



Maryland
Department of
the Environment

The Transportation and Climate Initiative

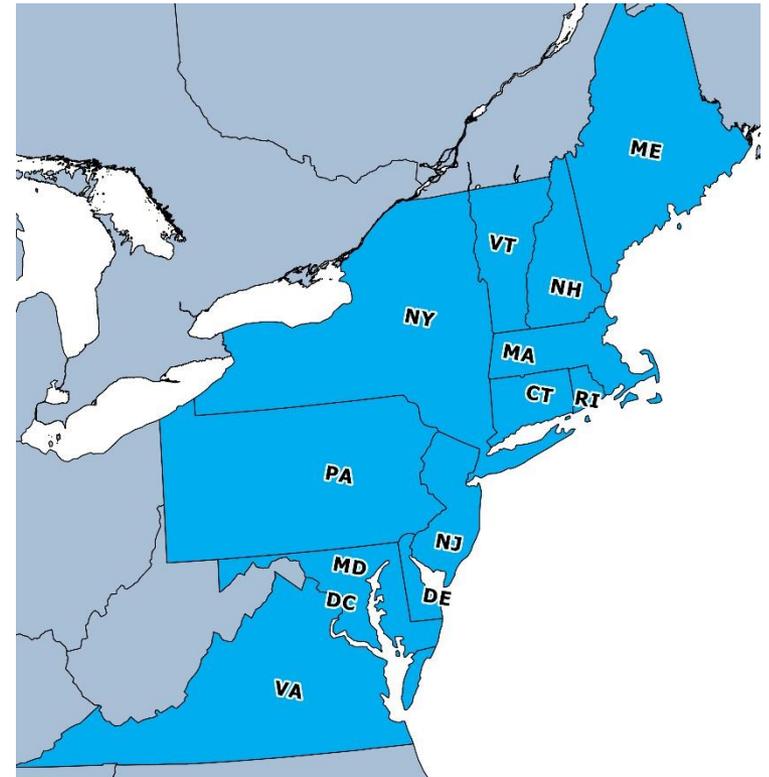
Baltimore Regional Transportation Board

January 28, 2020



What is TCI?

- Collaboration among 13 jurisdictions.
- Developing potential regional clean transportation policy
- Modeled on successful Regional Greenhouse Gas Initiative (RGGI)
 - “Cap-and-Invest”





What is “Cap and Invest”?

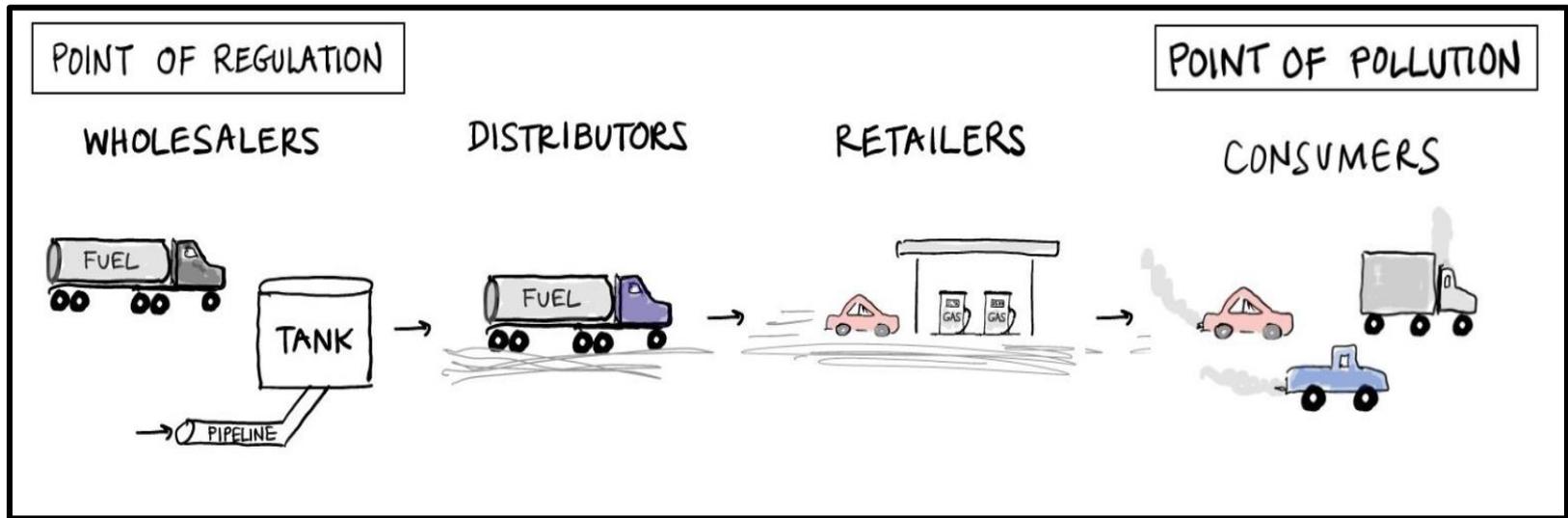
1. Require pollution sources to turn in **allowances** for CO₂ emissions.
2. Only issue a limited number of allowances.
3. Let sources trade allowances.
4. Invest proceeds from allowance auctions into energy programs.

“Cap and Trade”

“Cap and Invest”



How would a CO2 Cap work in TCI?





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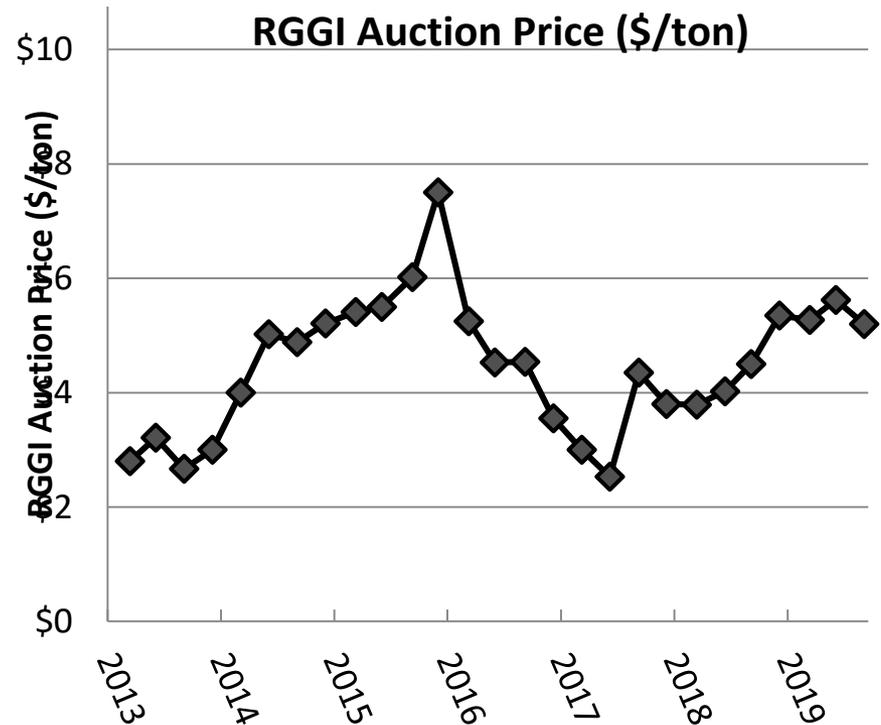
Fuel wholesalers would comply with a regulation by holding enough allowances to cover the CO₂ from combustion of fuel sold (sometimes distributors, too).

Gas stations and consumers would not have any regulatory obligation.



How would the cap raise funds for investment?

- States would make allowances available to fuel companies through auctions.
- Proceeds from these auctions would come back to the states, to invest in clean transportation.



Example: RGGI auction price history.

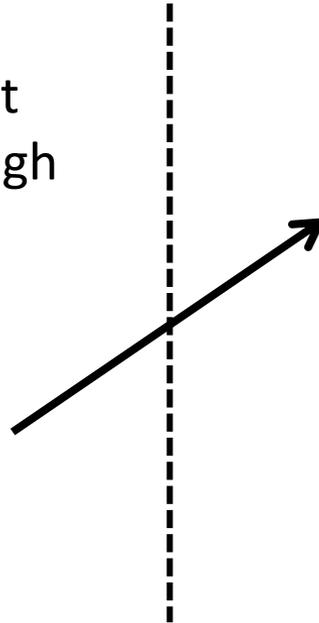


How might Cap and Invest Achieve our Clean Transportation Needs?

CAP

- Reduces CO2 emissions that cause climate change through declining pollution cap
- Creates proceeds for state investments

Investments

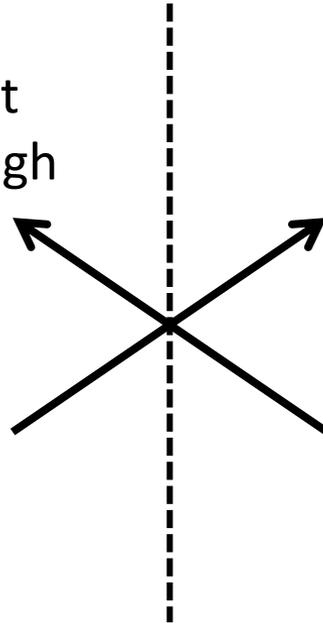




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Investments

- Expand and improve clean transportation options in communities
- Reduce CO2 emissions that cause climate change through clean transportation projects



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Together: Better climate, stronger economy, healthy air and communities



Current Status

- Released draft Memorandum of Understanding for comment (due Feb 28). Information on:
 - Equity approach
 - Regulatory program design
 - Cost containment and other stability mechanisms
 - Investment priorities
 - Implementation timeline
- Evaluated benefits from several program options

transportationandclimate.org



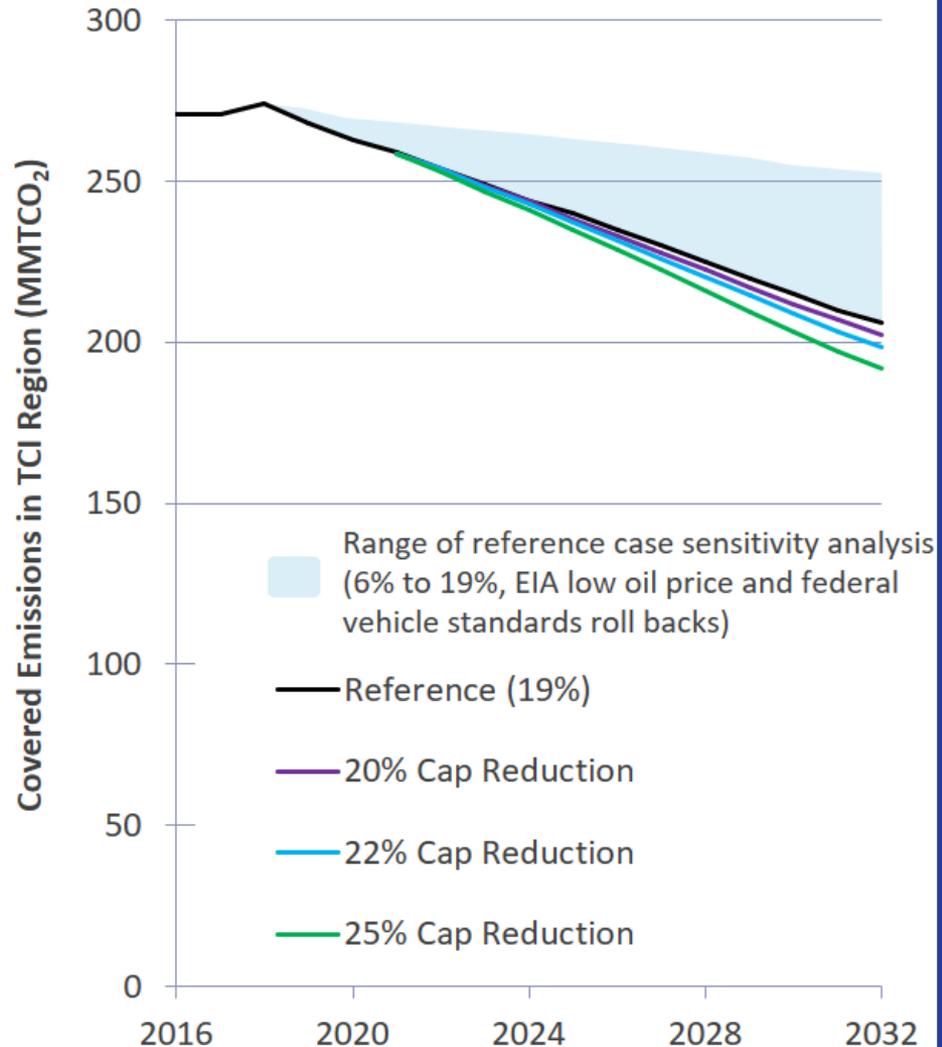
Excerpts from Regional Analysis

Full results and webinar recording at:

TransportationAndClimate.org

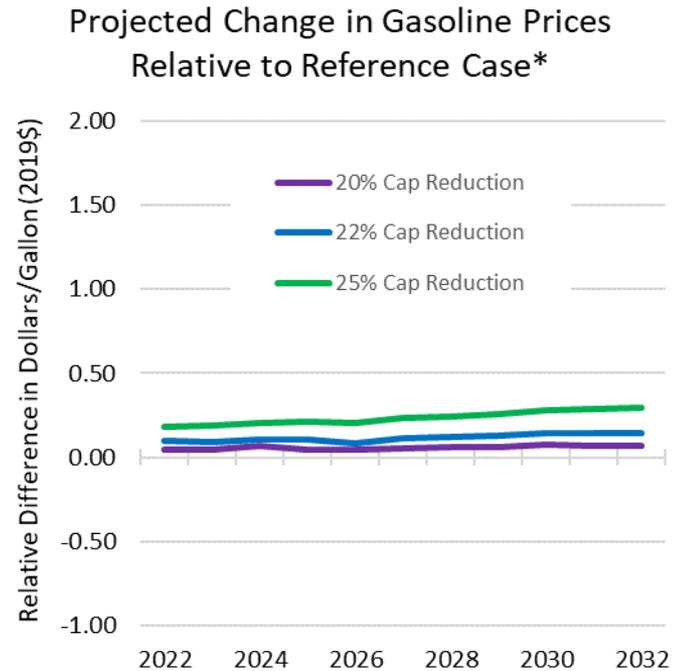
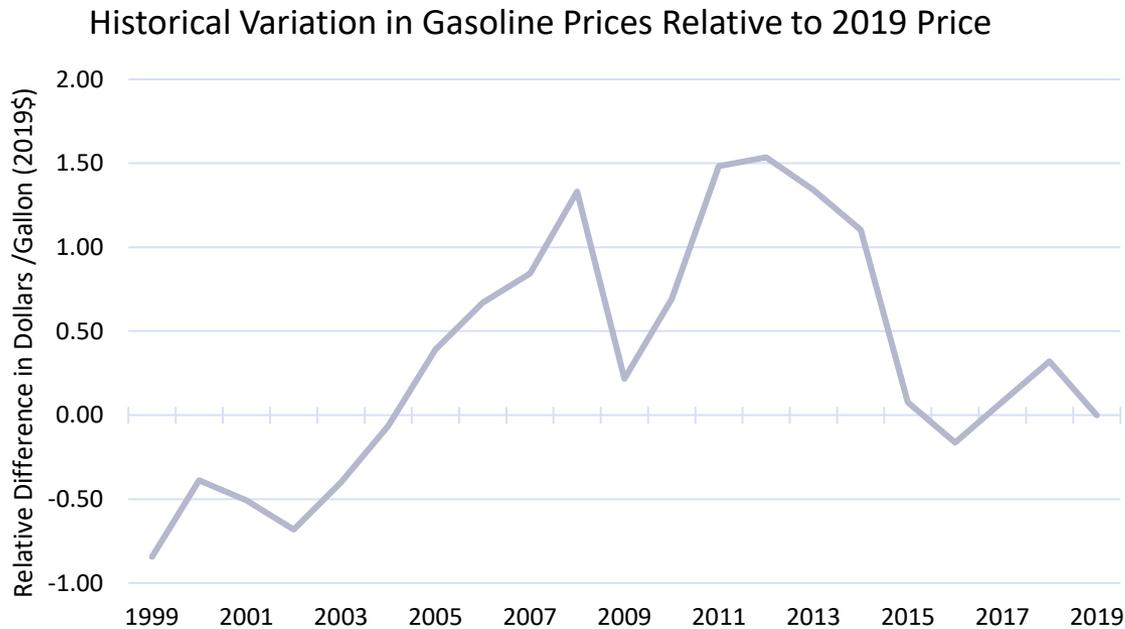
Emissions Cap Scenarios Results: Projected Transportation CO₂ Emissions

- A declining emissions cap could lock in decreases in carbon dioxide emissions that are expected through 2032 and drive additional reductions.
- In policy cases, emissions decline by roughly the levels prescribed by each cap from 2022 to 2032
 - Emissions decline slightly less in the later years, because of allowance banking



Modeled Gasoline Prices in Policy Scenarios

Compared with historical variations



*If fuel companies decide to pass on allowance costs it could mean an incremental price increase in 2022 of \$0.05, \$0.09 or \$0.17 / gallon in the 20%, 22% and 25% Cap Reduction Scenarios, respectively. This is not a prediction of gasoline prices in the future. Several factors affect future gas prices, including policy and market forces.

Clean Transportation Investments to Reduce Pollution in Modeled TCI Scenarios

- **Electric Transit Buses:**
Up to 44,000 transit buses by 2032.
- **Bus service and transit Improvements:**
Up to \$1.1 billion annually
- **Electric school buses:**
Up to 42,000 by 2032.
- **Electric Trucks:**
Up to 84,000 by 2032.
- **Bike Lanes & Sidewalks:**
Up to \$5.6 billion region-wide through 2032

(Regional totals)



Preliminary Public Health Benefits



- Fewer asthma symptoms
- Fewer premature deaths
- Fewer traffic-related injuries
- Total estimated public health benefits in 2032:
\$3.2 billion to \$10.5 billion

Avoided Climate Impacts



\$249 million – \$892 million in avoided climate impacts in 2032

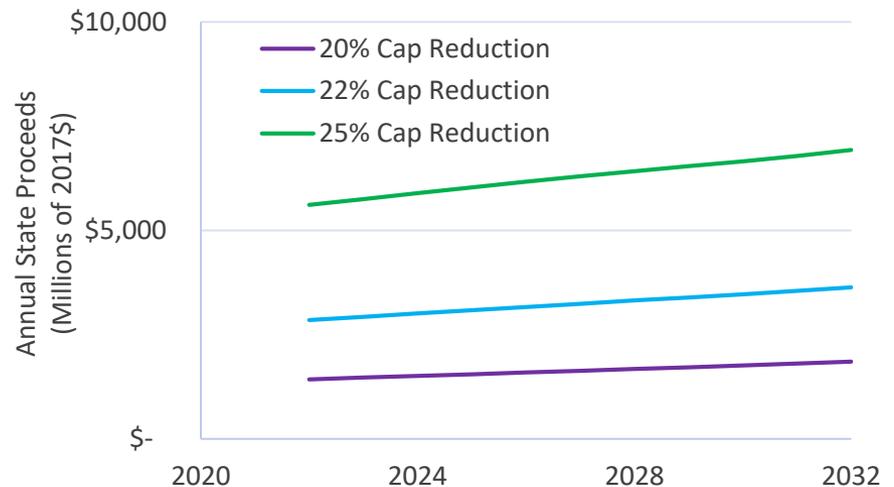
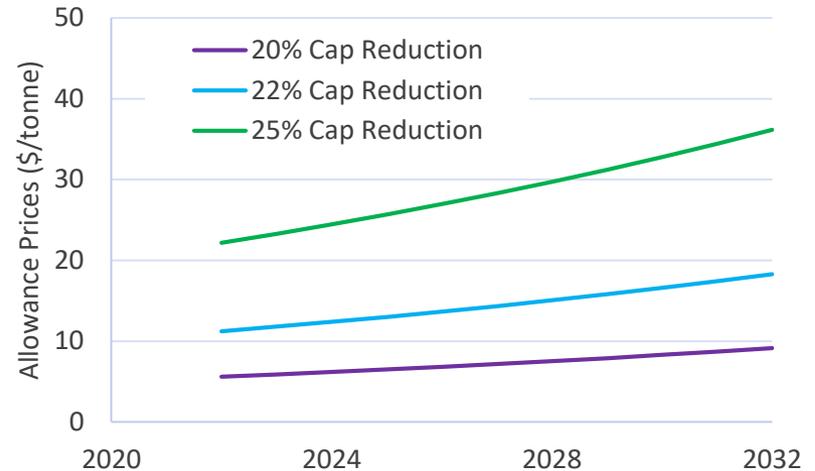
Conclusions from Macroeconomic Modeling

- Program has a positive impact on the economy.
- GDP, income, and jobs are projected to be greater than business as usual in 2032 and substantially net positive over the 2022-2040 timeframe.
- Significant progress towards achieving climate goals by reducing GHG and other pollution from transportation at modest cost and net benefit to the economy

Economic Indicators in 2032	20% Cap Reduction	22% Cap Reduction	25% Cap Reduction
Increase in GDP growth, from Reference Case	\$0.7B (0.01%)	\$1.4B (0.03%)	\$2.9B (0.05%)
Increase in DPI growth, from Reference Case	\$0.5B (0.01%)	\$0.9B (0.02%)	\$1.9B (0.04%)
Increase in Jobs, from Reference Case	1,900 (0.004%)	3,982 (0.001%)	8,900 (0.02%)

Emissions Cap Scenarios Results: CO₂ Allowance Prices & Program Proceeds

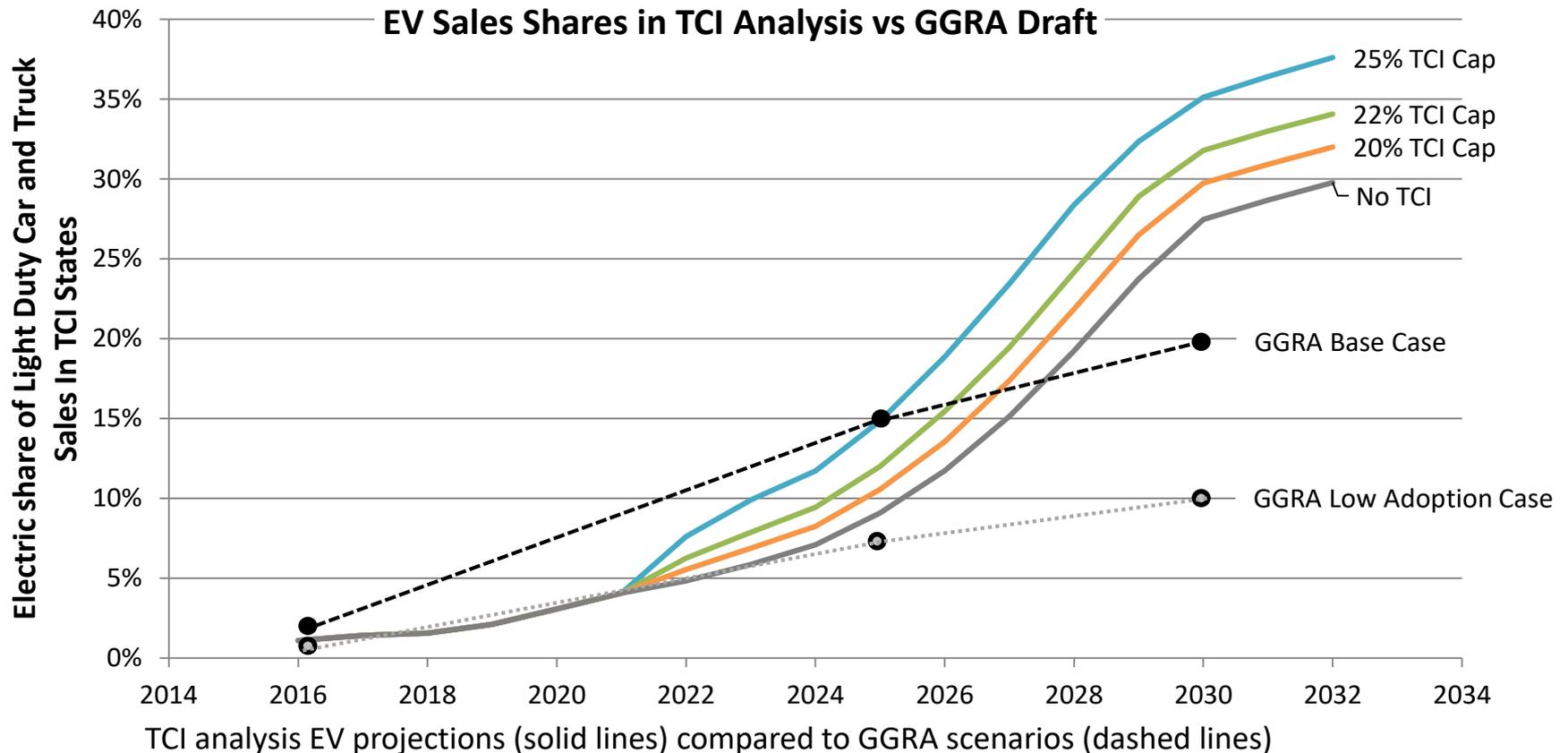
- Initial annual proceeds range from \$1.4 billion at start in the 20% case up to \$5.6 billion in the 25% case.
- Allowance prices reflect the combined effect of the cap and the investments
- More stringent caps result in greater proceeds for investments.





TCI and the Draft MD GHG Plan

- Maryland's draft plan to achieve 2030 climate goals points to TCI as a potential program to enable transportation measures (esp. EVs)
- TCI has provided sophisticated analysis on EVs, which we can incorporate into the final plan





Contact

Chris Hoagland

Climate Change Program Manager

Maryland Department of the Environment

chris.hoagland@maryland.gov

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