

# TRANSPORTATION PLANNING BOARD CLIMATE GOALS AND STRATEGIES

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## Greenhouse Gas Reductions Goals and Strategies for the On-Road Transportation Sector Adopted by the TPB

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Climate Energy & Environment Policy Committee  
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# Recent CEEPC Briefings on TPB Activities

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- Overview of Upcoming Planned Climate Change Planning Work Activities in the Metropolitan Washington Region; January 2021
- TPB Climate Change Mitigation Study of 2021: Findings of Past Studies (Phase I Report); May 2021
- TPB Climate Change Mitigation Study of 2021: Final Report (Phase II Report); January 2022



# Briefing Outline

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- Greenhouse Gas (GHG) Reduction Goals and Strategies for Region's On-Road Transportation Sector (Adopted by the TPB in June 2022)
- COG Regional Goals and TPB Goals
- TPB Goals and Strategies and 2030 CEAP



# GHG Reduction Goals And Strategies – Region’s On-Road Sector

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- Reduce vehicular GHG emissions by:
  - 50% below 2005 levels by 2030
  - 80% below 2005 levels by 2050
- Work to implement a set of GHG reduction strategies
  - Each TPB member jurisdiction/agency
- Explore additional GHG reduction strategies
  - Encourage exploration at Local, Regional, State, and Federal Levels
  - Participate in collaborative efforts to address implementation issues



# On-Road GHG Reduction Strategies – TPB Members To Implement

## Description of Strategy

Improve walk/bike access to all TPB identified high-capacity transit stations.

Increase walk/bike modes of travel - complete the TPB's National Capital Trail Network by 2030.

Convert private and public sector light, medium and heavy-duty vehicles, and public transit buses to clean fuels, by 2030.

Deploy a region-wide robust electric vehicle charging network (or refueling stations for alternate fuels).

Add additional housing units near TPB-identified high-capacity transit stations and in COG's Regional Activity Centers.

Reduce travel times on all public transportation bus services.

Implement transportation system management & operations (TSMO) improvement measures at all eligible locations by 2030.



# Level of Outcomes: GHG Reduction Strategies (To Implement)

No.	GHG Reduction Strategy Ready to Be Implemented	Assumed in TPB's Climate Change Mitigation Study (CCMS) Scenarios (COMBO 6)
1 (C9)	Improve walk/bike access to all TPB identified high-capacity transit stations	50% increase in bicycle access trips at all HCT stations
2 (C10)	Increase walk/bike mode of travel - complete the TPB's National Capital Trail Network	Unbuilt portion of the NCTN (55%, 700 miles) would be completed by 2030
3 (C14)	Transportation System Management & Operations (TSMO) improvement measures at all eligible locations	Both TSMO and some level of connected and automated vehicles (CAVs) by 2050
4 (C2)	Develop an electric vehicle charging network	Considered part of "C1" below, so not quantified separately
5 (C1)	Convert vehicles to clean fuels	By 2030: <ul style="list-style-type: none"> <li>• 100% of new light duty vehicles sold</li> <li>• 50% of new medium/heavy duty trucks sold</li> <li>• 100% of all buses <u>on the road</u></li> </ul>
6 (C3)	Add additional housing units near TPB-identified high-capacity transit stations and in COG's Regional Activity Centers	+77,000 by 2030 and +126,000 by 2050 compared to Round 9.1a COG Cooperative Forecasts
7 (C8)	Reduce travel times on all public transportation bus services	15% by 2030 and 30% by 2050 (relative to 2020 travel times)



# On-Road GHG Reduction Strategies – To Explore For Implementation

## Description of Strategy

Take action to shift growth in jobs and housing within and across jurisdictional boundaries from locations currently forecast to locations near TPB identified high-capacity transit stations and in COG's Regional Activity Centers to improve jobs and housing balance.

Make all public bus transportation in the region fare-free by 2030.

Make all public rail transportation in the region fare-free by 2030.

Price workplace parking for employees (In Activity Centers by 2030 and everywhere by 2050).

Convert a higher proportion of daily work trips to telework (by 2030).

Charge a new fee per vehicle mile travelled (VMT) by motorized, private passenger vehicles (in addition to prevailing transportation fees & fuel taxes).

Charge a “cordon fee” per motorized vehicle trip for all vehicles entering Activity Centers by 2030.



# Level of Outcomes: GHG Reduction Strategies (To Explore)

Ref.	GHG Reduction Strategy To Be Explored
1	<b>C4a. Take action to shift growth in jobs and housing</b> from locations currently forecast (COG Cooperative Forecasts) to locations near TPB-identified <b>high-capacity transit stations</b> and in COG's <b>Regional Activity Centers, <u>within and across jurisdictional</u></b> boundaries, to improve the jobs-housing balance locally.
2	<b>C5. Make all public bus transportation in the region fare-free</b> by 2030.
3	<b>C6. Make all public rail transportation in the region fare-free</b> by 2030.
4	<b>C7. Price workplace parking for employees.</b> In 2030, prices in <b>Activity Centers</b> would vary between \$12-\$14/day. In 2050, prices in Activity Centers would vary between \$12-\$14/day and be approximately \$6/day outside of Activity Centers. <i>(2020 dollars to be adjusted for inflation)</i>
5	<b>C11. Convert a higher proportion of daily work trips to telework.</b> By 2030, convert 25 percent of <u>daily</u> work trips and by 2050 convert 40 percent of work trips to telework. <i>(about 50 of region's jobs were reported as teleworkable)</i>
6	<b>C12. Charge a new fee per vehicle mile of travel (VMT)</b> by motorized, private, passenger vehicles in addition to the prevailing transportation fees and fuel taxes. In 2030, the fee would be 5 cents/mile and in 2050, the fee would be 10 cents/mile <i>(2020 dollars to be adjusted for inflation)</i>
7	<b>C13. Charge a "cordon fee" per motorized vehicle trip</b> for all vehicles entering Activity Centers in the region (e.g., would be \$10/trip for the core of the District of Columbia by 2030).





# COG and TPB GHG Reduction Goals

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- Regional Goals: 50% below 2005 by 2030; 80% below 2005 by 2050
- COG's regional goals are multi-sectoral:
  - Energy Grid
  - Energy Usage in Buildings (Residential, Commercial and Industrial)
  - Transportation (On-road, Aviation, Rail, Marine, Off-road)
  - Waste
  - Other (Agriculture, Fugitive)
- COG has not established GHG reduction goals for individual sectors
- No state or federal requirements for TPB to adopt GHG Goals for the on-road sector
- TPB voluntarily adopted GHG reduction goals for the on-road sector



# TPB GHG Goals, Strategies and 2030 CEAP

- COG's 2030 Climate and Energy Action Plan (CEAP) identifies strategies for each sector with assumed levels of implementation
- If each sector fully implements all the strategies, region will achieve the 2030 GHG reduction goal
- CEAP on-road strategies and TPB strategies are same:
  - Zero Emission Vehicles
  - Reduce Travel
  - Shift Travel Modes (away from single occupant vehicles)
- 2030 CEAP estimated that GHG reduction from the on-road transportation strategies would amount to a 32% reduction in GHG emissions from 2005 levels (TPB Goal is 50%)



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