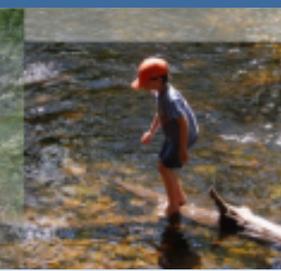
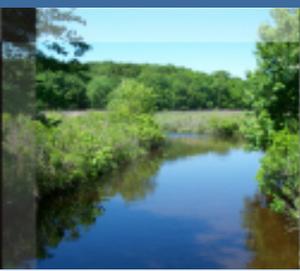




Connecticut Department of Energy and Environmental Protection



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

Governor's Council on Climate Change

November 13, 2015
2:00—4:00 p.m.



Connecticut Department of Energy and Environmental Protection

Agenda

2:00

Welcome

2:05

Review and discuss GC3 process
and decision making

2:25

Leadership, Accountability, and Engagement
Working Group update

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Analysis, Data, and Metrics Working
Group Update

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Leadership in the Transportation Sector

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GC3 administrative updates

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GC3 Process & Decision Making

The GC3 will adhere to the following discussion principles:

We will seek to understand the position and interest of all parties.

We will seek to reach consensus on issues brought before the GC3 for consideration.

Our goal is to review each issue and consider issues in a fair and balanced manner.

We will follow this process to reach consensus on a proposal:

Individual issues/agenda items can be brought to the chairs of the Leadership Working Group or the Data Analytics working group as appropriate.

Working group chairs can opt to present the topic as an agenda item for consideration by the working group and, if appropriate after consideration by the working group, recommend the item for consideration by the entire GC3.

After discussion and deliberation by the full GC3, the outcome will be captured as part of the meeting minute's to reflect consensus/agreements in the documentation of minutes.

Meeting notes will be prepared by DEEP staff and submitted to the Council/Working groups for review and acceptance as an accurate summary of the meeting dialogue. Meeting notes, upon acceptance from Council members at the following meeting, will be posted to the GC3 website for public viewing.

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Yale Clinic Timeline

Phase I (September) – Project background & research plan

- Sept. 29: GC3 meeting

Phase II (October-mid November) – Research & data collection

- Conduct research & interviews
- Oct. 16: LAE Work Group meeting

Phase III (November) – Analysis & report writing

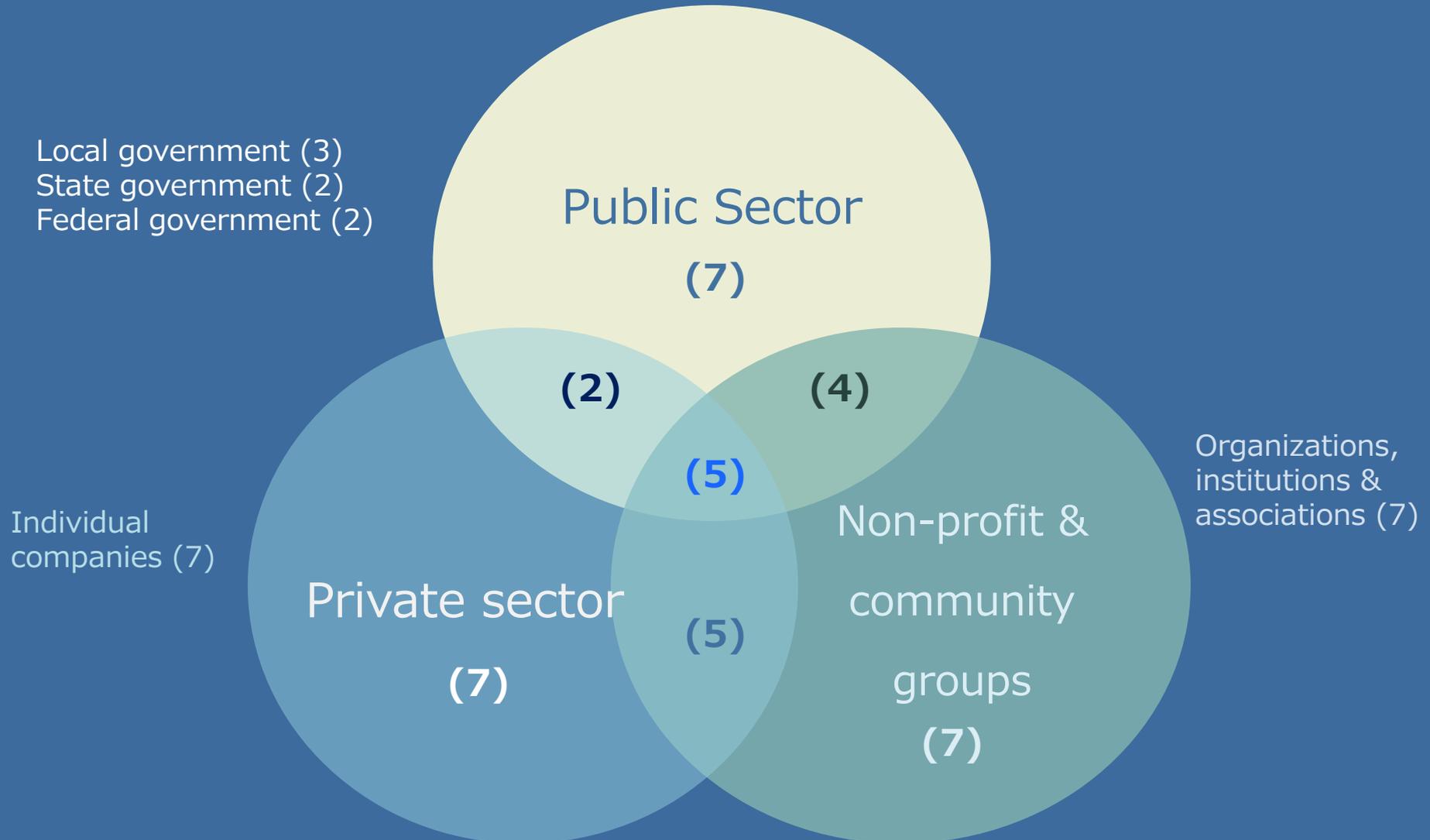
- Week of Nov. 16: Send draft report outline for review
- Nov. 13: GC3 meeting
- Nov. 16: LAE Work Group meeting – present initial findings

Phase IV (December) – Final report & presentation of recommendations

- Present recommendations at December 7 LAE meeting & December 16 GC3 meeting
- December 22: Submit final report

Snapshot: Current Research of Yale Team

LAE Models Led By



Stakeholder Engagement Workshop

Date: December 1, 2015

Time: Two Sessions to accommodate varying schedules of invited participants.
Session 1: 2 – 5pm Session 2: 6 – 9pm

Purpose: The objectives of holding this workshop include seeking ideas and feedback on:

- Identifying critical stakeholders now and into the future;
- Strategies for effective communication and engagement;
- Ideas on how to ensure accountability and transparency of the process; and
- Tactics or approaches to inspire ongoing engagement through the implementation phase.

Invited Participants: 50 participants per session.
Invitees categories include: Environmental, Labor & Jobs, Education, Business, Transportation & Fuels, Municipal/Regional, Faith Community, Chamber of Commerce's, and Other.

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Electricity Sector GHG Emissions: Recommend Using In-state Consumption

- Consistent with neighboring MA & RI climate planning
- Aligns well with CT Integrated Resource Plan for reference projection
- Potential methodology available from MA

NESCAUM Revised Schedule

Phase 1 through February 2016

- Identify technology / fuel switching options for achieving preliminary GHG reductions by target years
- Present progress update to GC3 in January 2016

Phase 2 through August 2016

- Analyze potential policies and strategies to achieve needed levels of technology deployment / fuel switching
- Develop package(s) of strategies as possible scenarios
- DECD to analyze macro-economics of scenarios

Phase 3 through December 2016

- Revise results based on GC3 and stakeholder feedback

Phase 1 – through February 2016

- Identify technologies / fuel switching for achieving future GHG targets
 - Establish reference case projection with assumptions
 - Identify GHG measures for CT's major sectors based on CT-relevant priorities
 - Build up CT-specific LEAP system with GHG measures and levels of deployment options
 - Use 2030, 2040, and 2050 for GHG targets
 - “Mix and match” in LEAP the GHG measures and deployment levels relative to targets
- Present progress update to GC3 in January 2016

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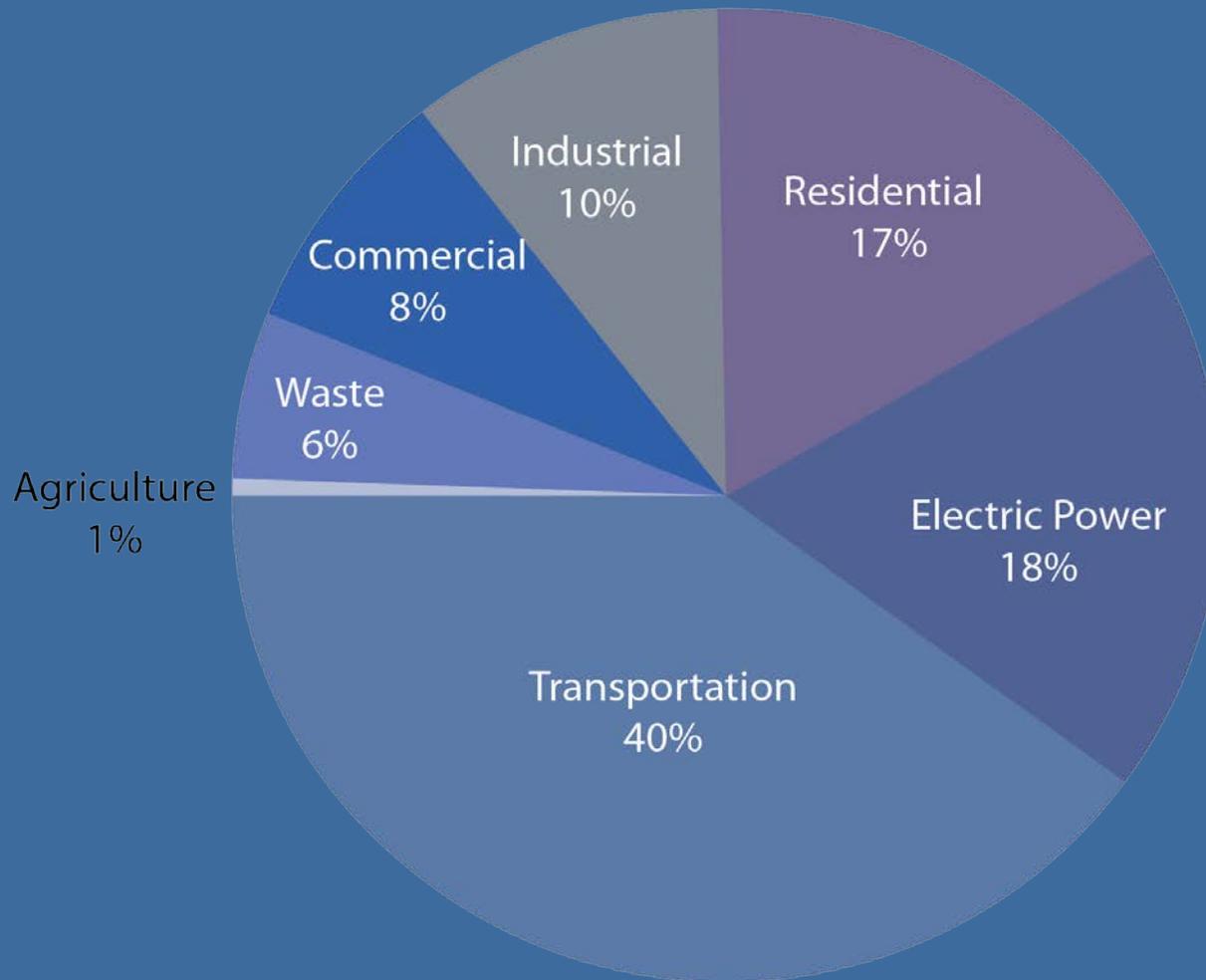
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Leadership in the Transportation Sector

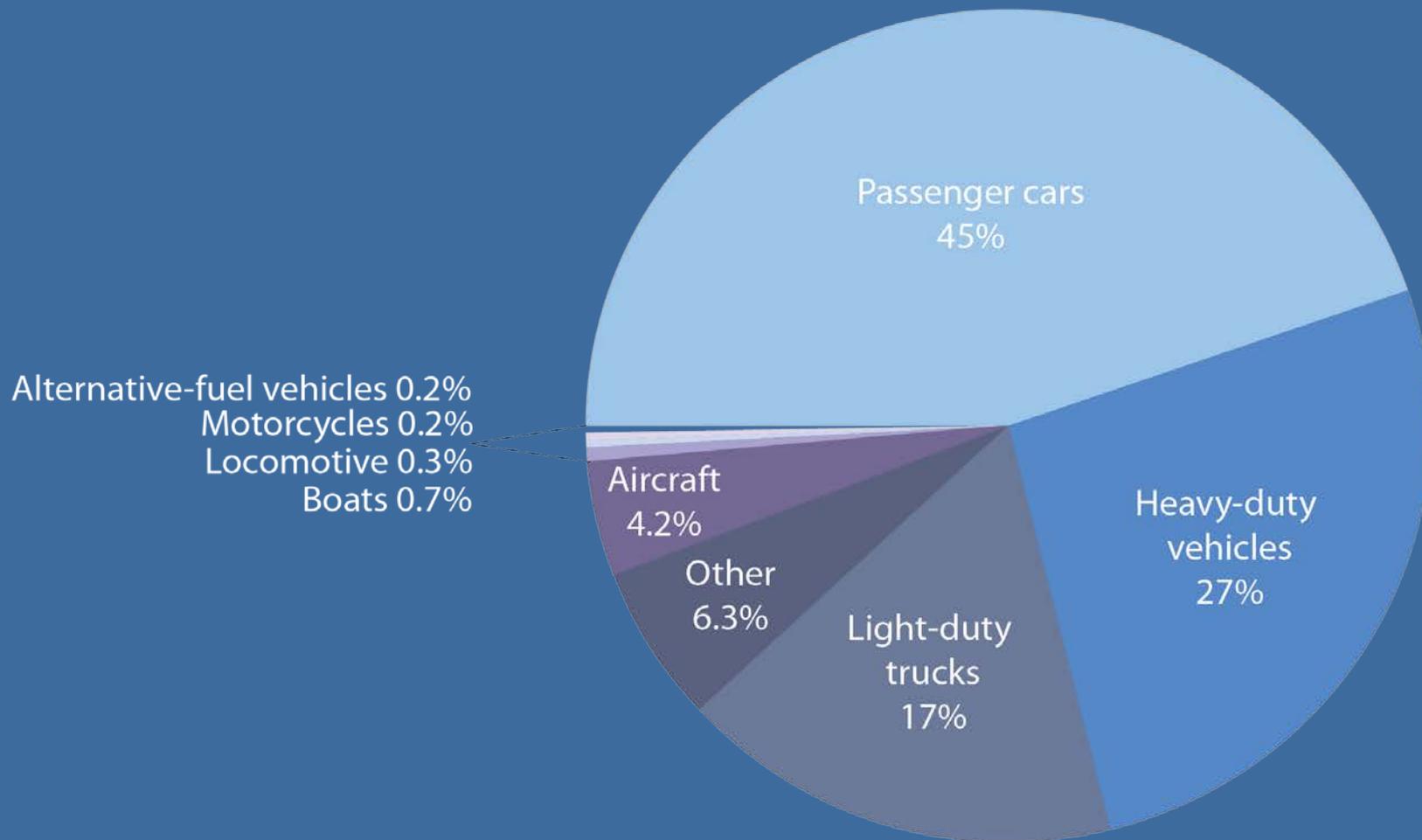
Discuss ideas that GC3 member agencies and organizations can put forth to foster transforming Connecticut's transportation sector to lower carbon.

- Lead by example initiatives
- Electrification of vehicles
- Regulatory
- Transit oriented development
- Education and awareness
- Equity and access

Distribution of greenhouse gas emissions by sector, 2012



CT Transportation Sector, 2012



**Non-road sector includes aviation, marine, rail, construction, etc.

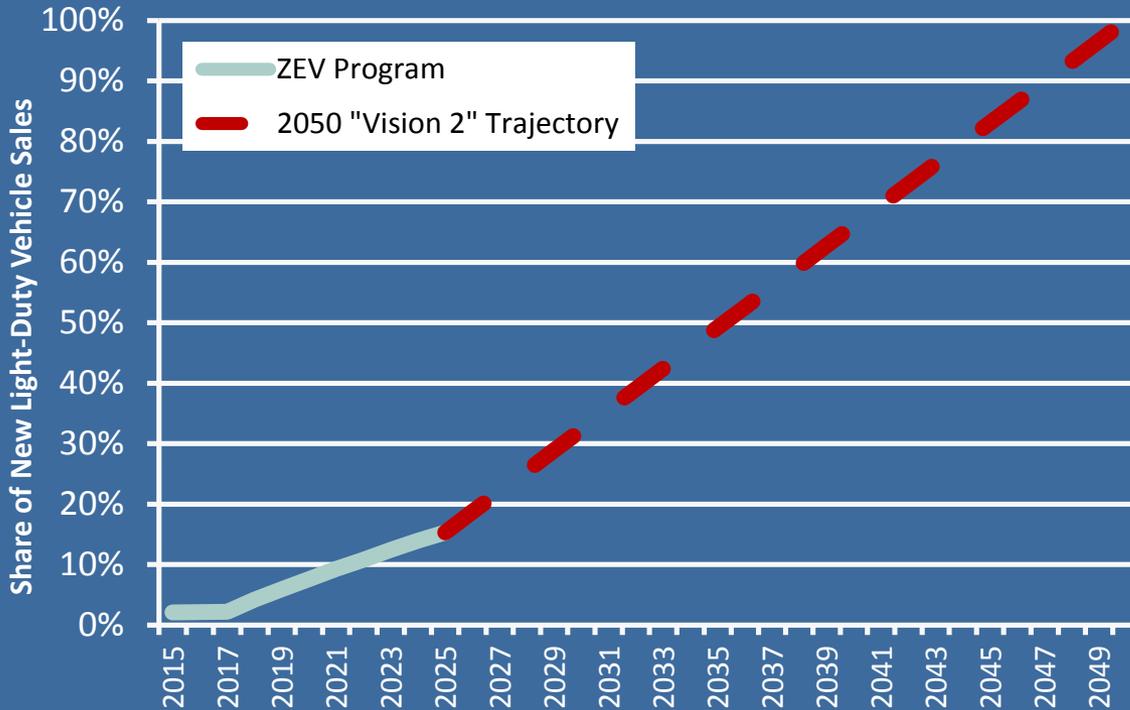
Source: EPA SIT Tool

State Regulation of Motor Vehicle Emissions

- Clean Air Act §209 preempts all states, except for California, from establishing their own motor vehicle emission standards
- §177 permits other states to adopt and enforce emission standards as long as they are identical to California's
- CT adopted CA's Low Emission Vehicle/Zero Emission Vehicle (LEV/ZEV) standards in 2009

From Current ZEV Program to 100% Electric

ZEV Sales Share, 2015-2050

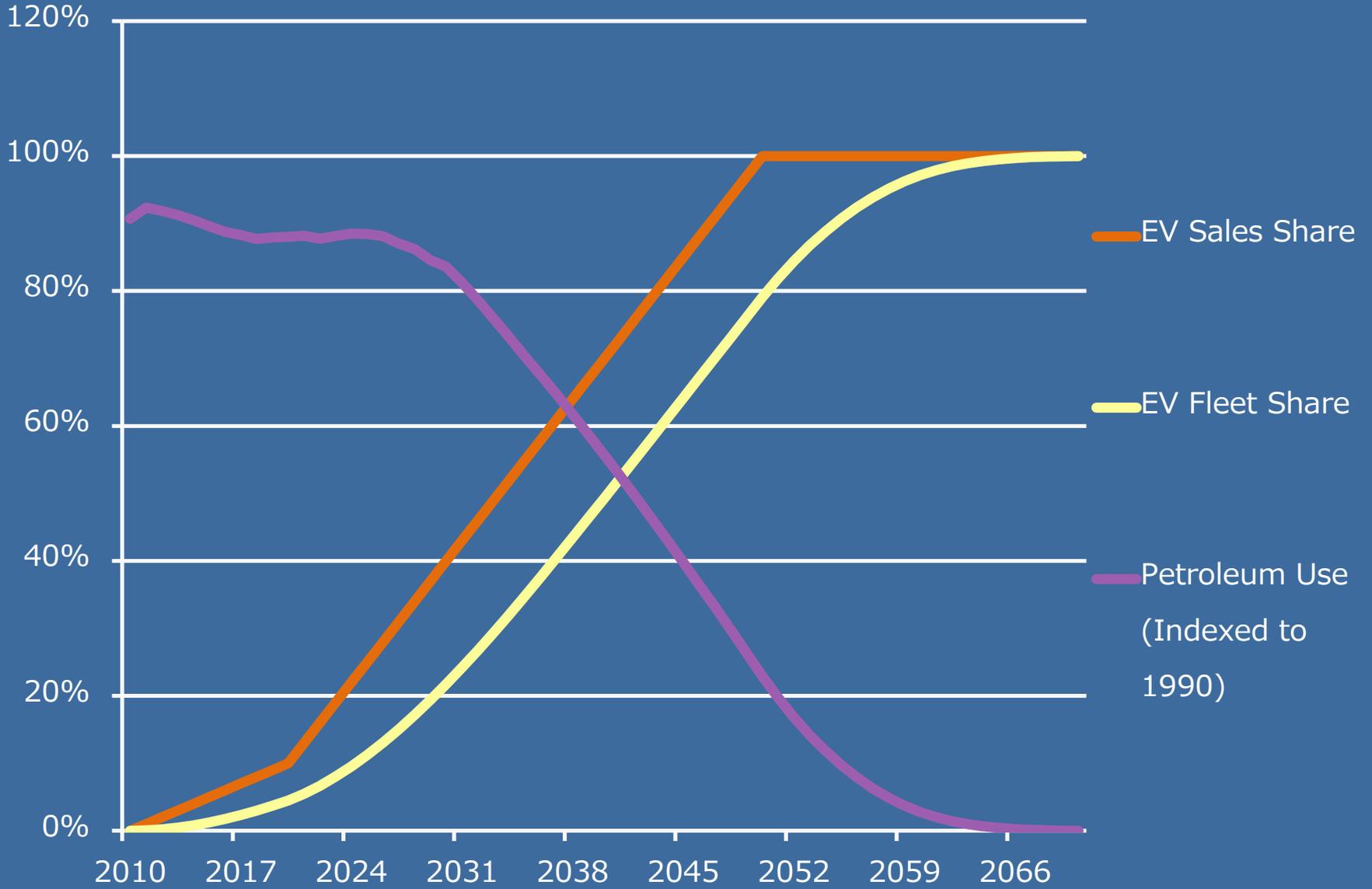


Current ZEV program results in roughly 15% ZEV sales share by 2025

To meet 80% GHG reduction target, sales share must increase to 100% by 2050

Current ZEV program provides a necessary early foundation for light-duty electrification, but market must continue to grow rapidly through 2050

Fleet Turnover Effects



Source: VISION Model.

Heavy-Duty Vehicles

Highway trucks

- Long-haul
- Box trucks

Buses

Non-road equipment

- Construction
- Rail
- Marine
- Aviation

- Represent 27% of transportation GHGs in CT
- 4 % of registered vehicles in U.S., but account for 25 % of on-road energy use and GHGs
- Long-haul trucks
 - Many registered out-of-state
 - Modern long haul trucks achieve only 5.8 miles per gallon
- Marine and aviation are regulated internationally and long-lived
- Construction & other non-road equipment is extremely diverse

Likely Long-Term Primary Fuel

- Cars and light-trucks – *electricity & hydrogen*
- Long haul trucks - *biofuels*
- Box trucks – *hydrogen & electricity*
- Bus – *hydrogen & electricity*
- Rail - *electricity*
- Aviation – *biofuels*
- Marine – *biofuels*

Source: “The need for biofuels as part of a low carbon energy future,” UC Davis, NRDC, et. al., 2015.

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Exploring Climate Solutions Webinar Series

Brought to you by the Governor's Council on Climate Change (GC3)

COMPLETED WEBINARS AVAILABLE FOR VIEWING

Energize Your Business with Clean Energy Communities

BGreen2020

Carbon Sinks: Opportunities for GHG Emission Reductions through Land and Forest Conservation in Connecticut

Consumption-Based Greenhouse Gas Accounting in Oregon

goNewHaven

Stamford 2030 District

[View recorded webinars](#)

UPCOMING WEBINARS

Portland, OR, Equity Work Group

November 16, 1:00 to 2:00

California PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios

November 20, Noon to 1:00

The Regulatory Assistance Project

November 24, Noon to 1:00

Boston Green Ribbon Commission

December 1, 11:45 am to 12:45 pm

Connecticut Hydrogen Fuel Cell Coalition

December 4, Noon to 1:00

California EPA Greenhouse Gas Report Card

December 8, Noon to 1:00

2015 Meeting Schedule and Locations



Leadership, Accountability, and Engagement Working Group Meeting

CT Green Bank , 845 Brook St, Rocky Hill, CT
1:00 – 3:00 P.M.



Analysis, Data, and Metrics Working Group Meeting

Eversource, 107 Selden Street, Berlin, CT
1:00 – 3:00 P.M.



Leadership, Accountability, and Engagement Working Group Meeting

DEEP Bureau of Energy Technology Policy, 10 Franklin Sq. New Britain, CT
2:00 – 4:00 P.M.



GC3 Meeting

DEEP Headquarters, Gina McCarthy Auditorium, 79 Elm St, Hartford, CT
2:00 – 4:00 P.M.

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