



# New Mexico Climate Change Task Force

Five-Year Emissions Reduction  
Plan Progress

# Climate Change Task Force Planning Objectives

Align climate action goals to:



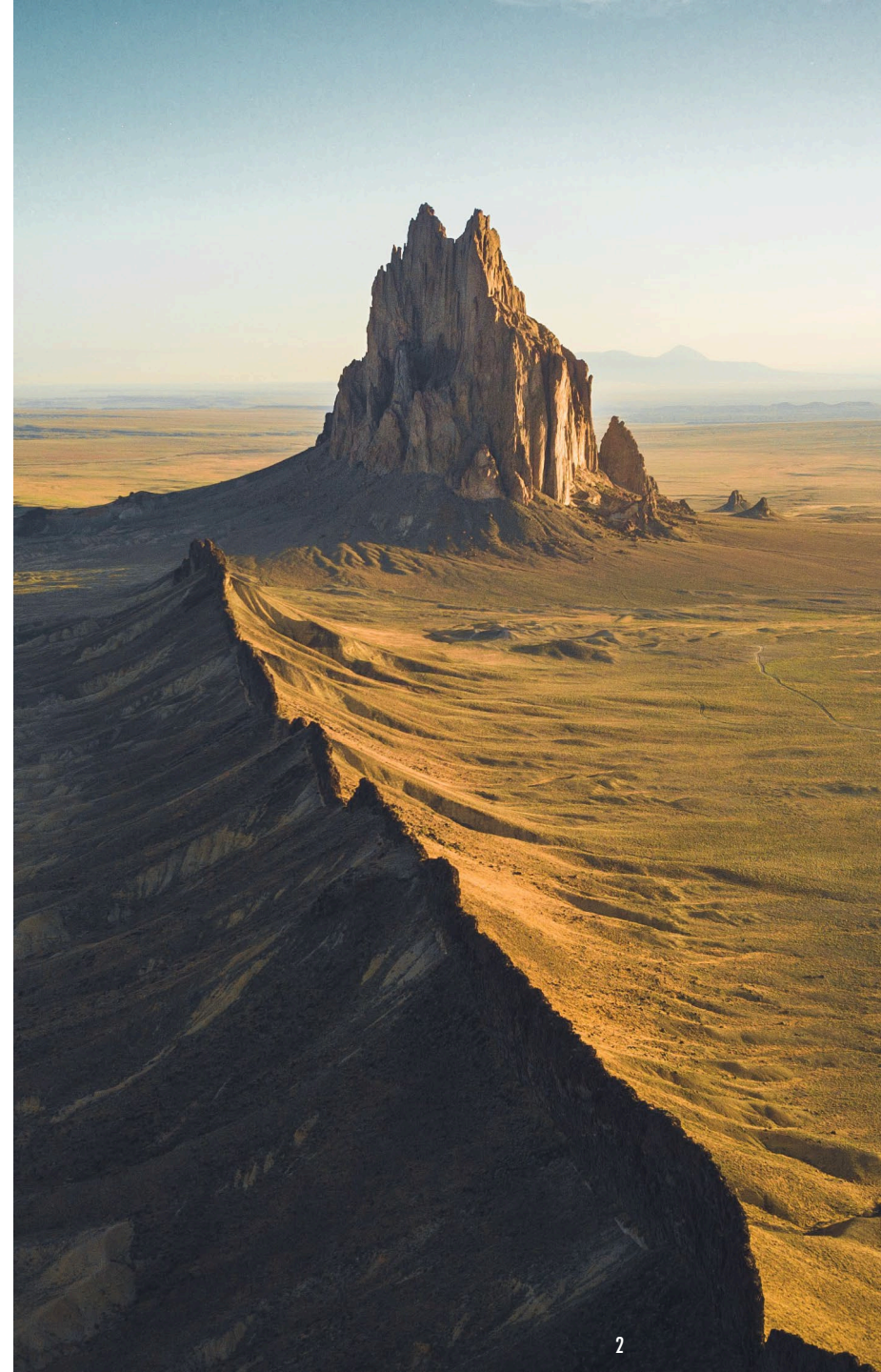
**A 5-year time horizon with an eye on 2030**



**The scale of the challenge in the Decisive Decade**



**The SMART goal framework**



# New Mexico Energy Policy Simulator

*Identifies what policies are needed to meet climate goals*



## A real-time model of emissions/economic impacts

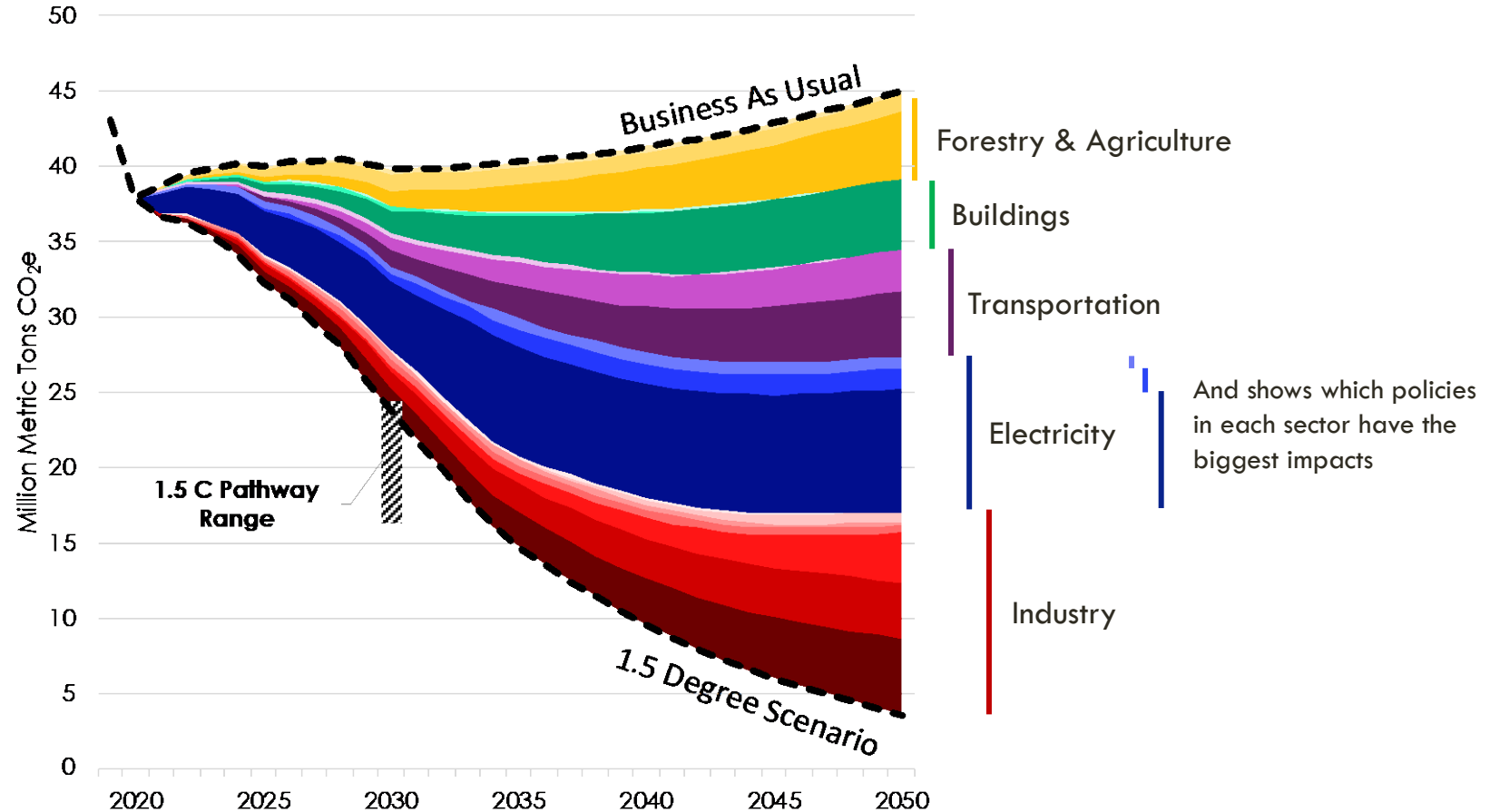
- Unparalleled interactivity for use in a variety of settings
- Users can build scenarios by combining policies
- Measures the impact of individual policies and *policy interactions*



## Free, public, open-source, and easy to use

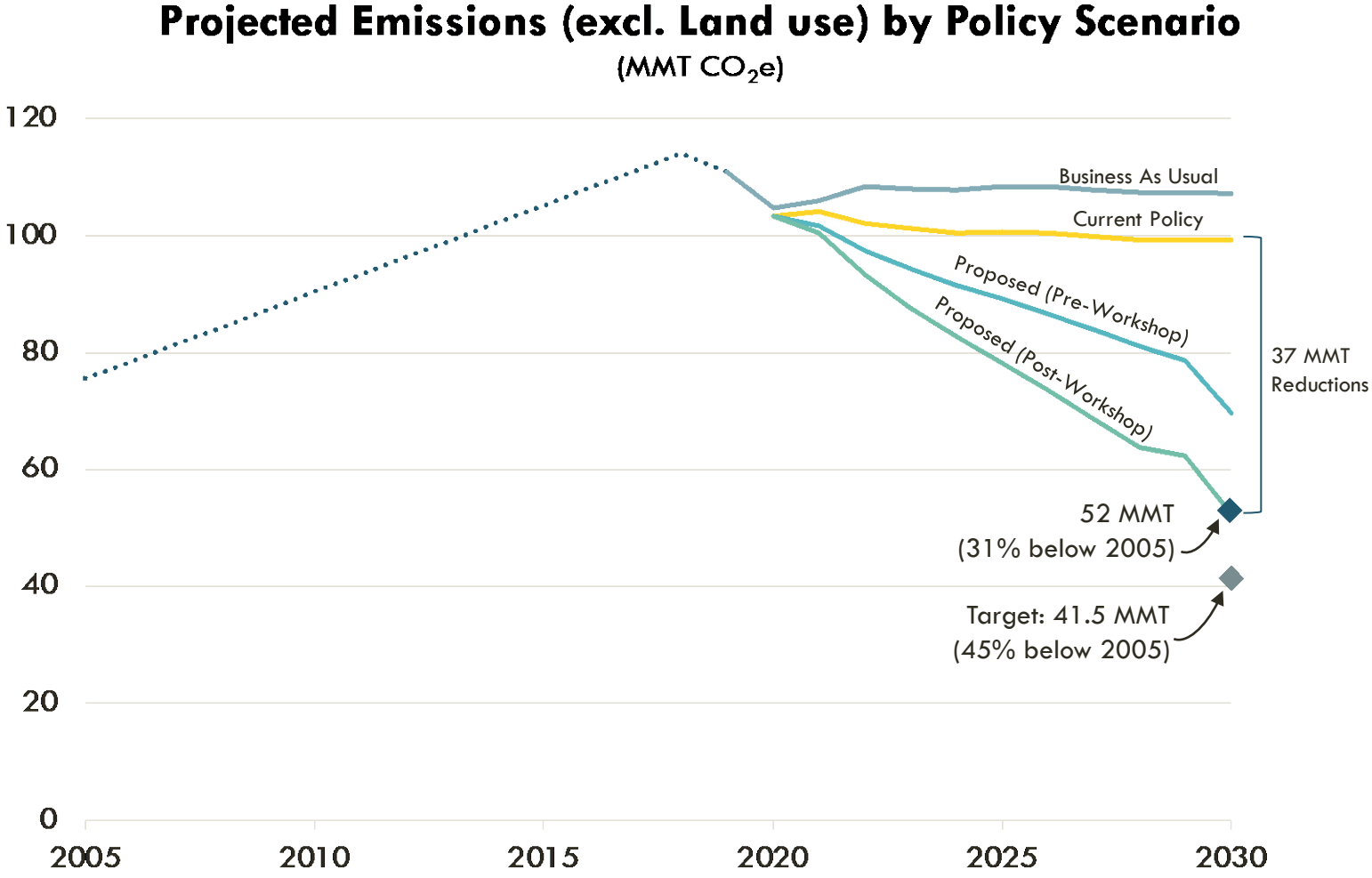
- Based on publicly available data
- Peer-reviewed and transparent methodologies

## GHG Reductions by Policy



# New Mexico has identified ambitious goals

*Now is the time to lock them in with strong follow through*



Workshop participants identified goals that will deliver an **additional 17 MMT** in emissions reductions by 2030 if implemented.

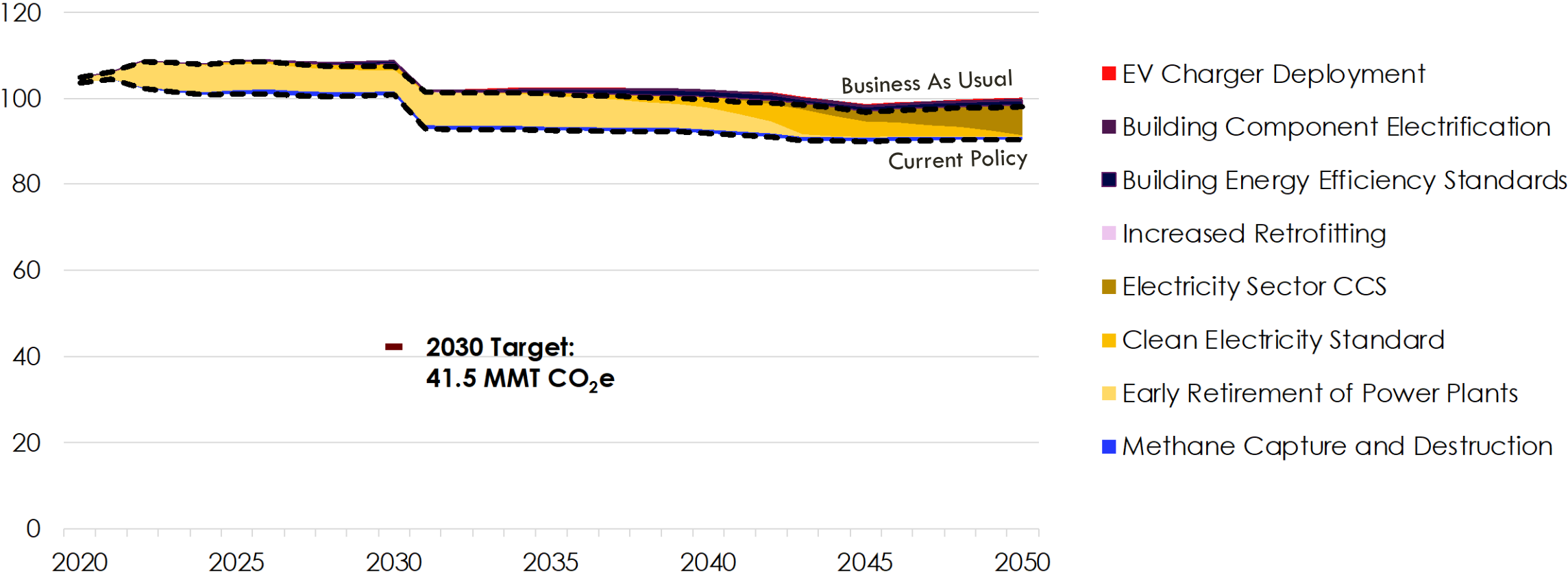
**All proposed policies will unlock 37 million metric tons (MMT) carbon dioxide equivalent (CO<sub>2</sub>e) of reductions in 2030 if implemented.**

These goals (plus current policy) also lead to net jobs increases, over 1,000 premature deaths avoided, and over \$4 billion in annual health benefits by 2030

# New Mexico has made significant electricity sector progress

*The Energy Transition Act lays the groundwork for carbon-free electrification of other sectors*

### Current Policy Scenario – Wedge Chart (MMT CO<sub>2</sub>e)

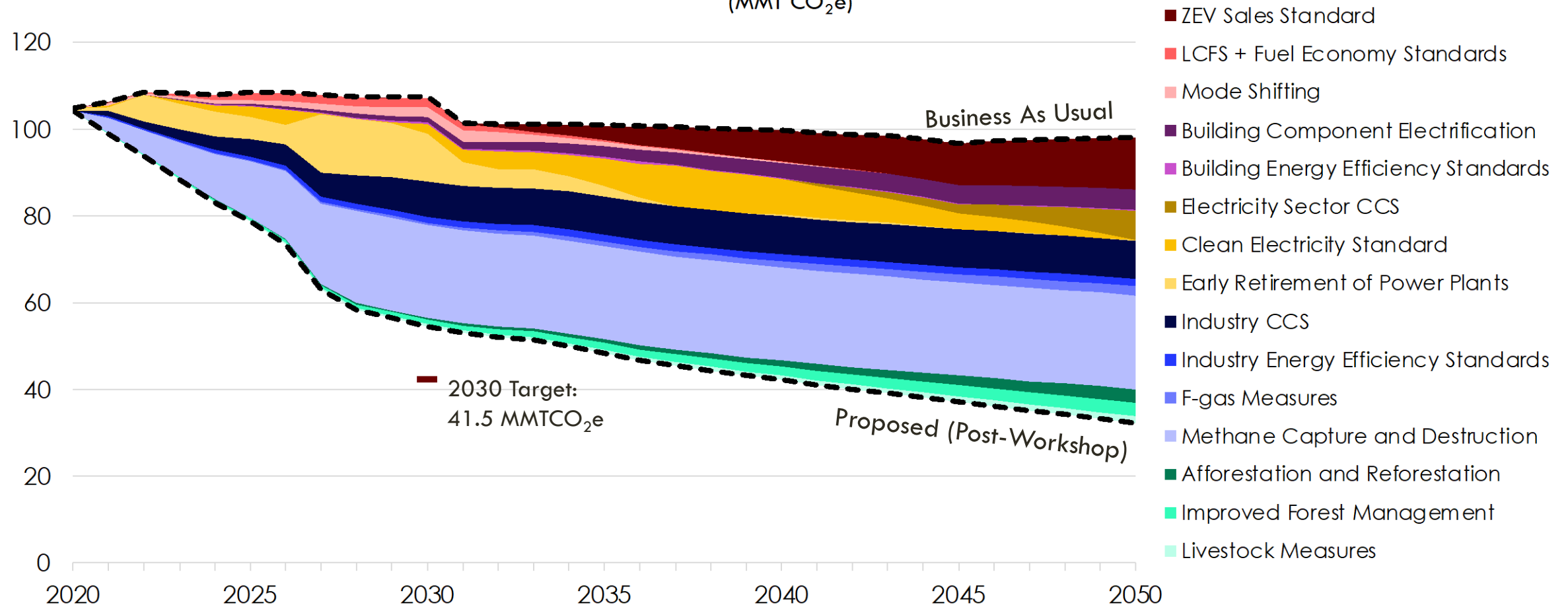


# Oil and Gas remains the most critical sector for progress

*Continuing to build on the momentum of recent rulemakings is critical*

## Proposed Policy (Post-Workshop): Policy Wedge

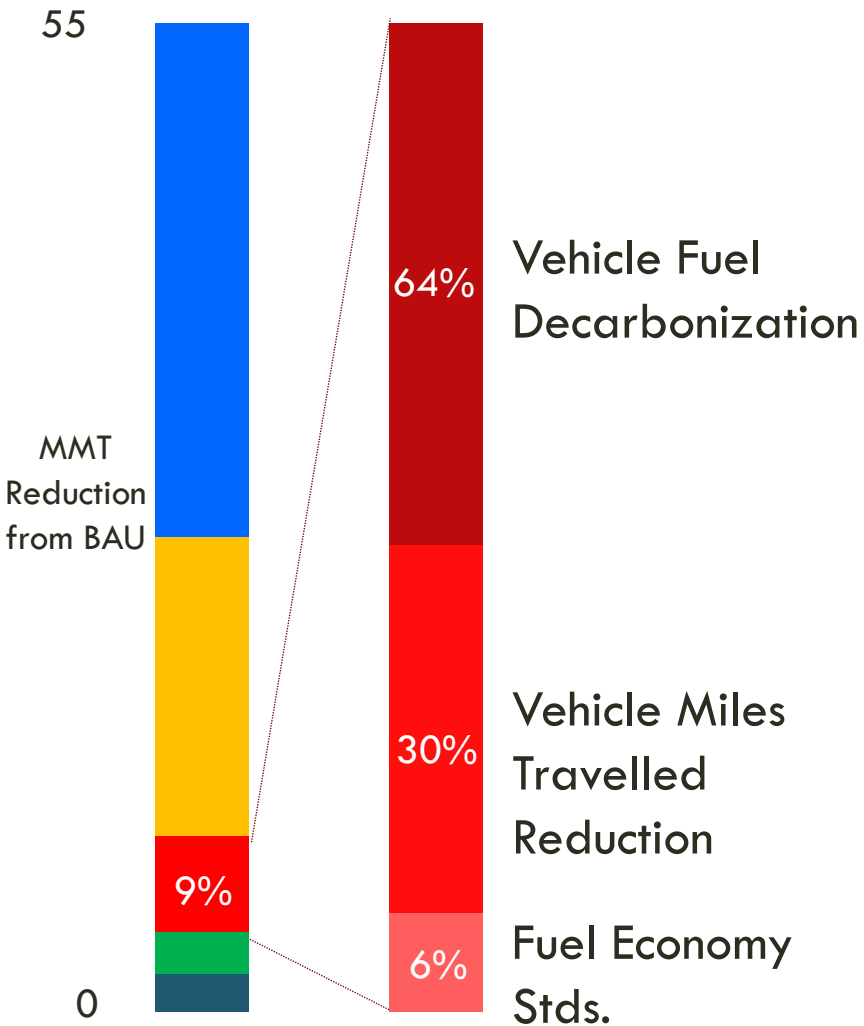
(MMT CO<sub>2</sub>e)



# Transportation policies can reduce 2030 sector emissions by 26% from Business as Usual (BAU) and 35% from 2005

## Primary Goals

## Critical Enabling Actions



Reach 500,000 (~25%) zero-emission light-duty vehicles on the road by 2030

Reach 15,000 (~25%) zero emission medium- and heavy-duty trucks and buses on the road by 2030

Achieve 20% reduction in fuel carbon intensity (CI) by 2030 via a Clean Fuel Standard (CFS)

Reduce light-duty vehicle miles traveled by 20% by 2030

Reach 2,000 DC Fast Charger (DCFC) stations in New Mexico by 2030 across public and private sector investments

Replace or complement the gas tax with an alternative mechanism for funding road maintenance and construction by 2026

# Possible milestones to achieve Transportation goals

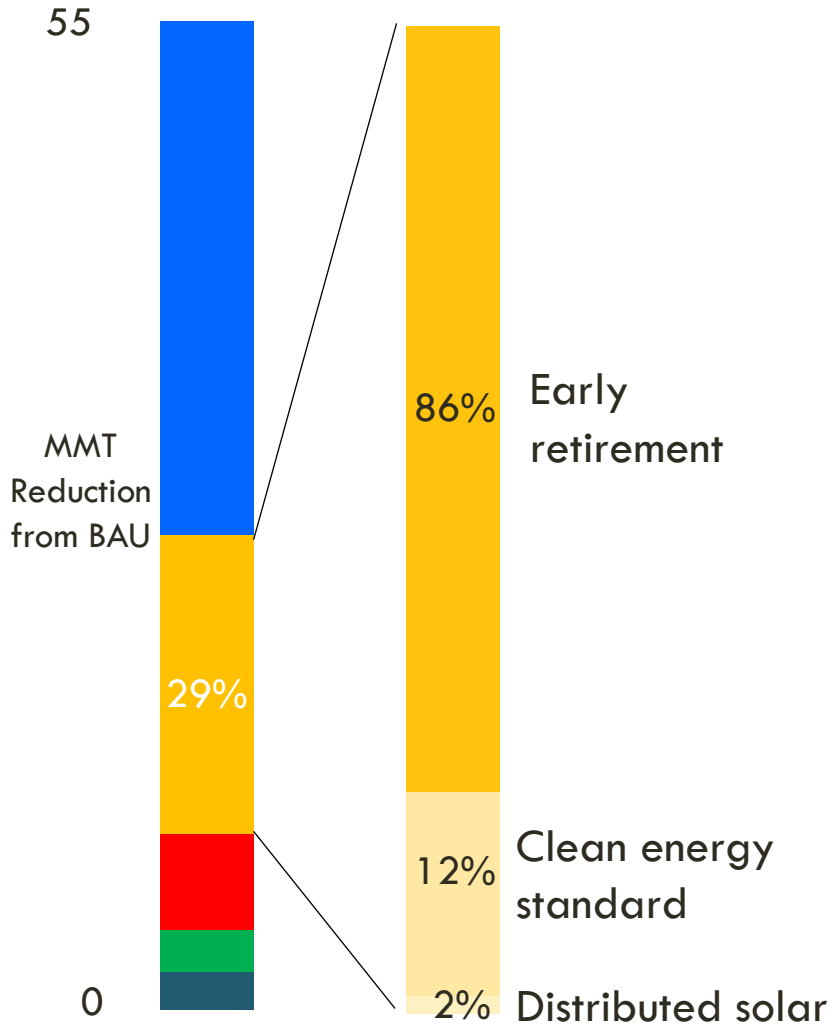
- Pass and implement the Clean Fuels Standards Act to reduce carbon intensity to at least 20% by 2030
- Additional clean car rulemakings for NMED, e.g. Advanced Clean Cars II and Advanced Clean Trucks, as soon as 2023
- Funding or finding 3rd party partners to fund incentive programs for electric vehicles AND charging infrastructure
- Education and pilot program initiatives for EVs, hydrogen heavy-duty vehicles



# Electricity policies can reduce 2030 sector emissions by 71% from BAU and 68% from 2005

## Primary Goals

## Critical Enabling Actions



Promote development of 11 GW of total renewables operating by 2030 (7 GW solar, 4 GW wind)

Enable universal clean electricity access for all New Mexicans by 2030

### Electricity Sector Notes:

Nearly all of the 2030 emissions reductions highlighted here are attributable to the ETA. Goals identified in workshops reduce cumulative emissions and support further emissions reductions post-2030

Deploy 6 GW transmission capacity by 2030 to connect new renewables to export hubs and coordinate statewide transmission planning

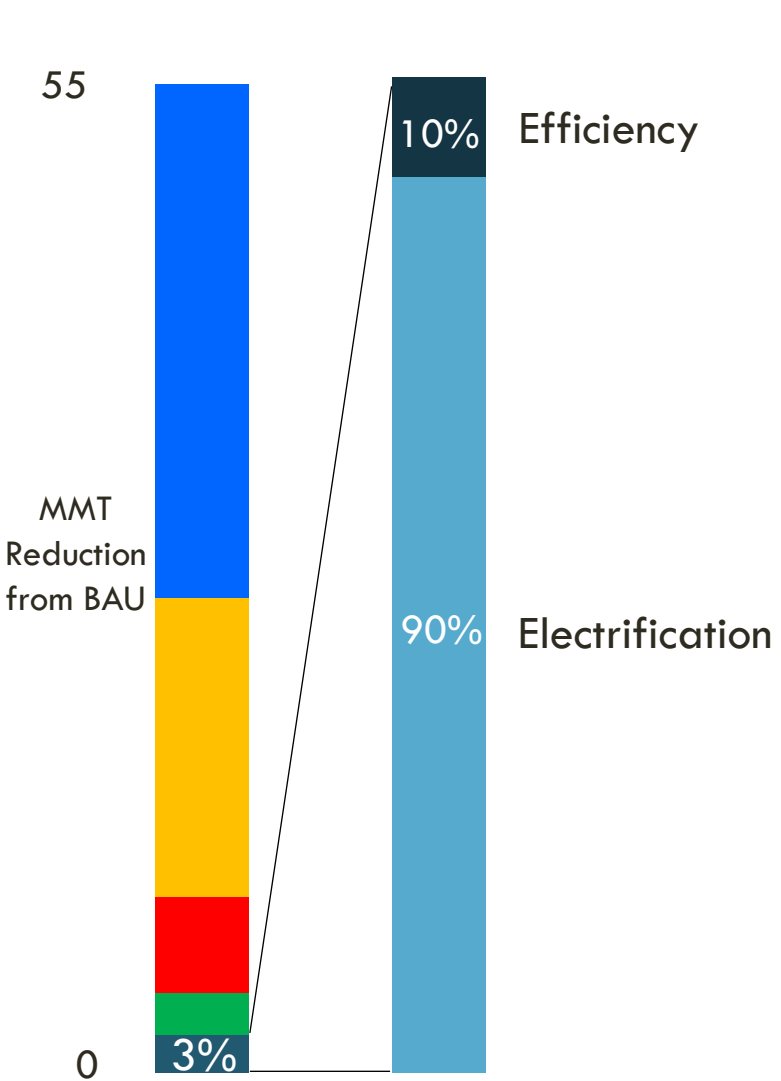
Incorporate distributed energy resources (DERs) integration and distribution system upgrades in state and PRC planning

Advocate for New Mexico's interests in western states' dialogue around regional electricity coordination.

# Possible milestones to achieve Electricity goals

- Sustain ongoing EMNRD initiatives – ETA implementation, regional coordination dialogues, grid modernization
- Legislate energy storage procurement target, e.g. 1 GW by 2026, or other action to drive energy storage deployment
- Develop strategy to streamline renewable project permitting across jurisdictions, potentially working with a local government to develop a model process other local govts can adopt
- Identify households without electricity access, in order to develop and fund a program or partnerships to enable universal electricity access across NM
- Establish a formal process for identifying priority transmission corridors and statewide transmission planning process

# Building policies can reduce 2030 sector emissions by 33% from BAU and 31% from 2005



## Primary Goals

- Electrify a third of the space and water heating in buildings by 2030 by providing financing and incentives
- Establish legislation requiring 100% fuel switching of gas space and water heating systems at end-of-life by 2023
- Establish a building performance standard by 2023 that drives a 33% reduction in commercial gas consumption by 2030
- Develop and incentivize the adoption of an all-electric, net-zero-carbon stretch code that is adopted by municipalities representing 50% of New Mexico's population by 2025

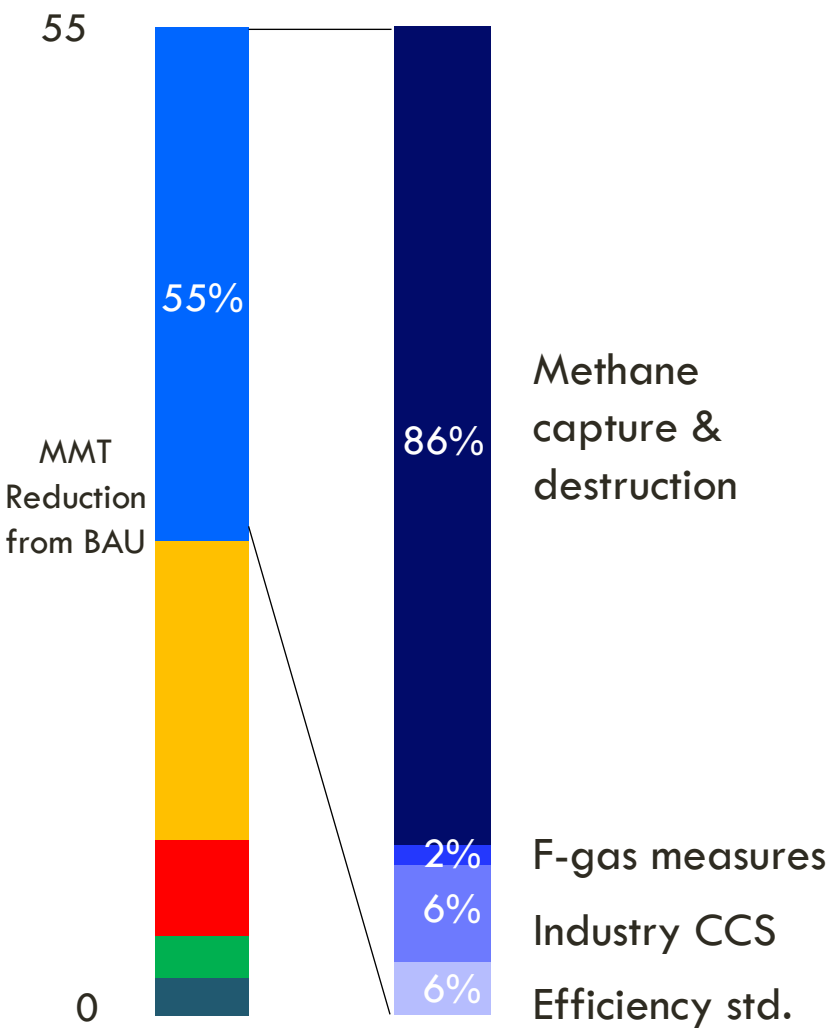
## Critical Enabling Actions

- Establish legislation that ensures an equitable transition of the gas infrastructure system, with steps to begin in 2023
- Establish regular energy code updates and progress toward adopting a state base code that requires all new buildings to be all-electric by 2030

# Possible milestones to achieve Buildings goals

- Implement and build on builder and trade training programs on codes
- Identify where existing programs (state, utility, or federal) can be expanded or refocused to meet space and water heating electrification needs (especially for LMI and underserved communities), where new programs need to stand up/secure funding
- Legislative action to establish authority for energy standards for existing buildings
- Research other funding mechanisms, such as green banks, that can help bridge the gap of funding for electrifying homes and buildings

# Industrial policies can reduce 2030 sector emissions by 58% from BAU



## Primary Goals

- Achieve 50% reduction of Industrial/O&G CO<sub>2</sub> by 2030 (based on 2018 inventory) through carbon capture and hydrogen (H<sub>2</sub>)
- Vision Zero – Remediate all existing abandoned infrastructure by 2030 (half by 2025)
- Reduce the operational intensity of methane and carbon from oil & gas production by 60% from a 2020 baseline by 2025

## Critical Enabling Actions

- Create one hydrogen hub in New Mexico by 2028
- Industry Sector Notes:**  
If all proposed industrial policies are implemented, industrial sector emissions will still be roughly 2% higher than 2005.

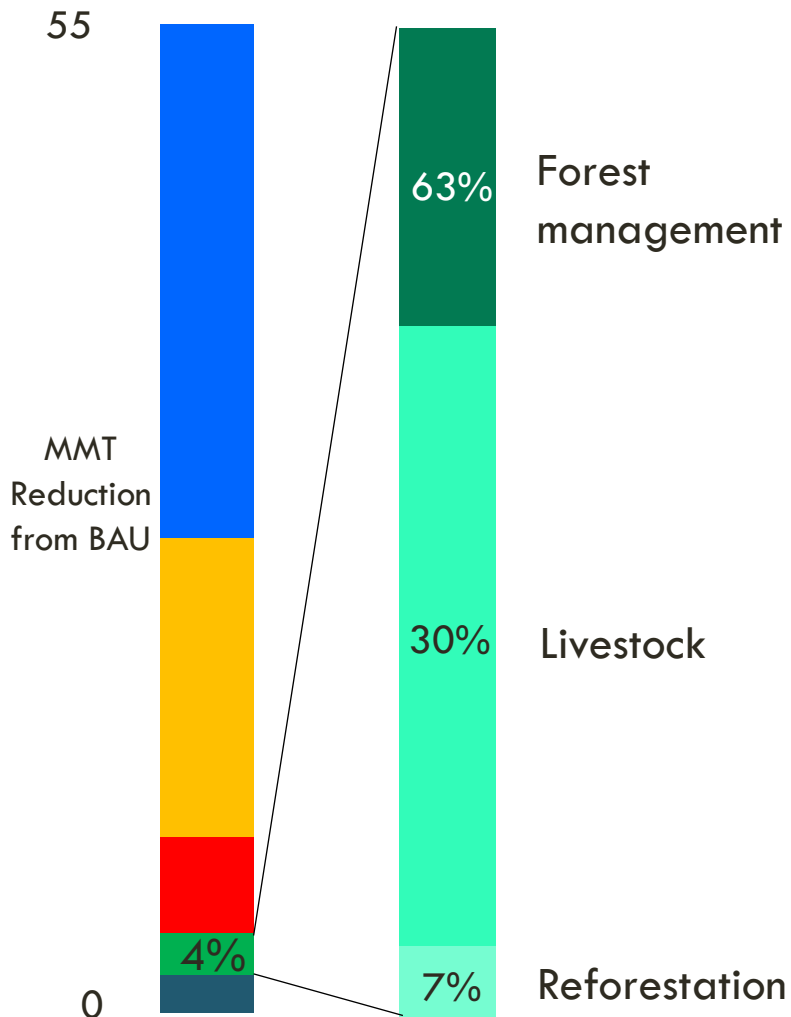
# Possible milestones to achieve Industry goals

- Implementation and adoption of EMNRD waste, NMED VOC rules
- Apply for and use Class VI primacy in order to regulate carbon capture & storage (CCS)
- Increased Oil Rec Fund, bonding amounts to ensure remediation of newly abandoned infrastructure begins within 12 months of abandonment
- Clarifying ownership of pore space and CO<sub>2</sub> injected for CCS will likely require Oil and Gas Act updates
- Pass and implement the Hydrogen Hub Act to create a clean hydrogen economy that accelerates decarbonization of industrial fuel

# Natural and working lands policies can reduce 2030 sector emissions by roughly 7% from BAU

## Primary Goals

## Critical Enabling Actions



Wildfire mitigation in high priority forests and watersheds

Landscape-scale restoration that supports native plant communities, carbon storage, and drought mitigation on natural and working lands

Implement healthy soil practices on agricultural working lands

Prescribed burning on private lands

Gather carbon sequestration data on lands for use in carbon markets and participate in 30x30 goals

### NWL Sector Notes:

Due to lack of high-confidence baseline emissions data, modeling estimates are very preliminary and should be considered as such.

# Possible milestones to achieve NWL goals

- Implement 2021 HB 57 (Prescribed Burning Act) by managing and permitting prescribed burning on private lands, including quantification of smoke impacts and effective landscape-scale restoration and fuel hazard reduction
- Create a qualified prescribed burner network throughout the state
- Formulate a reforestation planting strategy which considers future forest condition (2090) and prioritization of planting areas across the landscape
- Increase awareness of the 5 soil health principles in agricultural communities statewide and encourage agricultural producers to implement practices that enhance carbon sequestration
- Develop science-based inventory methods for understanding how land produces and absorbs carbon, and then implement inventory and monitoring methods using relevant indicators for natural and working lands in New Mexico



# Market Mechanisms such as pricing carbon can potentially deliver additional emissions reductions

- **Carbon Pricing Goal 1: Adopt and implement a price on carbon by 2026.**
  - Evaluate the appropriate carbon pricing mechanism and sectors for New Mexico
  - Complete carbon pricing rulemaking by December 2024
  - Implement carbon pricing program by 2026
- Carbon pricing is generally more effective when applied in the industrial and electricity sectors because fuel consumption in the buildings and transportation sector is typically not very responsive to price changes
- Carbon pricing can complement existing policies that New Mexico is either considering or already in the process of implementing
- Any pricing mechanism should be structured in a way that allows the price to rise over time to continually incentivize further decarbonization investments

# Carbon pricing may be a useful complementary policy, especially in the industry and electricity sectors

- To explore a few different scenarios, RMI modeled two carbon pricing pathways (more detail on next slide)
- Imposing a carbon price without additional supportive policies may reduce emissions by roughly 35%**
  - For comparison, the current proposed policies would reduce emissions by roughly 50%
- Layering a carbon price on top of the current proposed policies yields some modest additional emissions reductions (9%/15%)**

## Modeling the potential impact of carbon pricing

| Sector                | In addition to<br>2021 Current Policy Scenario |               | In addition to<br>2021 Proposed Policy (Post-Workshop) |               |
|-----------------------|--|---------------|--|---------------|
|                       | \$25 in 2023,<br>\$50 by 2030                  | \$100 by 2030 | \$25 in 2023,<br>\$50 by 2030                          | \$100 by 2030 |
| <b>Buildings</b>      | 8%   | 13%           | 7%   | 14%           |
| <b>Transportation</b> | 3%   | 5%            | 2%   | 4%            |
| <b>Industry</b>       | 38%  | 40%           | 7%   | 9%            |
| <b>Electricity</b>    | 67%  | 75%           | 38%  | 68%           |
| <b>Total</b>          | <b>35%</b>                                     | <b>37%</b>    | <b>9%</b>  | <b>15%</b>    |

# Carbon pricing may be a useful complementary policy, especially in the industry and electricity sectors

## To explore a few different scenarios, RMI modeled two carbon pricing pathways

- Both start at \$25 in 2023 and rise to \$50 or \$100 by 2030
- We applied these policies in the Energy Policy Simulator on top of our two key scenarios (*Current Policy* and *Proposed Policy – Post-Workshop*).
- Applying these alongside other policy measures helps us to estimate what incremental benefit a carbon price could offer.
- **To interpret the table to the right, take this as an example: The first data column indicates that a carbon price of \$25 in 2023, rising to \$50 by 2030, may reduce 2030 emissions by an additional 35% on top of current policies that are in place as of 2021.**

## Important considerations

- Any modeling results should be considered approximate at best and useful as a rough order of magnitude estimate. Much more sophisticated modeling approaches should be employed when considering the design of market mechanisms.
- RMI did not model carbon pricing as part of the main scenario modeling because of the way the Energy Policy Simulator assigns “credit” to policies for emission reductions, making it more difficult to estimate which policies are most effective in reducing emissions.

## Modeling the potential impact of carbon pricing

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# Questions and Discussion