



Minnesota Greenhouse Gas Reduction Legislation Target Setting

Anna Pierce | Carbon Reduction Program Coordinator

Why this matters to TAB



Greenhouse gas emission reduction targets are a requirement of the legislature.



Transportation is the largest contributor to GHGs in Minnesota. Works towards implementing the Statewide Multimodal Transportation Plan, Climate Action Framework, and the TPP.



Integrating emissions reduction into our policies, plans, and programs impacts how our transportation system can be sustainable, encourages healthy and thriving communities, and increases our economy.

- Share
 - Approach options (how the target will be assigned)
 - Geographic scenarios (where targets will be assigned, geographic regions)
 - Sample emissions targets for the Per Capita approach
- Discuss
 - Regional Priorities approach
- Activity
 - Regional priority levers
- Document questions and input
- Share next steps

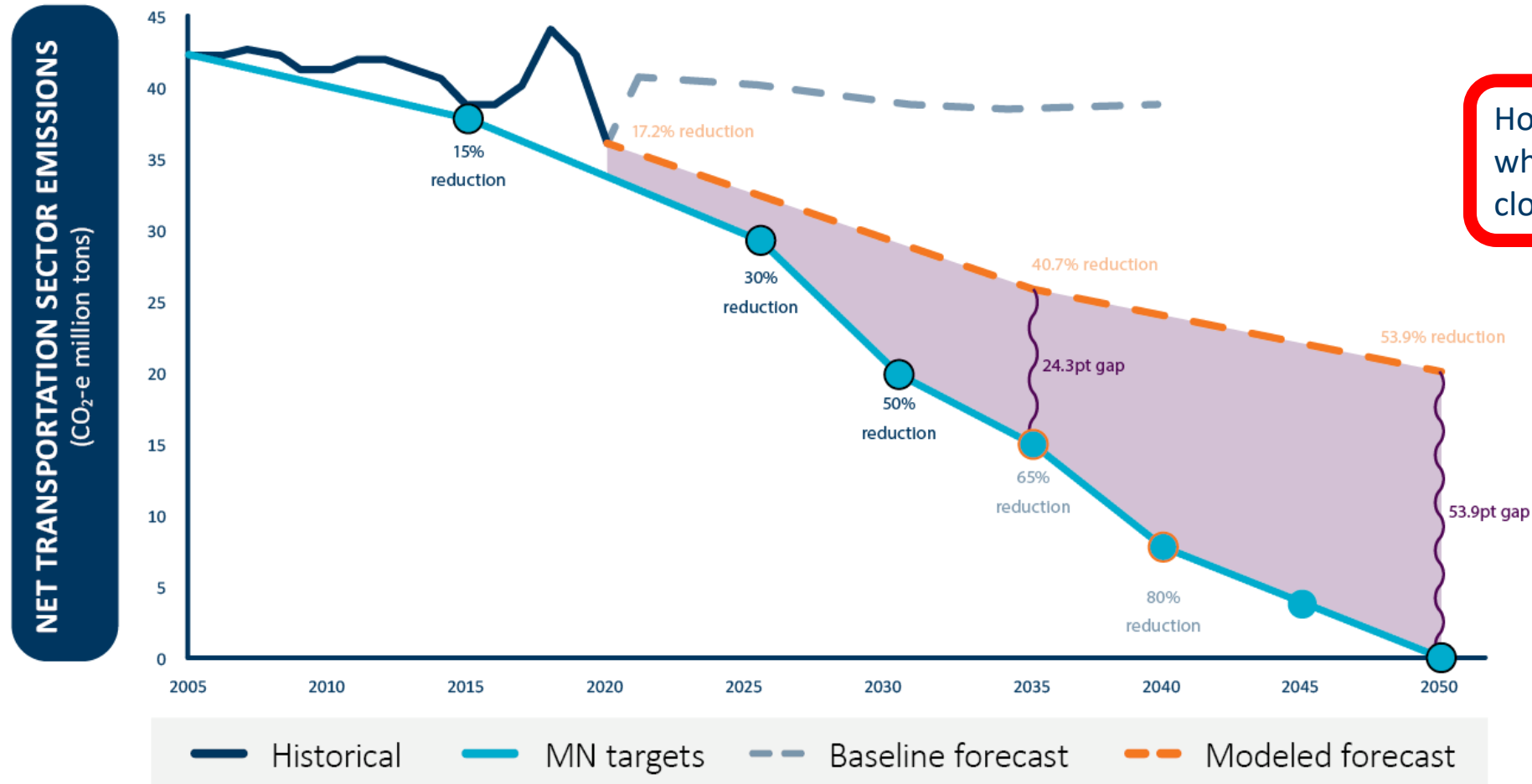
Legislative Requirements

- Set targets that bridge the greenhouse gas emissions gap
- Develop a transportation greenhouse gas emissions impact assessment procedure
- Establish a Technical Advisory Committee (TAC) for the Transportation Impact Assessment

MN Statute 174.01 Subd. 3 | Target setting

- Targets must be allocated on a 5-year or more frequent basis.
- Provide an allocation to the metropolitan area, as defined in statute as the seven-county metropolitan twin cities area.
- Account for differences in feasibility and extent of emission reductions across forms of land use and across regions of the state
- May include performance targets based on DOT districts, geographic regions, per capita calculations, transportation mode, or any combination.

Target Setting | How do we close the gap?



How, where and when do we close the gap?

NOTE: The 'zero' at the right hand side represents a net value of zero GHG emissions from the transportation sector above those that existed in 2005 (43,557,058 tons), and net of any mitigation efforts that get counted as 'offsets' to GHG emissions.

How do we close the gap? | Approaches

Assign emissions targets for each target year

Per capita

- Based on the number of people in a region

Regional priorities + per capita

- Based on regional priorities (e.g., transit, alt fuels, safety, access, health) combined with the number of people in a region

Where do we close the gap? | Geographic scenarios

Scenario 1

Metropolitan
Council's 7-county
metro area
(statute defined)

Greater Minnesota
*(everywhere outside the
metro area)*

Scenario 2

Metropolitan
Council's 7-county
metro area
(statute defined)

Greater Minnesota
Metropolitan
Planning
Organizations
(7 urbanized areas)

Greater Minnesota
rural areas
*(everywhere outside the metro
area and 7 MPO urbanized
areas)*

Scenario 3

Metropolitan
Council's 7-county
metro area
(statute defined)

Greater Minnesota
Metropolitan
Planning
Organizations
(7 urbanized areas)

Greater Minnesota
Area Transportation
Partnerships
(8)

How do we close the gap? | Approaches

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Per Capita | Geographic scenario 3 (2035)

Minnesota – Population: 6,093,579

Target: 15,245,000 CO₂e

Forecasted emissions: 23,665,000 CO₂e

Gap: 8,420,000 CO₂e

Per capita gap: 1.38 CO₂e

Region	% of Population (forecasted)	Gap responsible for
Met Council	55.2%	4,642,000
APO	5.3%	446,000
MIC	4.1%	345,000
MAPO	2.0%	168,000
LAPC	0.3%	25,000
ROCOG	4.2%	354,000
GFEGF MPO	0.5%	40,000
Metro COG	1.2%	101,000

Region	% of Population (forecasted)	Gap responsible for
ATP1	1.7%	143,000
ATP2	2.3%	194,000
ATP3	7.8%	657,000
ATP4	3.5%	295,000
ATP - Metro	1.0%	84,000
ATP6	4.7%	396,000
ATP7	3.4%	286,000
ATP8	2.9%	244,000

Per Capita | Geographic scenario 3 (2050)

Minnesota – Population: 6,416,283

Target: 0 CO₂e

Forecasted emissions: 16,017,000 CO₂e

Per capita gap: 2.5 CO₂e

Gap: 16,017,000 CO₂e

Region	% of Population (forecasted)	Gap responsible for
Met Council	56.9%	9,106,000
APO	5.8%	930,000
MIC	3.8%	605,000
MAPO	2.0%	320,000
LAPC	0.3%	45,000
ROCOG	4.3%	690,000
GFEGF MPO	0.4%	65,000
Metro COG	1.3%	210,000

Region	% of Population (forecasted)	Gap responsible for
ATP1	1.5%	240,000
ATP2	2.2%	352,000
ATP3	7.4%	1,185,000
ATP4	3.3%	525,000
ATP - Metro	1.0%	160,000
ATP6	4.4%	704,000
ATP7	3.0%	480,000
ATP8	2.5%	400,000

How do we close the gap? | Approaches

Assign emissions targets for each target year

Per capita

- Based on the number of people in a region

Regional priorities + per capita

- Based on regional priorities (e.g., transit, alt fuels, safety, access, health) combined with the number of people in a region

Regional priorities | Geographies & values

- Geographies

- Statewide

- Values only available at a statewide level (e.g., one value)

- MPO

- Values available for the eight MPO's urbanized areas and Greater Minnesota (e.g., nine values total)

- County

- Values available for each of the 87 Minnesota counties

- Values

- Continuous numbers

- 0% to 100%

Regional priorities | Levers

- **Transportation Options**

- Expand miles of transit service
- Shift short trips to active transportation
- Increase density of walkable intersections in community
- Reduce lane miles of freeways and arterials

- **Land use**

- Reduce parking spaces
- Charge fee for parking
- Increase options for mixed-use living
- Flexible options for increased HH size
- Increase options for multifamily housing
- Expand urban area
- Plan for connected rural growth

- **Fuels**

- Reduce carbon-based transit fuels
- Increase zero-emission or electric vehicle adoption:
 - Transit
 - Car service
 - Heavy truck
 - Commercial service
- Increase charging availability at-home
- Reduce the number of older HH and commercial vehicles
- Increase electric vehicle sales for HH use

- **Other strategies**

- Increase prices of fuel and power
- Implement vehicle ownership taxes
- Increase pay-as-you-drive (PAYD) insurance
- Implement vehicle use taxes
- Charge per mile of vehicle travel (congestion charges)
- Deploy traffic operations strategies
- Increase Travel Demand Management (TDM) strategies (e.g., commuter programs, telecommuting)
- Reduce fuel carbon intensity

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- ~~Implement vehicle ownership taxes~~
- ~~Increase pay-as-you-drive (PAYD) insurance~~
- ~~Implement vehicle use taxes~~
- ~~Charge per mile of vehicle travel (congestion charges)~~
- Deploy traffic operations strategies
- Increase Travel Demand Management (TDM) strategies (e.g., commuter programs, telecommuting)
- ~~Reduce fuel carbon intensity~~

Levers crossed out are only able to be impacted by statewide decision-making.

Regional priorities | Levers

- **Transportation Options**

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- Increase density of walkable intersections in community
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- **Other strategies**

- Deploy traffic operations strategies
- Increase Travel Demand Management (TDM) strategies (e.g., commuter programs, telecommuting)

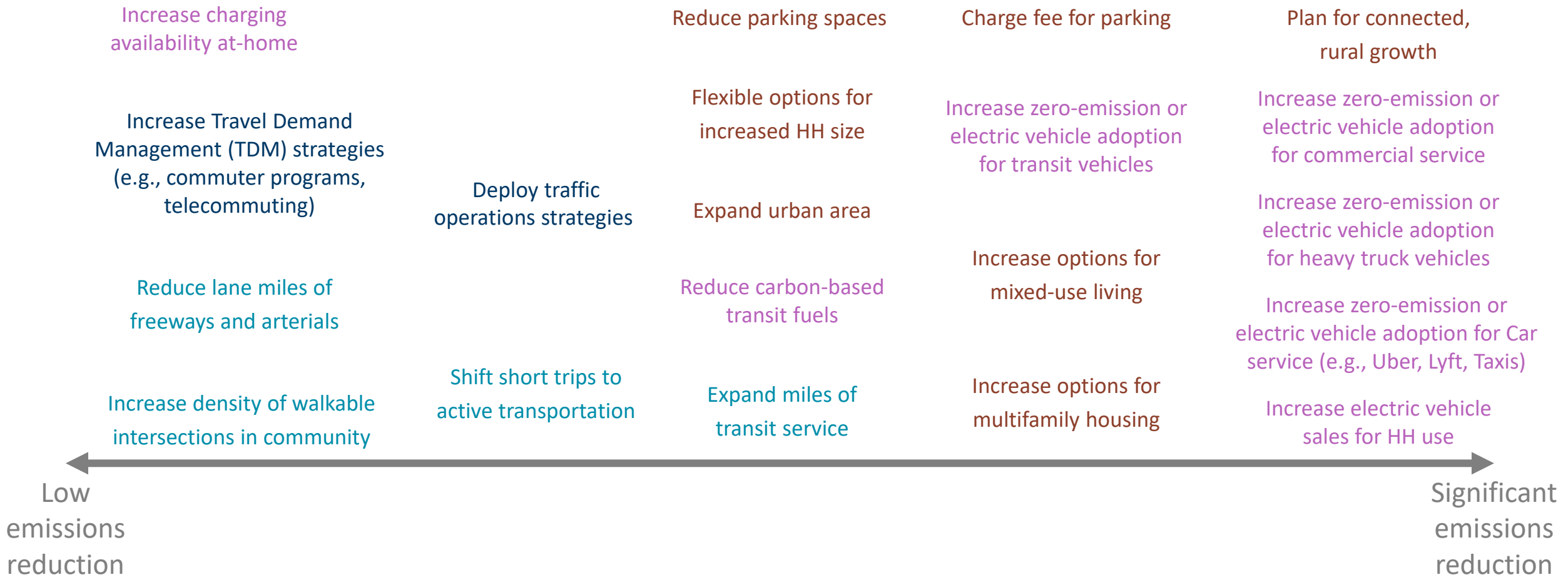
Levers are able to be impacted by local and regional decision-making.

Regional priorities | Questions

When you look at these levers...

- Which do you feel are the easiest to increase and advance?
- Which do you feel is the hardest to advance?
- Which do you feel will reduce the most greenhouse gas emissions?
- Which are the highest priority for your region?

Regional priorities | Levers and influence



Legend:

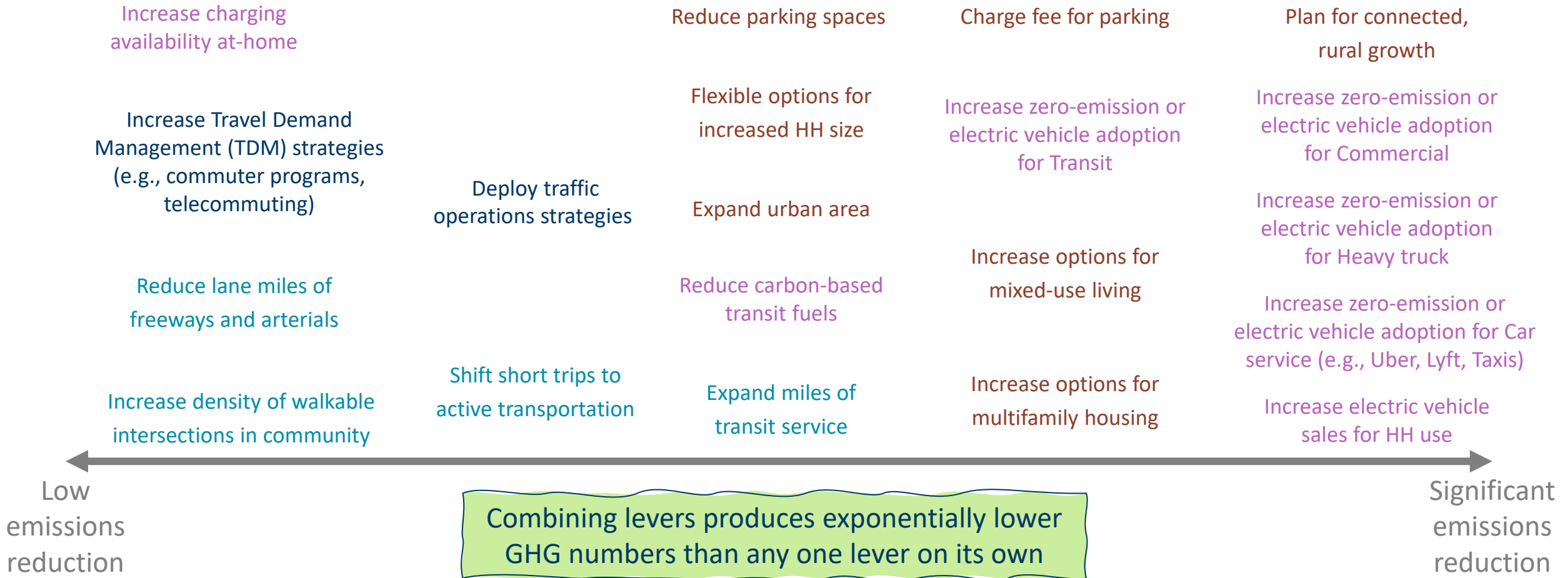
Fuels

Connected Growth

Transportation Options

Other Levers

Regional priorities | Levers and influence



Legend:

Fuels

Connected Growth

Transportation Options

Other Levers

Regional priorities | Levers and influence

Activity

Regional priorities | Levers and influence

Activity

Select the top 10 levers based on your understanding of your Policy Board priorities, Technical Committee priorities, City and County priorities, and public priorities.

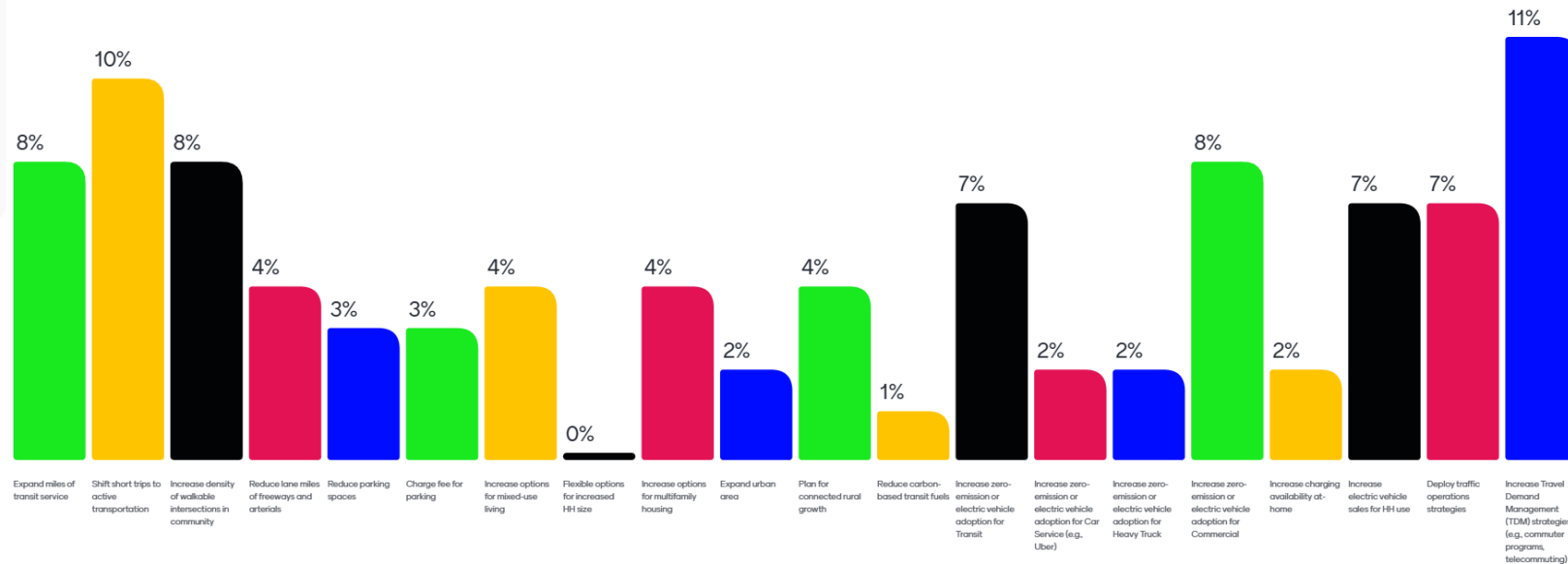
Regional priorities | Levers and influence

- TAC results were varied

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Open Mentimeter | DEPARTMENT OF TRANSPORTATION

What are the priority levers for the 7-county geographic area regardless of who implements them?
Select your top 5.



Regional priorities | Levers and influence

Activity

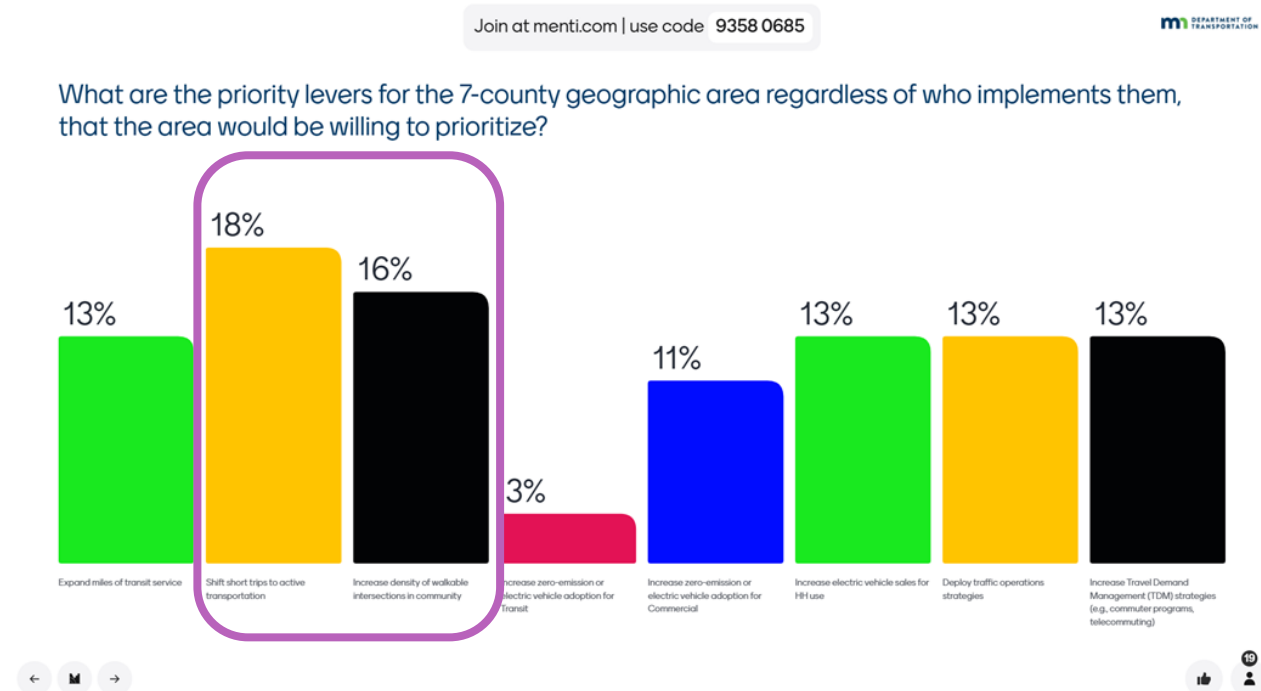
Select the top 10 levers based on your understanding of your Policy Board priorities, Technical Committee priorities, City and County priorities, and public priorities.

Of those previously selected, put an asterisk next to the top 2-3 levers you believe the 7-county metro is willing to advance the most.

Regional priorities | Levers and influence

TAC priority levers identified

1. Shift short trips to active transportation
2. Increase the density of walkable intersections in the community
3. Tied for 3rd priority:
 - Expand miles of transit service
 - Increase EV sales for household use
 - Deploy traffic operations strategies
 - Increase TDM strategies (e.g., commuter programs, telecommuting)



Regional priorities | Levers and influence

Activity

Results share out

Regional priorities | Geographic scenario 3 (2035)

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Gap: 8,420,000 CO₂e
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2,420,000 CO₂e

Region	% of Population (forecasted)	Emissions from regional priorities	Remaining emissions per capita	Total emissions	% of total gap of emissions
Met Council	55.2%	3,000,000	1,335,000	4,335,000	51.5%
APO	5.3%				
MIC	4.1%				
MAPO	2.0%				
LAPC	0.3%				
ROCOG	4.2%				
GFEGF MPO	0.5%				
Metro COG	1.2%				

Region	% of Population (forecasted)	Emissions from regional priorities	Remaining emissions per capita	Total emissions	% of total gap of emissions
ATP1	1.7%				
ATP2	2.3%				
ATP3	7.8%				
ATP4	2.0%				
ATP - Metro	1.0%				
ATP6	4.7%				
ATP7	3.4%				
ATP8	2.9%				

EXAMPLE

Closing the gap

- Requires us to rethink project prioritization in order to reduce emissions
- Must consider how we encourage and implement greater accountability for emissions reduction
- Emissions reduction enhances the work we are already doing

Closing the gap | Next steps

- Report the results of the modeling and comparing the approaches
- Gather input on the approaches from geographic regions (e.g., MPOs and ATPs)
- Commissioner of Transportation sets the targets before Feb. 1, 2025
- Work together to implement emissions-reducing policies and projects

Questions/Thoughts

Anna Pierce

Carbon Reduction Program Coordinator

MnDOT's Office of Sustainability and Public Health

anna.m.pierce@state.mn.us

GHG Reduction Legislation
dot.state.mn.us/sustainability/ghg-legislation.html