



# Energy Transition in Transport National Policy and Local Implementation

Virtual Seminar | December 2, 2021

## Introduction

Since 1998, the Royal Netherlands Embassy, the Ministry of Infrastructure and Water Management, Rijkswaterstaat (the Netherlands' national road and waterway administration), and the U.S. Department of Transportation's (U.S. DOT) Volpe National Transportation Systems Center have cooperated to exchange information, expertise, and innovative ideas. This cooperation is formalized through a Letter of Intent signed by representatives of the two countries. An in-person seminar typically takes place at the annual Washington, DC meeting of the Transportation Research Board; this year, in response to the Covid-19 pandemic, officials convened a virtual seminar.

Each technical information exchange provides an opportunity for transportation professionals to engage in a multi-cultural dialogue about crucial transportation issues. This year's dialogue centered on decarbonization and energy transition in the transportation sector in response to threats from climate change. There were three focus areas:

- Coping with energy needs and energy supply in the transport sector
- Social equity in transportation policy and adaptations to local context
- Governance: national and local collaboration, scaling-up for impact

Six speakers – three from each country – shared their perspectives and ideas during the 1.5-hour session. Approximately 50 participants watched and listened to the virtual seminar and interacted through a text-based chat. Lieske Streefkerk-Arts, Counselor for Infrastructure and Water Management at the Embassy of the Kingdom of the Netherlands welcomed guests and offered an introduction. Anne Aylward, U.S. DOT Volpe Center Director moderated the seminar and facilitated the dialogue. This report summarizes the key findings of the seminar. Appendix 1 provides speaker biographies and Appendix 2 is a list of participants.



**Lieske Streefkerk-Arts**, Counselor for Infrastructure and Water Management, Embassy of the Kingdom of the Netherlands



**Anne D. Aylward**, Director, U.S. Department of Transportation's Volpe Center

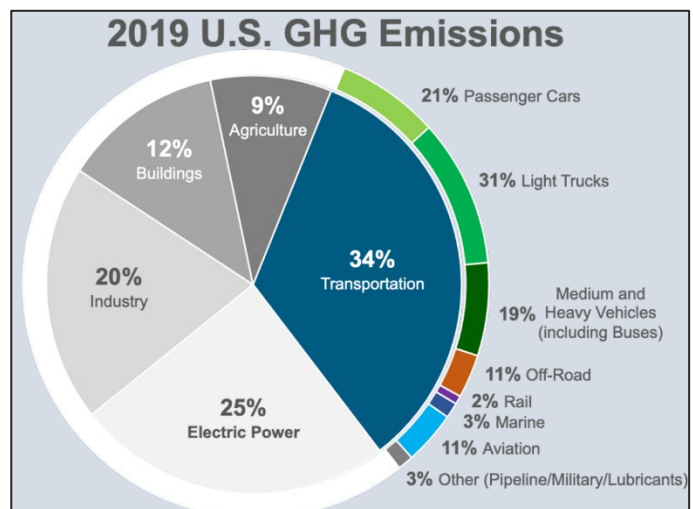
## Why Focus on Energy and Transport?

Since Superstorm Sandy in 2011, regions across the entire United States have experienced numerous climate change-related extreme weather events, including wildfires, floods, tropical storms, and hurricanes. These events disrupt people's lives and livelihoods and have destroyed or substantially damaged critical transportation infrastructure such as roads and bridges, mass transit systems, and aviation facilities.

A future-proof domestic transportation policy prioritizes resilience, sustainability, equity, and adaptation to climate change impacts. Transportation-related emissions are impacted by both total energy use and by energy sources. The U.S. is eager to share its innovative strategies to stimulate the use of alternative energy, and, to learn from other countries facing similar climate challenges and developing energy sector-based solutions.

The Netherlands, a low-lying country at the delta of three rivers abutting the North Sea, has grappled with water management for centuries; it is a challenge that must be met to keep the country safe, livable, accessible. Extreme weather has made the country – its residents, its economy, and its transportation network – ever more vulnerable to flood events and storm surges.

As in the U.S., the Dutch transportation sector accounts for a significant portion of CO<sub>2</sub> emissions that hasten the pace of climate change. A much smaller country in terms of land area, Dutch land-use patterns have resulted in high-density cities spread across several regions. The Netherlands is eager to share its approach to addressing the climate crisis on multiple fronts, by expanding and exploring the adoption of alternative energy in transportation and by engaging in coordinated regional multi-modal transportation planning to reduce total emissions volume.



## National Imperatives to Take Climate Action

To provide geographic, cultural, and political context for the dialogue, Deputy Assistant Secretary for Research and Technology and DOT Chief Science Officer **Robert Hampshire**, and **Marlouke Durville**, the Managing Director Rijkswaterstaat, Water, Transport and the Environment at the Netherlands Ministry of Infrastructure and Water Management delivered introductory remarks.

### Dr. Robert Hampshire, Deputy Assistant Secretary for Research and Technology and Chief Science Officer, U.S. Department of Transportation



In his role with the U.S. DOT, Dr. Hampshire directs an assortment of critical priority projects focused in four main areas:

1. The Covid-19 pandemic, including health management, vaccine distribution, strategic planning, and economic recovery
2. The federal “Build Back Better” approach to improve outcomes through public infrastructure investment, strengthening the social contract, and spurring innovation in the private sector
3. Racial equity and economic justice in America
4. The climate crisis, addressed by modernizing infrastructure and building sustainable and accessible clean energy sources

Only a few weeks prior to this year’s seminar, President Biden signed the Bipartisan Infrastructure Law (BIL), a “gamechanger” for the transportation network that includes massive federal investment in public transit, passenger rail, bridge repair or replacement, water infrastructure upgrades, and investments in clean energy transmission and electric vehicle (EV) charging stations.

The law includes provisions to tackle the climate crisis while making the largest long-term investment in U.S. infrastructure and competitiveness in nearly a century. The goal is to take swift and bold action to build an economy and a country that is more sustainable, resilient, and prioritizes equity. In tandem with emissions reduction, the law focuses on building out the first-ever national network of EV charging points in the U.S. This approach makes accelerating the adoption of EVs an imperative for reducing transportation emissions from internal combustion engines.

The BIL leverages the already robust U.S. interstate highway system by providing funding to deploy EV chargers along highway corridors, facilitating long-distance travel and ameliorating “range anxiety.” In parallel, new federal funding will be available to install convenient EV charging infrastructure in the cities, communities, and neighborhoods where people live, work, shop, and recreate, with a special focus on rural, disadvantaged, and hard-to-reach communities.

The U.S. approach to transportation electrification is balanced by a coordinated investment in clean energy generation and transmission, and upgrades to the national electric grid. In addition to near-term construction projects, U.S. DOT will invest in research and development for advanced transmission and electricity distribution technologies, flexible and resilient “smart grid” technologies, and demonstration projects and research hubs for next-generation technologies like advanced nuclear reactors, carbon capture, and clean hydrogen.

This massive domestic undertaking can be informed by the innovative approaches taken by the Netherlands that encourage transport organizations to go carbon-free.

### Marlouke Durville, Managing Director of Water, Transport and the Environment at Rijkswaterstaat, Ministry of Infrastructure and Water Management



Created in 1798, Rijkswaterstaat is part of the Dutch Ministry of Infrastructure and Water Management; the agency has primary responsibility for the design, construction, management, operations, and maintenance of the main transportation infrastructure facilities in the Netherlands. Durville, who directs the Water, Transport, and Environment branch of the Rijkswaterstaat, is focused on addressing the double challenge of aging infrastructure and persistent threats from climate change. The agency’s challenge is not only to rehabilitate or replace facilities, but to do so in a sustainable way, reduce the country’s carbon footprint, and deliver projects in a cost-effective manner.

The densely populated Netherlands has led by example with respect to sustainability efforts; still, the country’s leadership recognizes a broad imperative to bolster its resilience in the face of climate change impacts. As part of the European Union, the Netherlands is committed to reducing net energy use and has a goal of achieving “net zero” by 2030. A transition away from fossil fuels is critical to achieving this goal, but energy transition is not the only tactic. To be sure, Rijkswaterstaat is working closely with its local and regional partners to analyze opportunities such as co-locating energy and transportation facilities – for example, installing solar panels on highway noise barriers.

A common Dutch expression describes the notion that underpins the country’s energy and transport policy: “During the renovation, the shop remains open.” The challenge for federal, regional, and local planners is to implement an energy transition and a more sustainable transportation network while ensuring mobility, accessibility, and continued economic growth.

## Session 1: Perspectives on Domestic Energy Transition

### Key Takeaways:

- U.S. emissions reduction policies highlight the adoption of EVs and the expansion of EV infrastructure to the current surface transportation network.
- An already strong Dutch EV market has stimulated a transport policy that incorporates travel behavior shifts and no-emissions travel modes.
- U.S. approaches to decarbonization concentrate on technologies with “market pull.”
- Dutch policy development is highly collaborative and governance is often regional, rather than national in nature.

Michael Berube, Deputy Assistant Secretary for Sustainable Transportation, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy



Vehicle electrification is the cornerstone of the domestic approach to reduce transportation sector CO<sub>2</sub> emissions. Although U.S. electric vehicle (EV) sales have increased gradually each year since 2016, EVs made up less than 5 percent of U.S. vehicle sales in 2021. By comparison, Dutch EV sales have been on a steep trajectory since 2017, and now make up nearly one quarter of all sales of light duty vehicles. What’s more, the Netherlands is home to fully 25 percent of Europe’s electric vehicle charging stations or charge points.

From the perspective of the pace of global warming and CO<sub>2</sub> emissions, “the clock is ticking” according to Berube; the U.S. must develop technology strategies and policies to achieve net-zero emissions by 2030. To meet its domestic climate goals, the Federal government has been “bullish” on focusing R&D funding to reduce the cost of vehicle electric batteries, with the goal of achieving parity with internal combustion engines. The decarbonization of light duty vehicles is part of a broader sustainable transportation approach, and it dovetails with objectives to meet the needs to all traveling populations, including those communities that have been historically underserved by transportation infrastructure investments.

The U.S. approach recognizes the need for a diversified decarbonized transportation system; research and investments into biofuels and hydrogen fuel cells have the potential to transform the heavy-duty vehicle

market and the aviation sector. This is critically important as the country builds the resilience of its supply chain and freight sector. Initiatives like the Million Mile Fuel Cell Truck Consortium provide an investment of \$50M over five years to study fuel cell durability, performance, and cost to better position fuel cell trucks as a viable option in the long-haul trucking market.

Multiple federal Departments are coordinating to fashion thoughtful, achievable policies to meet environmental goals. Recognizing the enormous scale of the private vehicle industry and that transportation costs are an American household's second highest expenditure after housing itself means that U.S. decarbonization strategies must have a market-pull; incentivizing the private sector to electrify by funding the expansion of charging infrastructure, for example, is critical.

Berube reminded listeners of the adage, "hope is not a plan;" electrification strategies must be sensitive to racial justice and equity concerns, local and regional impacts on environmental quality, and they must address each element of the transportation sector – the many different types of surface transportation vehicles, the freight shipping sector, aviation, and other sectors in order to be truly transformative.

## Pieter Litjens, Chair of the Stakeholder Table for Mobility, Dutch Climate Agreement



In 2016, Litjens was privileged to host a visiting delegation that included the then-U.S. Secretary of Transportation Foxx, as well as the then-Mayor of South Bend and current Secretary of Transportation Buttigieg. Aside from seeing the many innovative transportation projects underway in the Netherlands, the visiting guests showed a keen interest in Dutch adoption of bicycles for personal mobility. Indeed, emissions-free forms of transportation are considered an essential feature of "sustainable and livable cities," and bicycle and pedestrian infrastructure is included in spatial planning efforts.

The Dutch Climate Agreement mirrors the Paris Climate Accord and contains more than 600 unique measures to dramatically reduce CO<sub>2</sub> emissions by 2030. The Dutch approach to adopting an aggressive sustainability policy hinges on collaboration with public and private stakeholders at local, regional, and national levels. This method of policy development has deep roots and goes back to centuries-old Dutch polder model for consensus building, applied to reclamation and water management efforts. Today's Climate Agreement reflects consultation with more than 100 organizations over nearly two years.

Thus, Dutch efforts to achieve environmental goals rarely originate from top-down national policies and measures; rather, the country coordinates closely with its strong network of regional governments to formulate implementable strategies. According to Litjens, the National government "provides a program to support regions and guarantee inter-connectivity of regional strategies." One such strategy is the public-private development of EV charging infrastructure. Previously, the private sector was responsible for developing EV infrastructure, but heavy public investment has dramatically expanded the sector – the Netherlands has approximately 80,000 public charge points.

To boost EV sales, the country offers tax subsidies and incentives to meet the Netherlands' bold goal of having EVs make up 100 percent of new vehicle sales by 2030. An important aspect of this strategy is facilitating growth of a second-hand EV market. To be sure, EVs do not have tailpipe emissions but the remaining hurdle is generating sustainable and renewable energy to power EVs. Unlike the U.S., the Netherlands is a very densely populated country with minimal space; large solar farm and wind farm projects are not as feasible as offshore wind, for example.

Dutch planners and industry professionals have an alternative perspective on freight transportation and aviation; many believe there are numerous market and technology innovations that make it possible to deploy battery-electric power to medium- and heavy-duty trucks. There is less focus on hydrogen fuel cell applications in the mobility sector given high rates (30 to 40 percent) conversion loss; rather, the country is studying the use of hydrogen technology in industrial manufacturing settings.

Litjens underscored that the Dutch approach centers multimodalism and alternatives to private vehicle use; he noted that it is important to acknowledge limits to growth and disincentivize travelers' reliance on inefficient transportation methods.

## Session 2: Regional Deployment and Implementation

### Key Takeaways:

- U.S. States will have broad discretion in how they invest new and massive federal infrastructure funds; low-emissions investment scenarios can expand EVs and provide transportation alternatives like transit.
- Planning for EV infrastructure at a multi-state, transportation corridor level can reduce “range anxiety,” lower emissions, and produce consistent experiences for travelers.
- Coordinated urban and regional spatial or land-use planning is key to supporting connected, dense places that co-locate multiple transportation modes.

### Dr. James Bradbury, Mitigation Program Director, Georgetown Climate Center



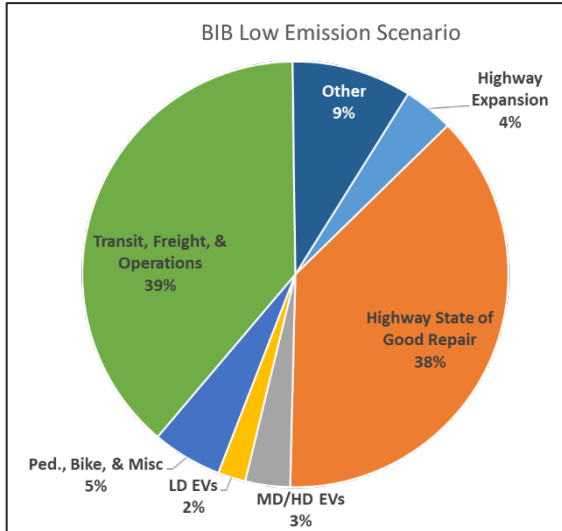
Federal plans and policies are essential for establishing priorities and sustainable transportation objectives; success is achieved, however, through coordinated deployment and implementation. The Georgetown Climate Center was established in 2009 and serves as a resource for U.S. states to share best practices and learn from one another. The Center supports policymakers through its research, convenings, and modelling and planning tools.

In alignment with a national priority for growth in vehicle electrification, the Center is deploying novel technologies to aid local and regional decisionmakers in siting EV infrastructure. For instance, a web-based planning tool evaluates a broad set of land use and transportation characteristics and criteria that yield recommendations for an interconnected, multi-jurisdictional surface transportation corridor.

Over time, the U.S. has evolved its approach to implementing federal transportation policies; currently, programs and policies are centering equity, access, and environmental justice. New tools help planners analyze and evaluate demographic and economic metrics and identify EV charging infrastructure locations that are responsive to underserved or historically overburdened populations.

Echoing Pieter Litjens, Bradbury acknowledged the “tough conversations” the Climate Center is facilitating about reducing vehicle miles traveled (VMT), providing transit and non-motorized transportation





alternatives, and leveraging mechanisms like carbon taxation and congestion pricing to shift travel behaviors.

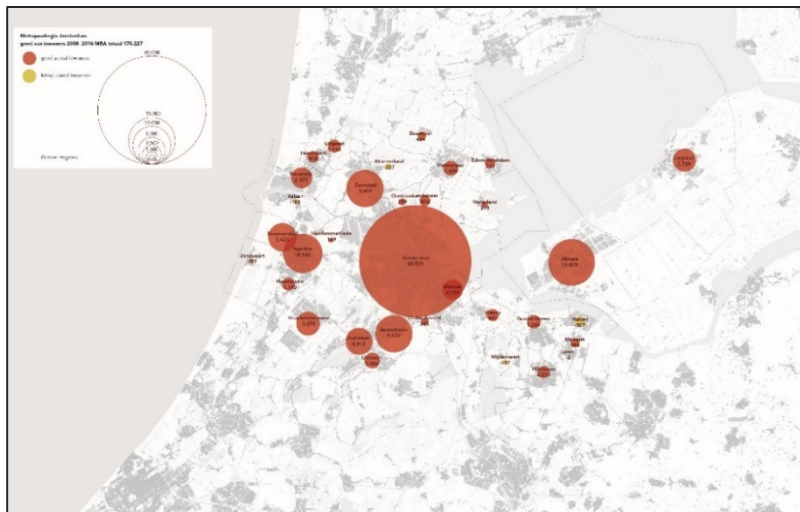
The recent passage of the BIL will invest approximately \$600B in surface transportation infrastructure. States, however, have broad discretion in how those funds are used. Scenario planning is one useful exercise that can help stakeholders understand the impact of investment decisions. For example, BIL funds could be spent in a “high-emissions” scenario that focuses on replacing roads and bridges, whereas a “low-emissions” scenario would allocate more funding for repair over replacement, transit, and multimodal facilities. The task

for a resource like the Climate Center is to continue facilitating conversations among regional stakeholders that highlights the benefit of low-emissions infrastructure investment scenarios.

### Errik Buursink, Chief Planner, City of Amsterdam NL



The Chief Planner for the City of Amsterdam offered a fresh perspective that places mobility, transportation, and the energy transition in the context of urban and regionally land-use planning. Amsterdam’s geographic context is a dense city of approximately 850,000 with outlying lower-density development that brings the regional population up to 2.4M. The region has experienced unprecedented economic growth in recent years, adding about 10,000 jobs per year primarily concentrated in the city center.



However, the region is experiencing a de-concentration of people as suburban areas and other regional centers expand. The region supplements its robust inner-city bicycle and pedestrian facilities with a network of roadways, traditional vehicle infrastructure, and public transit. Stakeholders in the metropolitan region are engaging in a thoughtful spatial development effort to identify concepts and

development scenarios that are environmentally and socially sustainable. For example, adopting a “poly-

centric urban development strategy” produces dense places with transit-oriented development and transportation hubs that link vehicular and non-personal vehicle infrastructure (like rail, bus, and cycle).

The use of targeted land use plans or concepts for spatial development that concentrates economic activity, housing, education, and transportation facilities can ultimately improve mobility while reducing emissions and environmental impacts. Integrated urban planning on a regional scale forces stakeholders to grapple with the challenges of sharing limited physical space among different types of transportation and mobility infrastructure.

For Amsterdam’s planners, the energy transition in the transportation sector goes beyond replacing existing vehicles with EVs. According to Buursink, “cities exist to facilitate interaction – mobility is a means towards that end and a functional urban region must bring people together.” Co-locating transportation modes into hubs, while at the same time decarbonizing vehicles, is a complicated task, but one with enormous benefit.

## Appendix 1: About the Speakers

### Dr. Robert Hampshire, Deputy Assistant Secretary for Research and Technology and Chief Science Officer, U.S. Department of Transportation

Dr. Robert C. Hampshire serves as the Deputy Assistant Secretary for Research and Technology and Chief Science Officer. Hampshire was previously an associate professor at the Gerald R. Ford School of Public Policy at the University of Michigan. He was also a research associate professor in both the U-M Transportation Research Institute (UMTRI) and Michigan Institute for Data Science (MIDAS), and an affiliated faculty member in the Department of Industrial and Operations Engineering (IOE).

His unique blend of engineering systems research with public policy has made him a leader in not only transportation research, but also on the disparate impact of policy decisions in transportation systems. This has led to important strides in our understanding of transportation equity. His research applies operations research, data science, and systems approaches to analyze novel transportation systems such as smart parking, connected vehicles, autonomous vehicles, ride-hailing, bike sharing, car sharing, as well as pedestrian and bicyclist safety. His research focuses on environmental impacts, equity, and access to opportunities. His work has been cited widely and covered by major press outlets. He has worked extensively with both public and private sector partners worldwide. He has also been a faculty member at Carnegie Mellon University and a visiting professor at Massachusetts Institute of Technology. Hampshire received a PhD in operations research and financial engineering from Princeton University.

### Anne D. Aylward, Director, U.S. DOT Volpe Center

Anne D. Aylward has served as director of the U.S. DOT Volpe National Transportation Systems Center in Cambridge, Massachusetts, since 2016. The Volpe Center is a unique fee-for-service federal organization that conducts more than \$230 million annually in transportation technology and innovation projects.

As director, Aylward steers the work of more than 580 engineers, scientists, and analysts engaged in a portfolio of projects carried out on behalf of all U.S. DOT modal administrations, numerous other federal agencies such as the Departments of Defense and Interior, state and local governments, and international, academic, private, and non-profit organizations facing transportation challenges.

Prior to serving in this role, Aylward was the Volpe Center's deputy director for Research and Technology. She has more than 30 years' experience in transportation planning, operations, and program management, and is a nationally recognized expert in freight and intermodal transportation planning, policy analysis, and operations.

Aylward began her career in public service with the Massachusetts Port Authority and served for 10 years as director of the Port of Boston. She began her federal career in 2006 as the Volpe Center's chief of Transportation Planning.

## Marlouke Durville, Managing Director of Water, Transport, and the Environment at Rijkswaterstaat, Ministry of Infrastructure and Water Management

Since 1 May 2020 Marlouke Durville is Managing Director of the Rijkswaterstaat national unit for Water Management, Traffic, and the Environment, and member of the Executive Board of Rijkswaterstaat responsible for knowledge and quality of the infrastructure.

Since 2018, Marlouke Durville was Programme Director Brexit Contingency at the Ministry of Foreign Affairs. In this role, Marlouke coordinated the interdepartmental preparations for the effects of a Brexit. Central in Marlouke's career are themes like environment, sustainable economic growth, and mobility. Marlouke's strength is in connecting parties like scientists, industry, and clients.

Marlouke Durville also worked in several management responsibilities at the Ministry of Economics and with the Netherlands Enterprise Agency RVO. As Director for Core Processes NL and Legal Affairs at RVO, Marlouke was leading a team of 600 people.

Marlouke Durville studied Aerospace Engineering at the Delft University of Technology.

## Lieske Streefkerk-Arts, Counselor for Infrastructure and Water Management, Embassy of the Kingdom of the Netherlands

On 1 August 2020, Lieske Streefkerk-Arts was appointed as counselor for Infrastructure, Transportation and Water Management at the Royal Netherlands Embassy in Washington DC. Previously, she held managerial positions in different parts of the Ministry of Infrastructure and Water Management of the Netherlands. Some of her previous positions are head of international shipping, head of public transport and railways, deputy director at the Inspectorate and head of innovative procurements at the Government Buildings Agency.

Lieske's first relationship with the USA stems from 1989/1990, when she was a foreign exchange student and graduated from Rushville High School in Nebraska. She's is happy to be back in the US and always eager to connect people and organizations of the US and the Netherlands.

## Michael Berube, Deputy Assistant Secretary for Sustainable Transportation, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy

Michael lead's DOE's transportation RDD&D team focused decarbonizing the transportation sector, from cars to heavy trucks to airplanes. This includes vehicles, batteries, hydrogen fuel cells and bioenergy as well as how EVs and Hydrogen can help support the transition to a clean energy grid. He created DOE's Mobility research program (EEMS) focused on new mobility solutions, including connected & automated vehicles, transit, e-commerce, and ridesharing. He has over 20 years of experience as a senior executive in the automobile industry. He has worked closely across the government with US DOT and EPA over his career.

## Pieter Litjens, Chair of the Stakeholder Table for Mobility, Dutch Climate Agreement

Pieter Litjens has a 20-year career in politics and public office. He served as mayor of the city of Aalsmeer, was Member of Parliament from 2012 till 2014, and became deputy mayor for transport and infrastructure in the city of Amsterdam.

Currently Pieter Litjens is general director of CROW, a knowledge institute for mobility, infrastructure, and public space. Together with public and private parties CROW works on the creation of knowledge that can be applied in practice.

For two years Pieter Litjens has chaired the Stakeholder Table for Mobility of the Dutch Climate Agreement. Here a wide variety of stakeholders (government, transport sector, NGO's, science etc) monitors the execution of the agreements that were made in the Dutch Climate Agreement.

## Dr. James Bradbury, Mitigation Program Director, Georgetown Climate Center

James Bradbury is the Mitigation Program Director for the Georgetown Climate Center. He oversees the Climate Center's work in support of state efforts to reduce greenhouse gas emissions, through facilitation, convening, and analysis. James also manages the Transportation and Climate Initiative, a collaboration among 13 Northeast, Mid-Atlantic and Southeastern states and the District of Columbia to reduce emissions from the transportation sector.

James has 15 years of experience working to advance climate and clean energy policies at the federal and state levels. He previously served as Senior Policy Advisor at the U.S. Department of Energy, Senior Associate at the World Resources Institute and as a Senior Legislative Assistant on Capitol Hill for U.S. Representative Jay Inslee.

James holds a PhD in Geosciences from UMass Amherst, a MS in Hydrology from the University of New Hampshire, and a BA in Geology from Colorado College.

## Errik Buursink, Chief Planner, City of Amsterdam NL

Errik Buursink is chief urban planner at the City of Amsterdam. He works at the intersection of planning, urban design, and traffic planning, from the local to the regional scale level. He was the editor and main author of the new Comprehensive Vision for Amsterdam, The Omgevingsvisie Amsterdam 2050. The basis for this vision, among other things, the regional and urban mobility visions that Errik had previously worked on. He is also involved in the urban development plans for several major development locations in the city and various policy documents. Errik is speech writer for Amsterdam's mayor and aldermen, he has published in several Dutch newspapers and journals and is a guest lecturer at the Rotterdam architecture academy and the university of Amsterdam.

## Appendix 2: Participants

Julie Abraham, USDOT-Office of International Transportation and Trade  
Niels Achterberg, Ministerie van Infrastructuur en Waterstaat, DGMO  
Maha Alkhateeb, USDOT-Office of International Transportation and Trade  
Shadi Sharif Azadeh, Delft University of Technology  
Nicole Bambas, USDOT-Office of International Transportation and Trade  
Ellen Bell, USDOT-Volpe Center\*  
Bastiaan van den Berg, Rijkswaterstaat  
Emily Clayton, USDOT-Office of International Transportation and Trade  
Guadalupe Contreras, USDOT-Office of International Transportation and Trade  
Rosemarie Cramer, Ministerie van Infrastructuur en Waterstaat, Int Sustainable Logistics  
Andrew Dushkes, USDOT-Office of International Transportation and Trade  
Lilian van Ek, Ministerie van Infrastructuur en Waterstaat and Embassy of the Netherlands\*  
Gregg Fleming, USDOT-Volpe Center  
Allison Glass, USDOT-Office of International Transportation and Trade  
Dave Gohlke, Argonne National Laboratory  
María Alonso Gonzalez, KiM-Netherlands Institute for Transport Policy Analysis  
Rob de Groot, Rijkswaterstaat WVL  
Shelia Helton-Ingram, USDOT-Office of International Transportation and Trade  
Jason Hill, USDOT-Office of International Transportation and Trade  
Rutger van den Hoven, Rijksdienst voor Ondernemend Nederland  
Tjitske Ijpma, Ministerie van Infrastructuur en Waterstaat, dgMI  
Hans Jeekel, Eindhoven University of Technology  
Aaron Jette, USDOT-Volpe Center  
Tim Klein, USDOT-Office of the Assistant Secretary for Research and Technology  
Zhenhong Lin, Oak Ridge National Laboratory  
Maura Lohrenz, USDOT-Volpe Center  
William Lyons, USDOT-Volpe Center\*  
Cynthia Maloney, USDOT-Volpe Center  
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Tess Perrone, USDOT-Volpe Center  
Eric Plosky, USDOT-Volpe Center  
Carson Poe, USDOT-Volpe Center  
Steve Popkin, USDOT-Volpe Center

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Michael Scarpino, USDOT-Volpe Center\*

Henk Stipdonk, KiM-Netherlands Institute for Transport Policy Analysis

Lieske Streefkerk-Arts, Ministerie van Infrastructuur en Waterstaat and Embassy of the Netherlands\*

Luca Tucci-Berube, guest

Pablo Nuñez Velasco, Rijkswaterstaat WVL

Erik Verroen, Rijkswaterstaat WVL\*

Johan Visser, KiM-Netherlands Institute for Transport Policy Analysis\*

Boris van Waterschoot, Rijkswaterstaat WVL

Morvarid Zolghadr, USDOT-Office of International Transportation and Trade

\* Member of the workshop planning team

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