

Alternative Fuel Requirements Update & “R99” Renewable Diesel

Renewable Diesel



Petroleum Diesel



Update & Discussion

- Status of the District's Alternative Fuel Requirements
- Discuss accomplishments & next steps
- No action required today

R.C.W. 43.19.648

- Effective June 1, 2018, state statute requires the District to “satisfy one hundred percent of fuel usage for operating publicly owned vessels, vehicles, and construction equipment from electricity or biofuel.”
- Some exceptions
 - Emergency response vehicles
 - Equipment that is still “useful”
 - Life cycle cost considerations

“R99” Renewable Diesel is different

- Both are made from vegetable oils and animal fats so are considered “renewable” or “biomass” fuels
- Biodiesel uses oxygen causing cold weather issues, separation during storage, algae growth, & higher emissions
- Renewable “R99” diesel does not introduce oxygen (similar to petroleum diesel). It can run in diesel engines with no blending, and with even greater emissions reductions than biodiesel

Who else is using R99?

- State of California
- City of Oakland since Fall 2015
- City of San Francisco
- United Parcel Service
- Eugene Water & Electric Board
- Numerous northwest utilities and public entities are moving to R99

Benefits of R99 Diesel

- Use means District in compliance early for a large portion of our fleet
- Better performance and fewer cold weather and storage issues compared to biodiesel
- Immediate, significant reduction in District fleet emissions – approx. a 2/3 reduction
- 2015 diesel usage of 113,000 gallons produced approx. 3.3 million pounds of carbon emissions – with R99 immediate reduction to about 1 million pounds

About 2.3 million pounds less carbon emissions by the District into the Chelan County environment annually!

- No modifications to current diesel vehicles or fueling infrastructure is required – immediate transition is easy

What's the Downside/Risk?

- Limited production in the U.S. (only 3 producers)
 - If supply is intermittent for any reason, we can switch immediately to biodiesel or petro diesel with no problem and maintain operations seamlessly
- Cost is currently higher due to transportation charges since R99 isn't produced locally (\$.20 - .55 per gallon)
 - At current costs, additional expense to District would be \$22K - \$62K annually (approx 1% - 1.5% of our total fleet O&M budget)
 - We expect that increasing demand will cause increased U.S. production and lead to decreased costs soon
- From a global standpoint, some environmental concerns about (rain forest) deforestation in Indonesia to support planting of palm oil for producing R99

Risk Mitigation/Communications

- Controlled trial of R99 in certain District trucks – now approximately 20,000 gallons
 - No equipment or operational issues whatsoever
- We have communicated with the City of Wenatchee and Fire District's #1 and #3 (who use District fueling facilities) about a conversion to R99 diesel and they are on board
- Ability to add R99 renewable diesel, as a variety of biodiesel, to our current fuel supply contract with Coleman Oil to ensure an ongoing supply through a local supplier at a very competitive price

Alternative Renewable Diesel

Questions?