

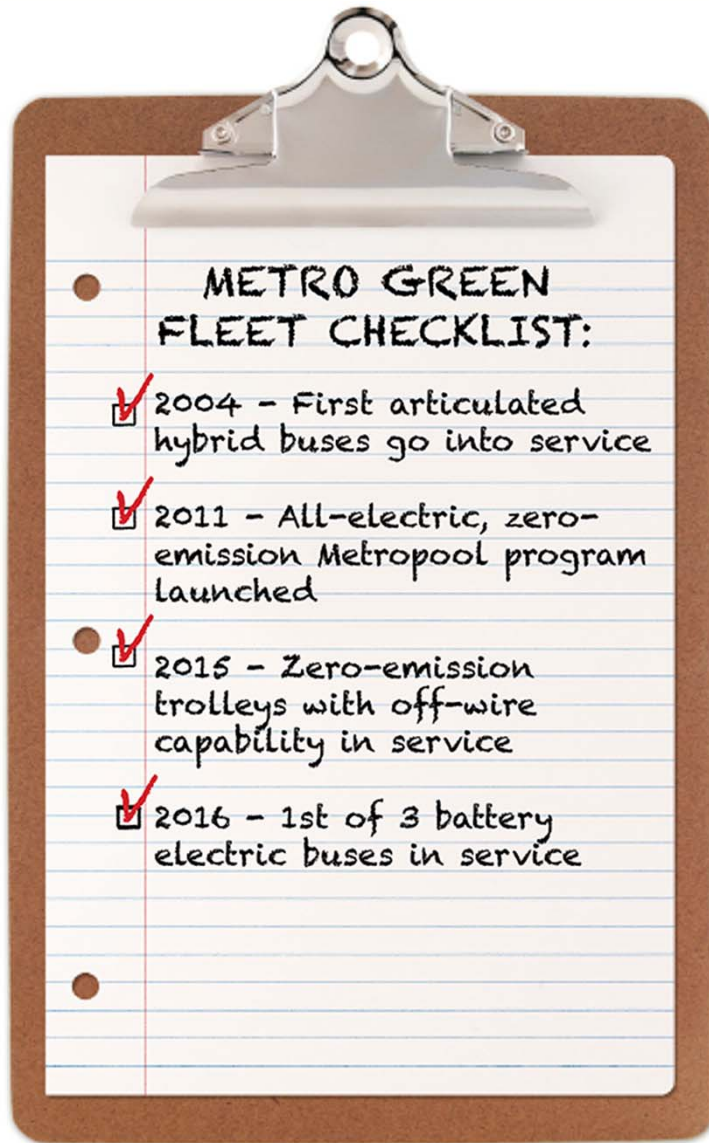
Metro Transit Green Fleet Initiatives

March 29, 2016



We'll Get You There.

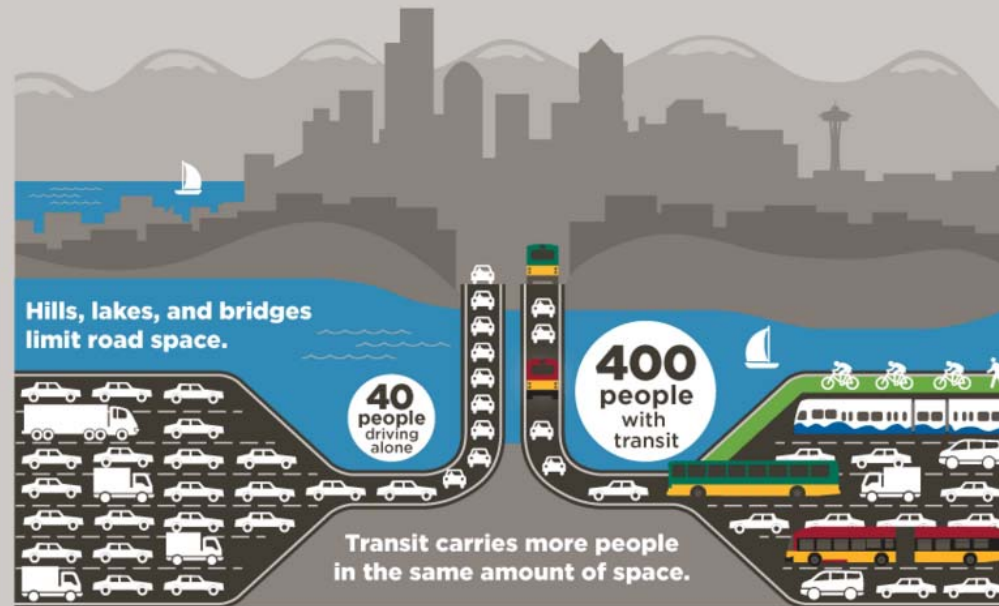
Metro's Green Fleets



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: Work with manufacturers to deliver nation's largest articulated fleet
- 2014: New cleaner and quieter hybrids



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

12%



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 & Charging Stations

Rideshare Operations

- 2011 metropool launch
- 25 Nissan Leafs

Charging Stations

- 59 stations in King County

Accessible Services

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



Looking Ahead: 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

- In-service performance
- Economic, market and barriers analysis
- Battery and charging technology
- Infrastructure location and needs
- Alignment with climate and energy goals



Battery Bus: Preliminary 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, 150+ buses, based on **5 minute minimum** layover
- Potential application for 8 routes, <50 buses, based on **10 minute minimum** layover
- 18 charging station locations

Biodiesel Water Taxis

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



Partnership Opportunities

- Buy service or vehicles
- Help locate charging stations for buses and/or vehicles
- Joint purchasing of vehicles
- Long range planning for electrification



2016 Priority Actions

- Complete Battery 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 alternative fuels