

Section 2 emphasize the overarching goals of the program to reduce emissions, lead by example, prioritize congestion and pollution reduction, and advance environmental equity through clean air and economic development.

Section 3 sets the target that by 2030 30% of registered vehicles in the City of Seattle will be electric. This target applies to total vehicles registered in Seattle. This is preferable to a target based on new vehicles registered to more accurately reflect the entire vehicle fleet. This 30% by 2030 target supports the City's policy goals of reducing total and per capita vehicle ownership within the City.

Section 4 describe certain actions that City Departments should take to identify the best ways to set up the infrastructure and policy framework to support the electrification of transportation, including:

- Determining the electrical grid and supply needs to make the transition to electricity as a major transportation fuel.
- Building and energy code changes necessary to ensure buildings being built or remodeled today are prepared to meet the future need.
- Implementing public policies and incentives which help accelerate the deployment of electric vehicles across vehicle and equipment classes.
- Getting charging right so that the electric vehicle charging network across the city is robust and comprehensive enough to support the transition to electric vehicles.

This legislation does not impact a CIP nor does it have financial implications. The tasks described in the Resolution can be accomplished within existing budgets.

2. CAPITAL IMPROVEMENT PROGRAM

This legislation creates, funds, or amends a CIP Project.

3. SUMMARY OF FINANCIAL IMPLICATIONS

This legislation does not have direct financial implications.

4. OTHER IMPLICATIONS

a) Does the legislation have indirect or long-term financial impacts to the City of Seattle that are not reflected in the above?

Transportation electrification provides significant environmental and economic benefits. Operating costs for EVs are much less than hybrids (and considerably less than standard internal combustion engine vehicles). As an example of the impact of electrification, below is a table showing a total cost of ownership analysis based on City fleet data comparing hybrid sedans against EV sedans. As EV purchases are scaled up, savings are significant. Installing infrastructure to support fleet electrification is a one-time capital cost that will yield lower fleet operating costs for every department utilizing EVs. While this table is specific to the experience

with the City fleet – the general principles apply to electric vehicle investments across the economy. Capital investments made in the near term will build the green fueling stations of the future, and operational savings from EVs will continue to accrue year over year. Transportation electrification is not only good from a business perspective but also an economic development perspective; fuel dollars that would have been exported out of our economy are kept local and redirected to our local utility. Also, replacing fossil fuel with electricity to power vehicles begins to decouple fuel costs from the volatile global commodities market. Predictable utility rates provide price stability and straightforward forecasting from a budget perspective. This is good for business across the economy.

The Business Case for Fleet Electrification

Total Cost of Ownership (TCO) Cost Comparison: Hybrid vs. EV								GHG Emissions
Type	Model	Life Cycle (Yrs)	Acquisition ¹	Life Fuel ²	Life Maint ³	Salvage ⁴	TCO ⁵	tons CO ₂ /Vehicle
Hybrid	Ford CMAX	10	\$ 25,028	\$ 5,830	\$ 6,481	\$ 2,503	\$ 34,836	19.6
EV	Nissan Leaf	10	\$ 22,638	\$ 1,980	\$ 5,553	\$ 2,264	\$ 27,907	0.3

¹ Washington State vehicle contract pricing including sales tax (the Leaf is tax exempt until June 30th, 2019)

² Fuel assumptions: 5500 miles/yr; \$3.18/gal (3 yr avg); EV kWh cost = \$0.036/mi (@\$0.08/kWh); CMAX MPG = 30;

³ Routine maintenance only (PM, breakdowns, repairs)

⁴ Salvage assumptions: 10% of original cost

⁵ TCO = acquisition + life fuel + life maintenance - salvage

Replacing a Hybrid with an EV = **98%** reduction in GHG emissions
 \$ 6,930 reduction in lifetime cost per vehicle

Operating costs for 300 vehicles:

Hybrid (CMAX) \$ 10,450,908

EV (Leaf) \$ 8,372,019

\$ 2,078,889 Savings w/ EV conversion

It is expected that the analysis from City Light (see below) will include further information about the business case for electrification and the financial implications to the utility of transforming the transportation sector in this way.

b) Is there financial cost or other impacts of not implementing the legislation?

The climate change imperative requires that we reduce our demand for oil. Oil dependence puts security at risk, exposes us to price volatility, and exacerbates climate change. Each of these threats places a financial burden on communities. By leading the transition away from oil, Seattle is signaling to the private sector that we welcome investment in transportation electrification and that the 21st century transportation sector can be designed here in the Emerald City.

c) Does this legislation affect any departments besides the originating department?

Finance and Administrative Services – Staff contacts: Andrea Pratt, Chris Wiley

- a. The Fleet Management Division is responsible for transforming the city’s fleet as described in Section 2 of the Resolution. Action Item #1 for Drive Clean Seattle is to transform the City’s municipal fleet by reducing emissions 50% by 2025. Experience

with the existing electric vehicles in the municipal fleet has demonstrated the financial benefit of electrification through fuel savings and reduce maintenance costs. This effort requires close partnership with FAS.

Transportation – Lead staff contacts: Bill LaBorde

- a. Fundamentally, this Resolution is about transforming our transportation sector from fossil fuels and prioritizing electricity to do that. SDOT has been working on reducing pollution from transportation for some time. Through investment in transit, shared-use mobility, and rethinking the way we use our streets and public rights-of-way, SDOT is a leader in visioning the future of transportation. This effort will require continued close partnership with SDOT.
- b. In response to Section 4 of this resolution, the Executive will direct the Department of Transportation to work with the Office of Sustainability and Environment to identify the best strategies available to address the charging needs of residents without off street parking at home.

City Light – Staff contacts: Brendan O’Donnell, Craig Smith, Rose Feliciano

- a. The electrification of our transportation sector represents a new business area for Seattle City Light. Transportation electrification is consistent with City Light’s long term vision and strategy.
- b. In response to Section 4 of this resolution, the Executive will direct Seattle City Light to determine what the electrical grid and supply needs are to make this transition with some detail on phase-in of the work.

Construction and Inspections – Staff contacts: Duane Jonlin, Shauna Larson

- a. In response to Section 4 of this resolution, the Executive will direct SDCI to recommend what building and energy code changes will best support transportation electrification in ways which reduce VMT and transportation-related emissions.

d) Is a public hearing required for this legislation?

No.

e) Does this legislation require landlords or sellers of real property to provide information regarding the property to a buyer or tenant?

No.

f) Is publication of notice with *The Daily Journal of Commerce* and/or *The Seattle Times* required for this legislation?

No.

g) Does this legislation affect a piece of property?

No.

h) Please describe any perceived implication for the principles of the Race and Social Justice Initiative. Does this legislation impact vulnerable or historically disadvantaged communities?

This Resolution contains language directly addressing race and social justice in Section 2 and connects Drive Clean Seattle with the Equity and Environment Initiative.

- i) If this legislation includes a new initiative or a major programmatic expansion: What are the long-term and measurable goals of the program? Please describe how this legislation would help achieve the program's desired goals.**

The strategies to be developed in accordance with this Resolution will include benchmark goals and outcomes in service of the larger goals of cutting oil used for transportation by 50% by 2035, reducing emissions from the Seattle municipal fleet 50% by 2025, and that 30% of all vehicles registered in Seattle be electric by 2030.

- j) Other Issues:** None.

List attachments/exhibits below: -