

# HB 2007 Approved Retrofit Compliance and Implementation Vehicle Inspection Program

Sept. 18, 2020

# Meeting Objectives

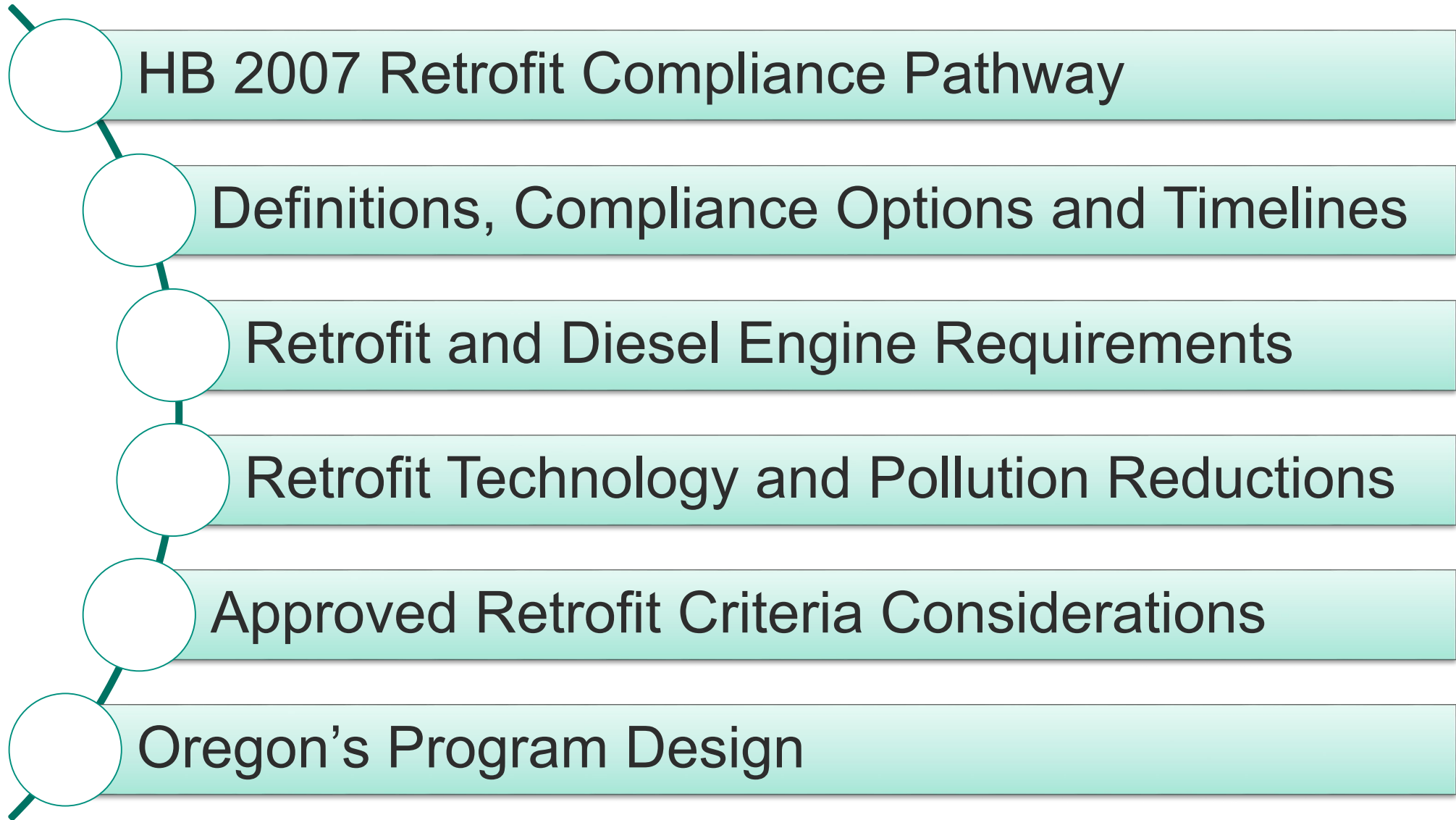
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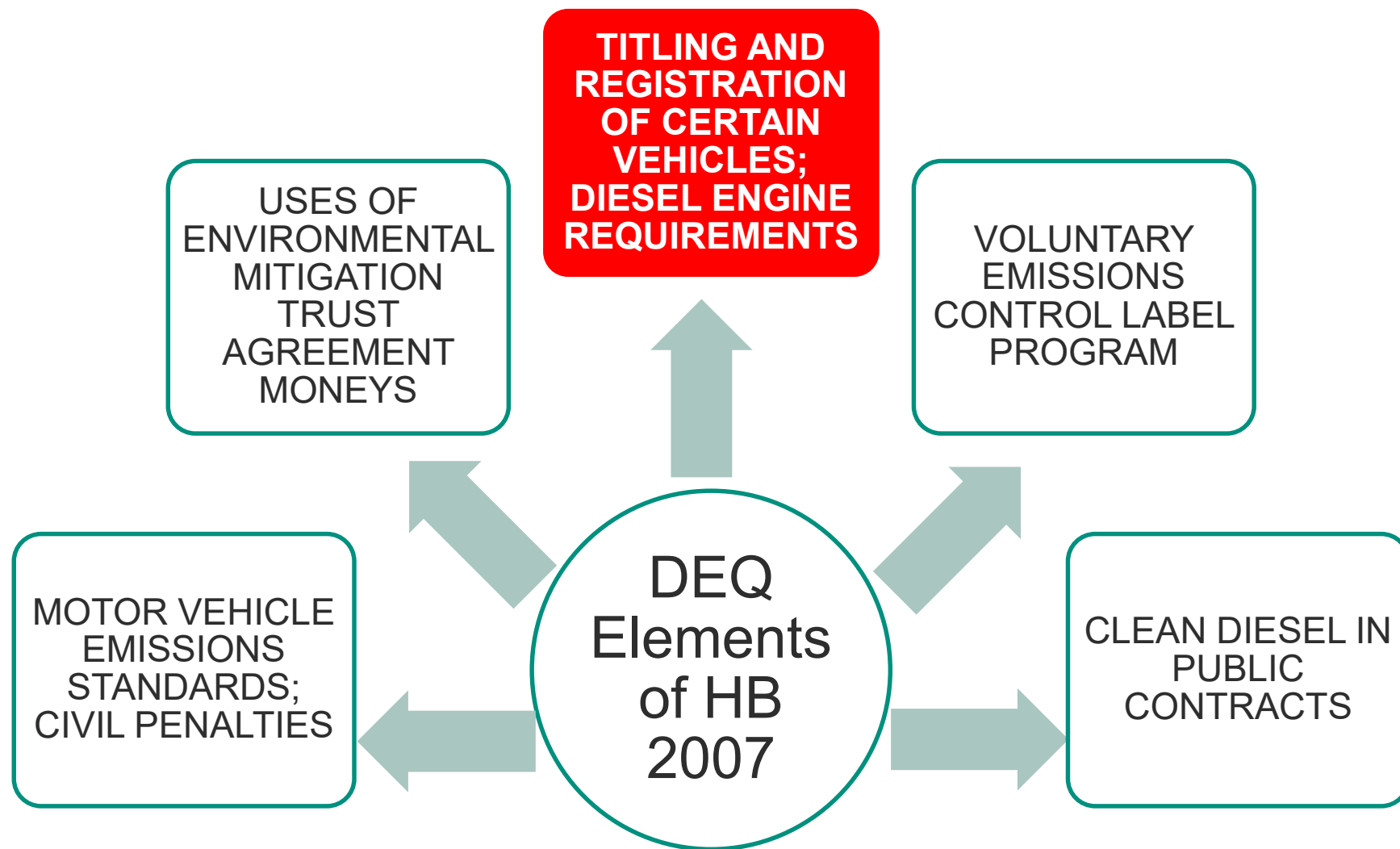
- ✓ Ensure that the rules respond to technical experts and fleet managers in Oregon to help identify real-world solutions.
- ✓ Foster input regarding retrofit criteria and standards including pollution reductions from proven and tested technologies.
- ✓ Facilitate input for DEQ's new program guidance and rulemaking.

# Advisory Committee Ground Rules

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- Prepares for and sets aside time for the meetings;
- Provides DEQ staff with copies of relevant research and documentation cited during the meeting;
- Stays focused on the specific agenda topics for each meeting;
- Comments constructively and in good faith;
- Consults regularly with constituencies to inform them on the process and gather their input;
- Treats everyone and his or her opinions with respect;
- Allows one person to speak at a time;
- Is courteous by not engaging in sidebar discussions; and
- Avoids representing to the public or media the views of any other committee member or the committee as a whole.





# Definitions

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Medium-Duty  
14,001 – 26,000  
lbs.

Heavy-Duty  
>26,000 lbs.

# HB 2007 Medium-and Heavy-Duty Diesel Compliance Option

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# Timelines for HB 2007 Subject Vehicles

Jan. 1,  
2023

- A medium-duty or a heavy-duty truck powered by a model year 1996 or older diesel engine cannot be registered

Jan. 1, 2025

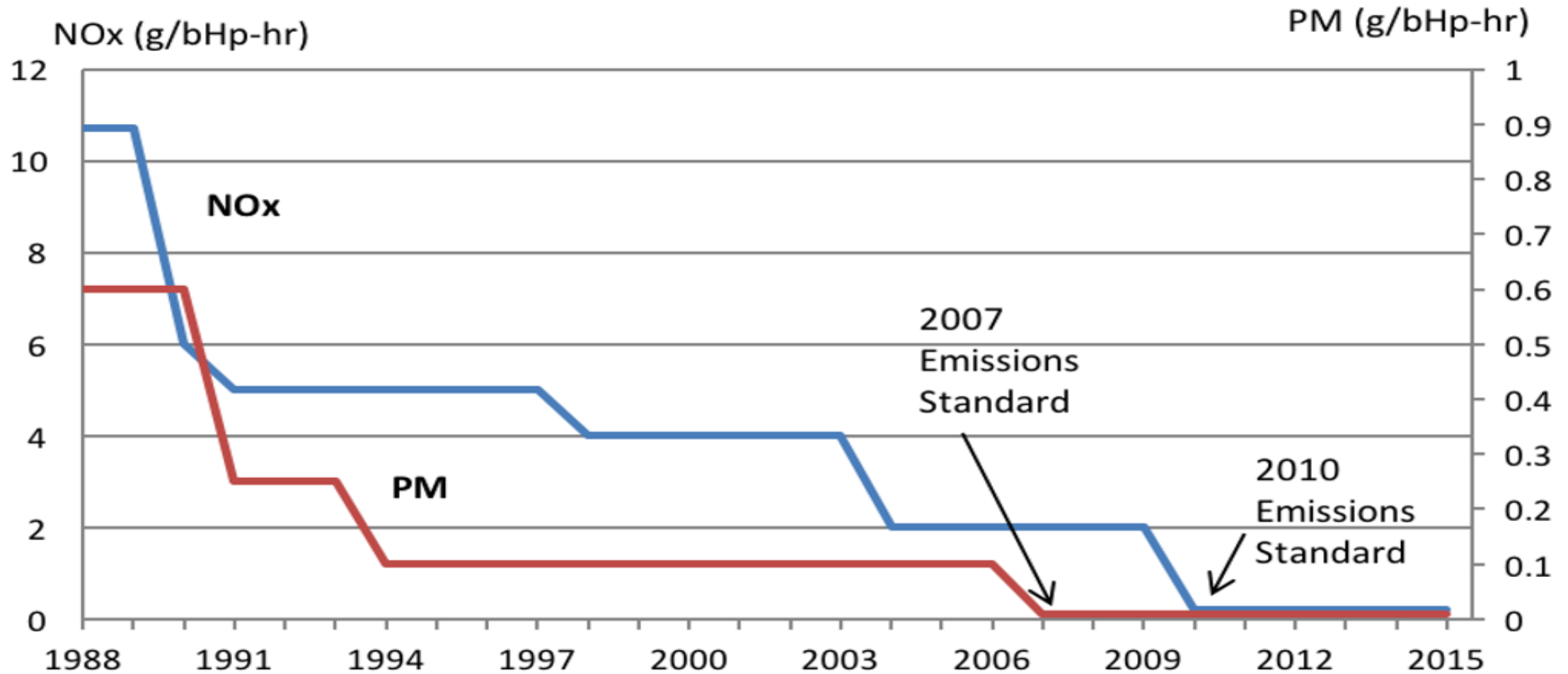
- A medium-duty truck powered by a model year 2009 or older diesel engine cannot be titled
- A heavy-duty truck powered by a model year 2006 or older diesel engine cannot be titled

Jan. 1,  
2029

- A medium-duty truck powered by a model year 2009 or older diesel engine cannot be registered
- Publicly owned heavy-duty trucks powered by a model year 2009 or older diesel engine cannot be registered
- Privately owned heavy-duty trucks powered by a model year 2006 or older diesel engine cannot be registered



# EPA & CARB On-Road Diesel Emission Standards



# Diesel Retrofit Technology

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- ✓ Aftermarket component designed to reduce diesel emissions
- ✓ Emission reductions and cost based on technology
- ✓ Not all vehicles are candidates for retrofit options due to age and engine condition.

# Retrofit Technology and Pollution Reductions

## Closed Crankcase Ventilation (CCV)

### Pollutant Reductions:

- CO: none
- NOx: none
- PM: Up to 100% of crankcase emissions
- HC: none

Estimated cost: \$450 - \$700

## Diesel Oxidation Catalyst (DOC)

### Pollutant Reductions:

- CO: 10-60%
- NOx: none
- PM: 20-40%
- HC: 40-50%

Estimated cost: \$2,000 - \$5,000

# Retrofit Technology and Pollution Reductions

## Diesel Particulate Filter (DPF)

### Pollutant Reductions:

- CO: 70-90%
- NOx: 25%\*
- PM: 85-90%
- HC: 80-90%

Passive or active system estimated cost:  
\$10,000 - \$16,000

## Selective Catalyst Reduction (SCR)

### Pollutant Reductions:

- CO: none
- NOx: 70-95%
- PM: 20-30%
- HC: 80%

Estimated cost: Unavailable

# In determining the criteria and approved retrofit technologies, EQC shall consider

Regulations adopted by the **State of California** for reducing diesel engine emissions from in-use medium-duty trucks and heavy-duty trucks

The list of technologies approved as qualifying retrofits included in the standards established by the commission under **ORS 468A.799**

# California On-Road Diesel Retrofit Technology

## List of Approved Retrofit Technology

- The list is maintained by Executive Order
- Specific engine compatibility
- List is current and used in NOx exempt area

## Manufacturer Certified Installers

- Installers provide assessment of engine operation and retrofit compatibility
- Warranty and maintenance requirements
- Technical assistance availability

## Particulate Matter Filter requirements

- Particulate matter reductions of at least 85%
- Custom fitted for the duty cycle of the engine
- Tested and proven technology

# ORS 468A.799 – Standards for qualifying replacements, repowers and retrofits

For the qualifying retrofit of a diesel engine, a resulting reduction of diesel particulate matter emissions by at least 85 percent

Verified by the United States Environmental Protection Agency or the California Air Resources Board

# Question

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**In addition to current CARB and EPA verified diesel particulate filter devices, what else does the committee believe that DEQ should consider when developing its approved list?**



# Medium and Heavy Duty Subject to HB 2007

MEDIUM DUTY 1996 AND OLDER  
(COMPLIANCE REQUIRED BY 1/1/2023)

527(A)

MEDIUM DUTY 1997 - 2009  
(COMPLIANCE REQUIRED BY 1/1/2029)

2822 (B)

4666 (A)

HEAVY DUTY 1996 AND OLDER  
(COMPLIANCE REQUIRED BY 1/1/2023)

465 (A)

HEAVY DUTY 1997 - 2006  
(COMPLIANCE REQUIRED BY 1/1/2029)

1570 (B) 2031 (A)

(A) ODOT DATA MAY 2020

(B) DEQ ESTIMATE BASED ON 25 YEAR VEHICLE TURNOVER

# Question

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**Should DEQ approve retrofit technology to satisfy EMY 2010 requirements and if so, what should DEQ consider?**

# Question

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**Should DEQ require maintenance or cleaning records to maintain approved certification?**

# Part 2 – Implementation

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- **Outreach (pre-implementation)**
- **Customer Service**
- **Resources**
- **Compliance**

# Pre-Implementation - Outreach

Discussion Topic	What DEQ is considering
<p>What type of outreach should DEQ perform regarding approved retrofit compliance and on what timeline?</p>	<p><b>Beginning third Quarter 2021:</b></p> <ul style="list-style-type: none"><li>• Update agency website information to include approved retrofit information, technical assistance, VW grant program information and FAQ's.</li><li>• Provide information to county, city and municipalities subject to HB 2007.</li><li>• Mail letters to inform registered owners and businesses subject to regulation</li><li>• Work with retrofit manufacturers to provide installer information and resources.</li><li>• Provide informational presentations and webinars.</li></ul>
<p>What else should DEQ consider?</p>	

# Implementation – Customer Service

Discussion Topic	What DEQ is considering
What customer service areas should DEQ focus on?	<ul style="list-style-type: none"><li>• Evaluation of retrofit criteria and customer service support over the phone and online.</li><li>• Technical information for compliance and procedural assistance.</li><li>• Information and direction to appropriate VW grant application and processes for approved retrofit compliance.</li><li>• Analyze and evaluate customer inquiries and compliance requirements.</li><li>• Auditing of compliance certification records.</li></ul>
What else should DEQ consider?	

# Resources for Owner, Operators and Fleet Managers

## Discussion Topic

What resources should DEQ consider for those subject to HB 2007 regulations?

## What DEQ is considering

- Updated Clean Diesel Service Provider list for retrofit compliance and installation.
- Technology system to securely share information and compliance approval in real-time.
- Technical and procedural information regarding retrofit compliance, record keeping and grant programs.
- Owner/operator notification for submissions and approval.

What else should DEQ consider?

# Implementation – Compliance requirements

Discussion Topic	What DEQ is considering
What record keeping requirements should DEQ consider from the owner/operator	<ul style="list-style-type: none"><li>• Proof of approved retrofit installation.</li><li>• Engine model year or engine family label/manufacturer documentation.</li><li>• Approved retrofit service records.</li><li>• Approved retrofit warranty or maintenance work.</li></ul>

What else should DEQ consider?



# Next Steps

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RAC Meetings  
Next: Draft Rules  
Then: Fiscal and  
Proposed Rules

Public Hearing,  
March 2021

EQC Adoption,  
Summer 2021