Seattle-Tacoma International Airport

Electric Vehicle Charging Host Site Perspective

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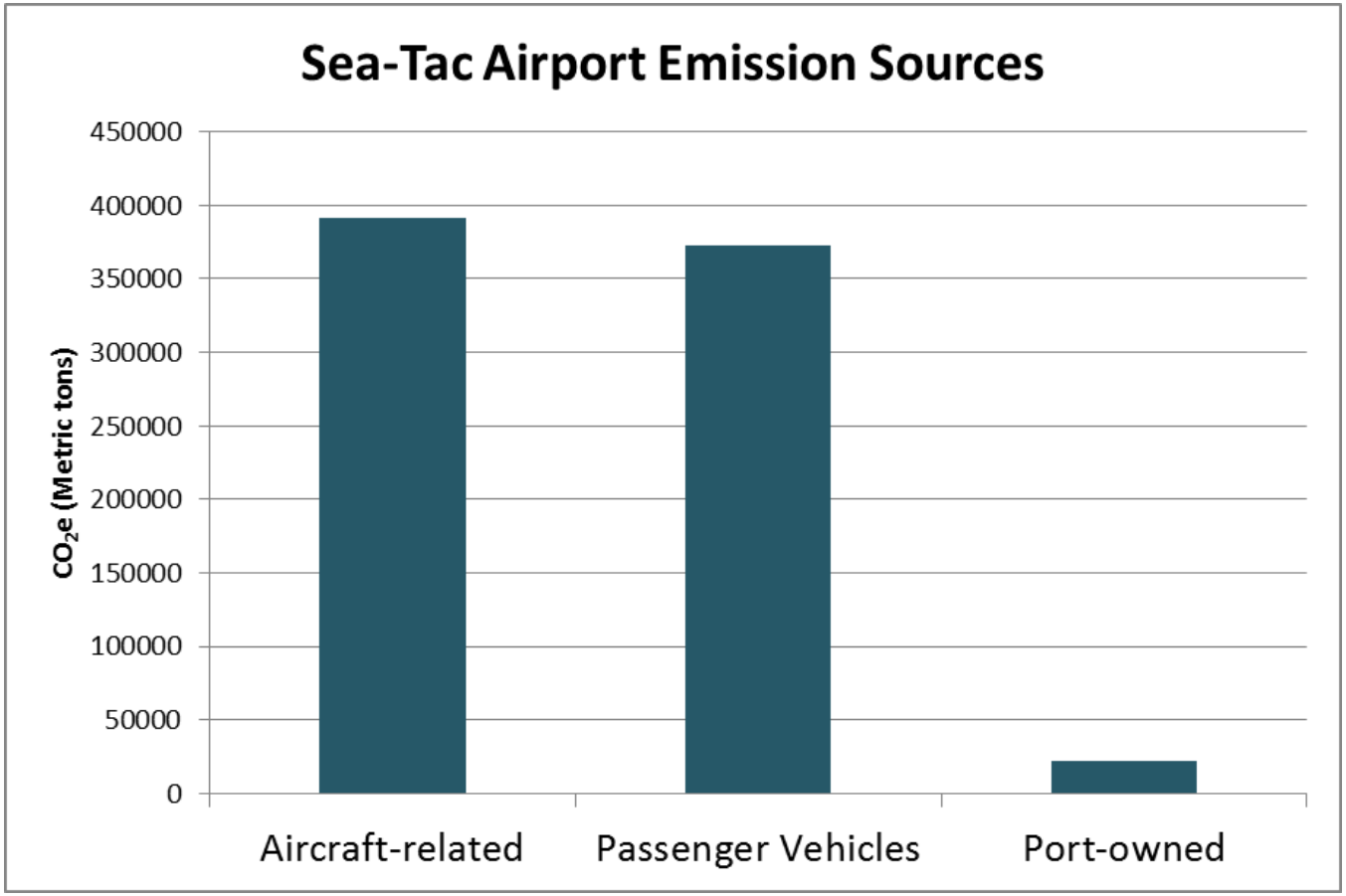
March 16, 2016

Why Does Sea-Tac Care About EVs?



What is the Impact?

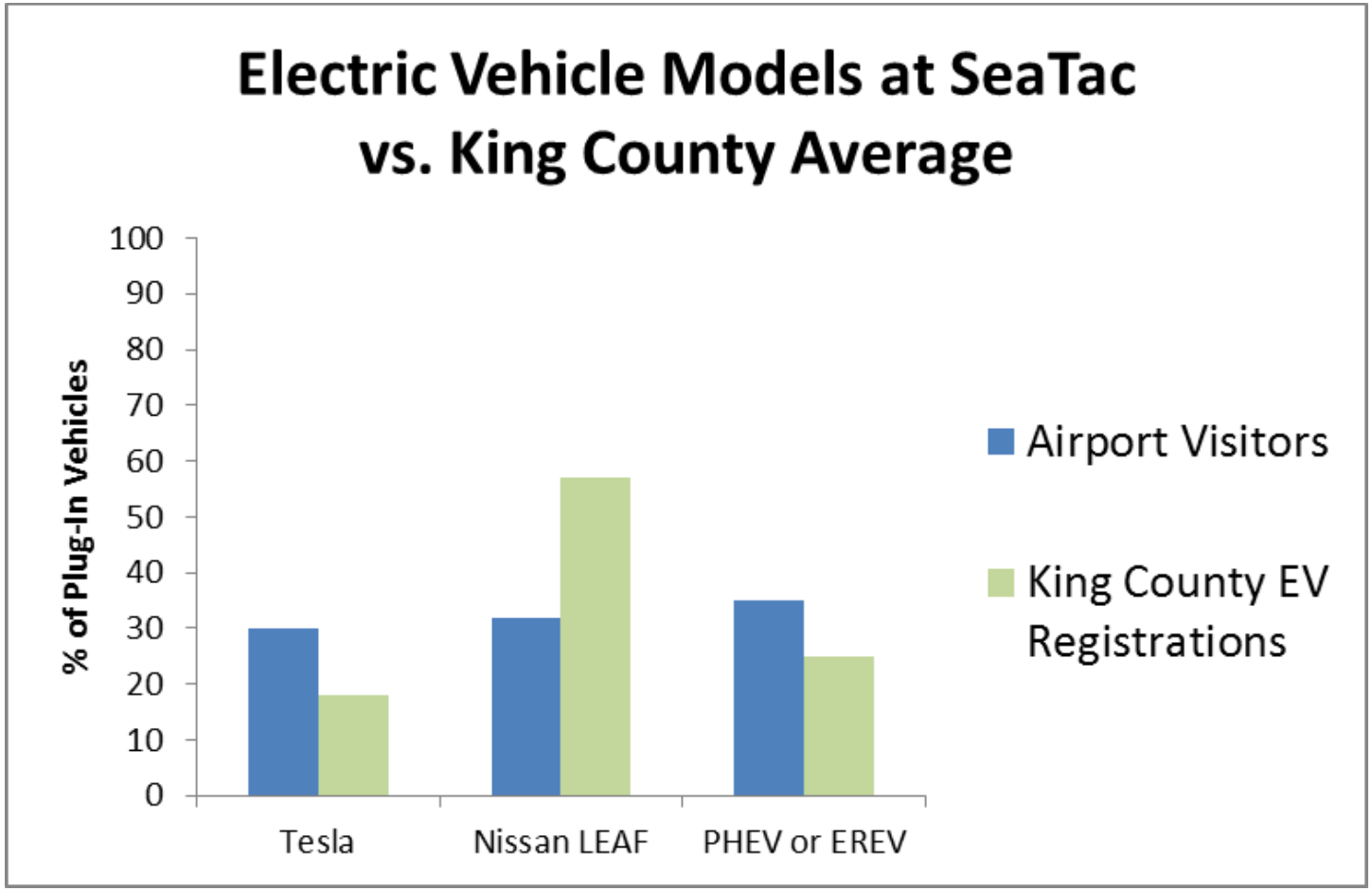
A Nissan LEAF filling up on Sea-Tac's 98% carbon-free electricity emits 0.0065 kg CO_2 per mile.

A gasoline Nissan Versa emits 0.25 kg CO_2 per mile, or about
40 times more carbon pollution per mile.

What We Know

- 48 public charging L1 spots
- Count of overnight stays
- Some indication from EV Project data that many EV drivers stay < 1 hour
- Lots of requests from advocacy groups, but no data to back up needs
- No sub-metering

2014 Survey Findings



Most Surprising?

Less than half of the plug-in vehicles in our survey period actually plugged in!

Vehicle Type	Observed to be plugged in
BEV ~75 mile (e.g. LEAF-like)	54 %
BEV ~200 mile (e.g. Tesla-like)	48 %
EREV or PHEV (e.g. Volt-like)	37 %
PHEVs not including Volt (about half of those listed above)	25 %
All plug-in vehicles	46%

Why not plug in?

Reason for not being plugged in	% of respondents who cited this reason
Multiple-day stays (concern for selfishly hogging spot or theft of their charger)	50 %
Poor signage or no awareness that plug-in spots exist	39 %
Don’t need the charge to get home	11 %

What About DCFC?

For those who have used DCFC on their car in the past, if we installed DCFC in the cell lot and charged market rates, how likely would you be to use it?	
Extremely likely	19 %
Somewhat likely	32 %
Somewhat unlikely	32 %
Extremely unlikely	16 %

Where to site DCFC?

Cell Lot vs Parking Garage

Priorities:

- Revenue?
- Contribute to congestion?
- Environmental benefit?

Barriers

- Merging different revenue/customer models with our own
- It's not the cost of the charger – it's the staff time, electrical infrastructure build out, design drawings, transformers, etc
- Construction priorities – land aircraft safely, move people through terminal, move people through roadways.

Contact Information

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