TRANSPORTATION ADVISORY BOARD

MEETING OF THE TECHNICAL ADVISORY COMMITTEE

Wednesday | April 7, 2021
9:00 AM
Webex

AGENDA

I. CALL TO ORDER

II. APPROVAL OF AGENDA

(Agenda is approved without vote unless amended.)

III. APPROVAL OF MINUTES

March 3, 2021 meeting of the TAB Technical Advisory Committee

IV. TAB REPORT

V. COMMITTEE REPORTS

1. Executive Committee (Jon Solberg, Chair)
2. TAC Action Items
   a. **2021-16:** 2021-2024 Streamlined TIP Amendment for MVTA: Burnsville Bus Garage Expansion (Joe Barbeau, MTS)
   b. **2021-17:** 2021-2024 Streamlined TIP Amendment for Metro Transit: Farebox Replacement (Joe Barbeau, MTS)
3. Planning Committee (Emily Jorgensen, Chair)

   No action items.
4. Funding & Programming Committee (Michael Thompson, Chair)
   a. **2021-15:** Project Selection – 2020 Regional Solicitation Arterial Bus Rapid Transit Line (presentation)

VI. INFORMATION ITEMS

1. Regional Bicycle Barriers and RBTN Update Process (Steve Elmer, MTS)
2. Regional Electric Vehicle Study Update (Tony Fischer, MTS)

VII. AGENCY REPORTS

VIII. OTHER BUSINESS

IX. ADJOURNMENT

Please notify the Council at 651-602-1000 or 651-291-0904 (TTY) if you require special accommodations to attend this meeting. Upon request, the Council will provide reasonable accommodations to persons with disabilities.

Minutes of a Meeting of the
TECHNICAL ADVISORY COMMITTEE
Wednesday, March 3, 2021
9:00 A.M.

Members Present: Jon Solberg, Joe MacPherson, Lyndon Robjent, Erin Laberee, Chad Ellos, Brian Isaacson, Emily Jorgensen, Andrew Witter, Elaine Koutsoukos, Cole Hiniker, Michael Larson, Innocent Eyoh, Bridget Rief, Andrew Emanuele, Matt Fyten, Peter Dahlberg, Danny McCullough, Ken Ashfeld, Charlie Howley, Paul Oehme, Danny McCullough, Michael Thompson, Robert Ellis, Jim Kosluchar, Jenifer Hager, Paul Mogush, Bill Dermody, Paul Kurtz

1. Call to Order

The meeting was called to order by Chair Solberg at 9:03 a.m. Due to the COVID-19 pandemic, the meeting was held via video conference.

2. Approval of Agenda

The Committee approved the agenda with no changes. Therefore, no vote was needed.

3. Approval of Minutes

The minutes of the February 3, 2021 meeting were presented to the Committee for consideration. A motion to approve the February minutes was made by Mr. Isaacson and seconded by Mr. MacPherson. Motion carried.

(Meeting minutes for the March 4, 2020, minutes will be presented for approval at a future committee meeting.)

4. TAB Report

TAB Coordinator Ms. Koutsoukos provided a summary of the February 17, 2021 meeting. Ms. Koutsoukos reported that the TAB will spend the next few meetings focusing on equity. She invited TAC members to listen in on the conversation should they be interested.

5. Committee Reports

1. Executive Committee (Jon Solberg, Chair)

Chair Solberg reported that the Executive Committee met prior to the meeting. The Committee reviewed items on the agenda and discussed the potential need to formalize a group to advise TAB and TAC on bicycle and pedestrian issues. The formation of this group would necessitate a change to the TAC bylaws. Chair Solberg noted that such a change could potentially be brought forth in the upcoming months.

2. TAC Action Items

a) 2021-13: 2021-2024 Streamlined TIP Amendment for MnDOT: MN 95 Drainage Repair

Mr. Barbeau of MTS Planning presented this item, noting that MnDOT was requesting an amendment to the 2021-2024 TIP to increase the project length and cost for a drainage project on Minnesota Highway 95. The overall project length will increase from 1.5 miles to 9.6 miles. Overall, the total project cost will increase by approximately $200,000. These additional costs will be provided entirely by the state

A motion to recommend approval of the TIP amendment was made by Mr. MacPherson and seconded by Mr. Eyoh. Motion carried.

b) 2021-14: 2021-2024 Streamlined TIP Amendment for MnDOT: FTA Section 5310, Enhanced Mobility for Seniors and Persons with Disabilities

Mr. Barbeau presented this item, which was requested by MnDOT. Mr. Barbeau explained that MnDOT was awarded Section 5310 funding from the Federal Transit Administration (FTA) for work on the Enhanced Mobility for Seniors and Persons with Disabilities program. The TIP amendment will include two additional projects funded by the FTA award and MnDOT funds.

A motion to recommend approval of the request was made by Mr. Ellis and seconded by Mr. Isaacson. Motion carried.

3. Planning Committee (Emily Jorgensen, Chair)

a) 2021-12: Federal Performance Measure Adoption

TAC Planning Chair Jorgensen introduced Dave Burns of MTS Planning, who presented the item to the Committee. Mr. Burns explained that the as the region's MPO, the Council is required to adopt performance measure targets and monitor the region's progress towards meeting the set targets. The targets under consideration were associated with bridge/pavement condition, travel time reliability, and Congestion Mitigation and Air Quality (CMAQ). The Council has the option to either agree to plan and program projects that contribute to the targets set by MnDOT or commit to a quantifiable target for the metropolitan planning area. The adoption of these targets is required by March 31st of 2021.

Mr. Burns recommended the following actions:

- To concur with the adopted MnDOT pavement/bridge interstate targets and non-interstate NHS bridge target.
- To set a specific metro area target for non-interstate NHS pavement in good and poor condition.
- To set system reliability performance targets specific to the metro area.
- To concur with the adopted CMAQ targets.

As the targets were based on 2019 data, the impact of the COVID-19 pandemic was not accounted for. Mr. Burns explained that this may have the effect of the targets being significantly different than the actual conditions but noted that the targets will be updated again in 2023.

A motion to recommend approval of the targets was made by Mr. Eyoh and seconded by Mr. Isaacson. Motion carried.

4. Funding and Programming Committee (Michael Thompson, Chair)

No items.

6. Information Items

1. Regional Solicitation Feedback and Preparation

Mr. Barbeau of MTS Planning presented this item, which focused on surveys and a sensitivity analysis performed to help assess the 2020 Regional Solicitation. He noted that the surveys were provided to applicants, scorers, and members of TAB, TAC, and TAC Funding and Programming. Major themes that came about from the survey included funding categorization for bike/ped bridges, a lack of clarity on how applications are scored; and the time and cost to complete an application. Some respondents felt the need for more prescriptive scoring guidance and a need to examine the functionality of the measures introduced in the 2020 Regional Solicitation.

Mr. Barbeau continued by discussing the results of the sensitivity analysis. Overall, the analysis showed that the measures that have a higher potential point value have a larger impact on the scoring. Few measures have a significant impact on their own and some measures had minimal impact in several of the application categories. Issues that should be considered prior to the 2022 Regional Solicitation include the Unique Projects category, geographic balance, whether bike/ped bridges should be a separate category, and an evaluation of the effectiveness of the new measures.

2. Statewide Multimodal Transportation Plan 2022 Update

Hally Turner, Policy Planning Director of MnDOT, presented this item. Ms. Turner provided an overview of the update of the Statewide Multimodal Transportation Plan (SMTP), the areas that will be of particular focus, and how MnDOT will engage the public in the update process. The SMTP is informed by the Minnesota GO 50-year vision and focuses on how the state will achieve the long-term vision. It includes overarching objectives, strategies, and performance measures for all modes. The 2022 update will concentrate in particular on six topic areas: aging infrastructure, climate change, the economy, equity, transportation options, and safety.

Public engagement will be an area of emphasis in the development of the plan. MnDOT will partner with community organizations to host virtual meetings and conversations and use the Minnesota GO website for greater engagement and to reach out to diverse audiences.

3. RBTN Bikeway Facility Guidelines and Measures Study

Steve Elmer of MTS Planning presented this item, which provided an overview of the Regional Bicycle Transportation Network (RBTN) Bikeway Facility Guidelines and Measures study. The study stems in part from the desire of local agencies to have more opportunities to submit RBTN changes for consideration. The study will develop a new process to allow for more significant RBTN changes and develop flexible measures to evaluate the proposed need in a variety of contexts.

Mr. Elmer noted that the study will consist of two phases: the development of quantitative measures and the development of bikeway facility types for the RBTN. The latter will provide guidance on RBTN treatments that may be most appropriate for urban, suburban, and rural areas of the region. The study will be informed by the RBTN guiding principles and will include measures addressing corridor spacing, directness, connectivity, equity and proximity to new major developments. Phase two of the study is anticipated to be complete later in 2021.

7. Agency Reports

Ms. Rief of MAC noted that passenger volume is up from previous months and outlined some the improvements to terminal one.

Chair Solberg provided an update on behalf of MnDOT. He noted that highway user tax revenue funds were down slightly compared to the forecast. He also noted that the snowplow naming contest was complete and the results were announced.

8. Other Business and Adjournment

The meeting adjourned at 10:57 a.m.

Prepared by:

Dave Burns

ACTION TRANSMITTAL No. 2021-16

DATE:	March 31, 2021
TO:	Technical Advisory Committee
PREPARED BY:	Joe Barbeau, Senior Planner (651-602-1705)
SUBJECT:	2021-2024 Streamlined TIP Amendment for MVTA: Burnsville Bus Garage Expansion
REQUESTED ACTION:	MVTA requests an amendment to the 2021-2024 TIP to add a project expanding the Burnsville Bus Garage (TRS-TCMT-22E).
RECOMMENDED MOTION:	That the Technical Advisory Committee recommend that the Transportation Advisory Board recommend adoption of an amendment to the 2021-2024 TIP to add a project expanding MVTA's Burnsville Bus Garage (TRS-TCMT-22E).

BACKGROUND AND PURPOSE OF ACTION: The Minnesota Valley Transit Authority (MVTA) was awarded funding from the 2020 Regional Solicitation for expansion of the Burnsville Bus Garage. This project was funded with money available for fiscal year 2022.

Projects from the 2020 Regional Solicitation are scheduled to be included in the 2022-2025 TIP. However, MVTA anticipates this project beginning before that TIP is adopted in the fall of 2021. Therefore, it needs to be added to the 2021-2024 TIP, which will be active for roughly the first one to two months of fiscal year 2022. No deviation from the cost or scope of the original application is proposed.

RELATIONSHIP TO REGIONAL POLICY: Federal law requires that all transportation projects that will be funded with federal funds must be in an approved TIP and meet the following four tests: fiscal constraint; consistency with the adopted regional transportation plan; air quality conformity; and opportunity for public input. It is the TAB's responsibility to recommend TIP amendments to the Council for adoption.

The streamlined TIP amendment process allows projects that meet certain conditions to be streamlined, which entails forgoing TAC Funding & Programming Committee review and results in saving a month of process time.

STAFF ANALYSIS: The TIP amendment meets fiscal constraint because the federal and local funds are sufficient to fully fund the project. The amendment is consistent with the Transportation Policy Plan, adopted by the Metropolitan Council on November 18, 2020 with FHWA/FTA conformity determination established on December 4, 2020. Public input opportunity for this amendment is provided through the TAB's and Council's regular meetings. The Minnesota Interagency Air Quality and Transportation Planning Committee determined that the project is exempt from air quality conformity analysis.

ROUTING

TO	ACTION REQUESTED	DATE SCHEDULED / COMPLETED
Technical Advisory Committee	Review & Recommend	4/7/2021
Transportation Advisory Board	Review & Adopt	4/21/2021
Metropolitan Council Transportation Committee	Review & Recommend	5/10/2021
Metropolitan Council	Adopt	5/12/2021

Please amend the 2021-2024 Transportation Improvement Program (TIP) to add this project to program year 2022. This project is being submitted with the following information:

PROJECT IDENTIFICATION:

Fiscal Year	ATP / Dist	Route System	Project Number (S.P. #)	Agency	Description	Miles
2022	M	BB	TRS-TCMT-22E	Minnesota Valley Transit Authority	CMAQ: Minnesota Valley Transit Authority – Burnsville Bus Garage expansion	-

Prog	Type of Work	Prop Funds	Total $	FTA $	FHWA $	Other $
BB	Transit (P)	CMAQ	$3,500,000	$2,800,000	-	$700,000

PROJECT BACKGROUND:

1. Briefly describe why amendment is needed (e.g., project in previous TIP but not completed; illustrative project and funds now available; discretionary funds received; inadvertently not included in TIP).

This formal amendment is needed to add a new CMAQ-funded project into the 2021-2024 TIP/STIP for fiscal year 2022. The project was awarded funding in the 2020 Regional Solicitation and needs to be placed into the 2021-2024 TIP because it may be authorized prior to federal approval of the 2022-2025 STIP, in which it will appear with identical information.

2. How is Fiscal Constraint Maintained as required by 23 CFR 450.216 (check all that apply)?
    - New Money
    - Anticipated Advance Construction
    - ATP or MPO or MnDOT Adjustment by deferral of other projects
    - Earmark or HPP not affecting fiscal constraint **X***

*This project was recently awarded funding in the 2020 Regional solicitation.

CONSISTENCY WITH MPO LONG RANGE PLAN:

This amendment is consistent with the Metropolitan Council Transportation Policy Plan, adopted by the Metropolitan Council on November 18, 2020 with FHWA/FTA conformity determination established on December 4, 2020.

AIR QUALITY CONFORMITY:

- Subject to conformity determination
- Exempt from regional level analysis **X***
- N/A (not in a nonattainment or maintenance area

*Exempt from reginal level analysis: T-8: Reconstruction of renovation of transit buildings and structures (e.g., rail or bus buildings, storage and maintenance facilities, stations, terminals and ancillary structures).

ACTION TRANSMITTAL No. 2021-17

DATE:	March 31, 2021
TO:	Technical Advisory Committee
PREPARED BY:	Joe Barbeau, Senior Planner (651-602-1705)
SUBJECT:	2021-2024 Streamlined TIP Amendment for Metro Transit: Farebox Replacement
REQUESTED ACTION:	Metro Transit requests an amendment to the 2021-2024 TIP to add two projects replacing the fareboxes for its regional bus fleet (TRS-TCMT-22D and TRS-TCMT-23D).
RECOMMENDED MOTION:	That the Technical Advisory Committee recommend that the Transportation Advisory Board recommend adoption of an amendment to the 2021-2024 TIP to add two projects replacing the fareboxes for Metro Transit's regional bus fleet (TRS-TCMT-22D and TRS-TCMT-23D).

BACKGROUND AND PURPOSE OF ACTION: Metro Transit was awarded funding from the 2020 Regional Solicitation for replacement of fareboxes. While this is only one grant application and award, it is scheduled to be programmed as two separate projects in order to accept limited funding available for 2022 with the balance of the funding to be programmed in 2023.

Projects from the 2020 Regional Solicitation are scheduled to be included in the 2022-2025 TIP. However, Metro Transit anticipates the 2022 project beginning before that TIP is adopted in the fall of 2021. Therefore, it needs to be added to the 2021-2024 TIP, which will be active for roughly the first one to two months of fiscal year 2022. No deviation from the cost or scope of the original application is proposed.

RELATIONSHIP TO REGIONAL POLICY: Federal law requires that all transportation projects that will be funded with federal funds must be in an approved TIP and meet the following four tests: fiscal constraint; consistency with the adopted regional transportation plan; air quality conformity; and opportunity for public input. It is the TAB's responsibility to recommend TIP amendments to the Council for adoption.

The streamlined TIP amendment process allows projects that meet certain conditions to be streamlined, which entails forgoing TAC Funding & Programming Committee review and results in saving a month of process time.

STAFF ANALYSIS: The TIP amendment meets fiscal constraint because the federal and local funds are sufficient to fully fund the project. The amendment is consistent with the Transportation Policy Plan, adopted by the Metropolitan Council on November 18, 2020 with FHWA/FTA conformity determination established on December 4, 2020. Public input opportunity for this amendment is provided through the TAB's and Council's regular meetings. The Minnesota Interagency Air Quality and Transportation Planning Committee determined that the project is exempt from air quality conformity analysis.

ROUTING

TO	ACTION REQUESTED	DATE SCHEDULED / COMPLETED
Technical Advisory Committee	Review & Recommend	4/7/2021
Transportation Advisory Board	Review & Adopt	4/21/2021
Metropolitan Council Transportation Committee	Review & Recommend	5/10/2021
Metropolitan Council	Adopt	5/12/2021

Please amend the 2021-2024 Transportation Improvement Program (TIP) to add this project to program years 2022 and 2023. This project is being submitted with the following information:

PROJECT IDENTIFICATION:

Fiscal Year	ATP / Dist	Route System	Project Number (S.P. #)	Agency	Description	Miles
2022	M	BB	TRS-TCMT-22D	Metro Transit	CMAQ: Replace fareboxes for regional bus fleet	-
2023	M	BB	TRS-TCMT-23D	Metro Transit	CMAQ: Replace fareboxes for regional bus fleet	-

Fiscal Year	Prog	Type of Work	Prop Funds	Total $	FTA $	FHWA $	Other $
2022	BB	Transit (P)	CMAQ	$2,752,774	$2,202,219	-	$550,555
2023	BB	Transit (P)	CMAQ	$5,997,226	$4,797,781	-	$1,199,445

PROJECT BACKGROUND:

1. Briefly describe why amendment is needed (e.g., project in previous TIP but not completed; illustrative project and funds now available; discretionary funds received; inadvertently not included in TIP).

This formal amendment is needed to add a new CMAQ-funded project into the 2021-2024 TIP/STIP for fiscal years 2022 and 2023. This is one award is being split into two years (and, therefore, two projects, per the TIP) due to the amount of funding available in the earlier year. The project was awarded funding in the 2020 Regional Solicitation and needs to be placed into the 2021-2024 TIP because it may be authorized prior to federal approval of the 2022-2025 STIP, in which it will appear with identical information.

2. How is Fiscal Constraint Maintained as required by 23 CFR 450.216 (check all that apply)?
    - New Money
    - Anticipated Advance Construction
    - ATP or MPO or MnDOT Adjustment by deferral of other projects
    - Earmark or HPP not affecting fiscal constraint **X***

*This project was recently awarded funding in the 2020 Regional solicitation.

CONSISTENCY WITH MPO LONG RANGE PLAN:

This amendment is consistent with the Metropolitan Council Transportation Policy Plan, adopted by the Metropolitan Council on November 18, 2020 with FHWA/FTA conformity determination established on December 4, 2020.

AIR QUALITY CONFORMITY:

- Subject to conformity determination
- Exempt from regional level analysis **X***
- N/A (not in a nonattainment or maintenance area

*Exempt from reginal level analysis: T-5: Purchase of operating equipment for vehicles (e.g., radios, fareboxes, lifts, etc.).

ACTION TRANSMITTAL No. 2021-15

DATE:	March 31, 2021
TO:	Technical Advisory Committee
FROM:	TAC Funding & Programming Committee
PREPARED BY:	Steve Peterson, Manager of Highway Planning and TAB/TAC Process (steven.peterson@metc.state.mn.us) Joe Barbeau, Senior Planner (joe.barbeau@metc.state.mn.us)
SUBJECT:	Project Selection - 2020 Regional Solicitation Arterial Bus Rapid Transit Line
REQUESTED ACTION:	Metro Transit requests award of $25M identified in the 2020 Regional Solicitation to the METRO F Line along current Route 10 from Downtown Minneapolis to Northtown Mall via Central Avenue and University Avenue.
RECOMMENDED MOTION:	That TAC recommend to TAB awarding $25 million identified in the 2020 Regional Solicitation to the METRO F Line along current Route 10 from Downtown Minneapolis to Northtown Mall via Central Avenue and University Avenue.

BACKGROUND AND PURPOSE OF ACTION: On December 16, 2020, TAB approved a program of 57 projects to be funded through the 2020 Regional Solicitation, primarily for Fiscal Years 2024 and 2025. Included in the nearly $200M federal program was $25M in federal funds (and therefore at least $31.25M total) for an arterial bus rapid transit (ABRT) project, with a final funding award to be decided upon by TAB in April 2021. This timing was selected to align with the Metropolitan Council's adoption of Network Next ABRT expansion recommendations and to enable robust community outreach in the selection process. TAB received information updates on the selection process across late 2020.

On March 24, 2021 the Metropolitan Council selected the following three lines as the region's next ABRT expansions, with 40 new miles of BRT corridors identified with planned implementation by 2030 serving four metro counties:

- The METRO F Line will serve the Central Avenue Corridor, largely replacing Route 10 from downtown Minneapolis to Northtown Mall via Central and University avenues.
- The METRO G Line will serve the Rice/Robert corridor, running from West St. Paul to Little Canada via Robert Street and Rice Street and replacing portions of routes 62 and 68.
- The METRO H Line will serve the Como/Maryland corridor from downtown Minneapolis to Sun Ray Transit Center in St. Paul via Como Avenue and Maryland Avenue, replacing and extending Route 3.

Since these near-term candidate corridors were presented to TAB in December 2020, robust engagement yielded strong support for each. The Central Avenue Corridor was selected as the F Line due to key differentiators that include high existing ridership, lower incremental annual

operating costs, and lower capital costs. Naming the G and H lines also enables project coordination to proceed with other near-term corridor roadway and transit projects.

Selecting the project will result in the project's inclusion in the 2022-2025 Transportation Improvement Program (TIP). The F Line is identified for 2025 program year funding.

RELATIONSHIP TO REGIONAL POLICY: TAB approves Regional Solicitation project selections for concurrence by the Metropolitan Council and recommends the TIP for approval to the Metropolitan Council.

COMMITTEE COMMENTS AND ACTION: At its March 18, 2021, meeting, the TAC Funding & Programming Committee voted unanimously to recommend awarding $25 million identified in the 2020 Regional Solicitation to the METRO F Line along current Route 10 from Downtown Minneapolis to Northtown Mall via Central Avenue and University Avenue.

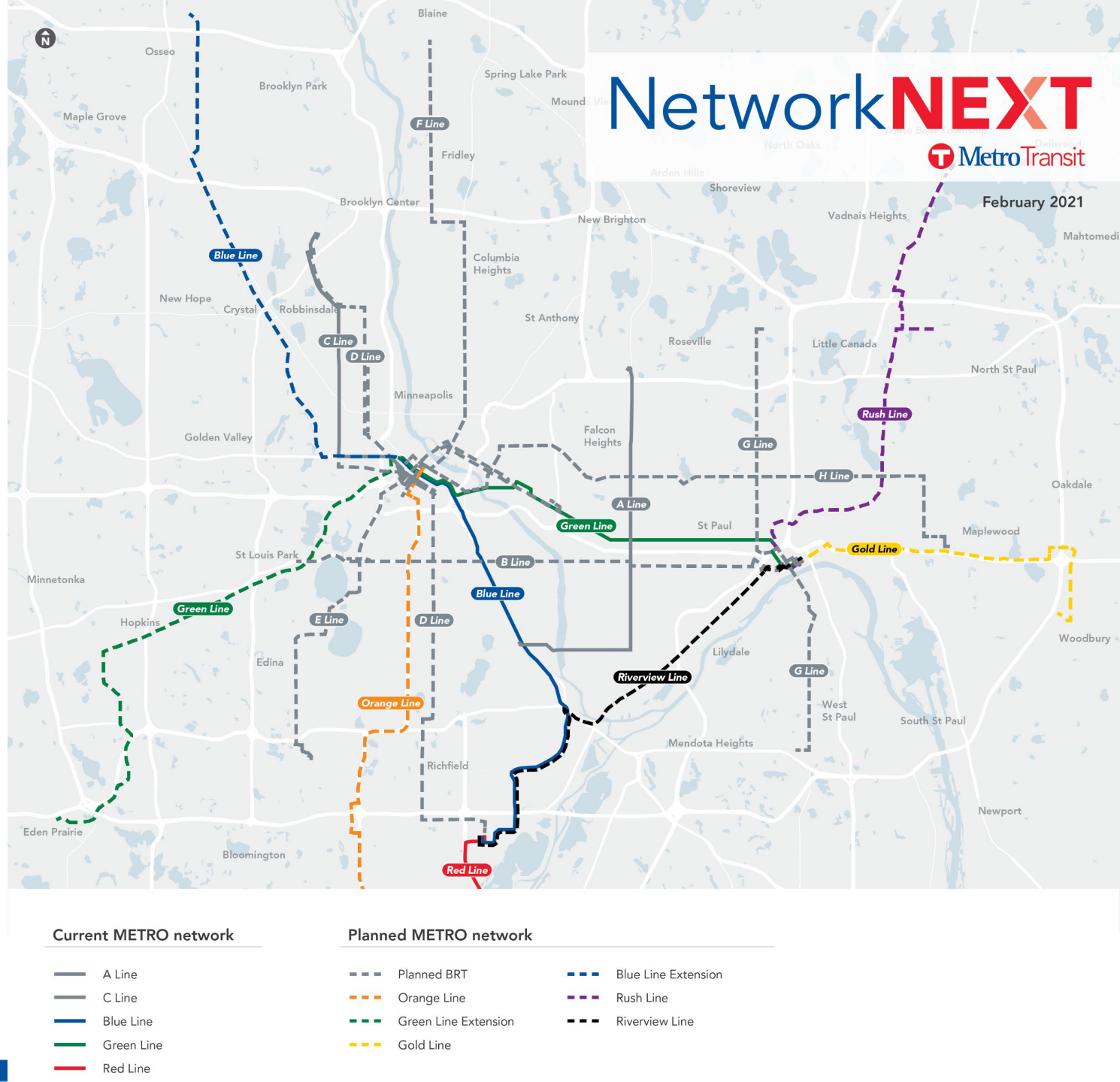
ROUTING

TO	ACTION REQUESTED	DATE SCHEDULED/COMPLETED
TAC Funding & Programming Committee	Review & Recommend	3/18/2021
Technical Advisory Committee	Review & Recommend	4/7/2021
Transportation Advisory Board	Review & Approve	4/21/2021

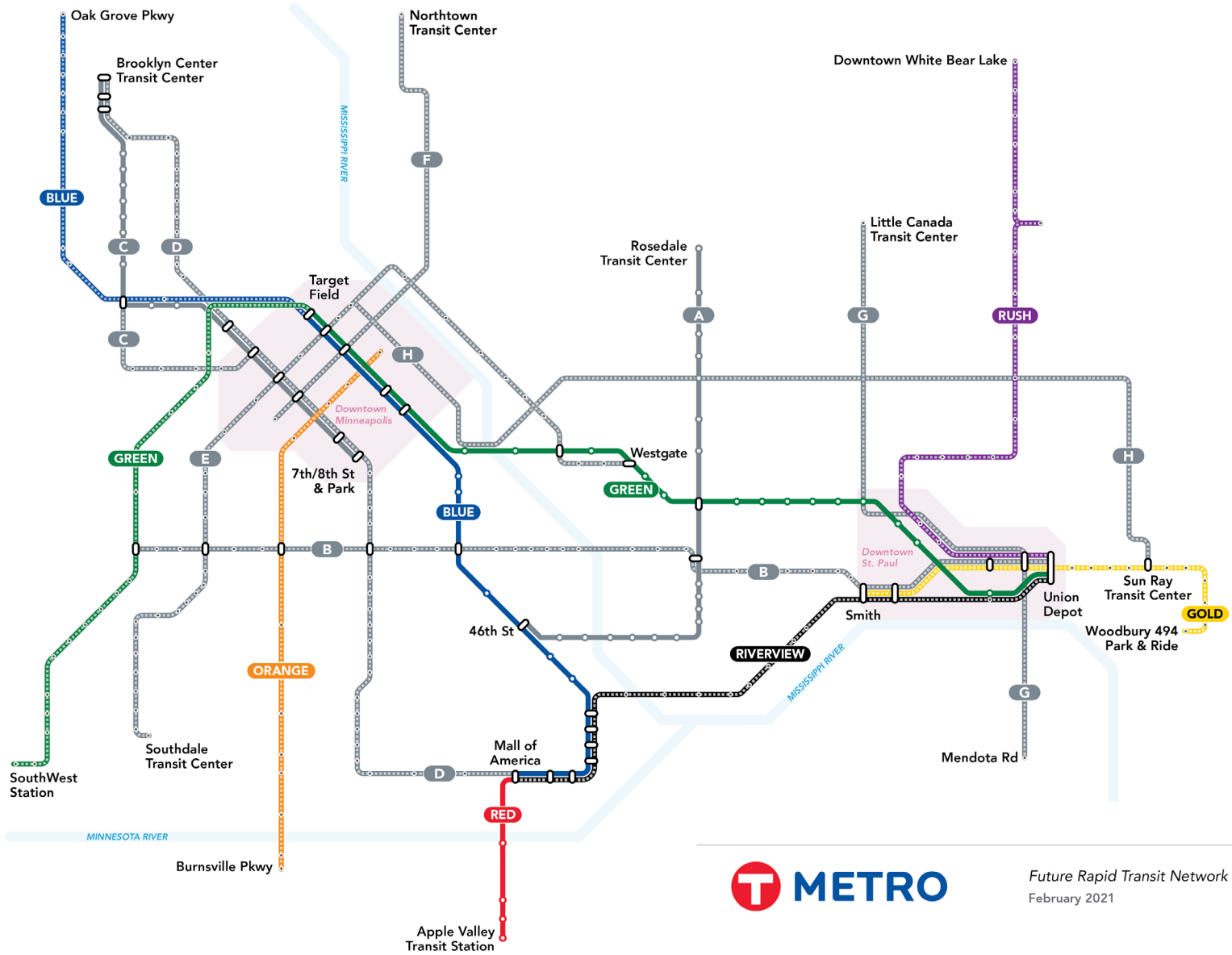
Network Next Near-term BRT corridors

- F Line (Central)
- G Line (Rice / Robert)
- H Line (Como / Maryland)

- Aligns with Network Next principles
- Serves Anoka, Dakota, Hennepin, Ramsey counties
- Provides significant expansion in access by 2030



Future METRO vision with F, G, H lines



METRO

Future Rapid Transit Network

February 2021

2020 Regional Solicitation Project Selection: F Line Arterial Bus Rapid Transit

Technical Advisory Committee to the Transportation Advisory Board
April 7, 2021

Charles Carlson, Director, BRT Projects

NetworkNEXT

2020 Regional Solicitation

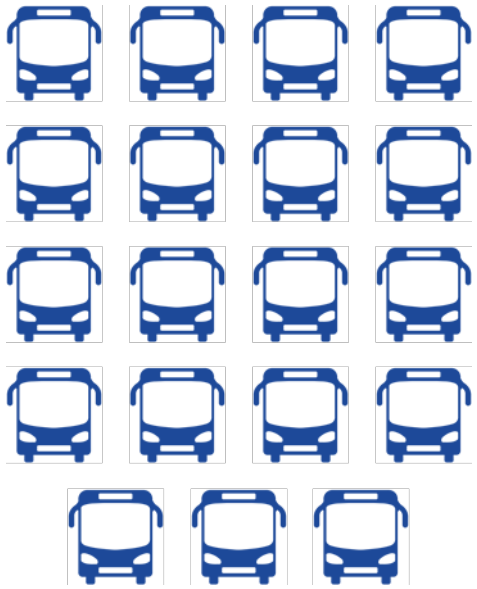
- TAB Action 2019-63: 2020 Regional Solicitation includes Arterial BRT category
  - Not scored through application process
  - BRT prioritization to occur through Metropolitan Council's Network Next planning process
  - Funding recommendation/TAB project selection
- TAB Action 2020-32 (September 2020)
  - Directed $25 million for arterial BRT projects in the 2020 Regional Solicitation
  - Amended the timeline for project selection from December 2020 to April 2021
  - Matches revised Network Next plan schedule after pandemic and unrest effects on outreach
- BRT planning updates provided to TAB via information items through December 2020

NetworkNEXT

Arterial BRT Corridor Development Process

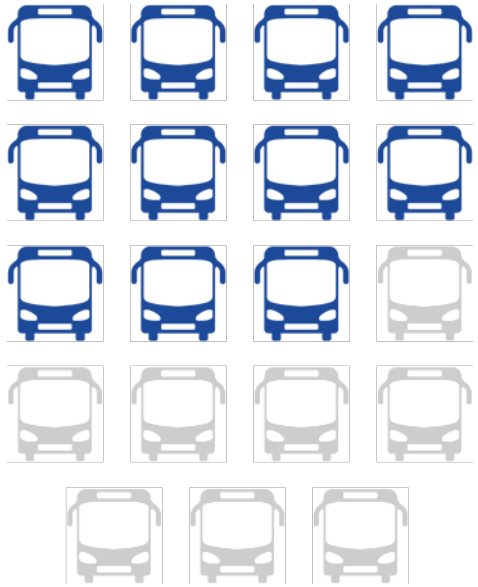
1. IDENTIFY
Spring 2020

Based on the Network Next principles, identify about 20 potential corridors for arterial BRT implementation.



2. SCREEN
Summer 2020

Conduct screening to identify about 10 most promising arterial BRT candidate corridors to advance.



3. EVALUATE
Fall 2020

Develop detailed arterial BRT concepts and apply robust evaluation criteria including cost, ridership & other benefits to sort lines into **three tiers.**

4. PRIORITIZE
Winter 2020/2021

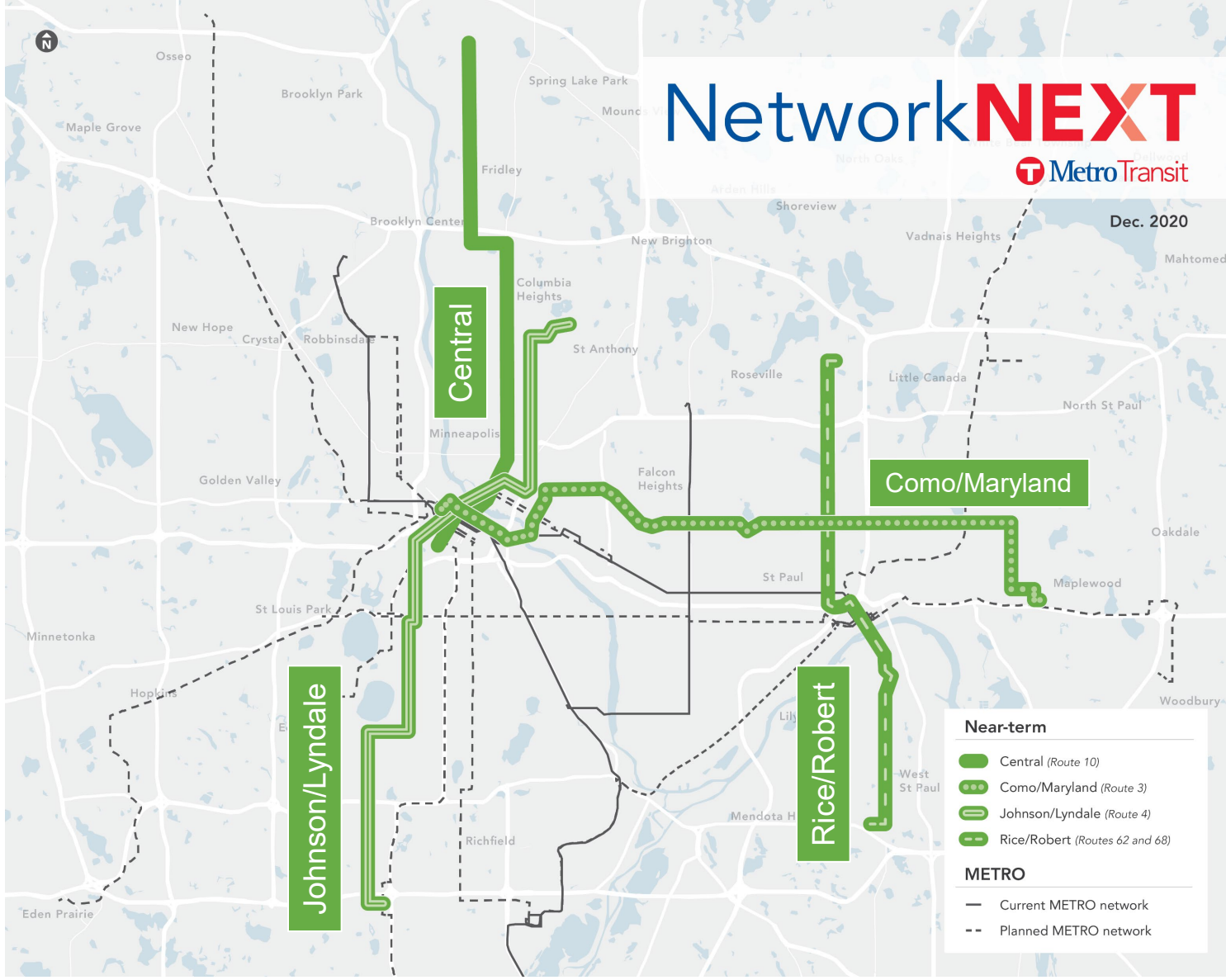
Review top performers based on readiness criteria to further prioritize the **next three lines** for implementation.

Selected March 2021

NetworkNEXT

December 2020: Near-term candidate corridor outreach

- >4,100 completed surveys
  - 119 in person, 3,997 online
  - 31% BIPOC, 69% white
  - Support for all corridors
- What we heard:
  - Provide service to BIPOC communities
  - Provide service to areas not currently served by BRT, LRT
  - Facilitate connections to home, work, school, stores and key destinations



NetworkNEXT

Key Factors in BRT Project Selection

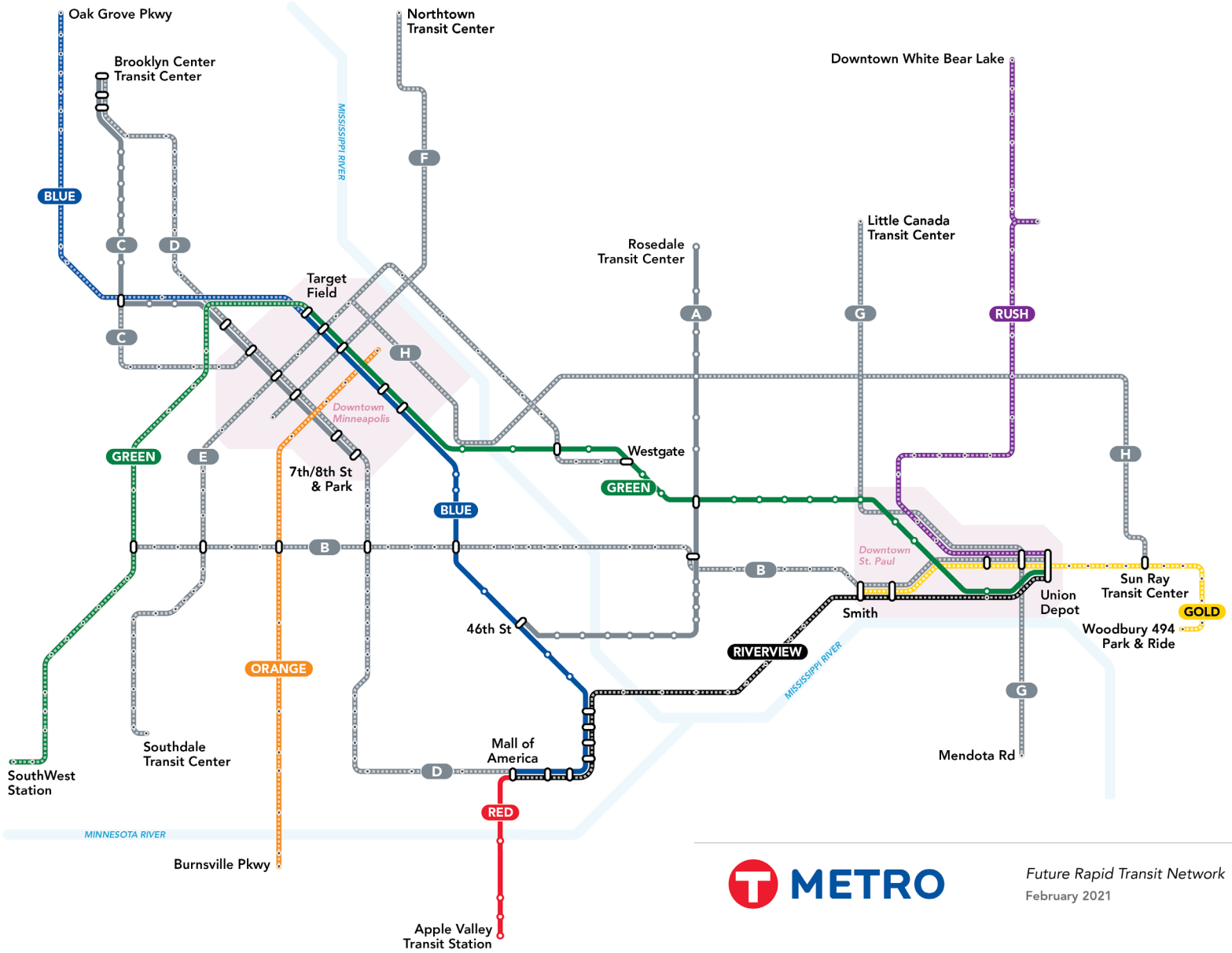
		Central	Rice/ Robert	Como/ Maryland	Johnson/ Lyndale
F Line Selection Factors	Ridership	7,200–12,100	3,800–9,100	5,700–11,600	5,200–13,200
	Capital Cost	$81M	$78M	$105M	$93M
	Annual Operating Cost	$15M	$26M	$21M	$26M
G and H line Selection Factors	Expanding the reach of the METRO System		Good	Good	Fair
	Implementation order with other corridors		No constraints	Follow Rice/Robert	No constraints
Outcome		**F Line**	**G Line**	**H Line**	**Mid-term**

Key to colors	Good	Better	Best

Network Next Near-term BRT corridors

- F Line (Central)
- G Line (Rice / Robert)
- H Line (Como / Maryland)

- Serves Anoka, Dakota, Hennepin, Ramsey counties
- Adopted by the Metropolitan Council on March 24, 2021
- Plan update in ~2025 will select next BRT lines



METRO

Future Rapid Transit Network
February 2021

NetworkNEXT

Requested Action 2021-15

That TAC recommend to TAB to award $25 million identified in the 2020 Regional Solicitation to the METRO F Line along current Route 10 from Downtown Minneapolis to Northtown Mall via Central and University Avenues.

Regional Bicycle Barriers and RBTN Update Process

Transportation Advisory Committee

April 7, 2021

METROPOLITAN COUNCIL

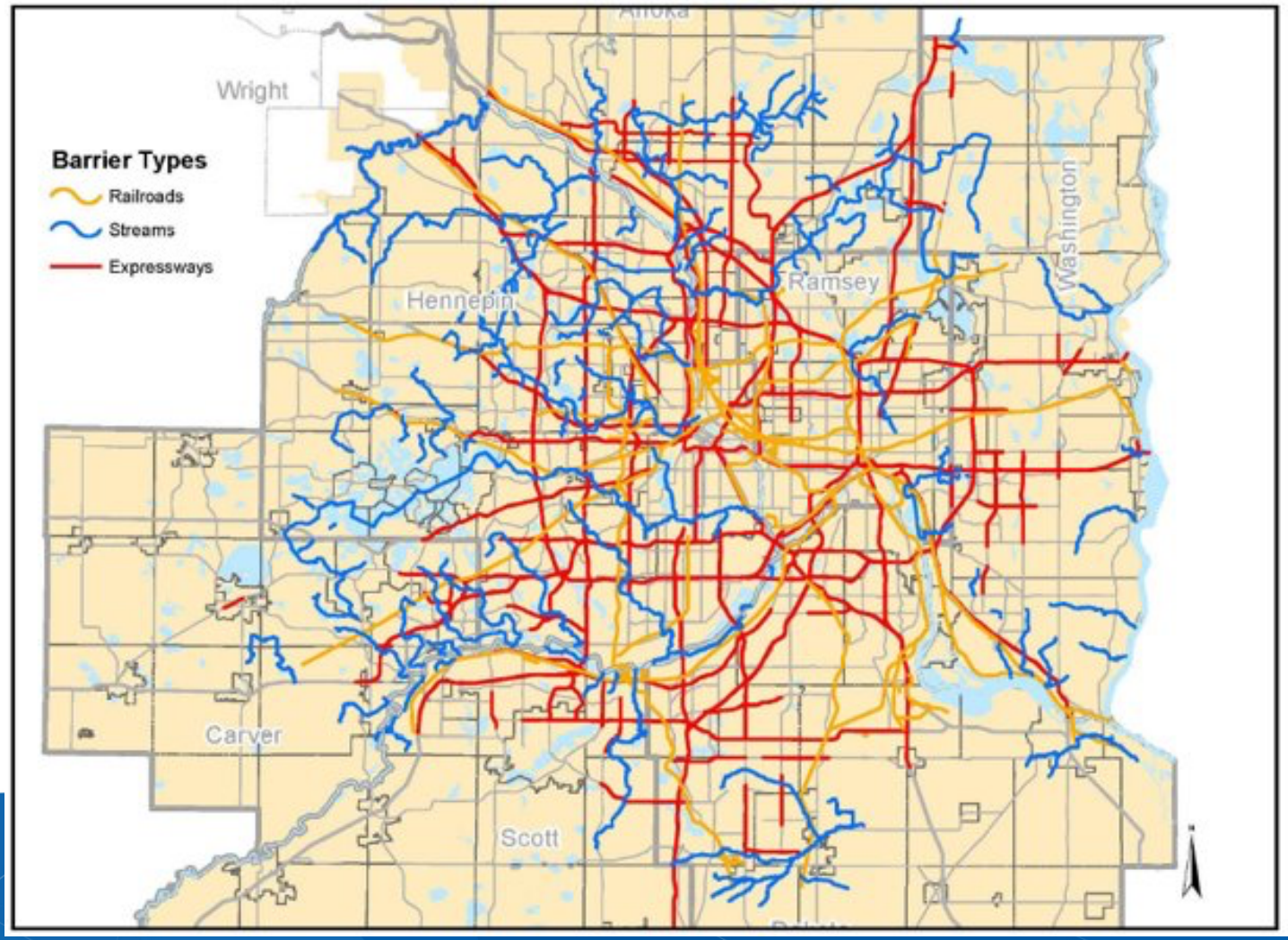
BACKGROUND

Trans. Policy Plan & Regional Solicitation

- RBTN established in 2014 TPP update
- RBTN corridors & alignments used in Regional Solicitation project selection criteria since 2016
- Regional Bicycle Barriers and Barrier Crossing Areas introduced in 2018 update to Transportation Policy Plan
- 2020 Regional Solicitation added regional barriers and barrier crossing areas as alternative criteria for Multiuse Trails/Bike Facilities funding applications

METROPOLITAN COUNCIL

Regional Bicycle Barriers Map



BACKGROUND

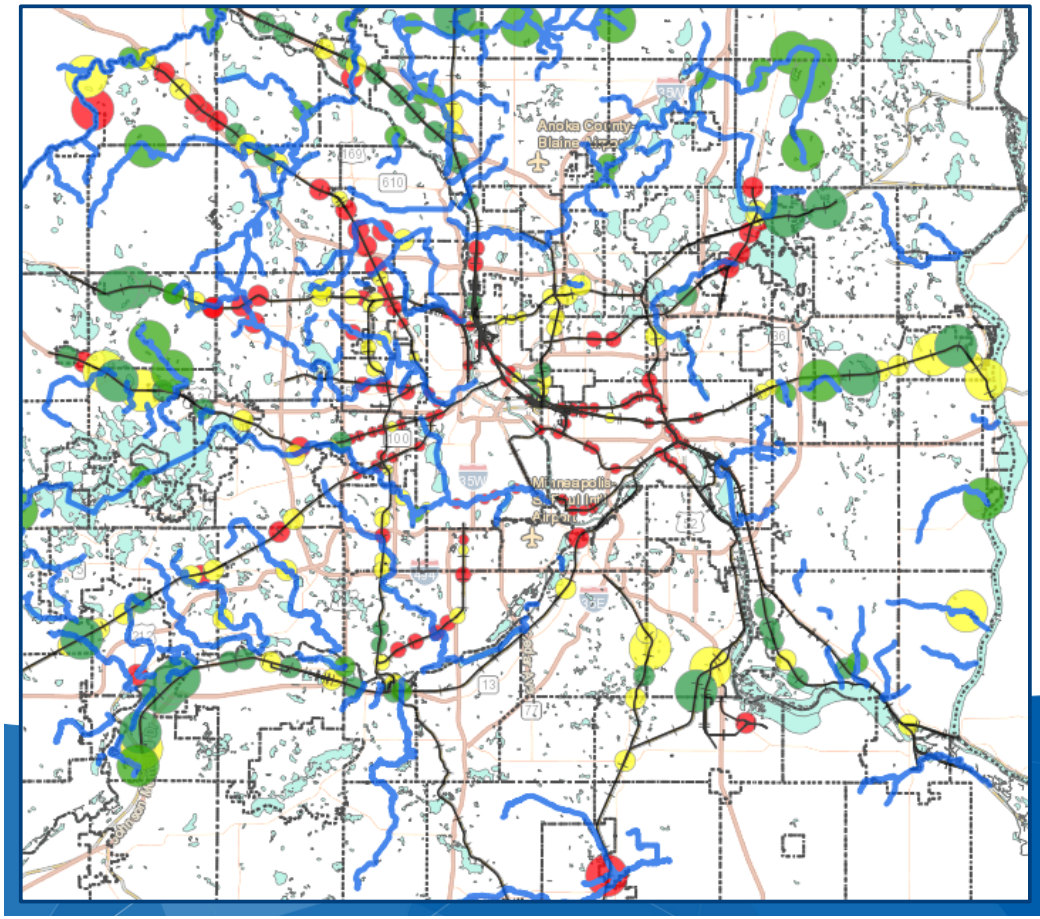
Regional Bicycle Barrier Crossing Areas

- Barrier Crossing Areas were prioritized of based on four data factors
  - Network Connectivity
  - Social/Economic Equity
  - Bicycle Trip Demand
  - Safety & Existing Conditions
- Barrier Crossing Areas define prioritized segments of each barrier type indicating where future improvements may be most needed

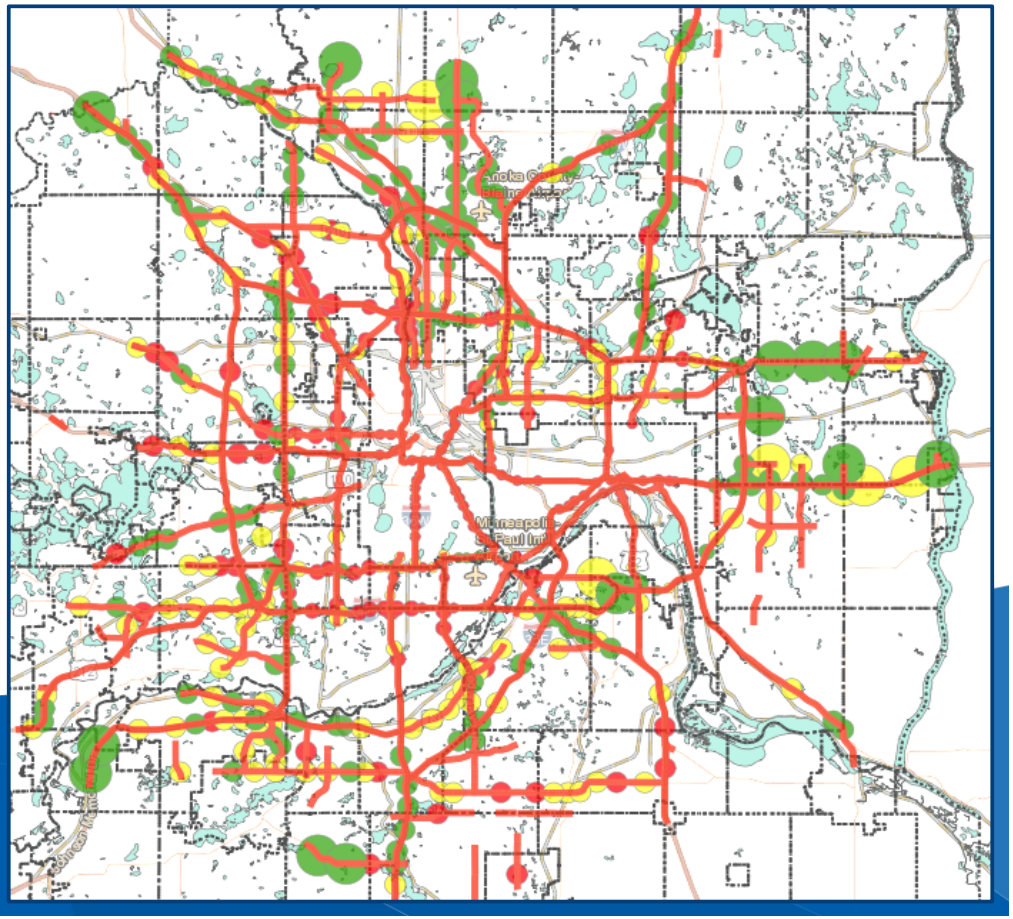
METROPOLITAN COUNCIL

Regional Bicycle Barrier Crossing Area Maps

1. Rail & Stream Crossing Areas



2. Freeway/Expressway Crossing Areas



Agency Review Process

On Regional Bike Barrier Change Applications:

- Agencies will be asked to review regional bicycle barriers and barrier crossing areas in their communities
- Based on those reviews, agencies can request the following:
    1. Addition of a ***new regional bicycle barrier*** consistent with the definitions provided
    2. Addition of a ***planned bicycle facility improvement location*** that crosses a regional bicycle barrier and is not currently included within a prioritized *regional bicycle barrier crossing area*

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Agency Review Process

On RBTN Change Applications:

1. Agencies will be asked to review RBTN corridors and alignments within their communities on interactive online map
2. Agencies will be given option to propose these change types:
   - **Addition** of a *new RBTN corridor or alignment*,
   - **Re-alignment (shift)** of an existing RBTN corridor or alignment
   - **Extension** of an existing RBTN corridor or alignment
3. Agencies can propose new development nodes or facilities that meet or approach the RBTN criteria for *regional destinations or regional transit nodes*

Application Process

What are the Steps?

1. Publish notification of period to submit applications for Regional Bicycle Barriers & RBTN changes
2. Council staff review submitted applications:
   - Regional Bicycle Barriers: will evaluate on consistency with definitions and determine priority tiers for new planned crossing areas based on study methodology
   - RBTN: will evaluate using recommended measures from RBTN Guidelines & Measures Study
3. Meet with Bicycle-Pedestrian Peer Discussion Group to review staff recommendations on submitted update requests

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Application Process

What are the Steps?

4. Present recommended changes through TAC/TAB process for developing the 2022 Regional Solicitation application
5. TAB accepts changes and updated maps prior to releasing draft Regional Solicitation application packet for public comment
6. Map updates will also require a TPP administrative modification; public comment will be afforded through Regional Solicitation public comment process
7. Final maps presented for approval by TAB and Met Council

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Regional Barriers/RBTN Update Schedule

• Publish notification to propose changes	Target: 4/23
• Deadline to submit applications	Target: 5/28
• Council staff review applications	June
• Review staff recommendations with Bike-Ped Peer Group	June/July
• TAC/TAB approval process for updated maps	Aug/Sept
• Public Comment period for Reg. Solicitation/TPP modification	Sept/Oct
• Final maps approved by TAB & Met Council	Dec/Jan

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Electric Vehicle Planning Study

TAB Technical Advisory Committee

April 7, 2021

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Overview

- Why electric vehicles?
- Electric vehicle basics
- State of the electric vehicle market today
- Scaling electric vehicles
- Metropolitan Council Electric Vehicle Planning Study

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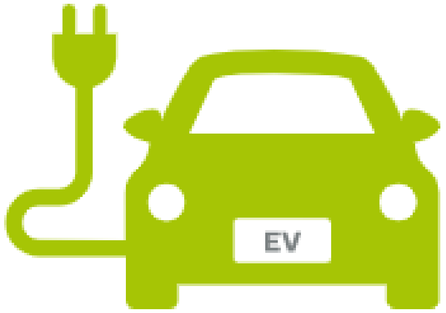

Battery Electric Vehicles (BEVs)

BEVs use a battery to store the electric energy that powers the motor. EV batteries are charged by plugging the vehicle into an electric power source. Examples of BEVs include the Nissan Leaf, Chevy Bolt, Tesla Model 3, etc...

Plug-In Hybrid Electric Vehicles (PHEV)

PHEVs are powered by an internal combustion engine that can run on conventional or alternative fuel and an electric motor that uses energy stored in a battery. The vehicle can be plugged into an electric power source to charge the battery. Examples of PHEVs include the Mitsubishi Outlander, Chrysler Pacifica Hybrid, and Chevy Volt.

Hybrid Ele les (HEV)

HEVs are pri wered by an internal co gine that runs on conver native fuel and an electr s energy stored ery. ehicles do not ge d into ric power source f harging a e not a focus of Drive Electric MN. A common example of an HEV is the Toyota Prius.

Benefits of EVs

- Large greenhouse gas emissions reductions.
- Zero tailpipe emissions from BEVs.
- As a result, improved air quality and reduce public health impacts from transportation.
- Helps states meet climate and energy goals.
- Less maintenance and more fuel savings for consumers and fleets.
- Operation: Fun to drive, smooth, no acceleration lag, QUIET.

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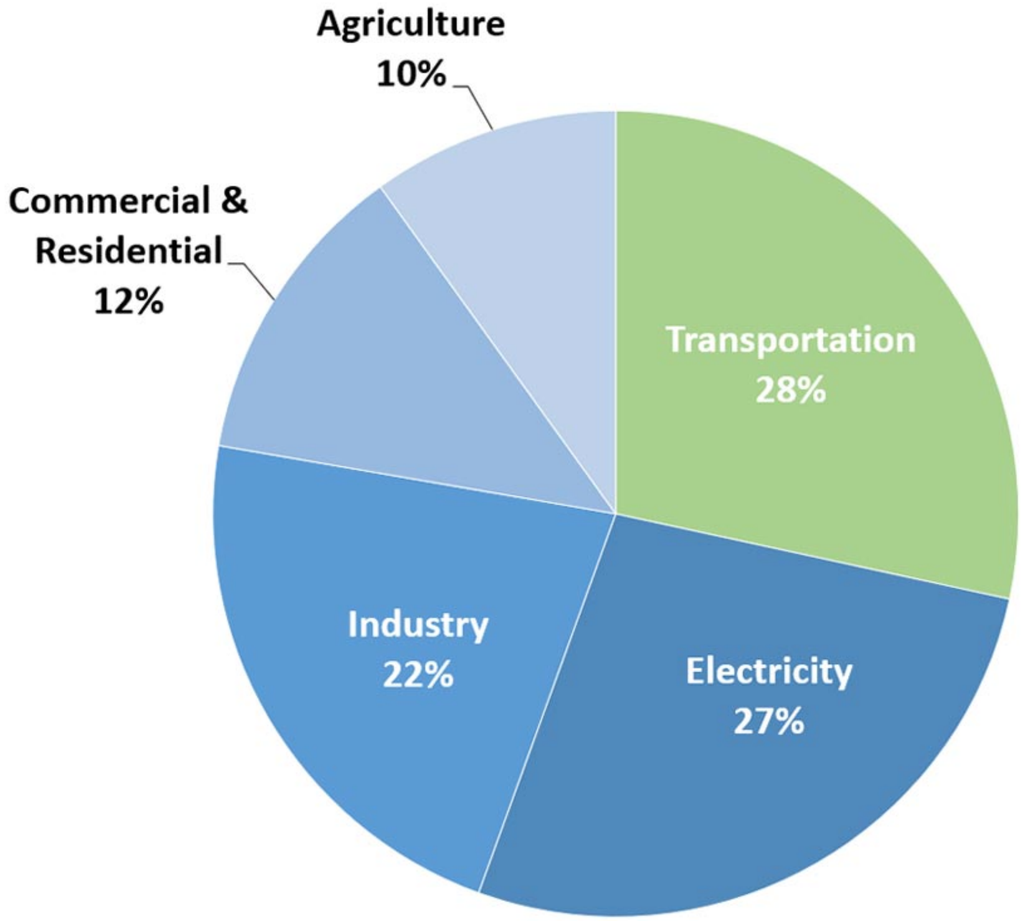
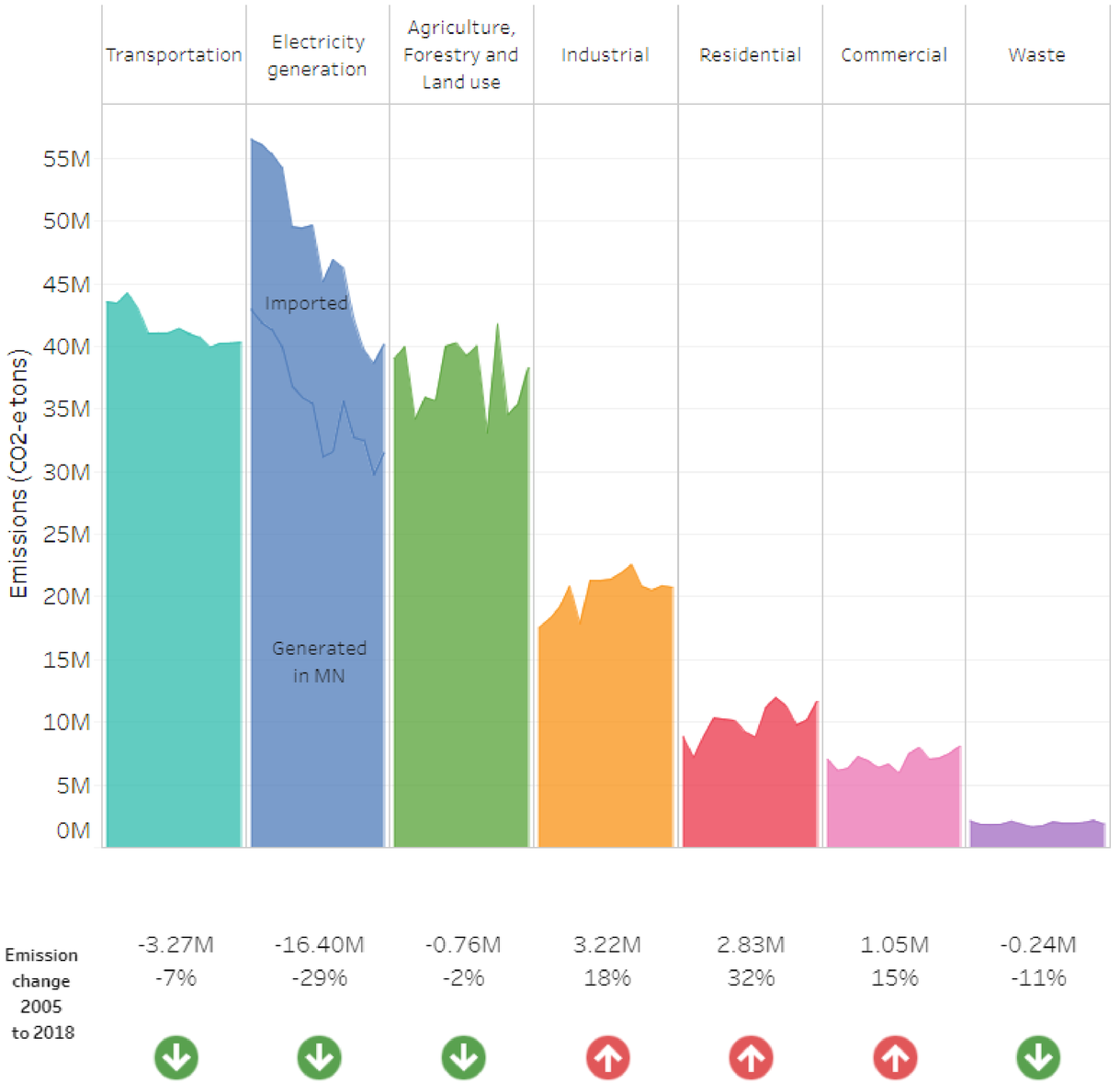
Total U.S. Greenhouse Gas Emissions by Economic Sector in 2018

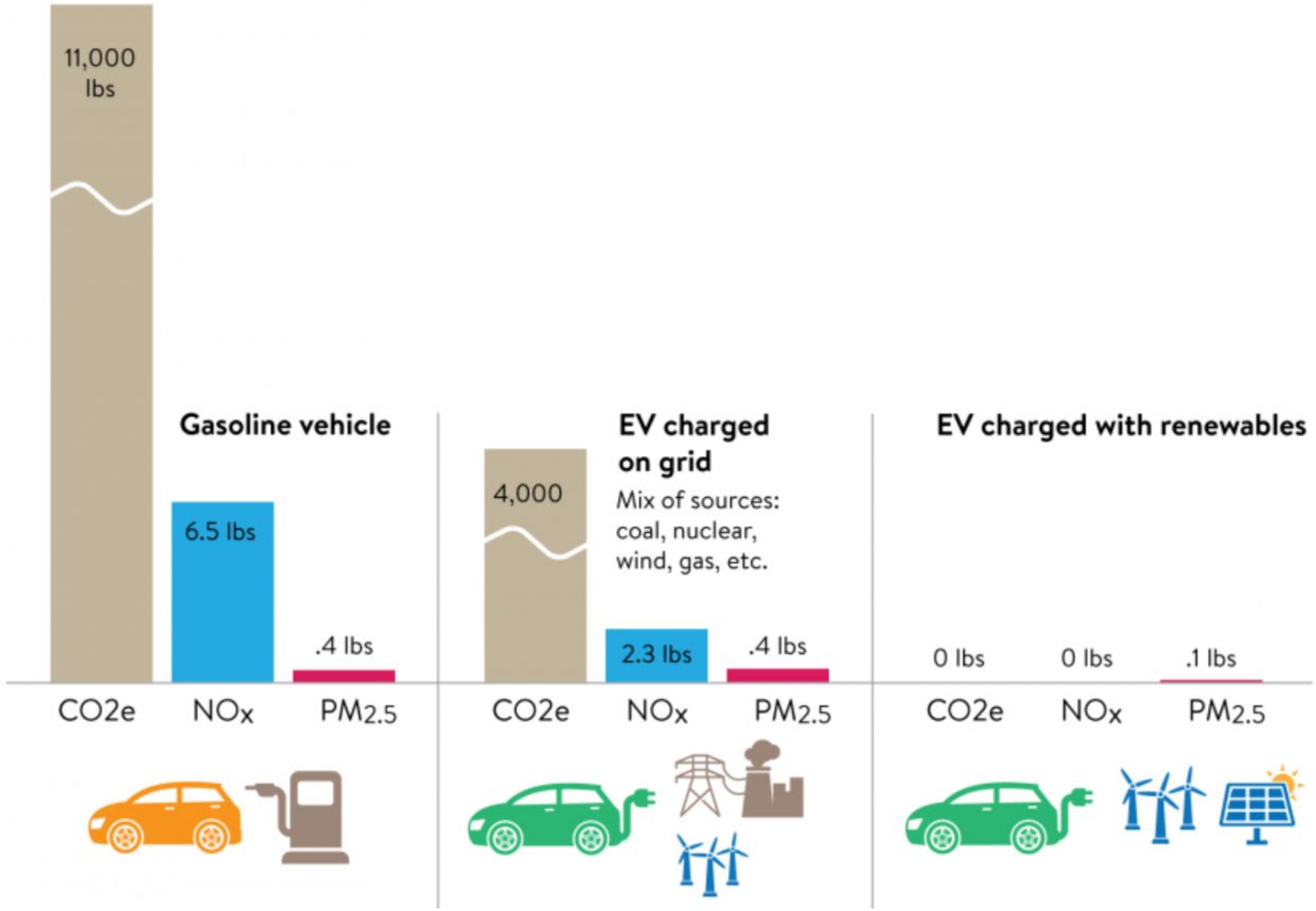


U.S. Environmental Protection Agency (2020). Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018



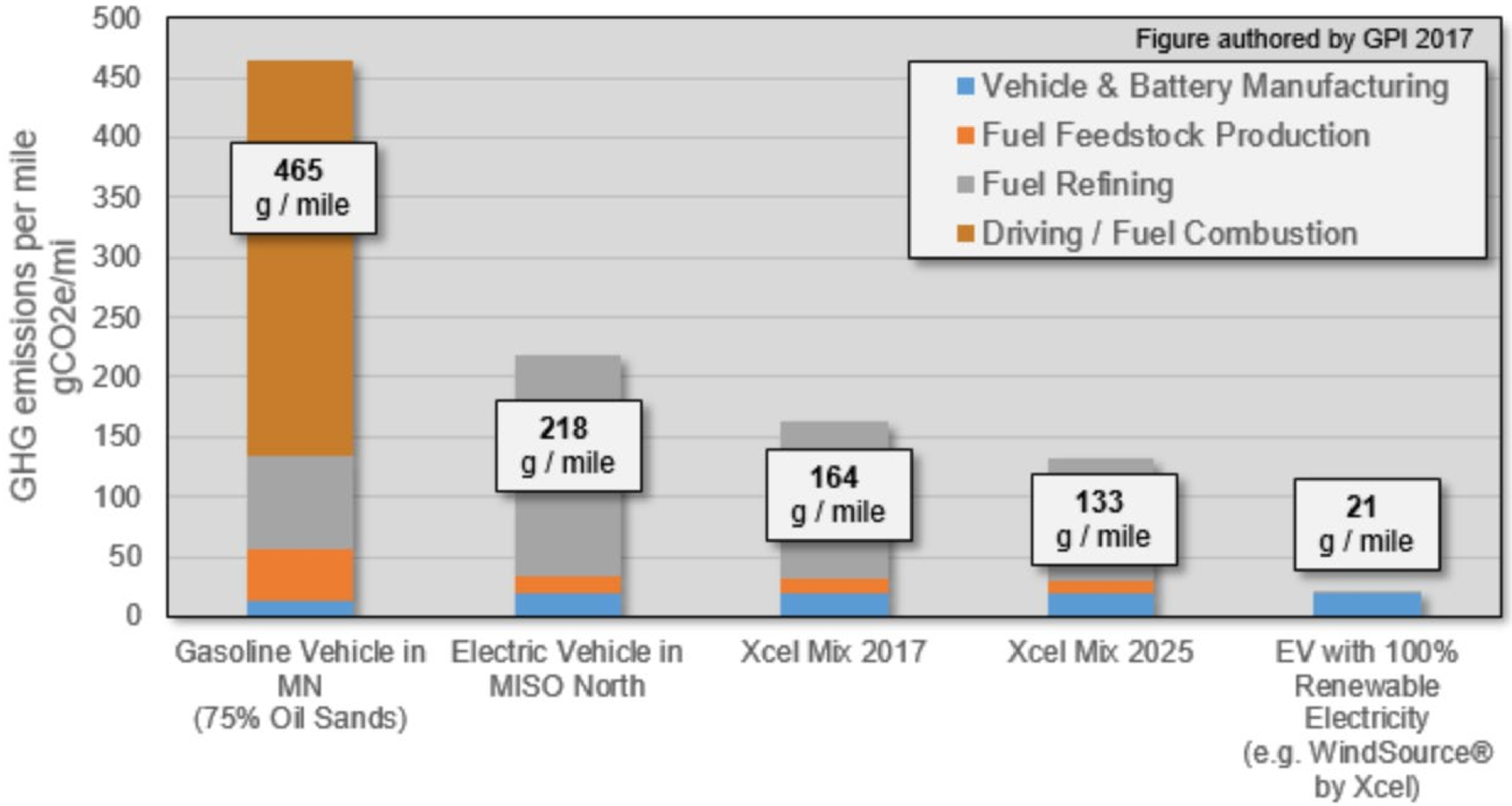
Source: Minnesota Pollution Control Agency, https://www.pca.state.mn.us/air/greenhouse-gas-emissions-data

Annual well-to-wheel car emissions by fuel type (12,000 miles compact / midsize car)



Source: Minnesota Pollution Control Agency, https://www.pca.state.mn.us/air/electric-vehicles

GHG Emissions: Gasoline vs. Electric in Minnesota



Source: Great Plains Institute, 2017

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Opportunity for Greenhouse Gas Emissions through EV Adoption

Electric Grid Mix	% Reduction in Lifecycle GHG Emissions from Gasoline Vehicle	# of Electric Vehicles (% of Passenger Fleet)	Annual Reduction (Tons CO_2)
Xcel Energy (2025 Mix)	71%	91 thousand (5%)	364 thousand
		274 thousand (15%)	1.1 million
100% Renewable	95%	91 thousand (5%)	487 thousand
		274 thousand (15%)	1.5 million

Note: Remaining emissions associated with 100% renewable electricity mix are attributable to vehicle development, battery, etc. Analysis assumes average annual VMT of 12k miles per vehicle.

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Source: Great Plains Institute, 2017

Maintenance Schedule for your 2016 Chevrolet Cruze Limited

Certified Service	7,500 miles	15,000 miles	22,500 miles	30,000 miles	37,500 miles	45,000 miles	52,500 miles	60,000 miles	67,500 miles	75,000 miles	82,500 miles	90,000 miles	97,500 miles	105,000 miles	112,500 miles	120,000 miles	127,500 miles	135,000 miles	142,500 miles	150,000 miles
Rotate tires, if recommended for the vehicle, and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replace passenger compartment air filter (or 2 years, whichever comes first).			✓			✓			✓			✓			✓			✓		
Replace engine air cleaner filter (or every 4 years, whichever occurs first).						✓						✓						✓		
Replace spark plugs and inspect spark plug wires.													✓							
Replace spark plugs. Inspect ignition coils boots. (Applies to: 1.4 L)								✓								✓				
1.8L Engine Only: Rplace timing belt, idler pulley, and timing belt tensioner (or every 3 years, whichever comes first). (Applies to: 1.8 L)													✓							
Change automatic transmission fluid, if equipped. If filter is serviceable, change filter. (Applies to: Severe)						✓						✓						✓		
Change manual transmission fluid. (Applies to: Manual, Severe)						✓						✓						✓		
Drain and fill engine cooling system (or every 5 years, whichever comes first).																				✓
Change brake fluid (or every 3 years, whichever occurs first).						✓						✓						✓		
Change clutch fluid (or every 3 years, whichever occurs first). (Applies to: Manual)						✓						✓						✓		
Inspect evaporative control system.						✓						✓						✓		
Inspect engine accessory drive belts for fraying, excessive cracks or obvious damage (or every 10 years, whichever occurs first).																				✓

Maintenance Schedule for your 2017 Chevrolet Bolt EV

Certified Service	7,500 miles	15,000 miles	22,500 miles	30,000 miles	37,500 miles	45,000 miles	52,500 miles	60,000 miles	67,500 miles	75,000 miles	82,500 miles	90,000 miles	97,500 miles	105,000 miles	112,500 miles	120,000 miles	127,500 miles	135,000 miles	142,500 miles	150,000 miles
Rotate tires, if recommended for the vehicle, and perform Required Services.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replace passenger compartment air filter (or 2 years, whichever comes first).			✓			✓			✓			✓			✓			✓		
Drain and fill vehicle coolant circuits.																				✓

Source: Shift2Electric.com

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EV Basics

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EV Basics: Light-duty

- Nearly all new BEVs have ranges over 150 miles—suitable for a lot of use cases
  - Use cases: Commuting, Road trips, Car sharing programs, Fleet, Uber/Lyft, others
- Charging: Need to plug in to a charging station or outlet to refuel
  - Level 1: Slowest charge; 120-volt outlet; 2-5 miles of range per hour (24-60 miles of range if plugged in for twelve hours overnight)
  - Level 2: Faster charge; 240-volt outlet; 10-20 miles of range per hour
  - DCFC: Fastest charge, speeds up to 350kW; typically charges vehicle in 30 minutes or less
- Locating public chargers:
  - PlugShare.com
  - All EVs come with technology to locate chargers for that vehicle

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EV Basics: Medium & Heavy-Duty

- Technology is still nascent
- Most common use cases today: delivery, transit (including school buses)
- Charging technology:
  - Plug-in: Utilize same plug standards as light-duty
  - Overhead: Typically used to charge buses; can output greater power than plug-in
- Further out: long-range semis, garbage trucks, airplanes
  - Currently in demonstration phase

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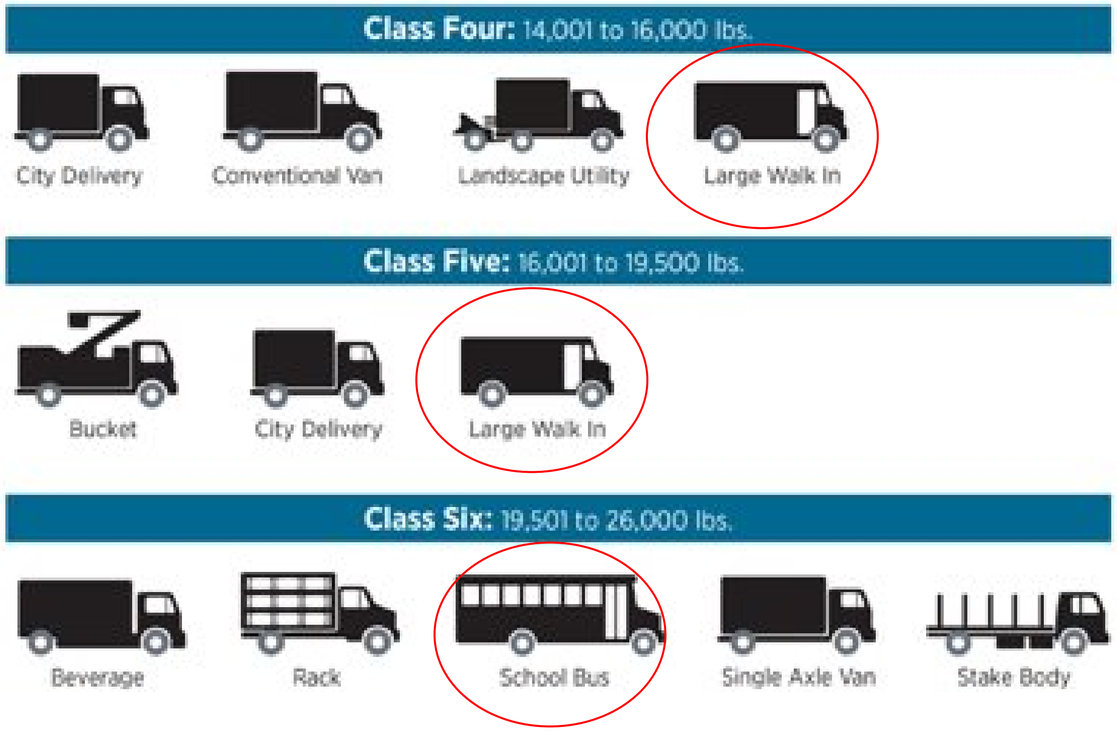
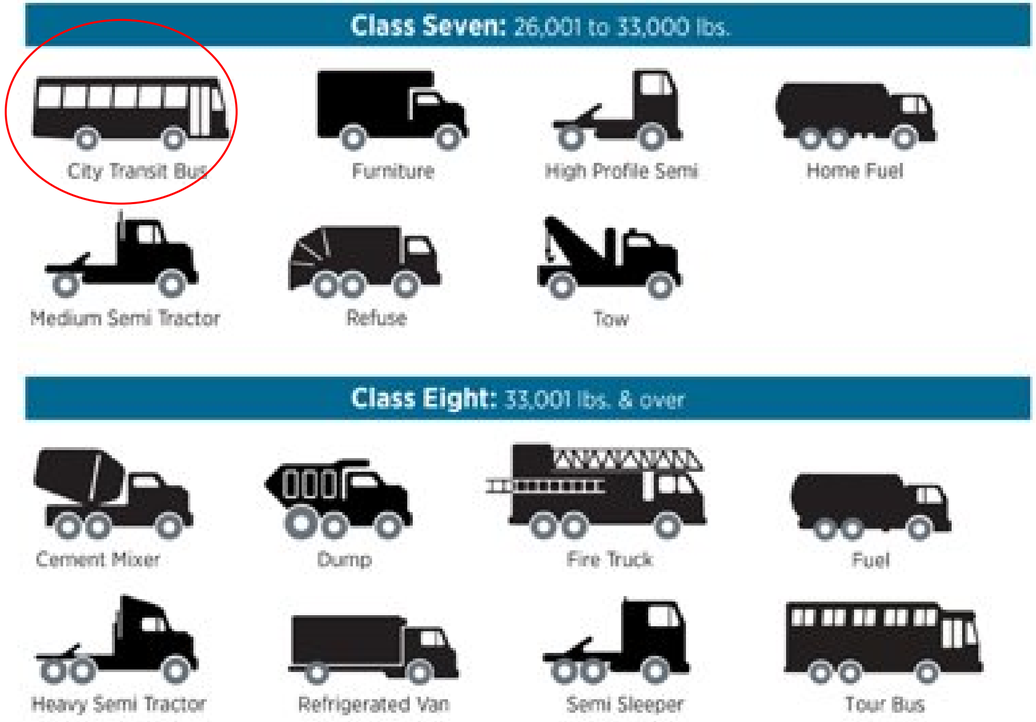
Medium & heavy-duty options for fleets





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State of the EV Market Today

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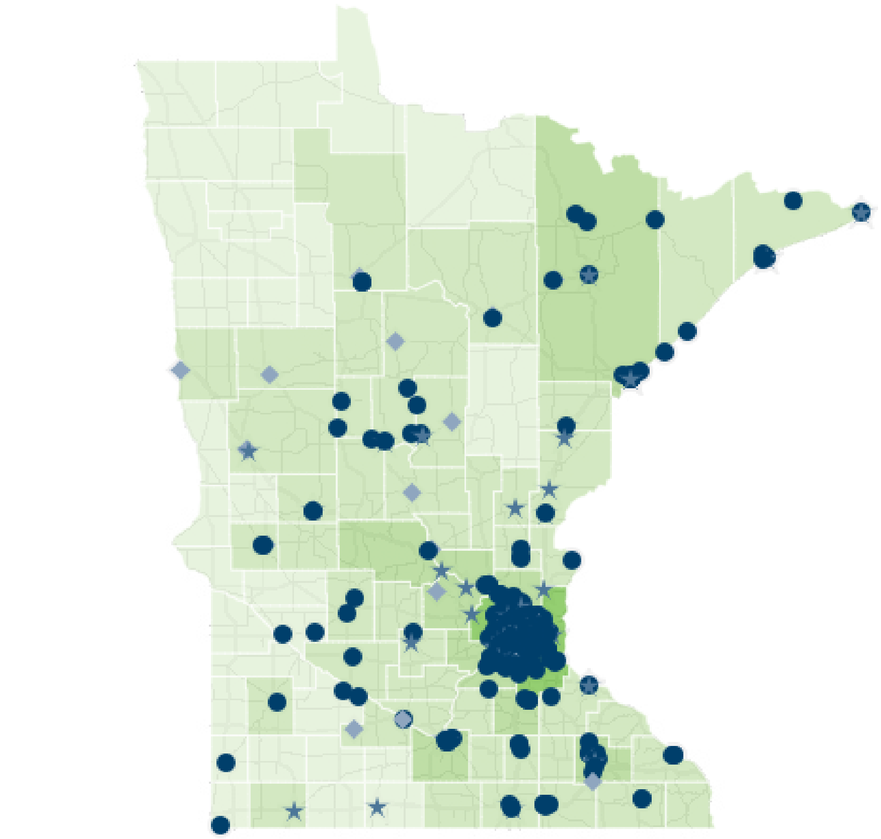
Minnesota EV Registrations & Charging Availability



Number of electric vehicles
- 1-9
- 10-99
- 100-999
- 1000+

Charging station category
- DC and Level 2
- Only DC
- Only Level 2

43 vehicles do not have an associated county and are not displayed.

Charging points

Level 2 charger	DC fast charger	Total
953	191	1,144

Total vehicles per Level 2 charger	Total vehicles per DC fast charger
20	98

Vehicles

Battery electric vehicles (BEV)	Plug-in hybrid electric vehicles (PHEV)	Total
11,184	7,565	18,749

Download data

Last update : February 13, 2021

Source: MPCA

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Source: Minnesota Pollution Control Agency, https://www.pca.state.mn.us/air/minnesota-ev-dashboard

Minnesota Charging Corridors

Volkswagen Settlement Phase 2

Aims to fund 39 new charging stations along corridors

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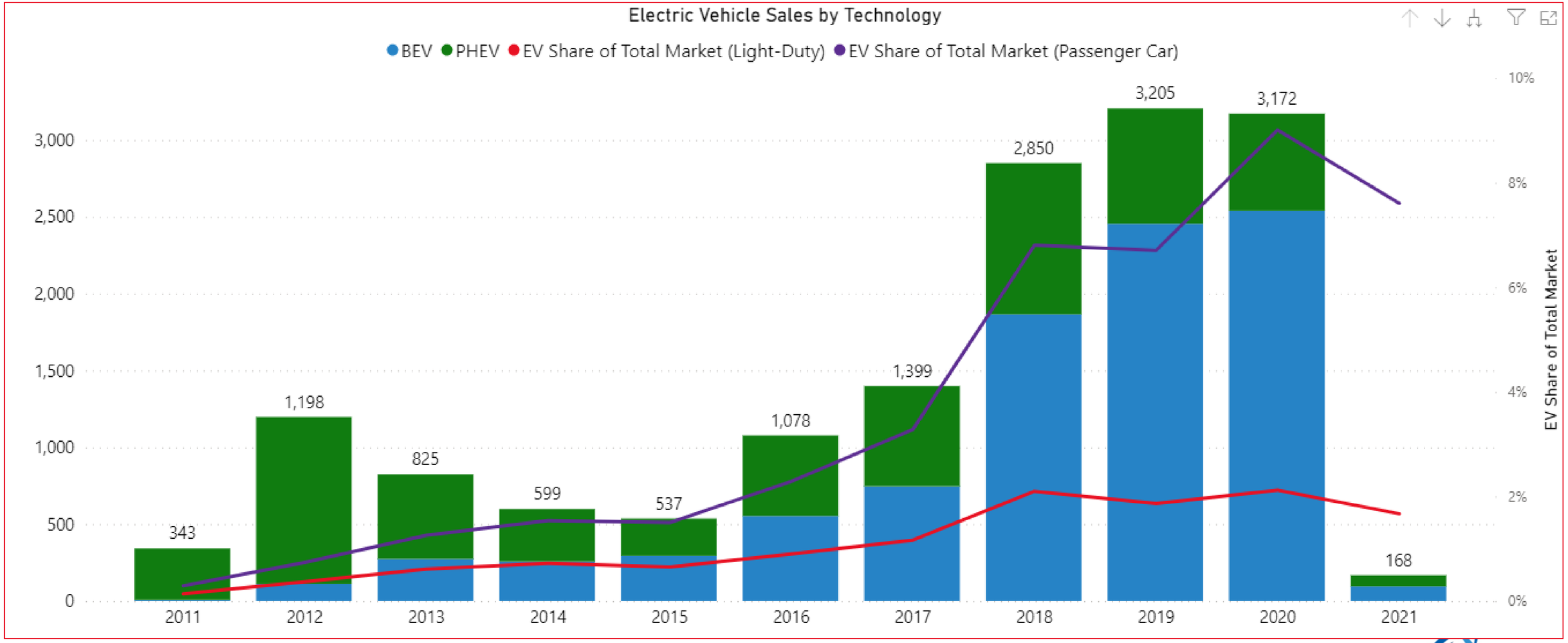
Source: Minnesota Pollution Control Agency, https://www.pca.state.mn.us/sites/default/files/aq-mvp2-35c.pdf

Minnesota EV Sales



Source: Atlas Public Policy EV Hub, 2021

Big EV Commitments

G.M. Will Sell Only Zero-Emission Vehicles by 2035

The move, one of the most ambitious in the auto industry, is a piece of a broader plan by the company to become carbon neutral by 2040.

FORD EUROPE GOES ALL-IN ON EVS ON ROAD TO SUSTAINABLE PROFITABILITY; COLOGNE SITE BEGINS $1 BILLION TRANSFORMATION

Volvo Plans to Sell Only Electric Cars by 2030

The Swedish company would phase out internal combustion engine vehicles faster than other automakers.

Xcel Energy's new electric vehicle vision to save customers billions while delivering cleaner air

Transitioning 20% of all vehicles to electric by 2030 will reduce carbon emissions and save customers billions in fuel costs

From Amazon To FedEx, The Delivery Truck Is Going Electric

March 17, 2021 · 5:01 AM ET

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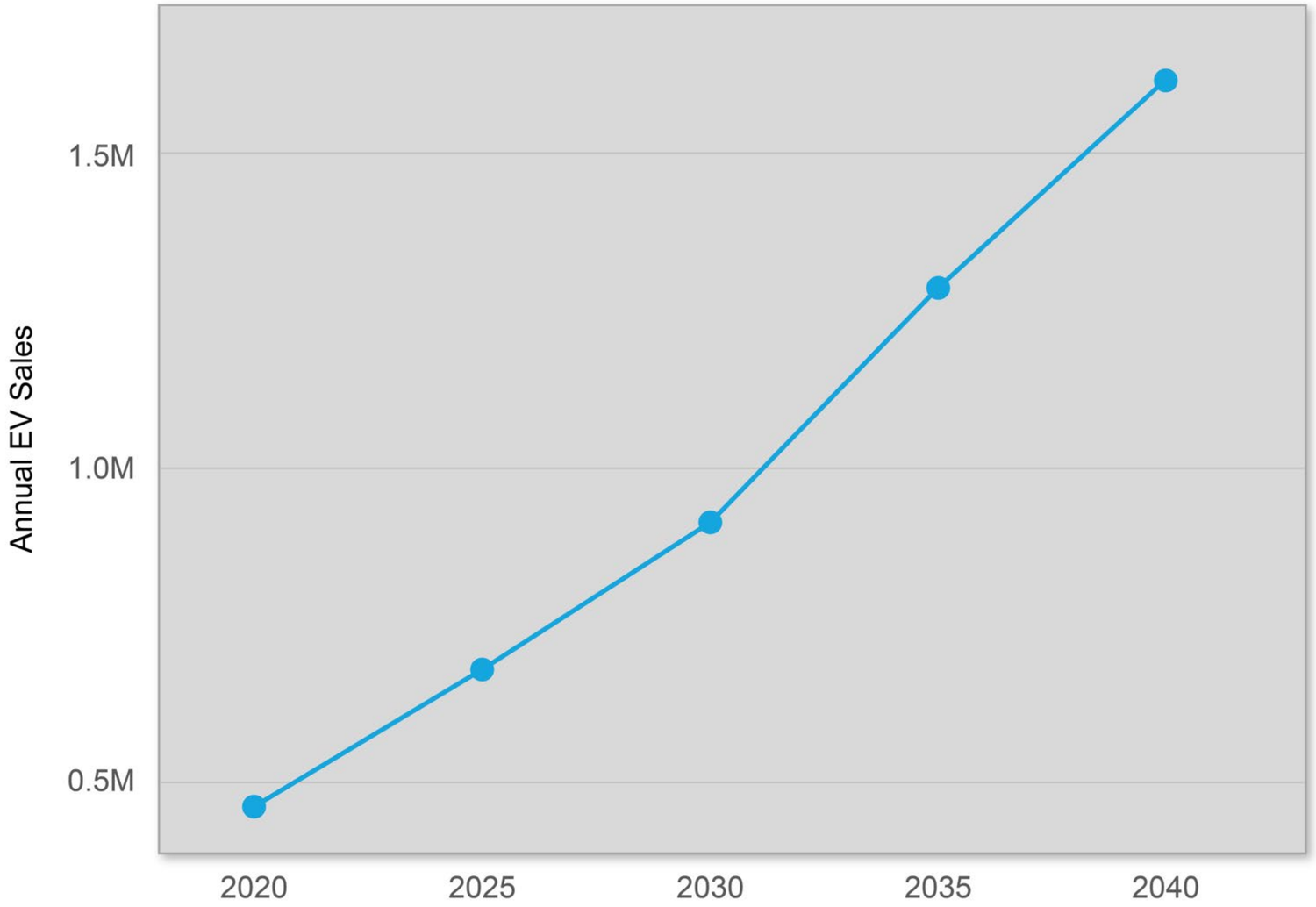
US Annual EV Sales Forecast, 2020-2040



Actual 2020 EV sales
US: 306 thousand
MN: 3 thousand

Current Automobiles
US: 109 million
MN: 1.8 million

Annual Sales
US: 16.8 million
MN: 250 thousand

Source: GPI Analysis based on EIA AEO 2020

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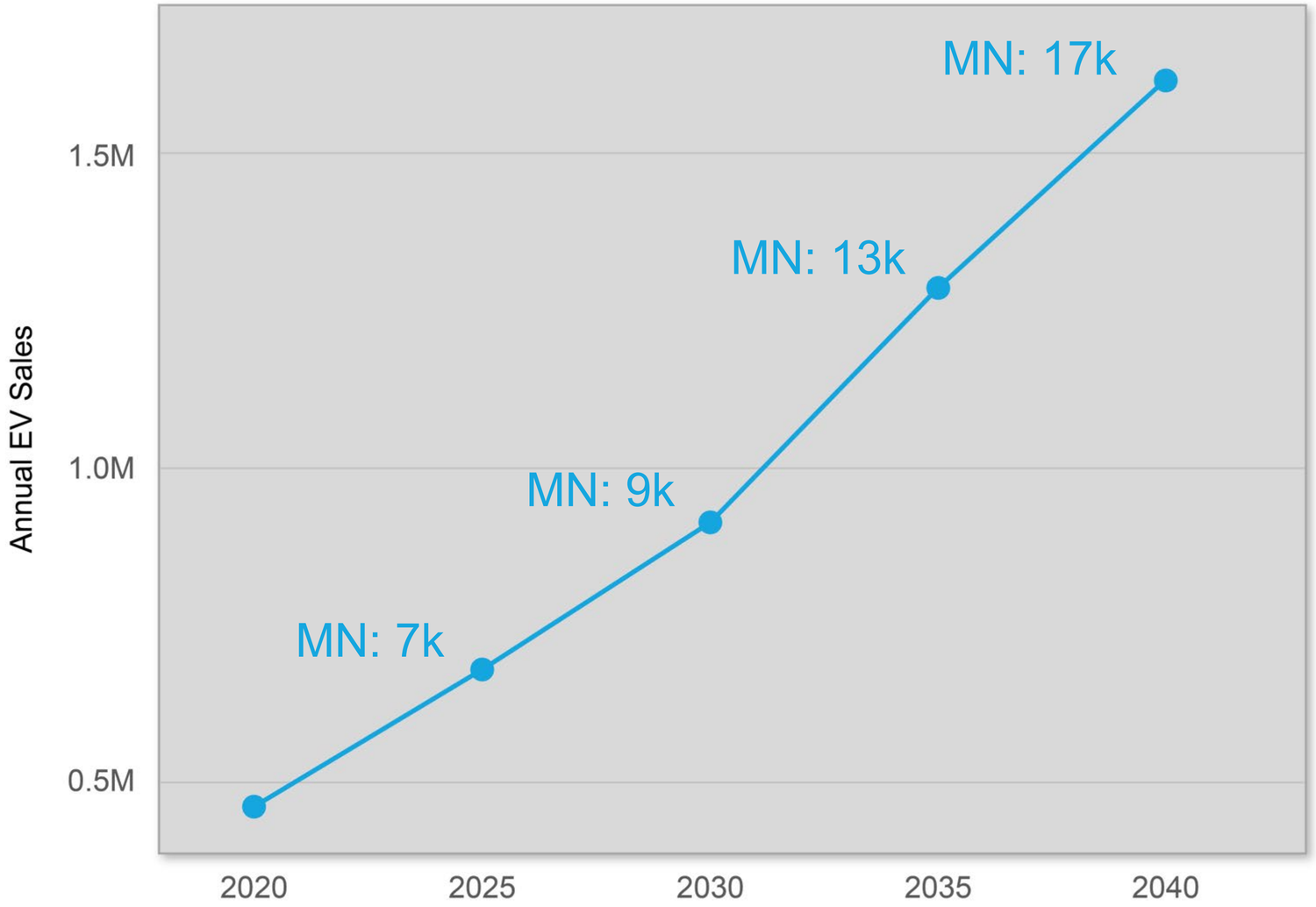
Correlating EV Sales Forecast for MN



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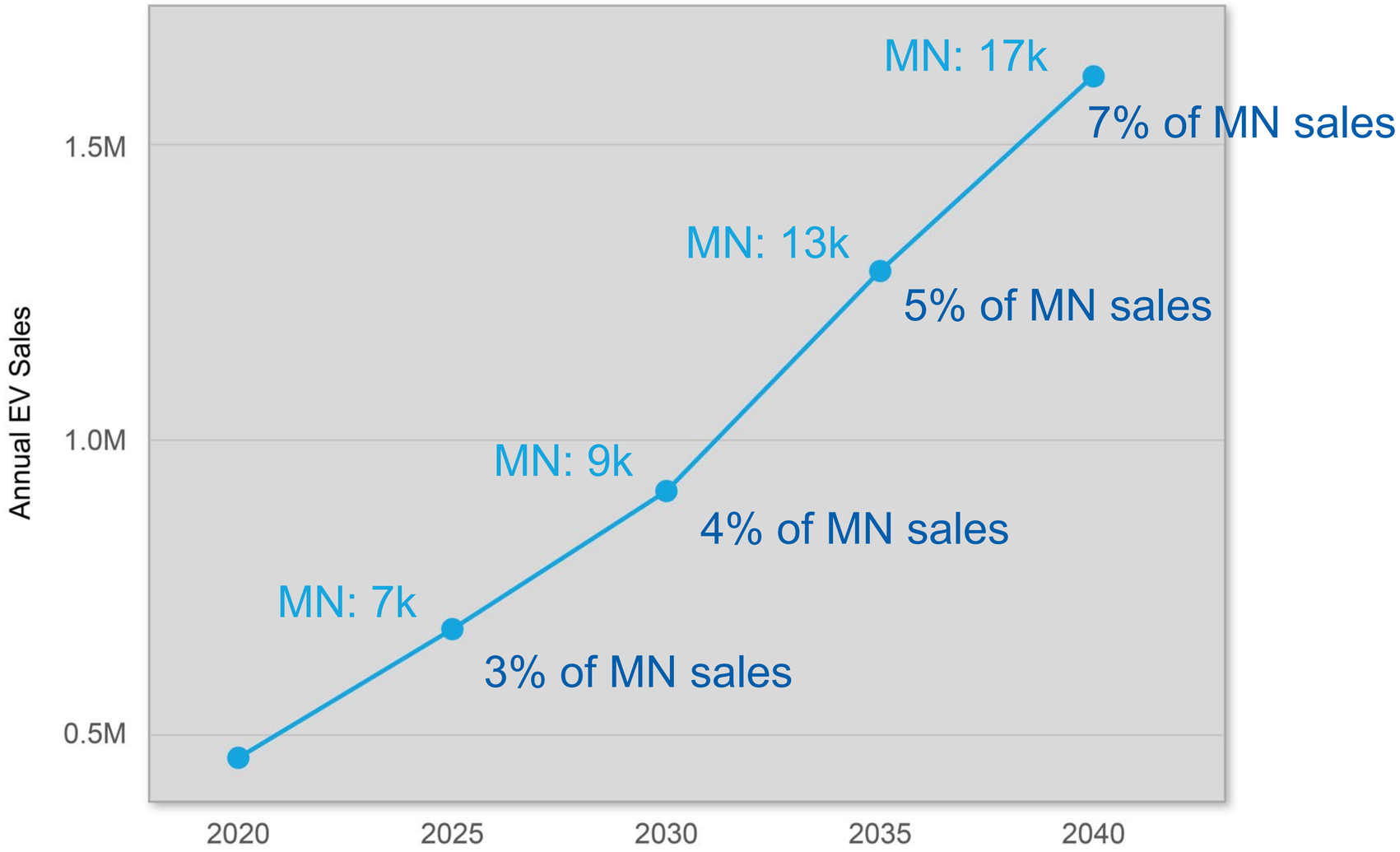

2030:
91 thousand EVs in MN, out of ~2 million automobiles

< 5% of MN fleet

Source: GPI Analysis based on EIA AEO 2020

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Scaling EVs—Pillars of Success

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Public Policy

- Policies include HOV lane access, EV rebates, low carbon fuel standard, LEV/ZEV, infrastructure rebates and grants, and more
- Minnesota is behind other states when it comes to supportive EV policy
  - Ranked 12th in State Transportation Electrification Scorecard by American Council for an Energy-Efficient Economy. **39.5/100 score.**

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Vehicle Availability

- MN offers 48 EV models compared to 66 offered in other states
  - 19 are BEV; 29 are PHEV
- Consumers want greater selection (body style, trims, colors)
  - More EVs are coming including trucks, vans, SUVs
    - 8 BEV pickups coming in 2021-2022
    - 24 SUVs coming 2021-2024 (mostly BEVs)
- Fleets need more medium & heavy-duty options

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Charging Stations

- Lack of charging in multi-unit dwellings means tenants cannot switch over to EVs
- Correlation has been shown between access to public charging and EV adoption—more public charging stations are needed
- More charging stations provide greater comfort to travelers

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Utility EV Programs

- Common programs include deploying charging infrastructure, supporting fleet adoption, specialized EV rates, and educating consumers
- Lower cost for charging reduces fueling cost and encourages shift to EV

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EV Ready Cities

- Policy: acknowledge EV benefits and support development of charging infrastructure
- Regulation: implement development standards and regulations that enable EV use
- Administration: create transparent and predictable EV permitting processes
- Programs: develop public programs to overcome market barriers
- Leadership: demonstrate EV viability in public fleets and facilities

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Metropolitan Council EV Planning Study

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Study Goals

- Identify strategies to accelerate EV adoption in the Twin Cities as a way to reduce greenhouse gas emissions and improve public health
- Guide future investments, policies, and other work to accelerate EV adoption for the Met Council and partner agencies
- Inform the 2040 Transportation Policy Plan and other investment and policy proposals
- Deliver final products by December 2021

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Planned Engagement

- Technical Advisory Committee consisting of industry, NGOs, academia, local government, state agencies, and others
- Fleet managers as part of fleet analysis
- Interviews with equity groups
- Webinar

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Planned Outcomes

- EV white paper
  - EV landscape
  - Data analysis on travel patterns, vehicles, streetlight data, public awareness
  - Fleet analysis
- EV use case identification and evaluation
- EV charging needs assessment for Twin Cities
- Identification and recommendation of strategies to help Twin Cities scale EV adoption and improve public health, including an equity analysis
- Summary report and presentation

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Questions?

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