

Metro Transit Green Fleet Initiatives

Green Transportation Summit
April 6, 2016

Metro's Green Fleets

METRO GREEN FLEET CHECKLIST:

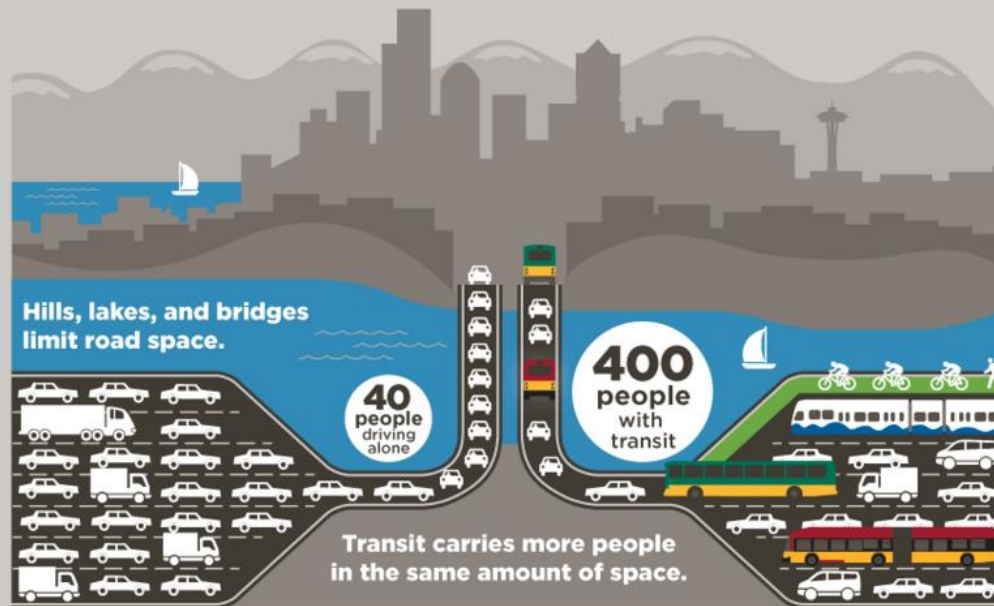
- ✓ 2004 - First articulated hybrid buses go into service
- ✓ 2011 - All-electric, zero-emission Metropool program launched
- ✓ 2015 - Zero-emission trolleys with off-wire capability in service
- ✓ 2016 - 1st of 3 battery electric buses in service



Record ridership

CHOOSING METRO MAXIMIZES THE ROADS WE HAVE.

Transit takes 175,000 cars off the road each weekday, reducing congestion and saving everyone time—whether or not you ride the bus.



METRO IS AN IMPORTANT CHOICE FOR MANY PEOPLE.



AND DEMAND IS STILL GROWING!

Alignment with 2015 SCAP

Key Goals & Targets

- Double transit ridership by 2040
- Grow transit service thru 2020 with no increase in GHG emissions
- Goal all Hybrid or Electric Fleet by 2018
- Reduce Metro's normalized fuel use 10% from 2014 to 2020
- Increase use of alternative fuels 10% from 2014 to 2025 (all County fleets)



Early Leadership: Hybrid Fleet

- 2004: began acquiring 60-ft hybrids
- 2014: began upgrading to new hybrids with electric drive components and accessories

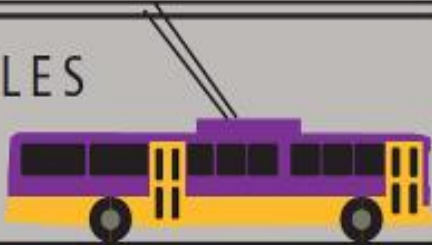


Continued Leadership: Trolley Fleet

FAST FACTS

Metro's trolley system operates on

70 MILES



of two-way overhead wire in Seattle.

The new trolley purchase represents over



of Metro's **entire** fleet.

30% more energy efficient

Off-wire travel for limited distances

TROLLEY ROUTES

1, 2, 3, 4, 7, 10, 12, 13, 14, 36, 43, 44, 49, 70

CARRY
20%



of Metro's weekday riders



Alternative Fuel Vehicles

Rideshare Operations

- 2011 metropool launch
- 25 Nissan Leafs
- Looking at additional EV vans for future

Accessible Services

- Converted 12 Access vans from gas to Propane (LPG)
- Convert 20 additional vans, and purchase 32 LPG vehicles in 2016



Looking Ahead: Electric Battery Bus

- All-electric battery bus
- Three buses in service for testing, Feb 2016 – Feb 2017
 - Routes 226 and 241
- Fast-charge station at Eastgate P&R



Battery Bus: Areas of Consideration

- R&D test analysis
- Service reliability, impacts
- Life-cycle cost benefit analysis
- Battery and charging technology
- Energy demand, distributed charging needs
- Advances in technology
- Alignment with climate and energy goals

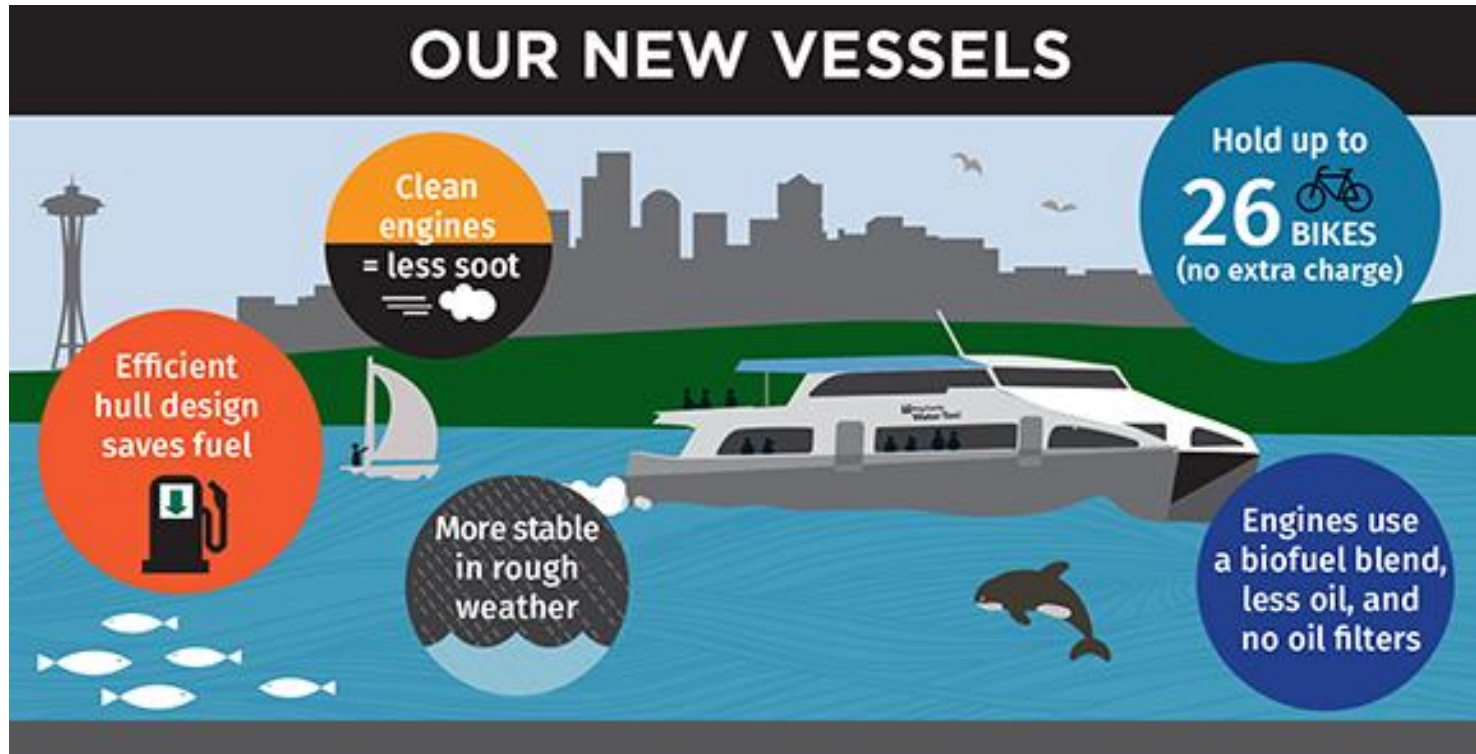


Battery Bus: Route Review

- Opportunities for electric bus expansion in Metro Transit fleet
- Screening Criteria:
 - Trolley routes excluded
 - Operated with 40' buses
 - Minimum scheduled layovers of +5 minutes
 - Round trip of 25 miles or less
 - Access KC facilities (some exceptions noted) for charging stations
- Potential application for 30+ routes, 170 buses, 18 charging station locations

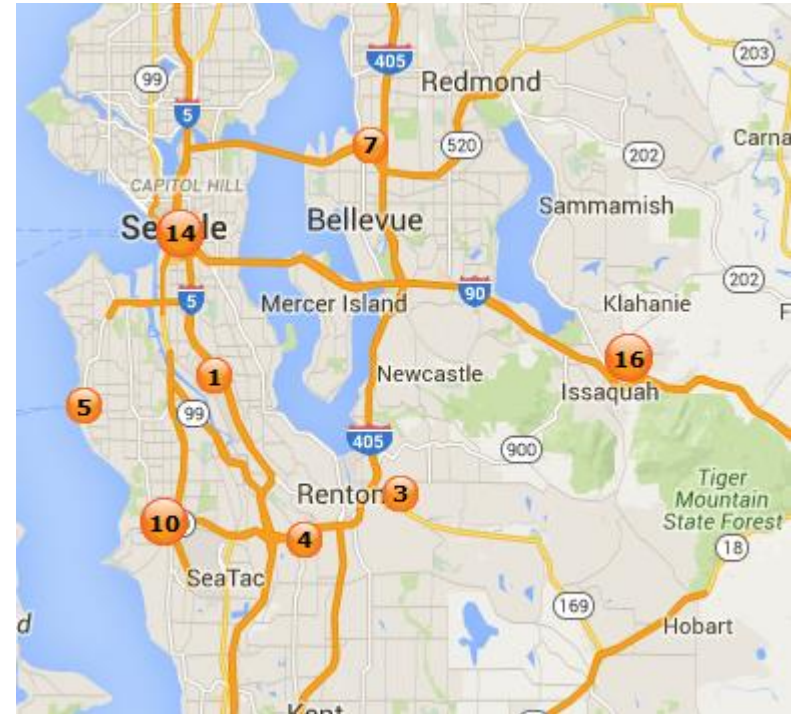
Biodiesel Water Taxis

- Water Taxis use a 10% locally-sourced biodiesel blend
- High efficiency design and new tech increases efficiency



Electric Vehicle Charging Stations

- In 2009, King County received a million dollar Federal grant funds for EV charging stations
- Pilot program installed 59 stations for public and fleet
- King County targeted all-day parking sites and potential 'share-use' sites



2016 Priority Actions

- Complete E-Bus program test and evaluation
- Put additional trolleys and hybrid buses into service
- Convert and purchase additional LPG Access vans
- Increase the number of hybrid and electric vehicles in non-revenue fleet
- Research and evaluate additional alternative fuels

Additional Information

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