TEXAS
ADVANCED ENERGY
BUSINESS ALLIANCE

Policy Priorities for Reliable, Affordable Energy in Texas

Consumers and businesses today depend on energy that is reliable and affordable, and have also come to expect continuous connectivity, fast speeds, and extensive control. The increased need for reliability, the rising economic cost of blackouts, and the growing threat of cyber attacks can all be addressed through a more flexible and responsive energy system that draws on a variety of advanced energy resources and gives all participants a role in energy decisions. By optimizing the electricity infrastructure that supports Texas prosperity, and by moving toward a more diverse and dynamic energy system in which customers have the opportunity to adopt advanced energy technologies and participate in new markets, we can also foster competition and innovation that will drive down costs while meeting our evolving energy needs.

Advanced energy is not just a contributor to our energy future; it is an economic engine as well. In 2014, advanced energy was a $16 billion revenue industry in Texas and a $200 billion revenue industry in the United States. Thoughtful public policies and a continued commitment to removing barriers to competition will give Texas the opportunity to position itself as the national leader in deployment of advanced energy technology.

Advanced Energy:

- **Empowers customers with unprecedented choice and control** – The line between energy suppliers and consumers is blurring with the additional of many new advanced energy technologies that provide on-site energy, control energy demand, increase energy efficiency, and offer new options for personal mobility and the transport of goods and services. The advanced energy economy gives consumers and businesses the same choice and control over their energy use that they have come to expect in other sectors of the economy.
- **Increases competition in the energy marketplace** – More choice means more competition, as advanced energy technologies increase the options available to the market for energy production, delivery, and consumption. Working together even as they compete in the marketplace, these technologies are already transforming the energy system of yesterday into one that is increasingly diverse, dynamic, responsive, and flexible.
- **Improves the reliability and resilience of our energy system** – Diverse energy solutions enhance our energy security and ensure ample resources for electricity,

heating and cooling, industrial processes, and transportation. Particularly on the electric grid, reliability and resilience involve not just long-term resource security, but also constant management. Further, advanced energy technologies are build to withstand the grid's increasing exposure to malicious cyber and physical intrusions.

- **Lowers costs for consumers** – There is significant opportunity to reduce losses and waste across the energy system through more efficient production, delivery, and use. Energy and dollar savings come not only from using energy and resources more efficiently, but also from avoided or deferred infrastructure needs. At the same time, prices for advanced energy technologies are competitive and dropping rapidly with increased deployment and improved performance.
- **Contributes to economic growth and creates jobs** – Deploying advanced energy technologies and services at scale and across the state will grow the Texas economy, expand Texas-based businesses, and create jobs for Texans.

TAEBA is working to ensure a vibrant advanced energy economy in Texas by focusing on six policy areas:

- Empowering Customers with Energy Data
- Optimizing Electricity System Infrastructure
- Providing Business Certainty with Smart Tax Policy
- Aligning Regulations to Ensure Customer Savings from Energy Efficiency
- Removing Barriers to ERCOT Market Participation
- Preparing for a Rapidly Evolving Energy Future

Empowering Customers with Energy Data

Texans are entitled to secure, timely, and convenient access to their smart meter data and the ability to share it with competitive energy service providers to take advantage of the full range of advanced energy products and services available, to improve their energy management, and to bolster the market for energy services and customer choice in Texas.

Data and data analytics are playing a vital role in the digital economy and energy is no different. Millions of Texas households and businesses are now served by smart meters that generate granular energy data. This data can help customers to understand where, when, and how they use energy and enable them to better manage

their energy usage and, as a result, save money through a variety of advanced energy products and services, including energy efficiency, solar energy, energy storage, demand response, and other energy management options.

By law, Texas consumers own their smart meter data. Therefore, customers can use or share that asset with advanced energy technology providers who can help them analyze it to take advantage of energy options and services. Unfortunately, the current process for sharing smart meter data in Texas is cumbersome for both customers and competitive energy service providers and thus is a barrier to further market adoption of advanced energy technologies.

Texas customers are entitled to secure, reliable, convenient methods to share their smart meter data with competitive service providers. Texas should implement industry best practices, including nationally-standardized processes and interfaces, such as Green Button Connect, to ensure that customers can easily share their own meter data – which they own and control – with any firm or individual they choose, while ensuring data privacy and security.

Optimizing Electricity System Infrastructure

Reliable, affordable energy drives the growth of Texas businesses. Texas transmission, distribution, and energy storage policies should leverage the full spectrum of competitive and cost-effective advanced energy technologies. We need to ensure that Texas makes smart investments to optimize the existing power grid for electricity consumers, while ensuring adequate new transmission infrastructure is developed to meet our future energy needs.

Texas has always made significant investments in its transmission grid to ensure that Texans and Texas businesses have power when and where they need it, to allow our modern economy to continue its breakneck growth. In recent years with Competitive Renewable Energy Zones (CREZ), Texas quickly built out transmission infrastructure to take advantage of low cost renewable energy in the western part of the state. Investments in transmission infrastructure will continue to be needed to meet growing demand, and cost-effective and capable advanced energy technologies should also be leveraged to improve system operations and reliability, enhancing our existing investments in the power grid.

Texas grid policy should focus on optimization and follow multiple paths. First, advanced energy solutions should be deployed directly on the current transmission

and distribution grids in order to extend the life and increase the value of our existing power infrastructure investments, and improve system utilization. Second, advanced energy solutions should be deployed close to loads to offer compelling alternatives to large new investments in grid transmission and distribution capacity.

Advanced energy technologies applied directly to the transmission and distribution grid will provide far more data to drive the optimization of existing infrastructure. For instance, deploying synchrophasers in strategic spots helps grid operators to better understand power flows and avoid grid congestion to ensure smooth operations. With better data and new standards for creative management of grid congestion, grid planners can ensure rational and deliberate investments in new grid capacity where and when it is most needed.

While new transmission capacity still will be needed, the deployment of Distributed Energy Resources (DERs), such as smaller scale renewable energy projects, natural gas microgrids, distributed energy storage, demand response, and energy efficiency, will relieve grid congestion and could defer the need for some transmission capacity. These advanced energy technologies help manage loads more effectively and can place power directly onto the distribution grid, offering an alternative to the capital-intensive projects associated with new transmission lines. Advanced energy technologies have the added benefit of helping to effectively manage variability of large scale renewable energy.

Effective energy policy should support innovation and growth across the grid, encouraging new sources of capital and cooperation with third parties to drive DER investment in a rational, collaborative fashion. Regulatory policies should allow for the capture of all the value streams associated with DERs.

Providing Business Certainty with Smart Tax Policy

Pro-business tax policies have helped to keep Texas competitive with other states by driving investment from advanced energy companies in the State of Texas, and our state economy benefits from maintaining consistent tax policies over time to provide business certainty.

In 2016, *Chief Executive* magazine rated Texas the #1 state in which to do business, for the 12th straight year in a row, and for every year that they have conducted the survey. Texas achieved this ranking based on how CEOs rank states on three criteria: taxes and regulations, workforce quality, and living environment. Pro-business tax

policies, including Chapter 312 and Chapter 313 of the Tax Code, are important tools for Texas as we compete with other states to attract new business and grow our economy.

Chapter 312 enables abatements that exempt all or part of the increase in the value of the real property and/or tangible personal property from taxation for a period not to exceed 10 years. Tax abatements are an economic development tool available to cities, counties and special districts to attract new industries and to encourage the retention and development of existing businesses through property tax exemptions or reductions.

Another successful tax policy is the Texas Economic Development Act, Chapter 313 of the Tax Code. This policy provides certain businesses with a school district property tax benefit, specifically a 10-year limitation on increases in appraised property value. Industries eligible for Chapter 313 school property tax treatment include manufacturing, research and development, certain clean energy projects, renewable electricity generation, nuclear energy, data centers, and certain other "priority" projects with a $1 billion or greater investment in the state.

TAEBA supports maintaining these pro-business policies to ensure a consistent business environment for the companies that qualify.

Aligning Regulations to Ensure Customer Savings from Energy Efficiency

Energy efficiency generates real dollar savings that allow businesses and consumers to invest in other parts of the Texas economy. There are significant and cost-effective efficiency opportunities available in Texas that can be achieved by policies that properly align utility incentives to promote energy efficiency and remove customer barriers to adoption of energy efficiency, such as financing, and additional measures yet to be uncovered.

Customers should have every opportunity to pursue and adopt all cost-effective efficiency measures available to them in the marketplace, and have access to advanced energy technologies that provide choices regarding when they use their energy, how much energy they use, and how much money they spend on energy. To achieve this goal, barriers to energy efficiency should be lowered.

For example, although an efficiency investment can reap significant financial benefits to a customer over the long term, the upfront cost of the investment can be a major

hurdle, particularly for those who do not have access to options such as PACE (Property Assessed Clean Energy) financing. Increasing access to innovative financing options for all customers will provide economic benefits for all Texans.

Similarly, though state policymakers have established energy efficiency and demand reduction goals for regulated utilities, barriers to adoption of cost-effective efficiency measures still remain. In order to overcome these obstacles, regulatory policy needs to recognize changes in technology now available to utilities and ensure that utility incentives are aligned with cost-savings opportunities for customers. Policy options to be considered should include performance-based ratemaking and revenue regulation (or revenue "decoupling"), as well as allowing cost recovery for "non-wires" advanced energy technology solutions, not just traditional capital investments.

Finally, there are additional efficiency gains in Texas that could decrease customers' electric bills, decrease the energy use per unit of product produced in the state, and eliminate wasteful dollar losses in our energy system, making Texas better-positioned compared to other states as we attract businesses here and continue to grow our economy. The state should quantify its energy efficiency and demand reduction potential by commissioning a study that can help guide future policy decisions. The most recent study conducted for the State of Texas is almost a decade old and does not take into consideration the currently available advanced energy economy in Texas.

Removing Barriers to ERCOT Market Participation

To maximize the efficiency of the ERCOT market, all resources should have an opportunity to participate in energy and ancillary service markets, regardless of ownership or whether they are interconnected on the transmission or distribution grid.

Customers are investing in advanced energy technologies that make economic sense for their own purposes, but these investments can also benefit the market as a whole. Opening energy and ancillary service markets will allow ERCOT to capture the value of advanced energy technologies such as energy storage, demand response, and distributed generation as they compete to provide services that improve the day-to-day reliability and longer-term resilience of the electric grid.

Current ERCOT protocols were written primarily for conventional generation resources, inadvertently erecting barriers to market participation for advanced energy technologies. Specifically, current ERCOT protocols do not allow all advanced energy technologies, whether transmission-connected or distributed resources, to fully

participate in these markets. To effect meaningful changes for ERCOT, market rules must be based on appropriate qualification and performance criteria to ensure that ERCOT has access to these resources to enhance market competition and improve reliable operation and resilience of the ERCOT grid on a competitive basis.

Advanced energy resources should be recognized for the value they contribute, be allowed to compete fairly in ERCOT, and be paid according to performance. Statutes, regulations, and ERCOT protocols should be consistent with these objectives.

Preparing for a Rapidly Evolving Energy Future

Texas is seeing a major shift in its energy generation, largely based on price, and advanced energy technologies are playing a growing role in Texas's power mix. Texas needs to be prepared to meet growing energy demand and be agile enough to adjust to market developments, such as retirement of aging power plants, and potential regulatory changes.

Generation in Texas has been shifting from coal to natural gas and renewables, largely due to lower cost natural gas, solar, and wind energy, compounded by the fact that older, inefficient thermal generators, especially those without modern pollution control technology, face an uncertain future due in part to regulatory pressure. A recent study on the Texas electricity market by the Brattle Group concluded that today's low natural gas prices, if they continue to remain low, could result in the retirement of 60% (12 gigawatts) of ERCOT's current fleet (19.6 GW) of coal-fired plants by 2022.[1]

ERCOT has noted the potential for rapid changes in the generation fleet in the coming years, largely as a result of these changing economics. In certain instances, ERCOT may need to implement measures to ensure grid reliability while the market adjusts. Rather than relying on "reliability must-run" contracts, ERCOT should seek to fill reliability needs through competitive market solicitations where possible. Many advanced energy technologies will be able to contribute market-based solutions to provide less expensive, more efficient alternatives to short-term reliability gaps.

[1] Ira Shavel et al., The Brattle Group, *Exploring Natural Gas and Renewables in ERCOT, Part IV: The Future of Clean Energy in ERCOT* (May 17, 2016), available at http://www.texascleanenergy.org/FINAL%20Brattle%20TCEC%2017%20May%202016.pdf.

Assuming that natural gas prices remain low, with solar prices continuing to decline, and market forces are allowed to work, 85% of ERCOT generation will be natural gas, wind, or solar by 2035, with natural gas combined cycle plants providing the majority of new generation.[2] These projections suggest that Texas is already well on its way to achieving compliance with federal environmental regulations, including the as EPA's Clean Power Plan.

Technology advancements in natural gas, wind, and solar energy production have already ensured that the Texas electric market of tomorrow will look very different than the market of yesterday. ERCOT has recognized that fact and is already working to ensure that the electricity system is agile enough to adapt quickly to changing circumstances.

[2] *Ibid.*