TRB Snap Search: Decarbonization

TRB's involvement in research on Decarbonization from 2020-2024

The Transportation Research Board (TRB) provides innovative, research-based solutions to improve how we move. TRB is part of the National Academies of Sciences, Engineering, and Medicine, an independent, non-profit institution that provides objective advice on scientific, engineering, and medical issues.

A resource to the nation and to the transportation community worldwide, TRB provides an extensive portfolio of services:

- Opportunities for information exchange on current transportation research and practice
- Management of cooperative research and other research programs
- Analyses of national transportation policy issues and guidance on federal and other research programs
- Publications and access to research information from around the world

All available Snap Searches can be accessed online here: [http://www.trb.org/InformationServices/Snap.aspx](http://www.trb.org/InformationServices/Snap.aspx)

TRB Research

TRID – The world’s largest and most comprehensive bibliographic source on all modes and disciplines of transportation

- Click here to view search results on TRB published research Decarbonization within the past three years.

Specialty Report

- Critical Issues in Transportation for 2024 and Beyond
- Critical Issues in Transportation 2019
- COVID-19 Addendum to Critical Issues in Transportation
- Racial Equity Addendum to Critical Issues in Transportation

Recent Reports & Publications

- **Airport Cooperative Research Program (ACRP)**
  - Report 236 - Preparing Your Airport for Electric Aircraft and Hydrogen Technologies
  - Report 220 - Guidebook for Developing a Zero- or Low-Emissions Roadmap at Airports
  - Report 207 - Optimizing the Use of Electric Preconditioned Air (PCA) and Ground Power Systems for Airports
  - Report 197 - Guidebook for Developing a Comprehensive Renewable Resources Strategy
  - Synthesis 127 – Airport Programs that Reduce Landside Vehicle Carbon Emissions
  - Synthesis 110 - Airport Renewable Energy Projects Inventory and Case Examples
  - Synthesis 100 - Airport Greenhouse Gas Reduction Efforts
  - Web-Only Document 51 - Commercial Space Vehicle Emissions Modeling

- **National Cooperative Highway Research Program (NCHRP)**
  - IDEA Report 211 - Reducing Stormwater Runoff with Biochar Addition to Roadway Soils
  - Report 1058 - Assessing Air Pollution Dispersion Models for Emissions Regulation
  - Report 924 - Foreseeing the Impact of Transformational Technologies on Land Use and Transportation
  - Synthesis 576 - Practices for Project-Level Analyses for Air Quality
  - Web-Only Document 308 - Methods for State DOTs to Reduce Greenhouse Gas Emissions from the Transportation Sector

- **Special Reports**
  - Pathways to an Equitable and Just Energy Transition: Principles, Best Practices, and Inclusive Stakeholder Engagement: Proceedings of a Workshop
  - Report 337 - The Role of Transit, Shared Modes, and Public Policy in the New Mobility Landscape
  - Report 336 - Options for Reducing Lead Emissions from Piston-Engine Aircraft

Updated 1/05/2024
• **Transit Cooperative Research Program (TCRP)**
  
  - IDEA Report 96 - Multi-stage Planning for Electrifying Transit Bus Systems with Multi-format Charging Facilities
  - Report 226 - An Update on Public Transportation's Impacts on Greenhouse Gas Emissions
  - Report 219 - Guidebook for Deploying Zero-Emission Transit Buses
  - Report 211 - Guidebook for Detecting and Mitigating Low-Level DC Leakage and Fault Currents in Transit Systems

• **Transportation Research Circularrays**
  
  - E-Circular 279 - Advancing Low- and Zero-Emission Marine Vessel Technology Options Workshop

**Current & Upcoming Projects**

• **Current Projects**
  
  - ACRP 02-90 - Development of Airport Construction Emission Inventory Tool (ACEIT) Version 2.0
  - ACRP 02-95 - Understanding Airport Air Quality and Public Health Studies Related to Airports: An Update to ACRP Report 135
  - ACRP 02-97 - Update to the Guidelines, Tools, and Resources Related to ACRP Reports 11, 147, and 160
  - ACRP 02-98 - Airport Energy Resiliency Primer and Roadmap
  - ACRP 02-100 - Carbon Removal and Reduction to Support Airport Net-Zero Goals
  - ACRP 02-101 - Environmental Stewardship and Compliance Training for Airport Employees
  - ACRP 10-34 - Migrating ACRP Research Report 228 Toolkit to an ACRP WebResource
  - NCHRP 25-64 - Considering Greenhouse Gas Emissions and Climate Change in Environmental Reviews: Resources for State DOTs
  - NCHRP 25-61 - Development of On-Bridge Stormwater Treatment Practices
  - NCHRP IDEA 20-30/IDEA 246 - Developing a Method for Selecting Low-Energy Mixing and Compaction Temperatures for Asphalt Mixtures Considering Asphalt Lubrication and Aggregate Characteristics
  - NCHRP Synthesis 20-05/Topic 54-21 - Practices in the Transportation Planning Process to Address Climate Resilience and GHG Emission Quantification and Reduction
  - NCHRP Synthesis 20-05/Topic 55-05 - Use and Availability of Supplementary Cementitious Materials for Concrete
  - TCRP Synthesis J-07/Topic SA-60 - Examination of Transit Agency Coordination with Electric Utilities

• **Upcoming Projects**
  
  - ACRP 11-08(24-03) - ACRP Insight Event – Airport Energy Resiliency
  - NCHRP 08-164 - Institutional Integration of Active Transportation
  - NCHRP 08-165 - Use of Active Transportation Data in Decision-Making
  - NCHRP 10-123 - Incorporating Quality Assurance into Green Public Procurement Practices
  - NCHRP 19-21 - Selecting Revenue Models for Electric Vehicle Charging
  - NCHRP 19-26 - Modernizing Fuel Tax Revenue Forecasting
  - NCHRP 20-06/Topic 27-03 - Environmental and Planning Law and Transportation
  - TCRP A-50 - Practical Considerations for Developing Transition Plans to Zero-Emission Fleets

**Reports from the National Academies Press on Decarbonization**

  - Laying the Foundation for New and Advanced Nuclear Reactors in the United States
  - Challenges and Opportunities Toward a Just Transition and Sustainable Development: Proceedings of a Workshop—in Brief
  - Carbon Dioxide Utilization Markets and Infrastructure - Status and Opportunities: A First Report
  - Understanding the Societal Challenges Facing Nuclear Power
  - Navigating an Electric Vehicle Future
  - New Directions for Chemical Engineering
  - Engineering Responses to Climate Change: Proceedings of a Forum
  - Accelerating Decarbonization in the United States: Technology, Policy, and Societal Dimensions
  - Accelerating Decarbonization of the U.S. Energy System
  - Enhancing Federal Clean Energy Innovation
  - Bringing Fusion to the U.S. Grid
  - The Future of Electric Power in the United States
  - A Research Strategy for Ocean-based Carbon Dioxide Removal and Sequestration
  - Advanced Technologies for Gas Turbines
  - Reducing Fuel Consumption and Greenhouse Gas Emissions of Medium- and Heavy-Duty Vehicles, Phase Two

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Committees & Panels

Sign-up to be a committee "Friend"

TRB Standing Committees – Search by transportation mode and committee topic

- ACP35 - Managed Lanes
- AEP70 – Environmental Analysis and Ecology
- AJL50 – Environmental Issues in Transportation Law
- AKG30 – Geo-Environmental and Climatic Impacts on Geomaterials
- AMR50 - Extreme Weather and Climate Change Adaptation
- AMS10 - Air Quality and Greenhouse Gas Mitigation
- AMS20 – Resource Conservation and Recovery
- AMS30 - Transportation Energy
- AMS40 – Alternative Fuels and Technologies
- AR020 - Rail Rolling Stock and Motive Power
- AV030 – Environmental Issues in Aviation
- AW030 – Marine Environment

Task Forces - Search for task force under committee here

Project Panels

- D1561 - Applying Climate Change Information to Hydrologic and Hydraulic Design of Transportation Infrastructure
- D2555 - Quantifying the Contribution of Vehicle Emissions to Local Air Quality
- D2564 - Considering Greenhouse Gas Emissions and Climate Change in Environmental Reviews: Resources for State DOTs
- D2570 - Developing a Framework for Evaluation of Decarbonization Outcomes
- DA0280 - Quantifying Emissions Reductions at Airports from the Use of Alternative Jet Fuel
- DA0282 - Developing a Roadmap to Achieve Zero Emissions at Airports
- DA0285 - Commercial Space Vehicle Emissions Modeling
- DA0290 - Update the Airport Construction Emission Inventory Tool (ACEIT)
- DA02100 - Pathways to Airport Net Zero Carbon Emissions
- DA2102 - A Balanced Look at Local Airport Activity and Climate Change
- DA0377 - Understanding the Impact of Climate Change on Forecasting Future Airport Activity Levels
- DA08181 - Understand How Climate Change and Extreme Weather Impacts the Mobility of Socially Vulnerable Populations
- SAS0222 - Airport Programs that Reduce Landside Carbon Emissions
- TA50 - Practical Considerations for Developing Transition Plans to Zero-Emission Fleets

Councils

- A001C – Young Member Coordinating Council

Recent and Upcoming Events

Upcoming Events – In the Upcoming Events tab under Types, choose what event you are interested in, search titles by keyword

TRB's Symposium on Managed Lanes
August 12-14, 2024
Irvine, CA

TRB’s Transportation Symposium on Environment, Energy, and Livable Economies
August 25-28, 2024
Denver, CO

Past Events - In the Past Events tab under Types, choose what event you are interested in, search titles by keyword

National Aviation System Planning Symposium
May 15-18, 2023
Irving, CA

Marine Transportation System Innovative Science and Technologies Toward Greater Sustainability
June 19-22, 2023
TRB’s Transportation Research Information Services (TRIS)

TRIS includes the TRB Library and the TRIS Databases (listed below) which are available free on TRB’s website.

The TRB Library provides information services to TRB staff, sponsors, TRB Committee members and panels and researchers. Access to the TRB Library is a benefit to TRB sponsors and TRB committee members.

In cooperation with your State DOT Library or Information Service, the TRB Library provides:

- Reference and research assistance
- Literature searches
- Articles for TRB Committee work

The TRB Library provides training on effective and efficient use of the following TRIS resources:

- **Transportation Research International Documentation (TRID)** – trid.trb.org - The world’s largest and most comprehensive bibliographic source on all modes and disciplines of transportation
- **Transportation Research Thesaurus (TRT)** – trt.trb.org - A tool to improve the indexing and retrieval of transportation information.
- **Research in Progress (RiP) Database** – rip.trb.org - Current or recently completed transportation research projects
- **Publications Index (PubsIndex) Database** – pubsindex.trb.org - The papers, articles and reports published by the Transportation Research Board, Strategic Highway Research Programs or the Marine Board

Contact or Questions: TRBLibrary@nas.edu