



TEPRI advances equitable solutions for **affordable, reliable, and clean energy** so all people can thrive



OUR WORK

Conduct research around how energy and the energy transition impact LMI households

Build a strong network of community and energy stakeholders

Develop tools to advance solutions

Pilot models to demonstrate innovations

Guiding Energy Terms - Key Definitions

Energy Poverty: occurs when the cost of energy needed to maintain a healthy lifestyle creates a significant or unnecessary economic burden

Energy Burden: is the percentage of a household's income that goes towards household energy expenses. A household's energy burden can be measured in three categories:

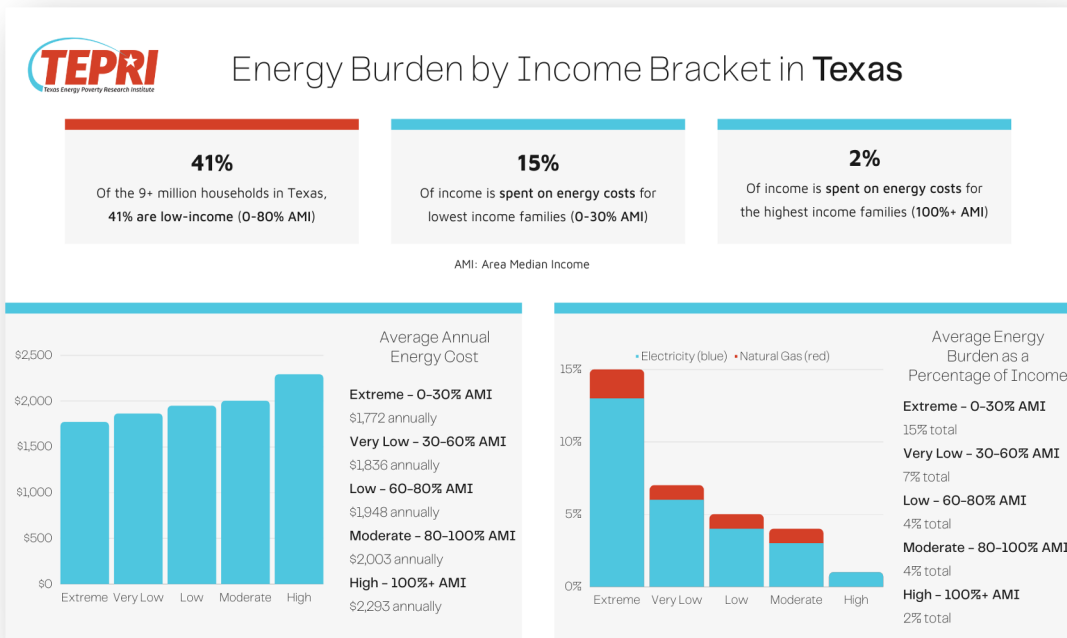
EXTREME Greater than 10% of income	MODERATE 6-10% of income	LOW Less than 6% of income
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Energy Insecurity: the inability to meet basic energy needs due to high energy costs

Energy Equity: is a process of allocating resources and opportunities as needed to create affordable, reliable, and sustainable energy outcomes for all households

Energy Burden in Texas

- Texas has one of the highest poverty rates in the United States at **13.60%** [1]
 - **37% of households** live below 200% of the Federal Poverty Level (FPL)
- There are over **3.8 million Low-Moderate Income households** disproportionately burdened by high energy costs



Contributing factors to Energy Burdens

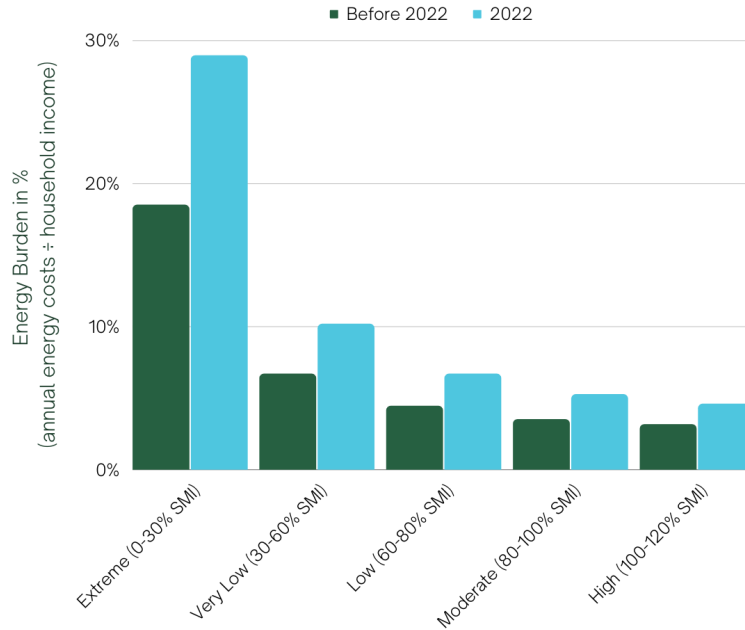
Housing age and building characteristics

Institutional Systems: Insufficient funding for energy programs, limited program awareness, cumbersome eligibility processes, lack of energy conservation education

Urban Heat Island: The biggest determinant of electric bills is **residential cooling**

Price Spikes Effect on Energy Burden

Retail electricity rates have risen **70%** year over year across the state, resulting in an **average increase of \$1,000** in annual electricity costs per household in Texas



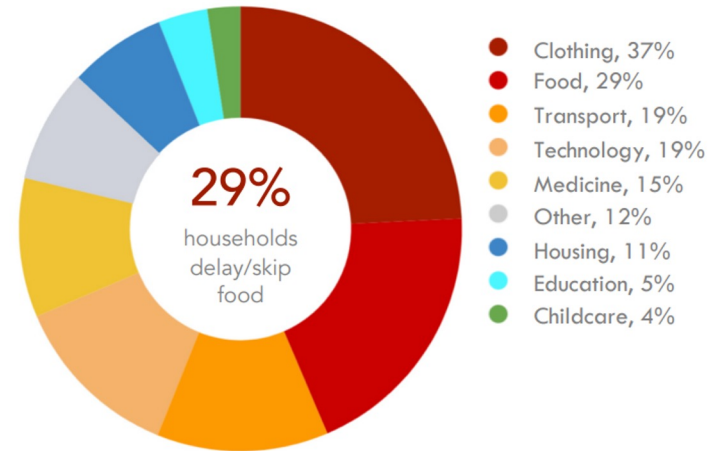
SMI = Texas State Median Family Income: \$63,826 (in 2020 dollars)

LMI Households Make Trade-Offs

26% of households in Texas keep their homes at an **unsafe and unhealthy temperature** [4] (national average is 18%)

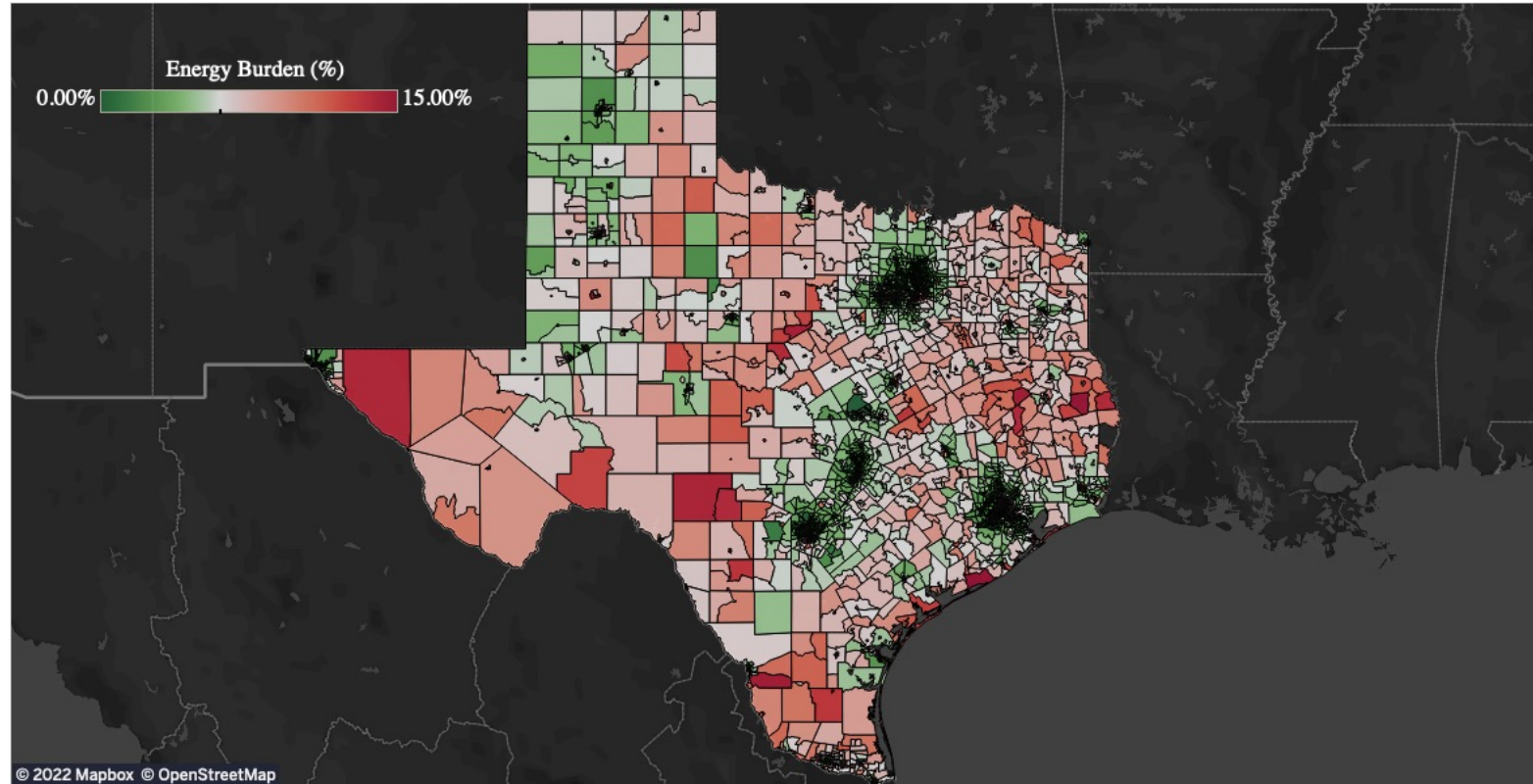
29% of households buy less food to keep the lights on or put off purchasing clothing or medicine to afford using heating and/or cooling.

HOUSEHOLDS MAKE TRADE-OFFS TO AFFORD ELECTRICITY BILLS

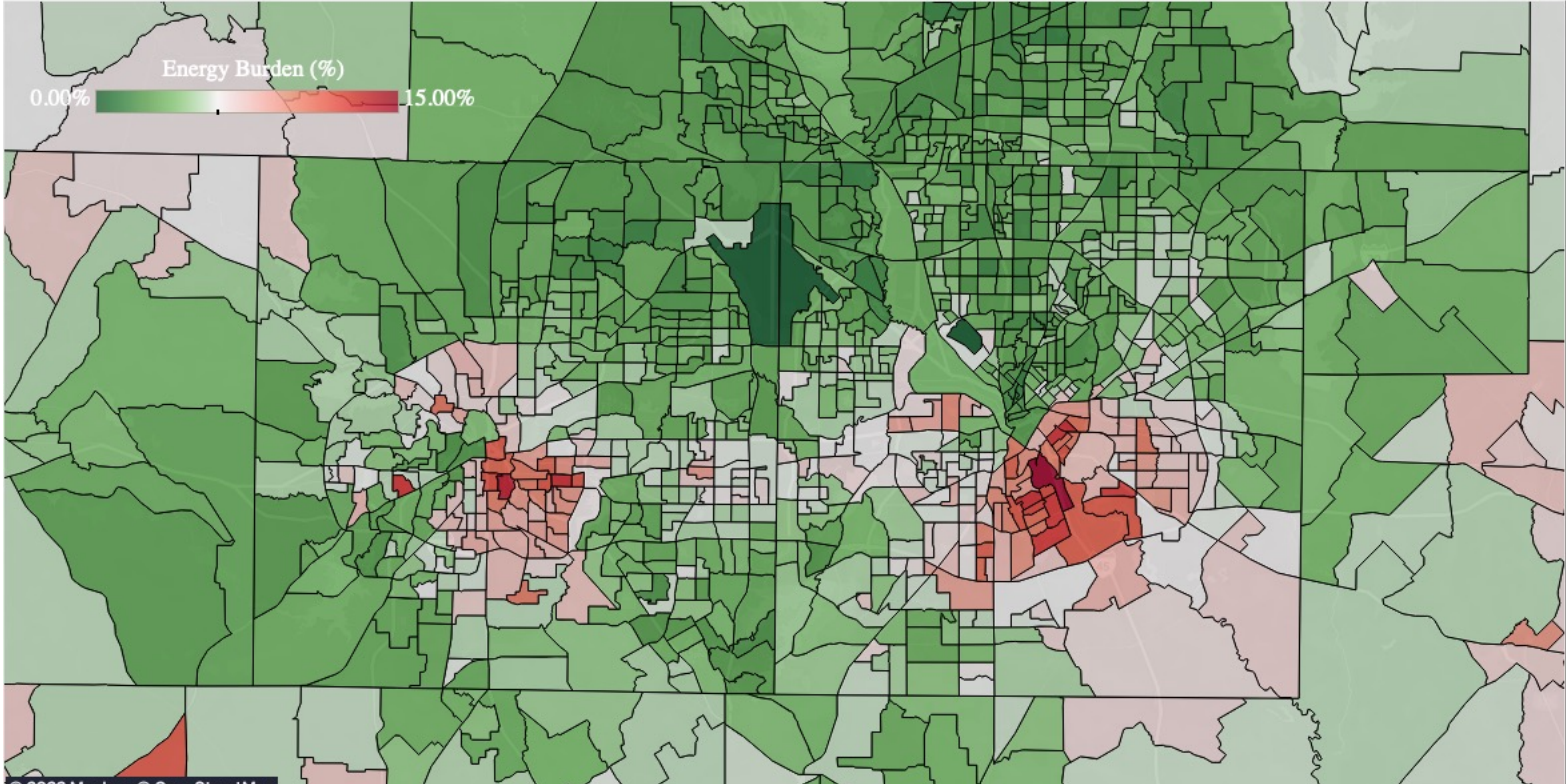


Low-income households make difficult trade-offs. When asked if utility bills cause them to delay or skip necessary spending on a list of categories, the most common responses were clothing, food, transport and technology.²

The Geography of Energy Burdens



Geography of Energy Burdens – Dallas/Ft.Worth Close-Up



Funds for LMI Households are Being Turbo-Charged

Program	FY2021	FY2022	Difference
LIHEAP*	\$164,514,775	\$313,713,228	+\$149,198,453
WAP	\$7,908,820	\$181,052,315	+\$173,143,495

*15% of LIHEAP funds can be used for weatherization, or for FY22 ~\$47,056,984



Served 125,000+ Utility Customers Since 2013

J. Stratton Lobdell

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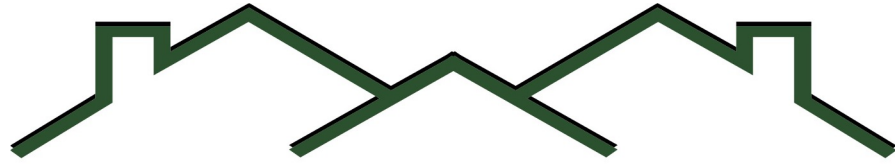
Who We Are

EZ Green Home provides implementation of Home Energy Efficiency Assessments, Smart Thermostat Installations, HVAC Tune-Ups, Duct Sealing and Home Performance Upgrades to utility customers.

Our mission is to generate energy savings for utility customers, create sustainable careers for passionate team members and make a difference in local communities across the USA.

We do this by hiring local, friendly, honest and hardworking professionals. We partner with expert trainers and reputable companies in the industry. Our successful canvassing and direct sales approach allows a deeper dive into any target community.





**EZ GREEN
HOME**

Workforce Acceleration

Part of our
everyday
operations

Solution to Low Income Outreach

- Hire local
- Reflect the community and meet people where they are, at home
- Create pathways to grow in skills and advance within the organization for local employees
- Target single family with face to face canvassing and embed in the community

Program Development Goals

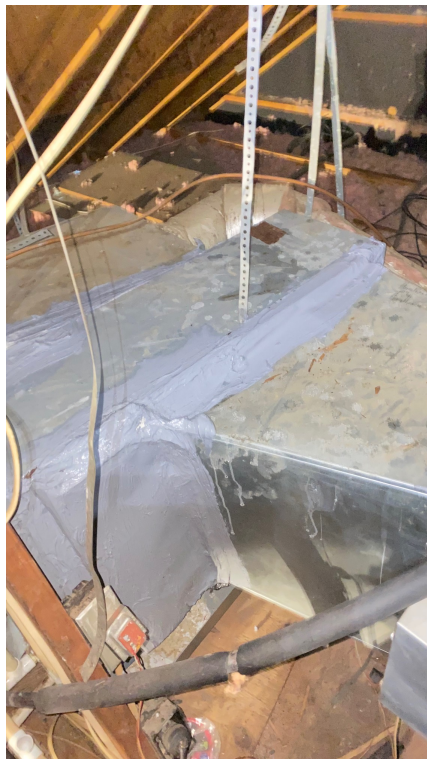
- Many existing programs have trouble reaching low income communities
- EZ Green tailors outreach and measures offered to benefit specific communities based on local needs
- Low income is often left behind due to below target efficiency gains leading to poor cost effectiveness

Program Design Example

- Jackson, MS has no building code
- Residents often have catastrophic duct issues (40%+ leakage)
- EZ Green offered effective program design to provide repair and seal with data from the field and expertise in the industry
- Replicated at scale
- Launched last week!
- Frontier Energy a model



Low Income Duct Repair/Seal Example





Low Income Weatherization Challenges and Opportunities

Steve Wiese, Director of Program Implementation

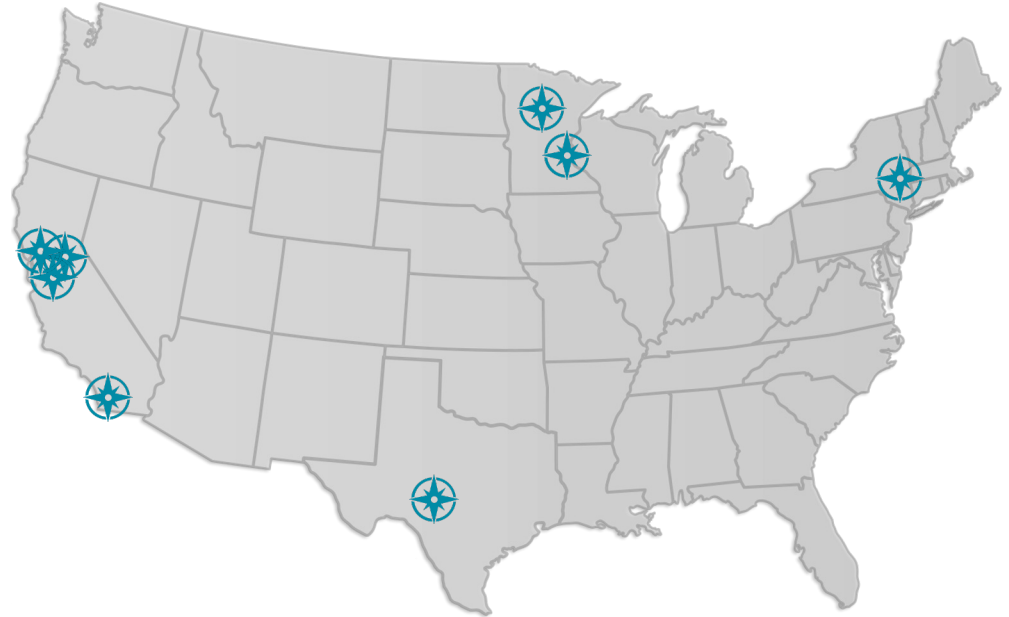
Frontier Energy

- **National footprint**

- 140+ employees
- Offices in TX, CA, MN, NY

- **Our capabilities**

- Energy engineering
- Electric transportation
- Energy efficiency/DSM programs
- Advanced power generation
- Foodservice energy & water
- Cloud-based software



www.frontierenergy.com

Targeted Low Income Weatherization Programs

- Frontier currently implements targeted low-income weatherization (Wx) programs for five investor-owned utilities
 - We also provide software tools that manage these programs specifically as well portfolios of programs
- All our programs:
 - Coordinate with/complement federal Wx programs and agencies (WAP and LIHEAP)
 - Some involve other non-profit organizations and for-profit Wx service providers as well
- But each is unique!
 - Rural/urban/non-contiguous service areas
 - Stakeholders (cities, towns, utility commissions, customers, and utility clients)



An AEP Company



Key Challenges

Outreach/Assessments

- Easy to find qualifying customers
- Harder to qualify homes and measures
- Challenges addressing specific geographic areas
- Costs don't directly translate to savings

Legal/Regulatory

- Federal/state alphabet soup – DOE/HHS (WAP/LIHEAP) v PUCT electric IOU programs
- State/state – PUCT and RRC – electric and gas

NEAT/TRM Divergence

- Federal - NEAT is used by the federal DOE/WAP program
- TRM is used by Texas utilities
- Different measures, different savings

Need for Repairs

- Holes, gas, mold
- Limited mechanisms within utility programs to bring homes to the condition where measures can be installed

Potential Solutions

- 1. Create pathways to fund extra costs associated with low-income programs.**
 - Specifically: targeted outreach, assessments, repairs.
- 2. Resolve the NEAT/TRM inconsistency.**
 - Current rules use NEAT to qualify measures but evaluate savings and performance with the TRM. Pick one! (Or even both!)
- 3. Offer means to coordinate electric/gas (/water?), IOU/muni/coop offerings.**
 - Many energy efficiency measures result in savings of multiple resources.



Thank you!

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