BUILDING DECARBONIZATION COALITION

NRDC

GRIDWORKS

New Mexico Building Decarbonization Roadmap

VERSION 1.0

Participating Organizations and Acknowledgements

Project Sponsors

BUILDING DECARBONIZATION COALITION

NRDC

Project Facilitator

GRIDWORKS

Participating Organizations[1]

350 New Mexico
Advanced Energy United
Center for Civic Policy
City of Albuquerque
Coalition for Clean Affordable Energy
Coalition of Sustainable Communities New Mexico
El Paso Electric
Housing New Mexico MFA
Kit Carson Electric Cooperative
New Mexico Attorney General's Office
New Mexico Climate Investment Center
New Mexico Dept. of Finance Administration
New Mexico Energy, Minerals and Natural Resources Dept.
New Mexico Home Solutions
New Mexico People's Energy Cooperative
New Mexico Regulation and Licensing Dept.
New Mexico Rural Electric Cooperative Association
Prosperity Works
Public Service Company of New Mexico
Rheem
Renewable Energy Industries Association of New Mexico
Sierra Club
Southwest Energy Efficiency Project
Southwestern Public Service Company, an Xcel Energy company
Tri-State Generation & Transmission
Western Resource Advocates

Acknowledgement

This Roadmap represents a starting point and a collective expression of shared views by participating organizations rather than an account of each organization's position on every issue. Although there may not be full alignment on each issue contained herein, participating organizations agree the Roadmap provides a reasonable foundation upon which to accelerate the elimination of operational greenhouse gas emissions from residential and small commercial buildings in New Mexico.

[1] Staff from the New Mexico Public Regulation Commission joined the stakeholder meetings solely in a consulting capacity.

Table of Contents

Executive Summary

Although the 2019 Energy Transition Act requires New Mexico's electric utilities to reach 100% zero carbon resources by mid-century, the state does not have a framework to address emissions in the built environment. This Roadmap envisions eliminating all operational greenhouse gas emissions from New Mexico's residential and small commercial buildings by 2050 and offers several priorities to accelerate this vision. It is the product of a months-long stakeholder inquiry in 2024 convened by Gridworks and sponsored by the Building Decarbonization Coalition and the Natural Resources Defense Council to spur building sector greenhouse gas reductions in the state.

Residential and commercial buildings make up approximately 4% of greenhouse gas emissions in New Mexico. This Roadmap focuses on residential and commercial building decarbonization to most directly impact New Mexicans where they work and live. Decarbonization actions in the building sectors can also help to raise awareness for decarbonization possibilities in other parts of the state economy.

The Roadmap lays out five goals for building decarbonization to lead the state:

1. **Increase public awareness of and interest in building decarbonization technologies;**
2. **Increase the value customers receive from adopting building decarbonization measures;**
3. **Strengthen the contractor value proposition with a comprehensive program of education, engagement, and empowerment;**
4. **Establish state policies that better incentivize greenhouse gas reductions in the residential and small commercial building sectors; and**
5. **Prepare New Mexico's electric grid and housing stock for future electrification.**

The Roadmap recommends prioritizing the following actions to achieve these goals:

- **Develop on-bill options to reduce upfront equipment costs;**
- **Prioritize cash incentives at point-of-sale;**
- **Provide free training on building decarbonization technologies to licensed tradespeople;**
- **Strengthen gas planning at the Public Regulation Commission to enable a future clean heat standard;**
- **Explore beneficial electrification rate design at the Public Regulation Commission; and**
- **Support grid modernization efforts and distribution system upgrades.**

The Roadmap discusses specific steps and lead entities to carry out these priorities. If implemented in the next few years, the priority actions and recommendations called for in this Roadmap will accelerate the elimination of operational greenhouse gas emissions from residential and small commercial buildings in New Mexico.

Project Background and Vision Statement

Project Background

With the passage of the Energy Transition Act in 2019, New Mexico joined several Western states in accelerating its commitment to renewable energy and electric grid decarbonization. The Act raises the state's renewable portfolio standard and requires investor-owned electric utilities to reach 100% zero carbon resources by 2045 (2050 for rural electric cooperatives).

While these goals are laudable, the Energy Transition Act does not address carbon emissions in the built environment. Residential and commercial building emissions currently account for approximately 4% of New Mexico's greenhouse gas emissions, yet New Mexico has no policy framework to guide building electrification.[2]

Recognizing this gap, the Building Decarbonization Coalition and the Natural Resources Defense Council hired Gridworks to engage stakeholders to jointly develop a Building Decarbonization Roadmap for New Mexico. From May-December 2024, Gridworks convened approximately three dozen New Mexico organizations to identify building decarbonization policy priorities for the state. Meeting materials and the project timeline are available on the Roadmap initiative website.

Vision Statement

Roadmap participants developed the following vision statement to guide the initiative:

Eliminate all operational greenhouse gas emissions and pollution from New Mexico's residential and small commercial buildings by 2050. This is as a means to creating affordable, comfortable, healthy, efficient, and resilient homes for ALL New Mexicans, prioritizing low income, disadvantaged, and Tribal communities.

[2] New Mexico Priority Climate Action Plan, p. 3

Defining Building Decarbonization

Throughout this Roadmap, building decarbonization is defined as the process of reducing the greenhouse gas emissions that result from a building's operations. This is accomplished by:

- **making energy efficiency improvements (and energy use reductions) to a building; or**
- **replacing appliances that burn fossil fuels with all-electric alternatives (including furnaces, boilers, water heaters, clothes dryers, ovens, and wood/pellet stoves); and**
- **supplying the building with clean electricity.**

Project Scope

The Roadmap initiative prioritized residential and small commercial buildings because decarbonization actions in these two sectors most directly impact the day-to-day life of New Mexicans. Decarbonization measures where New Mexicans live and work are the most immediate ways to benefit residents' health, comfort, and household budget as called for in the vision statement. Decarbonizing homes and small businesses also helps to raise awareness for decarbonization possibilities in other sectors. [3]

Given this prioritization, participants agreed to the following parameters on project scope:

In Scope

- **Electrifying gas appliances**
- **Improving energy efficiency and weatherization**
- **Residential: single and multi-family**
- **Small and medium commercial**
- **Tribal communities**
- **Distributed Energy Resources deployment where there are synergies with building decarbonization**
- **Indoor air pollutants (CO_2, NOx, Particulates, SO_2, VOCs)**
- **Building requirements - new construction, EV and solar ready**

Out of Scope

- Embodied carbon from building materials
- Oil & gas, industrial, large commercial
- Gas system decommissioning
- Water consumption improvements that reduce the community's carbon footprint

[3] While all of these topics are important to reducing greenhouse gas emissions from the building sector, the Roadmap focuses on operational emissions from the residential and small commercial segments.

New Mexico Built Environment Profile

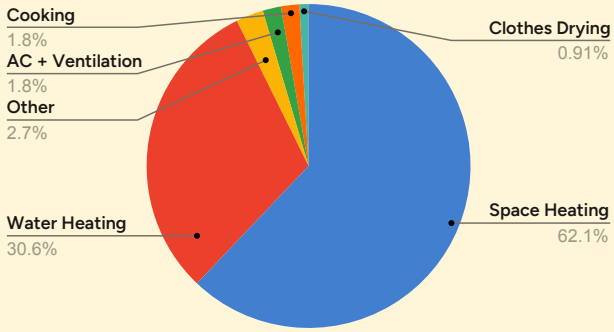
State Greenhouse Gas Emissions Profile

As New Mexico is a significant producer of oil and gas, emissions from this industry dominate the state's greenhouse gas emissions profile.[4] Residential and commercial buildings make up approximately 4% of greenhouse gas emissions in the state.[5] Emissions from New Mexico's buildings most directly impact residents' health, safety, and comfort and provide an opportunity to assist the state in meeting its economy-wide greenhouse gas emissions targets.[6]

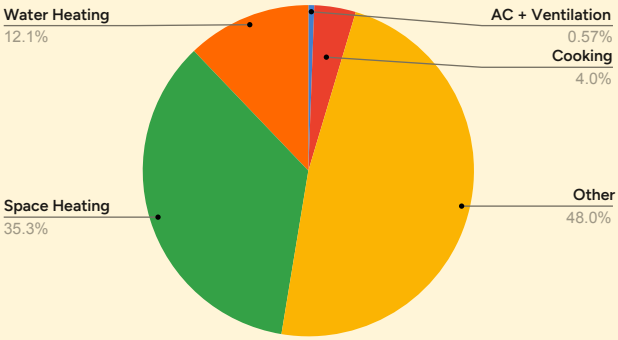
Building Operational Emissions

Space and water heating are the predominant source of operational emissions in New Mexico's buildings. In the residential sector, space and water heating are responsible for more than 90% of emissions and, in the commercial sector, almost half of emissions.[7] Additionally, approximately 68% of New Mexico households use gas or propane for home heating.8 This data suggests building decarbonization measures in New Mexico should prioritize space heating. Further, heaters are replaced approximately every 15 years, providing infrequent opportunities for end-of-life replacements.[9]

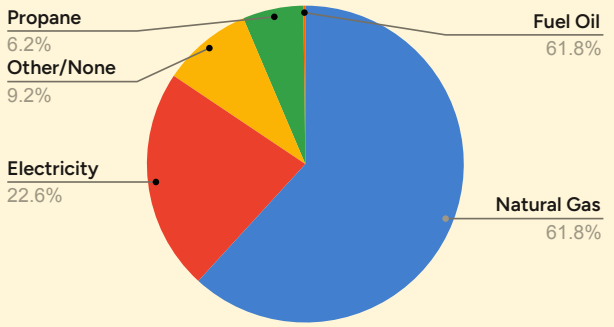
Greenhouse Gas Emissions by End Use in New Mexico's Residential Buildings



Greenhouse Gas Emissions by End Use in New Mexico's Commercial Buildings



Fuel Sources for Home Heating in New Mexico



[4] New Mexico is the second largest crude oil-producing state in the nation, behind Texas, and is one of the top 10 natural gas-producing states. Energy Information Administration, New Mexico State Profile, June 2024.

[5] New Mexico Environment Dept., New Mexico Priority Climate Action Plan, Mar. 1, 2024, p. 3.

[6] Governor Michelle Lujan-Grisham, Executive Order 2019-003, Jan. 29, 2019.

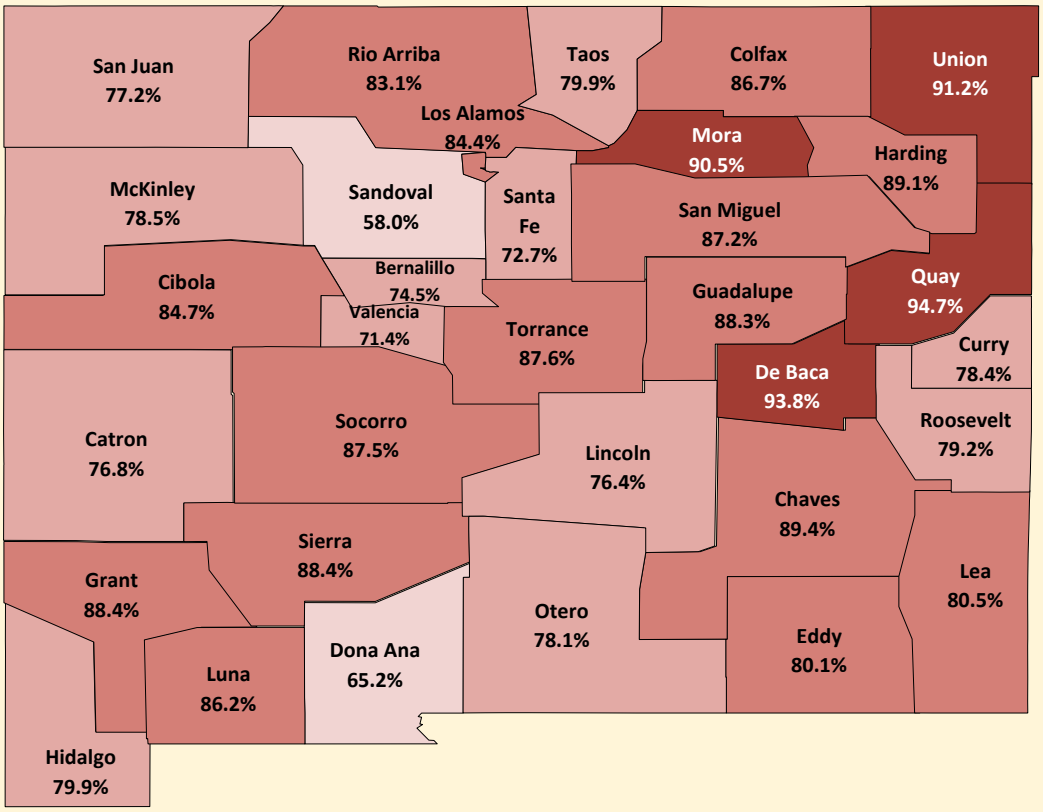
[7] Energy and Environmental Economics, Inc. (E3), New Mexico Greenhouse Gas Emissions Inventory and Forecast, October 2020, pp. 53-54.

[8] New Mexico Energy, Minerals and Natural Resources Dept., 2022 New Mexico State Energy Security Plan, Jun. 2022, p. 36.

[9] Larson et al., Net-Zero America: Potential Pathways, Infrastructure, and Impacts, Final Report Summary, Oct. 29, 2021, p. 23.

Infrastructure Readiness

New Mexico's building stock and socio-economic data also suggest the importance of weatherization and financing measures to support building decarbonization. 76% of New Mexico's homes were built before 2000, and older housing is particularly prevalent in New Mexico's rural counties.[10] Given the older building standards and codes under which two-thirds of New Mexico's homes were built, remediation and weatherization will be important precursors to home electrification. Additionally, 46% of New Mexico's households are low-income and may lack the funds to support home improvement projects.[11] Building decarbonization measures in the residential and small commercial sectors, therefore, must address the older building stock and limited financial resources of many residents.



Percentage of Homes Built Before 2000 in New Mexico Counties

Source: 2023 New Mexico Affordable Housing Needs Assessment, Figure 22.

[10] New Mexico Mortgage Finance Authority, Weatherization Presentation, Jun. 2024, p. 2.

[11] New Mexico Mortgage Finance Authority, 2023 New Mexico Affordable Housing Needs Assessment, 2023, p. 28.

Barriers to Achieving Residential and Small Commercial Building Decarbonization in New Mexico

In order to achieve the Roadmap vision, the following barriers must be overcome.

BARRIER

Low Awareness and Interest

Currently, there is a critical lack of awareness of and interest in decarbonization measures for residential and commercial buildings. Contributing factors include:

- Uneven and diffuse knowledge and programs make it difficult to know where to go for information
- Consumer demand for decarbonization technologies is not yet robust; consumers are unaware of the health impacts from combustion appliances
- Decarbonization technologies are unfamiliar; public hesitancy to invest in something new
- Difficulty in staying abreast of technological innovations related to decarbonization
- Contribution of residential and commercial builZdings to New Mexico's overall emissions is low (4%)

BARRIER

Low Perceived Customer Value

Customers (end users) do not see a clear value proposition to decarbonization measures. Contributing factors include:

- Information regarding appliance upfront costs and operational costs is not accompanied by quantitative benefits
- High complexity of applications for rebates, tax credits and incentives are confusing for customers and contractors
- Lack of customer understanding/interest in an energy audit to guide the appropriate sequence of comfort improvements
- Lack of access to tax credits/incentives/financing options to bring down the upfront cost; payback periods are too long
- Lack of tailored programs for different income groups or differentiation between rural versus urban needs.
- Split incentives between landlords and renters: landlords pay for the upfront costs, renters realize the operational benefits

BARRIER

Low Perceived Contractor Value

Designers, contractors, and builders do not see a clear value proposition. Contributing factors include:

- Low availability of professional and trades personnel trained in decarbonization options, installation methods, costs and benefits
- Lack of consumer demand for decarbonization solutions does not stimulate the market for contractors
- Contractor tendency to implement what they are familiar with (with change comes risk); contractor business model relies on predictability and avoiding service callbacks
- Not enough energy auditors to serve customers outside of major urban areas
- Exclusive focus on upfront construction cost for new homes/businesses
- Federal incentives are confusing and time-consuming to access; not paid out quickly enough for contractors' working cash needs
- Inventory and supply chain bottlenecks that limit product availability

BARRIER

Misaligned Policy

Existing building policies do not reflect the state's current greenhouse gas priorities. Contributing factors include:

- No guiding state policy to reduce building emissions
- Lack of rate designs that provide value for beneficial electrification or "smart appliances" that support the grid
- Lack of regulatory certainty for electric utilities regarding building electrification
- Incentives for natural gas expansion (including residential gas furnace and water heater replacements, mixed-fuel new construction, and gas line extension allowances) appear inconsistent with greenhouse gas emissions goals
- Lack of indoor air quality/comfort requirements (gas stoves, cooling)
- State building codes have been slow to keep pace with energy conservation updates
- The Public Regulation Commission does not evaluate the cost of externalities, such as greenhouse gas emissions and other pollutants

BARRIER

Infrastructure Readiness

The housing stock and the electricity infrastructure lack readiness for some decarbonization measures. Contributing factors include:

- Large inventory of old homes and mobile homes are likely to need weatherization and/or electrical improvements prior to decarbonization measures
- Increased building electrification with simultaneous demand changes such as transportation and industrial electrification could stress the existing electric systems
- Need for distribution grid modernization

Goals and Actions to Overcome These Barriers

Inverting the barriers into goal statements, New Mexico can take actions immediately to overcome these barriers.

Actions in bold were identified by participating organizations as priorities for New Mexico and are discussed in more detail in the next section.

Goals and Actions

GOAL 1

Increase public awareness of and interest in building decarbonization technologies

Proposed actions

1. Build a clearinghouse website – consolidate information regarding incentives and rebates, building from the Energy Conservation and Management website
2. Develop state funded energy coaches and a Climate CORPS
3. Fund a state education campaign with trusted voices, tailored to different constituencies (highlighting the health benefits of electrifying)
4. Create a core curriculum - for use by large employers, community-based organizations, chambers of commerce; a standard curriculum to inform about building decarbonization

GOAL 2

Increase the value customers receive from adopting building decarbonization measures

Proposed actions

1. **Develop on-bill options to reduce upfront equipment costs**
2. **Prioritize cash incentives at point of sale**
3. Develop a universal application for decarbonization programs
4. Require energy cost disclosures by landlords

GOAL 3

Strengthen the contractor value proposition with a comprehensive program of education, engagement, and empowerment

Proposed actions

1. **Provide free training on building decarbonization technologies to licensed tradespeople**
2. Create more Building Performance Institute certified training centers around New Mexico; Santa Fe Community College is currently the only certified site in the state
3. Consolidate information and educate contractors on available initiatives/ programs/approved contractor lists
4. Expand the training pipeline for energy auditors and inspectors

GOAL 4

Establish state policies that better incentivize greenhouse gas reductions in the residential and small commercial building sectors

Proposed actions

5. Automatically update the building codes within 1-year after International Energy Conservation Code release
6. **Strengthen gas planning at the Public Regulation Commission to enable a future clean heat standard**
7. **Explore beneficial electrification rate design at the Public Regulation Commission**
8. Require lenders to consider home energy savings in mortgage approvals
9. Expand the severance tax fund to cover environmental clean up (to address the cost of externalities)

GOAL 5

Prepare New Mexico's electric grid and housing stock for future electrification

Proposed actions

1. Conduct a study of housing stock deferred maintenance issues to establish a baseline for how many homes get deferred for electrification because of remediation needs
2. **Support grid modernization efforts and distribution system upgrades**
3. Launch a rulemaking to improve distribution system planning
4. Expand the Community Energy Efficiency Development block grant to help low income homes do home repairs and energy efficiency improvements

Priority Actions and Recommendations

In order to eliminate greenhouse gas emissions and pollution from New Mexico's residential and small commercial buildings by 2050, the state should prioritize the following actions and associated recommendations.

Develop on-bill options to reduce upfront equipment costs

Action type: Regulatory

Lead entity: Rural Cooperatives Served by Tri-State Generation and Transmission

Support entities: Public Regulation Commission, Elected Officials, Environmental Groups, Industry & Manufacturers

To increase customer value from building decarbonization measures, the state should prioritize the development of on-bill financing options. On-bill financing is a mechanism whereby utilities provide upfront capital for energy efficiency improvements, and customers repay the investment through charges on their regular utility bills. Tri-State Generation and Transmission launched an on-bill program with their Colorado distribution cooperatives in 2024 and is expected to expand it to their New Mexico member cooperatives in 2025.

New Mexico should prioritize Tri-State's on-bill program launch and establish a venue for sharing relevant experiences with other utilities, including investor-owned, municipal, other cooperatives (not affiliated with Tri-State), and tribal utilities. Tri-State is grappling with many program uncertainties such as rate case requirements, unpaid balances, collections, and the possible need for a loan loss reserve fund. Potential sources to fund the additional staff and oversight to administer on-bill options could come from the cooperatives' community benefits funds or the Climate Investment Center. Other programmatic questions include the simplicity of the application process for customers and the ability to stack federal, state, and utility incentives with on-bill options.

As Tri-State tackles these questions in its program roll-out, other utilities should learn from Tri-State's experience in anticipation of a future on-bill option. New Mexico should support Tri-State as it launches its program in 2025 and support a regular venue for on-going program information sharing with other utilities and interested parties.

Another avenue to increase customer value from building decarbonization measures is to make home energy audits more available and affordable for New Mexicans. A home energy audit is a crucial first step to understand a home's energy use, best direct home improvement investments, and in some cases, is required to redeem federal rebates. However, New Mexico has a severe shortage of energy auditors (few outside of Albuquerque) and the out-of-pocket cost is high. Energy audits cost $600-$1,000 per residence, often causing homeowners to forgo an audit and not understand the highest value home efficiency improvements for their home.

Many other states waive energy audit fees under state grant programs, utility energy efficiency incentives, or other sources. New Mexico should establish a similar mechanism; potential options include a cost-share arrangement between the utility and homeowner (borrowing from an energy performance contract model), amortizing the cost of energy audits via property taxes, or amending utility energy efficiency plans to allow utilities to offer energy audit rebates.

Recommendation: Support Tri-State's on-bill program roll-out in 2025 and convene a regular information sharing forum for other utilities and interested stakeholders to learn about on-bill options.

Recommendation: Establish a mechanism to eliminate or reduce a homeowner's out-of-pocket cost for an energy audit.

Prioritize cash incentives at point-of-sale

Action type: Administrative

Lead entity: Energy Conservation and Management Division (Energy, Minerals, and Natural Resources Dept.)

Support entities: Equipment manufacturers, distributors, and vendors

To increase customer value from building decarbonization measures, New Mexico should accelerate work already begun by the Energy Conservation and Management Division (ECAM) to provide cash incentives at point-of-sale. In September 2024, ECAM launched a point of sale rebate (coupon) for low income customers to purchase and self-install home insulation. The coupon is funded through the federal Home Energy Efficiency and Appliance Rebate program and publicized on ECAM's new clean energy website.

New Mexico should expand ECAM's early success by developing a midstream rebate submittal program. This type of rebate program allows a homeowner to sign federal energy efficiency or appliance rebates over to a contractor and subtract the rebate amount from the work order. This reduces the total upfront cost and paperwork burden for the homeowner and makes service jobs more attractively priced for the contractor. However, a midstream rebate submittal program requires a central entity, such as a state energy office, to act as the clearinghouse, registering approved contractors, managing the flow of money through rebates and reimbursements, and ensuring consumer protections. These programs require transparency, customer education, consumer protection oversight, and website maintenance. ECAM's clean energy website and program staff are a good first step from which to launch a midstream rebate submittal program.

Recommendation: Develop a midstream rebate submittal program administered by ECAM and provide adequate staff and resources to support the program.

Provide free training on building decarbonization technologies to licensed tradespeople

Action type: Administrative

Lead entity: Educational and training institutions

Support entities: Energy Conservation and Management Division (Energy, Minerals and Natural Resources Dept.)

To strengthen the contractor value proposition from building decarbonization measures, New Mexico should prioritize contractor training on heat pump home heating technology and energy auditor certification. Vocational institutions in the state report contractor hesitancy to install heat pumps due to unfamiliarity with the technology, concern for higher service callback rates, and becoming overwhelmed with the myriad of rebates and incentives. As space heating is a significant source of greenhouse gas emissions in residential and small commercial building operations (see section IV above), providing low-cost, easy-to-access heat pump training to contractors should be a high priority. Additionally, as noted above, New Mexico also has a severe shortage of energy auditors; a home energy audit is a crucial first step to identify the highest value energy efficiency investment for a home.

Santa Fe Community College (SFCC) has training programs to address both contractor heat pump training and energy auditor certification. These programs have established curriculum, low or no-fee tuition, provide continuing education credits and/or classroom support services. Other areas of the state would benefit from collaborating with SFCC to expand these training programs. This should include a stable funding source to cover tuition, program administration costs, testing and certification fees, equipment to complete the necessary training, and marketing for the program. Renovating SFCC's mobile classroom so that it can bring its programs to local partners and providing a per diem stipend for the 1-day heat pump training should also be considered.

Recommendation: Expand Santa Fe Community College's heat pump training program and energy auditor certification program to other educational and training institutions around the state. Secure a stable funding source to provide all aspects of these trainings.

Strengthen gas planning at the Public Regulation Commission to enable a future clean heat standard

Action type: Regulatory

Lead entity: Public Regulation Commission

Support entities: Gas utilities, environmental organizations

To establish state policies that better incentive greenhouse gas reductions, the state should prioritize a more robust gas planning process at the Public Regulation Commission (PRC). Current regulations require gas utilities to file integrated resource plans at the PRC every four years.[12] These plans focus on system conditions and fuel supply options, offering limited information about capital investment plans and possible alternatives. And while a public advisory process is required by rule, public input and scrutiny of gas plans is also limited. The gas planning process should be reformed at the PRC to strengthen data requirements as a first step toward setting a viable clean heat standard.

To enhance the integrated resource plan filings, natural gas utilities should be required to provide several additional analyses, including 20-year load forecasts with scenarios and sensitivities, a non-pipeline alternative analysis that compares alternatives to meet system needs, a capital expenditure plan, and maps illustrating expected customer growth and anticipated investments. All of these should be critically reviewed to determine the least cost, most beneficial project, including where electrification or energy efficiency could be reasonably substituted. The public engagement standard in the PRC gas planning rules should also be strengthened to require a more robust public input process. These additional reporting and public engagement requirements should serve as information gathering to prepare the state to consider a clean heat standard in the future.

Recommendation: Amend the PRC's integrated resource planning rules for gas utilities to strengthen reporting requirements on load forecasting, non-pipeline alternative analyses, capital expenditures, and public engagement expectations.

Explore beneficial electrification rate design at the Public Regulation Commission

Action type: Regulatory and Legislative

Lead entities: Public Regulation Commission and Elected Officials

Support entities: Electric utilities and environmental organizations

To establish state policies that better incentive greenhouse gas reductions, the New Mexico Public Regulation Commission should open an inquiry to establish beneficial electrification rate design principles to guide future rate applications. Beneficial electrification technologies, particularly space heating, could dramatically alter customer usage patterns, load shapes, and utility bills. Considerable thought must be given to the rationale and desired goal of a beneficial electrification rate and the price signals it will send to shape customer behavior. The Public Regulation Commission should lead an inquiry to establish this rationale and guide utilities as they consider beneficial electrification rate proposals.

The Public Regulation Commission recently concluded an inquiry on Regional Market Participation that can serve as a model for such an inquiry.[13] Applying a similar workshop series to explore beneficial electrification issues, such as anticipated impacts, candidate programs, appropriate use cases, metering and software requirements, and experiences from other states, would be useful. The inquiry should culminate in Commission principles that are used to guide future utility beneficial electrification rate proposals.

Recommendation: Open an inquiry at the Public Regulation Commission to establish beneficial electrification rate guiding principles.

[12] Sect. 17.7.4 NMAC

[13] See NM PRC docket no. 23-00268-UT.

Support grid modernization efforts and distribution system upgrades

Action type: Combination of legislative, regulatory, and administrative

Lead entities: Public Regulation Commission, elected officials, and Energy Conservation and Management Division (Energy, Minerals and Natural Resources Dept.)

Support entities: Utilities and industry

New Mexico should increase the speed and scale of grid modernization efforts already underway at state agencies to prepare New Mexico's electric grid for future electrification. Grid modernization entails integrating advanced technologies such as smart meters, automated controls, and real-time monitoring systems to facilitate grid management and distributed energy resource integration. Energy, Minerals and Natural Resources Dept.'s Grid Modernization Grant Program funds a small number of projects for public entities including pilot projects, preliminary design and scoping efforts, and research studies; this successful grant program should be prioritized for additional state funding. Also, utilities may file grid modernization project applications with the Public Regulation Commission; however, approvals for such projects have been slow. The state's grid modernization provisions are currently being re-evaluated.[14] The Public Regulation Commission should be adequately supported to accelerate plan review timelines.

The state should also identify one entity that is responsible for securing and coordinating state and federal funding for accelerated grid modernization programs.

Distribution system upgrades include improvements to essential hardware components such as service transformers, poles, conductors, switchgear, breakers, protectors, interrupters, relays, and substation transformers. While related to grid modernization, distribution system upgrades should also be prioritized in utility rate cases and distribution system plans.

> **Recommendation:** Accelerate grid modernization programs at the Energy, Minerals and Natural Resources Dept. and the Public Regulation Commission. Authorize and staff one agency to serve as the coordinating entity for both federal and state grid modernization funding efforts.

[14] As of Dec. 2024, the Public Regulation Commission was accepting comments on grid modernization rules, including a provision to require regular grid modernization plans from utilities. See NM PRC docket no. 22-00089-UT.

Actors

To implement the priority actions identified in **sect. VII**, the following entities are critical to success.

L = suggested lead entity

I = implementing entity

S = supporting entity

PRIORITY ACTIONS	Public Regulation Comm.	Legislature/ Elected Officials	Utilities (IOUs & Coops)	Educational and Training Institutions	Environ-mental Organizations	State Agencies	Industry, manufacturers, & vendors
Develop on-bill options to reduce upfront equipment costs	S	S	L		S	S	S I
Prioritize cash incentives at point-of-sale			S	S I		L I ECAM	S
Free tech training to trades			S	L I Santa Fe CC	L SWEEP	S CID, ECAM	S
Strengthen gas planning at the Public Regulation Commission to enable a future clean heat standard	L	L	I Gas Utilities	S	I		
Explore beneficial electrification rate design	L	L	S I		S		
Support grid modernization efforts and distribution system upgrades	L S	L	I			L S	S

Conclusion

In order to reach the Roadmap vision to eliminate operational greenhouse gas emissions from New Mexico's residential and small commercial buildings by 2050, the state should: Increase public awareness of and interest in building decarbonization technologies;

- **Increase the value customers receive from adopting building decarbonization measures;**
- **Strengthen the contractor value proposition with a comprehensive program of education, engagement, and empowerment;**
- **Establish state policies that better incentivize greenhouse gas reductions in the residential and small commercial building sectors; and**
- **Prepare New Mexico's electric grid and housing stock for future electrification.**

This Roadmap offers several priority actions and recommendations to effectuate these goals. If implemented in the next few years, these actions will reduce building emissions and accelerate progress toward the 2050 vision.

X. Appendix - Resources to Speed the Priority Actions and Recommendations

The following resources highlight legislation and state utility commission decisions from other jurisdictions that have adopted measures similar to the recommendations provided herein.

Prioritize cash incentives at point-of-sale

- California Technology and Equipment for Clean Heating (TECH) Program – TECH is a ratepayer-funded program that offers upfront cash incentives for heat pumps when customers purchase through TECH-enrolled contractors. The TECH program was authorized by the California Public Utilities Commission Decision 20-03-027.
- Efficiency Maine – Through the Efficiency Maine program, customers can receive an instant discount on heat pumps when purchased through participating installers or retailers. Maine Title 35-A, §10103 establishes the Efficiency Maine Trust.
- Eversource Pilot Program – The Massachusetts Department of Public Utilities authorized a neighborhood-scale electrification pilot project in Case 19-120. The Eversource Pilot Program offers ground-source heat pumps to residents at no direct cost and is a high-profile example of neighborhood-scale electrification.
- State programs:
  - Mass Save HEAT Loan
  - California Equitable Building Decarbonization Program

Provide free training on building decarbonization technologies to licensed tradespeople

- Massachusetts Clean Energy Workforce Equity Program

Strengthen gas planning at the Public Regulation Commission to enable a future clean heat standard

- Colorado Clean Heat Legislation – Colorado Senate Bill 21-264 establishes a timeline by which gas utilities are required to reduce greenhouse gas emissions in customers' homes. Xcel, the state's largest utility, is now directed to meet the program's requirements through investments in efficiency and electrification. For implementation decisions, see the Colorado Public Utilities Final Rule and PUC Info.

- Massachusetts Non-Pipeline Alternatives Evaluation – The Massachusetts Department of Public Utilities requires local gas distribution companies to consider non-pipeline alternatives for all projects through Order 20-80-B. Non-pipeline alternatives may include electrification, efficiency, and demand response measures.
- Studies and other materials:
  - Building Decarbonization Coalition, BDC Presents: The Future of Gas
  - Building Decarbonization Coalition, New Construction and the Future of Gas in Massachusetts
  - Building Decarbonization Coalition, The Future of Gas in Illinois
  - E3, Next Steps for Gas System Planning in California
  - Energy Futures Group, A Comparison of Clean Heat Standards: Current Progress and Key Elements

Explore beneficial electrification rate design at the Public Regulation Commission

- California Income Graduated Fixed Charge – The California Public Utilities Commission (CPUC) authorized an income-graduated fixed charge rate design in Decision 24-05-028. Ratepayers are separated into three income-graduated tiers and assigned a fixed charge. Pulling a fixed charge out of electricity bills lowers the volumetric rate, or incremental cost of electricity consumption.
- PG&E Electric Home Rate Plan (E-ELEC) and Southern California Edison Time-Of-Use (TOU) D-PRIME Rate Plan – E-ELEC and TOU-D-PRIME allow customers to opt-in to high differential time-of-use dependent electricity rates. These rate designs were designed so customers with flexible electric loads could access electric rates that were competitive with gas at off-peak times. Subsequent rises in electric revenue requirements have sacrificed some of this comparative economic edge against gas.

Support grid modernization efforts and distribution system upgrades

- Powering Up Californians Act – California Senate Bill 410 requires utilities to upgrade their distribution systems in alignment with state decarbonization goals. The bill also directs the California Public Utilities Commission to establish and enforce target energization timelines.
- Colorado Modernize Energy Distribution Systems Act – Colorado Senate Bill 24-218 directs Xcel, the state's largest utility, to upgrade their distribution system as necessary to support the state's decarbonization goals, subject to Colorado Public Utilities Commission oversight.

BUILDING
DECARBONIZATION
COALITION

GRIDWORKS