

New Texas Energy Dashboard Maps Future Production and Demand

Online tool models how four technology-driven scenarios would drive growth

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/EINPresswire.com/ -- In a major development for Texas' energy policy and planning, Texas 2036 has launched a new interactive tool - [The Future of Texas Energy Dashboard](#) - offering key insights into the future of the Lone Star

State's energy landscape. Users can explore how different market pathways would shape the energy production capacity and the economic and environmental outlooks for Texas and its 12 diverse regions.



"This innovative dashboard charts Texas' energy future through a market-based approach, allowing users to select different combinations of energy technologies to forecast how they would benefit our state's economy, provide affordable electricity, fuel our vehicles and impact emissions," said [Jeremy Mazur](#), senior policy advisor at Texas 2036. "The key takeaway is that Texas will continue to be the nation's energy leader and could pursue a variety of market pathways. The data indicates that an energy expansion approach that includes a broad, diversified energy portfolio opens the door to greater energy production, economic output, and emissions reduction opportunities."

Former Rice University President and Incoming Texas 2036 [President David Leebron](#) said, "Comprehensive, multi-year impactful projects like this are why I'm excited to join Texas 2036. Approaching the state's challenges with nonpartisan data and rigorous analytics allows policymakers and the public to explore different pathways to achieve the best outcomes for the people of Texas. Our energy future is critically important to this state, and these findings create a strong framework for further discussion, planning and action. We'll continue bringing this comprehensive analytical approach to the most important issues affecting our state."

The dashboard examines four key scenarios, each driven by a unique combination of energy technologies that are making headlines today:

- Status Quo: A "business as usual" energy future without major advances in renewable,

hydrogen or fossil fuel energy technology.

□ Advanced Fossil: An energy future focused on fossil fuel production with carbon capture, utilization and storage.

□ Energy Transition: An energy future focused on renewable energy, decarbonization and electrification.

□ Energy Expansion: An energy future reflective of an “all-of-the-above” energy policy, where the costs and technologies associated with fossil fuel and renewable production improve over time.

The results of these scenarios are shown statewide and broken down across 12 regions to highlight differences across the state. Based on this work, here are the first 10 findings from the dashboard highlights that should be factored into future policy discussions:

1. The Texas economy is projected to do well through 2050 under all four scenarios.

Furthermore, under the three scenarios involving greater use of new energy technologies, economic growth outpaces that within the Status Quo scenario. The models show that creating market opportunities within the energy sector for a diverse and broad array of energy technologies will positively impact the state’s future economic growth.

2. Texas is primed to continue leading the nation in energy production, contributing to the state economy's expansion. In all scenarios, increased energy generation through greater oil and gas production and renewable energy will contribute to net increases in Texas' energy output of between 26% and 59% by 2050.

3. The models project significant Texas employment growth between 19% and 23% by 2050. Under the four scenarios, total jobs are projected to increase statewide from 19 million in 2025 to between 23 million to 24 million in 2050, a net increase of at least 4 million. The models show that lower oil and gas prices and lower electricity prices supported by renewables contribute to greater manufacturing activity and jobs.

4. All four scenarios project lower wholesale electricity prices from increased natural gas and renewable energy production. Lower electric prices should have a positive impact on the economy. However, they also support concerns that Texas’ electric market will not be attractive enough for future capital investment in dispatchable forms of generation, particularly natural gas-fueled electricity generation, that are key to grid reliability when electric demand is high and wind and solar are unavailable.

5. Projections from all four models indicate a near doubling of electric demand in Texas by the year 2050. We can attribute this surge to multiple factors, including the state’s economic growth, increased air-conditioning usage due to more hot-weather days, the expansion of data centers, the proliferation of electric vehicles, and the broader adoption of electric appliances.

6. All models project that more Texans will use more electricity to cool more residential spaces, increasing residential demand by as much as 74% by 2050. This finding aligns with the extreme

weather report we produced in partnership with the state climatologist at Texas A&M, which shows the number of 100-degree days and average state temperatures increasing if trends continue. It also reflects the demographic trend analysis showing Texas' population will add five million more residents between now and 2036.

7. Given the increasing demand for energy to power a growing population and economy, all scenarios modeled show increased greenhouse gas emissions, except for the Energy Transition scenario. Emissions increase the most under the Advanced Fossil scenario (23.3%), followed by the Energy Expansion scenario (4.3%) and the Status Quo scenario (3%). Under the Energy Transition scenario, they fall by 9.9%. All scenarios predict a decrease in emissions from the transportation sector.

8. Texas energy production is expected to become more efficient, which means that the amount of carbon emissions per energy output, or the "emissions intensity" of Texas' energy production, will decline across all scenarios. The Energy Expansion scenario, which forecasts the biggest gains in energy production, returns the greatest decline.

9. In all scenarios, the number of light-duty vehicles on Texas roadways will increase by as many as eight million in 2050, while the amount of fuel used by those vehicles will decline by about 40%. This is due to the increased uptake of electric vehicle technologies, which become more efficient over the modeled horizon. For heavy-duty vehicles, hydrogen acts as a bridge fuel before the eventual electrification of the fleet.

10. Texas' transportation sector is expected to produce as much as 50% less carbon emissions between now and 2050.

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