



# Greening the Fleet

Cleaner Air, Lower Carbon, and a Better  
Economy

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# Outline

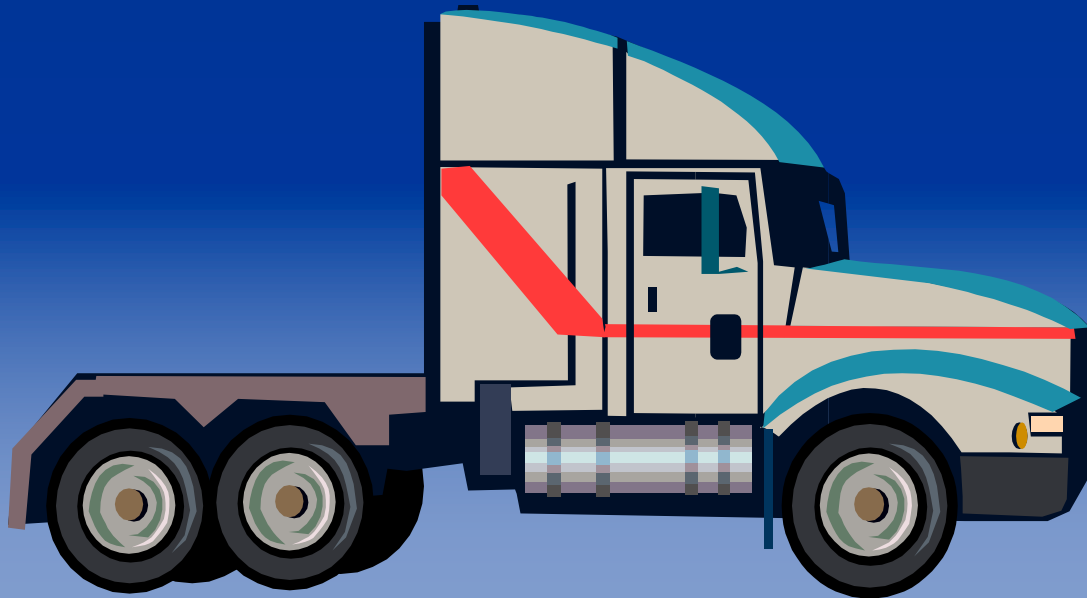
- What is Cascade Sierra Solutions?
- Mission & Purpose
- The Long Haul Truck
- Breaking Down Barriers
- Equipment
- Financing Options
- Funding Needs
- Q & A

# What is Cascade Sierra Solutions?

- An organization of public and private partners, working together to:
  - Save fuel
  - Improve air quality
  - Slow climate change
- Non-regulatory, Not-for-profit
- Showcases multiple brands of fuel-saving technology at truck stops
- Provides a “one stop shop” for truckers

# The CSS Mission

CSS identifies, promotes and finances technology to save fuel and reduce pollution from the legacy fleet of trucks.



# The Role of CSS

Technology

Grants

Discounts

Rules

Tax credits

Offsets

Financing

Rebates

Technical Assistance



Trucking  
Industry



# The Long Haul Truck

- ✓ Travels over 500 miles a day
- ✓ 100,000 miles+ per year
- ✓ Uses 20,000+ gallons of diesel fuel
- ✓ Emits 220 tons of carbon dioxide per year
- ✓ 100,000 are on the I-5 corridor at any time





# The Long Haul Truck

- ✓ Uses more fuel than any other vehicle
- ✓ Idles 1960 hours a year
- ✓ Wastes 2,000 gallons of fuel a year



# Room for Improvement

With a complete upgrade we can save:



- ✓ 25% of the fuel consumed or 5,000 gallons per truck per year;
- ✓ 25% reduction in PM, NO<sub>x</sub>, air toxics
- ✓ 50 metric tons of carbon dioxide per truck, per year

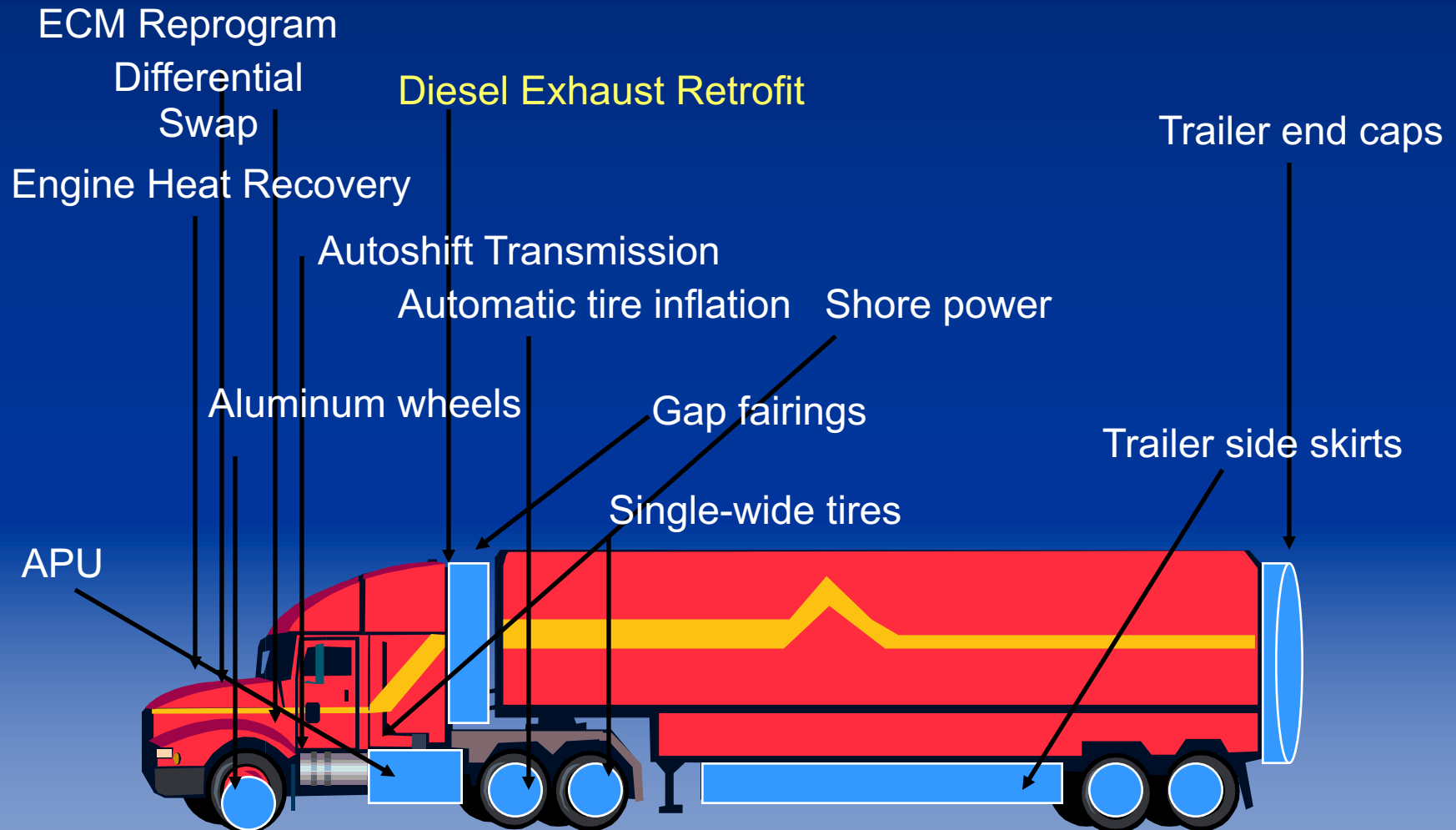
This is one of the biggest opportunities for reducing carbon emissions



# Potential Improvement – Each Year

- Upgrading 30,000 trucks would save:
  - 150 million gallons of fuel
  - 625 tons of diesel particulate matter
  - 22,500 tons of oxides of nitrogen-NO<sub>x</sub>
  - 1,500,000 tons of carbon dioxide
  - \$450 million in fuel savings

# Truck with *SmartWay* Technology



# CSS Strategies

- ✓ Implementing EPA SmartWay Upgrades
- ✓ Providing Affordable Upgraded Trucks
- ✓ Promoting new EPA SmartWay Certified Tractors & Trailers
- ✓ Promoting Alternative Fuel Vehicles; and
- ✓ Cleaner and Renewable Fuels

# The CSS Outreach Center

Breaks down  
barriers:

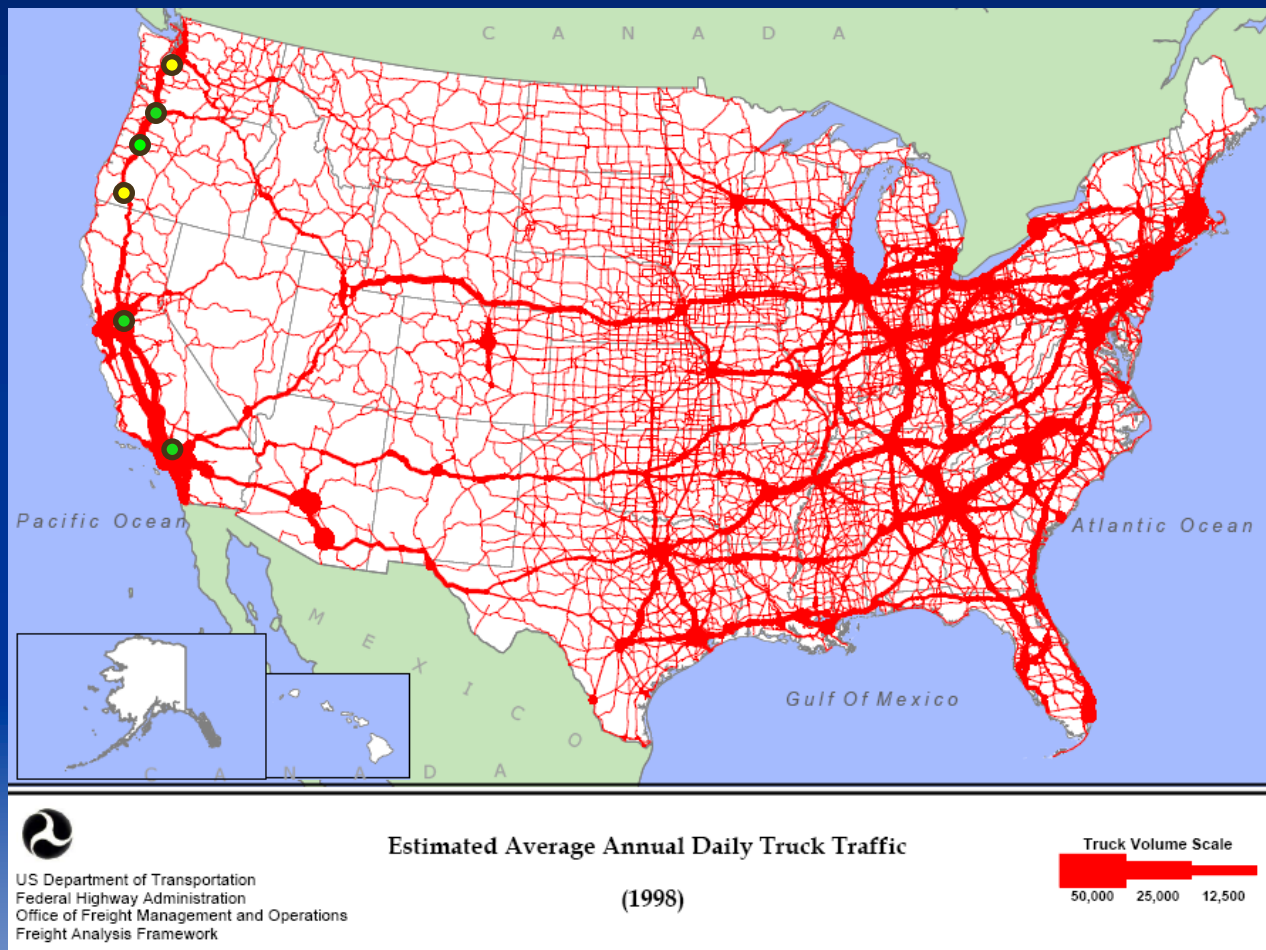
- ✓ Awareness
- ✓ Capital Cost
- ✓ Regulatory Information



Coburg, Oregon



# Locations



# Portland, Oregon



# Sacramento, California

- Grand Opening in September 24th
- 2800 Square Ft
- Classroom
- Showroom for equipment



# APUs





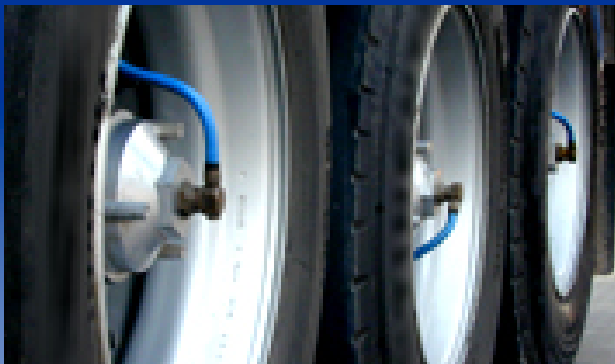
# Heaters



# Aerodynamics



# Tires & Wheels



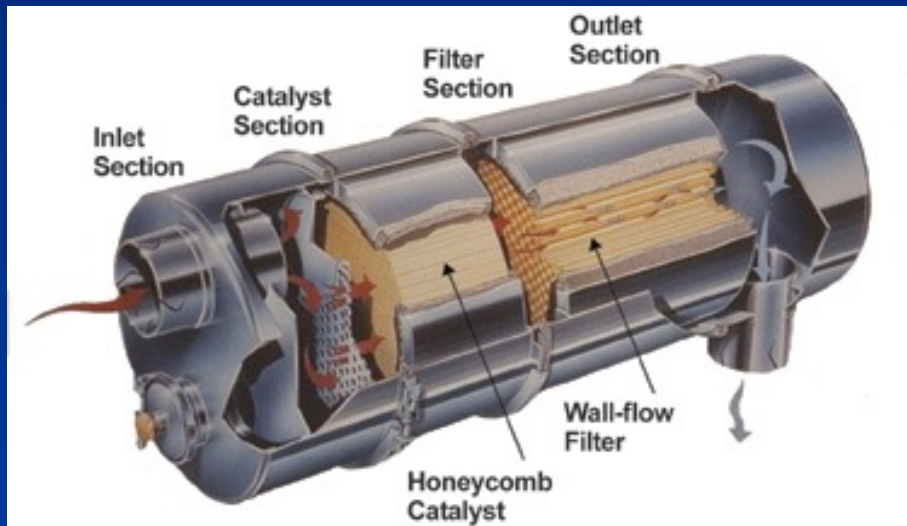


# Shore Power Hookups





# Exhaust Retrofits



# SmartWay Tractors



# LNG Tractors



# Fleet Case Study

- Replaced 300 trucks
- Baseline FE @ 5.8 mpg
- New truck FE @ 7.73 mpg
- 33.27% improvement
- Average VMT 150,000
- Fuel used before: 25,862 gal
- Fuel used after: 19,404 gal
- Savings of 6,458 gal
- 71 tons of GHGs
- $\$26,000 * 300 = \$7,800,000$



# Fleet Case Study

ECM Reprogram: Limiter @ 68, Idle shutoff

Correct  
Differential

Diesel Exhaust Retrofit

Autoshift Transmission

Automatic tire inflation

Full Aero Package

Aluminum wheels

Gap fairings

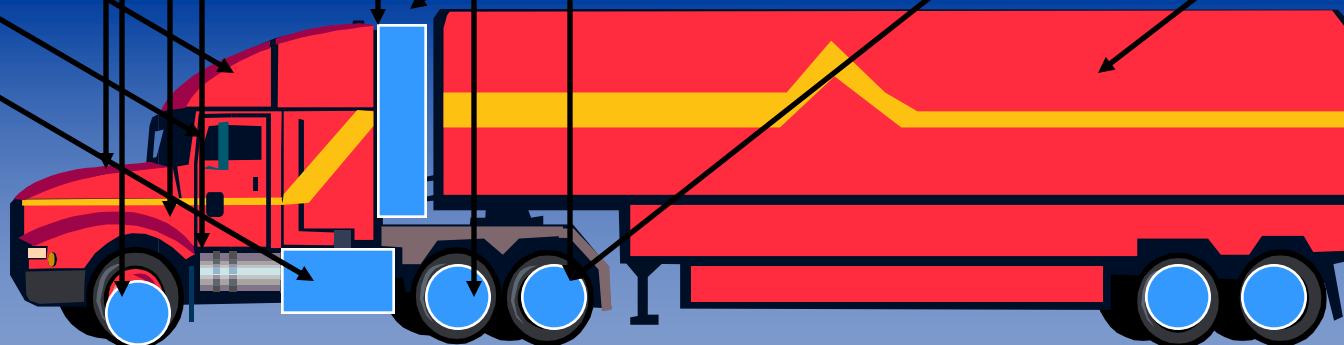
Tag Axle

Fuel Efficient Engine

Super Light Trailer

Single-wide tires

APU



# Fleet Incentives



# CSS Financing Options

- The CSS *Everybody Wins* Equipment Lease (\$10 Mil)
  - Low interest
  - Extended terms
- The CSS *Greenlease* (\$40 Mil) – Designed to help small businesses which often do not qualify for traditional financing.
  - 10 year payment plans for new trucks
  - 8% interest
  - Provides match for California ibond program
- SBA Loans up to (\$25K) per business
  - Higher interest
  - Extended terms
  - Processing fees
- Traditional Truck Financing – Daimler Chrysler, GE Capital

# Incentives

- On-road voucher program (CA)
- BETC (OR)
- Grant processing services for truckers
  - EPA
  - CARB
  - DEQ
- Shorepower grants (OR)



# Progress

- Truck Replacement Projects:
  - 380 completed
  - 300 in process
  - 1,200+ grants in process (CA)
- SmartWay upgrades:
  - 1,500 completed
  - 320 In Process
  - See the progress on our webpage:  
[www.cascadesierrasolutions.org](http://www.cascadesierrasolutions.org)

# Contact Info



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