



Subnational Efforts to Reduce Transportation Emissions in North America

COP25 – Blue Zone, Area 4, Room 2

Thursday, December 12, 2019 (15:00 – 16:30 CET)



GEORGETOWN
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IQCarbone **ESG**
Institut québécois du carbone

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Subnational Efforts to Reduce Transportation Emissions in North America

- Moderator: Matthew Goetz, Senior Associate, Georgetown Climate Center
- Christine Kirby, Assistant Commissioner, Massachusetts Department of Environmental Protection
- Jean Lemire, Emissary for Climate Change, Northern and Arctic Affairs, Government of Québec
- Tim Sexton, Assistant Commissioner and Chief Sustainability Officer, Minnesota Dept. of Transportation
- Andrew McAllister, Commissioner, California Energy Commission
- Anu Hittle, Climate Change Mitigation and Adaptation Coordinator, Hawaii Dept. of Land and Natural Resources
- Fan Dai, Director, California-China Climate Institute, University of California, Berkeley
- Mark Purdon, Professor, ESG-UQAM & Executive Director, IQCarbone

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Jean Lemire, Envoy for Climate Change, Arctic and Nordic affairs

Where are we?

- GHG emissions in Quebec related to transportation = 43%;
- Trucking, mostly fueled by diesel, remains the preferred mode for a majority of shippers and producers;
- Trends in passenger transport continue to rely predominantly on private vehicles for the majority of travelers, with a preference for SUVs;
- Reversing these trends will require an integrated and concerted approach tying several levels of governments and the main stakeholders, with dedicated and sustained funding, to leverage innovative approaches, techniques and practices in various field;

Sustainable mobility – a pillar to our strategy

- Quebec government has implemented a series of strategic programs and action plans to address the challenges in this sector:
 - ✧ A policy on Sustainable mobility
 - ✧ An Action Plan on the electrification of transport – which includes ambitious EV targets for 2020 (100 000 Evs) and 2030 (1 million Evs);
 - ✧ The largest charging infrastructure in Canada (more than 3 200 in service);
 - ✧ A zero-emission vehicle mandate (ZEV standard);
 - ✧ Incentives of up to 8 000\$ to acquire electric or hybrid vehicles;
 - ✧ Incentives to install charging stations at home and at working places;
 - ✧ Incentives for electric taxis, urban and school buses, as well as trucks;
 - ✧ And the pillar of our strategy - Carbon pricing – to send a price signal by incorporating the fuel distributors within the joint Quebec-California cap and trade system;

Where are we going?

- Efforts and programs will be maintained and accelerate, as transports are key part of a post-carbon society;
- The Electrification and Climate Change Plan 2020 – 2030 (reduction of 37,5% of our GHG emissions);
- A plan that will include everybody – just transition;
- Major investments in public transport;
- Collaboration and partnerships among governments and stakeholders will continue to be key;
- Mobilization of populations - as social acceptance is key to the implementation of measures and innovations required to achieve a low carbon society;

TRANSPORTATION ELECTRIFICATION IN QUÉBEC

Comprehensive **EV** policies

Ambitious **EV** targets

ZEV mandate for Original Equipment Manufacturer

Consumer & business incentives

Largest **EV** charging network in Canada



TRANSPORTATION ELECTRIFICATION IN QUÉBEC

Innovation: in our DNA!

Montréal: **AI** Hub in new mobility

Propulsion Québec: **Cluster** for Electric & Smart transportation

Fuel for innovation: naturel resources and industry powerhouse

Aluminum Lithium Graphite Titanium ...

+ 60 companies & **30** research centers
active in the field of electric mobility



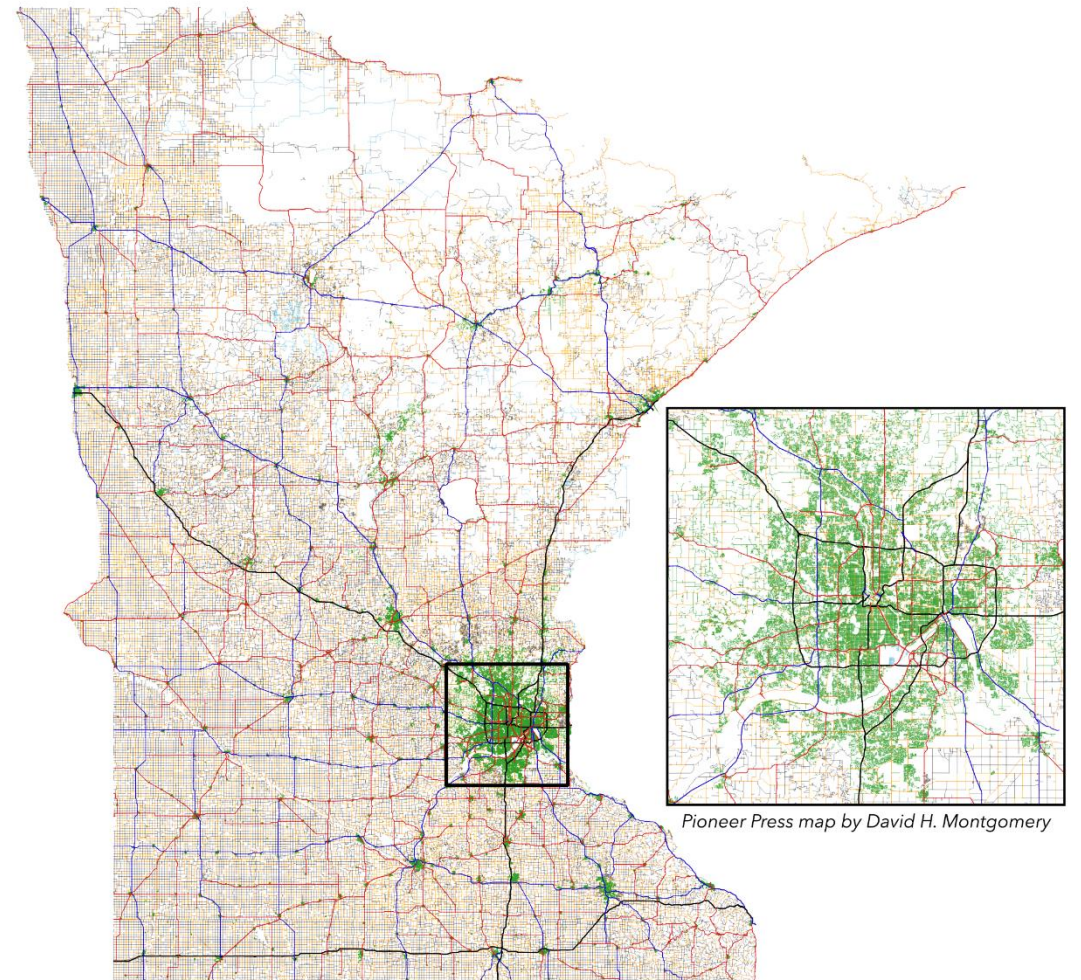
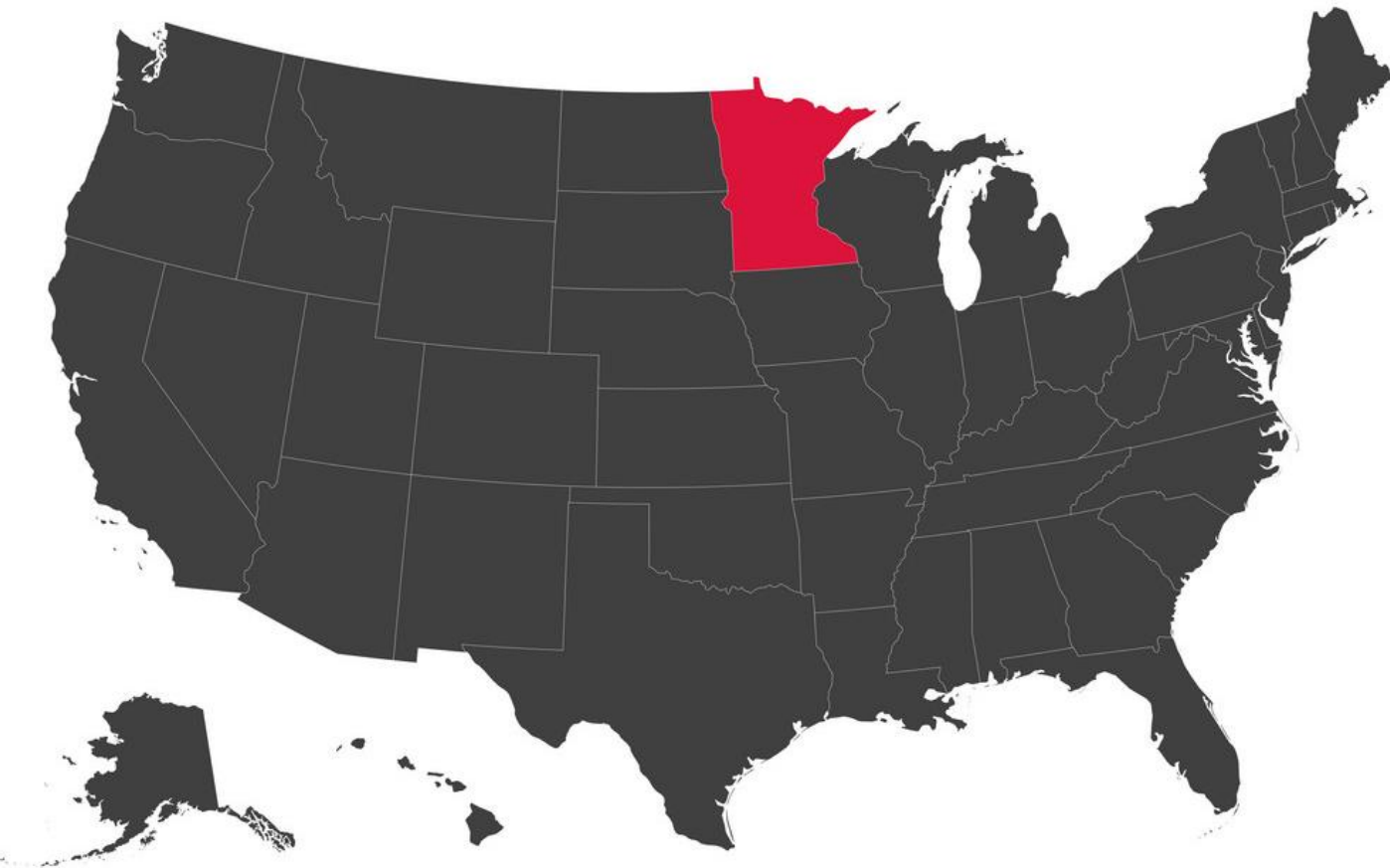
Efforts to Decarbonize Transportation in Minnesota

Tim Sexton

Assistant Commissioner and Chief Sustainability Officer
Minnesota Department of Transportation

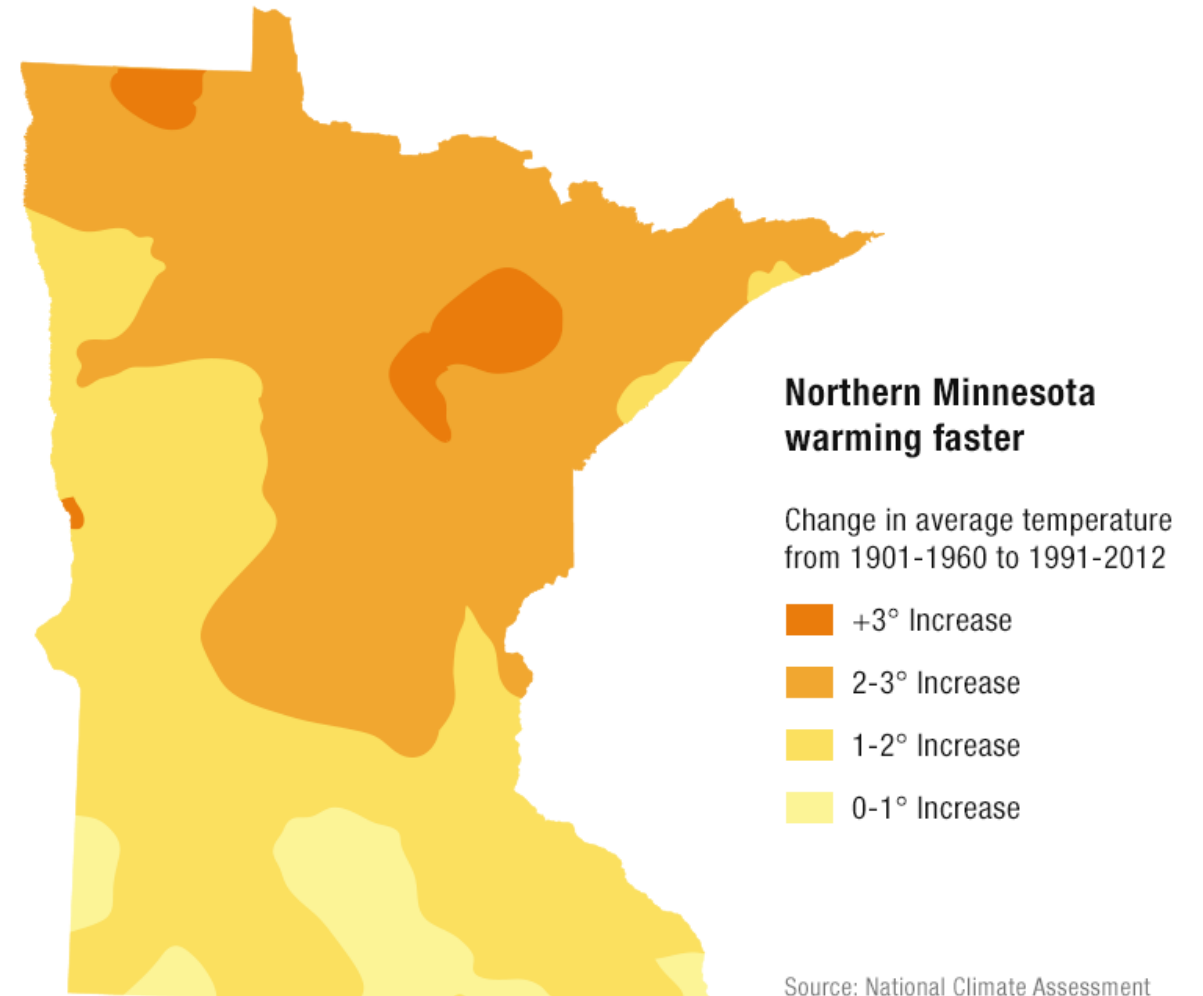


Minnesota



Climate Change in MN

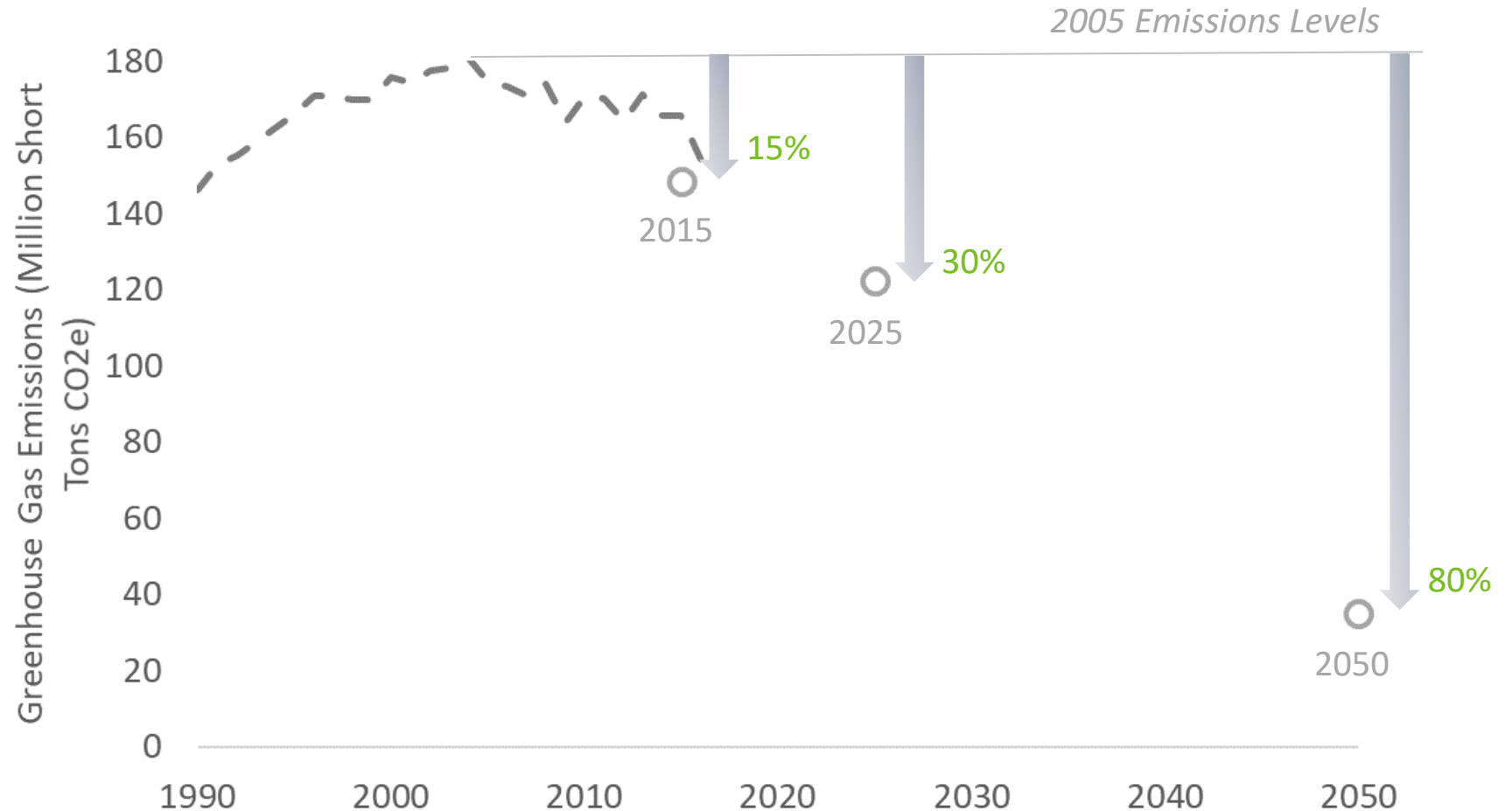
Minnesota is projected to experience the 2nd most warming of any US state



Next Generation Energy Act

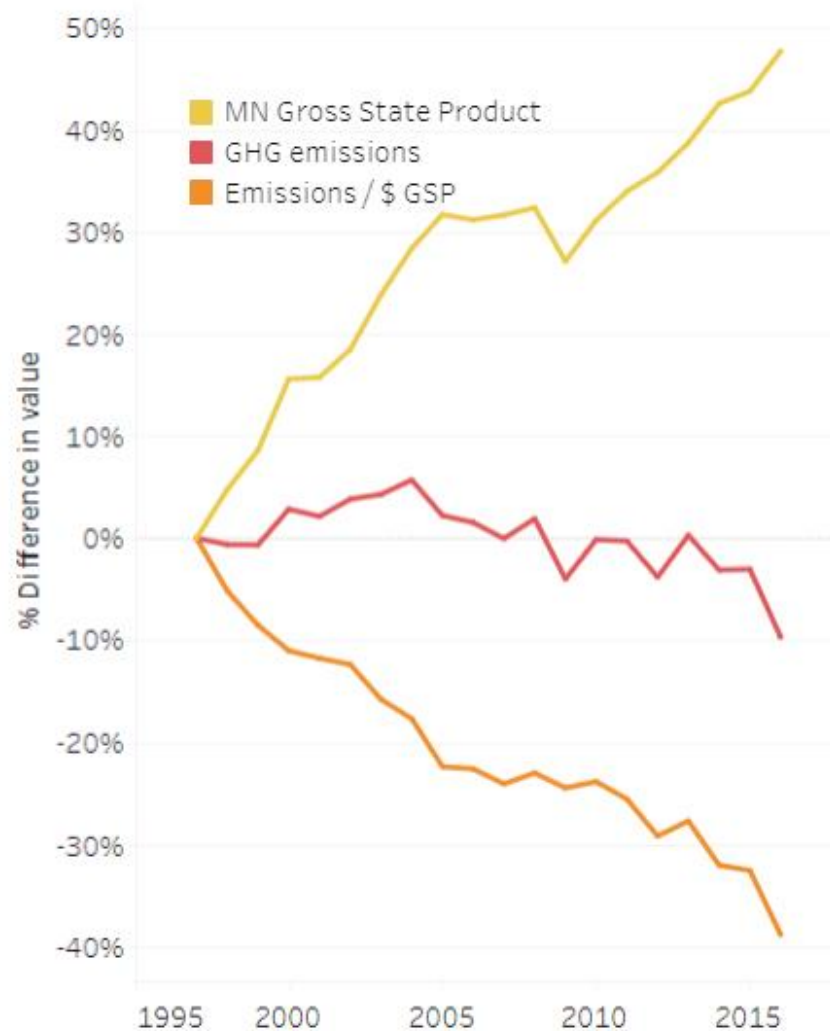
Economy wide goals: reduce greenhouse gas emissions 80% by 2050, interim reduction targets in 2015 and 2025.

Missed 2015 goal and NOT on track for 2025 or 2050.

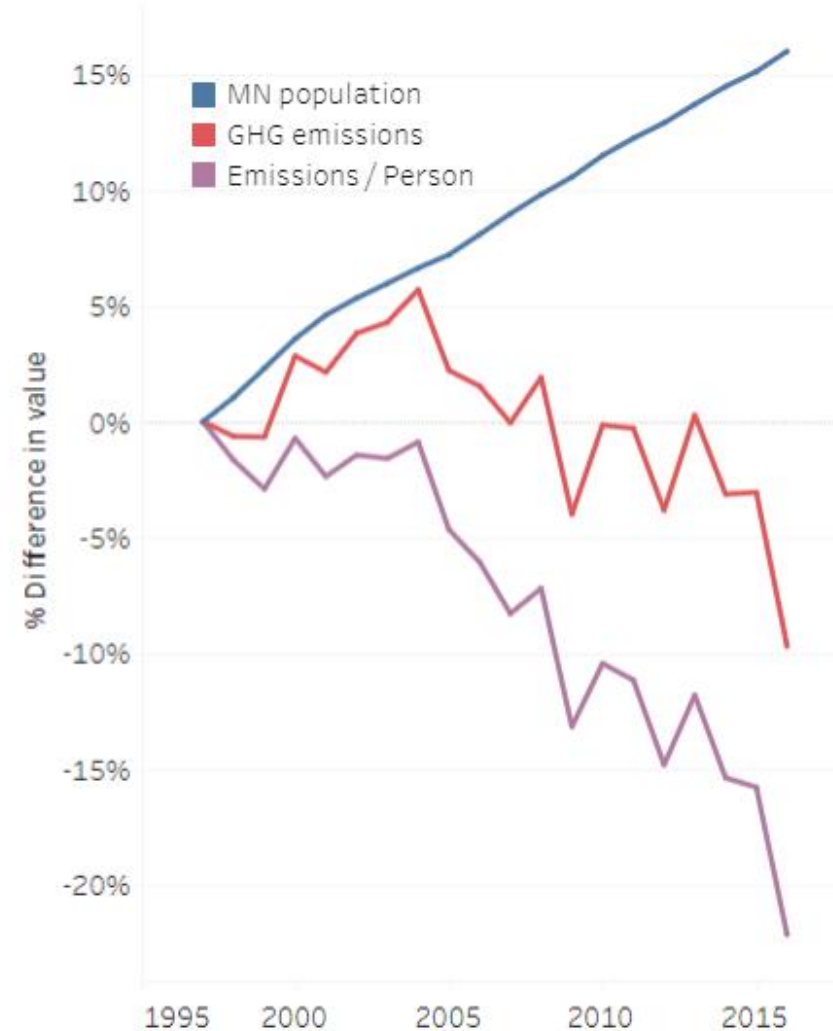


GHG Intensity: 1997-2016

Emissions per \$ GSP

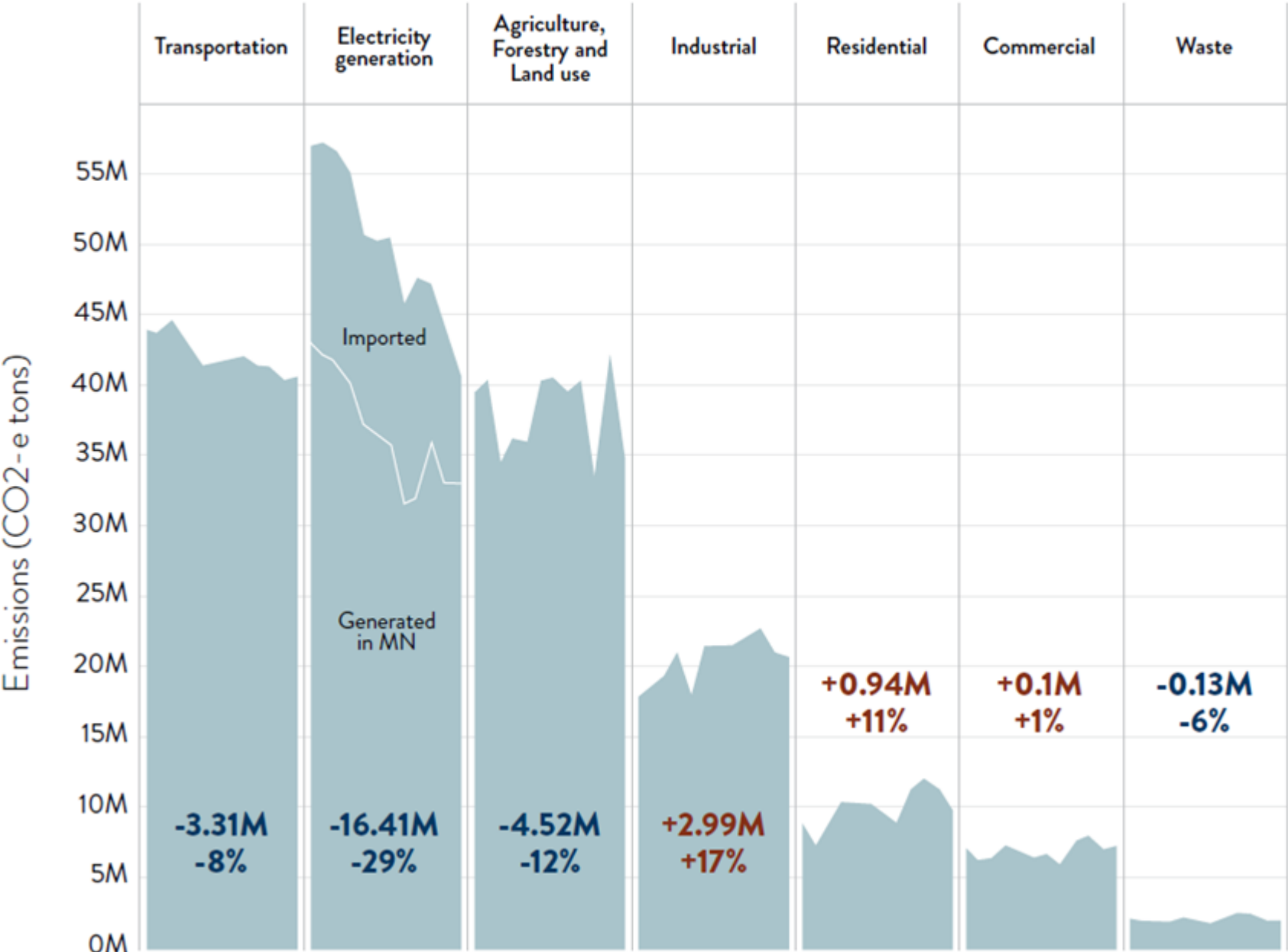


Emissions per capita



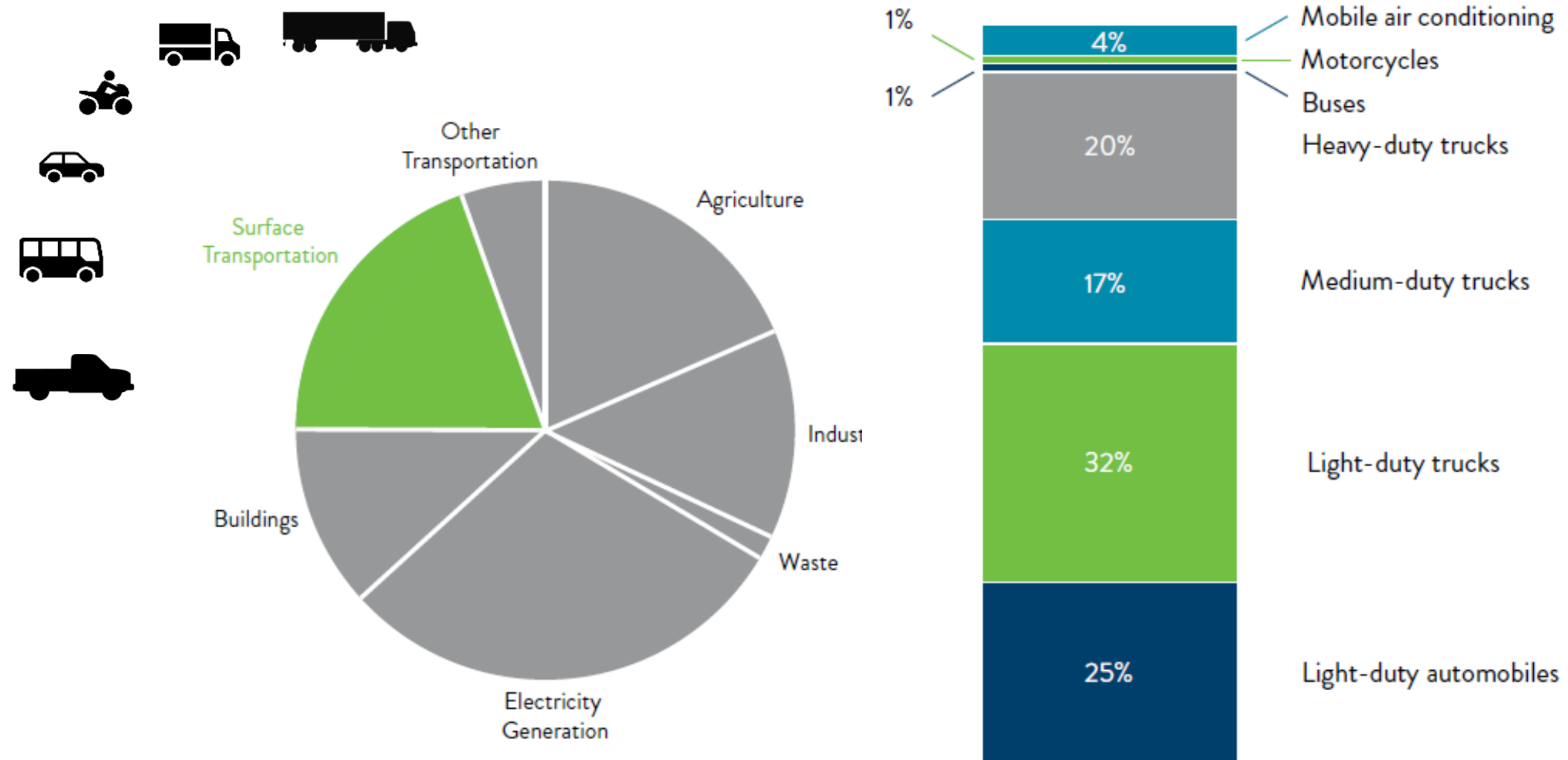
Source:
Minnesota
Pollution Control
Agency

Minnesota Emissions by Sector 2005-2016⁹



Surface Transportation

Minnesota Emissions Profile



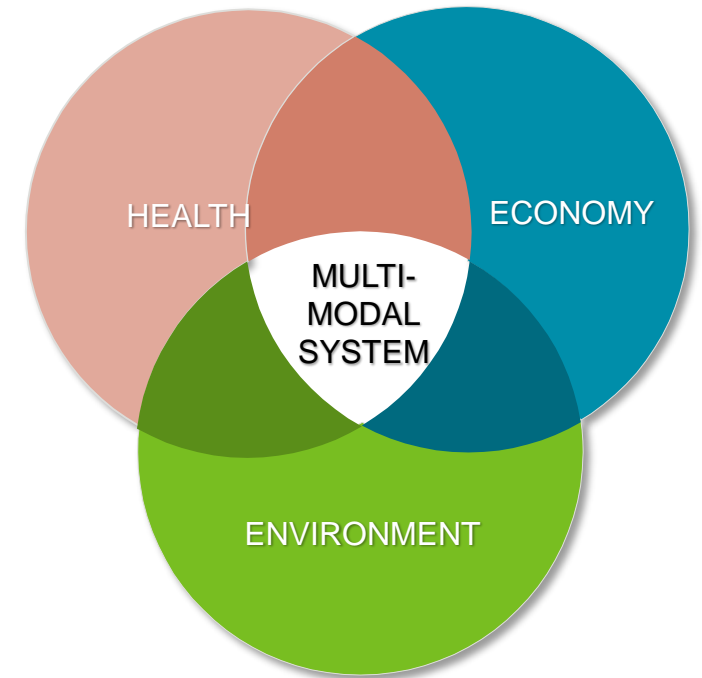
Sustainability – Statute

Agency Vision

Minnesota's multimodal transportation system maximizes the health of all people, the environment, and our economy

Minnesota statute 174.01: goals for MnDOT

- 10) Ensure planning and implementation of all modes are consistent with the environmental and energy goals of the state
- 11) Promote and increase use of high-occupancy vehicles and low-emission vehicles
- 15) Reduce GHG emissions from the state's transportation sector



Project Overview

Technical Stakeholder Engagement



Work with technical experts from the public, private, and nonprofits sectors to inform modeling assumptions and strategies that should be considered.

April – June 2019

Modeling



Model different pathways for decarbonizing transportation.

April – May 2019

Public Engagement



Meet with the public at locations around the state to hear their feedback and thoughts on strategies.

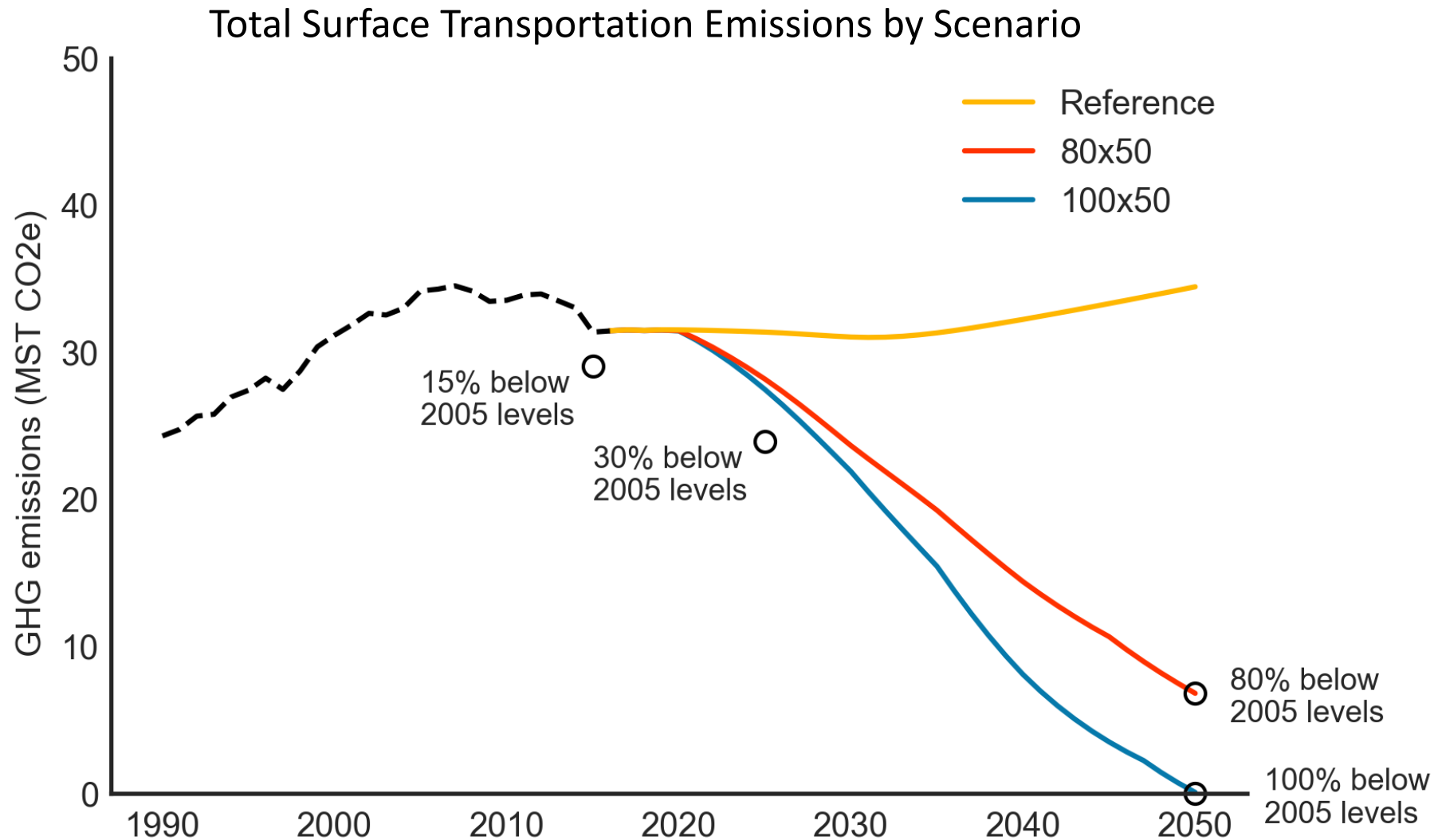
May – June 2019

Actions to reduce emissions in transportation

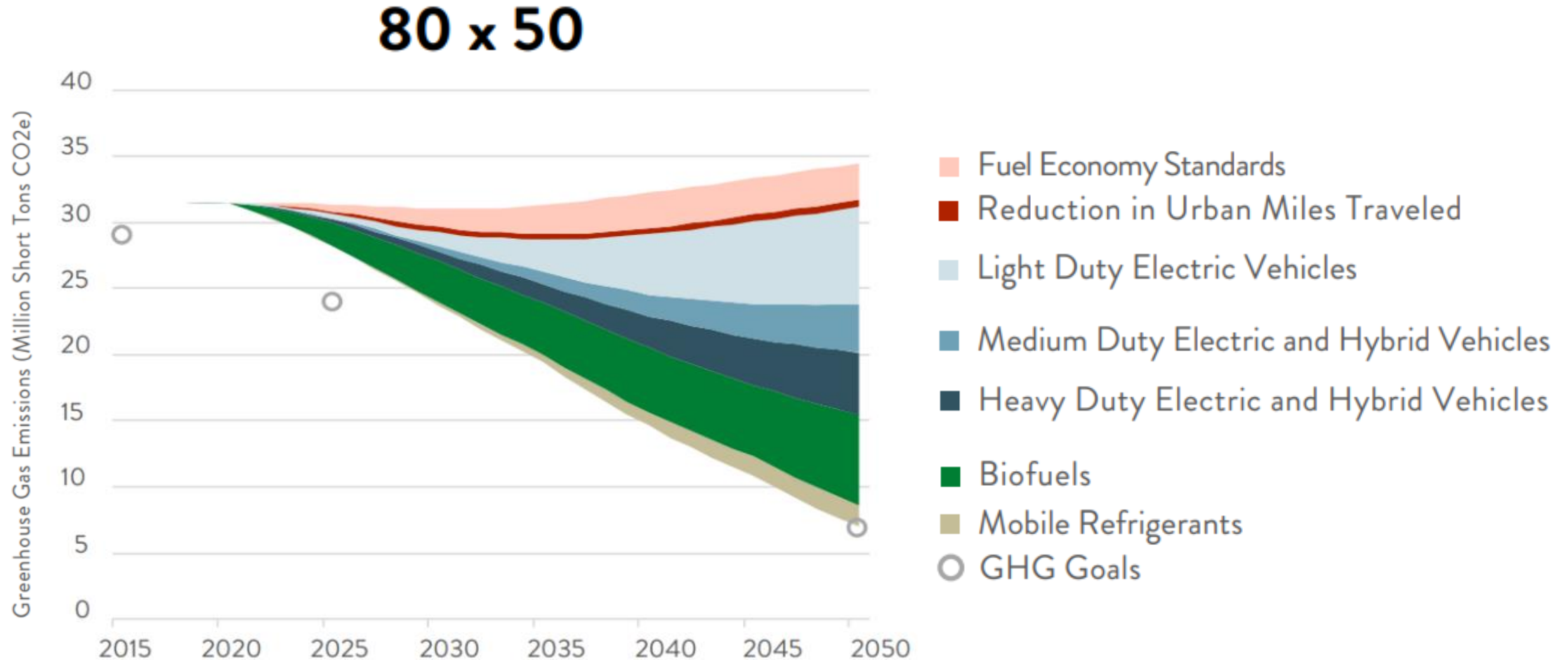


Model strategy	Example tactics to reduce transportation carbon pollution
Improve fuel economy	<ul style="list-style-type: none">• Federal or state vehicle efficiency standards
Reduce driving and VMT	<ul style="list-style-type: none">• Smart, dense city design• Neighborhoods built for biking, walking, and rolling• Carpooling incentives• Improved public transit
Increase electric vehicle sales	<ul style="list-style-type: none">• Consumer rebates• State vehicle targets• Public and workplace charging stations
Reduce the carbon intensity of biofuels	<ul style="list-style-type: none">• Regenerative agricultural and soil practices• Process efficiency• Low-carbon fuel standard
Increase lower-carbon electricity generation	<ul style="list-style-type: none">• Clean electricity standards• Utility greenhouse gas reduction goals• Retire coal plants

Emissions Reduction Scenarios



Emissions Reductions



Find Integrated Solutions

- Sustainable Transportation Advisory Council (STAC)
- Regional Collaboration on EV Corridors
- Clean Transportation Funding Pilot Program
- Analyze GHG emissions on transportation projects
- MnPass Incentive



I-94 near Albertville

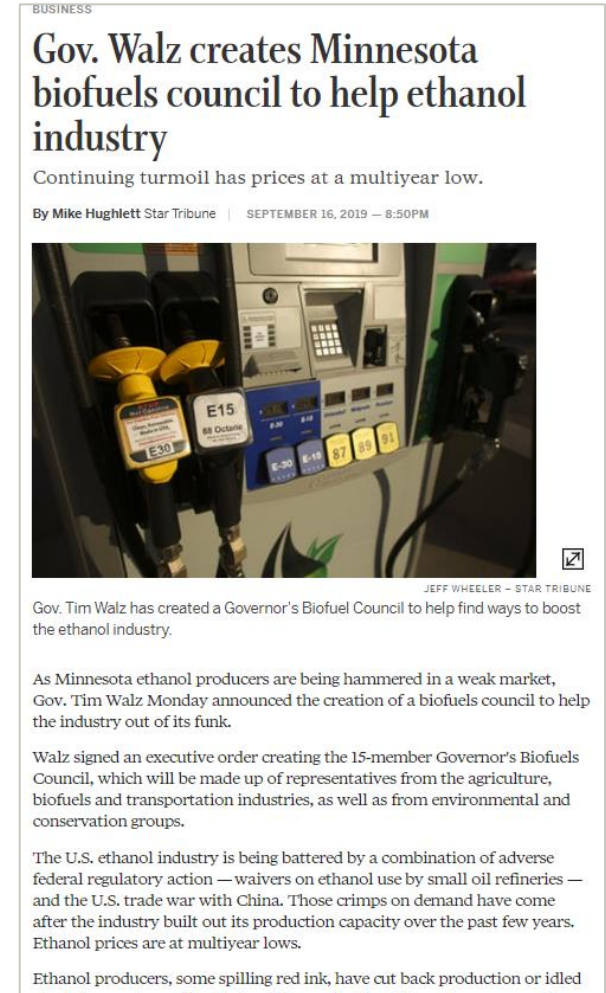
Recommendations

Build an EV Market and Provide More EV Options

- Adopt the Clean Car Standards

Promote Biofuels to Reduce GHG Emissions and Support Rural Minnesota

- Strengthen petroleum replacement goals
- Expand biofuel infrastructure
- Higher biodiesel blends and renewable diesel
- Reduce the carbon impact of biofuels

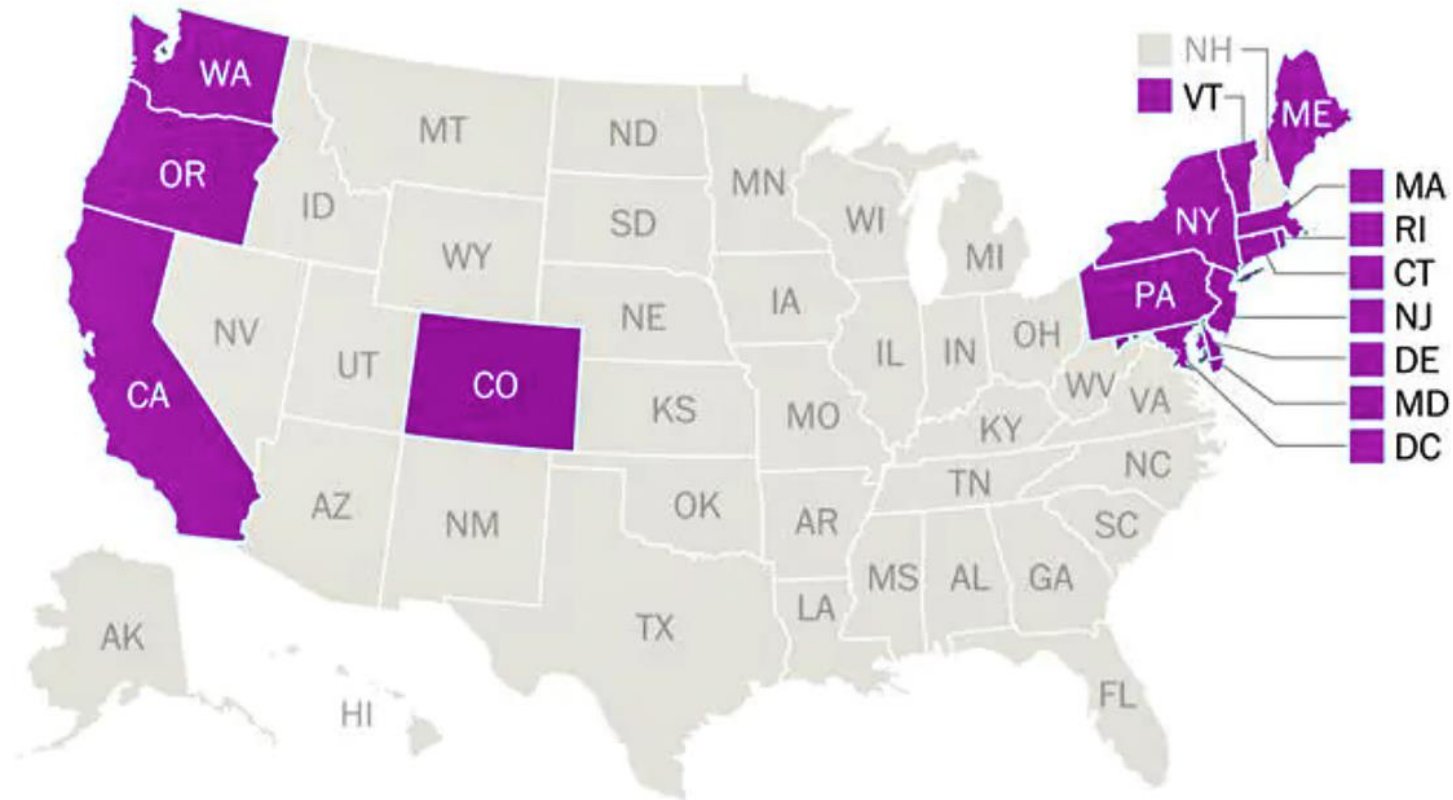


Star Tribune, Sept 16, 2019

Clean Car Standards

● Adopted LEV standards

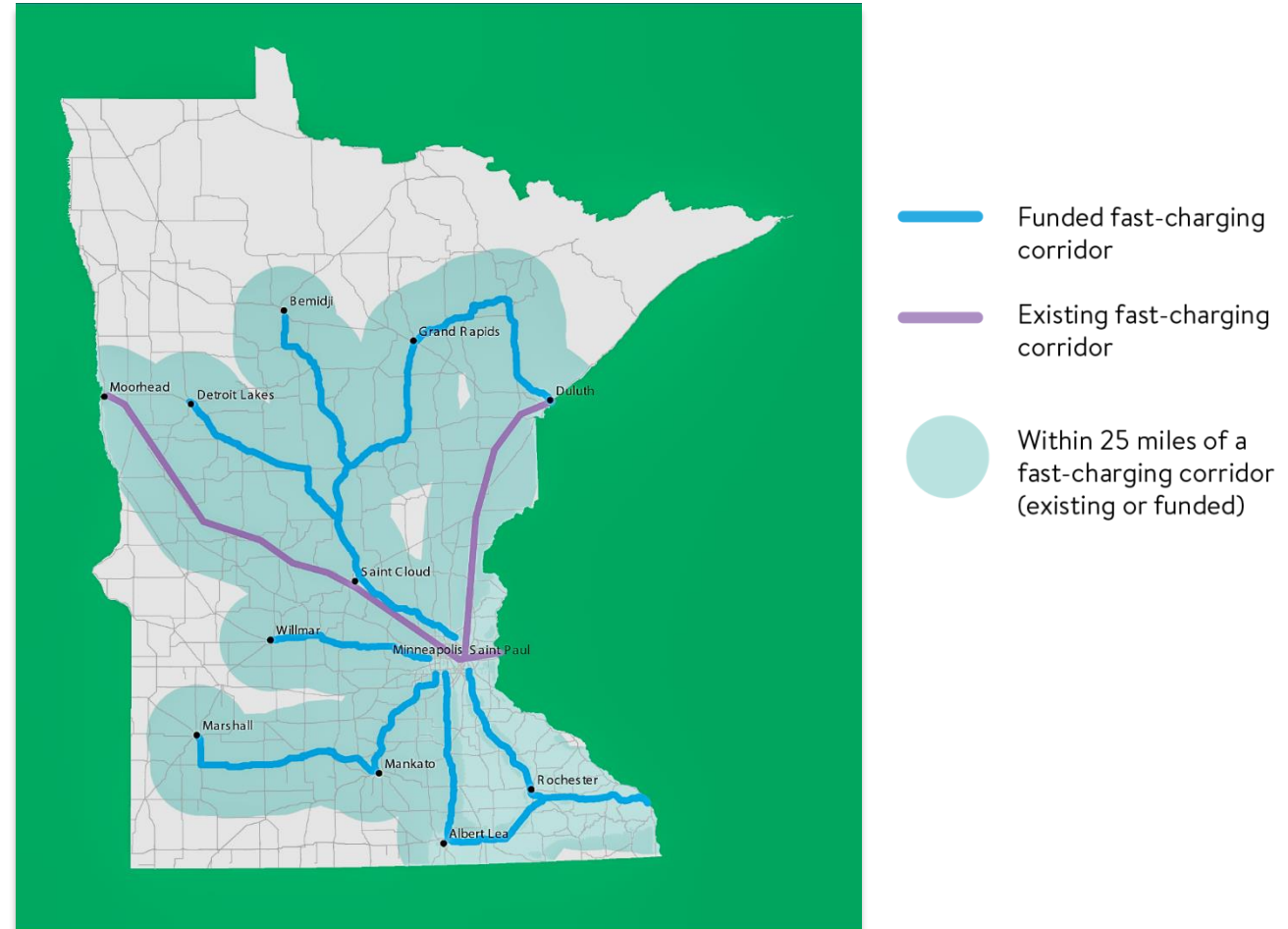
● Follows federal standards



Thank you!

Tim Sexton

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