects include the addition of two new Delivery Points to flow power into the system (Hallsville, as previously mentioned, and one to the far south side of our system that will eventually feedback to the Lake O’ the Pines and Jefferson areas) and a soon to be third at Avinger. URECC has also replaced a few hundred wooden transmission poles with metal ones in different areas and several hundreds of wooden distribution poles with a mix of wood and metal in many parts of the system. URECC has removed every known amount of PCB oil above 2 ppm and used a renewable vegetable-based oil in some environmentally sensitive substation areas. Other distribution improvements include replacing miles of old underground cable, notably much of Holly Lake, but in other areas as well. Finally, much attention has been given to the breaker protection schemes throughout our system.

There is much more to do. URECC will have almost entirely resolved all transmission and major distribution water crossing concerns by the end of this year, including a long transmission line crossing at the Highway 155 bridge at Lake O’ the Pines, where the DOT is about to replace the bridge. Further, we have engineered but not started to replace another roughly 70 transmission poles in the Harleton, Shady Shores, and Ore City area. There are plans to inspect transmission line poles in the Ore City and East Mountain areas soon. The engineering and construction of the aforementioned large transmission tie for the Diana, Hallsville, and Noonday areas will also start very soon. Several distribution tie lines in the East Mountain, North Longview, and Glenwood areas are also being studied now. Further, URECC is in the study stages of a new delivery point north of Longview and a new transmission source tie into the Holly Lake, Little Mound, and Gilmer substations for a looped feed into the western areas to be done later. This alone will provide significant transmission reliability for the entire western 1/3rd of our system, including Big Sandy, South Gladewater, and Mt Eara, plus an additional transmission fee recoupment from SPP. Finally, URECC spent nearly \$1 Million additional to its tree clearing budget this year to trim its westernmost 1/3rd of its transmission grid. Plans are to continue this process on the other 2/3rds over the next several years until all transmission corridors have a fresh cut.

These current and future jobs will require more additional capital but will also improve the reliability, quality of service, and safety of the system while providing a hardened look against future storms and make way for new members and businesses to attach. As an example of the need, the winter storm taxed Upshur Rural’s transmission system to dangerously high levels of available capacity. That single issue alone must be addressed if we continue to grow. To help

pay for these and other future upgrades, URECC is currently performing a Cost-of-Service Study (COSS) using a third party for clarity, transparency, and accuracy to determine if and how much rates must change to get future work done and provide recovery for what has already been accomplished.

The greater point of all these facts and issues is that cost for electric services will be rising into the foreseeable future. At times it will be a slow rise, with some volatility here and there, and at other times it will be felt at once. It is not what we would want, and much of it is not what we planned. The world around us is changing rapidly, and the electric business is always impacted by two key factors – government policy and weather. We desire to meet the expectations of our members, provide value for the money, make the system safer, more stable, and more resilient so that the next winter storm or other unforeseen event will not cause injury or damage here, like what happened in much of the rest of Texas. We hope the membership is seeing some benefit for all the planning and work being done. Whether by reduced outage times, less outage frequency, and an improved member experience. The employees of Upshur Rural Electric are committed to the membership and the communities we serve.

As always, URECC focuses on our mission, whether the mission is easy or tough, to bring affordable, reliable, and diverse electric energy to our members.

With all Regards and Respect,

Rob Walker

General Manager

Upshur Rural Electric Cooperative.



“Affordable - Diversified - Reliable”

