Clean Fuels 101: Fleet Efficiencies

Part 2 of 5

November 29, 2017

Western WA Clean Cities
• November 15: Introduction to Washington’s Clean Fuels
• November 29: Fleet Efficiencies
• December 13: Biomass Fuels - Biodiesel, Renewable Diesel & Ethanol
• December 20: Electric Vehicles & Hydrogen Fuel Cells
• January 10: Gaseous Fuels - Natural Gas & Propane Autogas

All webinars will begin at 10:00 AM Pacific Time.
Today’s Speakers
Outline

Angela Song
Puget Sound Clean Air Agency
Topic: Avoid-Shift-Improve

Patricia Weikersheimer
Argonne National Laboratory
Topic: Idle Reduction

Rob Beidler
Snohomish County Sheriff’s Office
Topic: Telematics
Seattle tops cities in per-capita car ownership

Among the 10 most densely populated big U.S. cities, Seattle has the most motor vehicles per person.

1. Seattle: **637 cars per 1,000 people***
2. Long Beach: **583**
3. Los Angeles: **549**
4. Miami: **465**
5. San Francisco: **444**
6. Chicago: **431**
7. Philadelphia: **384**
8. Washington, D.C.: **375**
9. Boston: **367**
10. New York City: **233**

*Includes owned or leased passenger cars, vans and pickup trucks that are kept at home and available for use by household members. Vehicles used exclusively for business, or not in working order, are excluded.

Source: U.S. Census, 2015

AMANDA E. WELCH / THE SEATTLE TIMES
Unsustainable Transportation

More Cars → Congestion → More Roads → More Cars → Congestion → More Roads

Western WA CLEAN CITIES
PSCAA 2015 transportation GHG emissions (total = 14.9 million tons CO2e).
CO2 Equivalency

- **22,689,072** barrels of oil consumed
- **2,098,501** passenger vehicles driven for one year
- **2.4** coal-fired power plants in one year
- **1,102,734,331** gallons of gasoline consumed
- **24,019,607,843** miles driven by an average passenger vehicle
- **11,542,992** acres of U.S. forests in one year
How many days per year do you spend commuting?

If your current commute to work is...

- 15 minutes
- 26 minutes (US Average)*
- 45 minutes
- 60 minutes
- 90 minutes

Over the course of a year you’ll spend...

- 3 days commuting
- 9 days commuting
- 16 days commuting
- 21 days commuting
- 31 days commuting

*U.S. Census Bureau, 2015 American Community Survey 1-Year Estimates
Hours of extra travel time due to traffic congestion in U.S. cities in 2016

<table>
<thead>
<tr>
<th>City</th>
<th>Extra Travel Time (Hours)</th>
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<tbody>
<tr>
<td>Los Angeles</td>
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<td>Seattle</td>
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<td>Atlanta</td>
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<td>Washington D.C.</td>
<td>126</td>
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</tbody>
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Source: TomTom Traffic Index
Sustainable Transportation
Avoid - Shift - Improve

A-S-I APPROACH

AVOID / REDUCE
Reduce or avoid the need to travel

SHIFT / MAINTAIN
Shift to or maintain share of more environmentally friendly modes

IMPROVE
Improve the energy efficiency of transport modes and vehicle technology

System Efficiency

Trip Efficiency

Vehicle Efficiency

Western WA CLEAN CITIES
Avoid - Shift - Improve

Can the trip be avoided or reduced?
- Teleworking/Telecommute
- Route optimization

Can you shift to more sustainable transportation?
- Public transportation
- Non-motorized travel

Can you improve your trip?
- Fuel efficient car
- Alternative fuels
Thank You

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http://wwcleancities.org/