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Time for more action on Demand-Side Management

Last legislative session, the Sierra Club supported a number of bills focused on the demand-side of the grid. With expected increases in industrial demand that could overwhelm our grid, we can not ignore these solutions.

One bill supported by the Sierra Club - SB 1699 by Senator Nathan Johnson and sponsored by Chairman Hunter in the House - signed by Governor Abbott is important because it protects and allows the use of Distributed Energy Resources - such as battery storage and customer-sited solar by customer and third parties such as retail electric providers (REPs), while also allowing certain advances in residential demand response.

There has been some progress recently. First, to their credit, the PUCT implemented a pilot project for Aggregated Distributed Energy Resources in the competitive market even before the last legislative session and since passage of the bill has taken some steps to begin to implement these legislative directives such as opening up questions for stakeholder input. In addition, ERCOT itself has also hired a professor at Texas A & M to assess the potential for other ways to incentivize the use of demand response in a market, so this study should help determine some possible parameters on which to base a goal. ERCOT has also proposed a new NPRR to better capture data about demand response that currently exists in the market. We would note that PUCT recently created a new Office of Energy Efficiency and has hired new staff which should help make implementation of SB 1699 and other improvements more likely.

Some portions of the bill related to distributed energy resources are essentially clarifications of statute and may not require rulemaking, such as the clarification that a retail electric provider that supports the use of Distributed Energy Resources in the market does not risk being categorized as a generator. Still, other parts of SB 1699 do require rulemaking, and they have still failed to move forward with actual rulemaking, which we believe is required. Both local distributed energy resources - such as local storage and solar - along with demand response - shifting energy use during peak periods or in periods like storms when the grid is under stress - could be hugely impactful on both the transmission and distribution levels. In a recent presentation by ERCOT, ERCOT itself showed how much our load increases due to residential heating and cooling during hot and cold weather. Thus, during certain periods, residential load can make up a sudden increase in our electricity demand by some 35 to 40 percent depending on the season. Having well developed programs that pay consumers to shift their energy use could be hugely beneficial to both resiliency and reliability.

Finally, PUCT has opened up rulemaking on SB 1699 (*Project No . 56966 - Goal for Reducing Average Total Residential Load in the ERCOT Region.*). In their proposal, the PUCT is suggesting a 25% reduction goal for residential consumers that participate in retail electric provider programs in the competitive parts of the market, and required quarterly reporting by REPs to ERCOT. Sierra Club supports this approach, and in our comments on the rule, suggested an annual review of the goal and public access to aggregated data. A copy of our comments can be found at the PUCT interchange.

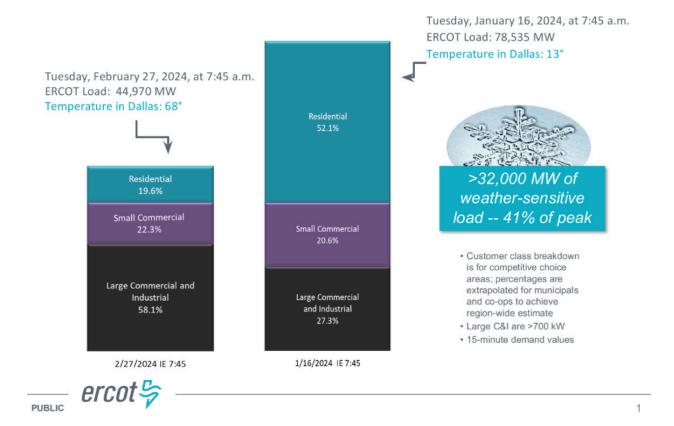
There are actually two provisions of SB 1699 related to demand response programs. First, the bill allows up to 10 percent of an ERCOT utility's annual energy efficiency load management budget to be spent on residential demand response programs that allow Retail Electric Providers to participate. In their 2025 energy efficiency plans and proposed fees to pay for their plans known as EECRF, both Centerpoint Energy and ONCOR the two largest ERCOT TDUs have indicated they plan to utilize this provision to begin retail electric provider residential demand response programs by incentivizing the use of smart thermostats. This is a good start.

However, both AEP Texas and TNMP have instead indicated they will not start programs until 2026. We hope that stakeholders, the utilities and the PUCT will work to assure that all utilities begin such programs, which would be incredibly useful to the market. Second, the bill requires the PUCT itself to establish a goal for residential demand response in Texas for customers who have access to devices such as smart thermostats, appliances (such as heat pumps or water heat pumps) or pool pumps that allow for demand response. This goal is not limited to the four private ERCOT utilities but to the market as a whole. Again the PUCT has suggested a 25 percent goal for

residential premises that have such a program in place. As can be seen in the graphs below, there is lots of opportunity to reduce consumer demand during weather extremes, particularly for the residential consumer space.

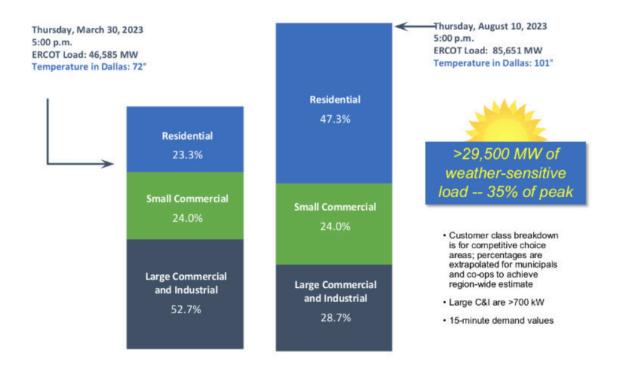
The Sierra Club looks forward to the results of the ERCOT study, finalization of the SB 1699 rulemaking and hopefully some additional rulemaking happening soon on other aspects of energy efficiency programs.

Winter Weather Impacts on Load by Customer Type



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Summer Weather Impacts on Load by Customer Type



Weatherization and Energy Efficiency Programs Would Help: Senate passed SB 258 but House didn't move it forward

Last Legislative session for the first time in over 12 years, the Senate took action by passing SB 258 by Eckardt to raise the utility energy efficiency goals to one percent of total energy sales. Nonetheless, the House failed to take action on the Senate measure and sadly Texas remains at the end of the line in terms of states with energy efficiency savings. Increasing goals and programs at both private and public utilities would help make our system more resilient and directly help save lives by making buildings more resilient. Unfortunately, unless either the legislature or acting on its own the PUCT begins rulemaking to increase goals, utilities are unlikely to increase offerings on their own. Recent 2025 plans (supported by proposed EECRFs submitted by both ERCOT and non-ERCOT utilities are very similar to past years. We do recognize that both Oncor Electric and Centerpoint Energy did propose to increase their program budgets in 2025 compared to 2024 and add important residential demand response programs. We support these increases, but both entities as well as AEP and TNMP could nearly double their programs and still be under the cost caps established by the PUCT. We are hopeful that in addition to the rulemaking related to SB 1699, the PUCT could make

other changes to the energy efficiency programs as they have promised for several years now through separate rules.

Building codes are an important resilience measure

Buildings built to more modern building standards such as the 2021 International Residential Code and 2021 International Building Code are more energy and water efficient, and better protect against floods, high winds and other climate extremes. While cities have latitude to adopt these codes, Texas statutes and authority are a hodgepodge of differing standards. A bill that passed the Senate and House last session - SB 2453 by Senator Jose Menendez - but vetoed by the Governor - would have given specific authority to the State Energy Conservation Office to raise state minimum standards. Other bills involving raising building code standards did not make much headway but we believe that reasonable codes could help protect Texans from weather extremes and should be a focus in 2025. The most recent codes approved by the Code Council include electric vehicle and solar ready provisions to better incorporate new technology.

We need better reporting by our political subdivisions and NOIEs on energy use and reporting

Political subdivisions, universities and certain state agencies that are located in non-attainment areas and "affected" counties are required to set an energy reduction goal and report on efforts to manage their energy use through an annual report to the State Energy Conservation Office. The statutory provision runs out in 2026, and the Sierra Club would support extending this reporting for another five years. There is no significant federal funding to help public entities reduce energy use, implement demand response and distributed energy resources and Texas should help coordinate these efforts.

Separately, larger electric cooperatives and municipally-owned utilities are required to report on their energy efficiency efforts annually to SECO, but the statutory requirements are vague and need an update. The reports should be extended to all NOIEs, and the reports should be publicly available on SECO's website.

Sierra Club continues to support the need for a Texas Energy Efficiency Council.

Last session, the Texas House passed HB 4911 creating a Texas Energy Efficiency Council, a bill recommended by the PUCT and supported by the Sierra Club. However, the Senate never took up the bill. With massive amounts of federal funding potentially,

including SECO applying for nearly \$690 million from the DOE for the HOMES and HEAR program, we need to be coordinated between our utilities, state agencies and retail electric providers to be efficient and grow our energy efficiency, demand response and distributed energy resources.

SB 2627: We must fund the TEF for the non-ERCOT resilience funds and the back-up power packages

Recently, the PUCT approved some \$5.2 billion in funds for 17 gas plant projects for the In-ERCOT Generation Loan program, although as is well known one project was then denied. However, there are two other programs approved by SB 2627 and endorsed by voters through Prop 7 that are intended to help on reliability and resiliency but thus far the rules have not been finalized, and additional monies still must be appropriated by the Legislature to implement them.

First, the Outside ERCOT Grant Program will provide up to \$1 billion in funding for transmission and distribution infrastructure or electric generating facilities in Texas outside of the ERCOT power region. Under this program, the PUCT will award grants for the modernization of infrastructure, weatherization, reliability and resiliency enhancements, and vegetation management. Second, TEF will provide up to \$1.8 billion in grants and loans to qualifying entities to design, procure, or install backup power packages at facilities necessary to support community health, safety, and well-being. A backup power package is a stand-alone, behind-the-meter, multiday backup power source. Again, while an advisory committee led by Senator Johnson has been named and held several meetings, rules have not been approved for these taxpayer-backed backup power packages.

Political leaders have announced that the Legislature intends to appropriate the other \$5 billion for the TEF. They have focused narrowly only on the supply side issue - more gas plants - while some suggest spending money on new nuclear plants. The Sierra Club hopes that rather than dedicating these funds to new gas or nuke plants, we instead invest in programs for resiliency which ultimately will benefit customers more. Our grid does not have a major supply issue, it has an issue with getting power where it is needed and keeping the lights on when climate extremes occur. Taxpayer funds are better served helping customers, not gas or nuclear generation investors. At the very least we must honor voter's wishes and fund the Outside ERCOT program and the backup power packages.

Climate Change is Real and Solutions Must be Multi-Faceted

The evidence is there for all to see. The climate is changing and no state has been more impacted by major climate events in recent years than Texas. The year 2023 was the warmest year since global records began in 1850 at 1.18°C (2.12°F) above the 20th-century average of 13.9°C (57.0°F). This value is 0.15°C (0.27°F) more than the previous record set in 2016. The 10 warmest years in the 174-year record have all occurred during the last decade (2014–2023). According to the NOAA, there have been 391 events since 1980 where damages from a storm or event have exceeded \$1 billion, which have also led to the deaths of more than 16,500 US residents, and no state has had more economic losses of \$1 billion dollars due to climate and weather extremes than Texas over that time period.¹ Indeed, there have been 183 such events with an estimated cost of between \$300 and \$420 billion, and 55 of those events have occurred in the last five years. Insurance claims and cost are rising and we are in danger of following in the heels of states like Florida where major companies are leaving the state

In essence our electric grid, and especially our distribution system where most customers receive their power, was built for a different era, before warming temperatures, sea level rise, more extreme storms and hurricanes and other impacts ravaged our basic infrastructure. While 30 years ago, or perhaps even 10, it made sense to build a cheaper system, today it is foolish to build a house of straw when a house of bricks is required. We can not snap our fingers and hope the climate returns to the way things were 30 years ago, but we can work to lower the emissions that are fueling the climate crisis and create resilient measures that will help mitigate the worst impacts of climate change, and even do so in a way that benefits our economy and quality of life.

We can not and should not stick our heads in the sand and pretend that yesterday's solutions will work. Climate extremes are a reality and it is incumbent upon us to look for local and smart investments that consider the needs of our most vulnerable citizens.

We must bolster the private sector investments with state and federal regulations and investments as well. First, there are billions of dollars available to Texas due to both the IIJA of 2021 and IRA of 2022. Texas state agencies should be aggressive in applying for these funds to help customers better prepare for winter and summer extremes and weatherize buildings and our electric system. We must honor the voters' wishes to fund all four TEF programs, including outside of ERCOT resiliency plans and backup power

¹ NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2024). https://www.ncei.noaa.gov/access/billions/, DOI: 10.25921/stkw-7w73

packages. These efforts can help reduce the costs on ratepayers. Still, to be clear, making our electric system more resilient is likely to increase costs on electric consumers. This increase can be offset however by programs that help customers reduce their energy use, along with proper standards like more advanced building codes. Distributed Energy Resources, Electric Vehicles as Vehicle-to-Grid, local storage, backup power for critical facilities and neighborhoods, traditional distribution investments, demand response and energy efficiency and better built buildings will all be needed with a combination of private, public and individual investment if we are to make our grid more resilient.

In 2025, we hope the Legislature will prioritize these demand-side and customer-sited solutions to our grid, climate and affordability crisis.