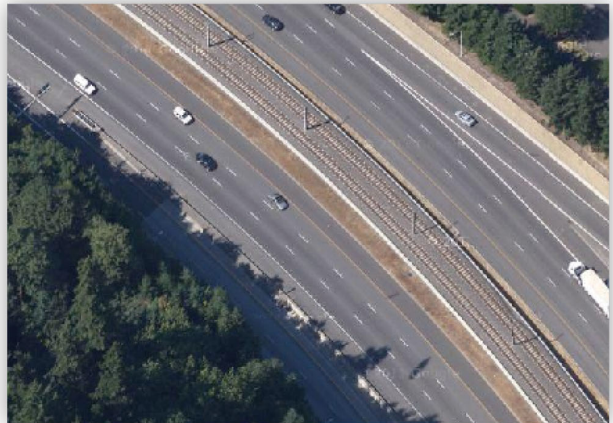


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TRANSPORTATION RESEARCH BOARD

TRB Air Quality and GHG Mitigation Committee (AMS10) 2022 Summer Meeting Summary



September 15, 2022

AMS 10 2022 Summer Meeting Summary Notes

September 15, 2022

Prepared by Ellen Greenberg and Annalisa Schilla

Our committee is uniquely positioned to bring together research in accelerating the transition to a cleaner transportation system. Because the time is short to address the climate crisis, we need to quickly advance the research policy makers need to support effective decision making. By understanding practitioner's needs and informational gaps, our committee can provide direction on urgent research needs.

The 2022 AMS10 summer committee meeting focused on operationalizing the committee's recently adopted triennial strategic plan, with a focus on identifying actions that the committee as a whole, and individual members, can take to implement the plan's near-term goals. This report summarizes the actions that the committee identified in order to successfully move forward and ensure that AMS10 fulfills its mission of providing leadership in research initiatives and knowledge sharing in the area of transportation-related air quality and GHG mitigation issues.

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Summer Meeting Overview

The TRB Air Quality & GHG Mitigation Committee (AMS10) held a mid-year meeting on June 29, 2022 (see inset for agenda), with approximately 30 participants. The meeting focused on the committee's recently-adopted strategic plan and had these two objectives:

- Increase familiarity with AMS10 new structure and 2022-2025 Triennial Strategic Plan
- Identify actions – both for the committee as a whole and that individual members can take – to operationalize the strategic plan, especially tackling the statement of urgency and near-term goals

Meeting Agenda: 8:30 am to Noon

1. Welcome – Doug Eisinger (Chair, TRB AMS10)
2. Overview of Triennial Strategic Plan and Implications
3. Connections with Other TRB Committees (especially AMS30 and AMS40)
4. Presentation on Advanced Clean Cars II
5. Remarks from Dr. Steven Cliff
6. Breakout groups: Operationalizing our Strategic Plan, Tackling the Statement of Urgency, and What Each of Us Can Contribute
7. Wrap-up

This summary synthesizes the outcomes from the summer meeting. Supplemental information is attached as an appendix and includes the committee's recently adopted triennial strategic plan, welcome and wrap-up slides presented at the summer meeting, presentations from committee leadership on the new subcommittees and from Joshua Cunningham's presentation on CARB's Advanced Clean Cars II regulation (which was adopted soon after the AMS10 summer meeting). Annalisa Schilla (CARB) and Ellen Greenberg (Caltrans, retired) led the planning and implementation of the summer meeting and developed the summary material presented here.

Overview of AMS10 Triennial Strategic Plan

The first topic of discussion was an overview of the recently adopted AMS10 Triennial Strategic Plan Overview, including overviews of the new subcommittees and of the committee's identified research priorities.

AMS10 Committee Mission Statement

Our Mission is to provide leadership in research initiatives and knowledge sharing in the area of transportation-related air quality and GHG mitigation issues. AMS10 does this by ensuring that

- critical issues are addressed in sessions and events
- up-to-date research needs are maintained
- cross-cutting emerging issues are identified
- excellence in research is rewarded, and
- the committee remains relevant and vibrant

AMS10 2022-2025 Triennial Strategic Plan Statement of Urgency **(Excerpts)**

The National Academies has stated, "...to reach net-zero carbon by 2050, the United States must begin taking action now [emphasis added] to accomplish five main technology goals. Meeting these objectives over the current decade (2021-2030) will be essential to making the net-zero transition possible on a 30-year timeframe, so that long-lived energy infrastructure can be replaced with zero-carbon alternatives." As [noted by the National Academies](#), "A sharp reduction in CO₂ emissions is needed to slow climate change and avoid the most severe impacts on weather extremes, ecosystems, human health, and infrastructure." *

Given the urgent need to address climate change, and the recent focus by the National Academies and TRB on GHG mitigation, there is a short-term need to prioritize resources on GHG issues... AMS10 faces a key challenge: it must rapidly address GHGs and simultaneously maintain and improve upon its ability to address air quality. To meet this challenge, the committee must place special emphasis in the near-term on GHG mitigation, while sustaining its ongoing air quality-related work.

*See goals from [Accelerating Decarbonization of the U.S. Energy System](#): (1) produce carbon-free electricity; (2) electrify energy services in transportation, buildings, and industry; (3) invest in energy efficiency and productivity; (4) plan, permit, and build critical infrastructure; (5) expand the innovation toolkit: triple investment in clean-energy R&D and demonstration.

AMS10 Triennial Strategic Plan Near-term Goals:

1. Connect research to policy: focus research priorities on policy-relevant actions
 - a. Identify policy community needs, share science-based priorities with practitioners
 - b. Develop findings to inform GHG control efforts in the near-term (two to five years)
2. Identify, assess, and profile informative GHG mitigation efforts (case studies)
 - a. What was done? What obstacles were encountered? Were they overcome and how?
 - b. What real-world outcomes were achieved?
 - c. What are the transferrable policy development and implementation lessons?
3. Improve information sharing on GHG and air quality-related research
 - a. Develop TRB e-Circulars (key topic research roadmaps – see Subcomm. Research Clusters)
 - b. Improve dissemination of findings to practitioner and research-funding communities
 - c. Leverage web-based communication resources
 - d. Coordinate with AMS30 (Energy) and AMS40 (Alternative Fuels and Technologies)

4. Continue to improve diversification of committee participants, membership, and leadership
 - a. Increase involvement by under-represented stakeholders and young professionals
 - b. Address diversification through committee membership rotations
 - c. Promote diversity, equity, and inclusion in research activities (e.g., paper submissions)

Actions AMS10 Can Take to Operationalize Triennial Strategic Plan Near-Term Goals

The topics below highlight actions that the committee (collectively or as individual members) can take to operationalize the triennial strategic plan.

Goal / Subgoal	What can the Committee do to operationalize these goals?
<p>Goal 1. Connect research to policy: focus research priorities on policy-relevant actions</p>	<ol style="list-style-type: none"> 1. Separate near-term and long-term objectives 2. Pick policy-relevant papers to share at TRB Annual Meeting and conferences 3. Advocate/promote poster sessions where more technical info can be shared 4. Sponsor and participate in workshops and seminars designed to bring communities, CBOs, researchers, policy makers together 5. Invite "lived experts" to our meetings (e.g., from EJ communities) <p>Individual members can use existing research and research plans such as:</p> <ul style="list-style-type: none"> • NCHRP 25-56 (Methods for State DOTs to Reduce GHG Emissions from the Transportation Sector) • EPA Research Plans for the next 4 years: https://www.epa.gov/research/strategic-research-action-plans-fiscal-years-2023-2026-drafts
<p>Subgoal a. Identify policy community needs, share science-based priorities with practitioners</p>	<ol style="list-style-type: none"> 1. Define community or design a way to identify community needs 2. Identify, summarize, compare frameworks for outreach and engagement with communities - how are community priorities assessed? Perhaps could connect to e-circular <p>Individual members can: build capacity by sharing resources</p>

<p>Subgoal b. Develop findings to inform GHG control efforts in the near-term (two to five years)</p>	<ol style="list-style-type: none"> 1. Develop information on strategies to specifically high-mileage drivers, considering equity implications, and benefits/cost-effectiveness vs. general strategies 2. Develop/update information on GHG mitigation strategy effectiveness, cost-effectiveness, and co-benefits 3. Develop consensus on how to include/consider related sectors such as land use and electricity when evaluating transportation emissions forecasts, targets, and strategies 4. Suggest FHWA fund task to provide updated information on GHG control cost-effectiveness <p>Individual members with experience in states taking actions (e.g., California, Oregon, others) can: share policy and research experience</p>
<p>Goal 2. Identify, assess, and profile informative GHG mitigation efforts (case studies)</p>	<ol style="list-style-type: none"> 1. Profile successes and lessons learned from EVSE deployment - NEVI, MHDV programs, etc. 2. Survey our members and have them identify pilot programs 3. Focus on multimodal strategies to reduce VMT and address equity is key <p>Individuals can: participate as presenters or participants in webinars providing lessons on NEVI experience (DOTs), MHDV programs (utilities, CA Energy Commission, etc.)</p>
<p>Subgoal a. Understand: What was done? What obstacles were encountered? Were they overcome and how?</p>	<p>Champion new NCHRP Synthesis project(s) to compile this information</p>
<p>Subgoal b. Understand what real-world outcomes were achieved</p>	<p>Champion new NCHRP Synthesis project(s) to compile this information including synthesis of GHG policies (AMS 10 to write statement)</p>
<p>Subgoal c. Identify transferrable policy development and implementation lessons</p>	<p>Need to identify scalable projects; important to figure out what can be moved from local to state/national context</p>
<p>Additional item</p>	<p>Technology deployment - Ports, Congestion mitigation co-benefits</p>

Goal 3. Improve information sharing on GHG and air quality-related research	<p>1. Convene a webinar and/or promote other info-sharing amongst state DOTs re: how they are meeting Carbon Reduction Program requirements and evaluating projects 2. Use our annual meeting to survey the participants to identify important pilot programs and other actions where findings are key to share</p> <p>Individuals can: Nominate webinar; suggest symposium at TRB</p>
Subgoal a. Develop TRB e-Circulars (key topic research roadmaps – see Research Clusters in AMS10 Triennial Strategic Plan)	<p>1. Small metro/rural/local planning agency actions to estimate and reduce GHGs 2. Summary and synthesis of frameworks for community engagement and outreach to support identifying community needs and incorporating equity into research project.</p>
Subgoal b. Improve dissemination of findings to practitioner and research-funding communities	<p>1. Stay abreast of major pilot programs (e.g., at the federal level), and then showcase their findings 2. Involve Equity Committee - invite them to present at a committee meeting. Findings from their seminars or research</p>
Subgoal c. Leverage web-based communication resources	Use committee website as a hub for crowdsourced GHG mitigation efforts (success stories, remaining challenges, etc.)
Subgoal d. Coordinate with AMS30 (Energy) and AMS40 (Alternative Fuels and Technologies)	(see notes from Summer Meeting guests)
Goal 4. Continue to improve diversification of committee participants, membership, and leadership	<p>1. Include community-based organizations in the work and membership of the committee 2. GHG experience underrepresented since a new expansion?</p>
Subgoal a. Increase involvement by under-represented stakeholders and young professionals	<p>1. Target student/young members to contribute committee meeting presentations 2. Outreach to faculty at HBCUs with relevant programs (e.g., energy/emissions + transportation)</p>

	3. Be more proactive at inviting new groups from new universities to meetings, including remote meetings to support no/low-cost engagement
Subgoal b. Address diversification through committee membership rotations	1. Expand allowed international membership 2. Address rural representation
Subgoal c. Promote diversity, equity, and inclusion in research activities (e.g., paper submissions)	Invite representatives from diverse stakeholder groups (e.g., community-based organizations) to speak in committee-sponsored sessions, subcommittee meetings, etc.