

# Delaware's Low Emission Vehicle 7 DE ADMIN. CODE 1140

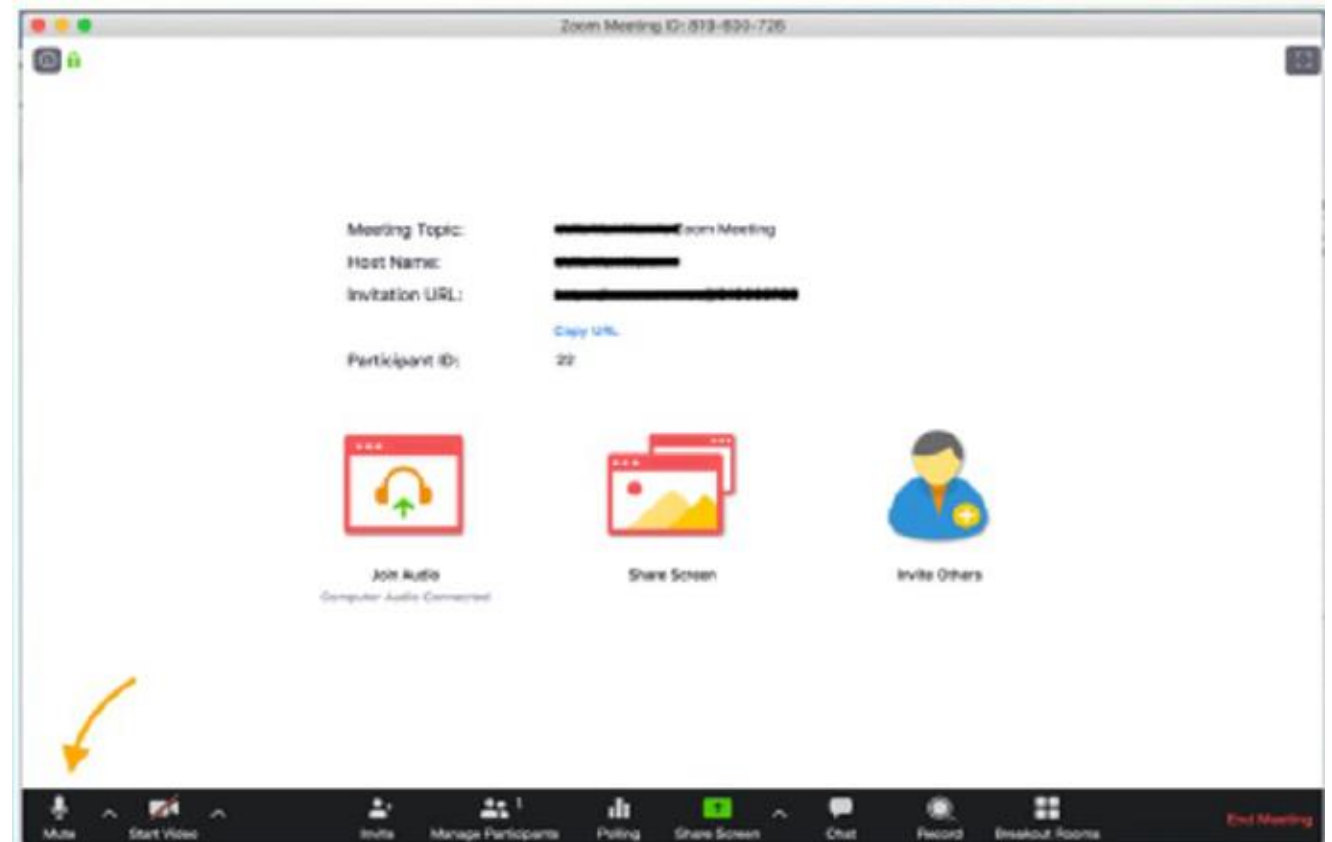
Proposed amendments for Advance Clean Car II

Virtual Public Workshop  
November 15, 16 and 17, 2022



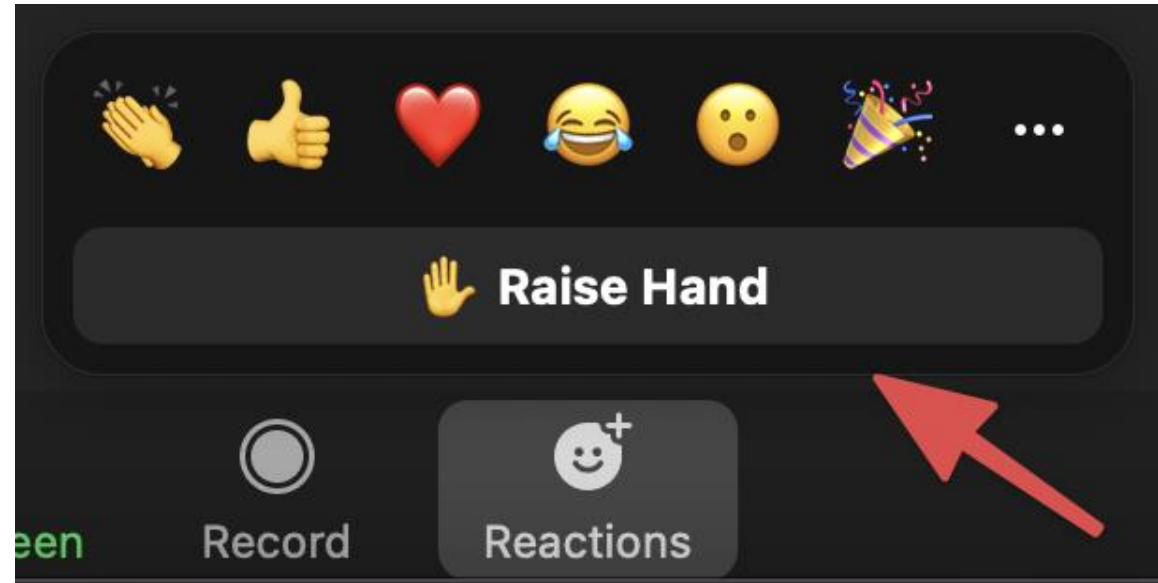
# ZOOM Orientation

- Attendees will remain on mute until called on in the speaking queue
- Zoom: **Mute/Unmute** button at the bottom left
- Phone: Dial \*6 to mute/unmute
- •Click the camera icon at the bottom left of your screen to toggle your video on and off



# Raise Hand to Speak

- To speak, please use **Raise Hand** feature
- Zoom: Using the **Reactions (Smiley face)** icon at the bottom of the screen
  - Click on **Raise Hand**
  - **Wait** to be called on...
- Then unmute yourself and speak...
- Phone: We'll check in with the phone line periodically



## Notes:

- **Windows:** You can also use the **Alt+Y** keyboard shortcut to raise or lower your hand.
- **Mac:** You can also use the **Option+Y** keyboard shortcut to raise or lower your hand.

# Meeting Logistics

- This workshop is being recorded and will be posted on the website.
- Questions can be sent via the ZOOM chat box...OR
- Raise your hand to speak
- Follow-up questions can be sent to Kyle Krall ([Kyle.krall@delaware.gov](mailto:Kyle.krall@delaware.gov))
- Comments submitted can be viewed on the [Regulations and Plans Under Development - DNREC Alpha \(delaware.gov\)](https://delaware.gov/regulations-and-plans-under-development-dnrec-alpha)

# Agenda

- Welcome, introductions, and ground rules
- Background & Overview of Advanced Clean Cars II Program
  - Low Emission Vehicle Requirements
  - Greenhouse Gas Requirements
  - Zero Emission Vehicle Requirements
- Complementary Policies
- Q/A & Open Discussion
- Wrap up and Next Steps
- Adjourn

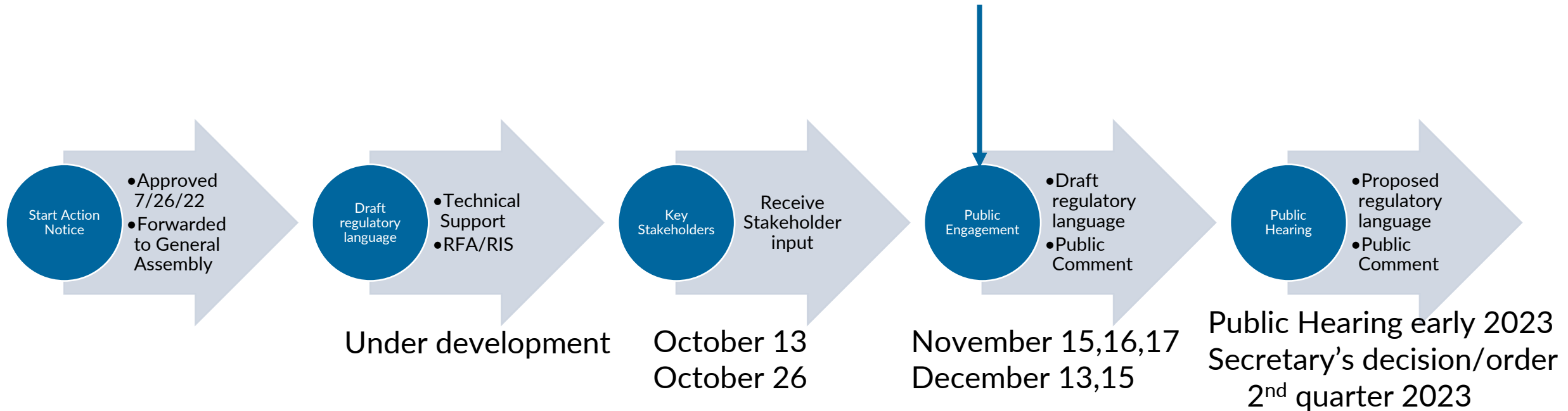


# Meeting Objectives

- Explain Delaware's Air Quality problem.
- Provide a high-level overview of the Advance Clean Car program.
- Identify key areas of concern.
- Identify barriers to implementation.



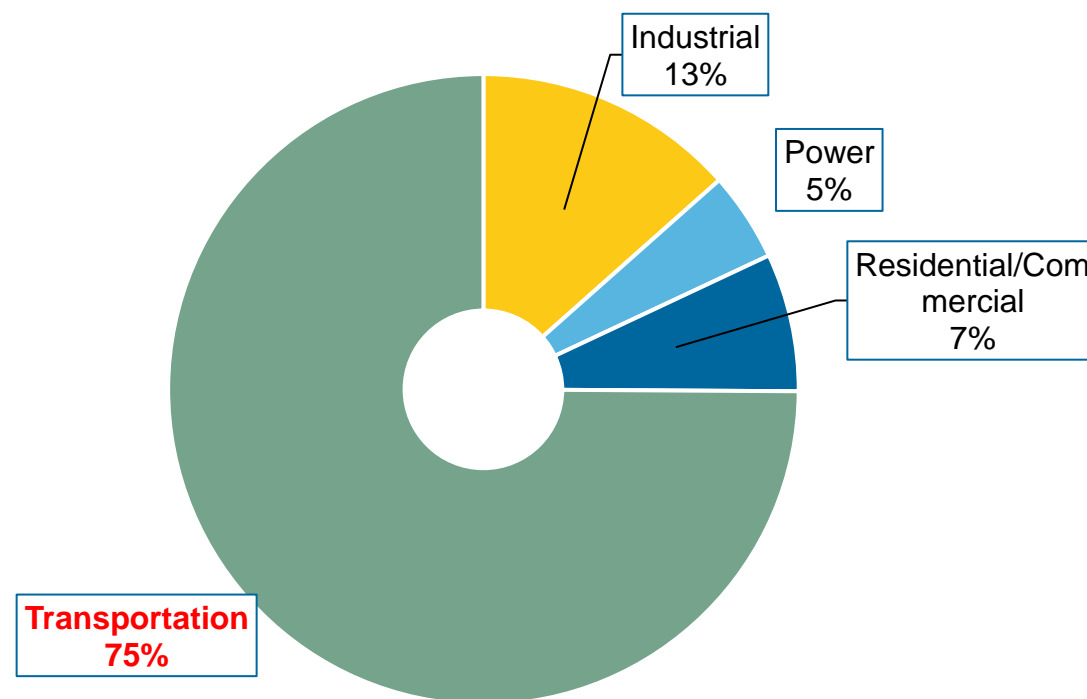
# ACC2 Regulatory development timeline



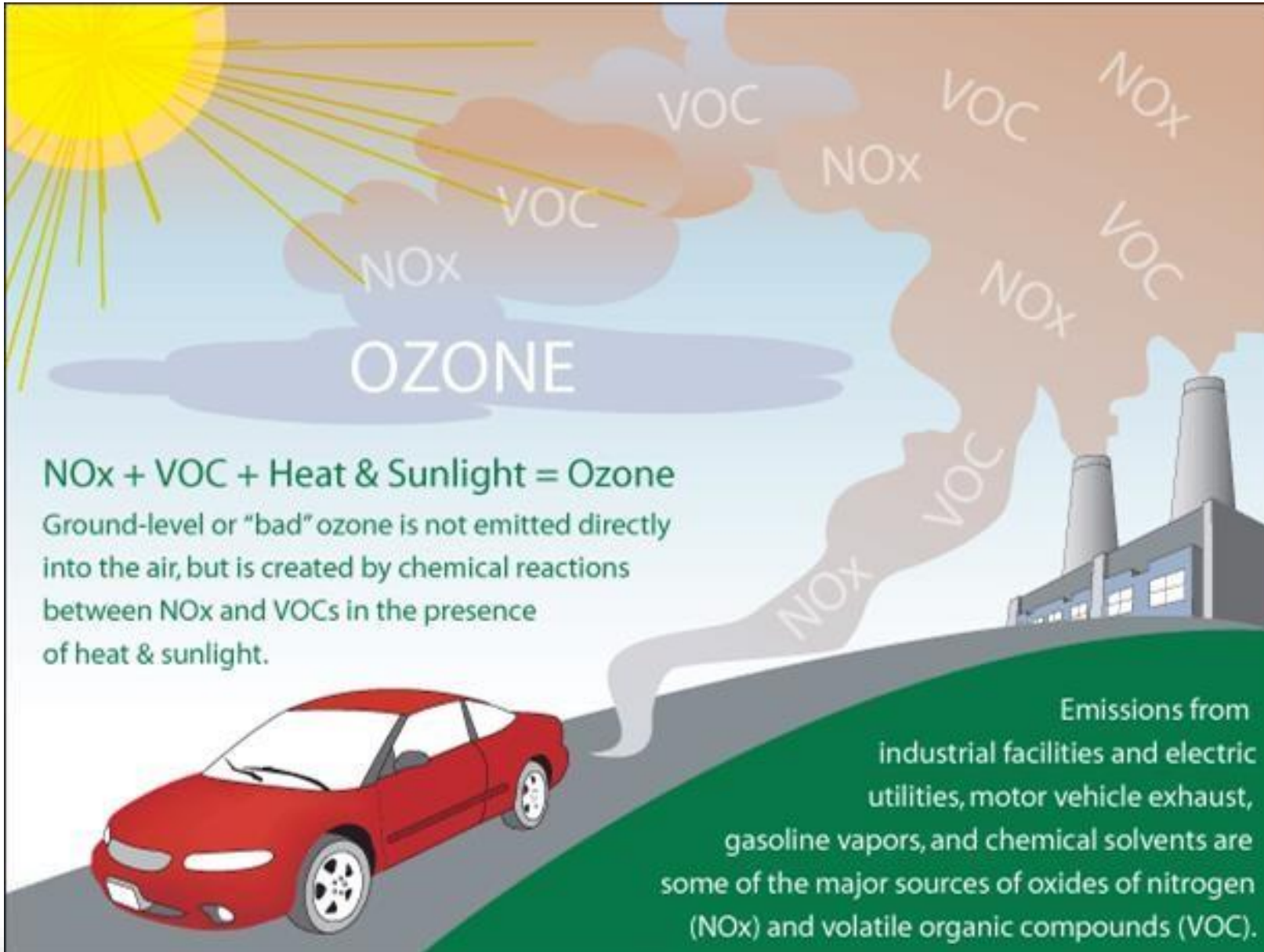
# Background on Delaware's Air Quality

- DNREC has worked to reduce smog forming pollution by ~62% since 1990.
- Delaware's New Castle County is designated non-attainment for the federal ozone health-based standard.
- Vehicles continue to contribute air quality pollutant emissions – particulate matter, CO, NOx, and greenhouse gases.

2017 NEI Delaware NOx Emissions by Sector

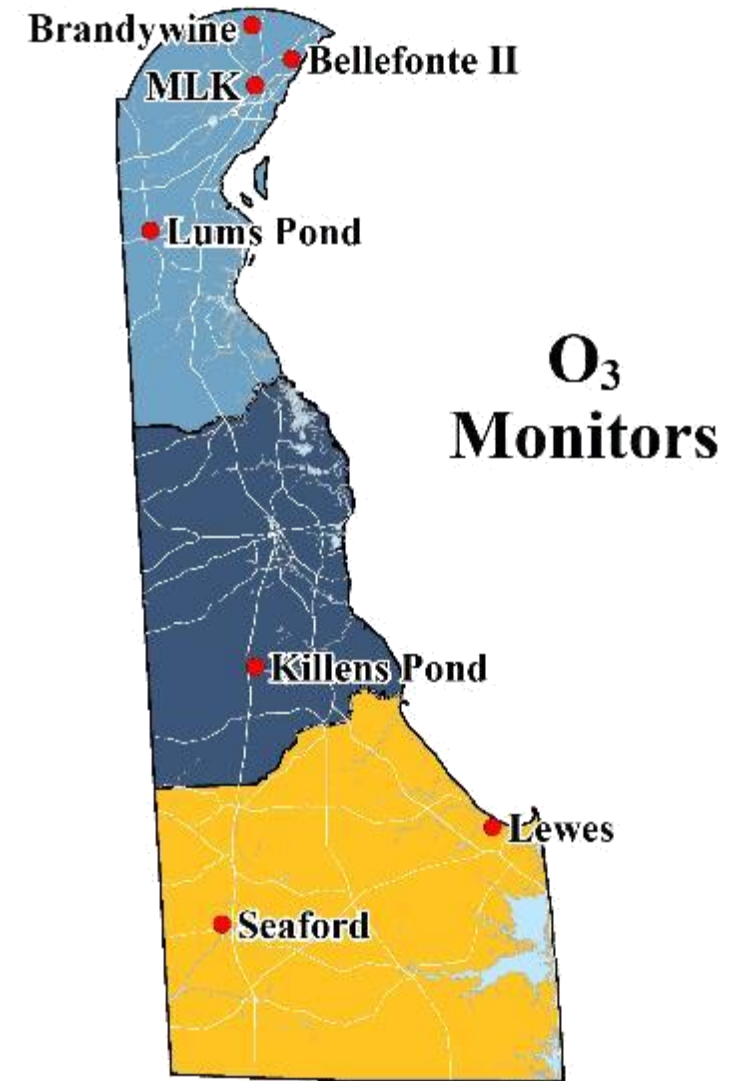
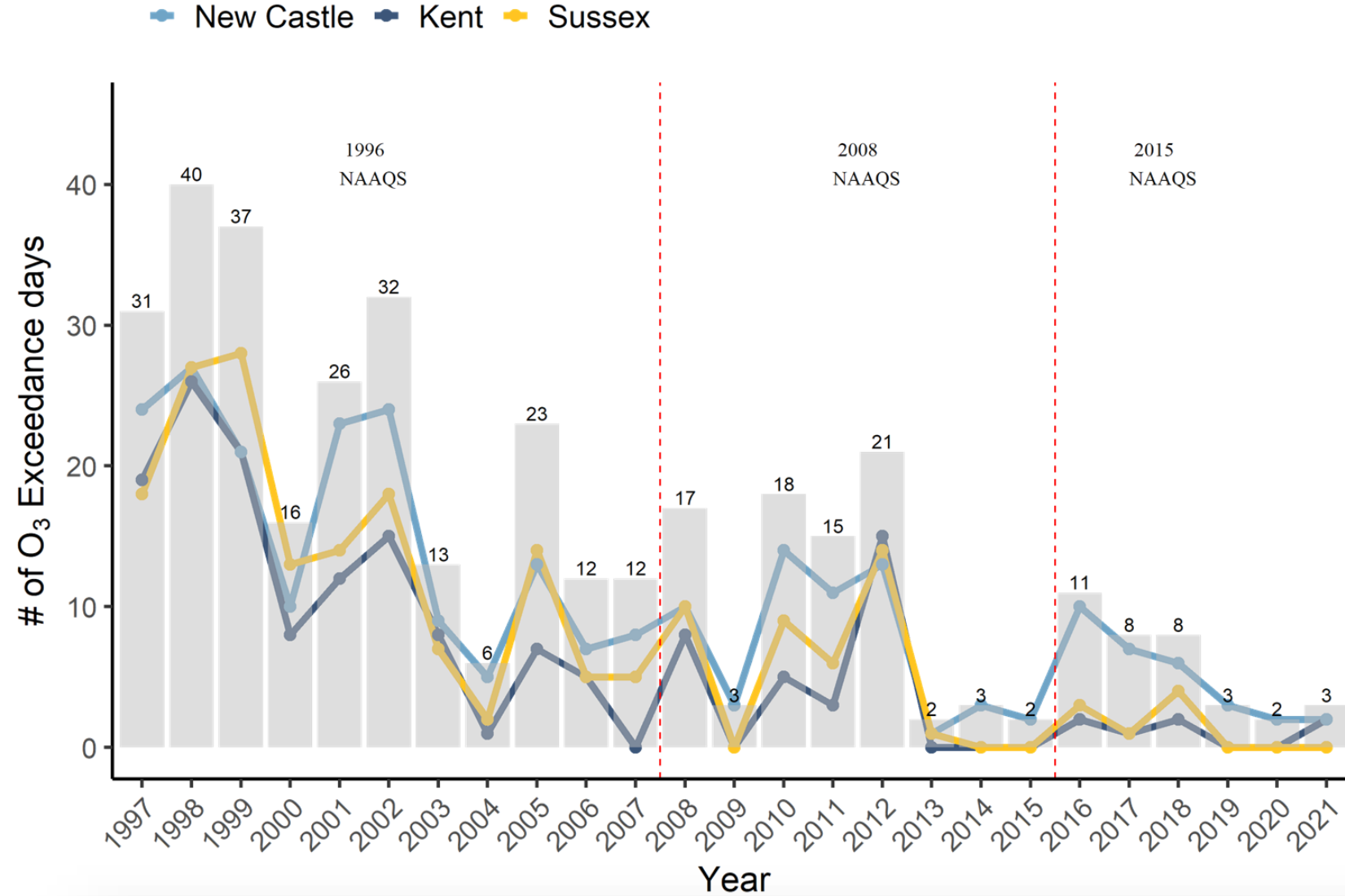


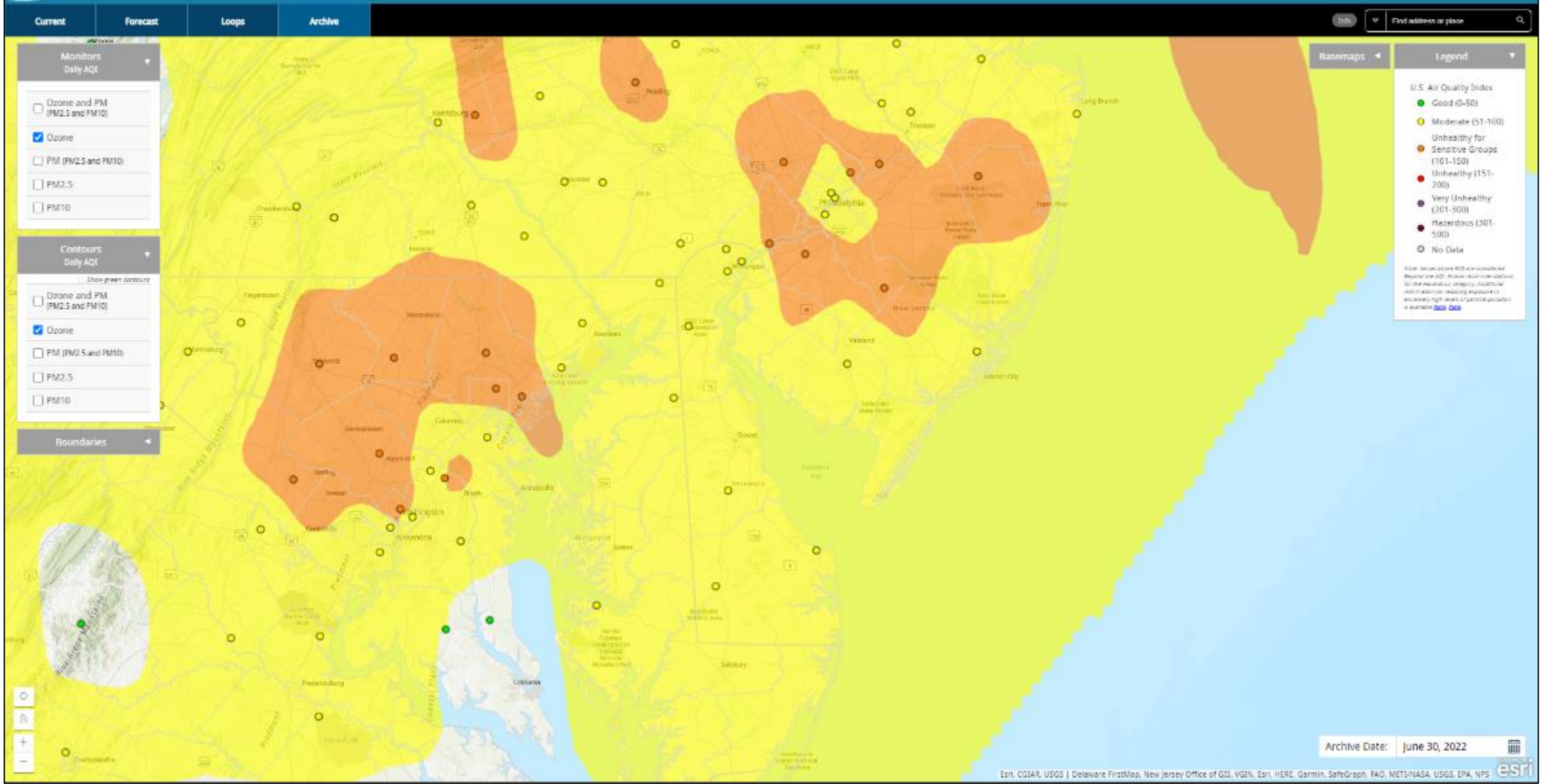




# O<sub>3</sub> Yearly 8-hour NAAQS Exceedance Days

Exceedance Days by County: 1997 to 2021



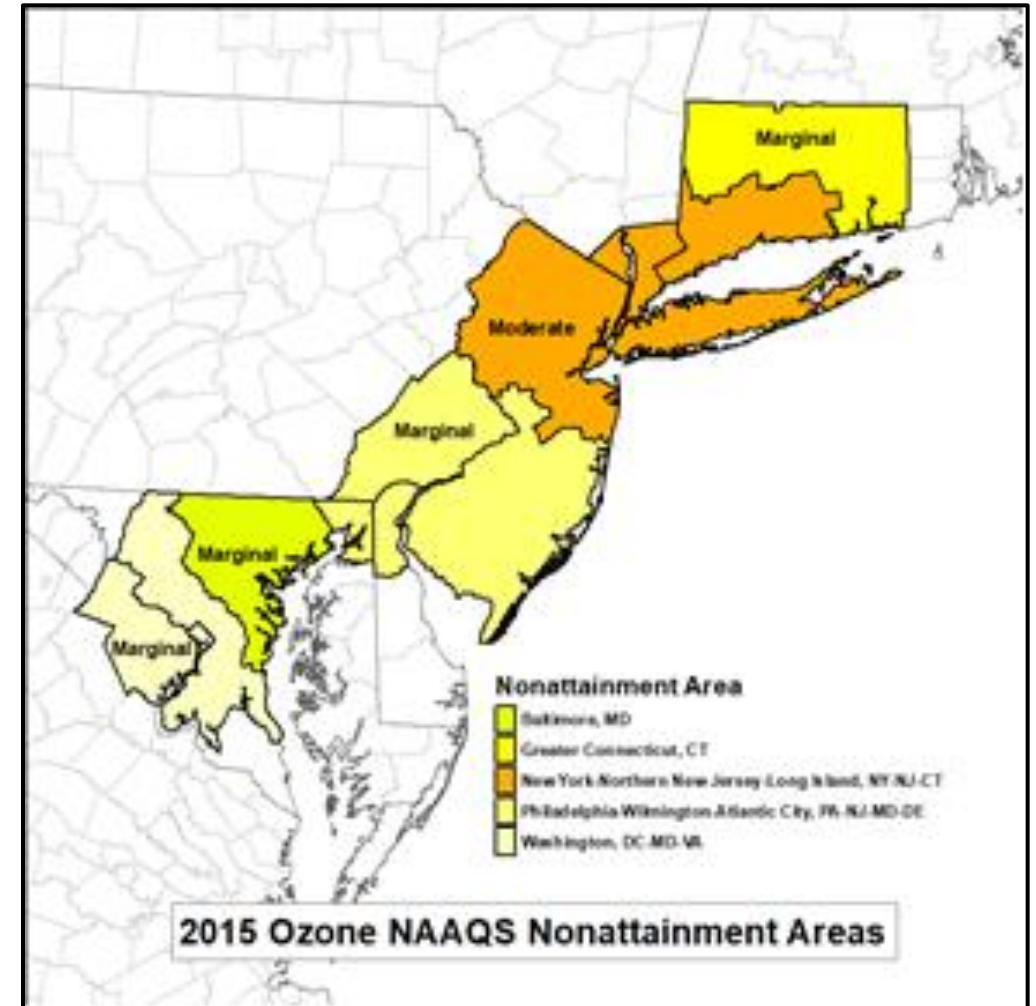


# Non-attainment Area

<b>DELAWARE</b>	
New Castle County	
8-Hour Ozone (2008)	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015)	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)*
Sussex County	
8-Hour Ozone (2008)	Seaford, DE - (Marginal)

\*Bumped-up to Moderate, Sep. 2022

Delaware's non-attainment is tied to the greater Philadelphia area. The Buck's County air monitor continues to record levels above the federal Health-based standard of 70 ppb.



# GHG Emissions from Transportation

- The largest source of GHG emissions in Delaware was the transportation sector, which represented 30% of the gross GHG emissions.
- Passenger cars and light-duty trucks represent 60% of Delaware's GHG emissions from transportation.

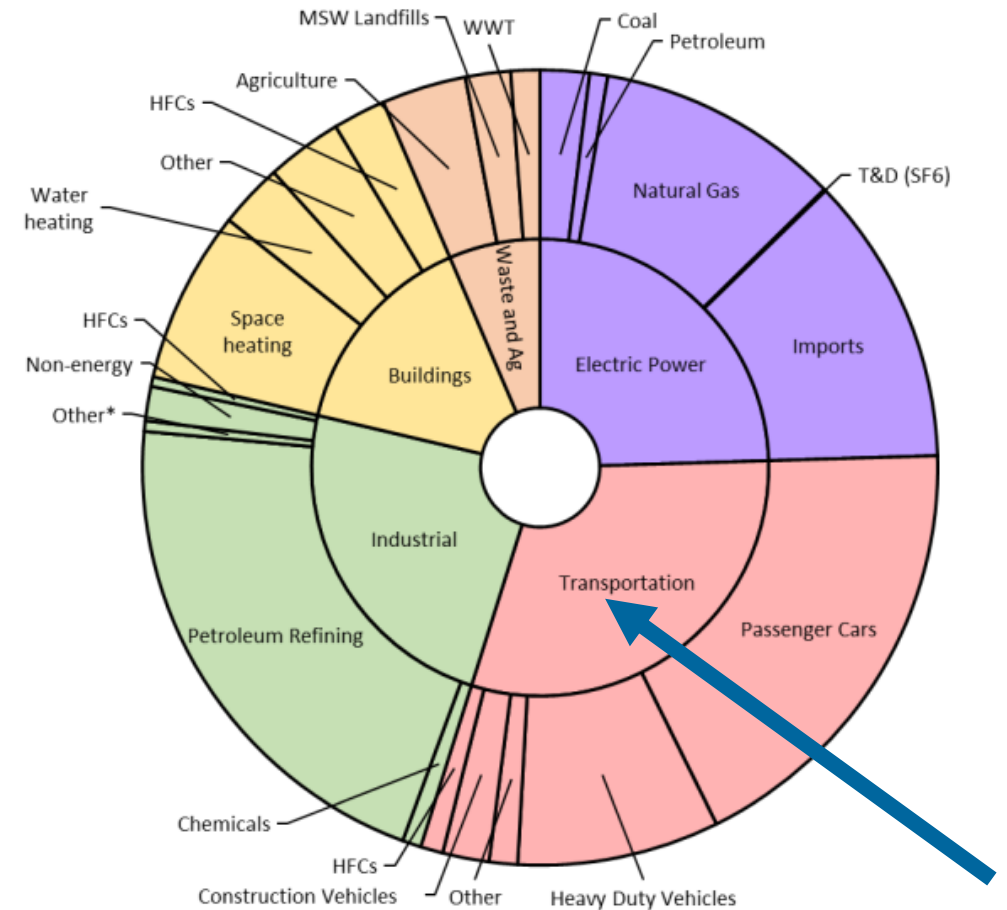


Figure 1. Gross GHG emissions in Delaware in 2018 broken out by sector and end-use (where applicable)

# Health Impacts from Tailpipe Emissions

## HUMAN HEALTH



Respiratory infections,  
Asthma, COPD



Cardiovascular diseases



Stroke, Depression,  
Headaches



Osteoporosis, Impaired  
liver and kidney function

## ENVIRONMENTAL HEALTH

Increased temperatures  
and heavier rain storms



Poor water quality,  
harmful to fish



Organ and  
reproductive failure



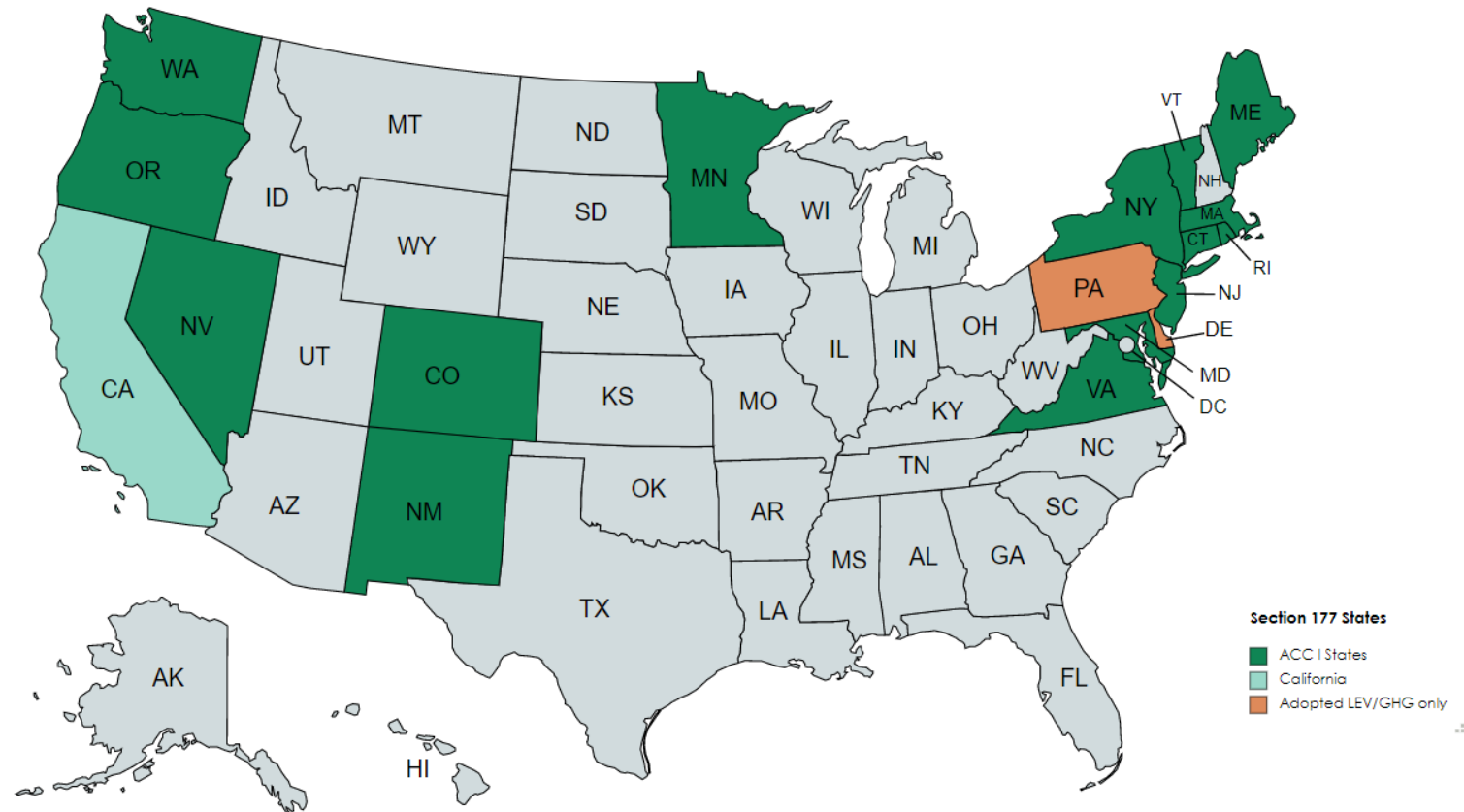
Crop damage,  
contaminated soils



# Clean Air Act and Vehicle Emission Standards

- In 1967, the federal Clean Air Act (CAA) established the framework for controlling mobile source emissions in the United States.
- Although states were preempted by Section 209 of the CAA from adopting state emissions standards, California was granted a special exemption to the federal preemption due to the state's unique air quality problems.
  - This exemption gave California the authority to set its own vehicle emission standards as long as such standards are at least as protective as the federal standards.
- A subsequent amendment to the CAA in 1990 added Section 177 that allows other states to adopt the California's vehicle emission standards instead of relying on the weaker federal standards.

# California and the Section 177 States





# Clean Air Act Limitations

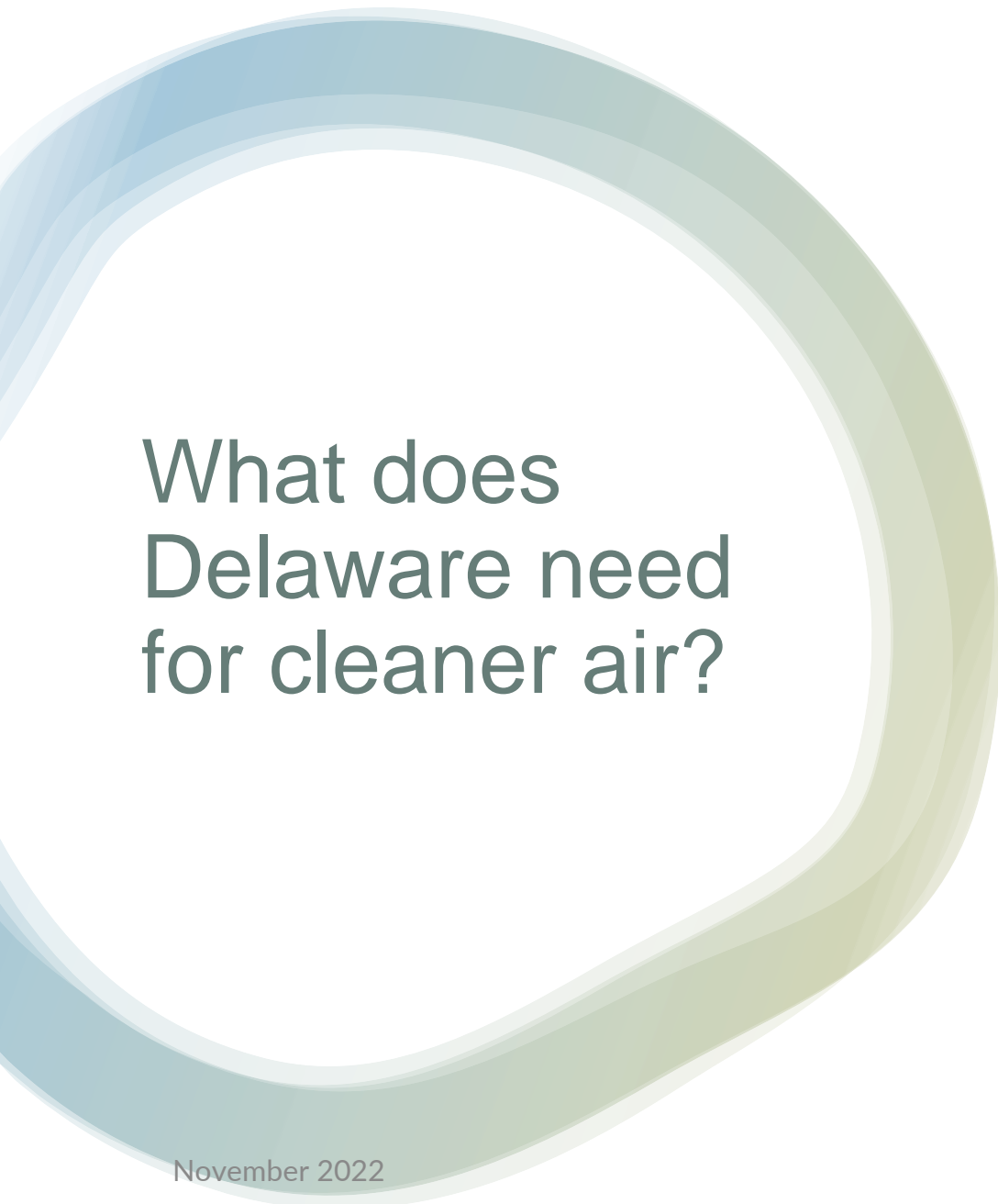
- States can adopt California emission standards but must do so identically.
- Provide auto manufacturers a two years' advance notice before the start of the model year.
- Delaware has required new vehicles meet California's more stringent emission standards since 2014.
- These emission standards in place through the 2025 model year.



# Advanced Clean Car 1 (model year 2015-2025)

- The ACC 1 program, first adopted by CARB in 2012, incorporated three elements that combined the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2015 through 2025.
- These three elements included
  - Low-Emission Vehicle standards,
  - Greenhouse Gas standards (LEV III) and
  - Zero-Emission Vehicle (ZEV) requirements.
- Delaware's ACC1 program included only 2 of the 3 elements - Low Emissions and GHG standards.





# What does Delaware need for cleaner air?

- Significant reductions of smog forming pollution from vehicles.
  - Meet the federal health-based standards
  - Reduce the vehicle emissions contributing to pollution in PA
  - Reduce the impact the transportation sector has on our EJ communities
- Reduction of GHG emissions from vehicles



## Delaware to Adopt Zero Emission Vehicle Regulation

### Goal is to Increase Electric Vehicle Availability, Purchases in First State and Save Delaware Drivers Money

**WILMINGTON, Del.** — Governor John Carney on Thursday announced that Delaware will join 13 other states in adopting California's Zero Emission Vehicle (ZEV) regulations, providing drivers looking to purchase an electric vehicle with more choices at Delaware dealerships.

"In 2017, we signed on to the U.S. Climate Alliance, committing to reduce our carbon emissions by at least 26 percent by 2025. Adopting ZEV regulations will help us make progress on those goals, as well as the other goals outlined in Delaware's Climate Action Plan," said **Governor Carney**. "By adopting the ZEV regulations, Delaware drivers won't have to go out of state to find an electric vehicle to purchase, and our dealerships will benefit by keeping Delaware customers in Delaware. By creating a better environment for the sale and purchase of electric vehicles, and aligning the environment with massive investments in infrastructure from the Bipartisan Infrastructure Law, we will create a positive electric vehicle future in our state."

Managed by the Delaware Department of Natural Resources and Environmental Control (DNREC), the ZEV program is designed to accelerate the commercialization of battery-electric, plug-in hybrid and fuel cell electric vehicles. The regulations mandate that a certain percentage of the vehicles delivered for sale in a state are ZEV vehicles. Manufacturers receive credits for each delivered vehicle based on the type of vehicle, range and other factors. Each year, manufacturers must meet a ZEV credit amount that is based on average annual sales. In states already in the program, the automobile industry has successfully met the required percentage.

Transportation is the leading source of greenhouse gas emissions in Delaware. **DNREC Secretary Shawn M. Garvin** said increasing the number of zero emission vehicles on Delaware roads, along with building out the state's electric vehicle charging network are key strategies outlined in Delaware's Climate Action Plan, a result of a two year-long process involving residents, businesses, and technical experts.

Advancing these strategies will reduce carbon pollution, improve air quality and help support fuel saving consumer. According to the U.S. Environmental Protection Agency, switching to an electric vehicle can reduce a driver's carbon footprint by up to 80 percent.

# Delaware's Strategy to Address Air Emissions from Transportation



## Advance Clean Cars is....

- Actionable
- Achievable
- Aspirational





# Who has a compliance obligation?

- The automobile manufacturers (Original Engine Manufacturer, OEM) are responsible for designing, producing and delivering vehicles to market that meet the ACC emission standards.
- Certify their vehicles meet the Criteria and GHG emission standards.
- Deliver an increasing number of Zero Emitting Vehicles for sale.
- ACC2 requirements will not ban Gasoline/Diesel vehicles in Delaware.

# What are ZEVs

- Plug-in Hybrid EVs
- Zero Emitting Vehicles

Vehicles that weigh up to 14,000 lbs gross vehicle weight.





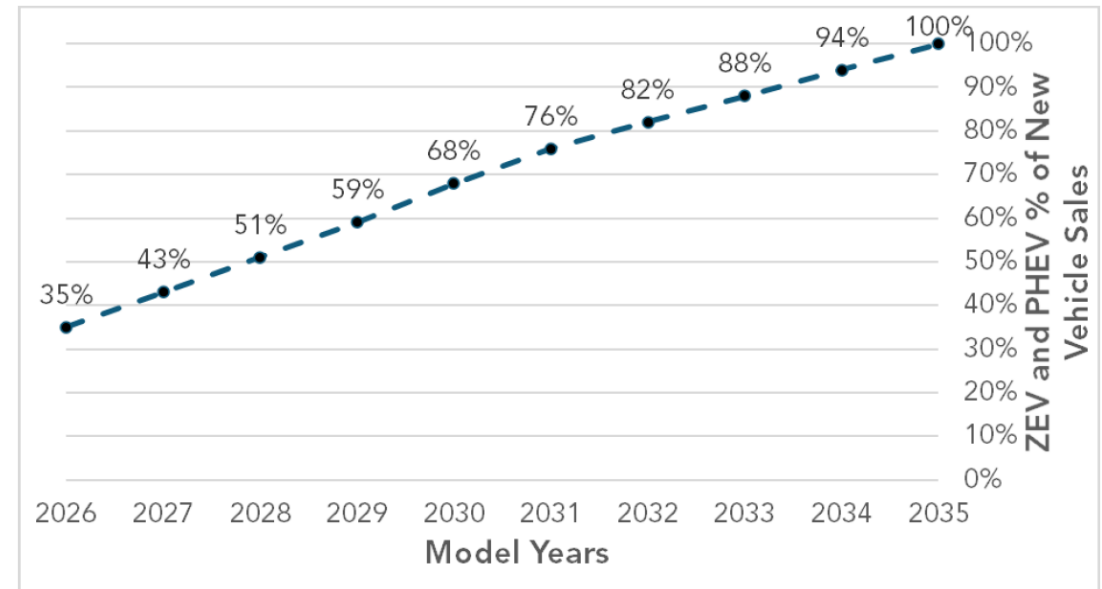
# When would compliance begin?

- Beginning with model year 2027 and not model year 2026.
- This is due to Delaware's timeline for adoption of the California amendments.
- The California program commences with model year 2026 which begins January 2, 2025.

# Program Elements – Zero Emission Vehicles

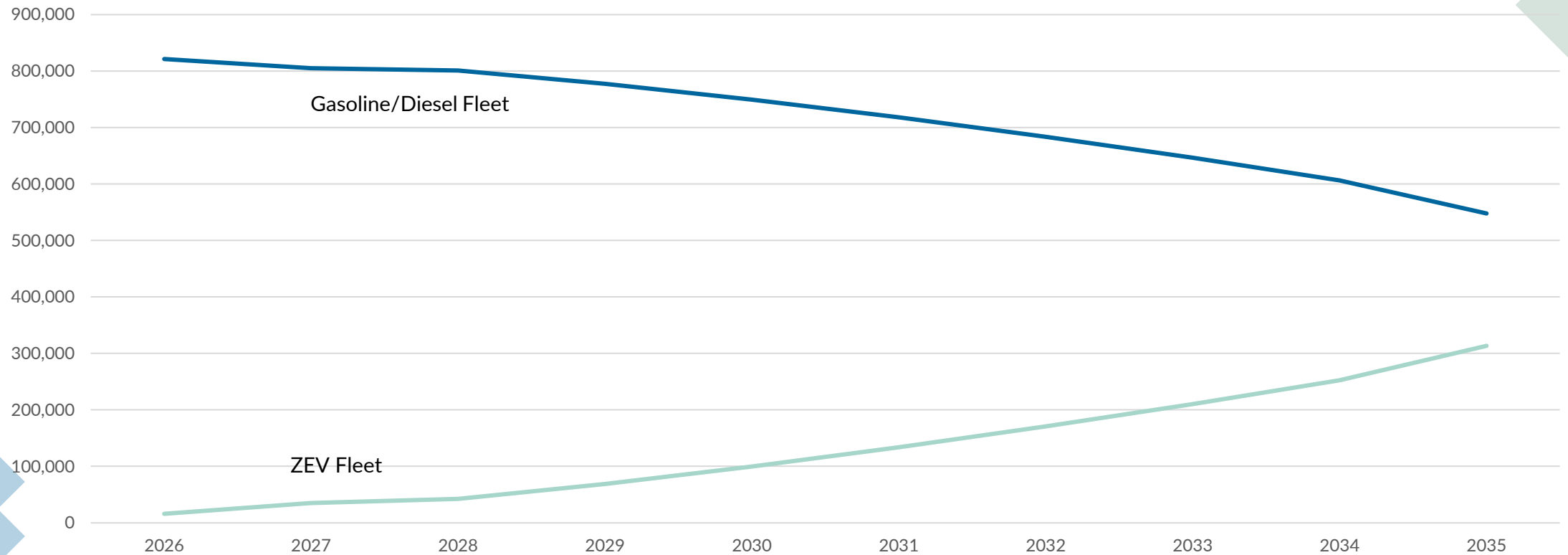


- ACCII is not a requirement that consumers purchase an electric vehicle.
- ACCII is a requirement imposed solely on auto manufacturers to deliver a certain annual percentage of ZEVs to Delaware, increasing to 100% ZEVs by 2035.
- The annual ZEV requirement aligns with where the market is expected to be in 2026 and continues to ramp up quickly.
- Small volume manufacturers must comply with the annual ZEV requirement beginning with the 2035 model year.



# Projected Delaware Fleet

Projected Delaware Fleet (2026-2035)  
Gasoline/Diesel vs. ZEV



# 7 DE Admin Code 1140 – Delaware's Low Emission Vehicle Program

- Delaware will amend Regulation 1140
- Add language to include ZEV
- Add/update California CCRs by Incorporating by Reference



# Flexibility Mechanisms

- PHEV Flexibility
- Community Based Clean Mobility Programs
- Early Compliance
- Pooling



# ACC2 Projected Emission Reductions

- Cumulative ACC II Emissions Benefits Compared to the Business-as-Usual Scenario, 2025-2040 (Model Year 2026 implementation)

	No <sub>x</sub> (tons)	PM <sub>2.5</sub> (tons)	WTW CO <sub>2</sub> e (mmt)
By 2030	140	9	1.3
By 2035	541	40	5.7
By 2040	1,234	90	12.9



# ACC2 Projected Health Benefits

The annual health outcomes of Delaware's adoption of ACC II were estimated with COBRA. COBRA estimates the change in number of cases and their economic values for PM<sub>2.5</sub>-associated health effects.

Analysis Year	Total NO <sub>x</sub> Reduction (TPY)*	Total PM <sub>2.5</sub> Reduction (TPY)*	In-State Benefit** (\$ millions)	Out-Of-State Benefit** (\$ millions)	In-State Burden*** (\$ millions)	Out-Of-State Burden*** (\$ millions)	Net Benefit**** (\$ millions)
2040	-225	-11	10.1	29.9	-3.6	-12.5	23.9

\* Emissions reduction in tons per year

\*\* The benefit of reduced on-road emissions

\*\*\* The burden of increased electric generation emissions

\*\*\*\* The sum of in-state and out-of-state benefits and burdens

# ZEV Total Cost of Ownership

- Total cost of ownership over 10 years for individual Battery EV (BEV) and Plug-Hybrid EV (PHEV) buyer compared to baseline ICEV, 2035 light duty truck (LDT2) in Single Family Home

Cost Category	BEV		PHEV
	With home charger	No home charger	With home charger
Incremental vehicle price	\$4,514	\$4,514	\$4,592
Home Level 2 Charging cost	\$850		\$850
Finance costs (document fee for Titles & interest payments)	\$789	\$597	\$607
Incremental fuel costs	-\$8,804	-\$698	-\$5,070
Incremental maintenance costs	-\$8,239	-\$8,239	-\$1,088
Incremental insurance	\$2,257	\$2,257	\$2,296
Incremental registration	\$0	\$0	\$0
<b>Total (10 years)</b>	<b>-\$8,633</b>	<b>-\$1,569</b>	<b>\$2,187</b>
Payback period	4.2	7.7	-







Time Check...

# Complementary Programs to support Clean Transportation

Division of Climate, Coastal & Energy



# Complementary Incentives, Programs and Policies

INCENTIVES

UTILITY PROGRAMS

REGULATION/  
LAWS

PLANNING



# INCENTIVES

- **The Clean Transportation Incentive Program**
- *This program initiated in 2015 and are foundational to the progress we have made thus far in deploying EVs without the companion regulations that other states have.*

## Clean Vehicle Rebate Program

### Electric Vehicle Rebates

Battery Electric Vehicles - \$2,500



Plug-in Hybrid Vehicles - \$1,000



Applies to vehicles purchased between July 1, 2021 and December 31, 2022 with a total purchase price of \$60,000 or less. Applications are due within 90 days of the vehicle's purchase.

For full program details, visit [de.gov/cleantransportation](https://de.gov/cleantransportation)

## Clean Vehicle Rebate Program

### Electric Vehicle Charging Station Rebates

Public Access/Workplace	Fleet	Multi-Family Dwellings
75% - Commercial properties 90% - Government & Nonprofit	75% - Commercial properties 90% - Government & Nonprofit	90% - Commercial properties 90% - Government & Nonprofit
Limit: 6 charging ports	Limit: 6 charging ports (commercial) Limit: 10 charging posts (Gov. & Nonprofit)	Limit: 10 charging ports

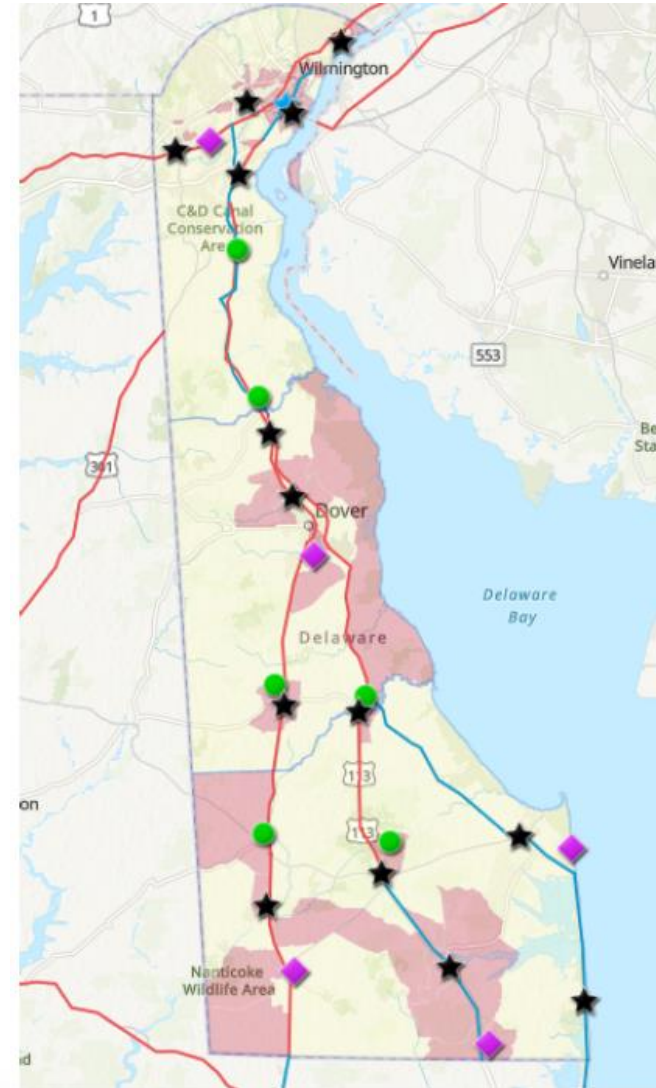
Rebates apply to the purchase of Level 2 stations. Program does not cover network fees, installation or site work.  
Max rebate: \$3,500/single port; \$7,000/dual port.

For full program details, visit [de.gov/cleantransportation](https://de.gov/cleantransportation)



# INCENTIVES

- **Competitive Grants for DC Fast: VW Mitigation Settlement Funding**
  - \$1.4M in VW settlement funds awarded through a one-time competitive grant. 14 new locations chosen.
- **Competitive Grants Incentives for Charging through Federal NEVI Funding: Coming soon!**
  - \$18M over 5 years will be invested in charging stations beginning with DC Fast stations in highway corridors, then focusing on neighborhood charging of various types. Delaware NEVI Plan approved.



# INCENTIVES

- **NEW! Energize DE program for Local Governments**
- Grants up to \$500,000 to assist municipal and county governments purchase of EVs, charging stations, electric motorcycles and electric lawn equipment.

## GRANTS FOR LOCAL GOVERNMENT EV FLEETS

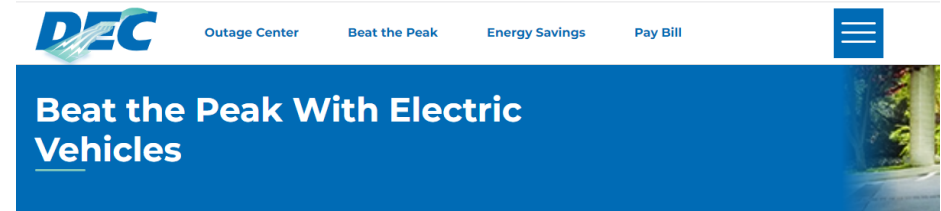
Energize Delaware promotes the use of electric vehicles in county and local governments. Because of this, we created a new program, **Grants for Local Government EV Fleets**, funded with five million dollars in the fiscal year 2022-2023. The grant will help county and local governments purchase electric vehicles (EVs). Grants are available for up to \$500,000. Energize Delaware will only accept one grant per applicant except when the local government requests funding for a feasibility study. In that case, they may follow up with a second grant for vehicles and charging stations.

**Applications will be accepted starting October 15, 2022**



# UTILITY PROGRAMS

- **DE Electric Coop residential charger program**
  - Customers of the Coop can get a \$200 billing credit and \$5 credit during summer months for participating in a Beat the Peak program. Specific requirements for charger used.
- **Delmarva Power Electric Vehicle Program**
- Delmarva Power customers can receive a time-of-use rate specific to EV charging.



## Receive a \$200 Billing Credit!

Members who have purchased or who are considering the purchase of an electric vehicle (EV) can play a new and important role in our Beat the Peak program.



## REGULATION/ LAWS

**Regulation of charging stations by Public Service Commission:** In 2019, PSC determined they would not regulate charging stations as public utilities or electricity providers, eliminating regulatory uncertainty and delays

**New Castle County Code requirements:** NCCo is the first county to require that new construction is "EV-Ready".

### **State legislation: SB187**

SB187 requires the development of ordinances to guide the provision of charging stations on residential streets. Law applies to towns with populations with over 30,000 people (Dover, Newark, Wilmington)

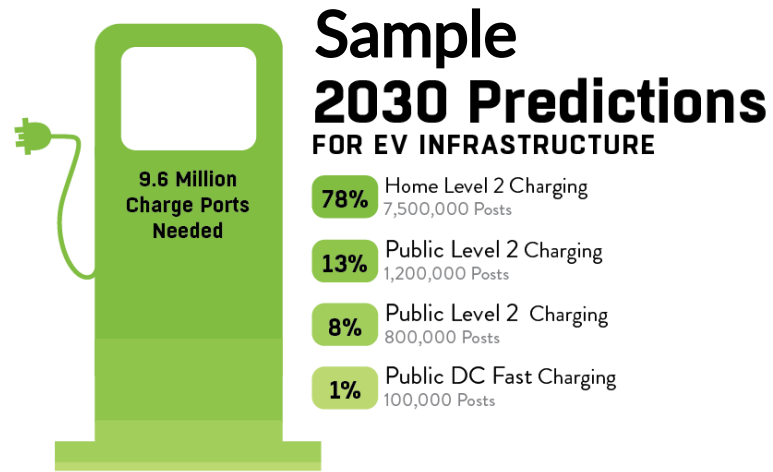




# PLANNING



Delaware NEVI Plan



Statewide EV Infrastructure Plan



Update Delaware Energy Plan

# Open Discussion Ground Rules....

- Be curious, open, patient and respectful
- One person speaks at a time
- Avoid jargon, acronyms and industry terms
- Speak from your own experience
- Challenge assumptions
- Anything else...?





# Questions?

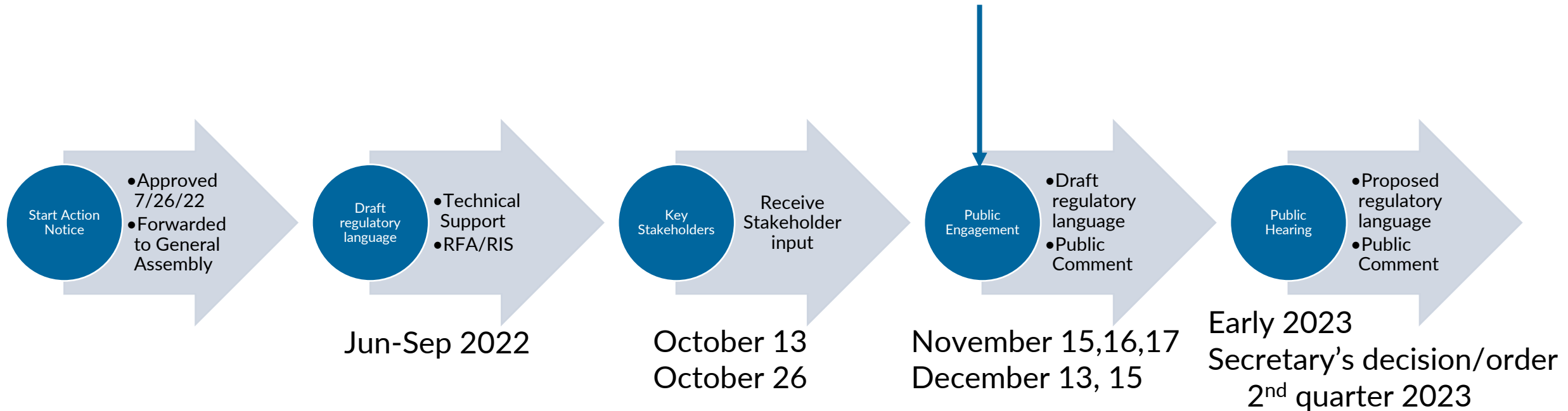
Should Delaware adopt the ACC2 vehicle emission standards?

If NOT ACC2, then what policies should the Department implement to reduce vehicle emissions?

What barriers have you identified that the Department should consider?

What issues should we consider going forward?

# ACC2 Regulatory development timeline

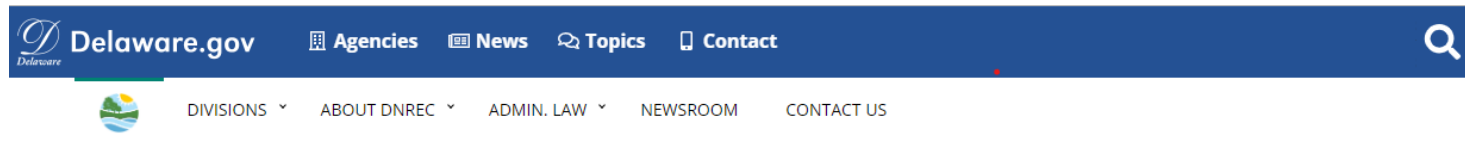


# Next Steps

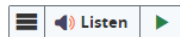
- November Workshop comments by December 2<sup>nd</sup>
- Additional Virtual Public Workshops
  - Tuesday, December 13, 2022 Public workshop 6 pm
  - Thursday, December 15, 2022 Public workshop 6 pm
  - December Workshop comments due December 30<sup>th</sup>
- 1<sup>st</sup> Quarter 2023 Public Hearing
  - Comment deadline 15 days after public hearing
- July 1<sup>st</sup> Final adoption
- January 2, 2026 program begins with model year 2027 vehicles



# For additional information – see our website at <https://dnrec.alpha.delaware.gov/air/permitting/under-development>



## Regulations and Plans Under Development



- Air Quality**
- Home
- Contact Us
- Air Quality
- Open Burning
- Asbestos
- Permitting & Regulation
- Greenhouse Gases
- Mobile Sources
- Get Involved
- Business Assistance

The DNREC Division of Air Quality is committed to openness and transparency as it updates and amends state Air Quality Regulations and related state implementation plans. This page provides information on items under development.

[Air Quality Regulations](#)

[Air Quality Public Hearings](#)

### Amendments to the Delaware's Low Emission Vehicle Program

The Division of Air Quality is amending regulation 7 DE Admin. Code 1140 – Delaware's Low Emission Vehicle Program.

The purpose of this action is to amend 7 DE Admin. Code 1140, to update the adoption by reference of California's Advance Clean Car II (ACC II) low emission vehicle and greenhouse gas standards and add the requirements for zero emitting vehicles for model year 2026 and beyond.

The ACC II regulations will reduce criteria and greenhouse gas emissions from new light- and medium-duty vehicles beyond the 2025 model year as well as add the new requirements for zero emission vehicles.

These standards were adopted in 2010 and went into effect for model year 2014, and since the original adoption California has made changes necessary for automobile manufactures to comply.

Section 177 of the Clean Air Act requires that Delaware standards must be "identical to the California standards."

This regulatory amendment process started with [DNREC Start Action Notice 2022-01](#).

**Contact Us**

[Kyle Krall](#)

Division of Air Quality  
302-739-9402

- [Proposed Draft Amendments](#)
- [Stakeholder Meetings](#)
- [Public Workshops](#)



November 2022



DELAWARE DEPARTMENT OF  
NATURAL RESOURCES AND  
ENVIRONMENTAL CONTROL

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