

Columbia has a municipal utility. One hundred and twenty years ago, this month, the citizens of Columbia voted to purchase the water and electric utility from a private company.

We are one of over 2,000 municipal utilities nationally. With over 52,000 customers, our utility ranks in the mid-60's nationally and is the 3rd largest in Missouri behind only Springfield and Independence. While there are federal regulations that apply, most major decisions are made locally by the City Council. That will include any decision related to expanding the renewable energy ordinance that was originally proposed by citizen initiative.

Slide 1 – It seems like a simple question....

Do you favor 100% Renewables by 2030?

Today, I will talk about why I believe that simple question is deceptive and financially dangerous.

Slide 2 – Some countries, like Iceland, get almost their energy from renewables. They have abundant geothermal and hydroelectric resources.

Slide 3 – Unfortunately, in Columbia Missouri, our primary renewable options are the intermittent resources of wind and solar.

Columbia's peak usage occurs in the summer. Wind energy production is lowest in the summer and highest during the non-summer months and often at night when utility requirements are the lowest.

Solar does provide more in the summer. Production on a bright sunny day would look like a bell curve with the maximum production around noon. The utility typically peaks in the late afternoon when the solar production is going down. On the peak day in 2021 there was significant cloud cover that impacted production.

Slide 4 – Some people think that if we add batteries everything will be fine. Current battery technology only provides hours of storage rather than the days or weeks that are needed.

Slide 5 – What 100% Renewables by 2030 really means is contracting for enough intermittent renewable energy to match the total annual requirements of Columbia's electric utility. We would then continue to use the existing non-renewable energy, but we can act like we are 100% renewable.

Slide 6 – In 2004, the citizens of Columbia voted for a renewable energy standard that included a 3% rate cap on what renewable energy could cost above non-renewable resources. The original maximum renewable percentage was 15%. After previous citizen requests, the City Council increased the maximum to 30% but maintained the 3% rate cap.

I helped negotiate the 35 MW wind contract that relies on the Grain Belt Express transmission line which was anticipated to be completed a few years ago. While the project has been delayed, more renewable energy will be available to Missouri and utility staff is recommending adding another 18 MW's. The total energy production from the 53 MW's will almost double current renewable output and should meet the current 30% renewable goal; however, the financial impact will not be truly known until energy starts being produced. I believe that it would be financially irresponsible to contract for any additional renewable energy until that project is completed and in operation. As you can see from this slide, in 2022 the cost of renewables exceeded the 3% rate cap by 60%.

Slide 7 – To achieve 100% renewables, we would need to contract for another 800,000 MWhs of energy annually. The cost would be in the \$30 to \$40 per MWh range or \$24 million to \$32 million annually.

Contracts are outside the energy market. Columbia must pay contracts and then the utility would need to sell excess energy in the energy market in hopes of regaining some of those costs. Excess energy will often be sold when the market is lowest.

Market prices can and do go negative. There are currently times when Columbia pays the market up to \$20 per MWh to take existing wind energy.

Slide 8 – In addition to being fiscally irresponsible, pretending to be 100% Renewable continues the old paradigm of buying more and more. I believe that if we hope to make a real impact on reducing our carbon impact, we must change that paradigm.

Slide 9 – Instead of talking about financially dangerous long-term intermittent energy contracts, we should be talking about maximizing efficiency. The Inflation Reduction Act provides us with an opportunity to focus our community on changing the old patterns of buying more. During the years before I retired, I evaluated the results of the utility's Home Performance with Energy Star program. Adjusted for temperature, it was not unusual for customers to reduce usage by 20%, 30%, or more after improving their homes and increasing the efficiency of their HVAC systems. Efficiency should be touted by the Chamber of Commerce – it creates jobs, it reduces the amount of money leaving the community, it gives customers more disposable income, and it has a real impact on climate change.

Slide 10 – Another topic more important than financially dangerous long-term intermittent energy contracts, is the need to improve Columbia's electric infrastructure. Columbia's electric utility is stuck in the 20th Century. There are critical improvements that must be made to ensure the utility can meet the needs of the changing climate. We need to recognize the adaptation part of the Climate Action and Adaptation Plan which many of us participated in creating.

As a community, we need to decide where utility funds should be spent. As I have said, I think the 100% Renewables by 2030 is an unnecessary and financially dangerous goal. I would encourage Muleskinners to lead an effort to invest utility funds on modernizing the utility, encouraging and rewarding efficiency and roof-top solar, protecting low- and moderate-income customers from unnecessary rate increases and educating all ratepayers in ways that have real long-term impacts on system load, energy requirements and the climate.

Slide 11 – Thank you – I would be glad to answer any questions or clarify any points I have made.