Maryland
Department of
the Environment

Presented by:

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# Maryland's Climate Pollution Reduction Plan

# Presentation Agenda

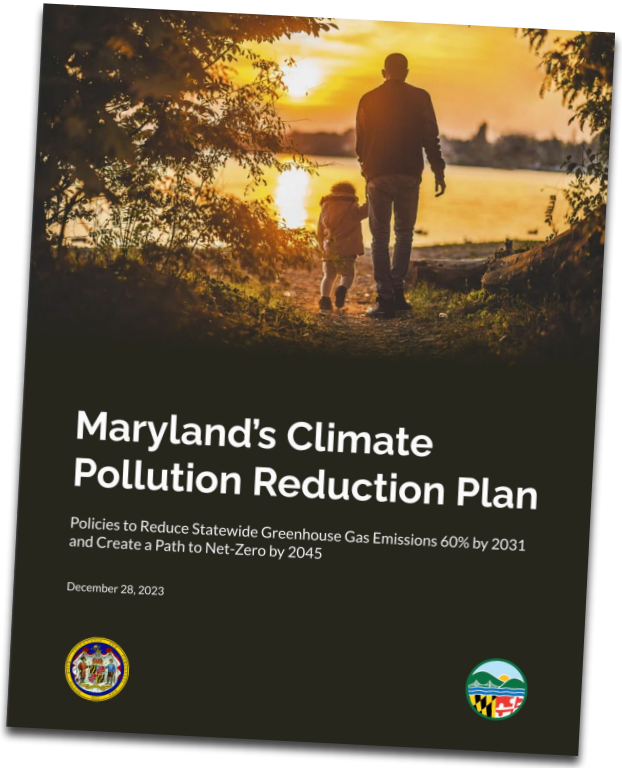
- Overview of the Plan
- Policies and Next Steps
- Discussion

# Part 1: Overview of the Plan

# What is the Climate Pollution Reduction Plan?

MDE's final plan to:

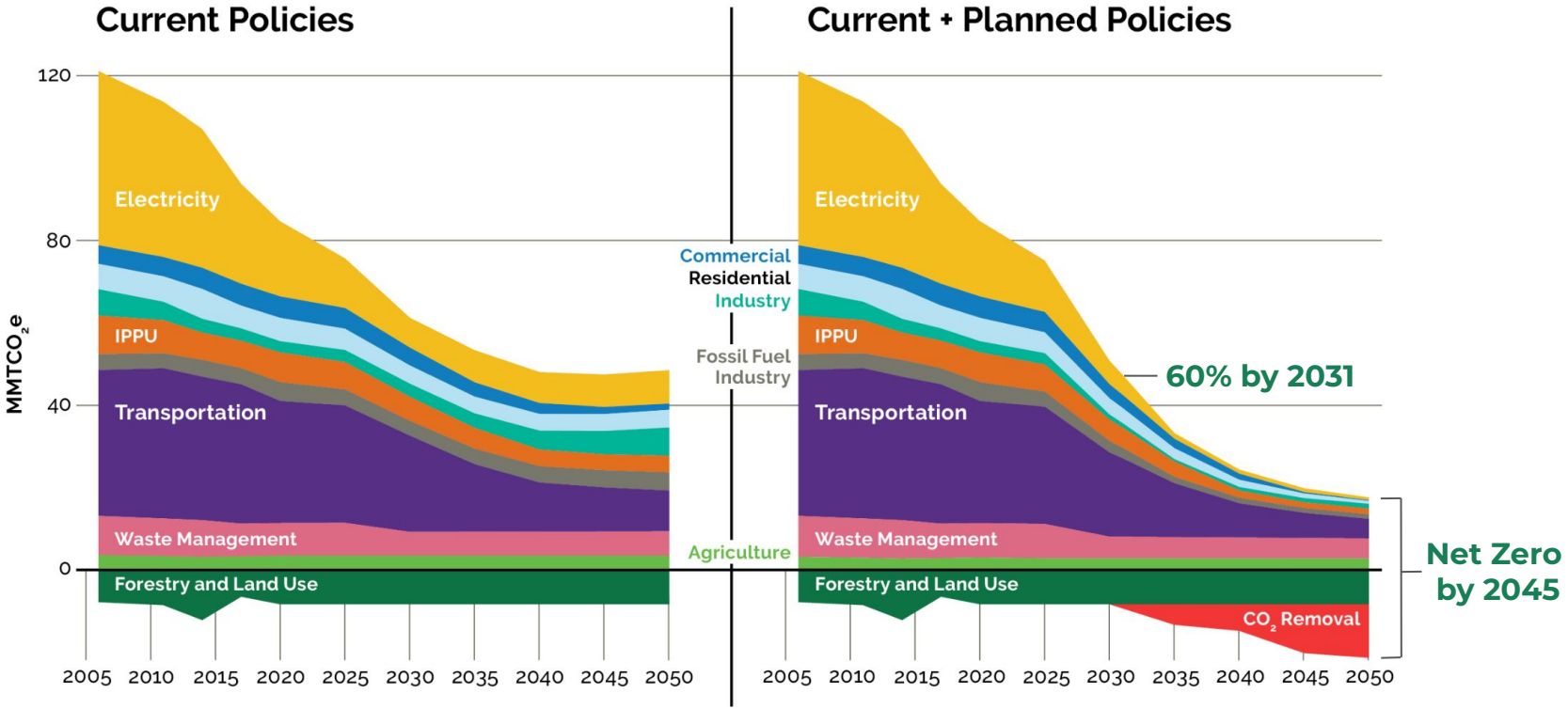
- Reduce statewide greenhouse gas emissions **60% by 2031** (from 2006 levels)
- Set the state on a path to achieve **net-zero emissions by 2045**
- **Create net economic benefits** for Maryland




The full plan is available at **mde.maryland.gov**

# Achieving the State's Goals

42 policies that, if fully implemented, will achieve Maryland's goals



# Maryland has Already Come so Far

Maryland once had the worst air quality east of the Mississippi River

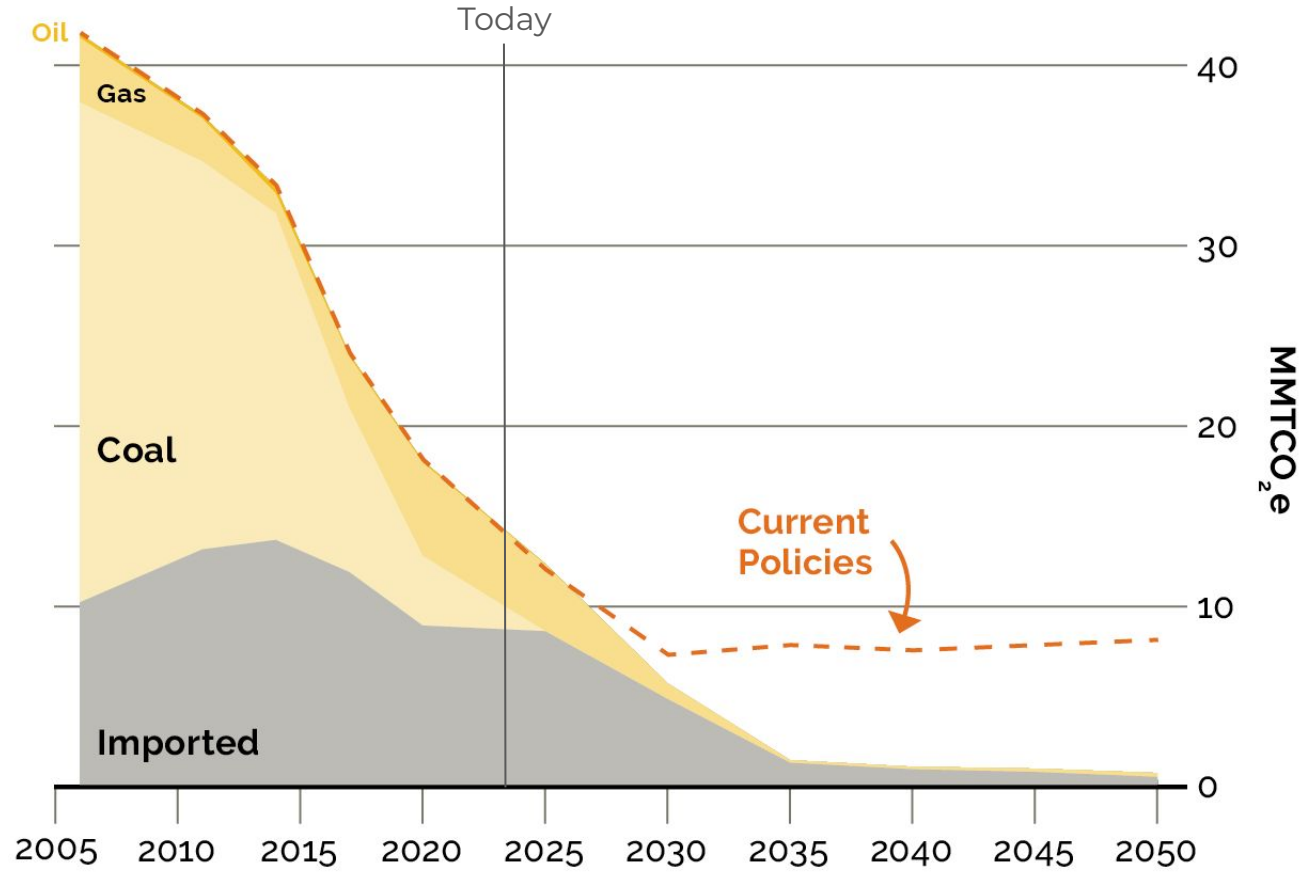
8 coal-fired power plants in 2006 (2 left today)

Countless cases of respiratory illness and hospitalizations

# From the Dirtiest Air to the Cleanest

In 2022, Maryland met all national air quality standards for the first time since the Clean Air Act was established over 50 years ago

# Greatest Improvements from the Electricity Sector




Emissions from electricity generation plummeted since 2006

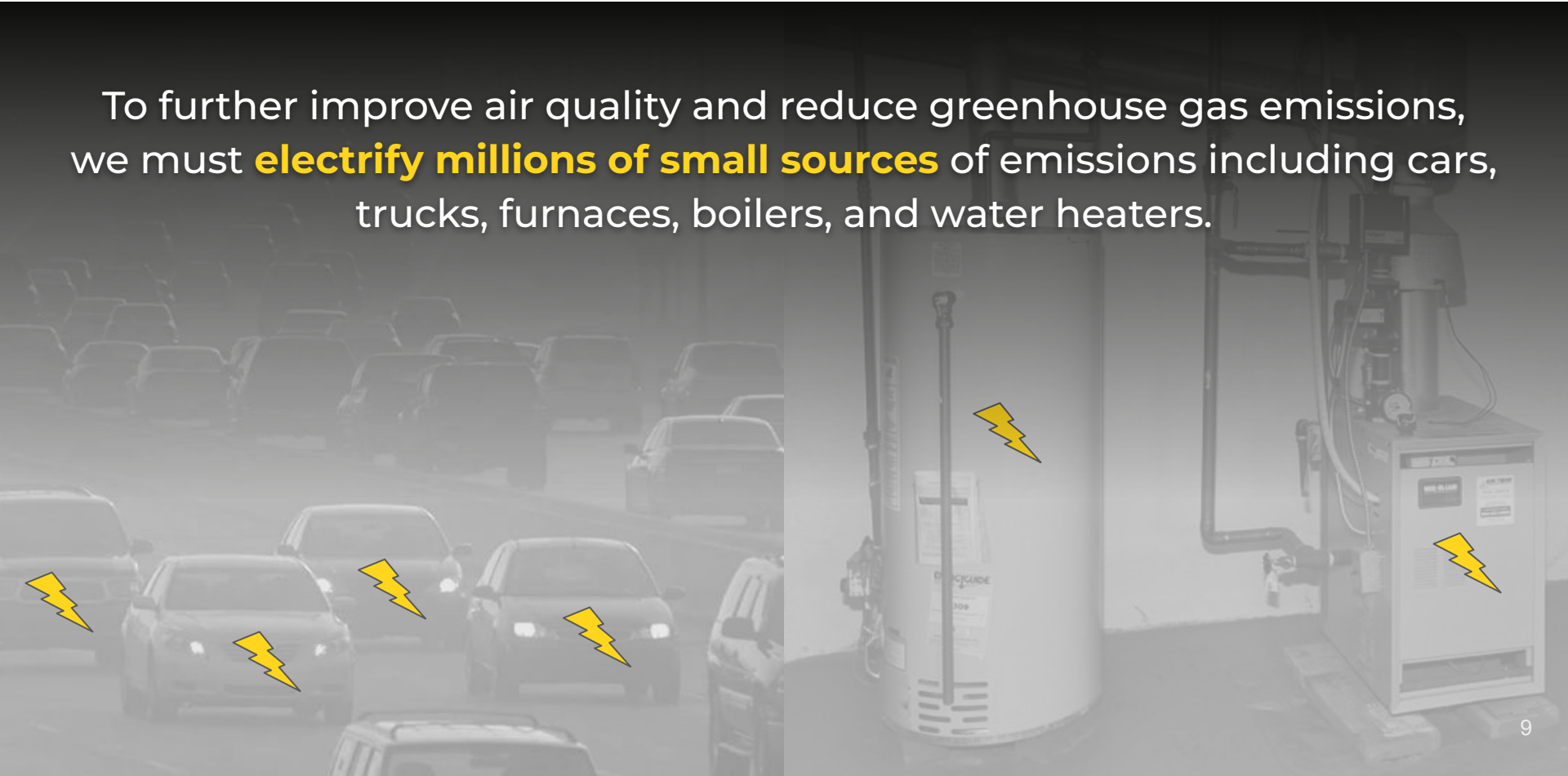
Two-thirds of statewide emissions reductions were from this sector

Current policies will further reduce emissions

**New policies will provide 100% clean electricity to all Marylanders by 2035**

# Shifting Focus from Large to Small Sources

To further improve air quality and reduce greenhouse gas emissions, we must **electrify millions of small sources** of emissions including cars, trucks, furnaces, boilers, and water heaters.



# Electrification is Underway

Heat pumps started outselling gas furnaces in the U.S. in 2022

The best-selling car in the U.S. in 2023 was an EV

Electric devices are increasingly powered by clean electricity

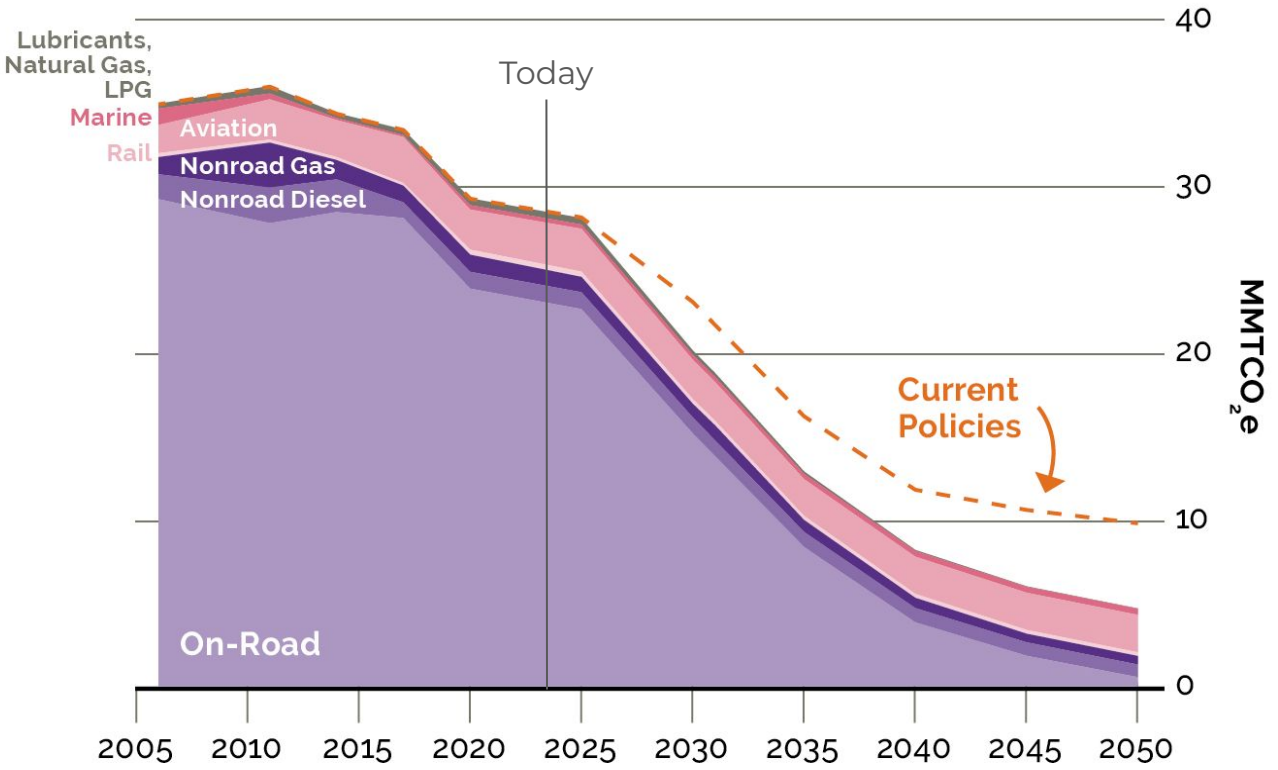
# Can the Grid Handle It?

Yes.

The Climate Solutions Now Act required the Maryland Public Service Commission (PSC) to study this issue.

The PSC study found that efficient electrification of buildings and vehicles will require modest electric grid investments below historic levels.

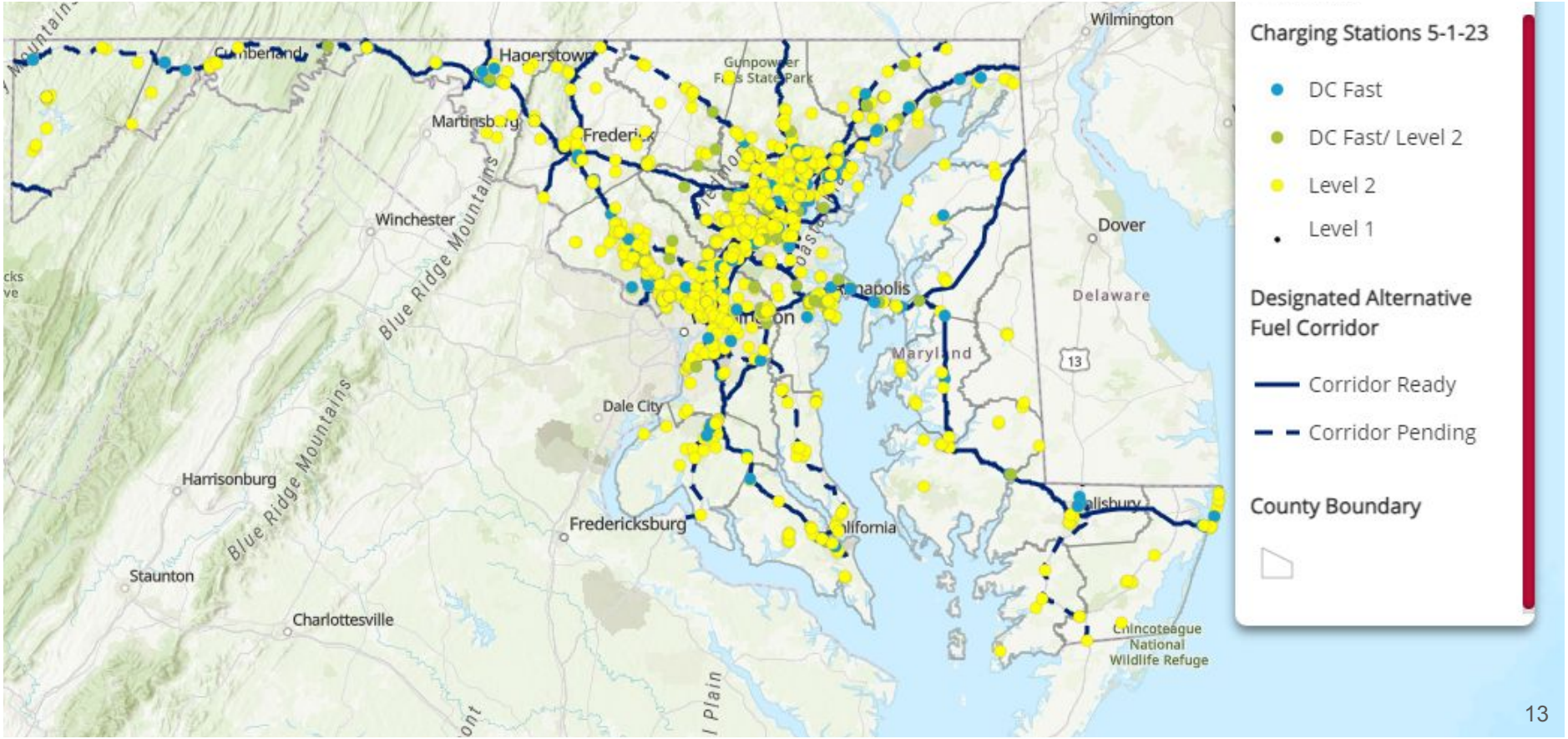
# Transportation Decarbonization is Driven by Electrification



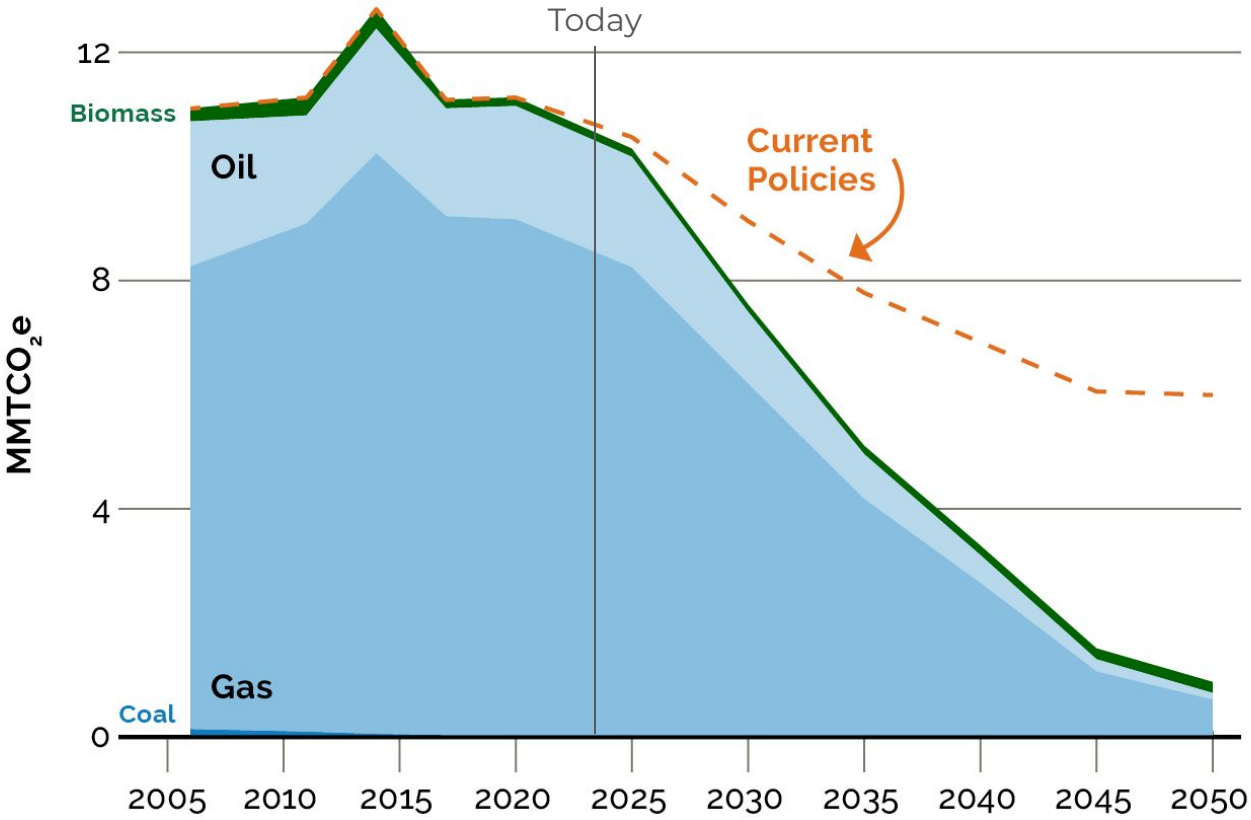

**Advanced Clean Cars II** and **Advanced Clean Trucks** guide the transition to zero-emission electric cars and trucks

MDOT's efforts to develop **transit projects** and **reduce vehicle miles traveled (VMT)** will further reduce emissions

# Maryland's EV Charging Network is Poised for Additional Growth



# Building Decarbonization is Driven by Electrification




**Building Energy Performance Standards** and federal incentives for heat pumps reduce emissions, but not enough

New policies such as **Zero-Emission Heating Equipment Standards** and **Clean Heat Standards** will reduce emissions fast enough to achieve the state's goals

# Electrification Creates Local Jobs

Upgrading a boiler to a heat pump is work that can't be outsourced

Implementing this Plan will create an additional **27,000 jobs** in Maryland between now and 2031

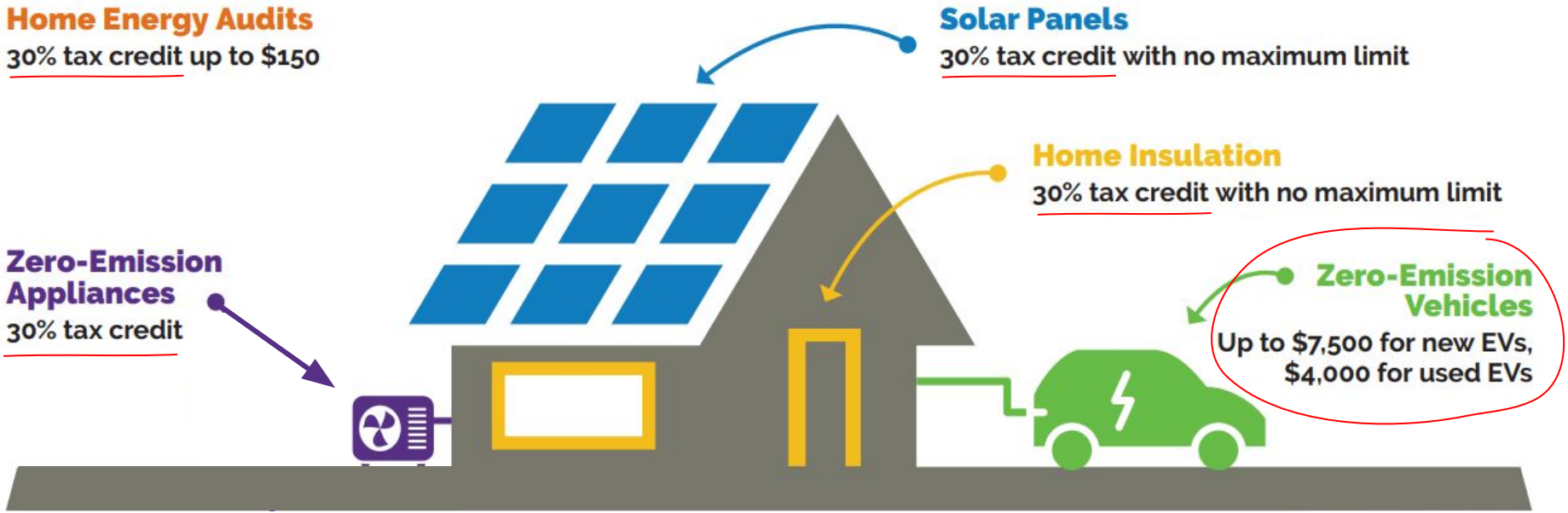
Electricians and heat pump installers are among the job sectors that will see strong demand

# Lower Energy Costs

The average Maryland household saves **$2,600** annually by using heat pumps and EVs instead of gas appliances and gas cars

Savings increase to **$4,000** annually for households that switch from oil or propane to heat pumps and EVs

# Take Advantage of Existing Federal Tax Credits



# Amping Up Electrification with Rebates

Rebates will be available starting in 2024 for low, moderate, and middle-income households.

**$8,000 rebate**
Heat pump HVAC

**$4,000 rebate**
Electric panel upgrade

**$2,500 rebate**
Electric wiring

**$1,750 rebate**
Heat pump water heater

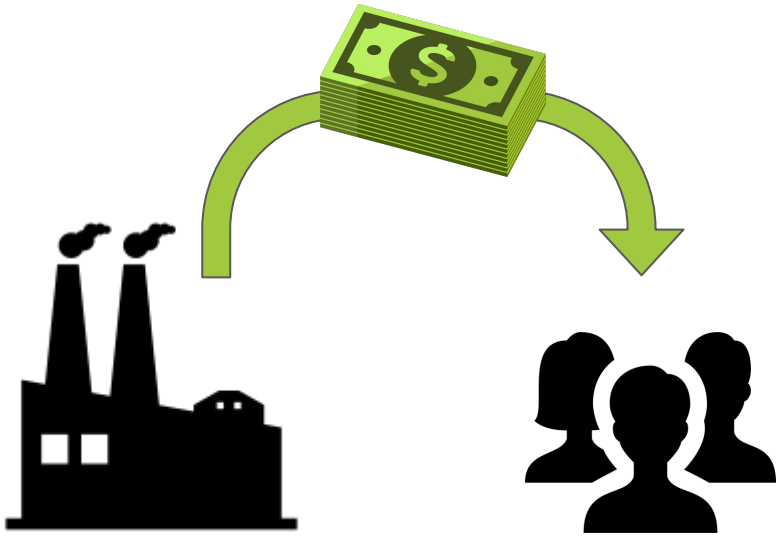
**$840 rebate**
Electric stove or cooktop

**$840 rebate**
Heat pump clothes dryer

This Plan proposes to keep electrification rebates flowing when federal funding runs out.

# Potential Funding Sources

- Federal grants and loans
- Green revenue bonds
- Cap and invest program
- Carbon fee
- Hazardous substance fee
- Fees on fuel-burning vehicles



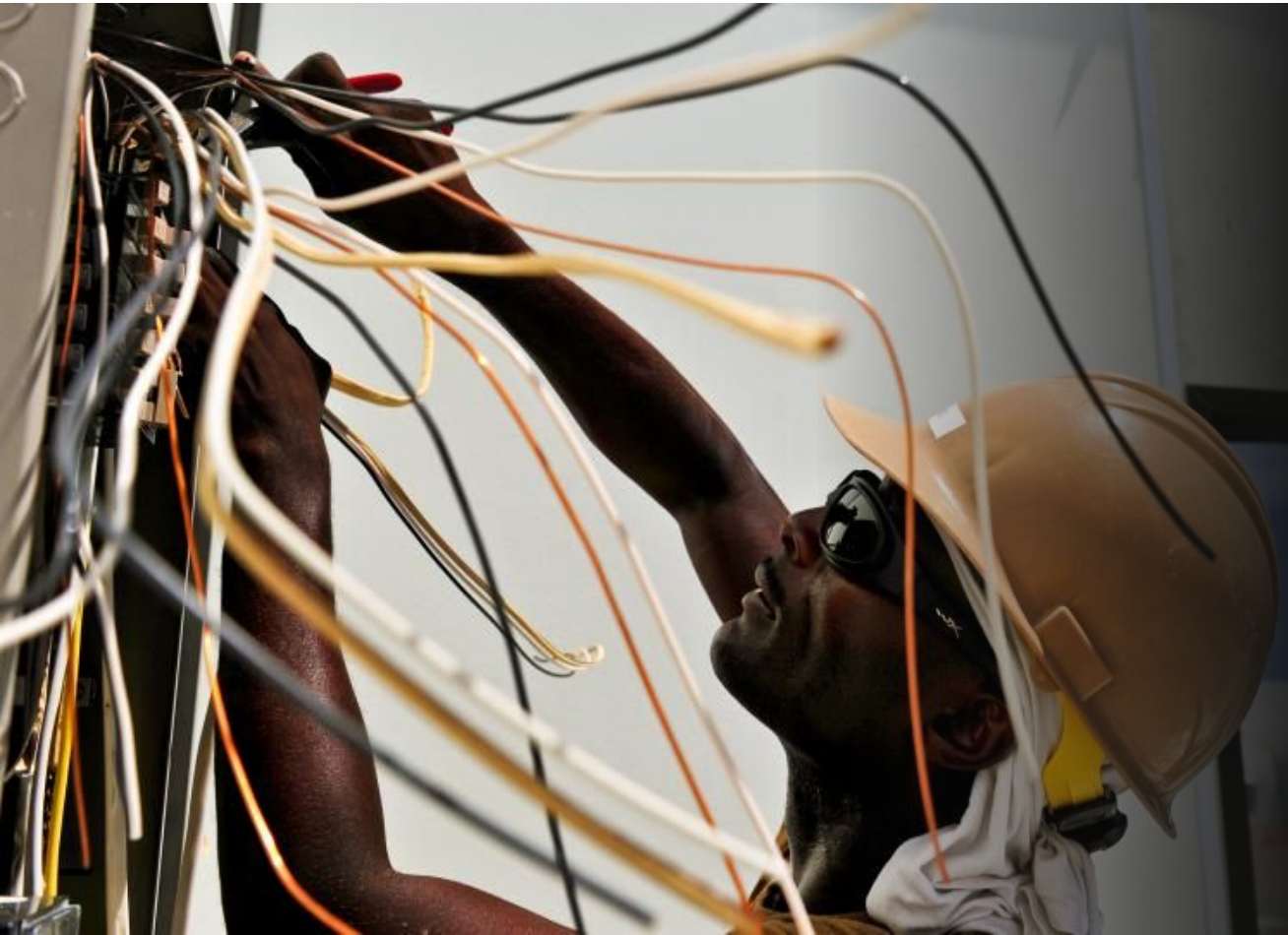
The general idea is that polluters should help pay for pollution reduction measures and Marylanders should benefit from the investments

# New Investments

With new funding sources established, the state will provide at least **$1 billion** annually to incentivize:

- Building electrification
- Transitioning to EVs
- Industrial decarbonization
- Workforce development and more

# Economic Benefits



In addition to lowering household energy costs and creating 27,000 jobs, this Plan will also

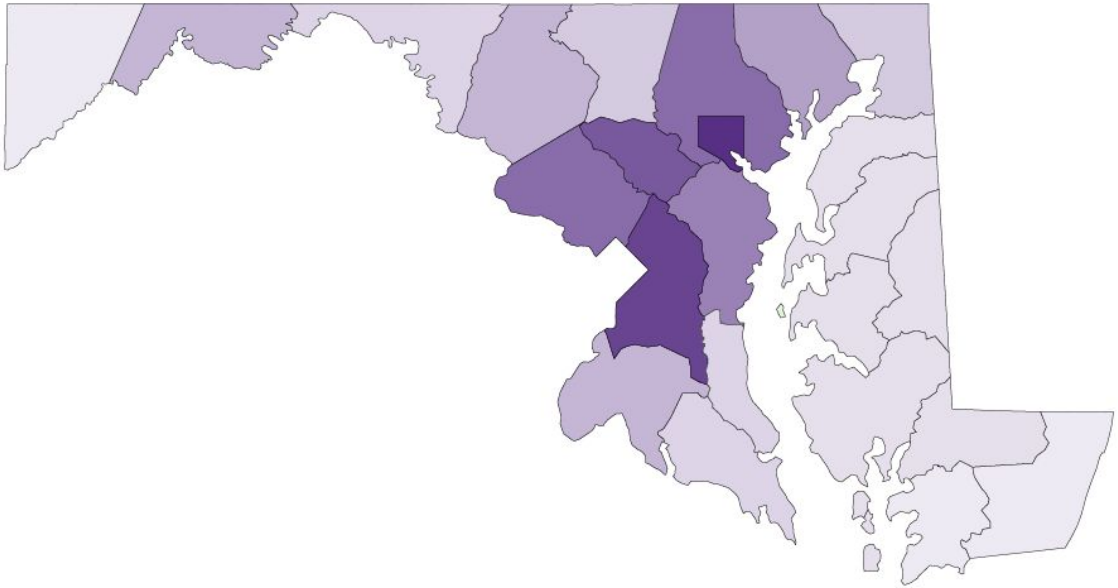
**increase total personal income by $2.5 billion**

and grow Maryland's **gross domestic product by $5.3 billion** between now and 2031

# Health Benefits

This Plan delivers between **$142 million and $321 million** in additional health benefits in 2031 compared to current policies

Most of the health benefits occur in historically disadvantaged communities



# Global Benefits

Maryland's new policies are modeled to reduce emissions by **646 million metric tons of carbon dioxide equivalent** (MMTCO2e) between now and 2050

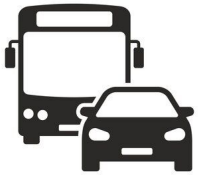
The global benefit is estimated to be **$135 billion!**

# Part 2: Policies and Next Steps

# Policies: Electricity Sector

- **POWER Act** (current)
- **Energy Storage Act** (current)
- **Incentives for Renewable Energy** (current)
- **Renewable Portfolio Standard** (current, modified)
- **Regional Greenhouse Gas Initiative** (current, modified)
- **Clean Power Standard** (new)

# Policies: Transportation Sector



- **Zero-Emission Vehicle Infrastructure Plan** (current)
- **Advanced Clean Cars II** (current)
- **Advanced Clean Trucks** (current)
- **ZEV Transit Buses** (current)
- **ZEV School Buses** (current)
- **Incentives for Purchasing EVs** (current, modified)
- **Advanced Clean Fleets** (potential)
- **Maryland Transportation Plan** (new)

# Policies: Buildings Sector

- **Energy Codes and Standards** (current)
- **Building Energy Performance Standards** (current)
- **State Government Lead by Example** (current)
- **EV-Ready Standards for New Buildings** (current, modified)
- **EmPOWER** (current, modified)
- **Incentives for Building Decarbonization** (current, modified)
- **Zero-Emission Heating Equipment Standard** (new)
- **Clean Heat Standard** (new)
- **Gas System Planning** (new)

# Policies: Industrial and Agricultural Sectors

- **Hydrofluorocarbon Regulations** (current)
- **Control of Methane Emissions from the Natural Gas Industry** (current)
- **Buy Clean** (current)
- **Incentives for Industrial Decarbonization** (current, modified)
- **Incentives for Agricultural Decarbonization** (current, modified)

# Policies: Waste Sector

- **Landfill Methane Regulations** (current)
- **Food Residuals Diversion Law** (current)
- **Sustainable Materials Management** (current)
- **Incentives for Waste Sector Decarbonization** (current, modified)

# Policies: Forestry and Land Use Sector

- **Maryland 5 Million Trees Initiative** (current)
- **Sustainable Growth** (current)
- **Forest Management** (current)
- **Coastal Wetland Management** (current)
- **Agricultural Resource Conservation Programs** (current)
- **Forest Preservation and Retention Act** (current)
- **Incentives for Forestry and Land Use** (current, modified)

# Policies: Economywide

- **Clean Economy Standard** (new)
- **Expanded Strategic Energy Investment Fund** (current, modified)
- **New Funding Sources** (potential)

# Next Steps

- ❑ Maximize federal funding opportunities
- ❑ Launch & implement regulatory processes
- ❑ Coordinate with the Maryland Commission on Climate Change
- ❑ Evaluate funding mechanisms

Please read the full plan at **mde.maryland.gov**

# Part 3: Discussion

# Questions? Contact Us

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