



What You Can Begin Doing Now in Order to Obtain Funding

Workshop on Rhode Island Clean Diesel Program
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Initial Steps

- **Several standard inventory forms**
- **Collect fleet data**
 - **Age**
 - **Daily mileage**
 - **Engine type**
 - **Engine data (hp, cid, rated RPMs)**

Inventory Forms

Section Three	Vehicle Information		
	Vehicle Type		Year
	Vehicle Manufacturer		Vin #
	Model		Vehicle #
	Comments/Other		
Section Four	Engine Information		
	Manufacturer		Turbocharged
	Series/Model		Engine Family #
	Year		Exhaust Flow (Rated Power)
	Displacement (liters)		Miles on Engine
	Rated RPM		Date of Last Engine Rebuild
	Rated Power (hp)		
	Comments/Other		
Section Five	Exhaust System		
	OEM Muffler P/N		Inlet Orientation
	Muffler Body Shape		Outlet Orientation
	Muffler Body Dia (in)		Muffler Inlet Tube Dia (in)
	Muffler Body Length (in)		Muffler Outlet Tube Dia (in)
Section Six	Fuel Information		
	Max. Sulfur (PPM)		
Section Seven	Description of Vehicle		
	Primary Use		
	% Interstate (> 55 mph)		Average Speed (mph)
	% Secondary Rd (30-55 mph)		Gross Vehicle Weight (GVW)
	% Urban (<30 mph)		% of Maximum GVW
	% Vehicle is working		Power Take Off (1/IN)
	Daily Idle Time (hrs)		PTO Usage per Day (hrs)
Comments			

Assess 5R Options



➤ **Retrofit** by using add-on devices

➤ DOCs

➤ DPFs

➤ CCV



➤ **Replace** the entire vehicle

➤ **Repower** – replace the engine with a newer engine



➤ **Rebuild** the engine only

➤ **Refuel** with alternate fuels including

➤ Bio diesel

➤ Natural gas



Engineering Analysis

- **Seek assistance from RI DEM on selection of equipment or strategy**
- **Obtain professional advice from engineering firms**
- **Use EPA web information in developing strategy**
- **Decide on units to be acted on**

Preliminary Cost Study

- **Preliminary engineering essential for developing costs**
- **Get a rough idea of the cost for each option**
- **Use EPA published information**
- **Add safety factor**

Installed Costs in Rhode Island

- **Diesel oxidation catalysts – \$1,500**
- **Diesel particulate filter – \$14,000**
- **Flow through filter – \$6,000**
- **Closed crankcase ventilation – \$1,000**
- **Active DPF (California) with NOx - \$25,000**

Investigate Sources of Funding

- **RI DEM**
- **NESCAUM**
- **EPA Grant Applications**
 - 📄 Watch for announcements

Presentation to Management

- **Be prepared to discuss options with managers, supervisors, school boards, etc.**
- **Develop presentation materials**
 - 📖 Why required (regulations, contract requirements, clean air initiatives, etc.)
 - 📖 Options available from preliminary engineering analysis
 - 📖 Cost information
 - 📖 Make specific recommendations
 - 📖 Develop work plan or implementation schedule

Summary

- **Basic inventory information needed to start**
- **Some help may be needed to select the appropriate technology for specific vehicles**
- **Funding opportunities exist**
- **Conduct cost analysis**
- **Make presentation to management**
- **Secure funding**