



Minnesota & Climate-Smart Transportation Policy

Miguel Moravec, RMI



*Benefits of decarbonizing the
state's most emission
intensive sector*

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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

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Introduction: America Is All In Coalition

**AMERICA IS
ALL IN**

3,375+
BUSINESSES AND INVESTORS

25 STATES

50+ HEALTHCARE ORGANIZATIONS

650+ UNIVERSITIES

580+ CITIES, COUNTIES AND TRIBES

900+ FAITH-BASED AND CULTURAL ORGANIZATIONS

71%
of U.S. Gross Domestic Product

65%

Greenhouse Gas Planning Rule & Colorado Dept. of Transportation: Lessons Learned
Friday, March 3, 2023 | 2:00PM CT | Zoom

Matt Frommer
Southwest Energy Efficiency Project

Jenny Gaeng
Conservation Colorado

Miguel Moravec
Moderator, RMI

AMERICA IS ALL IN

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Minnesota is a Climate Leader

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Apprentice Solar Workers, White Earth Tribal & Comm. College, St Paul, MN



Wind turbine towers in Lincoln County, MN

Source: Clean Energy Economy Minnesota, David Joles Star Tribune

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Minnesota is a Climate Leader



- **1993: Adopted social cost of carbon for utilities, led the fed**



Source: Minnesota Citizen's Utility Board

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Minnesota is a Climate Leader



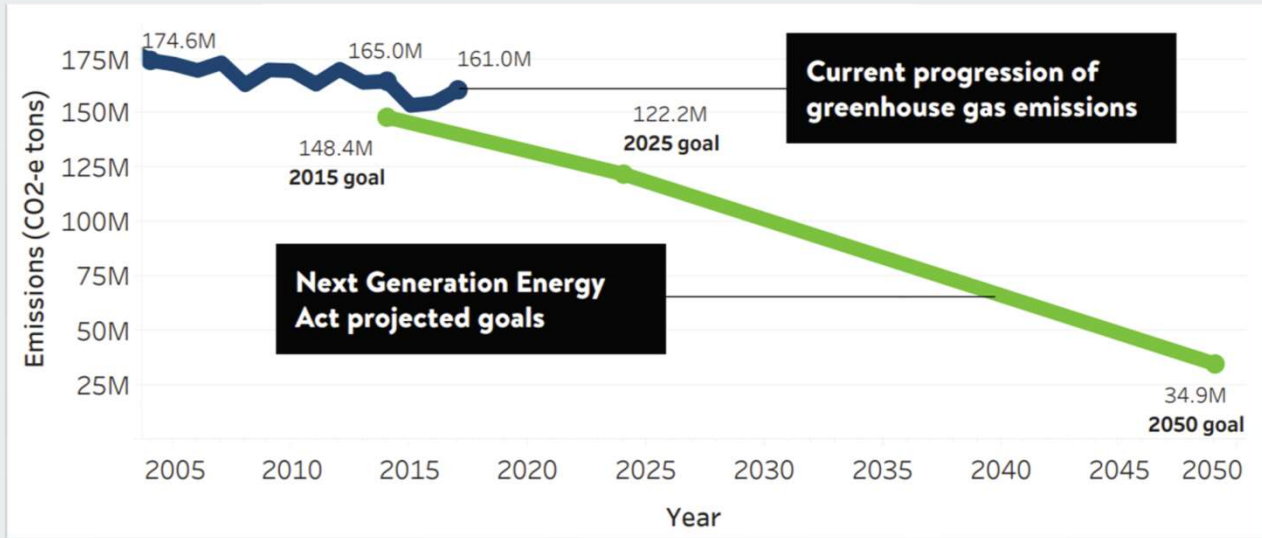
- **1993: Adopted social cost of carbon for utilities, led the fed**
- **2007: Among first to set statewide Climate Goal**



Source: Minnesota Pollution Control Agency

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Minnesota is a Climate Leader



Source: Minnesota Pollution Control Agency

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Minnesota is a Climate Leader

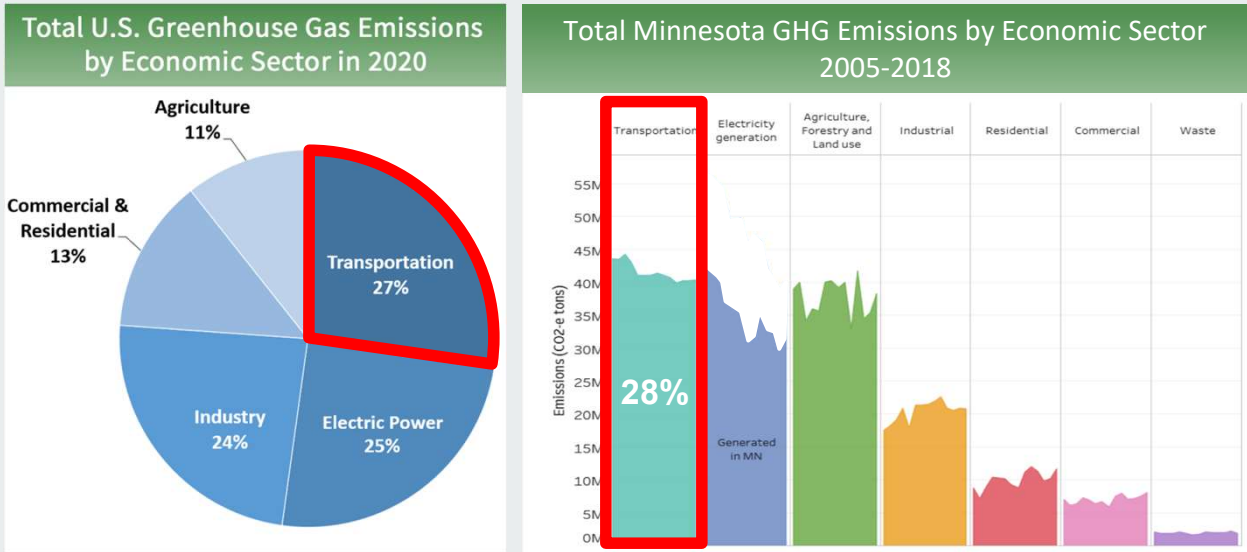


2023: 100% Clean Energy Law

Source: Sierra Club & Rep. Jamie Long, Twitter

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Transportation: Largest emitter in MN



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

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Clean Cars, IJA not necessarily enough



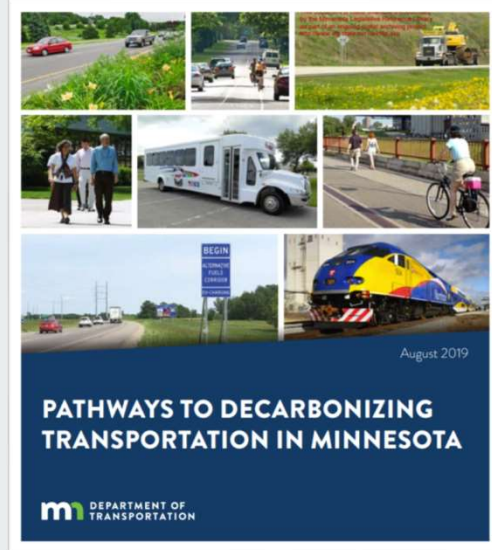
Source: E&E News, Sierra Club, DeSmog

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MnDOT: Policy solutions needed



“there is no silver bullet... Efforts to decarbonize transportation must go beyond a single policy, effort, or agency”



Source: MnDOT

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Colorado Model: Plan Climate-Smart



1.5 MMT CO2 reduction means:

- **5 Bus Rapid Transit**
- **Bike & Walk networks**
- **More public options**

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 Increased Bustang service within DRCOG area Pedestrian Facilities, Complete Streets retrofits	50,000 3,000 20,000	5.8% 0.4% 2.3%
Mitigation Action Plan (voluntary land use and parking management strategies) – 11% of 2030 Target	Increase residential density Increase job density Mixed-use TOD (high intensity) Mixed-use TOD (moderate intensity) Reduce or eliminate parking requirements and set low maximum levels (residential) Reduce or eliminate parking requirements and set moderate maximum levels (residential) Reduce or eliminate parking requirements and set maximum levels (commercial) Adopt local Complete Streets standards	13,548 2,309 8,588 18,397 37,750 18,332 4,373 369	1.6% 0.3% 1.0% 2.1% 4.4% 2.1% 0.5% 0%
Total		856,666	100%

Source: CDOT

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Colorado Model: Projected Benefits



\$40B savings

- Climate
- Health
- Equity

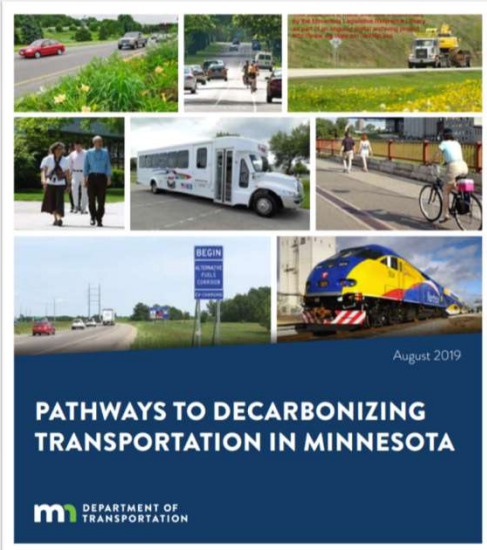
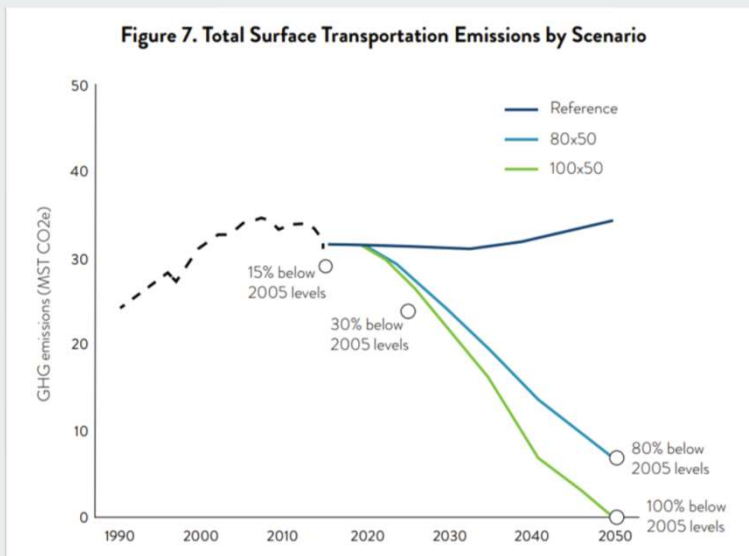
The Benefits of CDOT's GHG Planning Standard: **\$40 Billion by 2050**

<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>

Source: SWEEP, CDOT CBA

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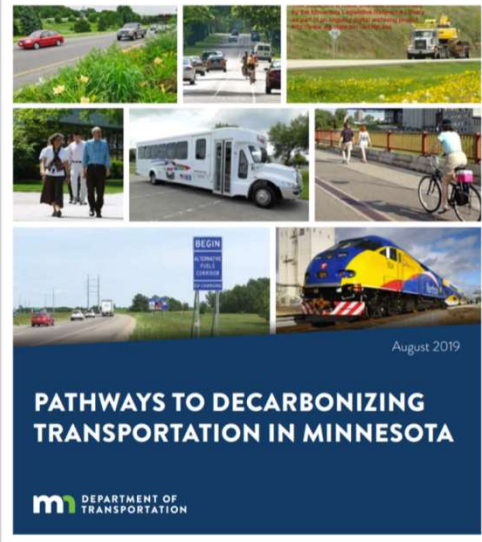
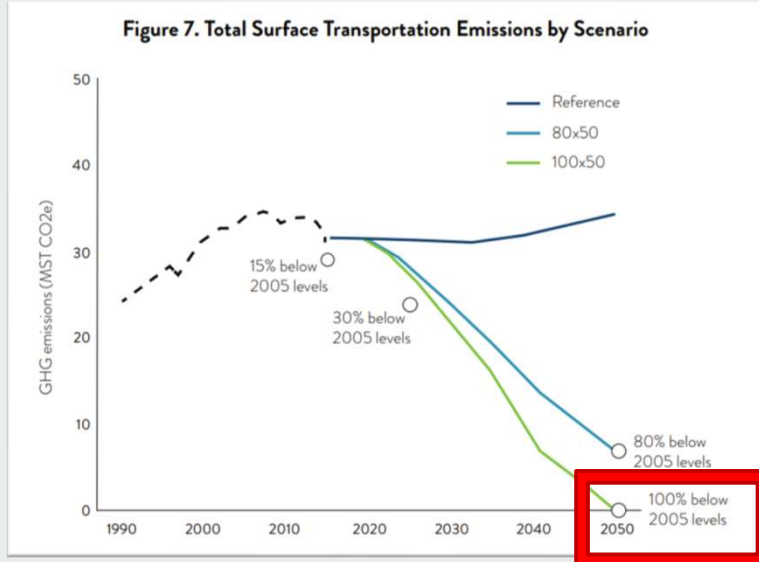
Benefits: 100% clean transportation MN



Source: MnDOT

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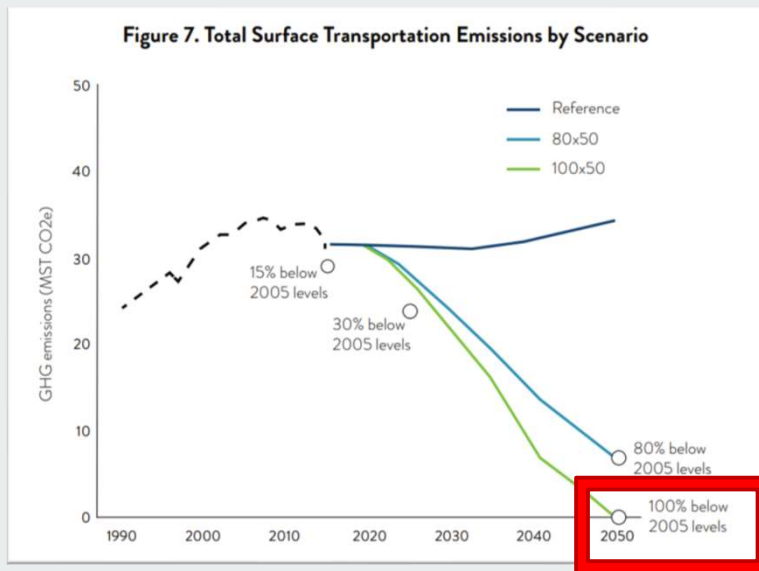
Benefits: 100% clean transportation MN



Source: MnDOT

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Benefits: 100% clean transportation MN



\$84B

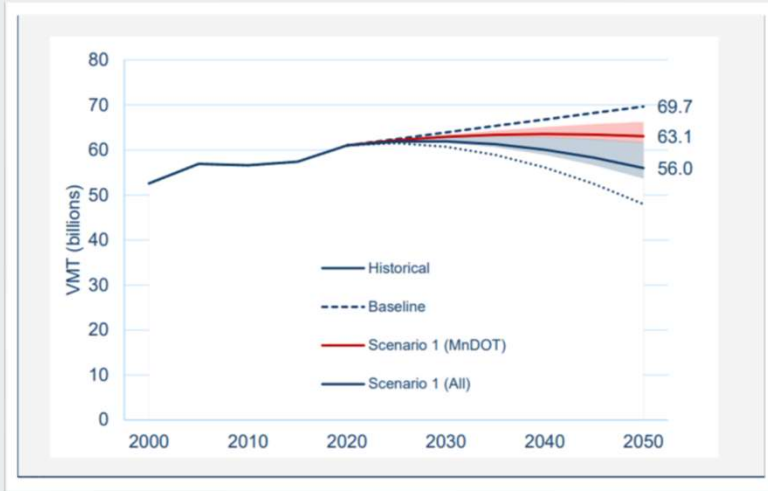
Savings, using MN social cost carbon 2020-2050



Source: RMI Analysis

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Benefits: Achieving MnDOT VMT goals



Source: MnDOT

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Benefits: Achieving MnDOT VMT goals



	Cost Type:	Savings: MnDOT target (7%) vs baseline	Savings: MN STAC target (20%) vs baseline
	Fatalities, Comprehensive	\$33 b	\$51 b
	Injuries, Comprehensive	\$20 b	\$23 b
	Maintenance	\$15 b - \$20 b	\$23 b - \$32 b
	Fuel	\$14 b - \$28 b	\$44 b - \$24 b

Source: RMI Analysis

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Benefits: Federal Investment



\$200 B competitive IIJA funding prioritized for:

- Environment
- Safety
- Equity



Vice President Harris tours Electric Bus Factory, St Cloud, MN

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MnDOT Survey: Clean Transportation



Left: Small group discussions in Marshall.

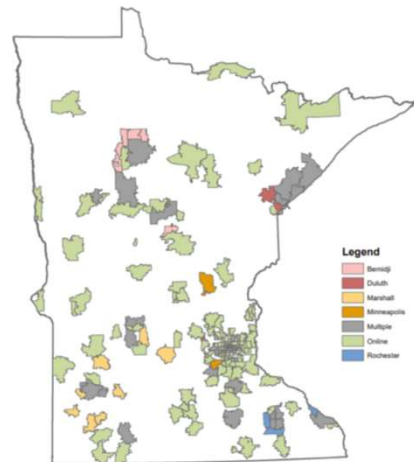


Right: Welcome address from the City of Duluth

Table 3. Summary of Public Engagement by Responses/Participants

Online survey responses	Online comments	Webinar attendees	In-person meeting attendees
1,115	4	53	280

Figure 11. Pathways Public Stakeholders by ZIP Code



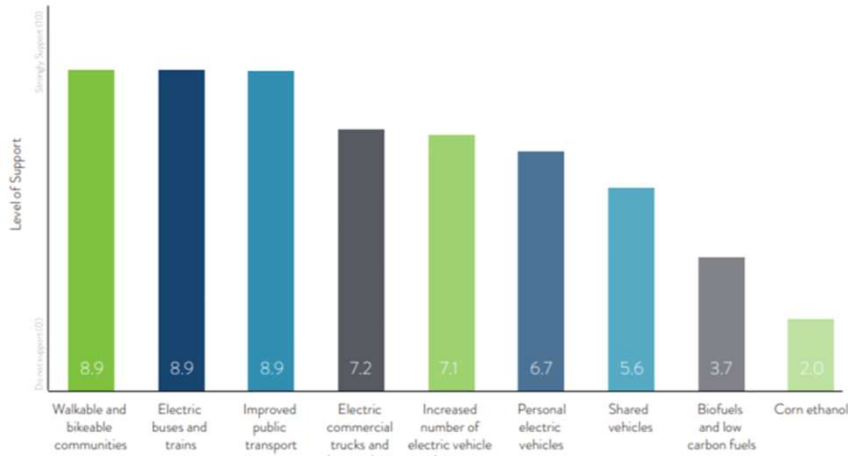
Source: MnDOT

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Minnesotans support expanding options



Figure 12. Public scoring results for transportation decarbonization strategies (10 = support)



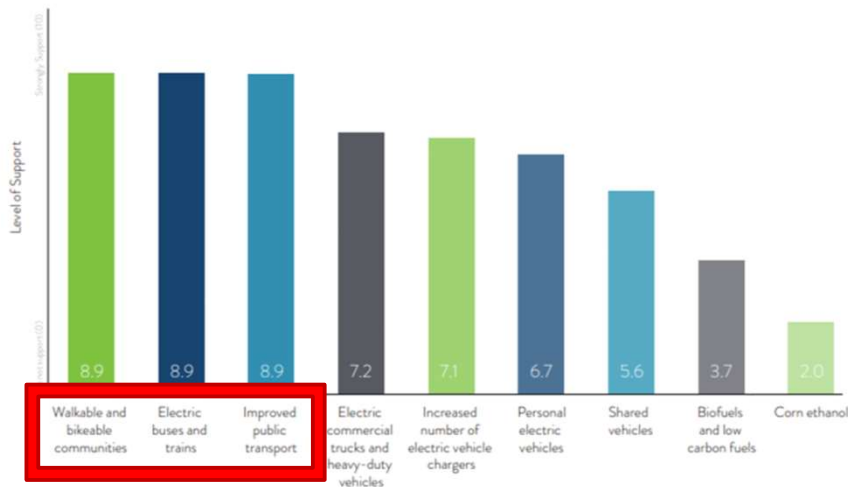
Source: MnDOT

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Minnesotans support expanding options



Figure 12. Public scoring results for transportation decarbonization strategies (10 = support)



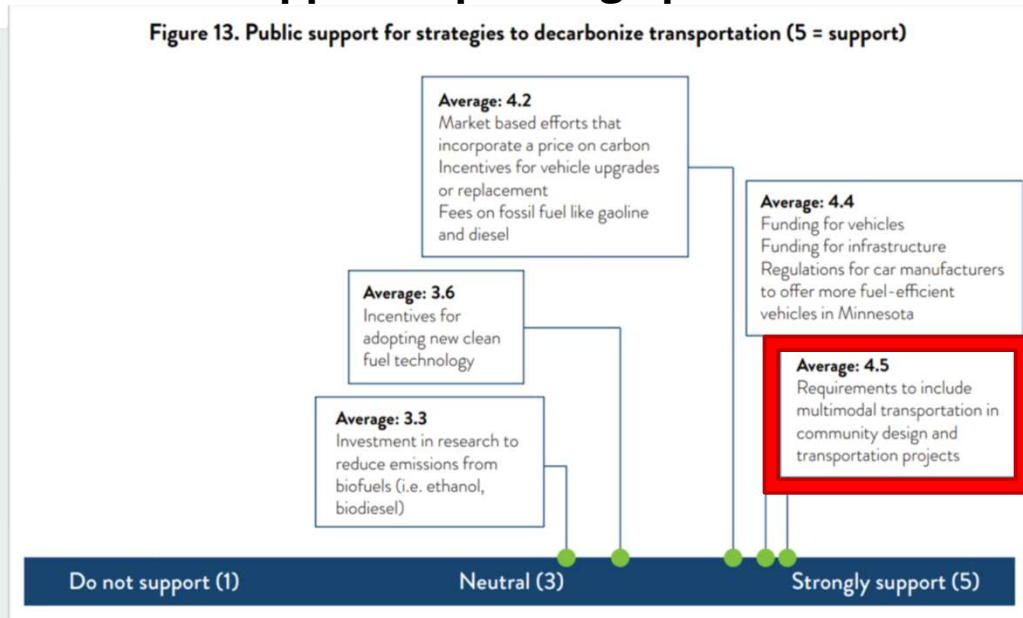
Source: MnDOT

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Minnesotans support expanding options



Figure 13. Public support for strategies to decarbonize transportation (5 = support)



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Conclusion



Minnesota Climate-Smart Transportation Policy would:

- ***Preserve climate leadership***
- ***Fill need for transportation options***
- ***Save tens of billions in costs***

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Questions?

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