

Climate Equity in State Planning

Miguel Moravec, RMI

Ben Holland, RMI



How incorporating GHG targets into CDOT projects advanced equity in Colorado

Introduction: Who we are

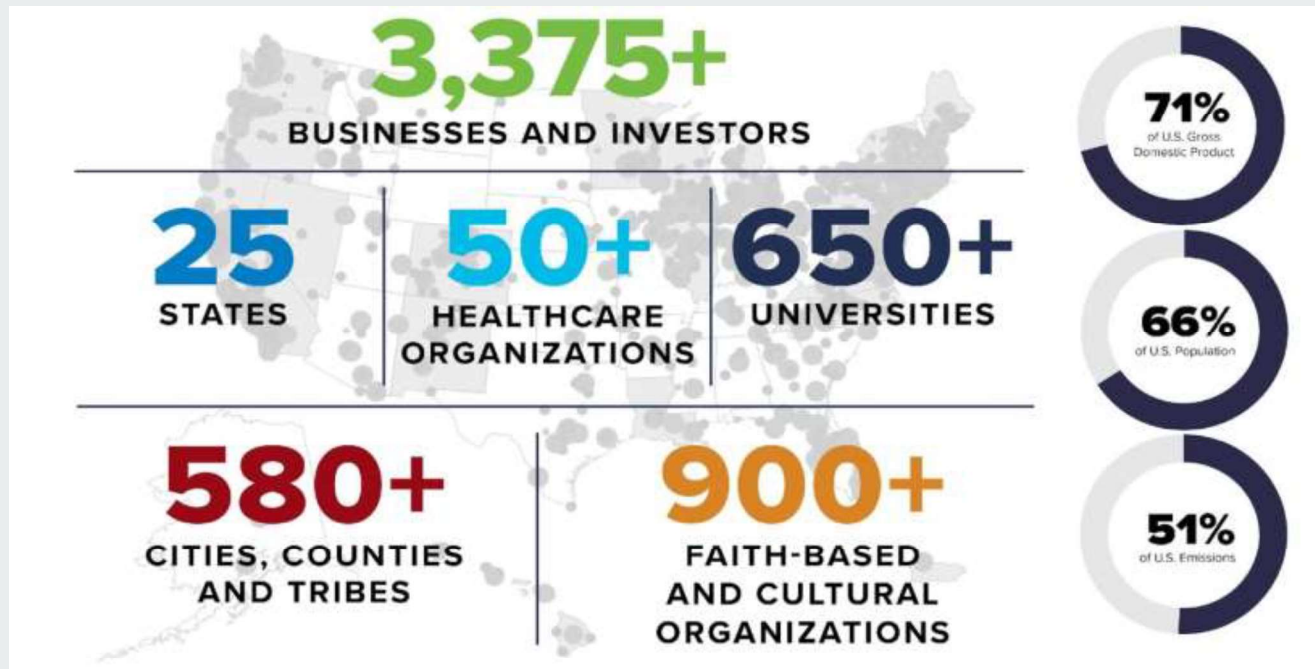


Minnesota's
Climate
Action
Framework

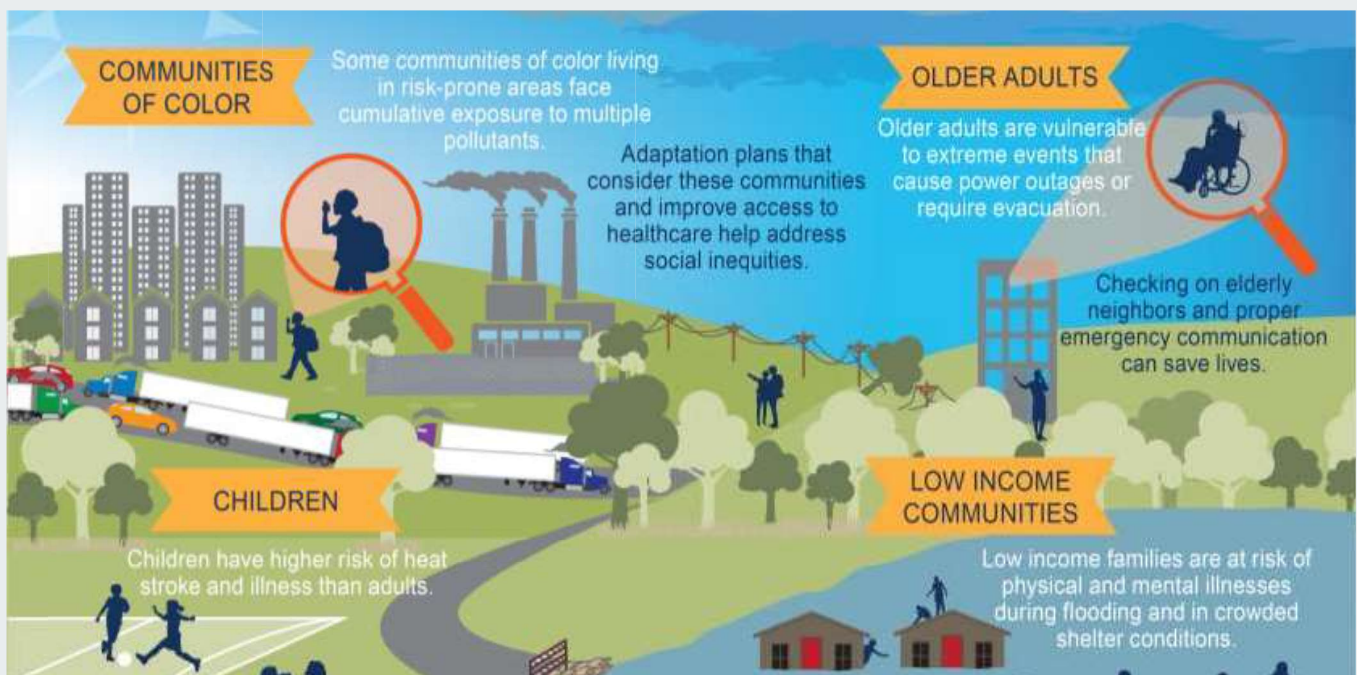
ACTIONS MODELED IN ENERGY POLICY SOLUTIONS SIMULATOR

The primary analysis tool for the Framework is the Minnesota Energy Policy Solutions tool created by Energy Innovation LLC and [Rocky Mountain Institute](#).¹ It is a free, open-source computer model developed with input from the Minnesota Pollution Control Agency, Fresh Energy, and MN Center for Energy and Environment. All input data and assumptions are

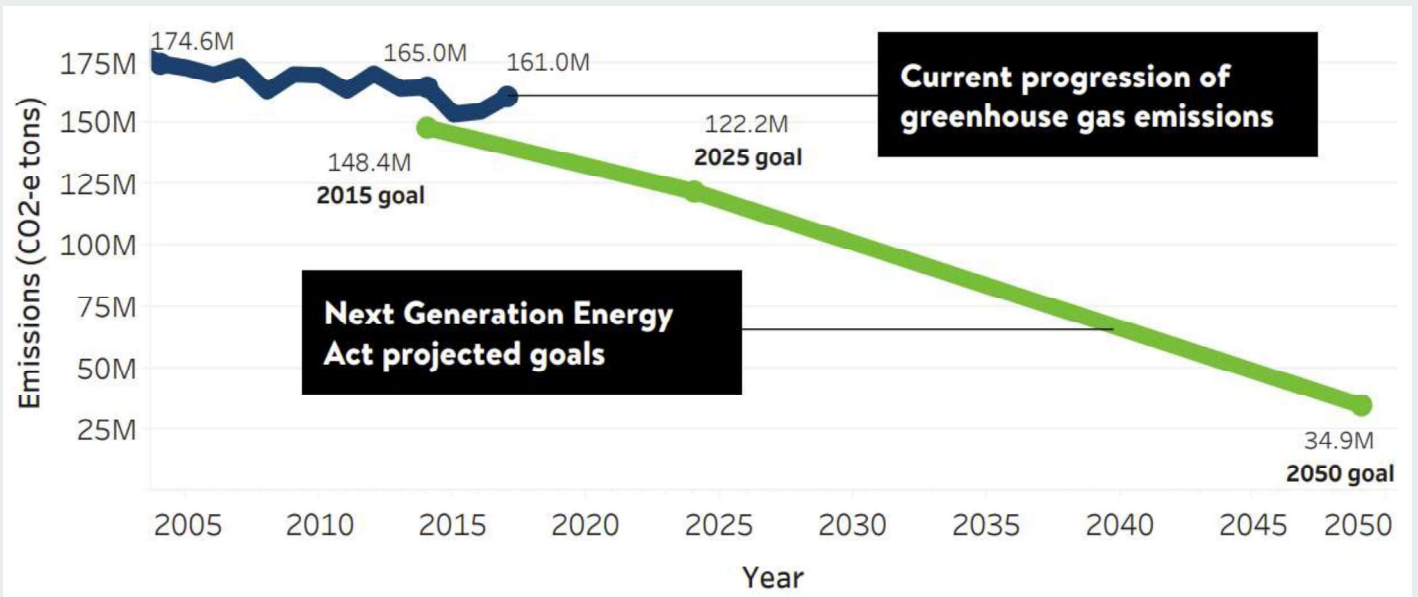
Introduction: America Is All In Coalition



Climate Change: Great Inequity

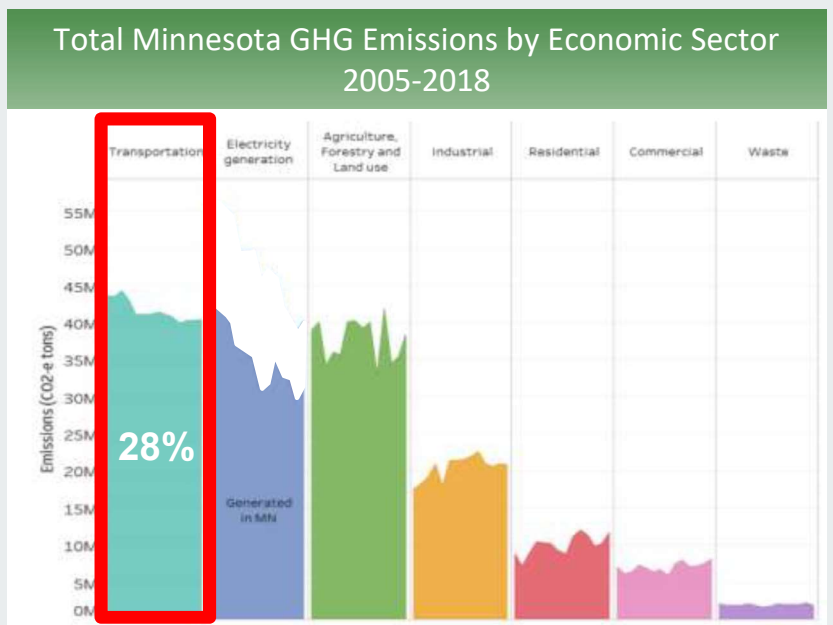
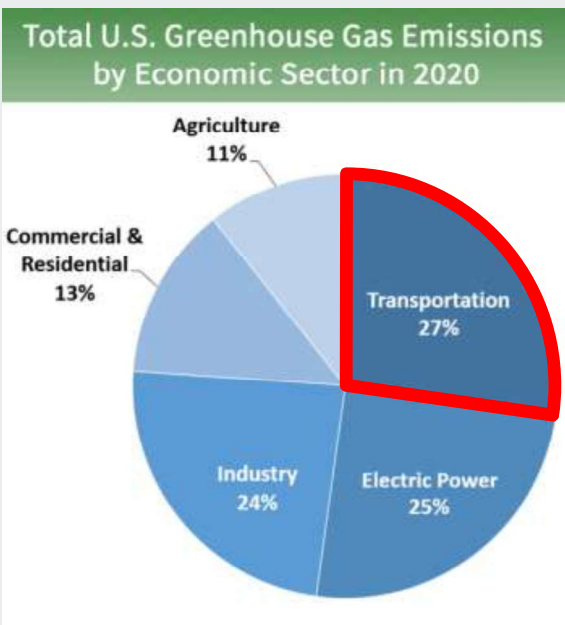


Climate Change: MN not on track



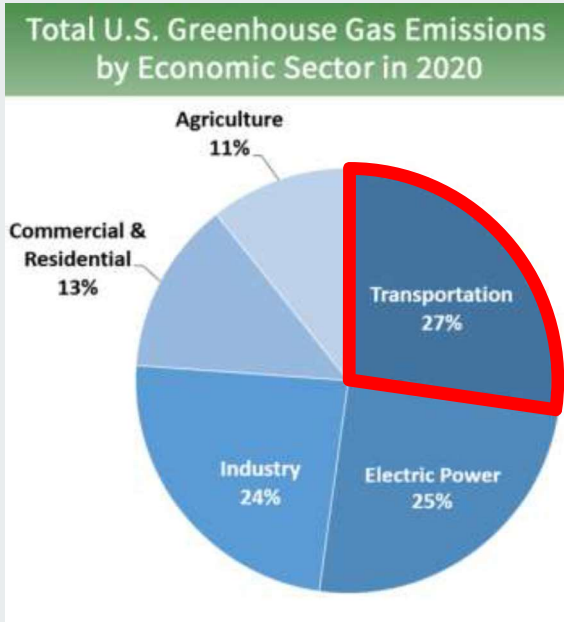
Source: Minnesota Pollution Control Agency

Transportation: Largest Sector in MN



Source: U.S. EPA, MN Pollution Control Agency. Note: Imported electricity excluded from MN emissions

Transportation: IIJA could incr. emissions



Source: U.S. EPA, E&E News

Infrastructure law could thwart CO2 goals

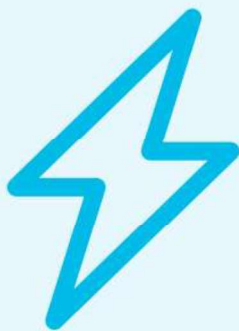
By Miranda Willson | 12/22/2021 07:15 AM EST



Transportation: More than Clean Cars

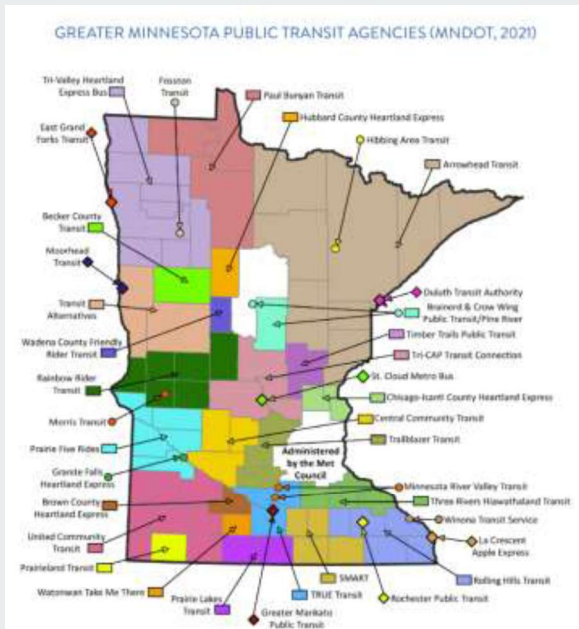


Electrification



Source: Sierra Club, DeSmog

Transit: Underfunded to meet need



Source: ASCE, MnDOT

Twin Cities

- Current: 92 million
- 2030: 9% pop growth

Greater MN

- Current: 12 million
- 2030: 20 million (2x)

**Funding Gap:
\$350 million**

Colorado: GHG Planning Standard



Colorado: GHG Planning Standard



\$40B savings

- Climate
- Health
- Equity

The Benefits of CDOT's GHG Planning Standard: \$40 Billion by 2050

<p>Vehicle Operating Costs</p> <p>\$11 Billion Savings</p> <p>Consumer savings from lower fuel & maintenance costs.</p>	<p>Safety (Crashes)</p> <p>\$19 Billion Savings</p> <p>Lower costs associated with traffic fatalities or injuries such as medical costs, insurance, vehicle property damage, lost workplace productivity.</p>	<p>Traffic Delay</p> <p>\$9 Billion Savings</p> <p>Decreased travel time for commuting, errands, personal travel & freight movement.</p>
<p>Air Pollution</p> <p>\$270 Million Savings</p> <p>Lower healthcare costs from less local air pollution.</p>	<p>Social Cost of Carbon</p> <p>\$1.2 Billion Savings</p> <p>Avoided financial losses and costs to pay for damages caused by climate change.</p>	<p>Physical Inactivity</p> <p>\$618 Million Savings</p> <p>Improved health from more physical activity such as walking and biking.</p>

GHG Standard: How does it work?



1. Assign targets based on state goals

Table 1: GHG Transportation Planning Reduction Levels in MMT of CO₂e

Regional Areas	2025 Reduction Level (MMT)	2030 Reduction Level (MMT)	2040 Reduction Level (MMT)	2050 Reduction Level (MMT)
DRCOG	0.27	0.82	0.63	0.37
NFRMPO	0.04	0.12	0.11	0.07
PPACG	N/A	0.15	0.12	0.07
GVMPO	N/A	0.02	0.02	0.01
PACOG	N/A	0.03	0.02	0.01
CDOT/Non-MPO	0.12	0.36	0.30	0.17
TOTAL	0.43	1.5	1.2	0.7

GHG Standard: How does it work?



1. Assign targets based on state goals
2. Close gap mitigation actions and mode shift

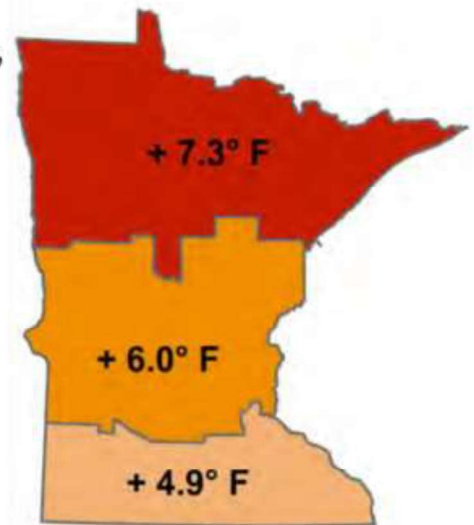
Compliance Category	GHG Mitigation Strategies	Estimated 2030 GHG reduction (metric tons)	Share of GHG target
Updated 2050 transportation plan, modified projects, and revised model assumptions – 80% of 2030 Target	- Less highway widening (I-25 Central, C-470, etc), - Complete 5 Bus Rapid Transit (BRT) corridors, - Add \$900 million in multimodal (transit, bike, ped), - Updated telework model assumption to 25%, - Updated land use model assumption (more infill development than anticipated in 2019)	680,000	79.4%
Additional Programmatic Investment ("off-model" strategies) – 9% of 2030 Target	Additional signal timing	50,000	5.8%
	Increased Bustang service within DRCOG area	3,000	0.4%
	Pedestrian Facilities, Complete Streets retrofits	20,000	2.3%
Mitigation Action Plan (voluntary land use and parking management strategies) – 11% of 2030 Target	Increase residential density	13,548	1.6%
	Increase job density	2,309	0.3%
	Mixed-use TOD (high intensity)	8,588	1.0%
	Mixed-use TOD (moderate intensity)	18,397	2.1%
	Reduce or eliminate parking requirements and set low maximum levels (residential)	37,750	4.4%
	Reduce or eliminate parking requirements and set moderate maximum levels (residential)	18,332	2.1%
	Reduce or eliminate parking requirements and set maximum levels (commercial)	4,373	0.5%
	Adopt local Complete Streets standards	369	0%
	Total		856,666

MN benefit: Improved Climate

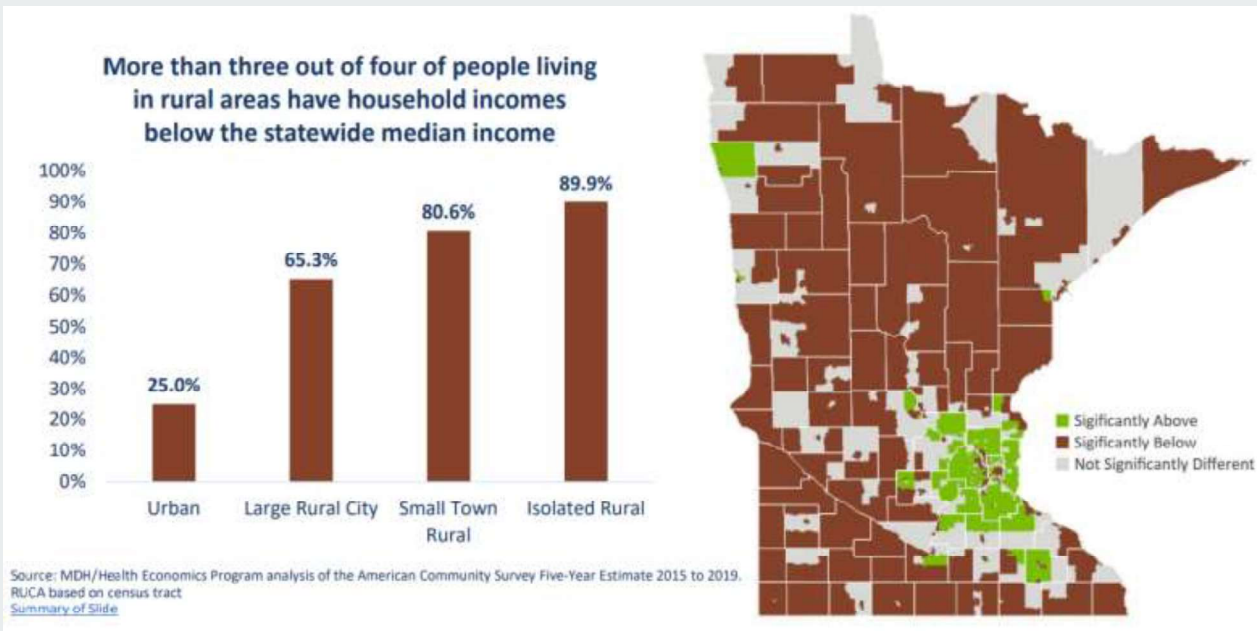


Minnesota is getting warmer, especially winter nights in the northern parts of the state.

Change in daily average minimum temperature during winter (Dec-Feb), 1895-2021.

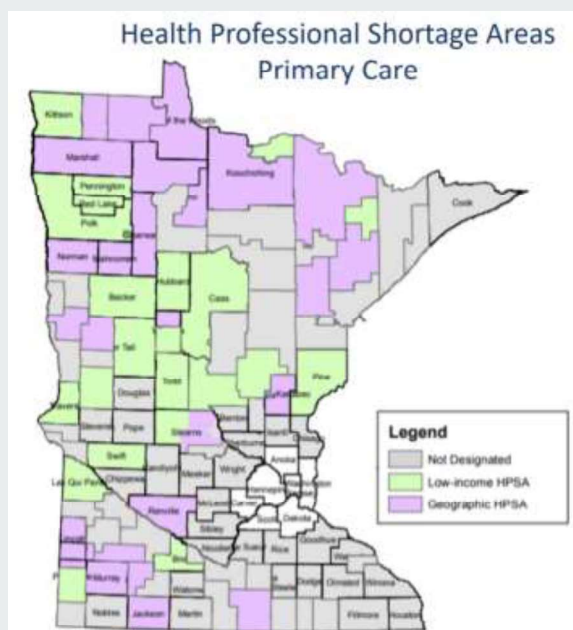


MN benefit: Affordability



Source: Minnesota Dept. of Health

MN benefit: Healthcare Access



- **28% rural physicians to retire in next 5 years**
- **2033: 32% of rural counties will be 65+**
- **85+ population to double in next 30 years**

Source: Minnesota Dept. of Health

MN benefit: Federal Funding



\$200 B competitive IIJA funding prioritized for:

- Environment
- Safety
- Equity



Take-away



By adopting a GHG planning standard, MN can:

- ***Lead Midwest***
- ***Advance Equity***
- ***Achieve Climate Goals***

A solid light gray horizontal bar at the top of the page.
A short horizontal line with a blue segment on the left and a red segment on the right.

Questions?

mmoravec@rmi.org

bholland@rmi.org