



CEEJAC AIR AND TRANSPORTATION SUBCOMMITTEE

Presented by: Paul Farrell, Jaimeson Sinclair, and Jake Felton
Bureau of Air Management
April 26, 2023

INTRODUCTIONS

*Chair, Alex Rodriguez, Environmental Justice Specialist,
Save the Sound*

Edith Pestana, Environmental Justice Program Coordinator, CT DEEP

AGENDA

Welcome and introductions from the CEEJAC subcommittee chair

Ground Rules

Re-cap of First CEEJAC Air & Transportation Subcommittee meeting – DEEP/Paul Farrell

Overview of New CT Greenhouse Gas Inventory Report – DEEP/Jeff Howard

Overview of DEEP's Air Permitting Program - What we do & why we do it - DEEP/Jaimeson Sinclair

Overview of DEEP's Air and Transportation Programs – DEEP/Paul Farrell

Community-Based Air Monitoring Opportunities - DEEP/Pete Babich

GMAP Program Update - DEEP/Jake Felton

Subcommittee Comments and Opportunities

Q & A

Public Comment

Closing and Next Steps

CEEJAC MEETING GROUND RULES

During the discussion, all members should:

- **Listen respectfully, without interrupting.**
- **Listen actively and with an ear to understanding others' views.**
- **Only have one conversation at a time.**
- **Be mindful to give others the opportunity to speak.**
- **Focus on the task at hand rather than the position.**
- **Avoid off-topic conversations.**
- **Criticize ideas, not people.**
- **Commit to learning, not debating.**
- **Avoid blame, speculation and inflammatory language.**
- **Avoid assumptions about any member of the group.**



STATIONARY SOURCE REGULATORY DEVELOPMENT FOR 2023-2024

Presented by: Jaimeson Sinclair
April 2023

AIR QUALITY REGULATIONS IN DEVELOPMENT

■ How to Access Rules in Development:

- All Regulations in Development can be found in the [eRegulations System](#)
- To hear about Air Regulations in early development stages join [SIPRAC](#)

■ Ozone Reclassification (“Bump-Up”) Regulations in Development:

- [Definition of Severe Ozone Non-Attainment Area](#) – Designates more areas as Severe Ozone Non-Attainment and reduces the applicable Major Source and Title V Thresholds
- [Reasonably Available Control Technology for NOx](#) – Creates a schedule for compliance with lower NOx emissions limits for the recently redesignated areas (More stringent limitations triggered at lower emissions thresholds in New Haven and Middlesex Counties)

■ [General language cleanup](#)

- Updates definition of Hazardous Air Pollutant
- Clarifies some obscure permitting provisions

■ Forthcoming

- NOx controls for Municipal Solid Waste Incinerators
- Review of Petroleum Storage Tanks and VOC control



AIR PERMITTING: WHAT WE PERMIT AND WHY

Presented by: **Jaimeson Sinclair**
April 2023

HOW CAN THE PUBLIC PARTICIPATE IN THE PERMIT PROCESS?

- 1. Prior to submission of a Permit Application, Applicant must post notice that the application is being submitted. Such Notice must be posted in a “newspaper of general circulation” in the area where the activity will occur.**
 - This notice provides any interested individual the opportunity to engage with the Department to obtain copies of the application and to also seek intervenor status (i.e. become an active participant in the permit application review process)

- 2. Notice of Tentative Determination to approve or deny the application**
 - Notice initiates 30 public comment period during which any one member of the public can request a public hearing on the application
 - Written comments can be submitted to the Department
 - Provides the public the opportunity to request copies of the proposed permit and the technical support documentation that provides justification for the proposed decision to approve or deny the permit

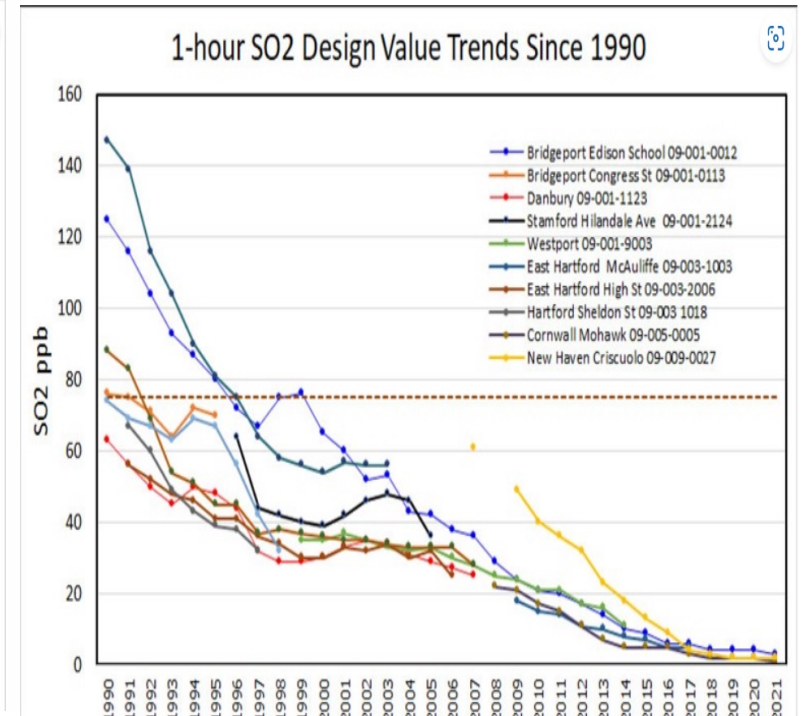
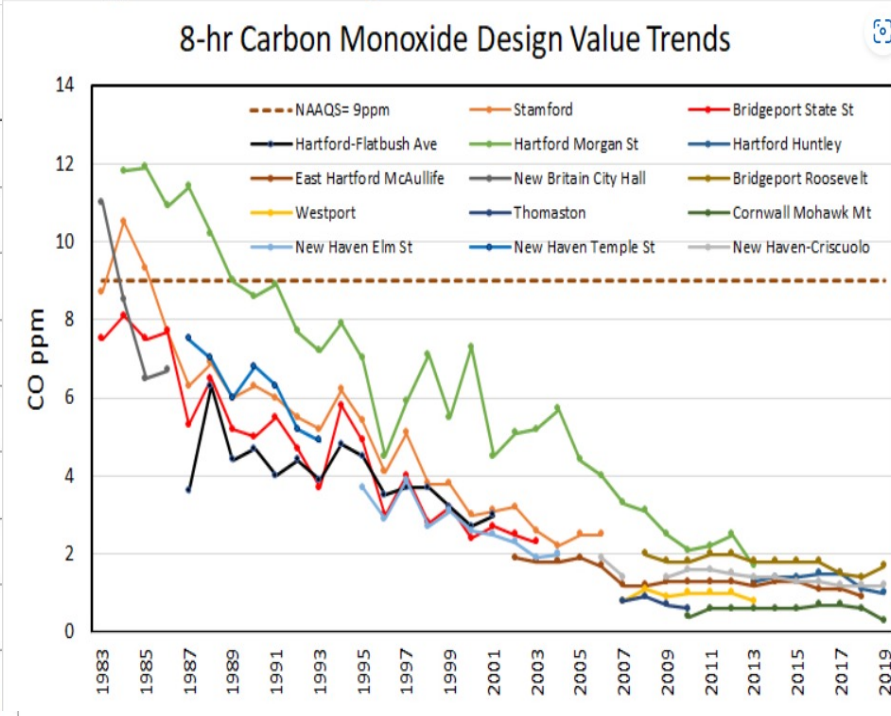
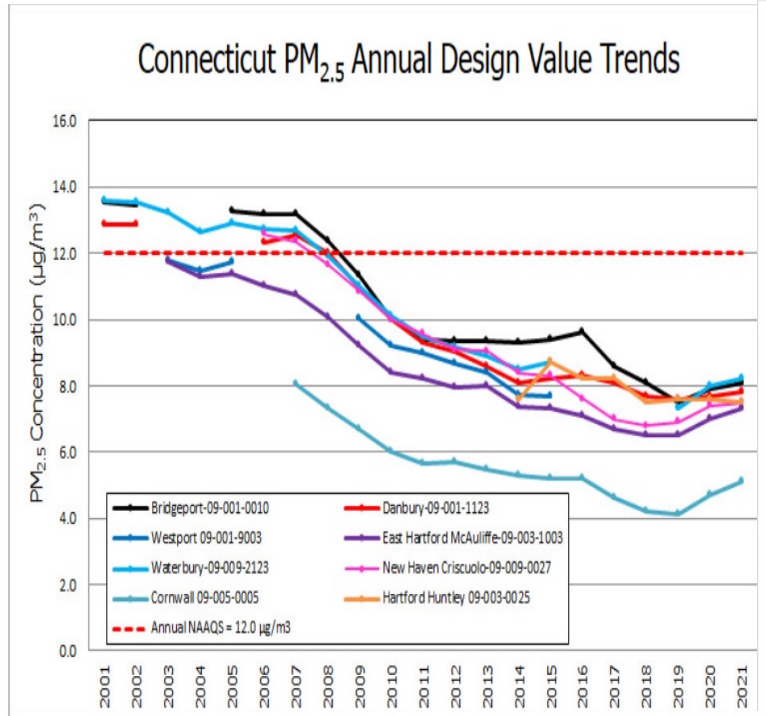
DEEP Public Notices and eAlert

To Request Permit Application related documents: FOIA

WHY DO WE ISSUE AIR PERMITS?

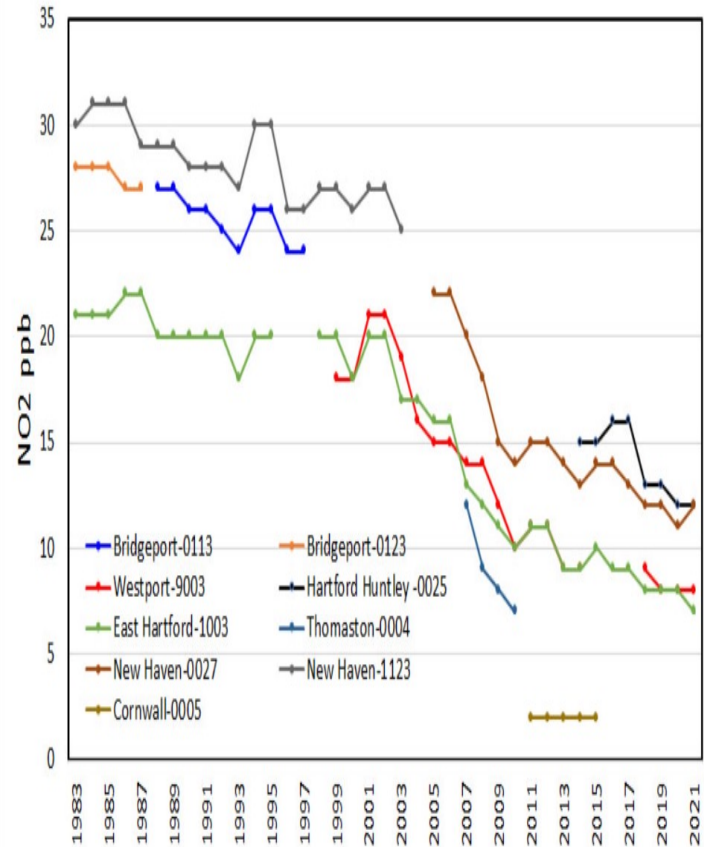
- 1. Primary Reason: Assure compliance with National Ambient Air Quality Standards (NAAQS) and Prevent Significant Deterioration of Air Quality**
- 2. Enforce Federal Emissions Standards under the New Source Performance Standards and National Emissions Standards for Hazardous Air Pollutants**
- 3. Limit Emissions of State Regulated Hazardous Air Pollutants**

NAAQS COMPLIANCE IN CONNECTICUT

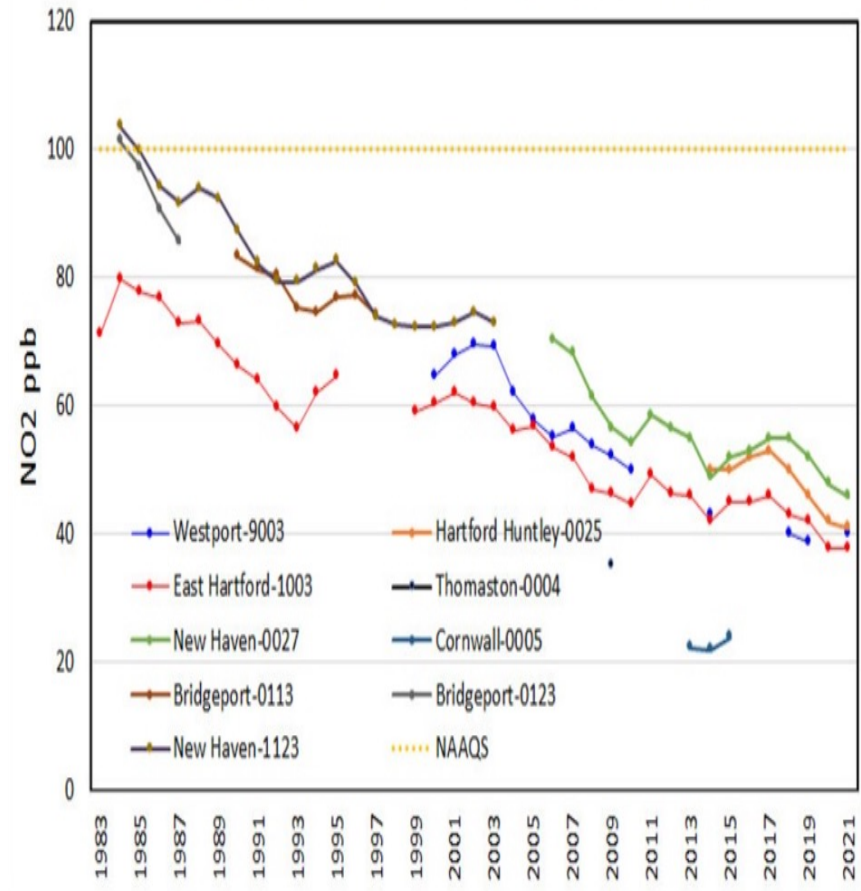


NAAQS COMPLIANCE IN CONNECTICUT

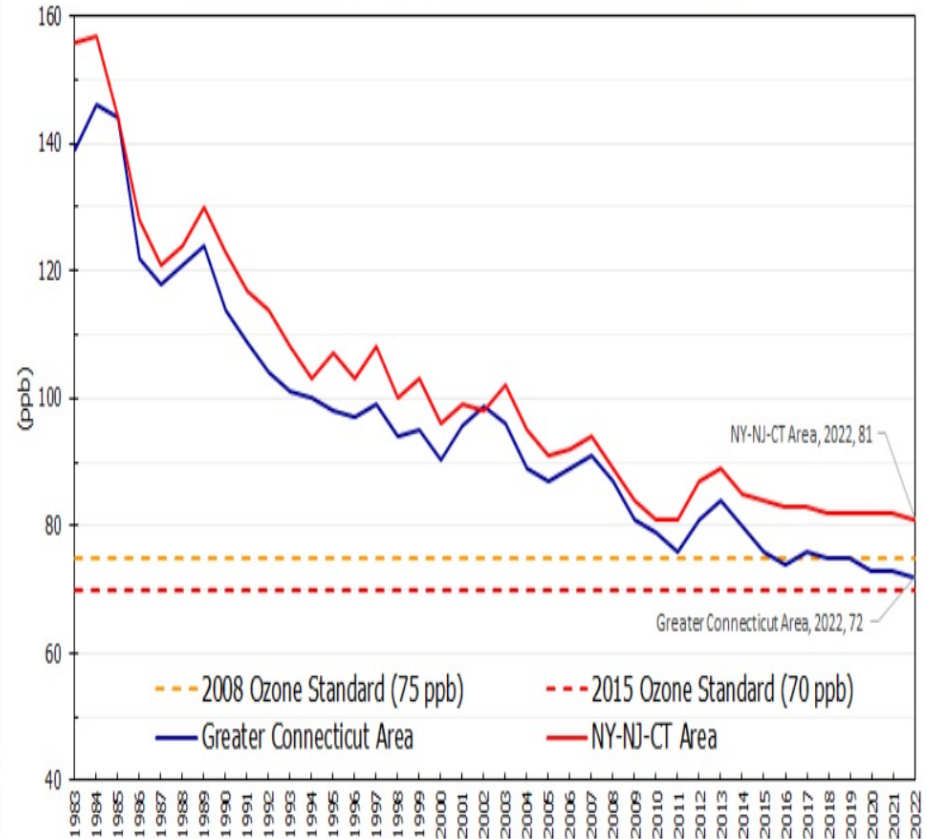
Connecticut NO2 Monitor Annual Design Value Trends



Connecticut 1-hour NO2 Design Value Trends



Ozone Design Value Trends Connecticut's Two Nonattainment Areas



WHAT KINDS OF AIR PERMITS DO WE ISSUE?

New Source Review Permits – Equipment/Process specific permits

RCSA Section 22a-174-3a

Title V Operating Permits – Facility-wide Permit; primary function is to generate a comprehensive document incorporating all the statutes, regulations, permits, orders and registrations to which a Title V Source (“affecting facility” for EJ Purposes) is subject to enhance enforcement.

RCSA Section 22a-174-33

NEW SOURCE REVIEW PERMITS

Applicability –

- **New source or modification of an existing source that has the potential to emit 15 tpy or more of any regulated air pollutant. Examples, include**
 - Large combustion sources (boilers, engines, electric generating units that burn fossil fuels, incinerators)
 - Surface Preparation/Surface coating operations (degreasing, metal surface preparation/plating, spray painting)
 - Chemical process lines /chemical manufacture operations
 - Mineral Processing Operations – quarries, asphalt plants
- **New equipment or modifications at major source facilities that exceed a certain aggregate increase in pollution over a 5 yr period.**
- **New source or modification that becomes a major source of hazardous air pollutant (i.e. has the potential to emit > 10 tpy of hazardous air pollutant)**

WHY ARE TENTATIVE DETERMINATIONS TO DENY PERMITS RARE?

- 1. A tentative determination to deny a project is publicly embarrassing for the Applicant because it will be posted in the newspaper and on the Department's website...Consequently applicants seek to spare themselves the embarrassment by either : 1.) Designing a project to comply with the standards, 2.) modifying a deficient application to comply with the standards, 3.) not applying at all because the standards can't be met, or 4.) withdrawing the application for a deficient project**
- 2. The standards for granting a permit are codified in law and publicly available**
- 3. Most potential applicants who know a project can't meet the published standards simply do not apply**
- 4. When the Department's analysis shows that a project can't meet the standards the Department informs the applicant that denial is likely**
 - A. Applicant modifies the design and operation of the project to meet the standards, or**
 - B. Applicant withdraws the application**

WHAT ARE THE STANDARDS FOR GRANTING A PERMIT?

RCSA 22a-174-3a(d): The Department **CANNOT** grant a permit unless the applicant demonstrates that the proposed new source or modification will comply with:

| | |
|--|--|
| All applicable emissions limits, statutes, regulations, and other orders of the Commissioner | Maximum Allowable Stack Concentrations for State regulated Hazardous Air Pollutants |
| NAAQS and PSD increments | NSPS and NESHAPS |
| Best Available Control Technology | |
| <u>For Major Sources of Ozone Precursors (i.e. NOx and/or VOC):</u> | |
| Lowest Achievable Emission Rate | Alternative Analysis that demonstrates the benefits of the source outweigh the impacts |
| Offsetting Emissions Reductions | |

HOW DOES THE APPLICANT DEMONSTRATE AND THE DEPARTMENT VERIFY COMPLIANCE WITH THE STANDARDS FOR GRANTING A PERMIT?

| | |
|---|---|
| <p>All applicable emissions limits, statutes, regulations, and other orders of the Commissioner</p> | <p>1.) Compliance History Review 2.) Engineering Review of:</p> <ul style="list-style-type: none"> ▪ Equipment Design ▪ Raw material inputs ▪ Emissions Rates ▪ Emissions Control Equipment Specifications ▪ Hours of Operation ▪ Review of emissions limits and standards codified in statute, regulation, and recently issued permits for similar source |
| <p>NSPS and NESHAPS</p> | |
| <p>Best Available Control Technology</p> | |
| <p>NAAQS and PSD increments</p> | <p>Predictive modeling of proposed source emissions and background concentrations to NAAQS and PSD increments.</p> |
| <p>Maximum Allowable Stack Concentrations for State regulated Hazardous Air Pollutants</p> | <p>Compare Emission rates to Regulatory Maximums in accordance with specified formulae in the regulation</p> |

HOW DOES THE APPLICANT DEMONSTRATE AND THE DEPARTMENT VERIFY COMPLIANCE WITH THE STANDARDS FOR GRANTING A PERMIT?

| <u>For Major Sources of Ozone Precursors (i.e. NOx and/or VOC):</u> | |
|---|---|
| Lowest Achievable Emission Rate | Review of lowest emissions limits and standards codified in statute, regulation, and recently issued permits for similar source |
| Offsetting Emissions Reductions – purchase reductions that exceed the proposed emissions from the new project in order to create a net air quality benefit from the new project | Must be obtained prior to permit issuance |
| Alternative Analysis that demonstrates the benefits of the source outweigh the impacts | Qualitative analysis of benefits and impacts of the project, including the location and surrounding community |

WHAT HAPPENS AT THE TENTATIVE DETERMINATION STAGE?

- 1. The Department has drafted a comprehensive evaluation of the project and how it does or does not meet the standards for issuing a permit.**
- 2. The Department has drafted a copy of the permit – permit governs both the construction of the source and its day-to-day operations**
 - Specifies equipment design and maximum operating capacities and throughput
 - Specifies emissions limits
 - Specifies Monitoring, Record Keeping, and Reporting that needs to be done in order to demonstrate compliance with the permit.
- 3. Department issues Notice of the Tentative determination, which initiates a 30-day comment period and the opportunity to request a hearing**

The application, supporting materials, the Department’s Evaluation are available for public review and comment.

[Guidance for submitting Public Comments](#) (see Tips for Effective Comments and Written Comment)

WHAT HAPPENS AFTER THE COMMENT PERIOD CLOSES?

- 1. Department reviews all comments received and drafts a comprehensive “Response to Comments”**
- 2. Department modifies permit and proposed determination in accordance with valid substantive comments**
- 3. Department issues Final Decision: Issue Permit or Deny Permit**
- 4. Department’s Final Decision may be appealed in court**
- 5. If Final Decision to Issue stands Applicant can commence construction**

Note: If an Applicant secures a permit but does not commence construction within 18 months, the permit is subject to re-review and can be modified or revoked depending on the outcome of the re-review

TITLE V OPERATING PERMITS

Federally mandated tool to facilitate evaluating compliance with all the applicable statutory, regulatory, permit and order requirements to which an entire facility is subject.

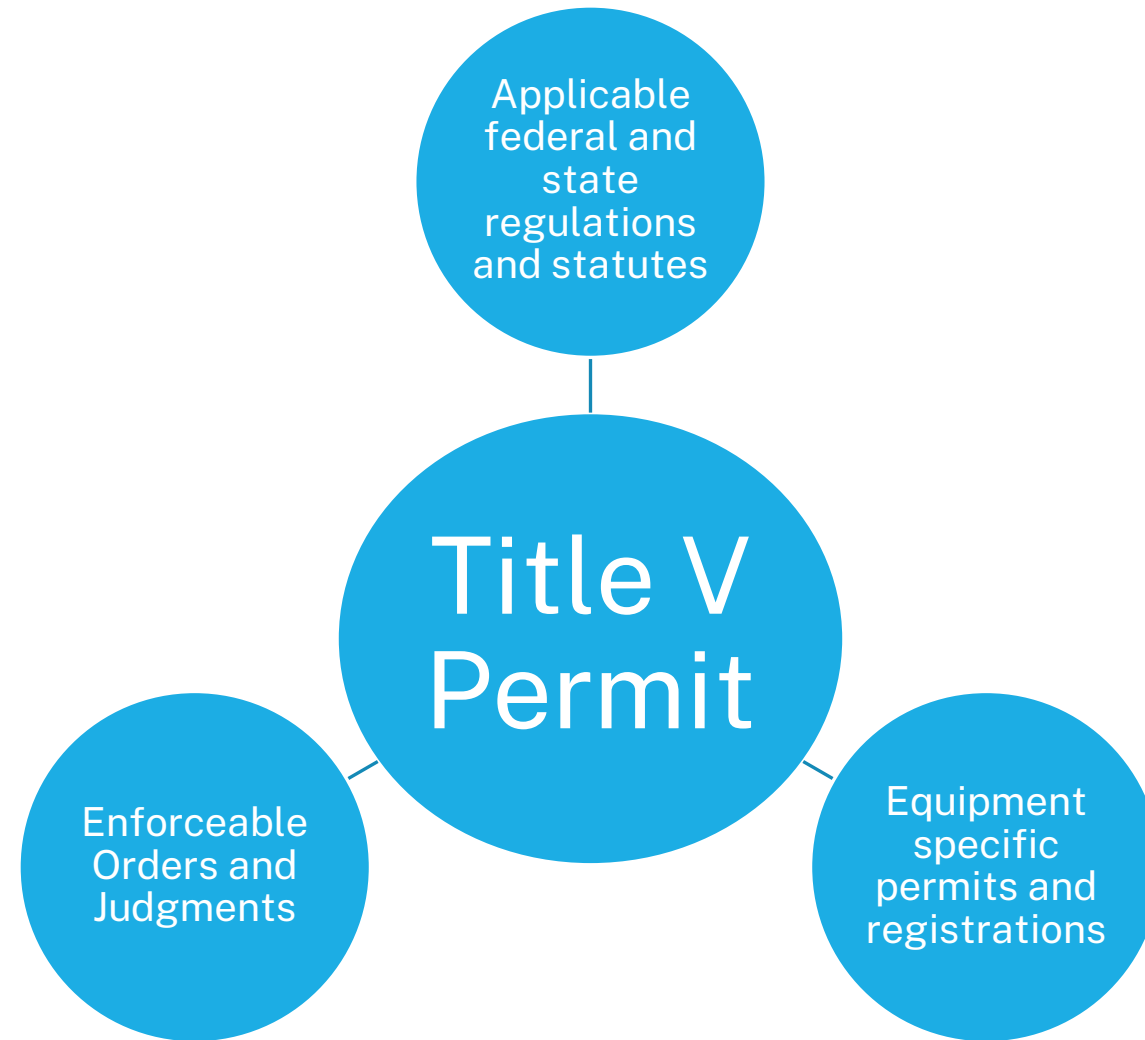
Applicability:

All Title V Sources must apply for and obtain a Title V Operating Permit

Title V Source is defined in RCOSA Section 22a-174-33 (a)(10) – based on potential emissions, applicable regulatory programs, and location within the state

- In general:
 - Major Source of Air Pollution
 - Source subject to a Federal Requirement to have a Title V Permit (e.g. NSPS, NESHAP, ACID RAIN Program, Incinerator Facility subject to Section 129 of the Clean Air Act)

TITLE V OPERATING PERMIT



WHAT GOES INTO A TITLE V OPERATING PERMIT?

Note: Title V Operating Permit cannot authorize any new activity; there must be an underlying permit, order, regulation, or statute that authorizes the activity first

- 1. Expiration Date – 5 years from date of permit issuance**
- 2. All applicable emissions limits and operating standards**
- 3. Monitoring, record keeping and reporting to demonstrate compliance with the limits and standards**
- 4. Requirement to notify the Department of violations of/deviations from permit conditions**
- 5. Requirement to submit semi-annual monitoring reports and annual compliance report and certification**
- 6. Requirement to report annual emissions**

WHAT HAPPENS AT THE TENTATIVE DETERMINATION STAGE?

- 1. The Department has drafted a comprehensive technical support document(TSD) outlining what's covered in the permit and any changes from the prior permit**
- 2. The Department has drafted a copy of the permit – permit governs the day-to-day operations**
 - Listing of equipment operating at the facility
 - Specifies all applicable emissions and operating limits for the listed equipment at the facility
 - Specifies Monitoring, Record Keeping, and Reporting that needs to be done in order to demonstrate compliance with the permit.
- 3. Department issues Notice of the Tentative determination, which initiates a 30-day comment period and the opportunity to request a hearing**

The application, supporting materials, the Department's Evaluation are available for public review and comment.

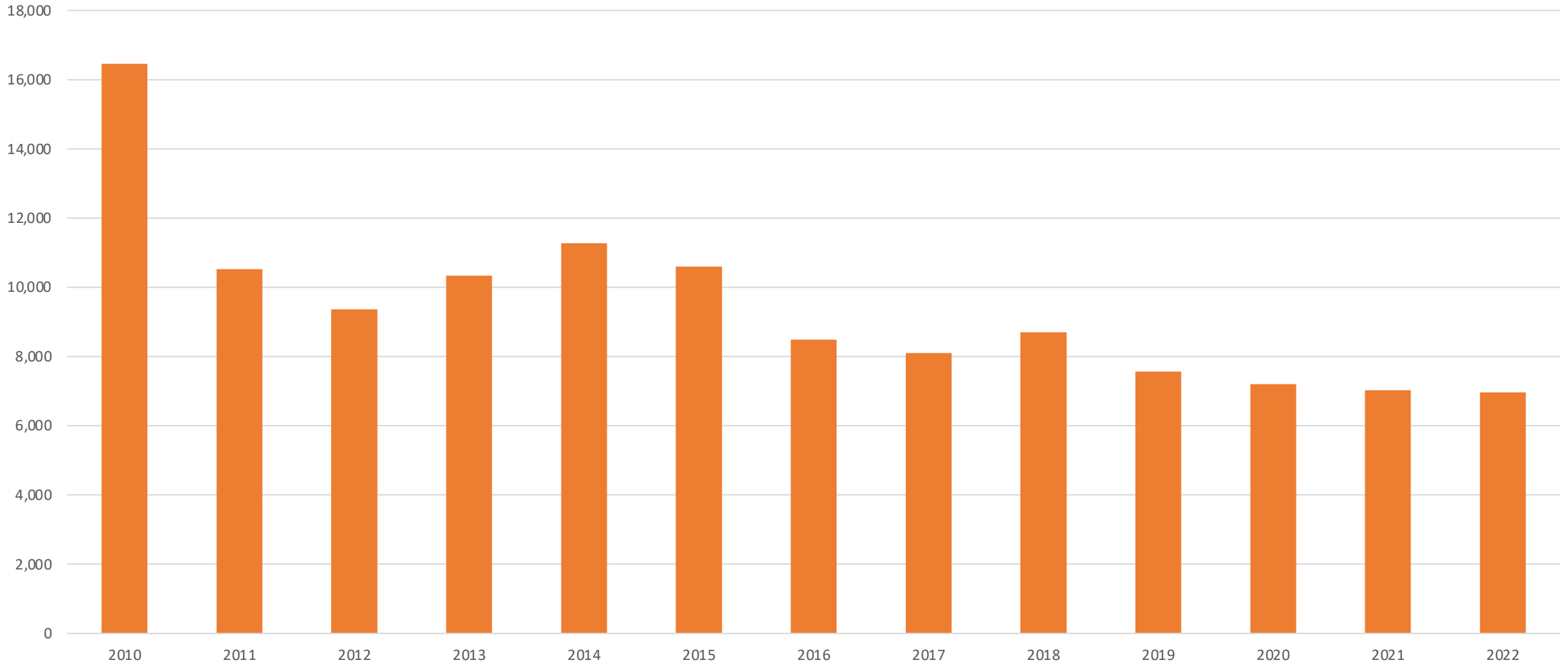
[Guidance for submitting Public Comments](#) (see Tips for Effective Comments and Written Comment)

WHAT HAPPENS AFTER THE COMMENT PERIOD CLOSES?

- 1. Department reviews all comments received and drafts a comprehensive “Response to Comments”**
- 2. Department modifies permit and proposed determination in accordance with valid substantive comments**
- 3. Department issues Final Decision: Issue Permit or Deny Permit**
- 4. Department’s Final Decision may be appealed to EPA and/or court**

EMISSIONS FROM CT'S TITLE V SOURCE HAVE DECREASED

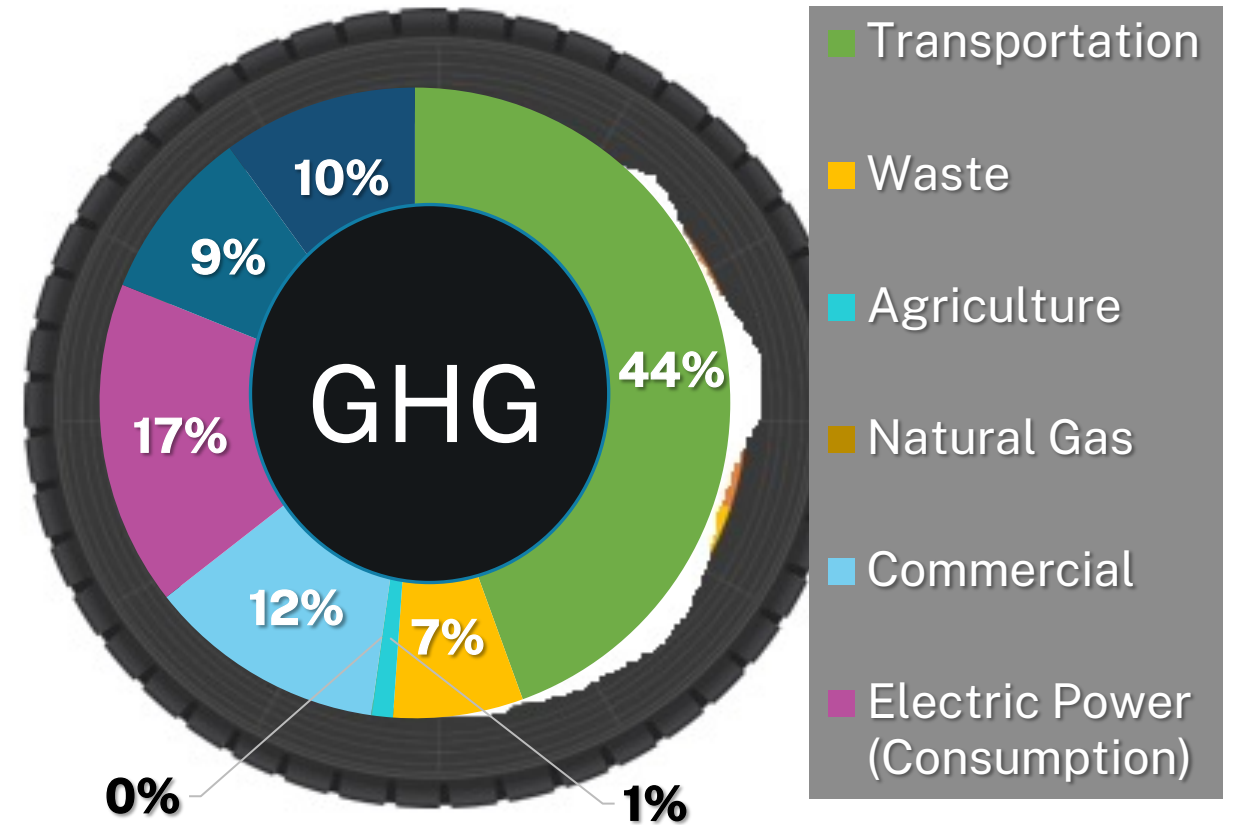
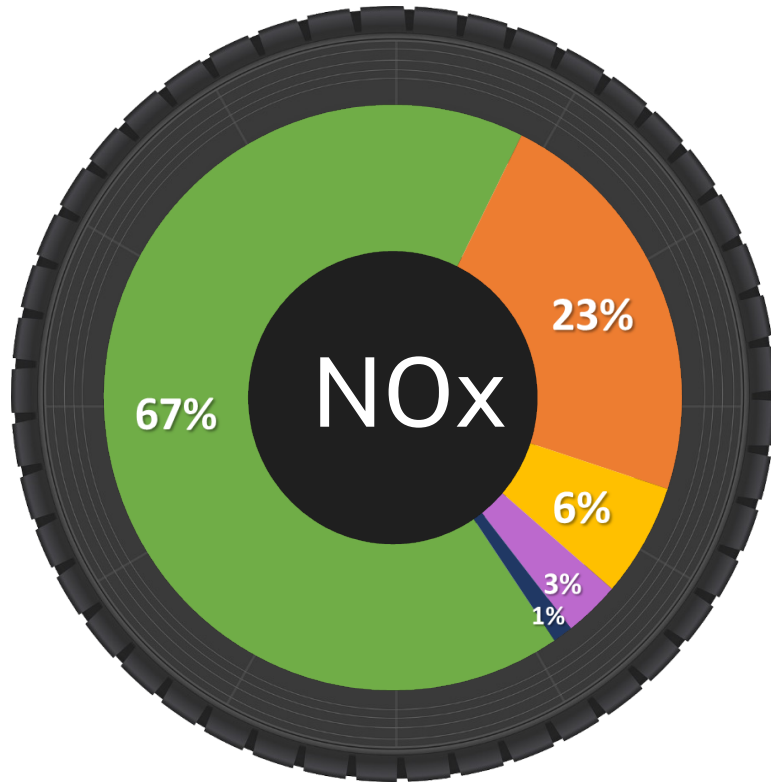
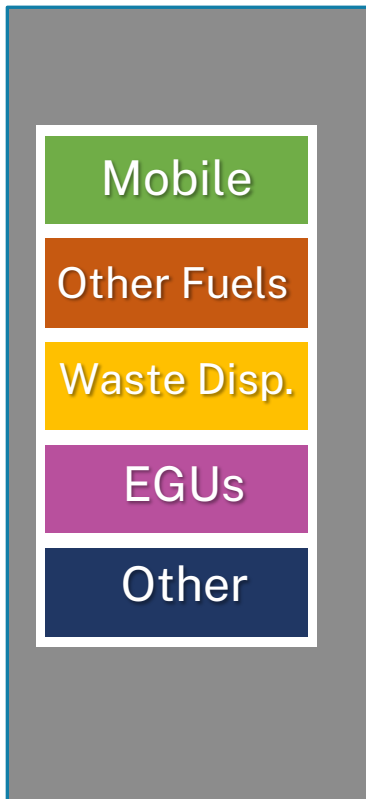
Title V Source Emissions (Tons) by Calendar Year





AIR & TRANSPORTATION PROGRAMS PA 22-25 IMPLEMENTATION UPDATE

MOBILE SOURCE EMISSIONS



Mobile Sources are the single largest contributor to GHG emissions and the largest contributor to NOx Emissions

CONNECTICUT HYDROGEN AND ELECTRIC AUTOMOBILE PURCHASE REBATE (CHEAPR)

Eligibility Expansion

- **As of March 30, 2023, eligibility has expanded for Rebate+ enhanced incentives, 3 ways to be eligible:**
 - Categorical Eligibility (Participate in certain income qualifying state of federal programs)
 - 300% of the federal poverty level
 - Family 1 = **\$43,740** | Family 4 = **\$90,000**
 - Address in a distressed municipality or identified EJ census block
 - Rebate+ New and Used are now vouchers, [Login | CHEAPR Program \(drivecheapr-ct.org\)](https://drivecheapr-ct.org)
 - **Rebate+ New:** Apply for prequalification voucher and redeem combined Standard + Rebate+ incentives at dealer.
 - **Rebate+ Used:** Apply for prequalification voucher before or after purchase. Choice to redeem incentive at dealer or electronically via check.

Statistics

- **Number of Rebate+ incentives given out:**
 - Jan. 2020 – Jan. 2023
 - **Standard Rebates:** 3,337 (~\$4.4M) | **Rebate+:** 27 (~\$59K)
- **Number of rebates in distressed municipalities (25 DECD defined towns):**
 - 17 had at least **one** rebate
 - 8 had **Zero** (Chaplin, Derby, Meriden, Montville, Sprague, Sterling, Winchester, Windham)
 - 197 Total Rebates (Note: 290 Rebates did not have a City or Zip Code listed)

CHEAPR (CONT'D)

Marketing Focus

- **DEEP contracting for CHEAPR marketing and outreach with a focus to reach moderate income individuals**
- **Program design RFP**
 - Three proposals were turned in
 - DEEP selected a vendor who will supply a marketing plan by May
 - Following creation of a plan DEEP will submit an RFP for program implementation, select a vendor and begin LMI marketing

E-Bikes

- **Incentive Levels**
 - Standard Incentive: \$500
 - Income eligibility determined both categorically and via income verification for Rebate+ incentive of \$1,000
 - Incentives will be stackable: \$500 + \$1,000 = **\$1,500 Total incentive**
 - Expect program launch in late June
 - Continue identifying barriers not solved by the incentive
- **Help us message safety!**
 - Battery and charger safety
 - Safety, rules of the road, helmets, etc.
 - DEEP will distribute information from the best sources available

VW AND DERA GRANTS

DEEP administers a number of grant opportunities, includes the Volkswagen and Diesel Emission Reduction Act (DERA) grants.

- **DERA is a yearly EPA grant administered by DEEP since 2008**
- **VW funding totaled \$55.7 million dollars and has been disbursed through a number of funding rounds with a portion still remaining**

Application Scoring and Evaluation

- **All applications for any funding opportunity provide extra points to projects that are located in, or predominately expected to operate in an EJ neighborhood.**

Statistics

- **In total the Air Bureau has funded 82 vehicle projects in EJ neighborhoods, including 100% of our 3rd round of funding in 2021**
- **100% of municipal and private funding EVSE VW grants in 2023 will be EJ neighborhoods**
- **2788 tons NOx Emissions reduced over their lifetime (equivalent of 184,833 cars driving for a year)**
- **80 tons of PM Emissions reduce over their lifetime**
- **178,900 tons of CO2 emissions**

CLEAN SCHOOL BUSES

Public Act 22-25 Electric School Bus Requirement

- Requires 100% of school buses that serve EJ communities to be zero emission vehicles (ZEV) by 2030
- DEEP estimates that ~2,100 CT buses serving EJ areas will need to be replaced

2022 EPA Clean School Bus (CSB) Rebates Program

- \$1 billion nationwide to replace existing school buses with ZE and low-emission models.
- Limited amount of funding for infrastructure upgrades needed to install EVSE.
- Applicants requesting funds for new buses that serve a school district that met one or more of the prioritization criteria below were offered more funding per bus and received preference in the selection process:
 1. High-need school districts and low-income areas
 2. Rural
 3. Tribal
- Awardees (all prioritized applicants):
 1. Region 1 School District: Cornwall (1 bus), Sharon (1 bus), General (1 bus)
 2. Connecticut Technical Education and Career System/DATTCO (25 buses)
- \$375,000/bus plus \$20,000 in infrastructure funding

CLEAN SCHOOL BUSES

Clean School Buses – Round 2 Announced April 24th!

- \$400 million notice of funding opportunity for school districts and student transportation services
- Application deadline August 22, 2023
- Same funding levels for priority districts but fewer districts and minimum bus/project has increased
- EPA Website: [Clean School Bus Program Grants | US EPA](#)
- NOFO: [2023-csb-grant-nofo-4-20-23.pdf \(epa.gov\)](#)

Planning for 2023 EPA CSB Rebates Program Solicitation

- To prepare for this opportunity, eligible applicants operating school buses that serve EJ communities should:
 - Engage with school bus operators
 - Ensure federal System for Award Management (SAM.gov) registration is up to date.
 - Conduct school bus fleet analysis.
 - Coordinate with utility:
 - Eversource - Kevin Boughan, Kevin.Boughan@Eversource.com
 - UI - Marriott Dowden, M.Dowden@Ulnet.com
 - Wallingford Electric - Alex Boutsoulis (Chief Engineer) 203-294-2285
 - Norwich Public - (860) 823-4514 – EfficiencyMatters@NPUMail.com
 - Bozrah Light & Power/Groton Utilities - Aaron Brooks, BrooksA@GrotonUtilities.com

CLEAN SCHOOL BUSES

DEEP Plans to Launch a CSB Matching Grant Program as required by PA 22-25

- Provide supplemental funding for recipients of the EPA CSB Rebates.
- For prioritized applicants, grant structure is likely to include:
 - School buses - funding will be available for up to 100% of the incremental cost of the school bus over a diesel replacement counterpart that is not covered by EPA funding, or \$150,000/vehicle, whichever is less.
 - Infrastructure upgrades - DEEP will match 100% of the infrastructure funding allocated through the EPA CSB Program.
- **More details will be announced soon.**

ADVANCED CLEAN CARS II

New Vehicle Emission Standards for 2027-2035

- 90% cleaner than today's vehicles

Zero Emission Vehicle Program

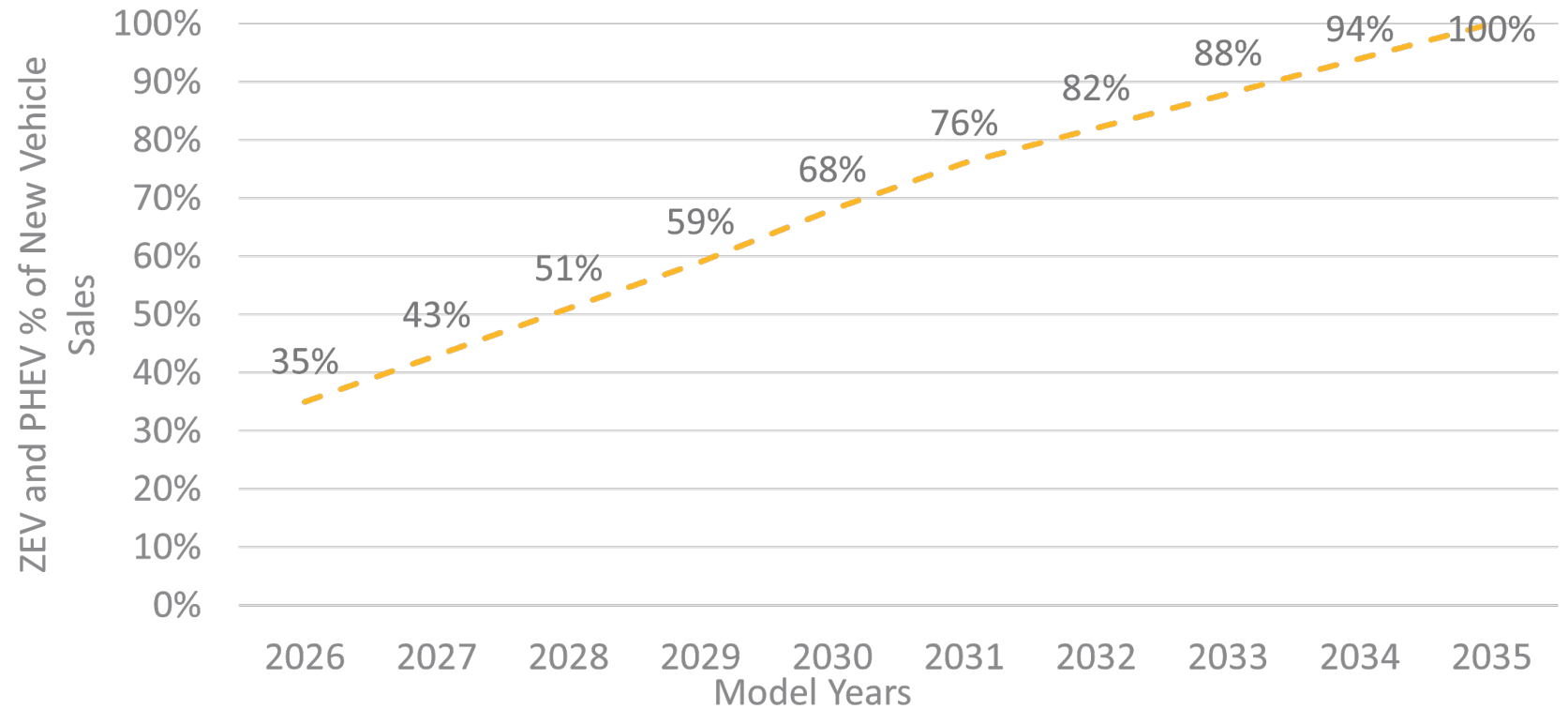
- Increasing percentage of zero emission vehicles until 2035
- Benefits and Challenges

EJ Credit Program Development

- Under California's rules manufacturers can meet 15% of their requirement through credits gained in 3-types of EJ programs.
- DEEP will need to establish qualified programs through which these credits may be gained.
- #1: Credits for rideshare programs in EJ neighborhoods.
 - Do these programs already exist in Connecticut communities?
- #2: Credits for vehicles offered at decreased MSRPs
- #3: Credits for sale of used vehicles

CALIFORNIA'S ADVANCED CLEAN CARS II (ACC II) RULE

- Why regulate light duty vehicles?
 - 3 million registered light duty vehicles in CT
 - LDVs remain the single largest contributor to mobile source emissions
- Adopted in 2004 and implemented in 2008, LEV and ZEV (ACC 1) requires manufacturers to sell increasing percentages of vehicles in adopting states



- CA adopted ACCII in 2022 for the 2026-35 model years
- Incentives like CHEAPR (\$2,250 standard – \$4,250 for LMI), federal tax credit (\$7,500) and incentive for chargers will continue to be important as early adopters are exhausted from the market

BENEFITS AND CHALLENGES OF ACCII

Benefits for Urban Areas

- Less Emissions
- Driving down costs through economies of scale
- Creating an environment to get OEMs to develop more economically viable vehicle options.
- EJ credit programs
- Increased number of used EVs

Challenges for Urban Areas

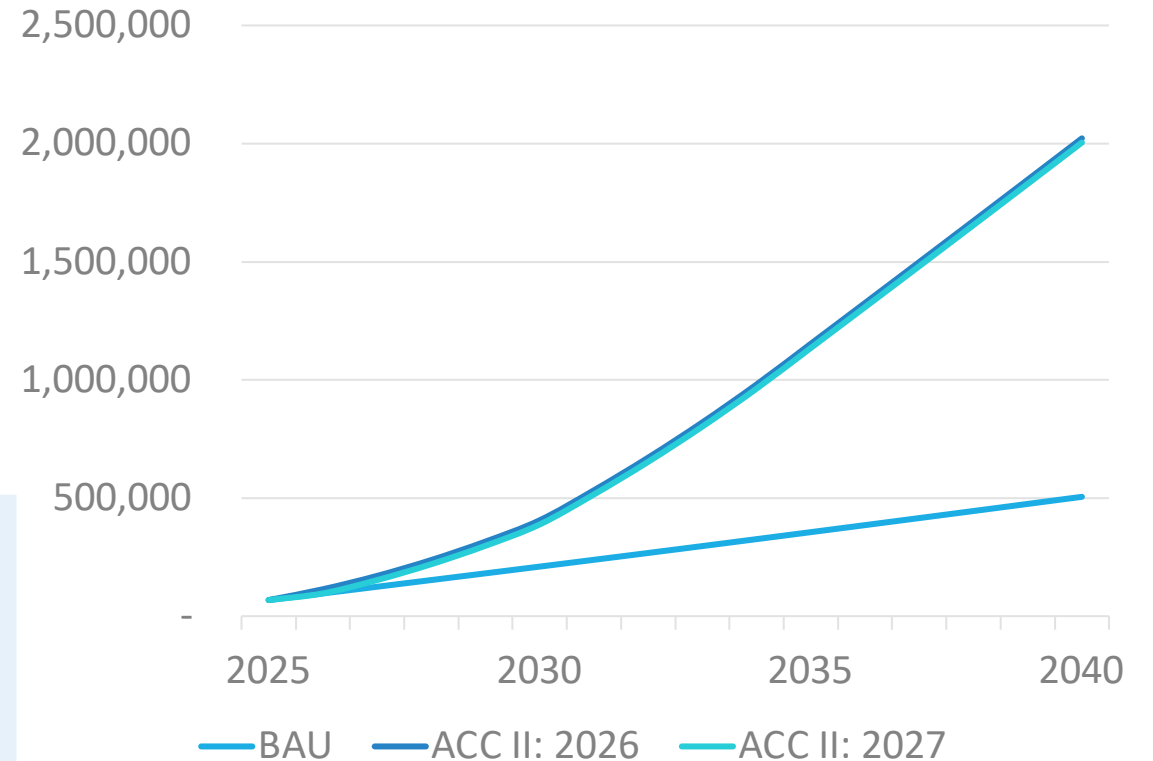
- Cost of Vehicles
- Charging Availability and Reliability
- Charging Infrastructure at multiple unit dwellings (MUDs)
- Any other barriers?

BENEFITS OF ADOPTING ACC II

| | NO _x | PM _{2.5} | WTW CO _{2e} |
|----------------|------------------|-------------------|-----------------------------|
| By 2030 | 460 US tons | 31 US tons | 3.6 million metric tons |
| By 2035 | 1,873 US tons | 143 US tons | 16.7 million metric tons |
| By 2040 | 4,341 US tons | 324 US tons | 39.5 million metric tons |

Cumulative ACC II Emissions Benefits Compared to the Business-as-Usual Scenario, 2025-2040 (Model Year 2027 implementation)

CT Light-Duty Zero Emission Vehicle Population, 2025-2040



| Analysis Year | Total NO _x Reduction (TPY) * | Total PM _{2.5} Reduction (TPY) * | In-State Benefit** | Out-Of-State Benefit** | In-State Burden*** | Out-Of-State Burden*** | Net Benefit*** * |
|---------------|--|--|--------------------|------------------------|--------------------|------------------------|---------------------|
| 2040 | 580 | 39 | 160.0 | 112.7 | 0 | 0 | 272.7 |

Annual COBRA-estimated economic values of Connecticut adopting ACC II, in millions of US dollars

Sonoma Technology, Inc. (STI) modeling using MOVES3, GREET 2021 and COBRA

MEDIUM AND HEAVY DUTY

Low NOx Rule

- Emissions reductions of smog forming emissions and particulate emissions from internal combustion engine trucks
- Should reduce emissions from vehicles at intermodal facilities, warehouses, and highways that often are in or abut EJ neighborhoods

Advanced Clean Trucks Regulation

- Requires increasing percentages of electric and advanced technology medium and heavy-duty vehicles.
- Vehicles that have zero tailpipe emissions. Vehicles that are quieter.

CALIFORNIA'S ADVANCED CLEAN TRUCKS (ACT) RULE

- Why regulate MHDs?
 - 6% of CT's on-road fleet
 - 25% of CT's transportation related GHG
 - 53% of CT's on-road NOx
- Adopted in 2021, ACT requires manufacturers to sell certain percentages of vehicles in adopting states beginning in 2024. These percentages are broken up by vehicle class.
- MHD EV vehicle deployment in CT will be driven by regulatory sales requirements and begin in 2027.
- School bus and public transit electrification targets addressed separately in PA 22-25.

| California Final Regulation Order | | | |
|-----------------------------------|------------------|-----------------|--------------------------|
| Model Year | Class 2b-3 Group | Class 4-8 Group | Class 7-8 Tractors Group |
| 2024 | 5% | 9% | 5% |
| 2025 | 7% | 11% | 7% |
| 2026 | 10% | 13% | 10% |
| 2027 | 15% | 20% | 15% |
| 2028 | 20% | 30% | 20% |
| 2029 | 25% | 40% | 25% |
| 2030 | 30% | 50% | 30% |
| 2031 | 35% | 55% | 35% |
| 2032 | 40% | 60% | 40% |
| 2033 | 45% | 65% | 40% |
| 2034 | 50% | 70% | 40% |
| 2035 and beyond | 55% | 75% | 40% |

Table 4: California Initial Statement of Reasons for the Advanced Clean Trucks Regulation

OPPORTUNITIES FOR FUTURE ENGAGEMENT

CHEAPR

- **CHEAPR Board Meeting Dates**

- Thursday, June 15th
- Thursday, September 14th
- Thursday, December 14th

Advanced Clean Trucks/ Advanced Clean Cars

- Rulemaking Notice and Comments (Late Spring)

Grant Programs

- All programs are announced via CT DEEP Grants webpage: [Grants and Financial Assistance \(ct.gov\)](https://www.ct.gov/deep/oc/grants)



GMAP UPDATE

JOIN US ON MAY 1ST!

DEEP is publicly unveiling the GMAP platform

**Where – McAuliffe Park Monitoring station
30 Remington Road, East Hartford**

When – 10 – 11AM