

Mobile Sources Technical Review Subcommittee Update: Future Mobility Report

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MSTRS Future Mobility

Objective:

- Given the emerging technologies and trends impacting the transportation sector, EPA would benefit from detailed feedback from the MSTRS about EPA's role with respect to future mobility paradigms

Structure:

- Each of the 35 subcommittee members self-selected into one of four subgroups: Vehicle Technology, Personal Mobility, Fuels, and Goods Movement
- EPA challenged each subgroup with a list of questions to initiate discussion
- Subgroups met and worked for over a year, between March 2020 and June 2021
- EPA provided a moderator and scribe to each subgroup, to assist in discussions

MSTRS Future Mobility

Goal:

- By Spring 2021, each subgroup will produce a report providing feedback and insights on their respective topic
 - Report should provide insights into implications for EPA's near-, mid-, and long-term work
 - Report should discuss what, structurally, what would need to change about EPA's work to support our mission of emission reductions while maintaining mobility and accessibility, i.e., what new factors and approaches would EPA need to consider?
- Subgroup reports will be combined into a single document for adoption by the subcommittee at the Fall 2021 MSTRS meeting

Future Mobility Scenarios

Subgroup	Scenario
Technology “Zero Emissions”	<i>In a world where the majority of new light-duty and heavy-duty fleets are zero tailpipe emission technologies (e.g., battery electric, hydrogen fuel cell), describe EPA’s work and role in reducing emissions from transportation while maintaining mobility.</i>
Personal Mobility “Share a Ride”	<i>In a world where the majority of people in the U.S. get from Point A to Point B using a transport mode other than a personally-owned vehicle, describe EPA’s work and role in reducing emissions from transportation while maintaining mobility/accessibility.</i>
Fuels “Future Fuels”	<i>In a world where alternative fuels such as electricity and hydrogen are used to meet a significant percentage of the light-duty and heavy-duty onroad fuel demand, describe EPA’s work and role in reducing emissions from the fuel pool.</i>
Goods Movement “I Want My Stuff!”	<i>In a world where goods delivery primarily happens through on-line orders and by direct-to-household-and-business deliveries, describe EPA’s work and role in reducing emissions from transportation options in the supply chain (e.g., between the final distribution site and a household or business).</i>

Future Mobility Questions

For each scenario, subgroups were asked to consider the following questions:

- What are the opportunities and challenges that may arise in each scenario?
- What factors are most important for positive environmental outcomes?
- What type of information would EPA need?
- What tools/skills/authority would EPA need to continue reducing transportation emissions in the given scenario?
- What role would other stakeholders (local, state govt, industry, NGO, etc.) play in this evolving landscape?
- What other new concepts are emerging that EPA needs to consider, i.e., what is the next disruptor?

Future Mobility Subgroup Highlights

Final report is being finalized, but 10 common themes have emerged:

- 1) To meet our GHG, criteria pollution, and other Future Mobility goals, we will need to decarbonize the liquid fuels and the engines that will continue to be used in many applications, and finding ways to move people and goods in as sustainable and equitable a way as possible
- 2) Good data and analysis will be critical to meeting our Future Mobility goals
- 3) We will need to integrate principles of social equity, environmental justice, and mobility justice in ways that have never been done before
- 4) We will need increased collaboration across agencies and levels of government
- 5) We will need to consider solutions that are outside the traditional regulatory authority of the Office of Transportation and Air Quality

Future Mobility Subgroup Highlights

Ten common themes continued:

- 6) Fuel-neutral, technology-agnostic performance standards will continue to be critical for both fuels and vehicles
- 7) Incentive, public education, and outreach programs will continue to be critical to accelerate deployment
- 8) We will need to consider new approaches to solve new problems and old problems (e.g., legacy vehicles), some of which are beyond EPA's traditional role
- 9) Additional strategies will be needed for hard-to-electrify components of the legacy and future fleets
- 10) There is no "silver bullet"