

# MARYLAND'S CLIMATE PATHWAY



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# Agenda

- Introductions
- Background
- Maryland's Climate Pathway
- Break
- Audience Comments

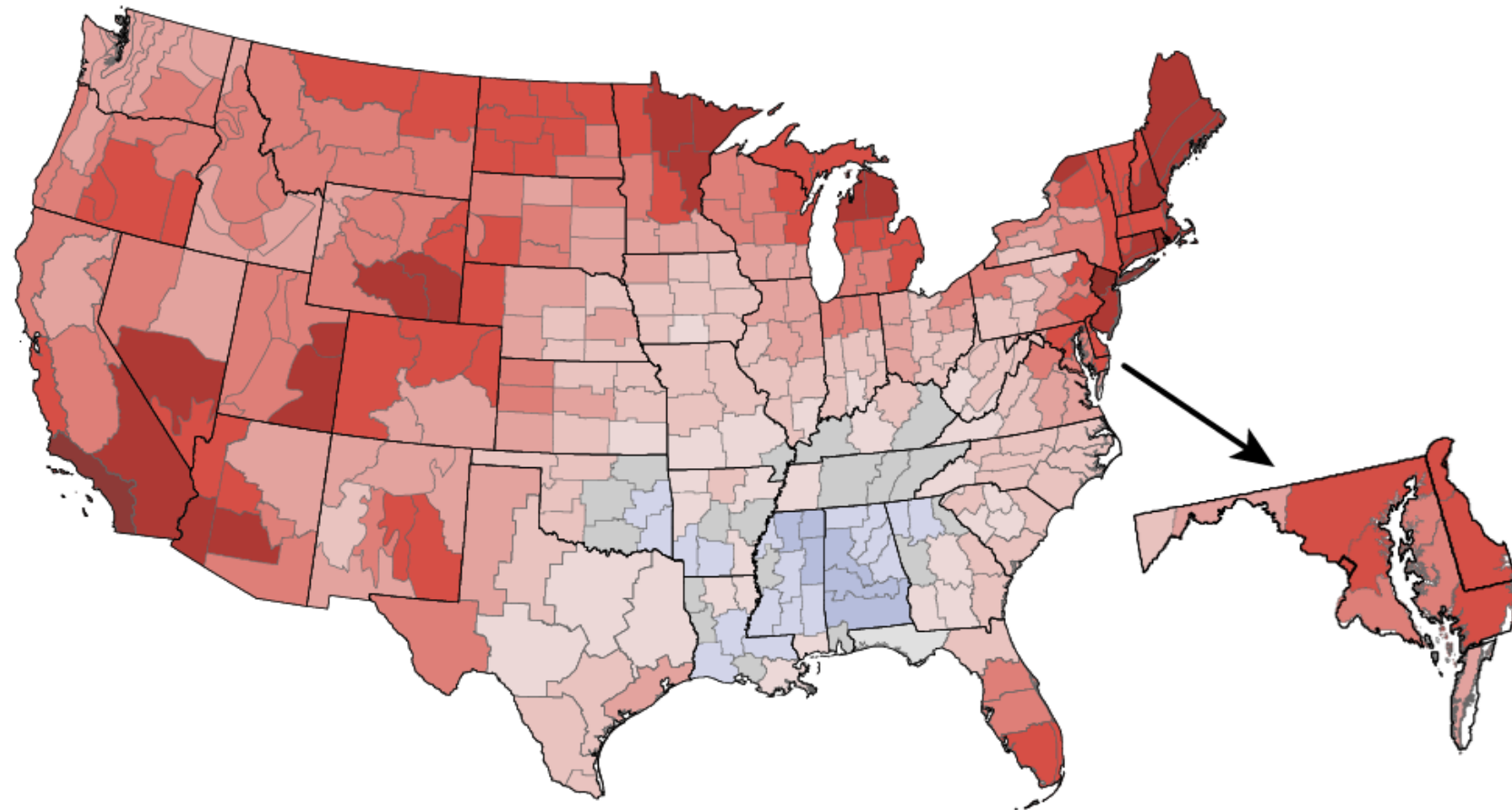


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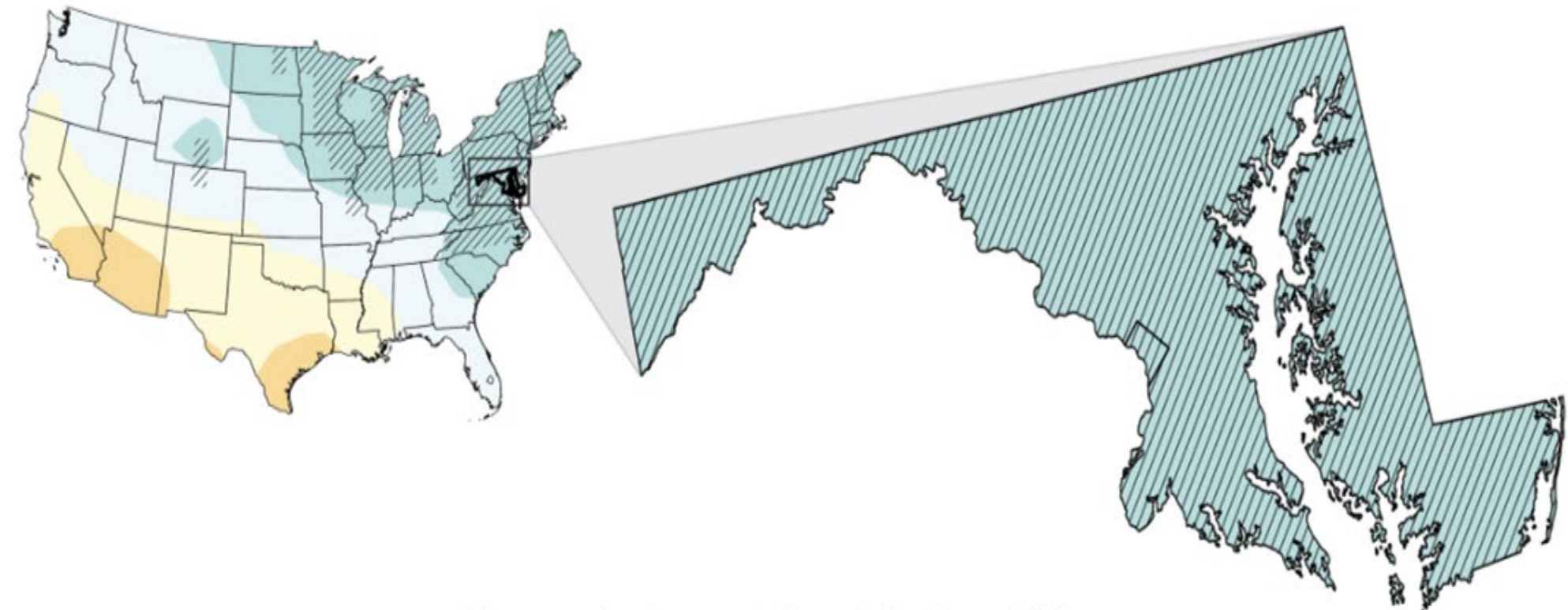
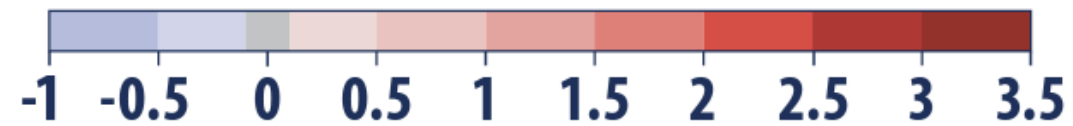


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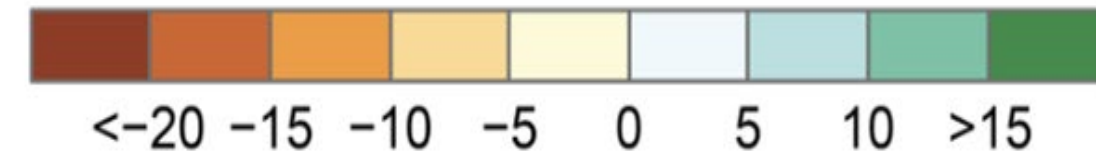
# Climate Change Impacts



Temperature change (°F):



Change in Annual Precipitation (%)



Source: EPA Climate Change Indicators in the United States

Sources: CISESS and NEMAC. Data: CMIP5.



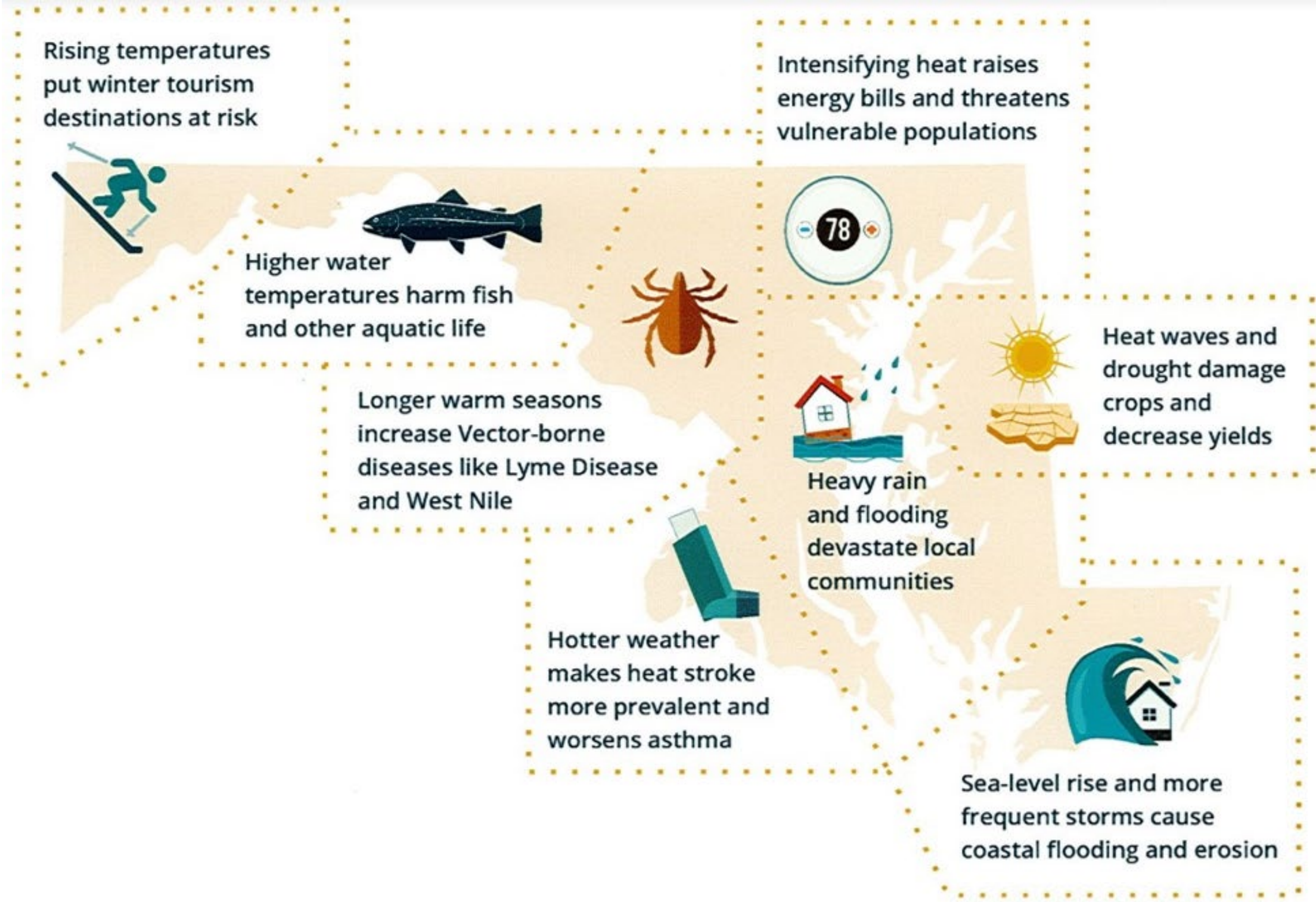
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# Climate Change in Maryland



# Maryland is a Climate Leader

Maryland has reduced climate pollution faster than almost any other state.

(Yes, faster than California.)



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# Maryland is a Climate Leader

Maryland will reduce statewide greenhouse emissions 60% by 2031 and achieve net-zero by 2045.

These are the most ambitious goals of any U.S. state



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# How Can Maryland Achieve These Goals?



- Current policies achieve 51% reductions by 2031
- Maryland's Climate Pathway provides an inclusive and comprehensive approach for Maryland to reach its 60% goal
- An all-of-society approach can realize substantial benefits for Marylanders



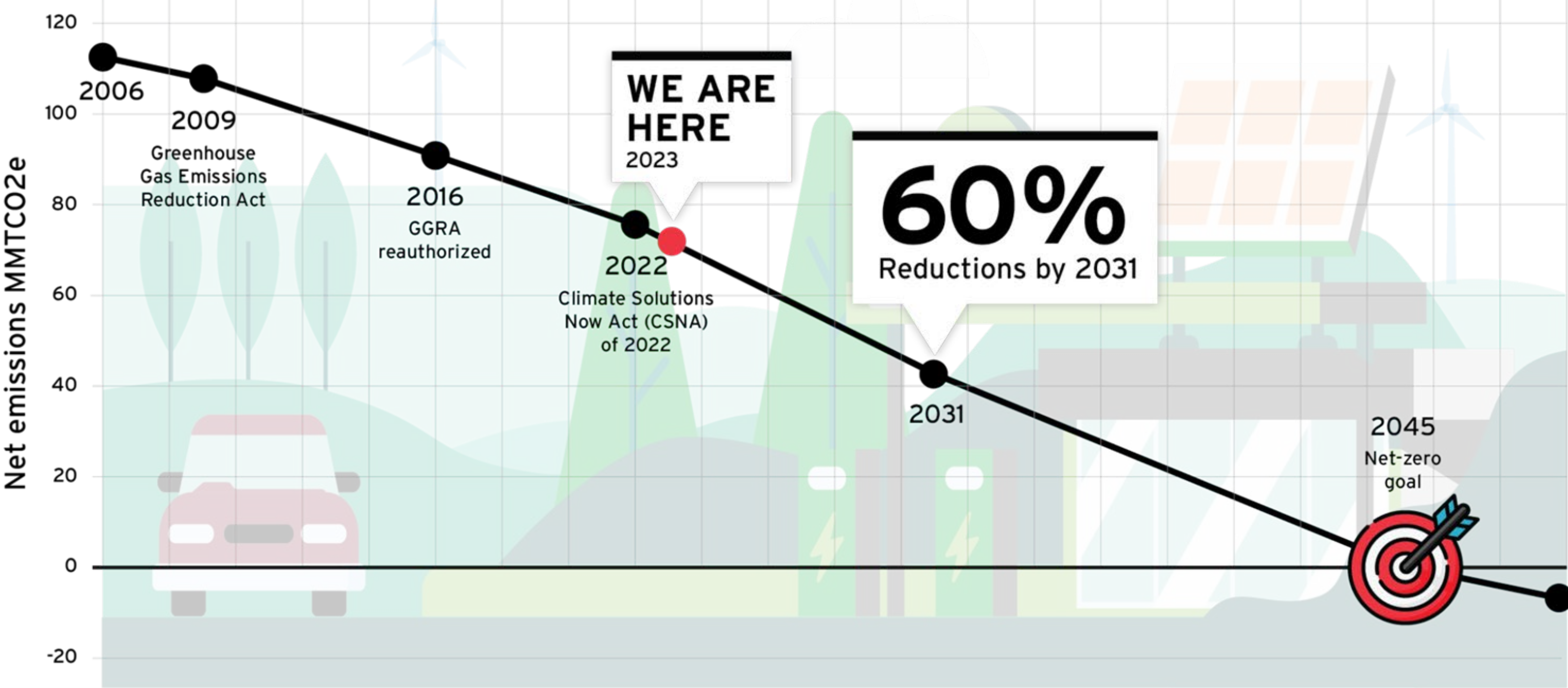
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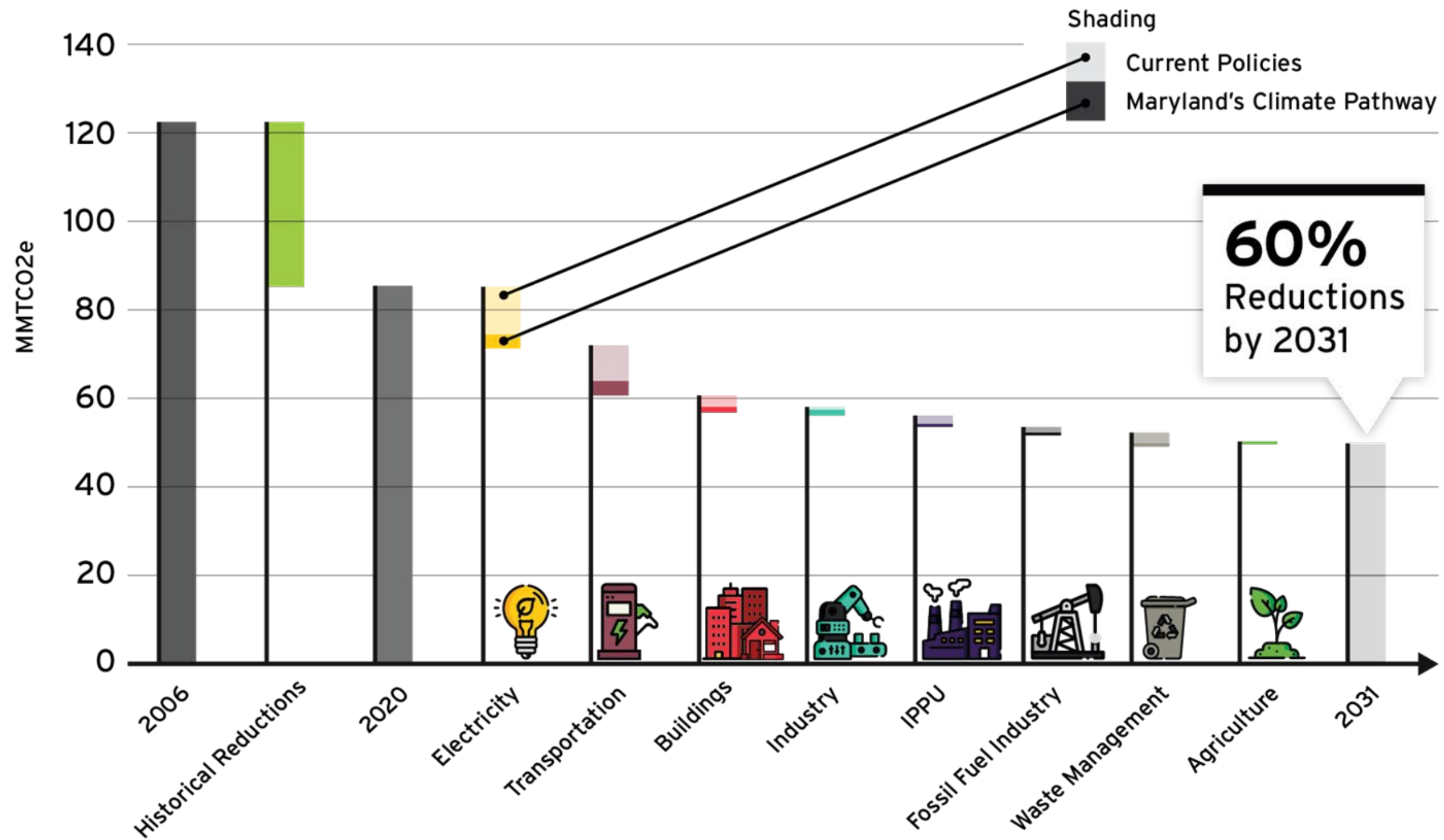


# The Path to 2045

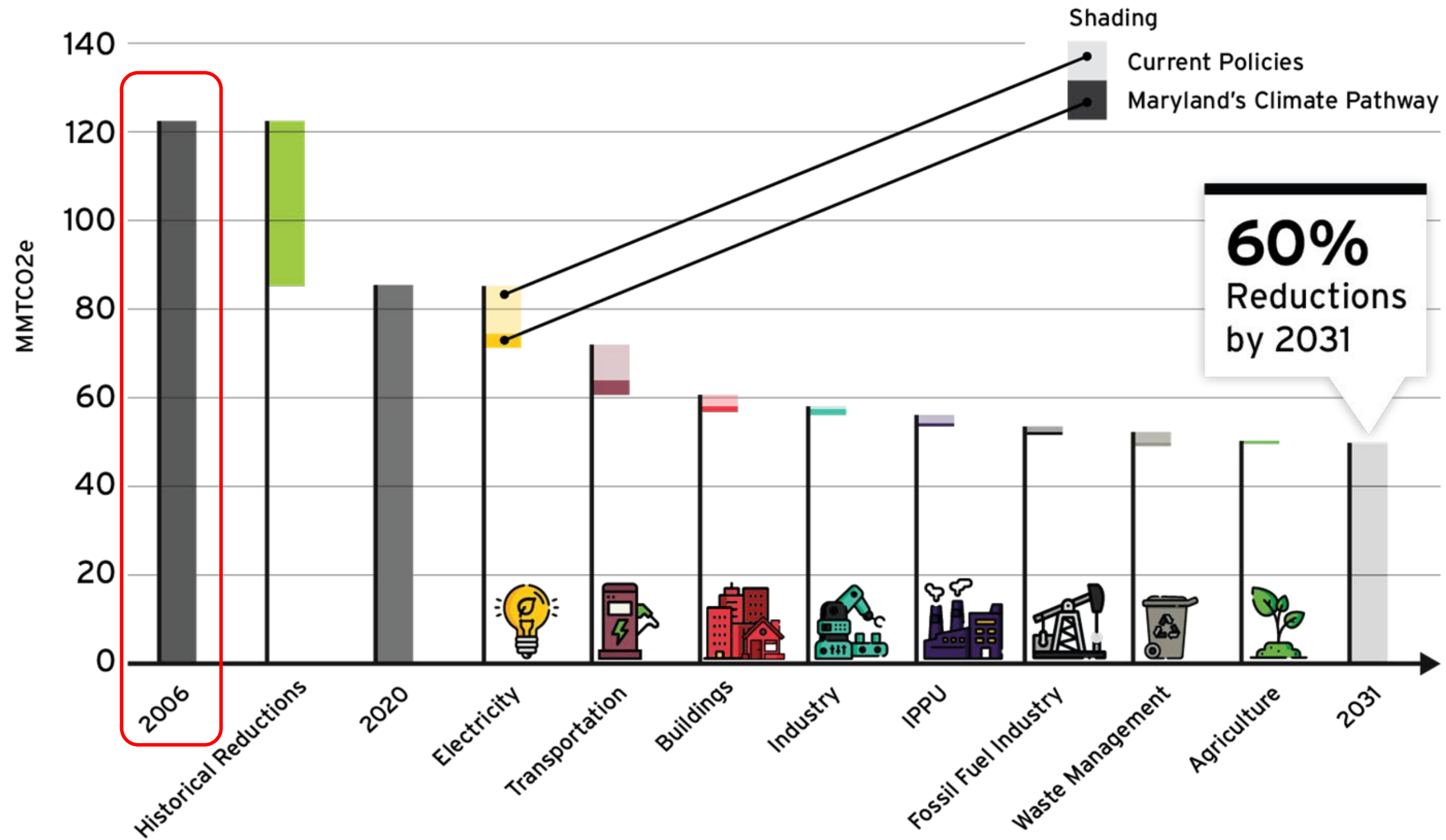




# Maryland's Climate Pathway by Sector

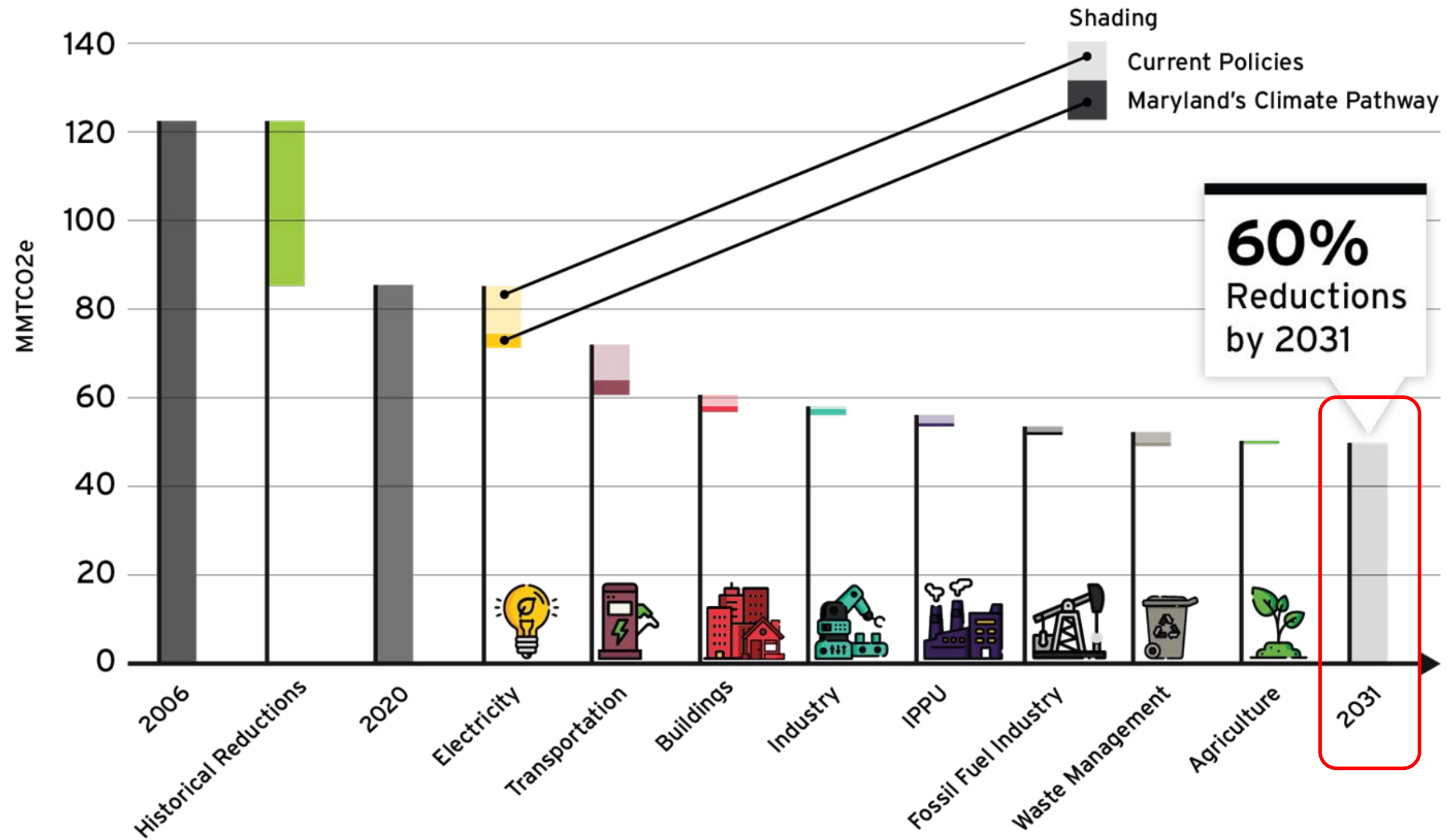


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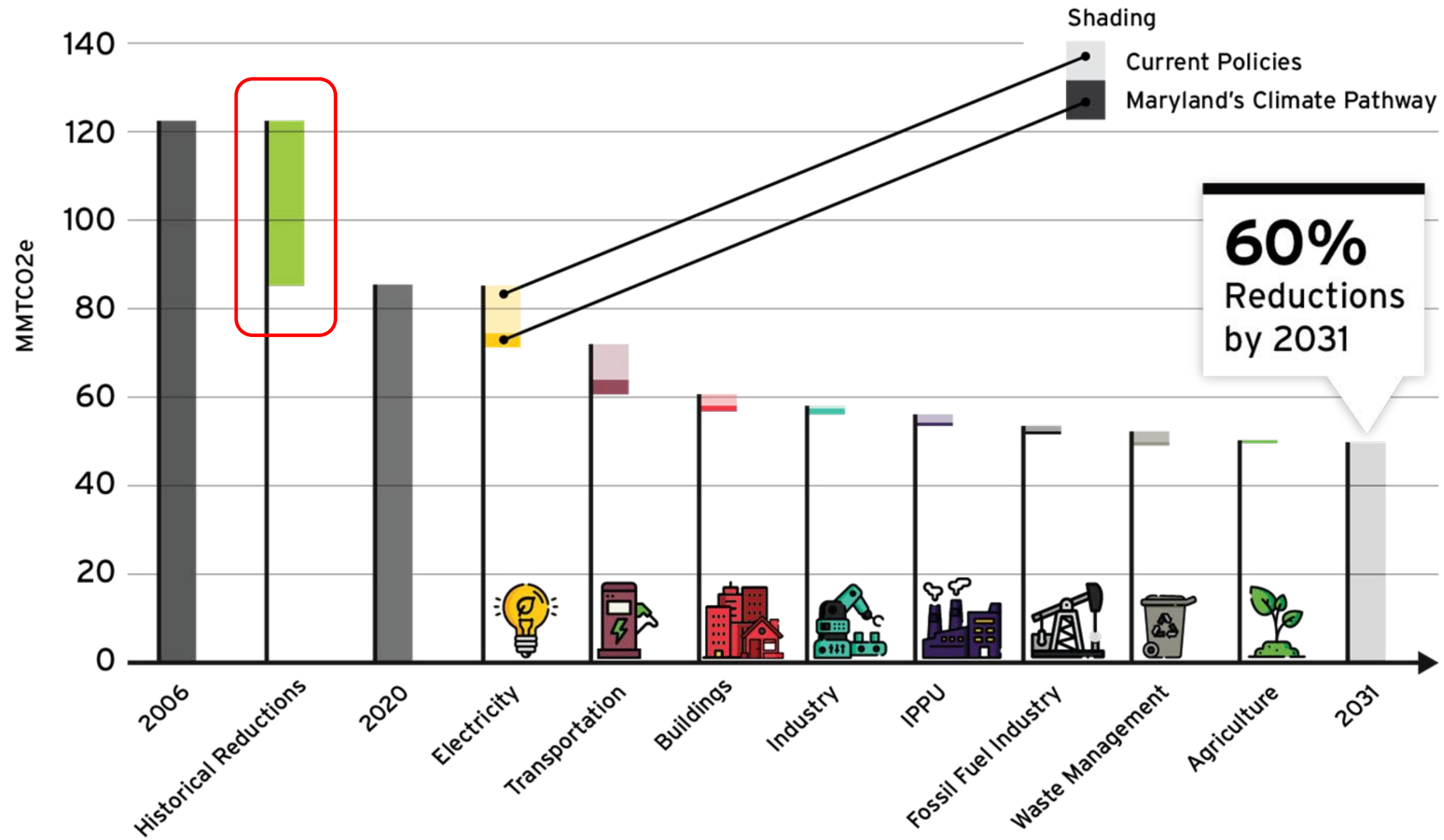




# Maryland's Climate Pathway by Sector



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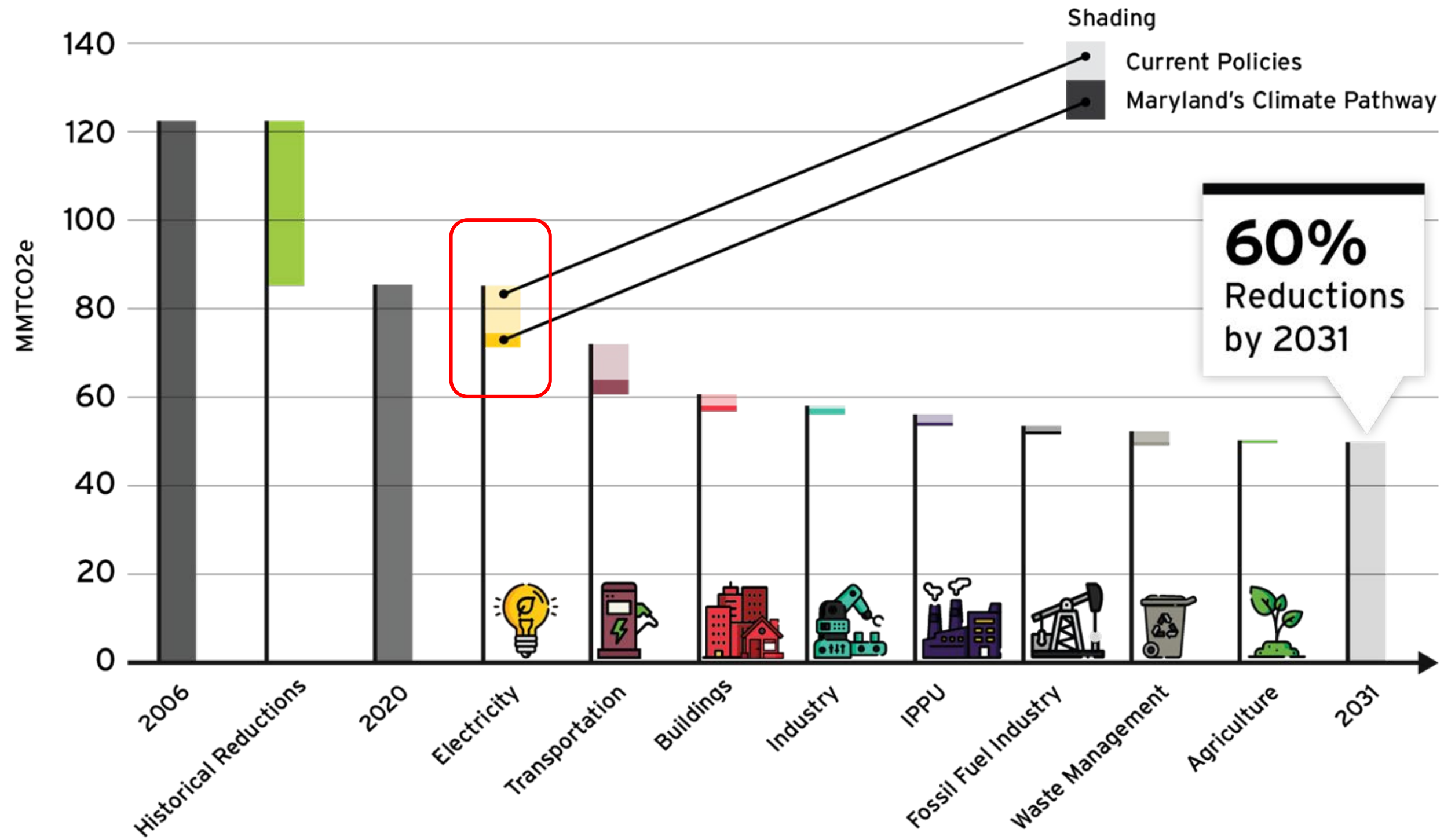
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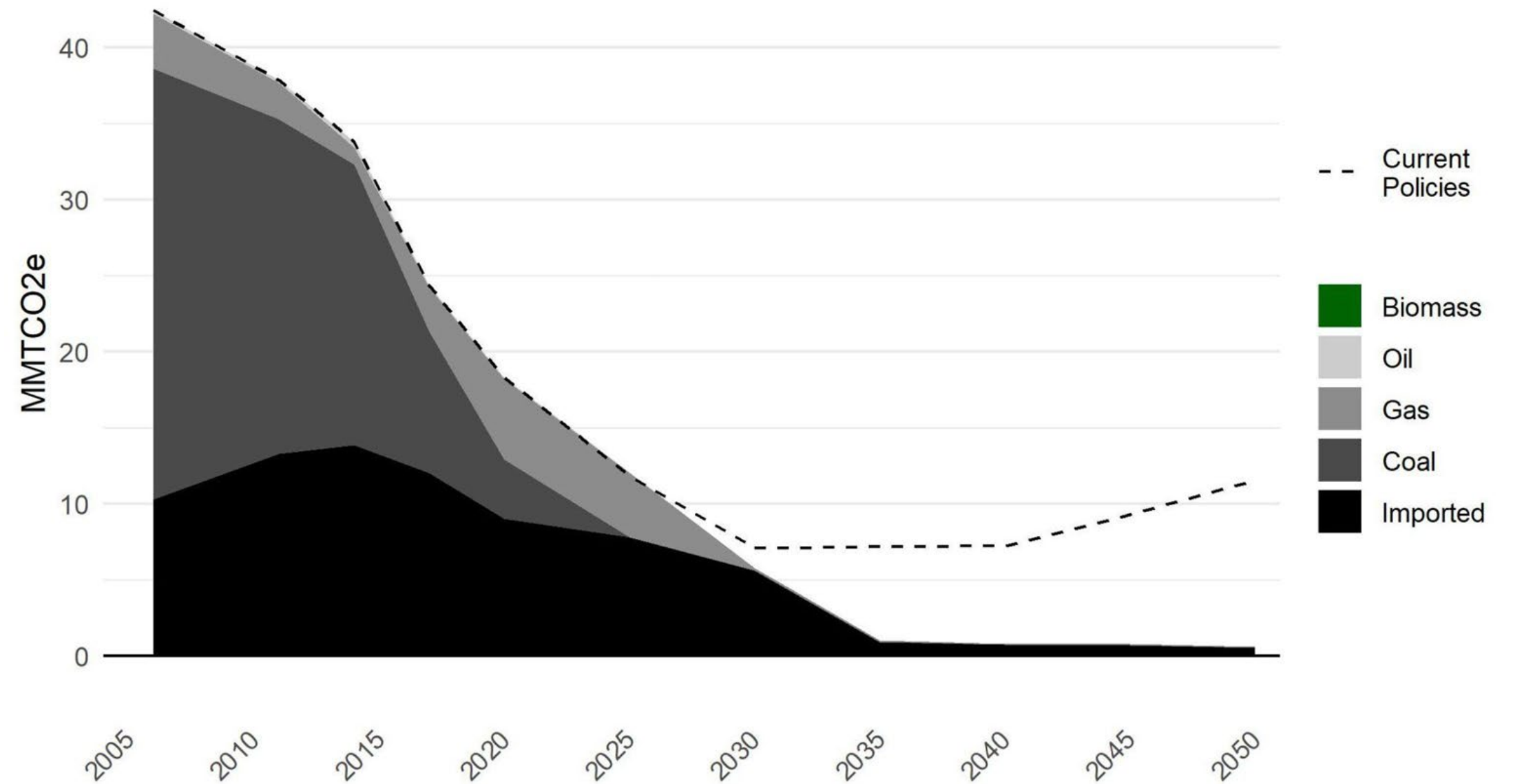


# Maryland's Climate Pathway by Sector



# Electricity Sector: 89% Reduction

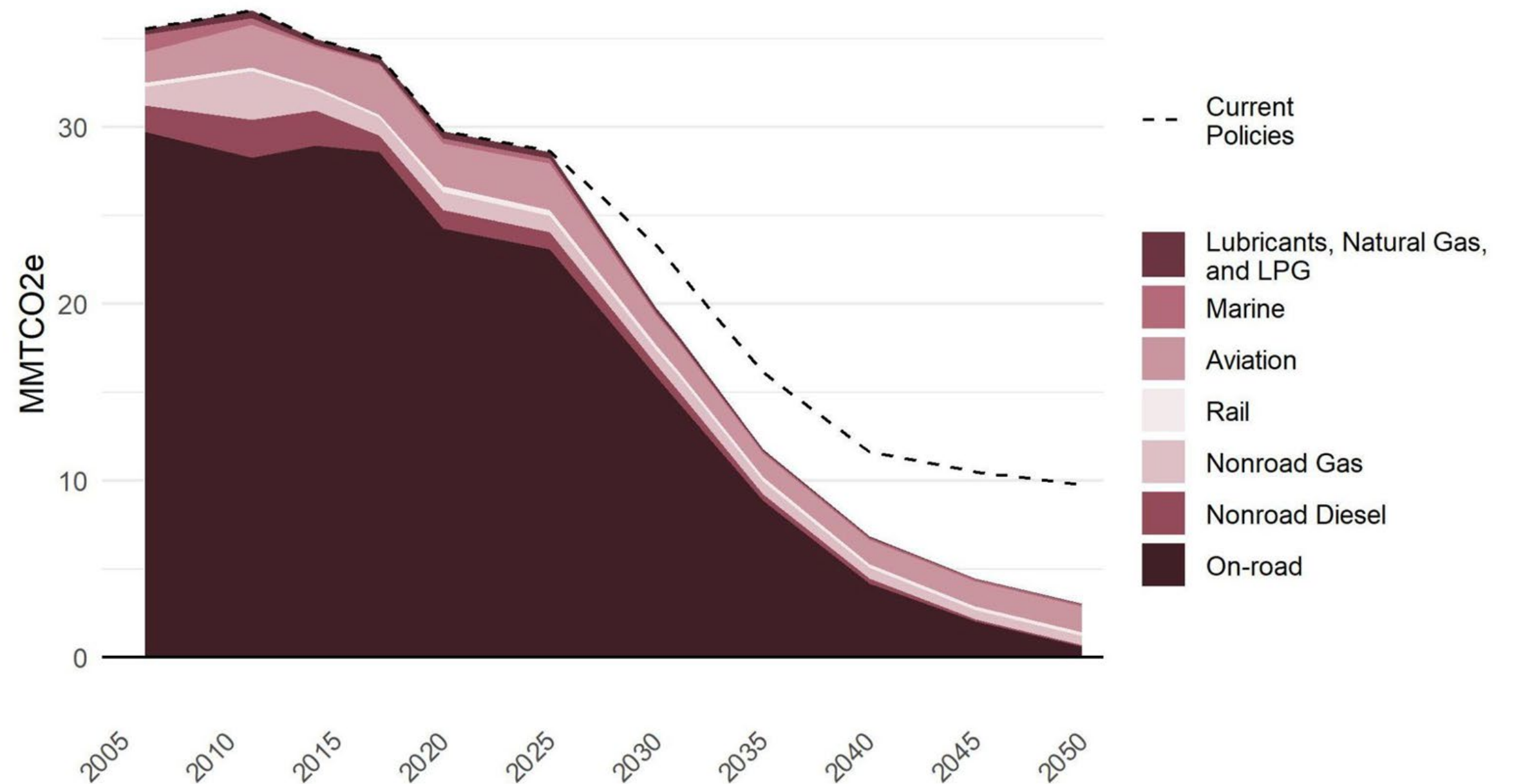
- 100% **clean energy** sources by 2035
- **Collaborate** across Maryland and with neighboring states
- **Boost renewable energy** deployment and accessibility, for example through federal solar energy tax credits





# Transportation Sector: 49% Reduction

- Smart growth and zoning reform to **reduce vehicle miles traveled**
- Ensure access to state and federal **incentives**
- Adopt California's **Clean Fleets** Regulation
- Reach 100% **electric bus** sales by 2025
- **Electrify non-road** sources such as lawn care equipment



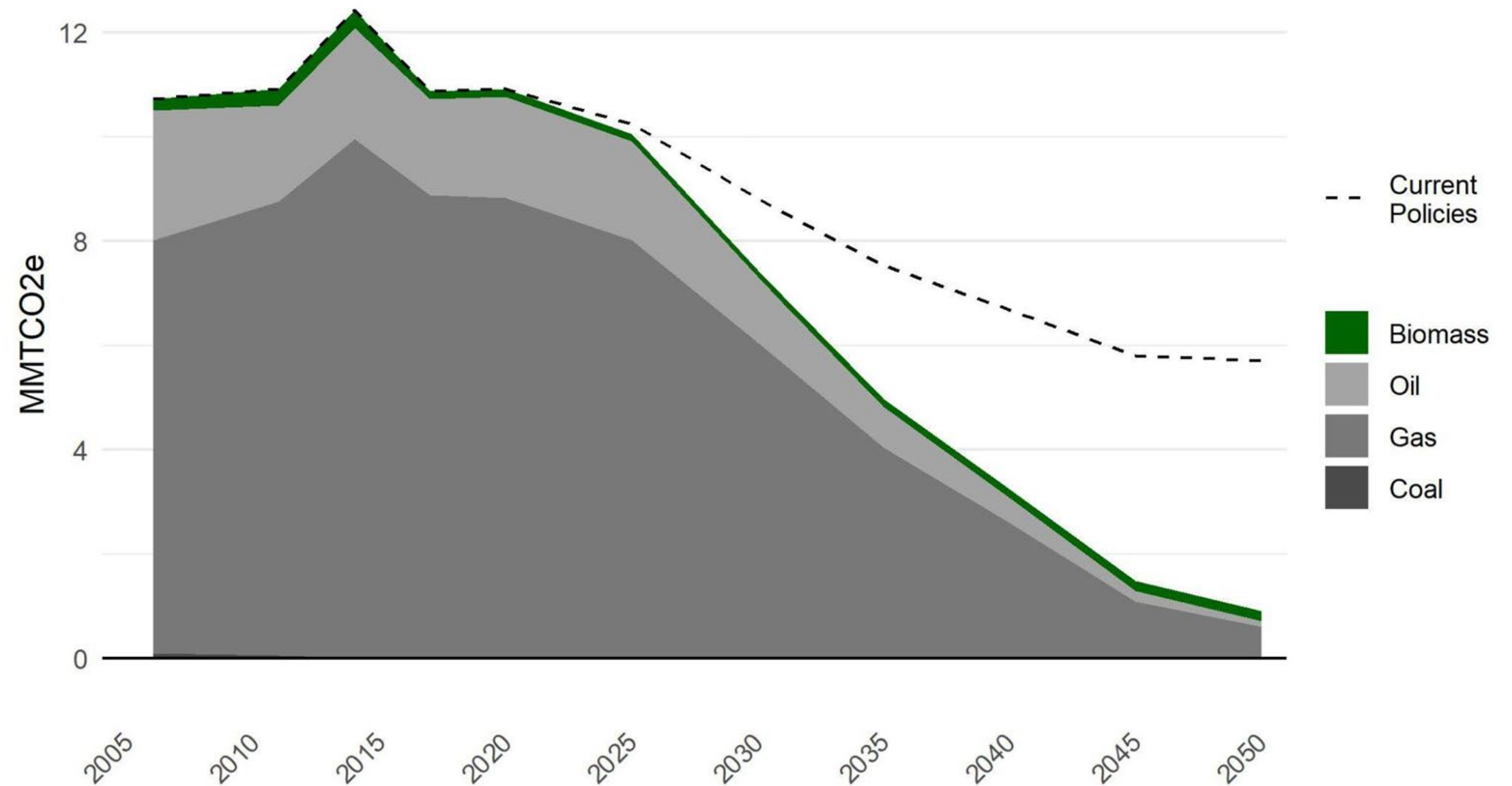
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# Buildings Sector: 35% Reduction

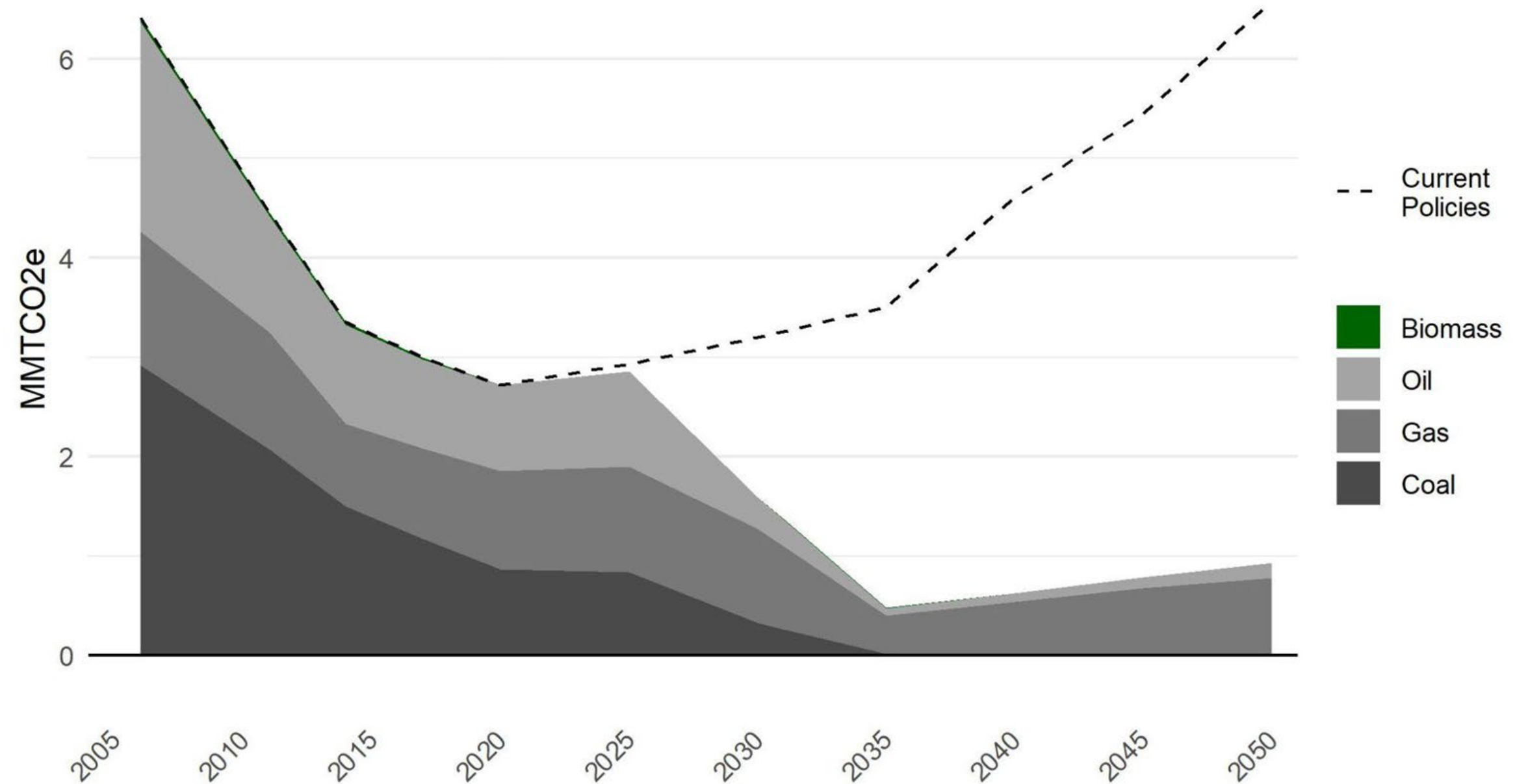
- **Zero-emission appliances** — improving indoor air quality and safety
- **Zero-emissions** construction
- Extended energy efficiency standards





# Industrial Sector: 79% Reduction

- Implement “**Buy Clean**” standards for manufactured products
- **Switch fuel use** in cement industry away from coal
- Include the **manufacturing** sector in decarbonization efforts



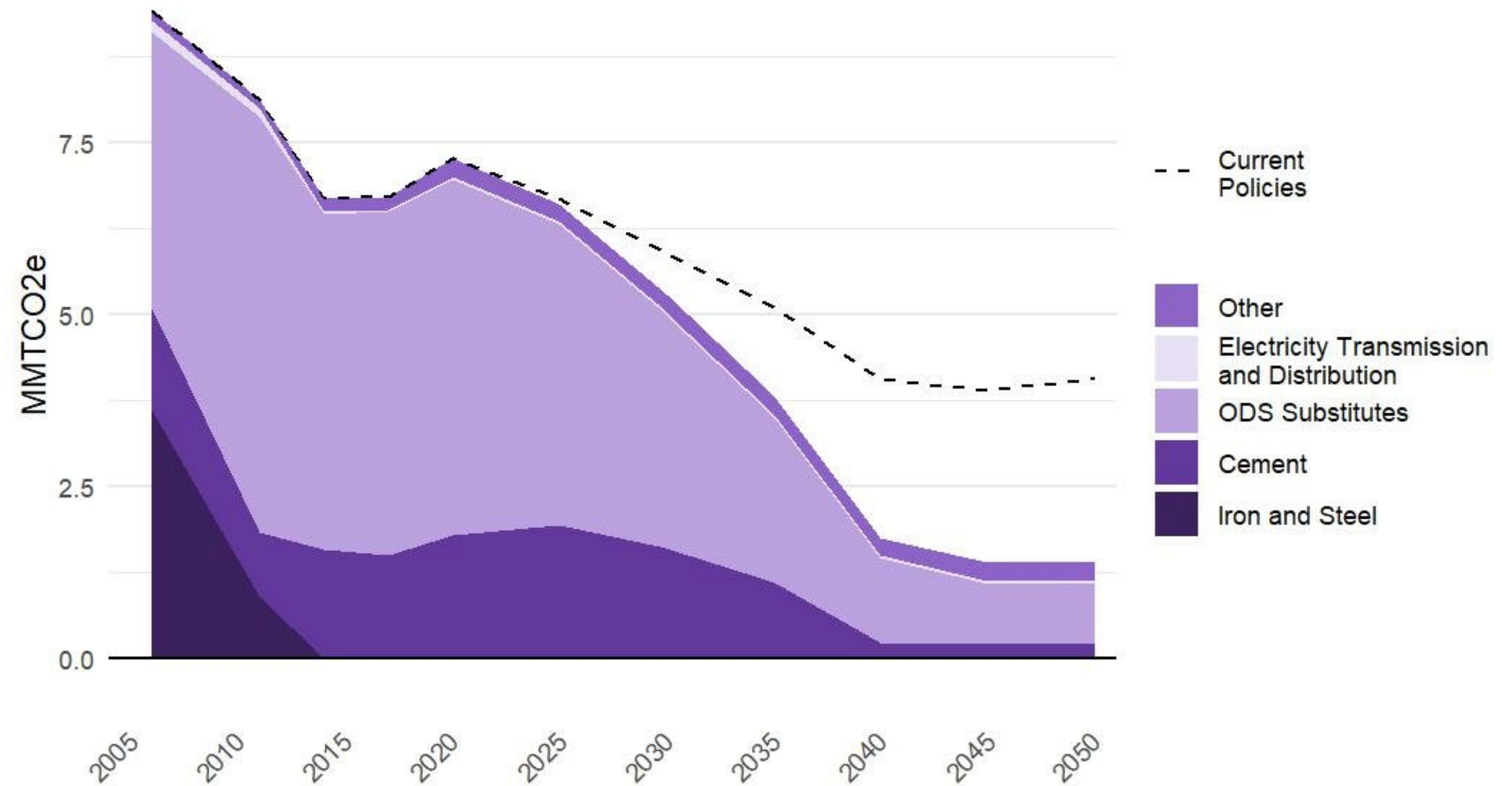
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# Industrial Processes and Product Use: 46% Reduction

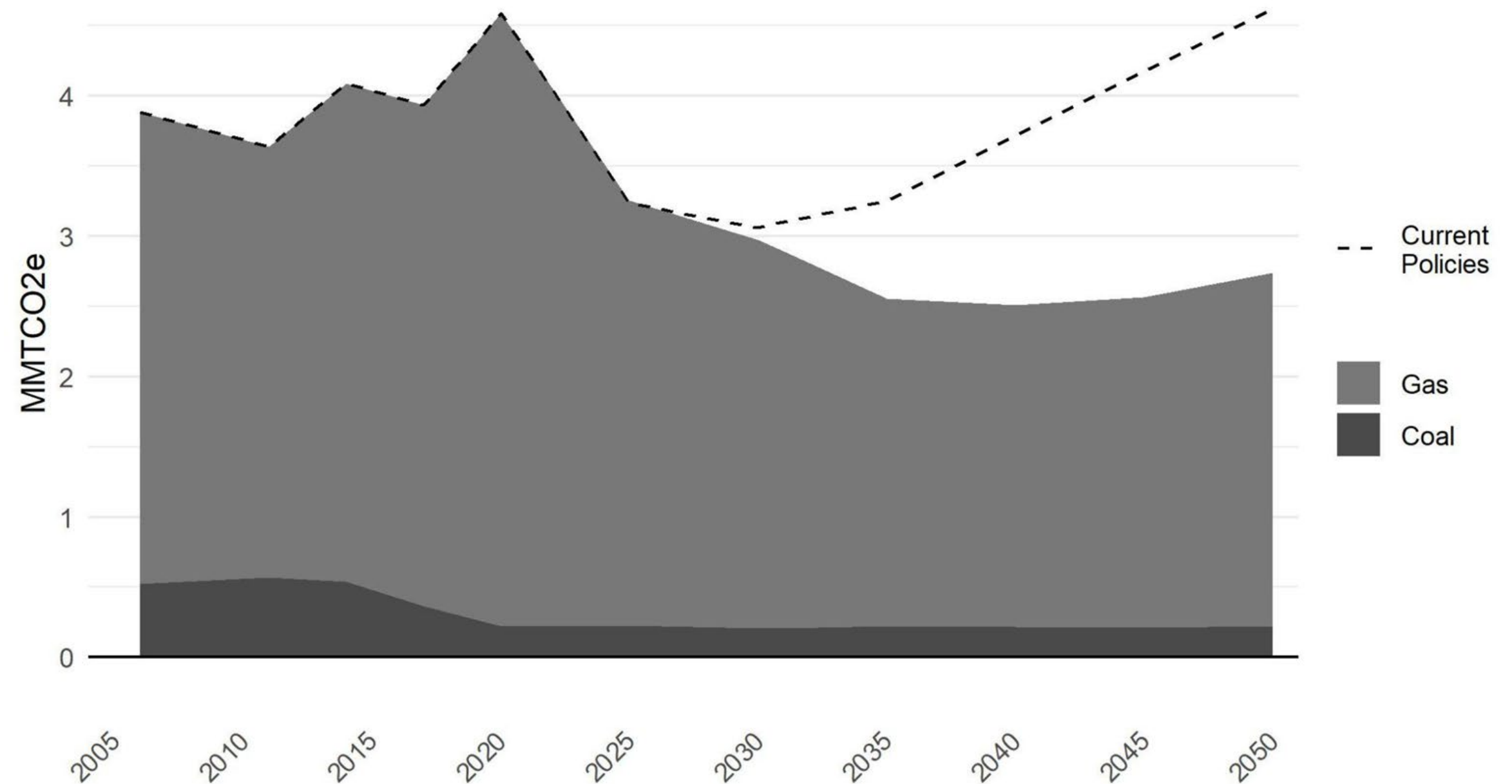
- **Lower process-related emissions** in cement manufacturing
- Use **carbon capture and storage (CCS)** to reduce cement emissions beyond 2035
- Reduce **non-CO<sub>2</sub>** emissions from air conditioning and refrigeration





# Fossil Fuel Sector: 26% Reduction

- **Reduce** natural gas use
- Widespread **monitoring** of natural gas infrastructure
- **Ensure affordability and no increased costs** for Marylanders, especially vulnerable communities



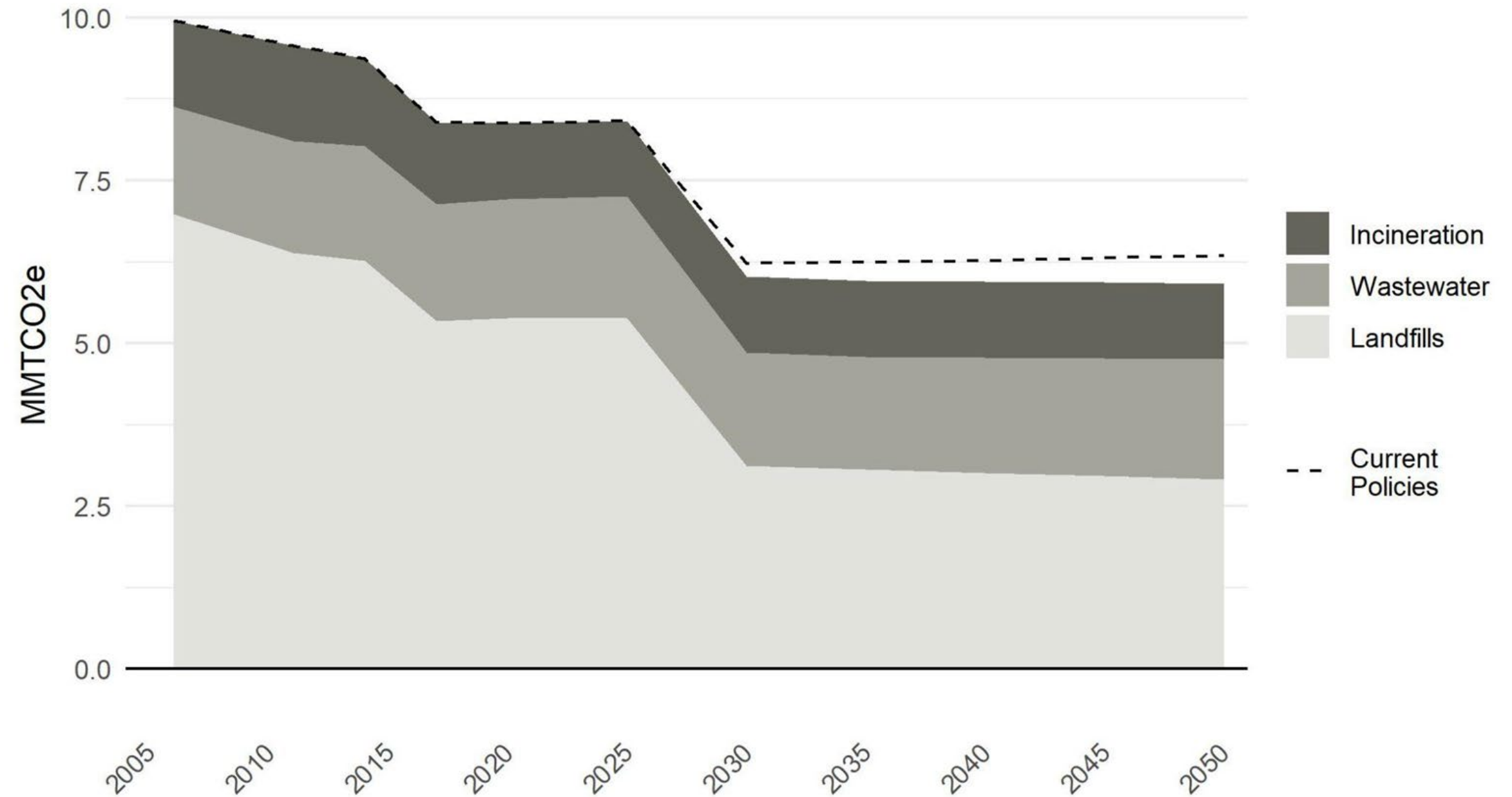
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# Waste Management: 40% Reduction

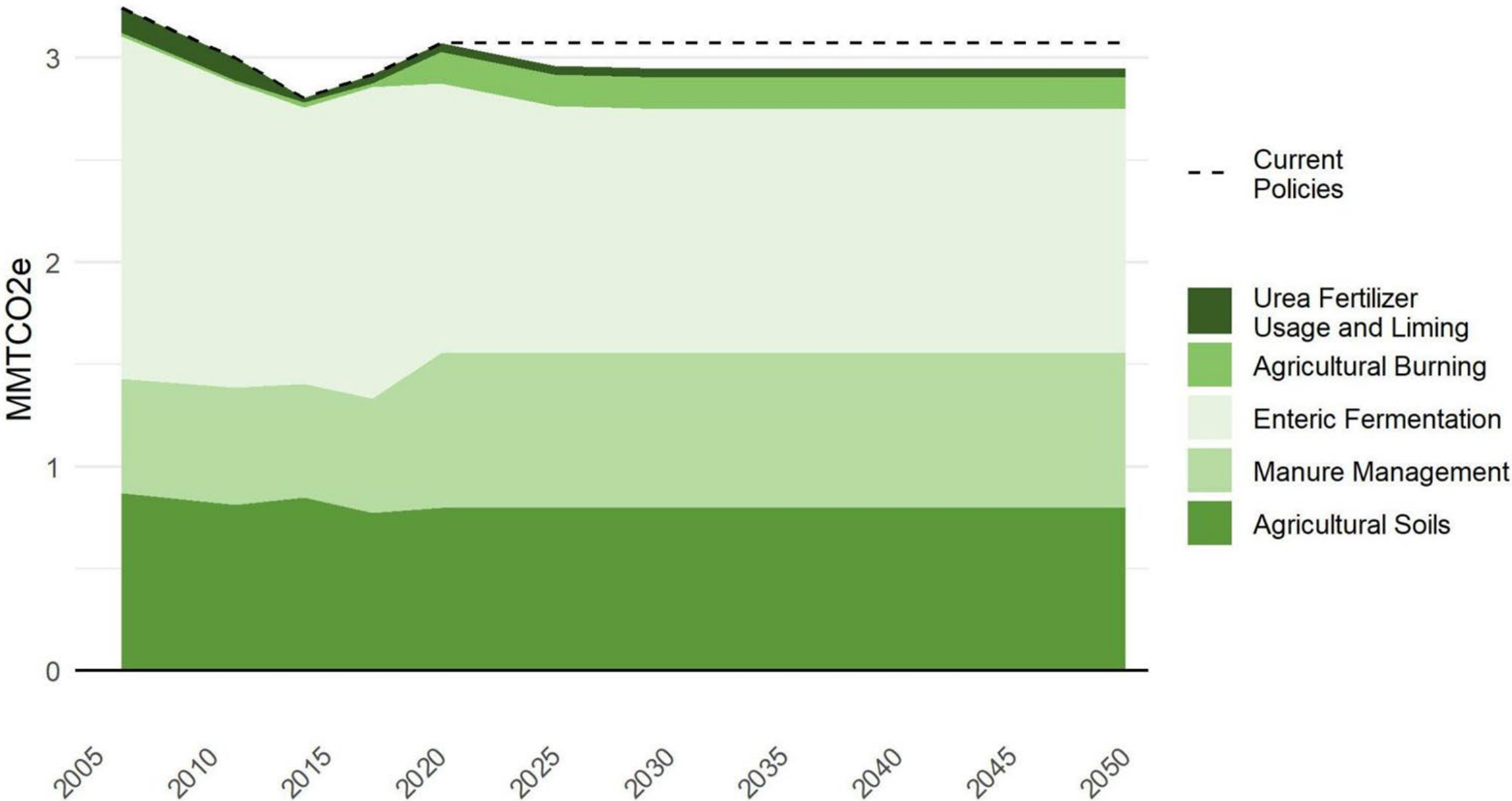
- Increase recycling and **waste diversion** away from landfills
- Improve access to **composting**





# Agriculture: 9% Reduction

- Implement **climate-smart agriculture** practices
- Pursue **zero-cost** mitigation opportunities for livestock



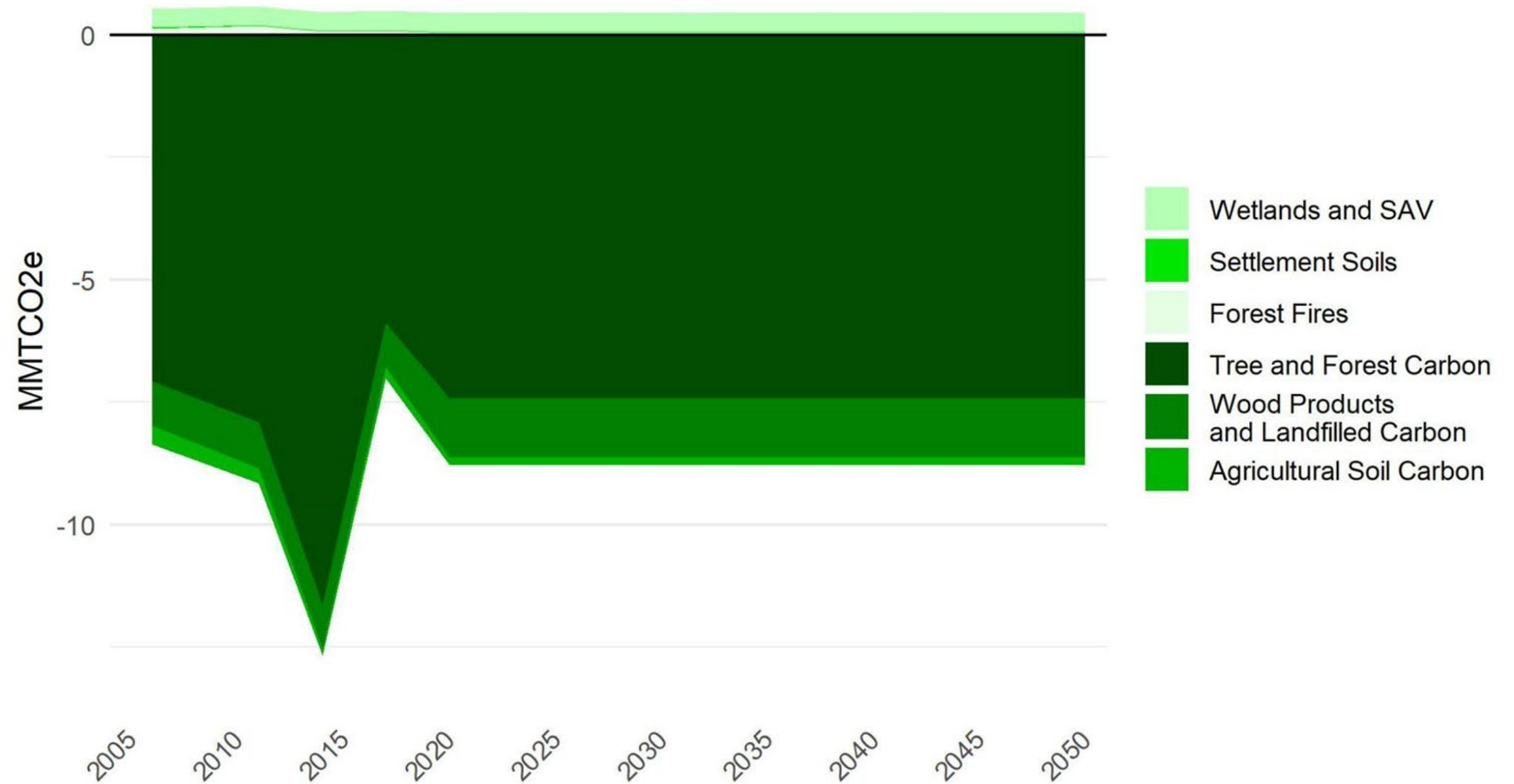
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# Forestry and Land Use: Negative Emissions

- Protecting and expanding **natural emissions sinks** will be essential for the 2045 net-zero goal
- Future analysis will expand on opportunities in this sector



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# Economy-wide



- **Cap-and-invest** program applies to all sectors
- Proceeds are **re-invested to support Marylanders**
- Delivers 4% emissions reductions



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# Benefits of achieving targets



## Climate

Snapshot of 2031

**60%**

Emissions reduction

Contribute to national and global reduction goals

Co-pollutant reductions bring health benefits to Marylanders



## Health

Snapshot of 2031

**Up to 1000**

fewer cases of upper and lower respiratory symptoms

**Up to 51**

lives saved

**Over 16,500**

fewer days of restricted activity from pollution



## Economy

Cumulative through 2031

**\$1.09-2.44B**

in health benefits

**16,700**

jobs created

**\$1.5B**

increase in personal income



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**What can Maryland do to  
realize these reductions?**



# Key implementation opportunities



## **Decarbonizing electricity also enables decarbonization of other sectors**

- Equitable transition
- Access to incentives



## **Overcoming barriers to the electric vehicle transition and reducing miles traveled**

- Affordability
- Access to charging infrastructure
- Access to public transit



## **Efficient and clean building technologies must be made available to everyone**

- Affordability
- Access for owners and renters



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# Key implementation opportunities



## **Decarbonizing the industrial sector is challenging but has large untapped potential**

- Stakeholder engagement
- Research and innovation



## **Waste management is an opportunity to achieve greenhouse gas reductions**

- Equity
- Reduce pollution
- Waste diversion



## **Land and agriculture sector can contribute to reductions and help the Bay**

- Improve soil health
- Preserve & expand forest sinks
- Improve water & air quality



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# Submit Comments and Learn More

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# Questions and Comments?

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