The Community Voices in Energy Survey (CVES) utilizes the 13 Uniform State Service Regions of Texas as employed by the Texas Department of Housing and Community Affairs (TDHCA).
The Community Voices in Energy Survey (CVES) solicited feedback from households that contend with low incomes to better understand concerns around affordable, reliable, and clean energy. Primarily low-to-moderate income households earning below the region’s median income were surveyed across the Texas Department of Housing and Community Affairs (TDHCA) 13 Uniform State Service Regions. Survey respondents were household members who were at least 18 years old and responsible for energy management decisions in the household.

As the cornerstone of TEPRI’s research initiatives, this survey series aims to measure the lived experiences and opinions of households that contend with low-moderate incomes (LMI) as they relate to energy burden, energy insecurity, climate risks, and other key energy-related factors.

CVES data and reports are intended to help inform stakeholders (including lawmakers, regulators, utilities, and community-based organizations) to make better and more informed decisions to address the energy needs of Texas households.
Region 6, known as the "Gulf Coast," encapsulates the greater Houston area, including the cities of The Woodlands and Sugar Land. The region confronts significant energy challenges that intersect with issues of affordability, reliability, and clean energy adoption. This dynamic landscape is shaped by demographic shifts, environmental factors, extreme weather events, and historical considerations. The region has experienced a remarkable 20% population surge since the 2010 Census, with Harris County and Houston at its epicenter, fostering a widely diverse population.

Survey findings underscore the energy challenges faced by households in the Gulf Coast area, revealing that nearly half (47%) of respondents find their energy bills unaffordable. The challenges are particularly pronounced among low to moderate-income households, which make up around 52% of the region's 2.5 million households. Respondents who are renters, people of color, and residents of manufactured homes reported heightened difficulties in managing monthly energy expenses. Tradeoffs, including cutbacks on essential needs like clothing, entertainment, and, in extreme cases, food, illuminate the extent of the energy affordability concerns.

Lower-income households in Region 6 also face amplified financial burdens due to the increased risks and losses associated with hurricanes, with the Gulf Coast ranking second in the U.S. for hurricane frequency. Notable hurricane impacts, exemplified by Hurricane Harvey in 2017, have caused extensive damages and elevated financial burdens for lower-income households in counties like Harris, Galveston, and Matagorda. Concerns about weather-related events leading to power outages are pervasive, particularly among lower-income households. Nevertheless, respondents expressed a notable willingness to reduce energy consumption during grid emergencies in exchange for various incentives. Despite these concerns and the region's vulnerability to extreme weather, awareness and participation in energy assistance programs remain significantly low, highlighting the imperative for improved outreach efforts.

The survey reveals that while there was significant support for clean energy (especially among younger adults), enrollment in clean energy programs remains relatively low. This trend is likely influenced by economic considerations, including the willingness and ability to pay a monthly premium for clean energy. Respondents consistently prioritize affordability, reliability, and sustainability in shaping their energy concerns, showcasing a growing awareness of the impact of extreme weather events on energy reliability.

Addressing energy disparities in the region requires multifaceted strategies. Initiatives should be tailored to consider the specific needs of diverse populations, promote awareness of energy assistance programs, and foster community-driven efforts toward cleaner and more equitable energy solutions. Policymakers, energy providers, and community organizations can leverage these survey findings to collaboratively work towards a resilient and equitable energy future in the Gulf Coast region.
Key Survey Results

Energy Bill Affordability
- Almost 50% of respondents did not consider their energy bills affordable.
- Sixty-four percent of respondents ‘agree’ or ‘strongly agree’ that they struggle to pay their energy bills most months.
- People in multifamily homes were the least likely to struggle to pay their energy bills.
- Respondents cut back on clothing (48% of respondents), entertainment (44%), and food (32%) to meet monthly energy expenses.
- Additionally, respondents of color (35%) were more likely to make sacrifices of at least one essential household need compared to White (non-Hispanic) individuals (14%).
- Forty-five percent of respondents were disconnected or received disconnection notices in this region from non-payment of energy services.
- Renters were more likely to experience disconnections and/or disconnection warnings compared to homeowners.
- Despite high disconnections/disconnection notices, only 12% of respondents participate in energy assistance programming.
- Forty-nine percent of respondents lacked awareness of energy assistance programs.

Energy Reliability
- Eighty-six percent of respondents expressed at least some concern about weather-related blackouts.
- Respondents with annual household incomes below $50,000 expressed the highest level of concern about weather-related blackouts.
- Renters were more likely to express concern about energy reliability than homeowners.
- A majority of respondents (57%) worry about maintaining a suitable temperature in their homes during emergencies.
- More than half (59%) of respondents were open to reducing energy use to prevent a blackout in exchange for a financial incentive, while about a quarter (26%) were willing to do so voluntarily.

Perspectives on Clean Energy
- About 14% of respondents reported being enrolled in clean energy programs - surpassing the statewide average of 10%.
- Respondents with an annual household income of $27,000-50,000 were the least likely to participate in clean energy programs.
- Almost 55% of respondents were unwilling to pay a monthly premium for clean energy.
- Urban residents were more willing to pay extra for clean energy compared to their rural counterparts.

Sample Size
- Region 6: 540
- State of Texas: 6,520

Survey Period
- Dec 2022 - Mar 2023
Energy Burden Region 6 - Gulf Coast

Region 6 Energy Burdens by Census Tract

- **Average Energy Burden - All Households**: 4.4%
- **Average Annual Energy Costs - All Households**: $2,039
- **Average Energy Burden - LMI Households**: 8.3%
- **Average Annual Energy Costs - LMI Households**: $1,804

Average Energy Burden by Income Group

- 0-30% AMI: 14.4%
- 30-60% AMI: 5.9%
- 60-80% AMI: 4.1%
- 80-100% AMI: 3.3%
- 100%+ AMI: 1.6%

Zooming In: Two Largest Urban Areas

- **Houston, TX - City Center**
- **Greater Houston, TX**
Most Populous Cities

<table>
<thead>
<tr>
<th>City</th>
<th>Population</th>
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<tbody>
<tr>
<td>Houston</td>
<td>2,288,250</td>
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<tr>
<td>Cypress</td>
<td>182,459</td>
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<tr>
<td>Pasadena</td>
<td>148,626</td>
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<td>Pearland</td>
<td>125,990</td>
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<td>League City</td>
<td>115,595</td>
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</table>

2022 population estimates

2,519,274 Households in Region 6

$73,620 Median Household Income

Age of Housing Stock

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage of Households</th>
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<tbody>
<tr>
<td>&lt;1940s</td>
<td>2.4%</td>
</tr>
<tr>
<td>1940s</td>
<td>2.6%</td>
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<tr>
<td>1950s</td>
<td>6.4%</td>
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<td>1960s</td>
<td>8.9%</td>
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<td>11.0%</td>
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<tr>
<td>2010s+</td>
<td>20.9%</td>
</tr>
</tbody>
</table>

Top 5 Industries by Number of Employees

- Education, Healthcare, Social Assistance: 703,687
- Professional, Scientific, Management, Administrative, and Waste Management: 426,713
- Retail Trade: 355,637
- Construction: 328,245
- Manufacturing: 323,868

Sources: U.S. Census Bureau (2020-2022), Texas Department of Housing and Community Affairs (TDHCA), National Renewable Energy Laboratory (NREL) - ResStock (2018)
Forty-four percent of respondents with an annual household income between $13,000 and $27,000 and 45% of respondents with an annual household income between $27,000 and $50,000 do not consider their energy bills to be affordable.

Sixty-four percent of all respondents ‘agree’ or ‘strongly agree’ that they struggle to pay monthly electricity bills. Across all income categories, energy affordability perceptions differed by age, race/ethnicity, and homeownership status. For instance, almost half of respondents of color find their energy bills unaffordable, compared to 31% of White respondents.

Among home types (single-family, multi-family, semi-attached, and manufactured homes), manufactured home residents were the most likely to report struggling to afford electricity bills, with 53% reporting affordability challenges.

Low-income households often make tradeoffs to afford their energy bills, including keeping homes at uncomfortable or unsafe indoor temperatures. Among all respondents, cutbacks in clothing (48%), entertainment (44%), and food (32%) were the most commonly reported areas where people made cutbacks. 11% cutback medicine, and 12% cutback rent.

Across all income groups, more respondents of color made sacrifices in essential needs (81%) compared to non-Hispanic White respondents (55%).

The survey revealed that 49% of renters found their energy bills unaffordable, compared to only 33% of homeowners. Despite renters being more likely to perceive bills as unaffordable, 17% more homeowners reported making cutbacks to afford energy bills.

In Region 6, those aged 40-50 and over 65 were most likely to make cutbacks and view energy expenses as unaffordable, while those aged 30-40 and 18-30 reported the least challenges.
For the 12 months preceding the survey, 15% of respondents reported disconnections and 30% received non-payment warnings. Reports of disconnection are mostly from respondents with an annual household income of less than $50,000. **Respondents with annual household incomes of $27,000 to $50,000 were the most likely to experience disconnections, with 23% reporting disconnections.**

Respondents of color reported 12% more disconnections than non-Hispanic White respondents (3%). The age group most affected was those between 30-40, with an 18% affected. Renters were more likely to face both disconnections and disconnection warnings compared to homeowners.

Among the 64 respondents in Region 6 who received energy bill assistance, the majority discovered it through mailers and flyers, with social media as the next most common source. While mailers were the predominant source, respondents mentioned various communication channels such as television and radio ads, information from community and religious organizations, landlords/leasing offices, and messages from electricity companies. Younger respondents, particularly those aged 18-30, were more likely to rely on social media. Given the limited awareness of such programs among respondents, the data is constrained, and Harris County stands out with the highest number of respondents participating in programs.

Despite facing disconnections and payment issues, **only 12% of respondents (64 out of 540) are enrolled in energy bill assistance programs.** The most common reason, cited by 49% of respondents, is a lack of awareness about these programs. Individuals with annual household income between $13,000 and $27,000, especially those below the Region 6 Area Median Income, are more likely to express unawareness, and respondents with incomes below $27,000 find the application process challenging.

These findings highlight the need for enhanced outreach, marketing, and educational initiatives to make financial assistance programs more accessible across diverse communities in both urban and rural areas of Region 6.
The Gulf Coast is prone to extreme weather events such as heatwaves and hurricanes. Survey participants were asked to report their level of concern about weather-related events that could lead to power outages. Eighty-six percent (86%) of respondents expressed at least some concern.

Almost 30% of respondents with annual household incomes below $50,000 report extreme concern, compared to approximately 14% of respondents with moderate and high incomes.

While 89% of renters and 87% of homeowners expressed concern about weather-related outages, 29% of renters reported an extreme concern, compared to 20% of homeowners.

To gain insights into the range of concerns across households, respondents were asked "What are your concerns about experiencing a power outage during extreme (bad) weather?" Results revealed that the majority of respondents (57%) expressed concern about maintaining a comfortable indoor temperature during weather emergencies. Regardless of heating or insulation, power outages during extreme weather may pose risks, especially to vulnerable individuals such as the elderly or people with pre-existing health issues.

The survey shows that LMI households are open to reducing energy consumption when needed. More than 59% of respondents were willing to reduce their energy use for financial compensation and about a quarter (26%) were willing to do so voluntarily. Only a small percentage (13%) were unwilling to reduce energy use in an emergency scenario to prevent a blackout.
The disparity between support for clean energy and actual enrollment is likely influenced by economic factors, with respondents’ willingness to pay a monthly premium being crucial. Respondents of color are slightly less willing to pay extra for clean energy (44%) compared to White non-Hispanic respondents (47%). The ability to afford the premium for clean energy is likely a key determinant in clean energy program participation.

Region 6, a prominent hub for the oil and gas industry and often hailed as the energy capital of the world, boasts a substantial presence of power facilities. Despite the increasing momentum toward renewable energy sources, 54% of respondents in this region express reluctance to incur additional costs on their monthly bills. Interestingly, urban residents display a higher inclination towards paying extra for clean energy compared to their rural counterparts, highlighting geographic opinion differences.

The survey highlights that 14% of respondents are currently enrolled in clean energy programs, surpassing the statewide average of 10%. Those with an annual household income between $27,000 and $50,000 exhibited the lowest enrollment rates.

Families with vulnerable members (children or seniors) were less likely to be enrolled in clean energy programs but showed higher levels of support for their energy providers to use clean sources of power generation.

Respondents aged 30-40 (18%) and 50-65 (14%) had the highest level of clean energy program enrollment, expressing similar levels of support for their energy providers to use clean sources of energy. Those aged 18-30, however, demonstrated the highest enthusiasm for clean energy, with 45% supporting their utilities using clean energy.