



Cleaning up the Legacy Fleet

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What is Cascade Sierra Solutions (CSS)?

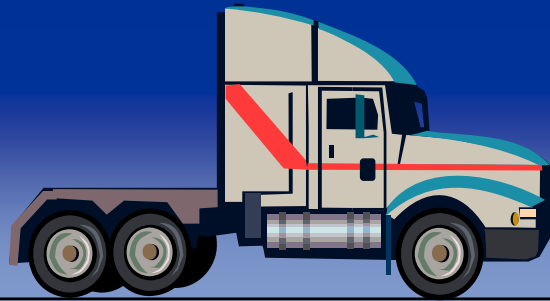
A non-profit organization of public and private partners, working together to:

- Save fuel
- Improve air quality
- Slow climate change

Focus is I-5 Corridor in Washington, Oregon & California

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

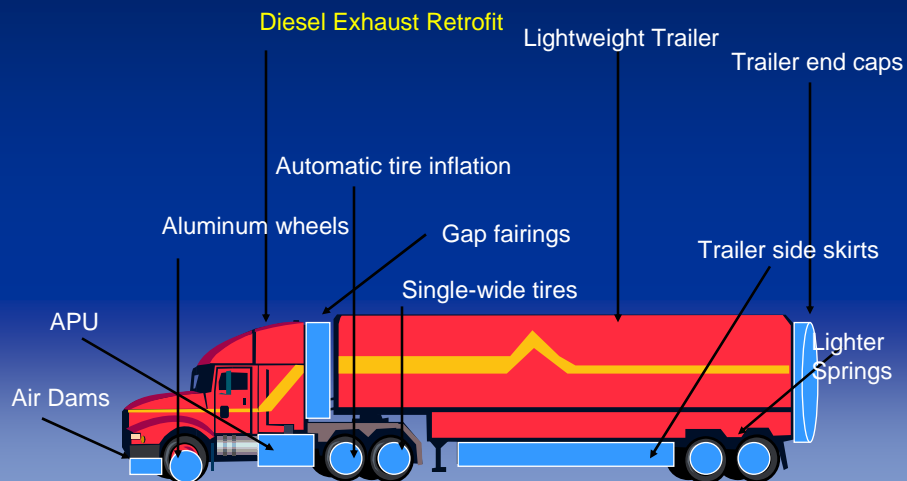


Trucking
Industry

CSS Breaks Down Barriers

- The *awareness* barrier
- The *capital cost* barrier
- The *regulatory* barrier

Truck with *SmartWay* Technology



Initial Locations



CSS Programs

- Upgrading trucks with EPA *SmartWay* upgrade kits through a growing dealer network
- Technical assistance & education
- Low-cost financing, grants & tax credits
- Manufacturer rebates
- CSS fleet member program
 - Registration program for fleets wanting to upgrade
 - Tracking database for fuel savings & emissions reductions
 - Fleet fuel discount card
 - Grant writing services
- Providing low-cost upgraded trucks to drayage operators (In development)

Truck Replacement Program

Some trucks are clearly not worth upgrading



The Truck Replacement Program

- Trucks are donated from dealer inventory (1999 or newer)
 - Dealers get a retail value tax write-off
 - Dealers are paid by CSS for the upgrade:
 - ECM programming (5 minute idle shut-off, 62 MPH max speed, NO_x reflash, derate engine to \leq 375 hp)
 - Level 3 EPA/CARB verified particulate trap
 - New fuel efficient tires & lightweight wheels
 - Engine reconditioning
 - 2-year engine warranty
 - New paint
 - EHRS/Evap Cooler

The Truck Replacement Program

Truckers get an attractive, clean, fuel-efficient truck that should be good for 300,000 miles or 10 years of operating in drayage service

New Truck vs. Old Truck

- | New Truck | Old Truck |
|---|---|
| <ul style="list-style-type: none">– 7.5 mpg– 4,000 gallons per year– Saves 29 tons of CO₂– Reduces PM by 85%+– Reduces other emissions by 1/3 based on better fuel economy– Low maintenance– Monthly Payment
\$497 | <ul style="list-style-type: none">– 4-5 mpg– 6,667 gallons per year– Highly polluting– Guzzles fuel– Frequently idles– High maintenance bills– Unattractive |
| <ul style="list-style-type: none">– (222) fuel savings– \$275 net cost | |

CSS in Oregon



CSS Outreach Centers



- Co-located with truck stops
- One stop shop for equipment selection
- On-the-spot financing
- Provide rules info
- Help with grant applications

Idle Reduction Technology



- Comfort Pro (Carrier)
- Tripac (Thermo King)
- Rigmaster
- Idle Solutions
- Espar
- Webasto
- Autotherm
- CCS Lightning
- Blackrock
- Willis
- Kohler
- Shurepower
- Dometic
- Frigette
- Cummins

Tires & Wheels



- Michelin
- Les Schwab
- Doran
- Merritor
- Vigia
- Alcoa
- Accuride

Aerodynamics



- Laydon Composites
- Freight Wing
- Nose Cone

Diesel Exhaust Controls



- Donaldson
- Cummins NW
- Caterpillar
- Johnson Matthey
- Detroit Diesel
- Engine Control Systems
- Clean Diesel Technologies
- International

Light Weight Components



- Meritor
- Laydon Composites

Lightweight Trailers



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