

# PLANNING, POLICY, AND OPPORTUNITY FOR CLEAN TRANSPORTATION

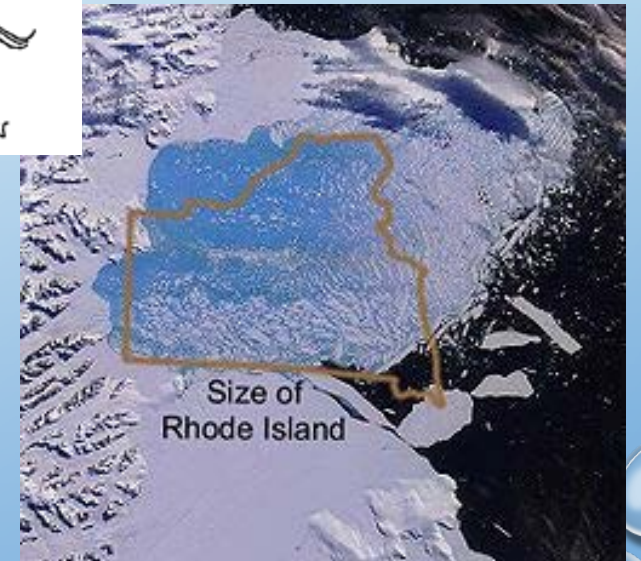
## *REGIONAL COOPERATION THROUGH THE TRANSPORTATION AND CLIMATE INITIATIVE*

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173 Rhode Islands = 1 Texas

Rhode Island is 1,545 square miles;  
Has 420 miles of coastline;  
Just over 1 million in population;  
Total annual budget of about \$9.5b;  
39 fiercely independent cities & towns.



# What's At Stake For Rhode Island?

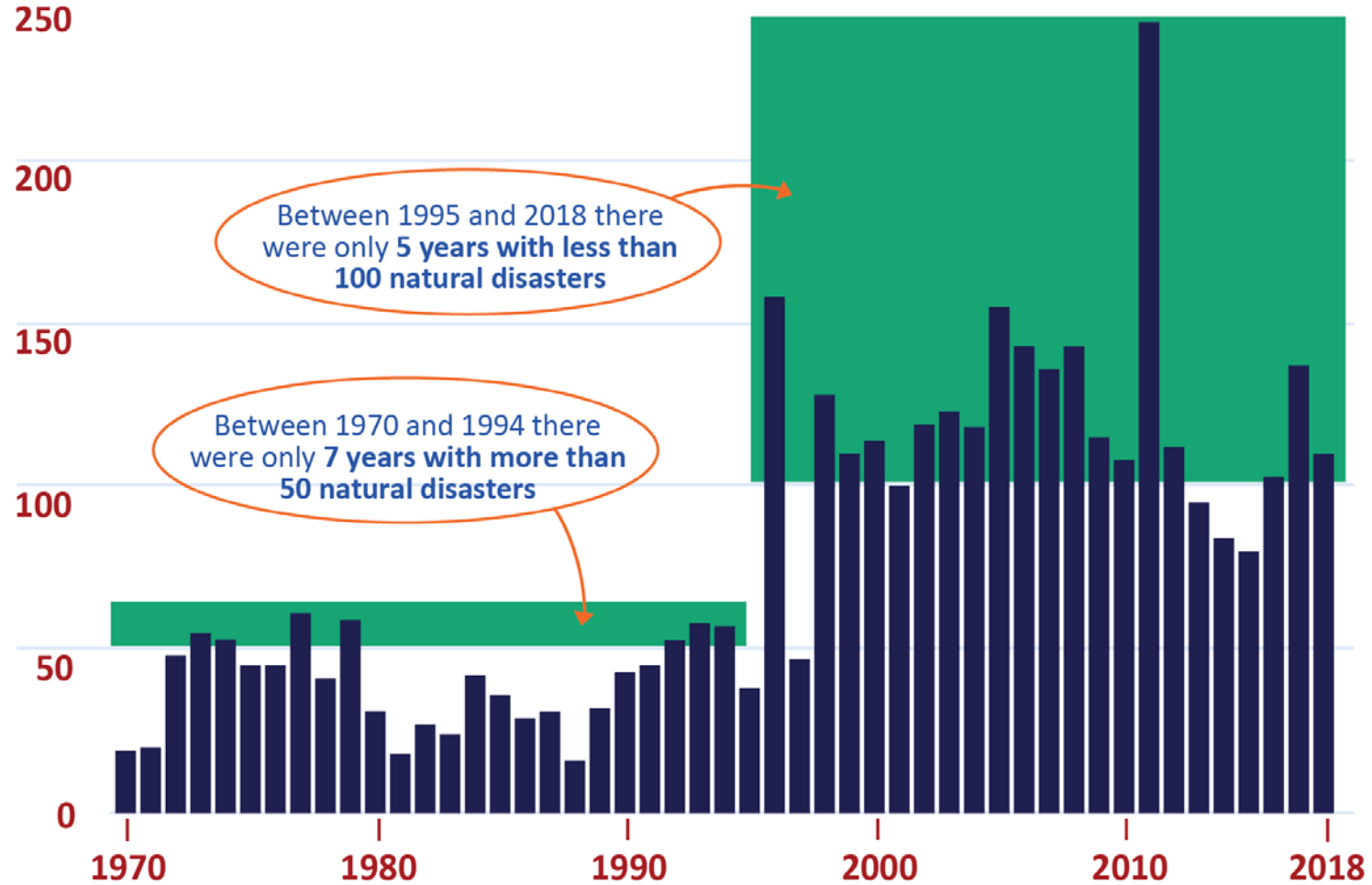
Sometimes, You Feel Small In the Face of Big Challenges...



# Natural Disasters Have Tripled Since the 1970's

FEMA Disaster Declarations: 1970-2018 (ytd)

# of disasters

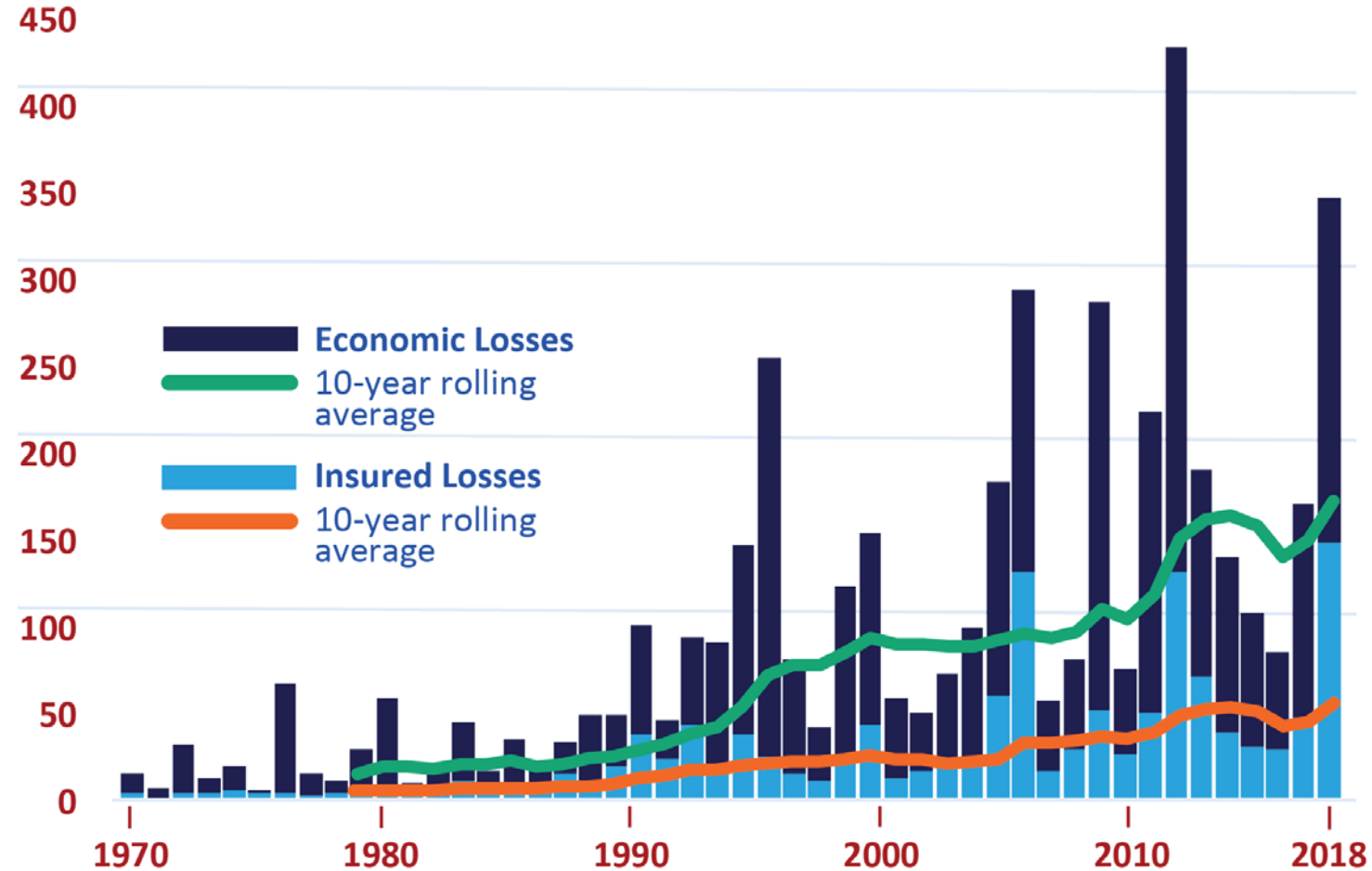


In 2017 and 2018 alone, the United States suffered over \$300 billion in damages from weather and climate disaster events

# The Growing Burden of Uninsured Losses


Natural Catastrophe Losses 1970-2017 (in 2017 USD billion)

# of disasters



Of the top 20 costliest hurricanes to land on U.S. soil, all but three occurred since 2000





Westerly inundated with  
flood waters in 2010

## RHODE ISLAND MANIFESTATIONS OF CLIMATE CHANGE

- 1** Sea Level Rise
- 2** Warming Air Temperatures
- 3** Warming Water Temperatures
- 4** Storm Frequency And Intensity
- 5** Changing Biodiversity
- 6** Precipitation and Inland Flooding



Temperatures in Rhode Island have increased by more than 3°F since the beginning of the 20<sup>th</sup> century. 2016 was the warmest year on record globally.



Over the past 50 years, the **surface water temperature** of Narragansett Bay has increased 2.5-2.9°F. Winter water temperatures in the Bay have increased even more (2.9 -3.6 °F).







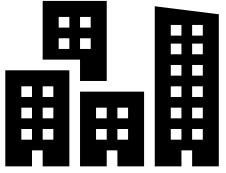
Sea levels have risen 10 inches in RI since 1930 (Newport tide gauge). Updated NOAA predictions (Jan. 2017) put sea level rise in RI at close to 2.2 ft. by 2040 and upwards of 9 ft. by 2100.



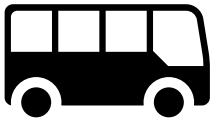
Intense rainfall events in New England have increased 71% since 1958. RI's average annual precipitation has increased more than 10 inches since 1930.



## Resilient Rhody what's at risk



- 15,380 active flood insurance policies covering over \$3.8 billion in **residential and commercial property**



- 337 miles of **state and municipal roadway** are vulnerable to flooding in a 100 yr. storm surge event



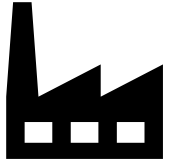
- **Salt marshes** provide recreational and commercial fishing activities with an estimated of \$6,417 an acre. Coastal wetlands generate \$2 billion annually.



## Resilient Rhody what's at risk



- 100% of **state drinking water supply** – 85% surface water



- **All state ports** totaling 3.1 million tons of cargo and \$200M in economic benefits over 2,400 jobs



- The state's 360,000 acres of **forest land** are being impacted by drought and invasive pests



- **Providence County has the worst air quality** in the Boston-Worcester-Providence metro area and received an F for high ozone days (American Lung Foundation)

# We're Not Just Sitting There, We're Doing Something About It

- The Resilient Rhode Island Act of 2014 established the Executive Climate Change Coordinating Council.
- Charged with developing a plan with strategies, programs, and actions to meet the following targets for greenhouse gas reductions below 1990 levels:
  - 10% by 2020
  - 45% by 2035
  - 80% by 2050

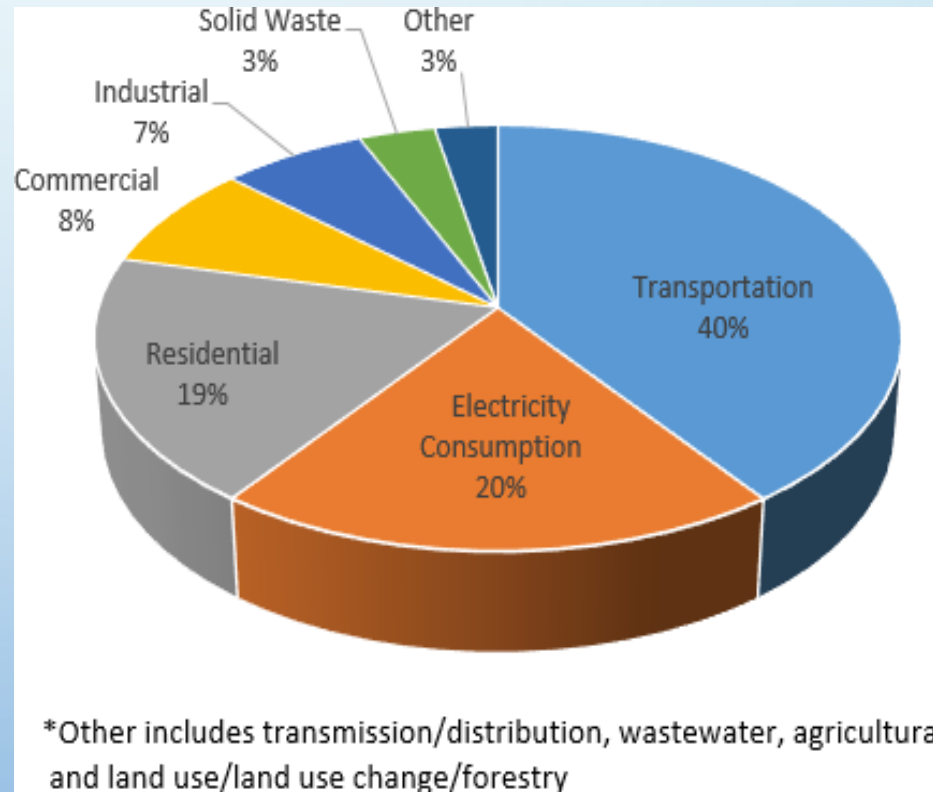
# Major Takeaways of the Plan

- **Climate change: a formidable challenge and leadership opportunity**
- **Viable pathways exist to achieve GHG targets**
  - We are poised to exceed 2020 GHG target
  - 2050 GHG target entails major, economy-wide energy transformation and innovation
- **Sets the stage for future policy discussions and analysis**
  - Evaluates technical pathways, not econ/envIRON impacts
  - High-level framework for ongoing conversation
  - New technology and innovation likely important



# Major Sources of RI GHG Today

- Transportation
- Electricity Consumption
- Residential



# We're Planning For Ways To Meet Our Goals

- RIPTA all-electric buses;
- ZEV Plan
- Long Range Transportation Plan
- Transit Master Plan
- Bike Mobility Plan
- Land Use 2050
- Resilient Rhode Island
- Alternate Fuel Infrastructure
- Changing Criteria for TIP/STIP
- Improving Data Resources

## But There's A Lot We Don't Know



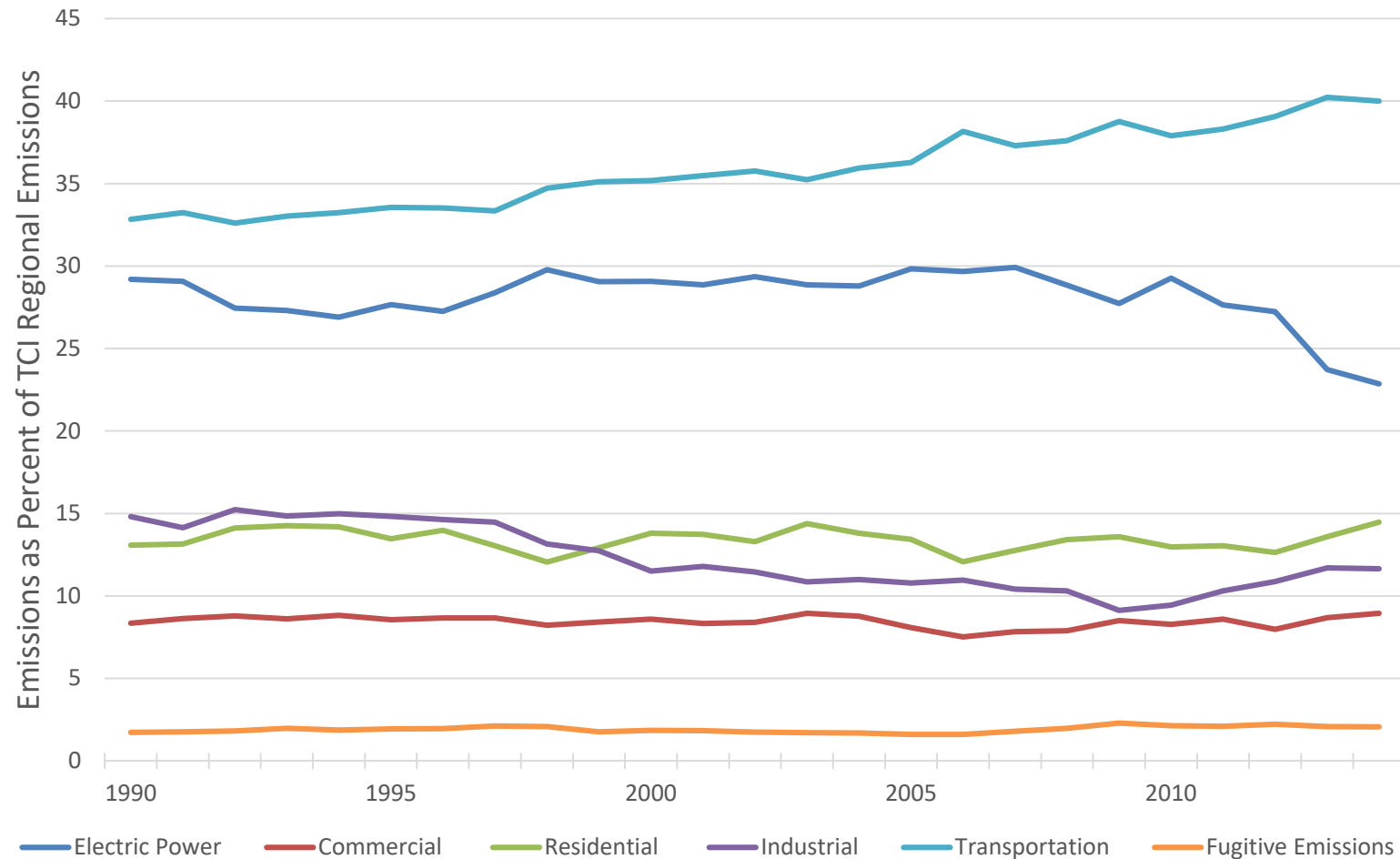
# Georgetown Climate Center: A Resource for State and Federal Climate Policy

- Launched in 2009 as a resource to states
- Works at the nexus of federal-state policies
- Supports states through research, facilitation, and convening





# Transportation is the Largest and Growing Share of GHG Emissions in TCI Region



Source: WRI CAIT, 2018

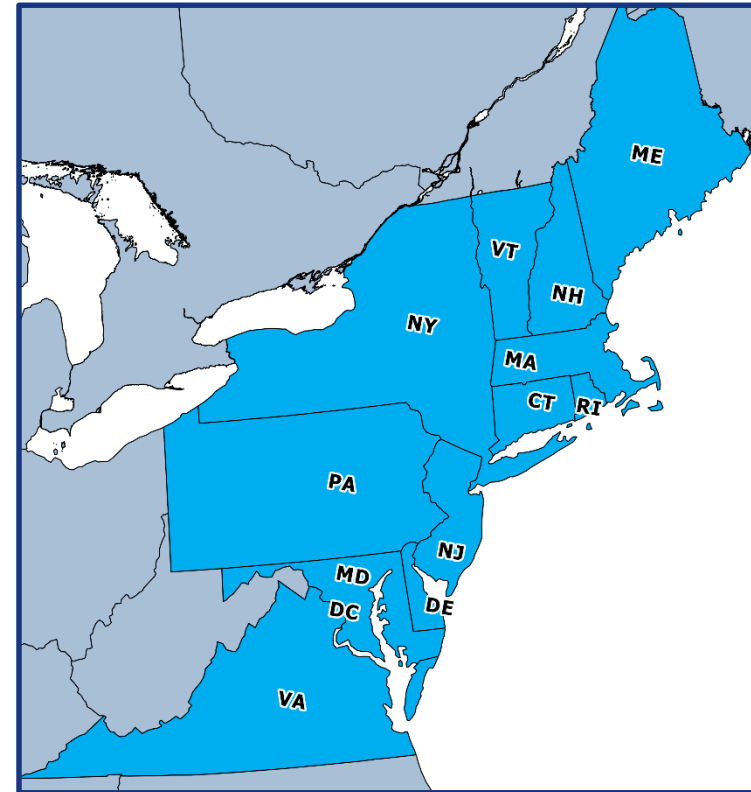
# Transportation and Climate Initiative

- 12 northeast and mid-Atlantic states and the District of Columbia
- TCI launched in 2010, Virginia joined in 2018
- State energy, environment, and transportation agencies
- Working together to reduce energy use and GHG emissions from transportation



## Regional Challenges Call For Regional Action

- 10 years of policy experience with the Regional Greenhouse Gas Initiative (RGGI)
- Improved regional air quality
- Coordinated multi-state policy can more efficiently leverage limited funds for low-carbon infrastructure
- Level playing field for participating states

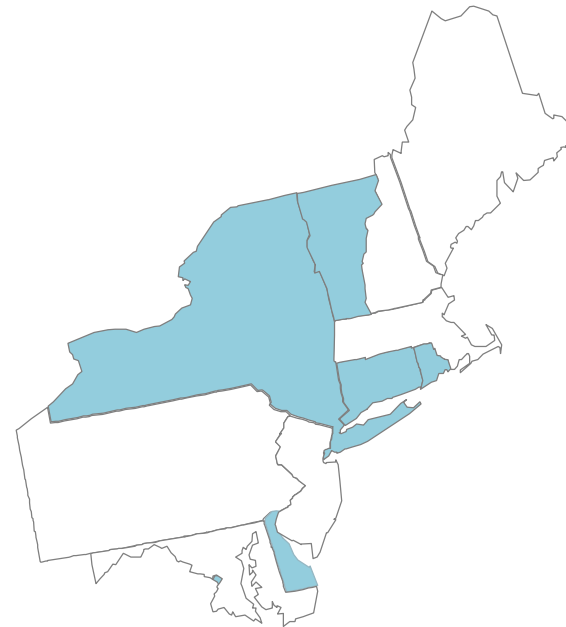




# November 2015 Announcements

***“Our states will work together through TCI to develop potential market-based policies that, when combined with existing programs, are targeted to achieve substantial reductions in transportation sector emissions and provide net economic benefits.”*** – Connecticut, Delaware, Washington D.C., New York, Rhode Island, and Vermont

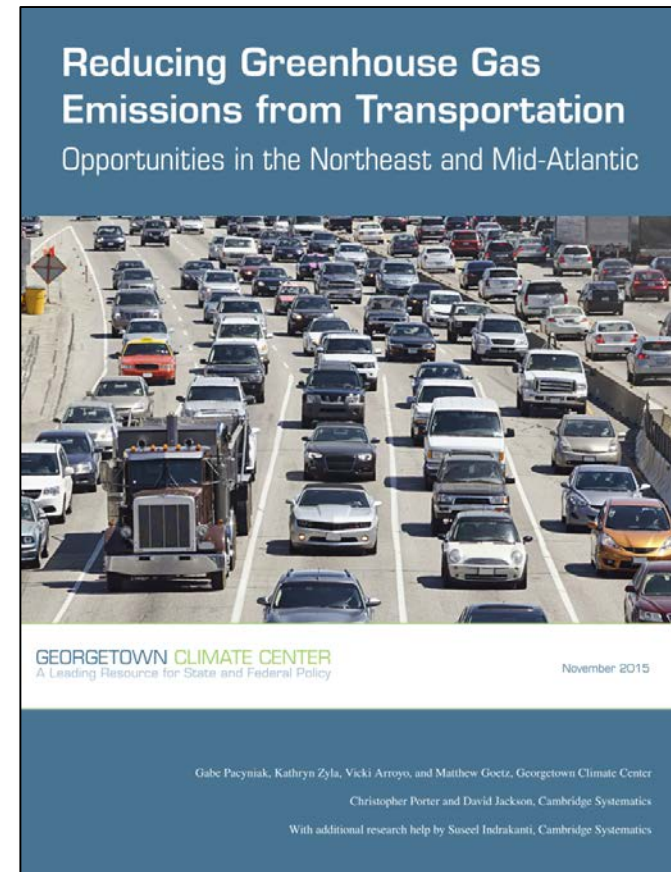
*Also, with supporting statements from New Hampshire and Maryland*



# 2015 Analysis Found Opportunity & Benefits

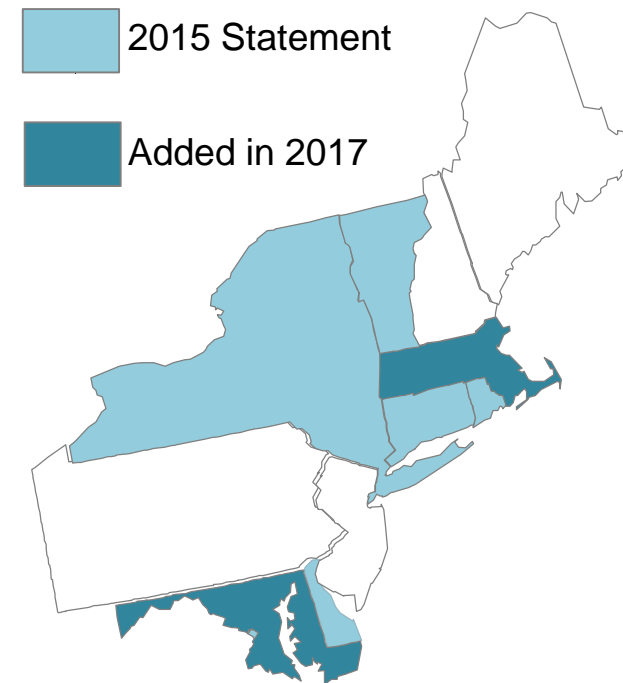
Findings included:

- States in the region not on track to meet long-term emissions goals.
- Up to 40 percent regional GHG reductions from 2011 levels by 2030 may be feasible.
- Estimated significant net economic, health, employment and environmental benefits of reinvesting \$3B annually.
  - Businesses save \$1.6 to \$3.2 billion by 2030
  - Consumers save \$284 million to \$1.2 billion by 2030



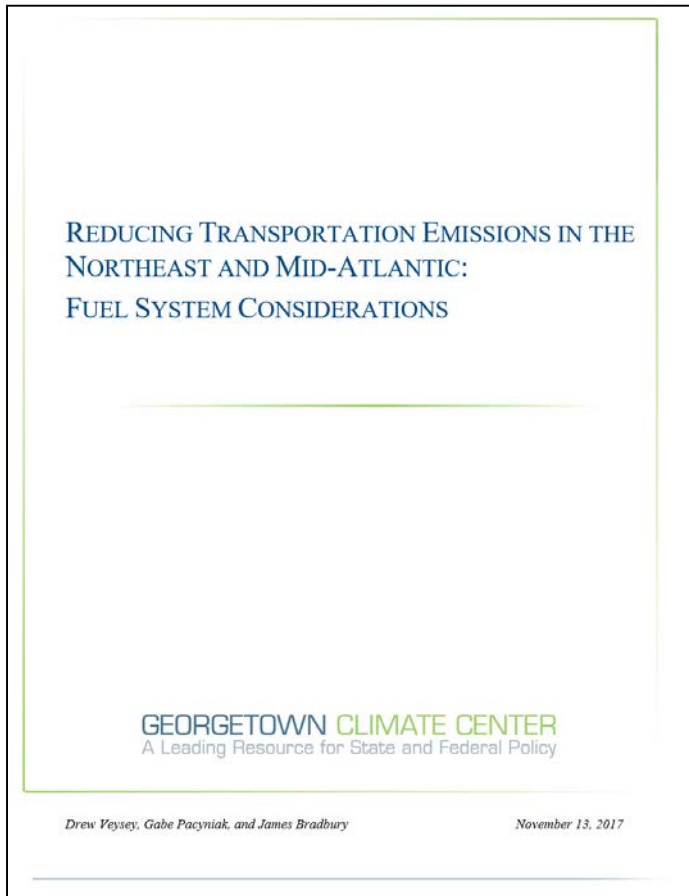
# November 2017 Announcement

***“Our states are now initiating a public conversation about these opportunities and challenges, the benefits we would all like to see in the transportation system of the future, and the policies that will enable us to realize this future together.”*** – Connecticut, Delaware, D.C., Maryland, Massachusetts, New York, Rhode Island, and Vermont





# White Paper Analysis Focused on How a Market-Based Program Might Work



- Which fuels would be included?
  - Gasoline and on-road diesel
- Which entities would have a compliance obligation?
  - Prime Suppliers, which are large fuel wholesalers

# TCI Regional Listening Sessions



2018 public listening sessions to discuss opportunities and challenges of a low-carbon transportation system:

- April 9, in Albany, NY
- May 21, in Hartford, CT
- June 6, in Wilmington, DE
- July 24, in New York, NY
- August 27, in Largo, MD



# Policy Actions Identified by Stakeholders

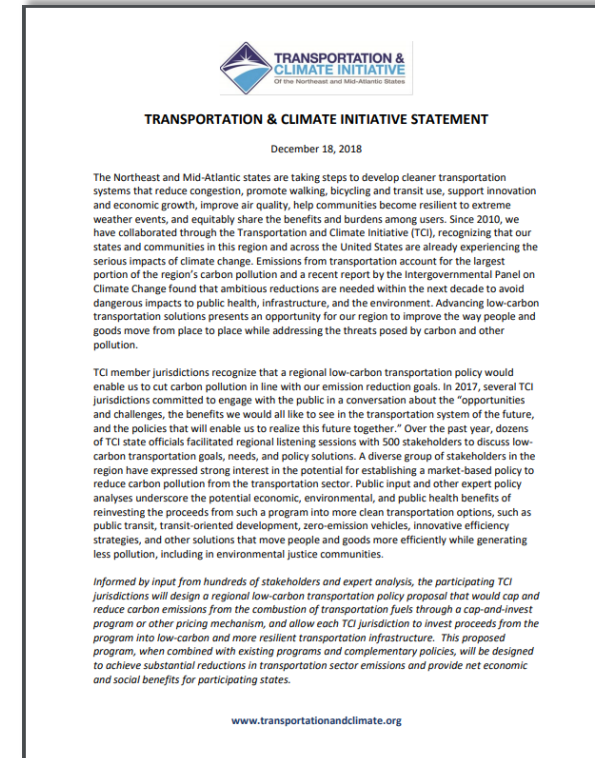
1. Price emissions from transportation and reinvest proceeds
2. Accelerate electrification
3. Incorporate smart growth, zoning, and affordable housing
4. Encourage greater use of many transportation modes
5. Support expansion of alternative transportation fuels
6. Improve ports and other freight facilities





# TCI Regional Policy Announcement

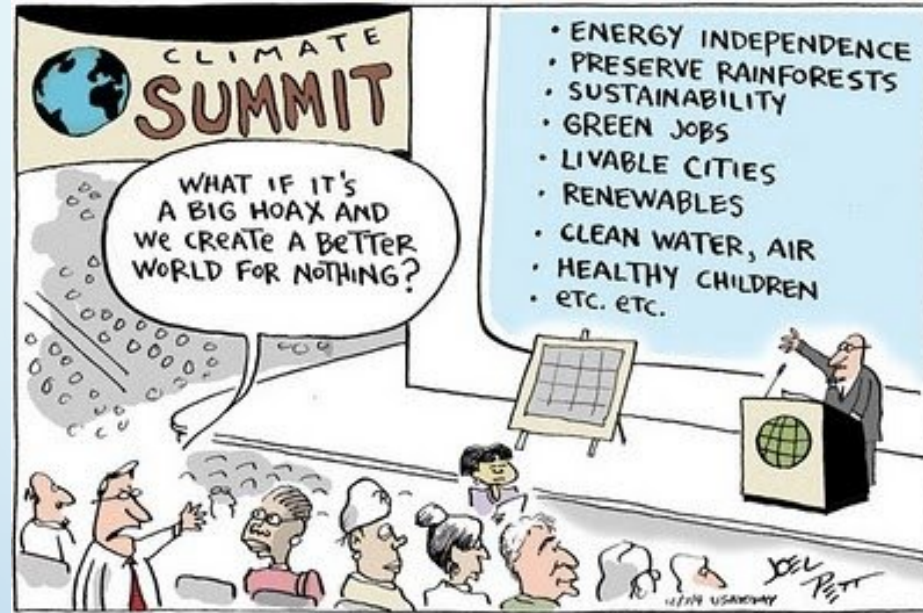
- Announcement by 10 jurisdictions in December 2018
- **“design a regional low-carbon transportation policy proposal that would cap and reduce carbon emissions from the combustion of transportation fuels... and allow each TCI jurisdiction to invest proceeds from the into low-carbon and more resilient transportation infrastructure”** - CT, DE, MD, MA, NJ, PA, RI, VT, VA, D.C.



[www.transportationandclimate.org/nine-states-and-dc-design-regional-approach-cap-greenhouse-gas-pollution-transportation](http://www.transportationandclimate.org/nine-states-and-dc-design-regional-approach-cap-greenhouse-gas-pollution-transportation)

## Statement also Outlines 2019 Work Plan

- Regional Policy Design
  - Determine level of cap
  - Identify shared priorities for investment of proceeds
- Expert Consultation
- Further Stakeholder Engagement
- Technical and Economic Analysis
  - Examine macroeconomic effects
- Complementary policies



# THANK YOU!

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