TRB Snap Search: Decarbonization

TRB's involvement in research on Decarbonization from 2018-2022

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

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 four years.

Specialty Webpages

- Environment Research at TRB
- Climate Change

Specialty Report

- 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 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 205 - Revolving Funds for Sustainability Projects at Airports
  - Report 197 - Guidebook for Developing a Comprehensive Renewable Resources Strategy
  - Report 185 - Airport Air Quality Management 101
  - Synthesis 110 - Airport Renewable Energy Projects Inventory and Case Examples
  - Synthesis 100 - Airport Greenhouse Gas Reduction Efforts
  - Synthesis 89 - Clean Vehicles, Fuels, and Practices for Airport Private Ground Transportation Providers
  - Web-Only Document 51 - Commercial Space Vehicle Emissions Modeling
  - Web-Only Document 36 - Enhanced AEDT Modeling of Aircraft Arrival and Departure Profiles, Volume 1: Guidance
  - WebResource 4 - Airport Air Quality Resource Library

- Conference Proceedings
  - Proceedings 54 - Decarbonizing Transport for a Sustainable Future: Mitigating Impacts of the Changing Climate

- National Cooperative Highway Research Program (NCHRP)
o IDEA Report 211 - Reducing Stormwater Runoff with Biochar Addition to Roadway Soils
o Report 924 - Foreseeing the Impact of Transformational Technologies on Land Use and Transportation
o Report 909 - Guide to Truck Activity Data for Emissions Modeling
o Synthesis 576 - Practices for Project-Level Analyses for Air Quality
o Web-Only Document 281 - Case Studies of Truck Activity Data for Emissions Modeling
o Web-Only Document 274 - Zero Emission Vehicles: Forecasting Fleet Scenarios and their Emissions Implications
o Web-Only Document 261 - Case Studies of Truck Activity Data for Emissions Modeling
o Web-Only Document 246 - Volume 1: TRAQS User Guide
o Web-Only Document 246 - Volume 2: TRAQS: A Combined Interface for Project-Level Air Quality Analysis

Special Reports
o Report 337 - The Role of Transit, Shared Modes, and Public Policy in the New Mobility Landscape
o Report 336 - Options for Reducing Lead Emissions from Piston-Engine Aircraft

Transit Cooperative Research Program (TCRP)
o Report 226 - An Update on Public Transportation's Impacts on Greenhouse Gas Emissions
o Report 219 - Guidebook for Deploying Zero-Emission Transit Buses
o Report 211 - Guidebook for Detecting and Mitigating Low-Level DC Leakage and Fault Currents in Transit Systems

Transportation Research Circulars
o E-Circular 243 - SHRP 2 Safety Data Student Paper Competition 2017-2019
o E-Circular 238 - 2018 National Household Travel Survey Workshop

Current & Upcoming Projects

Current Projects
o ACRP 02-90 - Development of Airport Construction Emission Inventory Tool (ACEIT) Version 2.0
o ACRP 02-95 - Understanding Airport Air Quality and Public Health Studies Related to Airports: An Update to ACRP Report 135
o ACRP 07-18 - Develop Airfield Design Guidelines for Large Unmanned Aerial Systems (UAS)
- NCHRP 03-133 - Traffic Signal Design and Operations Strategies for Non-Motorized Users
- NCHRP 14-39 - Using Vegetated Compost Blankets to Achieve Highway Runoff Volume and Pollutant Reduction
- NCHRP 25-64 - Considering Greenhouse Gas Emissions and Climate Change in Environmental Reviews: Resources for State DOTs
- NCHRP 25-55 - Assessment of Regulatory Air Pollution Dispersion Models to Quantify the Impacts of Transportation Sector Emissions
- NCHRP 25-61 - Development of On-Bridge Stormwater Treatment Practices
- Transit IDEA J-04/IDEA 96 - Multi-stage Planning for Electrifying Transit Bus Systems with Multiformat Charging Facilities

Upcoming Projects
o ACRP 02-97 - Updates to ACRP Environmental Reports 11, 43, 147 & 160
o ACRP 02-98 - Airport Energy Resiliency
o ACRP 02-100 - Carbon Removal and Reduction to Support Airport Net-Zero Goals: A Playbook and Tools
o ACRP 10-34 - Airport Microgrid Toolkit Upgrade to ACRP WebResource
o NCHRP 08-148 - Utility Abandonment, Out of Service Plant, and Decommissioning without Removal on Public Right of Way
o TCRP H-61 - Resilience and Emergency Response Planning for Zero-Emission Fleets

Reports from the National Academies Press on Decarbonization
o Accelerating Decarbonization in the United States: Technology, Policy, and Societal Dimensions
o Accelerating Decarbonization of the U.S. Energy System
o Enhancing Federal Clean Energy Innovation
o Bringing Fusion to the U.S. Grid
o The Future of Electric Power in the United States
o A Research Strategy for Ocean-based Carbon Dioxide Removal and Sequestration
o Advanced Technologies for Gas Turbines
o Reducing Fuel Consumption and Greenhouse Gas Emissions of Medium- and Heavy-Duty Vehicles, Phase Two
o Deployment of Deep Decarbonization Technologies
o Negative Emissions Technologies and Reliable Sequestration
o Environmental Engineering for the 21st Century
o Gaseous Carbon Waste Streams Utilization

Page 2
Committees & Panels

**Sign-up to be a committee "Friend"**

**TRB Standing Committees** – Search by transportation mode and committee topic

- **AEP70** – Environmental Analysis and Ecology
- **AIL50** – Environmental Issues in Transportation Law
- **AKG30** – Geo-Environmental and Climatic Impacts on Geomaterials
- **AMS10** – Air Quality and Greenhouse Gas Mitigation
- **AMS20** – Resource Conservation and Recovery
- **AMS30** – Transportation Energy
- **AMS40** – Alternative Fuels and Technologies
- **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
- **D2556** - Methods for State DOTs to Reduce Greenhouse Gas Emissions from the Transportation Sector
- **D2564** - Considering Greenhouse Gas Emissions and Climate Change in Environmental Reviews: Resources for State DOTs
- **DA0257** - Reducing the Impact of Lead Emission at Airports
- **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
- **DA02100** - Pathways to Airport Net Zero Carbon Emissions
- **TH61** - Resilience and Emergency Response Planning for Zero-Emission Fleets

**Councils**

- **A001C** – Young Member Coordinating Council

Recent and Upcoming Events

**Upcoming Conferences** - Left hand menu “upcoming conferences by topic”
*(Conferences cosponsored by TRB are denoted with an asterisk.)*

- **Conference on Sustainability and Emerging Transportation Technology**  
  *March 15, 2022*  
  *Irvine, CA*

- **American Society of Civil Engineers (ASCE) Geo-Congress 2022**  
  *March 20, 2022*  
  *Charlotte, NC*

- **18th Biennial National Harbor Safety Committee Conference**  
  *June 13, 2022*  
  *Boston, MA*

- **International Conference of International Society for Intelligent Construction**  
  *September 6, 2022*  
  *Guimaraes, Portugal*

- **TRB Scenario Planning Conference**  
  *September 19, 2022*  
  *Washington, DC*

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

**Past Events** - In the Past Events tab under Types, choose what event you are interested in, search titles by keyword
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
- Research Needs Statements (RNS) – rns.trb.org - Research needs as identified by TRB Technical Activities standing committees
- 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