Transportation Vehicle Fund (TVF)

- Washington State School bus purchase and replacement program
- Funded by the State of Washington through OSPI
- TVF fund is regulated for school buses only per **RCW 28A.160.130**
- Dispersed to districts over scheduled payments each August
- Replacement schedule is based on class of bus purchased
- Districts can make contributions to prepare for district growth

Variables That Drive TVF

- Manufacturers submit annual bid prices to OSPI for each bus model
- Three primary bus models
  - Type A = light duty chassis / 8 year depreciation schedule
  - Type C = medium duty conventional front engine / 13 year depreciation schedule
  - Type D = heavy duty rear engine / 13 year depreciation schedule
- Funding is based upon base model school bus approved by OSPI
- District added options must be locally funded (cameras, GPS, radios, chains etc..)
- District receives interest earnings, held by county treasurer
- TVF deposits are sent to each district August of each year.

KWRL Develops TVF Forecast Model

The purpose of a forecast model is to assess future expenditures compared to expected revenues so that districts can predict fund balance year over year. When a district knows the eb and flow of the fund balance they can determine an appropriate local contribution to maintain a healthy fund balance that allows districts to be prepared for growth.

- Forecast future replacement purchases and expected expenditures
- Project future purchases through simulator to forecast TVF income
- Project the cost of district based options for liability estimate
- Project interest earnings and trade value income
- Compare total income to total expenditure to determine district contribution

Bus Purchase Comparison

	Type C or D	Electric
2023-2024 OSPI Base Bid Price	$200,000	$400,000
Estimate of Add-Options	$20,000	$20,000
Total Cost	$220,000	$420,000
EPA Grant Funding	-0-	$200,000
Net Cost	$220,000	$220,000
Net Cost if you stack local grants and rebates	$220,000	$0 to $220,000
OSPI funding to TVF	$220,000	$400,000

Benefits of electric buses as a fourth class of bus

(projection of 14 bus sample)

- $6000 per bus in fuel savings per year / $78,000 per bus over cycle of bus
- $1,092,000 in fuel saving over the life of a 14 bus sample size
- Electricity from proprietary charger is at least 80% cheaper than diesel
- $7000 in parts/lubricants savings per bus over cycle of bus / $98,000 14 buses
- $12,000 in service labor savings over the cycle of 14 buses

Total rough estimate of operational savings per year for 14 buses = **$92,461**

Total rough estimate of operational savings over 13 years = **$1,202,000**

\+ KWRL saving from reduction in TVF contribution = **TBD ????**

TFV balance forecast made prior to EPA grant application

KWRL 10 Year TVF Forecast

2024 Purchase Prices & Quantity Detail				May 2024 Balance	Income By Source				May 2024 Balance
	$150,690.00	$153,787.00	$203,747.00	$3,854,000.00				$2,000	$3,854,000.00
Red = already ordered or delivered									Sep 1st Annual
Year	Type A	Type C	Type D	Expenditures	Dep Income	Coop Deposit	Avg Interest	Trade Income	Balance Estimate
2023/2024	4	4	0	$1,217,908.00	$1,469,474.03	$350,000	$50,000.00	$18,000	$4,523,566.03
2024/2025	1	5	4	$1,765,370.40	$1,991,015.61	$350,000	$50,000.00	$20,000	$5,169,211.23
2025/2026	1	2	6	$1,705,351.92	$1,438,382.69	$350,000	$50,000.00	$18,000	$5,320,242.00
2026/2027	1	2	6	$1,827,443.84	$1,823,161.15	$350,000	$50,000.00	$18,000	$5,733,959.32
2027/2028	1	2	6	$1,876,343.12	$1,384,043.36	$350,000	$50,000.00	$18,000	$5,659,659.56
2028/2029	1	2	6	$1,925,242.40	$1,278,129.20	$350,000	$50,000.00	$18,000	$5,430,546.36
2029/2030	1	2	6	$1,974,141.68	$1,408,158.24	$350,000	$50,000.00	$18,000	$5,282,562.91
2030/2031	1	2	6	$2,023,040.96	$1,512,000.98	$350,000	$50,000.00	$18,000	$5,189,522.93
2031/2032	1	2	6	$2,071,940.24	$1,357,875.92	$350,000	$50,000.00	$18,000	$4,893,458.61
2032/2033	1	2	6	$2,120,839.52	$1,536,731.81	$350,000	$50,000.00	$18,000	$4,727,350.90
2033/2034	1	2	6	$2,169,738.80	$1,797,546.99	$350,000	$50,000.00	$18,000	$4,773,159.09
4% Market Increase Applied Each Year									
Variables/Multipliers				$20,677,360.88	$16,996,519.97	$3,850,000	$550,000.00	$200,000	$4,773,159.09
				$20,828,050.88	$21,596,519.97				2034 Balance

Forecast TVF balance with electric but with no EPA rebate

KWRL 10 Year TVF Forecast

2024 Purchase Prices & Quantity Detail					May 2024 Balance	Income By Source				May 2024 Balance
	$150,690	$153,787	$203,747	$406,000	$3,854,000.00				$2,000	$3,854,000.00
Red = already ordered or delivered / NO EPA Rebate						August Deposit				
Year	Type A	Type C	Type D	Electric	Expenditures	Dep Income	Coop Deposit	Avg Interest	Trade Income	Sep 1st Annual Balance Estimate
2023/2024	4	4	0	0	$1,217,908.00	$1,487,727.26	$350,000	$50,000.00	$18,000	$4,541,819.26
2024/2025	1	5	4	0	$1,803,997.52	$2,070,094.48	$350,000	$50,000.00	$20,000	$5,227,916.22
2025/2026	1	2	0	14	$6,387,954.56	$1,652,290.18	$350,000	$50,000.00	$6,000	$898,251.84
2026/2027	1	2	6	0	$1,815,205.68	$2,422,103.43	$350,000	$50,000.00	$18,000	$1,923,149.59
2027/2028	1	2	6	0	$1,882,435.52	$2,025,887.16	$350,000	$50,000.00	$18,000	$2,484,601.23
2028/2029	1	2	6	0	$1,949,665.36	$1,885,289.34	$350,000	$50,000.00	$18,000	$2,838,225.21
2029/2030	1	2	6	0	$2,016,895.20	$2,020,255.00	$350,000	$50,000.00	$18,000	$3,259,585.01
2030/2031	1	2	6	0	$2,084,125.04	$2,127,573.92	$350,000	$50,000.00	$18,000	$3,721,033.89
2031/2032	1	2	6	0	$2,151,354.88	$2,028,819.47	$350,000	$50,000.00	$18,000	$4,016,498.48
2032/2033	1	2	6	0	$2,218,584.72	$2,004,709.61	$350,000	$50,000.00	$18,000	$4,220,623.37
2033/2034	1	2	6	0	$2,285,814.56	$2,169,738.80	$350,000	$50,000.00	$18,000	$4,522,547.61
4% Market Increase Applied Each Year										
Variables/Multipliers					$25,813,941.04	$21,894,488.65	$3,850,000	$550,000.00	$188,000	$4,522,547.61
					$20,828,050.88	$26,482,488.65				2034 Balance

Forecast TVF balance with electric but with $200,000 EPA rebate

KWRL 10 Year TVF Forecast

2024 Purchase Prices & Quantity Detail					May 2024 Balance	Income By Source				May 2024 Balance
	$150,690	$153,787	$203,747	$206,000	$3,854,000.00				$2,000	$3,854,000.00
Red = already ordered or delivered / With EPA Rebate						August Deposit				
Year	Type A	Type C	Type D	Electric	Expenditures	Dep Income	Coop Deposit	Avg Interest	Trade Income	Sep 1st Annual Balance Estimate
2023/2024	4	4	0	0	$1,217,908.00	$1,487,727.26	$350,000	$50,000.00	$18,000	$4,541,819.26
2024/2025	1	5	4	0	$1,803,997.52	$2,070,094.48	$350,000	$50,000.00	$20,000	$5,227,916.22
2025/2026	1	2	0	14	$3,475,954.56	$1,652,290.18	$350,000	$50,000.00	$6,000	$3,810,251.84
2026/2027	1	2	6	0	$1,815,205.68	$2,422,103.43	$350,000	$50,000.00	$18,000	$4,835,149.59
2027/2028	1	2	6	0	$1,882,435.52	$2,025,887.16	$350,000	$50,000.00	$18,000	$5,396,601.23
2028/2029	1	2	6	0	$1,949,665.36	$1,885,289.34	$350,000	$50,000.00	$18,000	$5,750,225.21
2029/2030	1	2	6	0	$2,016,895.20	$2,020,255.00	$350,000	$50,000.00	$18,000	$6,171,585.01
2030/2031	1	2	6	0	$2,084,125.04	$2,127,573.92	$350,000	$50,000.00	$18,000	$6,633,033.89
2031/2032	1	2	6	0	$2,151,354.88	$2,028,819.47	$350,000	$50,000.00	$18,000	$6,928,498.48
2032/2033	1	2	6	0	$2,218,584.72	$2,004,709.61	$350,000	$50,000.00	$18,000	$7,132,623.37
2033/2034	1	2	6	0	$2,285,814.56	$2,169,738.80	$350,000	$50,000.00	$18,000	$7,434,547.61
4% Market Increase Applied Each Year										
Variables/Multipliers					$22,901,941.04	$21,894,488.65	$3,850,000	$550,000.00	$188,000	$7,434,547.61
					$20,828,050.88	$26,482,488.65				2034 Balance

KWRL Transportation Director Considerations

- Consider the plausibility of whether elimination of diesel by 2027 will become reality, or will the emissions regulations that prohibit diesel engines be paused or rolled back?
- Whether you agree with government subsidies or not, does it make sense to capture grant and rebate opportunity for our community while it is available?
- How can the cost and realization of infrastructure be capitalized without local funds?
- Are there additional funding sources to leverage and stack in conjunction with the EPA rebates to pay for infrastructure or bring the net price of a bus to zero?
- What are there operational savings with electrification of just a portion of the fleet?
- What are the risks and unknowns of electrification compared to the established benefits of diesel powered buses?
- Woodland is the district of record for the Cooperative Agreement but the financial transactions are a collective agreement between the four member districts.
- Being selected as an EPA rebate recipient does not obligate the applicant to accept
- Clark and Cowlitz PUD have confirmed power can be available at both facilities.

KWRL Transportation Director Recommendation

- My opinion is that we need to diligently advocate and lobby for diesel powered school buses because electrification is nowhere near ready to wholesale replace diesel by 2027
- I don't believe that diesel will be eliminated as soon as the legislature would like, but I do believe electrification is going to be forced at some scale in the short term.
- I believe that electrification can be beneficial for those that are able to capture grant and rebate assistance, but these programs will be available to capture much longer.
- Electric buses are a viable option for a portion of a school bus fleet, and the ability to capture outside funding greatly benefits the KWRL TVF based on forecast estimates.
- I think that a good mechanic has, and uses, the right tools. I believe that insistence on electrification is foolish, but only as foolish as blind resistance to electrification as a viable tool. One could argue that some version of both tools should be in the districts tool box. Electrification is the round peg for the round hole and diesel is the square peg for the square hole. KWRL has both round holes and square holes to fill.

I believe that the financial considerations that an EPA rebate brings to the table would be too viable to dismiss. Electrification should be fully investigated to confirm facts before we accept the EPA rebates, or commit to electrification. Just because we were awarded the rebate opportunity, does not mean that we must accept it. It would be foolish not to further, and fully explore what the EPA rebate opportunity has to offer.