# How Cities and States Can Accelerate E-Bike Adoption Using RMI's Free E-Bike Calculator

February 2025

# Reason for Gathering

**Our Mission: Transforming the global energy system to secure a clean, prosperous, zero-carbon future for all.**

- **Discuss RMI's E-bike Environment and Economics Impact Assessment Calculator updates**
- **Learn from cities and states that have used the calculator for implementing e-bike programs**
- **Discuss opportunities for using the data produced by the calculator**
- **Answer audience questions about calculator scenarios, calculations, etc.**

# RMI Speakers


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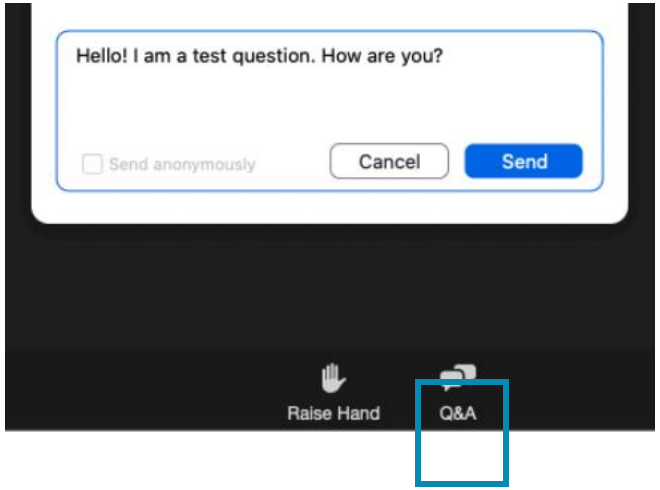
# Agenda

- Welcome and Introductions
- Why Did RMI Create the E-Bike Environment and Economics Impact Assessment Calculator
- Overview of Updates to the RMI E-Bike Environment and Economics Impact Assessment Calculator
- Panel with City and State Officials and Q&A
- Q&A with RMI
- Calculator Walkthrough
- Closeout

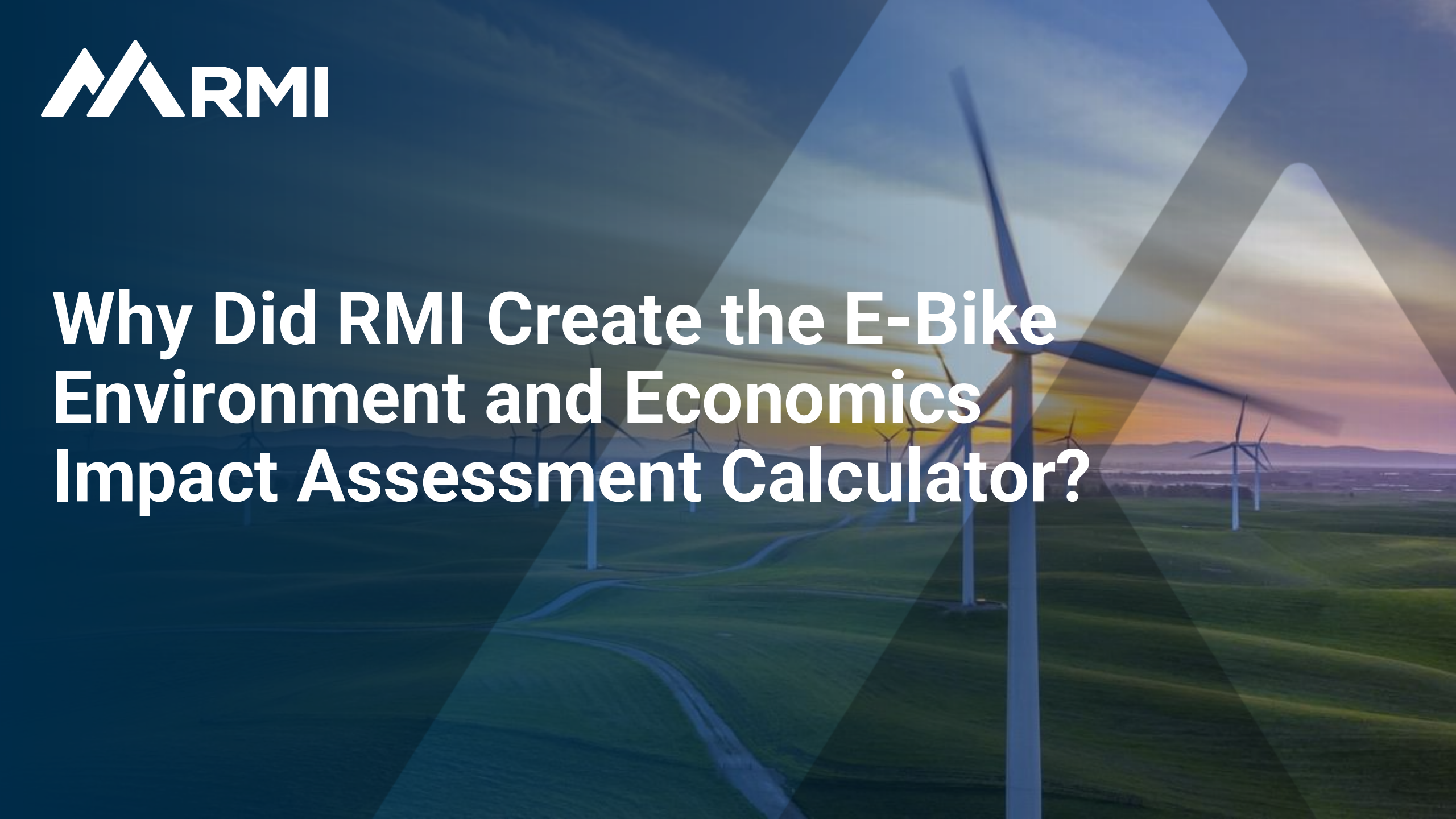
# Overview – Plan for Q&A

**Designated Q&A with the panel before the walkthrough**

**Use the Q&A button to submit your questions throughout the presentation**



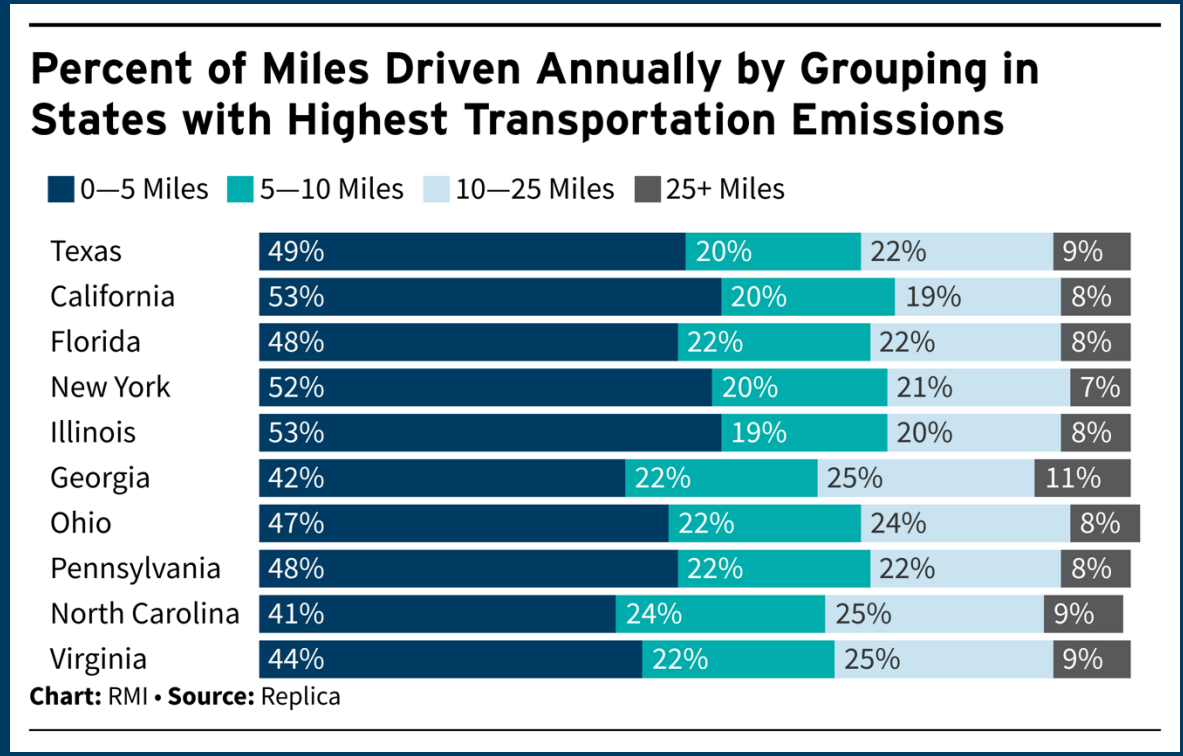

**Team members will respond or direct you to email Bryn Grunwald at bgrunwald@rmi.org**



# Why Did RMI Create the E-Bike Environment and Economics Impact Assessment Calculator?

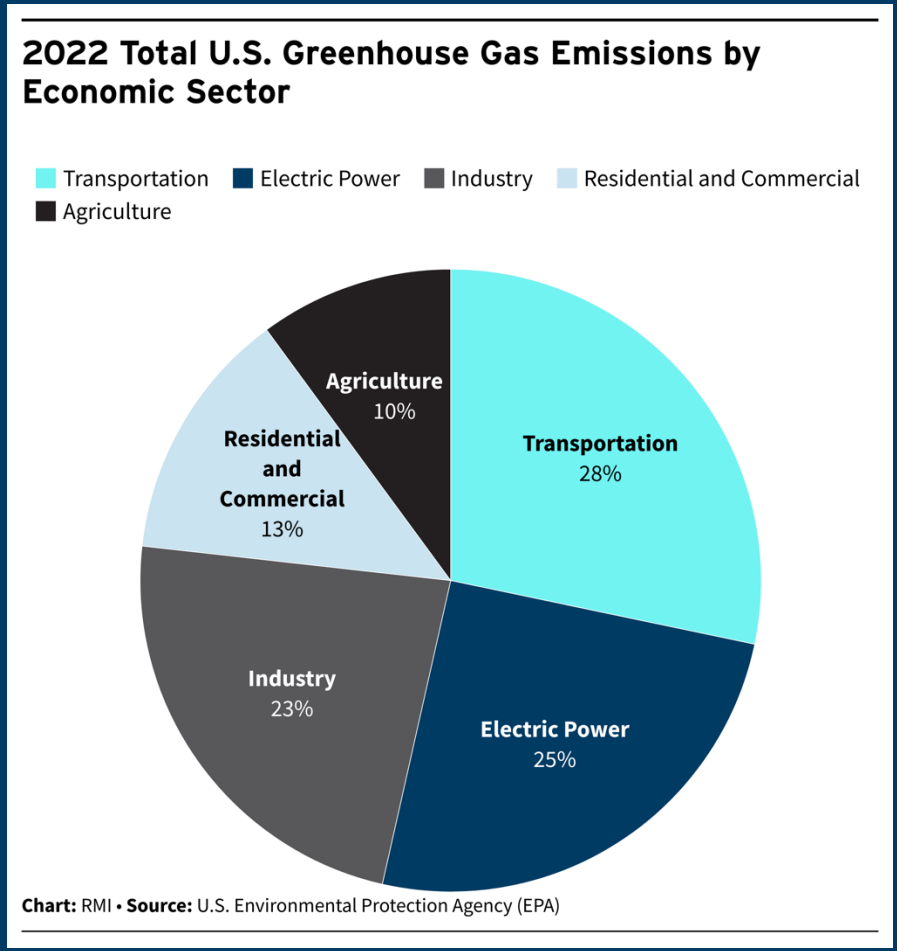
# What is the potential for impact?

- **Transportation is consistently the largest emissions producing sector in the U.S. (30% of all emissions)**
- **Of all trips in the transportation sector, most are done in light duty vehicles (60%) and are under 5 miles (50% in most major metro areas)**
- **Using calculator defaults for the 10 states with highest transportation emissions:**
  - Save 3.3 billion gallons of gasoline over ten years
  - Save residents $11.5 billion (difference in fuel and maintenance)



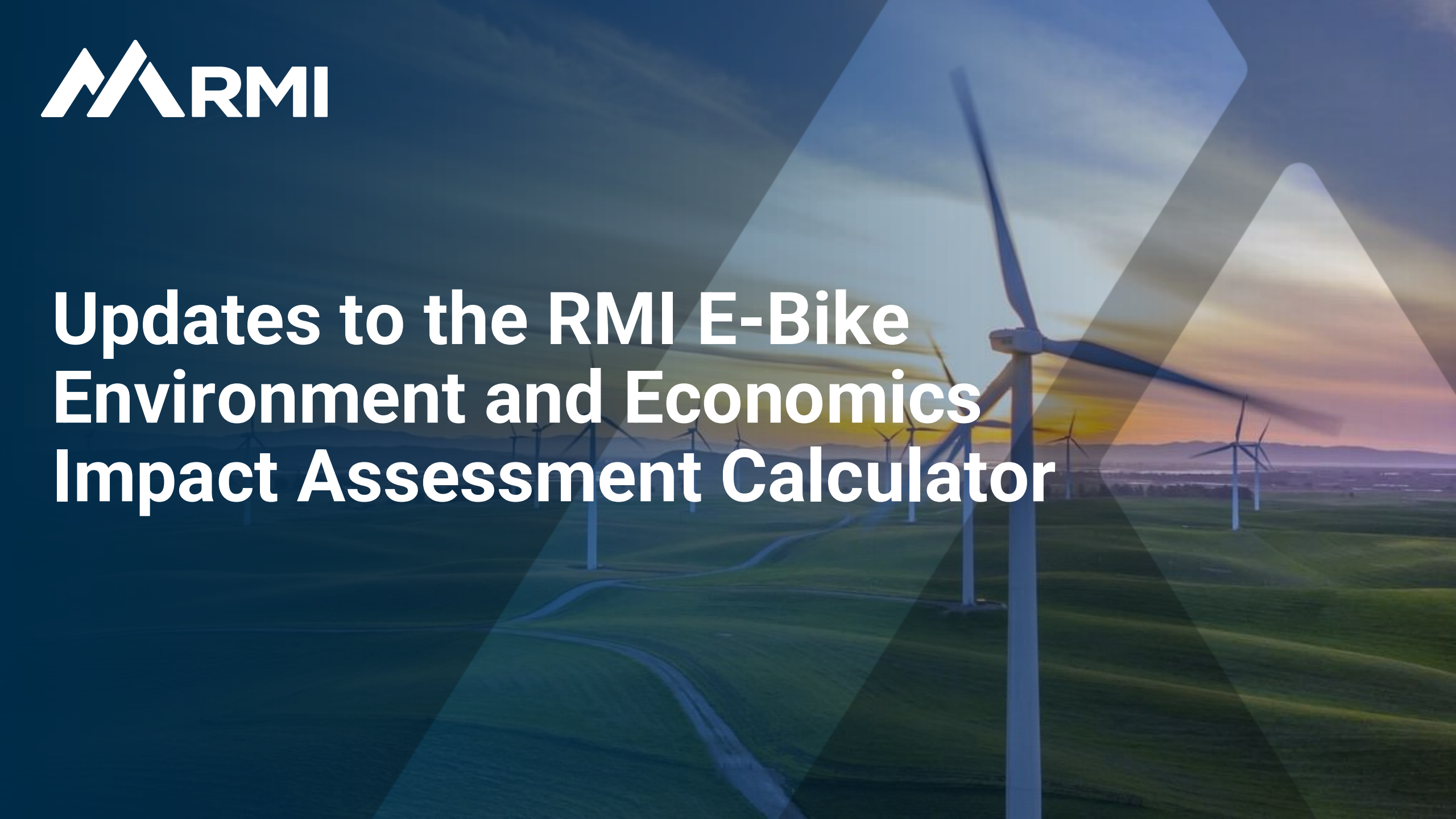
# What is the potential of e-bikes to meet transportation emission reduction and equity goals?

- E-bikes are more affordable, require less space, and result in more positive health outcomes than cars
- The potential for mode shift to e-bikes is enormous!
- Decision makers often lack the necessary data to make a compelling argument for shifting investments to active transportation infrastructure



# How do e-bikes address gaps in transportation offerings?

- **E-bikes address issues like transportation access and cut trip-related pollution**
- **E-bikes create access to other modes (e.g. transit)**
- **More cities are beginning to look at changing parking minimums to address traffic congestion, land use constraints, and climate change**
  - E-bikes would allow for reliable transportation while helping cut costs associated with parking development at multi-family communities
- **Access to e-bikes and dedicated infrastructure helps multifamily residents save money while accessing employment and services**
  - Research from NREL showed that e-bikes can help bridge transportation gaps, especially for low-income workers



# Updates to the RMI E-Bike Environment and Economics Impact Assessment Calculator

# Updated e-bike calculator features

- **Added geographies and data**
  - Includes 500+ cities and all 50 U.S. states, including DC
  - Updated electricity and gas costs (2024 data)
  - Functions at the annual level rather than the weekly level

- **Improved functionality to align with best practices**
  - Incentive program now functions at three levels of income stratification (low-income, medium-income, and market-rate)
  - The city-wide goal now has different levels of biking depending on season
  - Utilizes state-level EV projections

- **Expanded capabilities**
  - Calculates saved gallons of gas and kWh
  - Estimates health benefits and avoided lost days of work due to reducing PM2.5

# Updated datasets

- **Counting replaceable vehicle trips**
  - How many trips of length *Y* miles are being taken in a town/city/state?
  - Data source is Replica: all vehicle trips, anonymized, for typical U.S. days
  - New infrastructure for programmatically pulling data on new locations
- **Daily temperatures for every location in the calculator**
  - People bike less when it's too cold or too hot
  - NOAA provides temperature records at over 65,000 weather stations in the U.S.
- **Health effects of fine particulate matter (PM2.5)**
  - How does reducing PM2.5 emission by *N* tons affect health outcomes?
  - EPA's COBRA tool calculates effect of reduction in a county on that county

# Overview of the tool's assessment scenarios

| City Mode-Shift Goal | E-Bike Incentive Impact |
|---|---|
| ***Estimate the impact of shifting a percentage of passenger vehicle trips to e-bikes – with seasonal variation*** | ***Estimate the environmental and economic impact of an e-bike incentive program*** |
| ***Scenario planning options include a gradual replacement over 10 years and immediate adoption*** | ***Test out varying levels of incentive amounts by market-rate or income-qualified (low and medium-income)*** |

**Both scenarios are measuring potential only. They are meant to provide stakeholders, including advocates and cities, the data they need to justify investments in e-bike incentive programs and/or bicycle infrastructure.**

# Panel with City Representatives

# Panel Discussion With Leading Cities

Mike Salisbury
Director of Transportation
Colorado Energy Office

Matthew Gabb
Sustainability Specialist
City of Edina, MN

Tejas Kotak
Senior Transportation Specialist
Atlanta Regional Commission

Ben Kamber
Senior Project Analyst
Atlanta Regional Commission


# State of Colorado eBike Programs

## How Cities and States Can Accelerate E-bike Adoption

COLORADO
Energy Office

# CEO Mission & Vision

## Mission

*Reduce greenhouse gas emissions and consumer energy costs by advancing clean energy, energy efficiency and zero emission vehicles to benefit all Coloradans.*

## Vision

*A prosperous, clean energy future for Colorado.*

COLORADO
Energy Office

# Colorado: #1 E-Bike State

- Funding: Upwards of $75m over the next decade
- Incentivizing e-bike purchases- 150,000+ e-bikes through 2032

# E-Bike Programs

- Statewide e-bike rebate program
- E-bike tax credit
- E-bike grant programs
- E-cargo bike grant program

# E-Bike Rebate Program

- Funded through SB22-193: $12m for e-bike programming; spent $8.7m to-date on rebates
- Available to low- and moderate-income Coloradans
- Point-of-sale rebate: discount applied at the time of purchase
- 40,000 applications submitted, 9,431 rebates issued
- Through January 2025 **7,970** Coloradans have redeemed a rebate for an e-bike (85% redemption rate)
- **88%** of rebates went to low-income Coloradans
- https://energyoffice.colorado.gov/ebike-rebates

# Colorado E-Bike Tax Credit

- HB23-1272: Tax Policy that Advances Decarbonization
- $450 point-of-sale discount to consumer; bike retailers get $500 tax credit in exchange for offering that discount
- Estimating about 15,000 purchases over 9 months in 2024
- Started April 1, 2024 and runs until January 1, 2033
- Eligible Bikes: UL or EN certified
- Purchase bike at a participating retailer
- https://energyoffice.colorado.gov/ebike-tax-credit

# Contact Information

**Mike Salisbury**

**Director of Transportation Programs**

**Colorado Energy Office**

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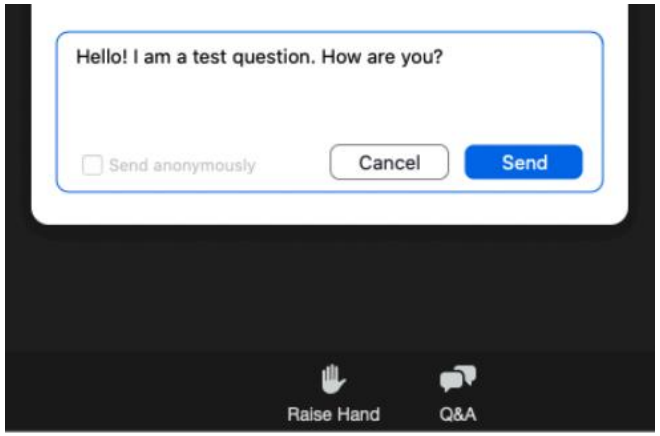
# RMI Q&A

# Q&A Reminders

**We will be prioritizing questions sent in through the Q&A function**

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# Calculator Walkthrough

RMI

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