

# IMPLEMENTATION CONSIDERATIONS FOR ON-ROAD TRANSPORTATION GREENHOUSE GAS (GHG) EMISSIONS REDUCTION STRATEGIES

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## Briefing on New Study

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TPB Technical Committee  
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National Capital Region  
**Transportation Planning Board**

# Let's Recap!

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- In June 2022, TPB adopted Resolution R18-2022: Resolution on the Adoption of On-road Greenhouse Gas (GHG) Reduction Goals and Strategies
  - Adopted regional, voluntary, on-road transportation sector-specific GHG reduction goals of 50% below 2005 levels by 2030 and 80% below 2005 levels by 2050
  - Adopted seven on-road greenhouse gas reduction strategies as priorities
  - Identified seven other on-road greenhouse gas reduction strategies for “further exploration in coordination at the local and state levels”
- The adopted goals and strategies were informed by the TPB’s Climate Change Mitigation Study of 2021 and the results of a questionnaire distributed to TPB members in February/March 2022



# A New Study!

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- Implementation Considerations for On-Road Transportation Greenhouse Gas (GHG) Emissions Reduction Strategies
  - Follow-up to action taken by TPB in June 2022 to adopt GHG emissions goals and strategies specific to on-road transportation
  - Study of the seven GHG reduction strategies that the TPB identified as needing “further exploration in coordination at the local and state levels”
  - The study will include up to seven additional strategies not considered in the TPB’s Climate Change Mitigation Study of 2021
  - Qualitative assessment of set of implementation considerations for each strategy
  - Conducted by TPB’s planning services, on-call consultant, ICF
- Seeking feedback from TPB Technical Committee on the additional strategies to include in the study and the implementation considerations that will be addressed for each strategy



# Seven Priority Strategies – Not part of this Study!

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- 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



# Study Includes the Seven Strategies for “Further Exploration”

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- Take action to shift growth in jobs and housing from locations currently forecast to locations near TPB-identified high-capacity transit stations and in COG’s Regional Activity Centers to improve the jobs-housing balance locally
- 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 – only in Activity Centers by 2030 and everywhere by 2050
- Convert a higher proportion of daily work trips to telework by 2030 and beyond
- Charge a new fee per vehicle-mile of travel (VMT) by motorized, private, passenger vehicles in addition to the prevailing transportation fees and fuel taxes
- Charge a “cordon fee” (commuter tax) per motorized vehicle trip for all vehicles entering Activity Centers, by 2030



# GHG Reduction Potential of TPB Identified Strategies

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Visualize 2045 (adopted in 2018)

~14% below 2005 levels in 2030

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Visualize 2045 + Seven strategies adopted as priorities

~23% - 29% below 2005 levels in 2030

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Visualize 2045 + Seven strategies adopted as priorities + Seven strategies identified for further study

~33% below 2005 levels in 2030

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TPB's on-road transportation GHG reduction goal for 2030

~50% below 2005 levels in 2030

# Additional Strategies for Study (up to Seven)

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- ICF recommends **five** primary additional strategies for assessment
  - Institute a carbon pricing program or increase in fuel taxes
  - Implement pay-as-you-drive insurance requirements
  - Implement employer-based parking cash-out program requirements
  - Reduce VMT associated with school-based trips
  - Incentivize electric-bicycle (e-bike) adoption
- TPB staff recommend including these five strategies in the study



# Additional Strategies for Study (up to Seven)

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- ICF identified secondary additional strategies that could be included (**select up to two**)
  - Expand the rail system
  - Freight-related efficiency strategies
  - Replace fossil fuels with biofuels / implement a low-carbon fuel standard
  - Convert fixed transportation fees into mileage-based fees
  - Adjust parking requirements and urban design guidelines
  - Expand programs to incentivize carpooling and vanpooling
  - Expand the bikeshare system
  - Expand microtransit / first mile-last mile service in the region
  - Expand carsharing
  - Constrain vehicle use in urban areas
  - Promote the deployment of Connected and Autonomous Vehicles (CAVs)
  - Utilize low-carbon methods for constructing and maintaining transportation infrastructure
  - Add renewable energy generation on transportation infrastructure/right-of-way (ROW)





# Priority Implementation Considerations

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- ICF recommends that the following implementation considerations be addressed for each strategy
  - Relative effectiveness in reducing GHG emissions
  - Implementing organizations, legislative authority, and necessary enabling actions
  - Costs associated with implementation
  - Implication of the strategies on other regional goals and priorities
    - Accessibility and Affordability
    - Environmental Quality
    - Equity
    - Infrastructure Condition
    - Livability and Prosperity
    - Reliability and Efficiency
    - Resiliency and Safety



# Feedback requested from TPB Technical Committee

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- Seven additional strategies for study
  - TPB staff recommends including the five primary strategies recommended by ICF
  - Which two additional strategies to include?
- Implementation Considerations
  - Are there additional implementation considerations that should be addressed?
- **Feedback should be sent to Erin Morrow ([emorrow@mwkog.org](mailto:emorrow@mwkog.org)) and Dusan Vuksan ([dvuksan@mwkog.org](mailto:dvuksan@mwkog.org)) by COB Thursday, March 7**
- Presentation on draft study report is expected for TPB Technical Committee in May for feedback
- Presentation on final study report is expected for TPB Technical Committee and TPB in June



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