



## Filing Receipt

**Received - 2022-12-15 11:43:15 AM**  
**Control Number - 54335**  
**ItemNumber - 94**

PROJECT NO. 54335

Topic: COMMENTS On MARKET REFORM ASSESSMENT PRODUCED BY ENERGY AND ENVIRONMENTAL ECONOMICS, INC. (E3) AND THE PROPOSED MARKET REDESIGN

To: PUBLIC UTILITY COMMISSION OF TEXAS

From: LARRY LINENSCHMIDT

I think we all recognize there is not a simple answer for meeting the conflicting demands of improving our air quality; mitigating and adapting to climate change; limiting water resources used by oil and gas drilling, as well as power generation from thermal sources; the need for dispatchable and reliable electric generation; and the high cost of electricity generated from natural gas and coal, particularly when Milton Friedman's admonition for full costing of negative externalities is considered for air pollution, water resources, and the costs to the health of Texans of pollution from coal and natural gas generated electricity.

I want to thank the investors and operators who have brought so much renewable energy to Texas through the investment of over \$60 billion. Would we have made it through the summer of 2022 without our renewable resources, other than by rolling blackouts? Millions of dollars have been invested in renewable energy resources in Texas and Texans are the beneficiaries of that capital which has been put at risk here.

I also want to thank former Governor Perry, the PUC commissioners, and the members of the Legislature who had the vision and foresight to pave the way for renewable energy to grow in Texas by setting in motion the installation of the CREZ lines-which were paid for by private capital, not state funds.

I hope Governor Abbott, the PUC, and the Legislature will support the renewable energy industry so we can maintain low cost, predictable energy for Texans, particularly to ensure those investments which have been approved by ERCOT are actually installed. Without new builds, I wonder how we will meet the issue of increased demand due to population growth and climate change. We need regulatory certainty to make Texas a safe place for investment.

In his report, *The Impact of Renewables in ERCOT*, Joshua Rhodes, PhD, an energy analyst and scholar at the University of Texas – the report is available online and incorporated herein by reference - quantified the impacts of renewables in ERCOT on wholesale clearing prices and avoided fuel costs, water use, and emissions by comparing how the market would have performed with and without wind and solar from 2010 to August 2022. This analysis found that the build out of renewables from 2010 and beyond has yielded significant benefits and savings to Texans in the ERCOT service area, cumulatively worth as much as \$106 billion.

From the Executive Summary of the report:

- The widespread adoption of renewables reduced wholesale electricity costs by about \$27.8 billion between 2010 and August 2022, saving consumers significantly from what they might otherwise have had to pay.
- In the first eight months of 2022, renewables reduced ERCOT wholesale electricity market costs by about \$7.4B (~\$925M per month) and are on-track to exceed \$11B in cost savings by the end of the year.
- Renewables have reduced wholesale electricity market prices on average between \$1.17/MWh (in 2012) and \$20.60/MWh (in 2022) by offsetting more expensive power plants.
- This analysis also indicates that renewables can provide a price hedge against the volatility of natural gas and coal prices in ERCOT, both of which were significantly more expensive in 2022 than the preceding years.
- Without renewables, power plants would have consumed an additional 244 billion gallons of water from 2010 to August 2022, adding water stress to regions that are often in drought. At typical wholesale water rates of \$3 to \$7 per thousand gallons, 244 billion gallons of water is worth between \$0.7B and \$1.7B.
- Emissions reductions have saved Texans between \$10.2B and \$76.4B in total in lower healthcare and other environmentally related costs.
- Summing up all benefit streams, we estimate that, between 2010 and August 2022, renewables provided between \$38.7B and \$106B (about \$48.2B using median values for water and emissions) in total benefits to Texas residents in the ERCOT service territory.

Joshua Rhodes report indicates renewable energy has a positive impact on the finances of Texans, which is needed to offset the tremendous financial burden all Texans will pay over the next 30 years for the decision to escalate prices during Winter Storm Uri.

Remember, the outages were primarily caused by the failure of the state's natural gas infrastructure to operate in unusually cold weather and deliver the fuel needed by the generators that provide most of the state's electricity, not by renewables. Solar overperformed during that period based on ERCOT projections. There is also the cost of \$1.5 billion in reserve payments to generators this year and the estimated annual cost of \$460 million if the PUC plan is enacted.

General Motors is representative of the many companies which are actively moving towards green energy goals and targets. In the letter to the PUC Commissioners from Rob Threlkeld, Senior Global Manager of Energy Strategies for GM, Threlkeld expressed his appreciation for being able to contract for low-cost renewable energy in Texas and his desire that no ancillary charges be placed on renewable energy providers.

GM employs over 13,000 people in Texas and has contracted for 80 megawatts of wind energy. There are many other major employers who are pursuing aggressive green energy targets. Let's

be sure we maintain our competitive edge in bringing those employers to Texas to continue the Texas Economic Miracle.

It is also important to note Mr. Threlkeld's reference to the short-term predictability of renewable energy resources. ERCOT has a very sophisticated system in place to project electric generation and needs. Predictability makes renewable energy an important part of meeting our electric energy planning. It seems the well-developed capacity of ERCOT is not explained fully in the E3 report or in presentations by PUC and ERCOT representatives to the Texas Legislature. I hope you will take that significant asset into account as you consider how the market might be restructured.

Texas leads the states in the production of both coal and gas fired electricity generation. The impact on our air quality and the health of Texans is significant. There is no mention of limiting pollution or the impact of natural gas and coal on global warming leading to climate change in the report from E3 or the proposal from the PUC. There was also no mention of these issues during the presentations to the Texas Senate Business and Commerce Committee or the Texas House State Affairs Committee.

I propose we initiate a pollution fee on both coal and natural gas fired electrical generation to follow Milton Friedman's suggestion of taxing pollution. We, the taxpayers, are paying for the pollution through the negative impact on our health, increased medical costs, and shorter life spans. If we continue to not tax the pollution, it is another subsidy for the oil and gas industry.

Conservative estimates put U.S. direct subsidies to the fossil fuel industry at roughly \$20 billion per year; with 20 percent currently allocated to coal and 80 percent to natural gas and crude oil. The State of Texas further subsidizes the oil and gas industry by capping wells which are abandoned by producers and requiring minimalist deposits or surety bonds for capping wells which are to be drilled. The estimate cost to cap the abandoned wells in Texas is over \$2 billion.

When we consider revamping the market for electric energy in Texas, let's consider all the costs of all aspects of extraction, transportation of natural gas, health, climate change, reliability, and cost to the consumers, including methane leakage in the production, transportation, and electric generation from natural gas.

We need new wind and solar going forward to meet growing needs in Texas. There are very few natural gas-powered plants in ERCOT's list of future projects, and there is no assurance the plan proposed by the PUC will bring further generation to Texas. In fact, the treatment being received by renewable energy providers may cause them to reconsider Texas as a place to invest and take their capital to states which welcome them.

Let's also consider how we can decrease demand. There is tremendous potential in providing a revolving loan pool to Texans who own older homes to update insulation, heating, and air conditioning, as well as distributed solar. I refer you to the report, *Energy Efficiency and Demand Response: Tools to Address Texas' Reliability Challenges*, by the ACEEE – available

online and incorporated herein by reference. The report indicates this approach is extremely cost effective.

So, what should we do?

1. Create an environment that is positive and welcoming for wind, solar, nuclear, and geothermal.
2. Take steps to make Texas a test market for NuScale, TerraPower, and other developers of Small Modular Nuclear Reactors.
3. Direct ERCOT to approve more transmission lines to allow the solar and wind resources of Texas to be fully integrated into our system. This particularly should include the wind generation resources along the Texas coast which correspond to peak summer demand, as does solar.
4. Facilitate the expansion of existing 345kV transmission lines to 500kV to take full advantage of all rights of way which are available.
5. Don't load ancillary charges on renewable energy.
6. Require new home being built to meet the latest standards for energy conservation.
7. Establish a revolving loan pool to facilitate the updating of Texas homes with the latest insulation and heating and cooling technologies.
8. Facilitate distributed solar to make use of the many rooftops in Texas which can become generators of much needed electricity.
9. Establish a pollution tax on coal and natural gas electric generation.

Larry Linenschmidt

Austin, Texas

[larrylinenschmidt@gmail.com](mailto:larrylinenschmidt@gmail.com)

512.680.7993

Executive Director, Hill Country Institute

Partner, Evangelical Environmental Network

Member, EcoRight Leadership Team, RepublicEn

Volunteer, Citizens' Climate Lobby