

Fleet Electrification Update

March, 2023

Ordinance 21-094 required the Fleet Services Division to (1) conduct market research to determine the availability of EVs and/or electric equipment to replace specific vehicles and/or equipment during standard fleet rotation (end of service life) (2) based on the market research, coordinate with county departments/courts/offices to determine whether there are EVs and/or electric equipment available on the market that meet the needs of each department/court/office, and (3) provide to council a report identifying those existing county vehicles/equipment which can be replaced with an EV and/or electric equipment in 2022. Through Ordinance 21-094 Council appropriated \$2,200,000 to be used toward electrification of the fleet. In March, 2022 the Fleet Services Director presented a list of county vehicles which could be replaced with all-electric vehicles (EVs). After Council review the Fleet Services Division moved toward purchasing EVs. However, due to supply chain and new technology related delays, delivery of EVs has been significantly delayed.

In mid-March, 2023 a long-awaited all-electric medium-duty cabover truck chassis that was ordered to replace a Solid Waste diesel-powered box truck was finally delivered to the local dealer. The chassis will go to the body upfitter and receive the van body and other equipment. We hope to see that truck delivered to the County in April. Below is a picture of the truck taken at Pape' Kenworth in Marysville just after delivery from the factory:



Thirteen all-electric crossover SUVs are on order to replace vehicles identified earlier. Delivery time is uncertain but anticipated in third or fourth quarter, 2023. These vehicles will replace a variety of internal combustion engine (ICE) sedans and small SUVs and will be used by various departments including Public Works, PDS, DCNR/Parks, and Facilities & Fleet. Eight hybrid-electric ½ ton pickup trucks were delivered in March, 2023. These are the first hybrid-electric pickup trucks to ever be put into service in the County. These vehicles will replace existing ICE pickup trucks used by various departments including Public Works, PDS and DCNR/Parks. A list of other ICE pickup trucks to replace with all-electric models is waiting for ordering opportunities which have been hampered by supply chain and new technology constraints. Facilities maintenance has been using a newly purchased all-electric van since July of 2022. Although there have been some challenges with charging, overall it is working well in this assignment.

One of the greatest areas of impact in terms of per-unit pollution reduction, and sustainability, is replacement of ICE (typically diesel) “yard” equipment such as yard trucks, forklifts, loaders and backhoes used at County facilities. The engines in this off-road equipment used intermittently for loading, unloading and transporting goods around sites rarely reach normal operating temperature. Because of this they are inefficient, and they pollute more when below operating temperature. Equipment used intermittently also requires more frequent repair and parts replacement, using already scarce labor and parts. Changing to all-electric equipment solves all of these problems. Presently two electric forklifts are on order to replace diesel forklifts. Electric yard trucks have been in use at Solid Waste sites for a couple of years. We’re looking into options for electric and hybrid-electric loaders, backhoes and other equipment to replace ICE equipment. The technology is increasing rapidly and it is only a matter of time before these are available.

A new staff member will join Fleet Services in late March. One of the primary duties of this person will be to identify additional opportunities for electric vehicles and equipment, to work with departments and conduct fit analysis, to research new technology and trends, and to identify suitable charging stations and locations and work with Facilities and PUD to upgrade electrical infrastructure. This staff member will also research EV grant opportunities and identify and coordinate EV maintenance/repair training for Fleet technicians.