

Electrifying State Light-Duty Fleets & Transit

- Moderator:
 - **Melissa Savage**, Director, Center for Environmental Excellence, AASHTO
- Speakers:
 - **Hanna Waterstrat**, Assistant Director, State Efficiency and Environmental Performance, Washington Department of Commerce
 - **Ryan Daley**, CEO, Sawatch Labs
 - **Rob Gannon**, General Manager, King County Metro



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Hanna Waterstrat, Assistant Director, State
Efficiency and Environmental Performance,
Washington Department of Commerce

#WeTheStates



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Ryan Daley, CEO, Sawatch Labs

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An aerial photograph of a multi-lane highway. Several cars are visible on the road, including a red car, a white car, and a yellow car. The highway is flanked by lush green trees. The image is used as a background for the title and subtitle.

Data Driven Fleet Electrification & Optimization

NGA West Regional Transportation Electrification Workshop
April 5, 2019

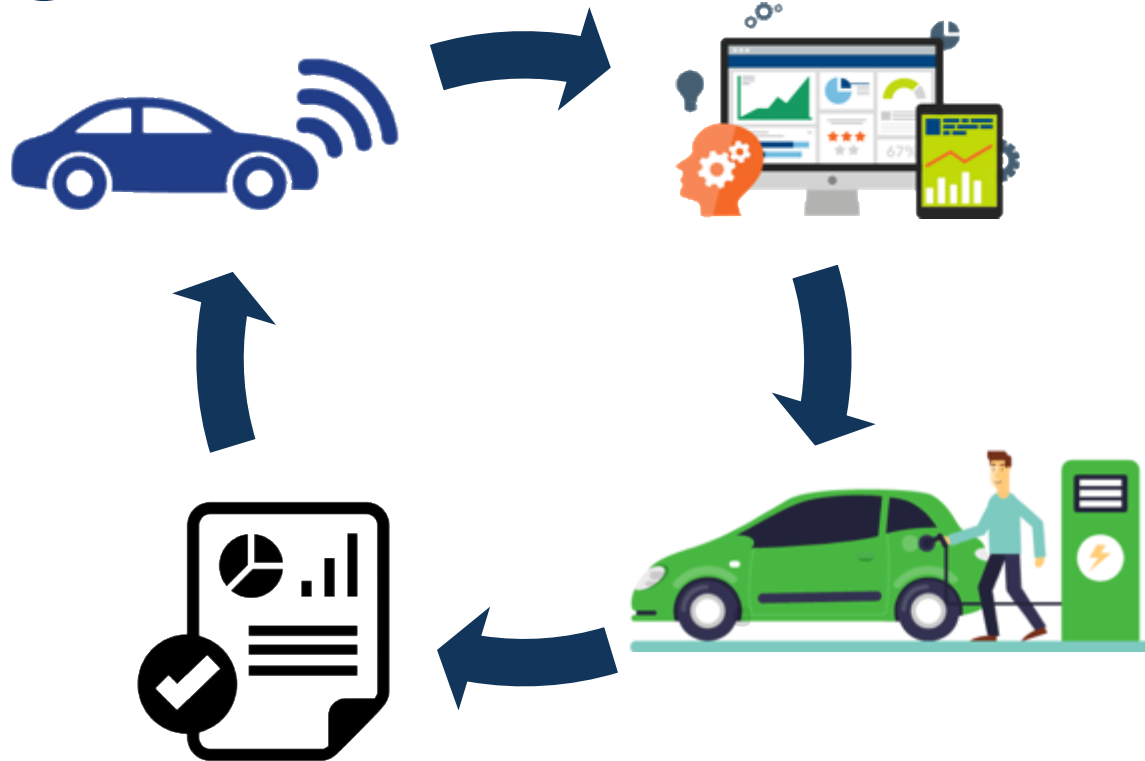




Sawatch Labs Approach

Telematics

Analytics



Compliance

Management



EV Suitability Assessment

myGEOTAB

 Getting Started & Help

 Dashboard

 Map


 Vehicles

 Activity

 ezEV - Sawatch Grp

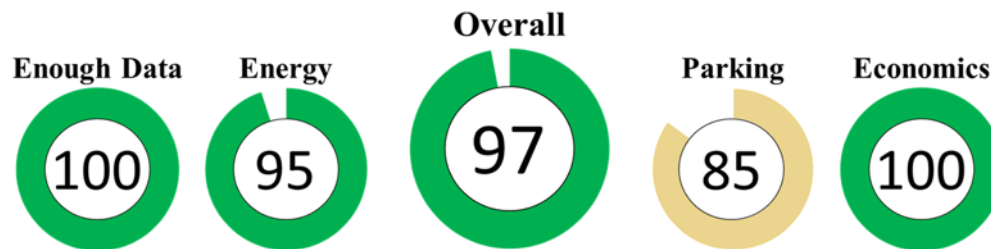
 Engine & Maintenance

 Zones & Messages

 Rules & Groups

 Administration

 Marketplace



Estimated Operational Metrics in a 2018 Nissan Leaf

These metrics estimate what the usage numbers would be if the miles driven by your 2008 FORD Fusion had been driven in an EV

VMT	GHG Reduction	CPM Reduction in an EV ¹	Operational Savings ²	TCO Change ²
5,350	80%	15%	\$12,000-15,000	\$6,000-9,000





EV Management

Are they actually...

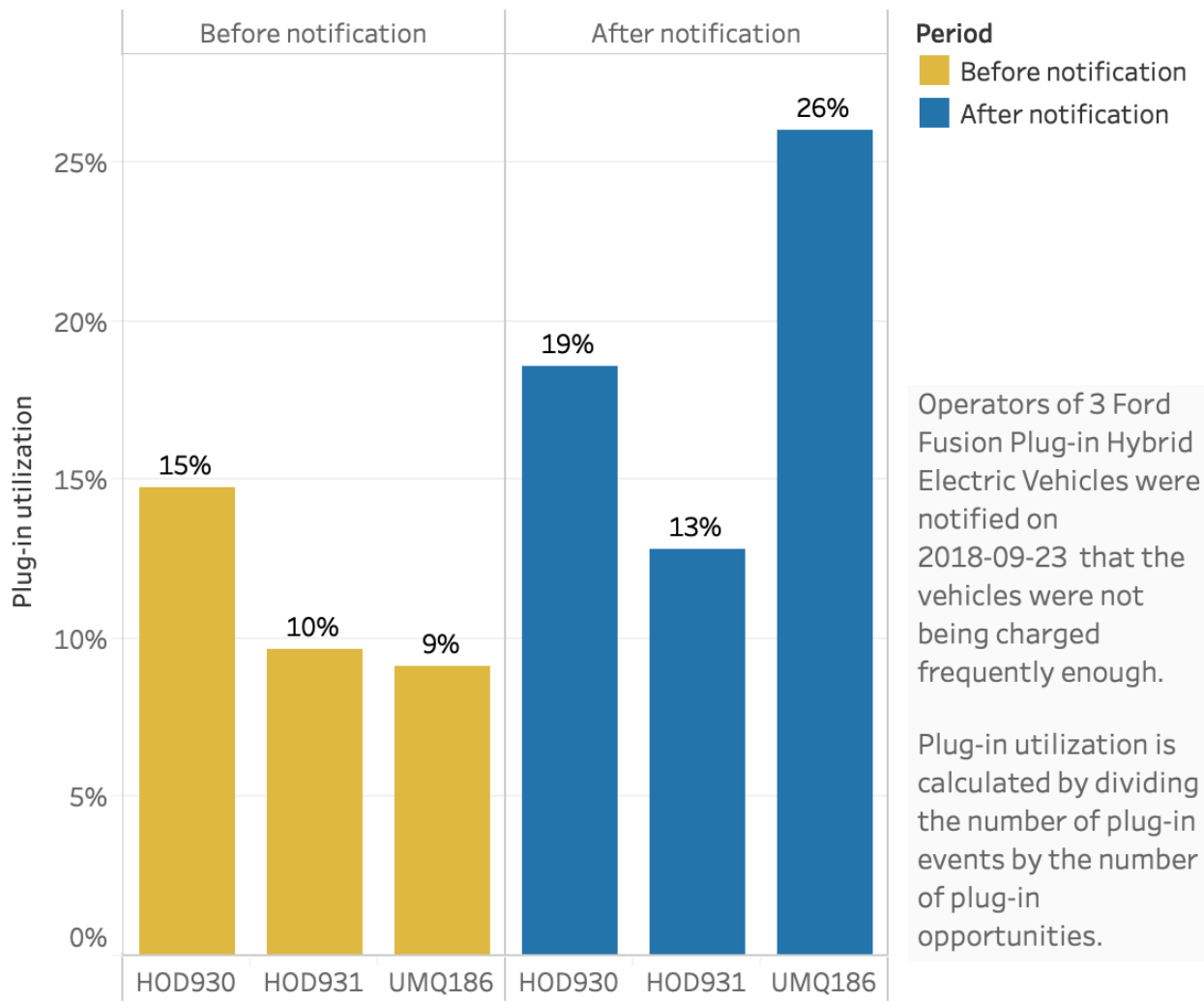
- Approaching an ROI?
- Plugging in?
- Fully charged?

Missed Opportunities

- $e\text{-vmt} > g\text{-vmt}$



PHEV charging behavior by vehicle

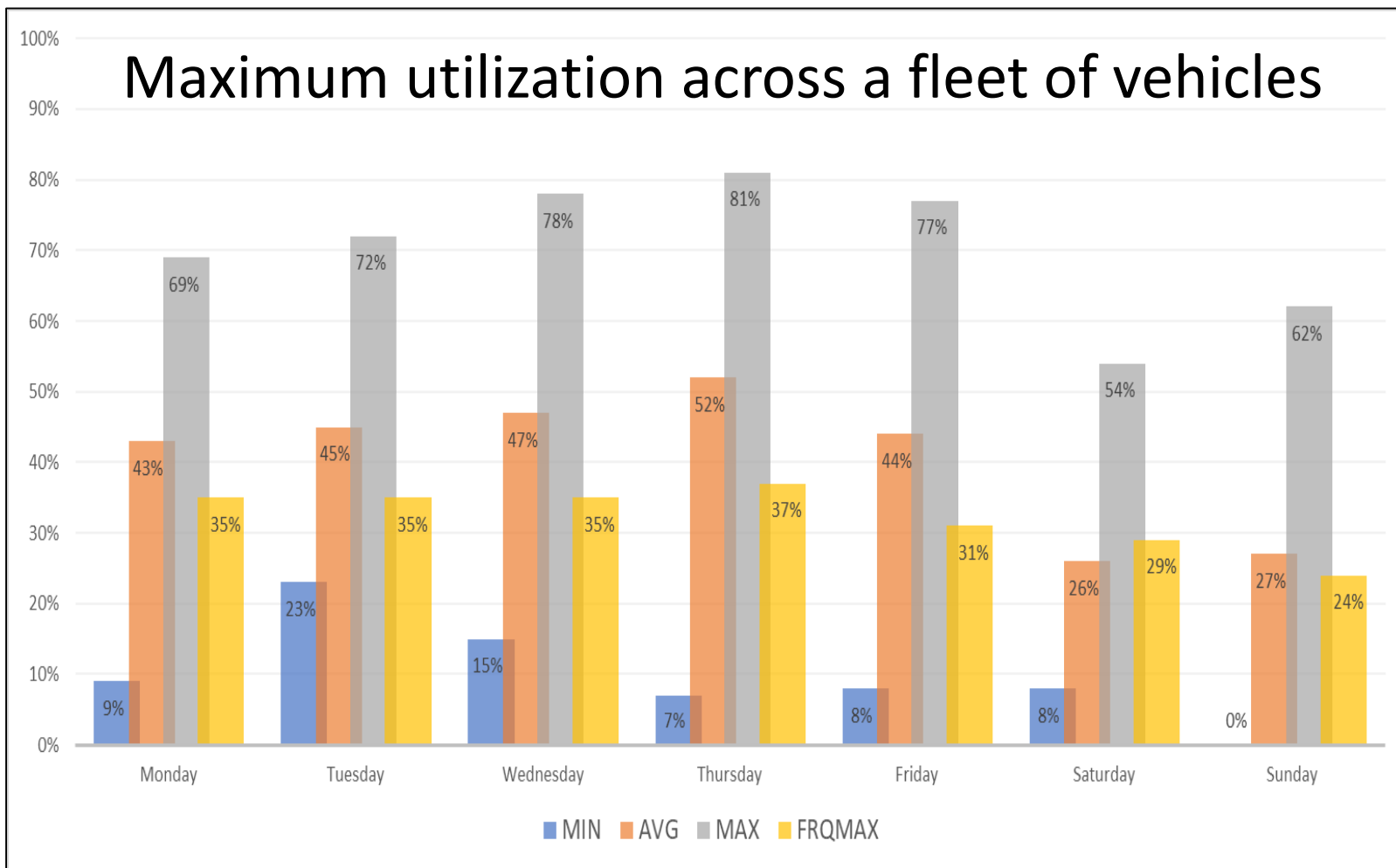




Transportation & Mobility Management

Employee Mobility

- Fleet Share
- Right miles on the right tech
- Right-sizing
- Multimodal
- Cost, time, sustainability





Recent Projects with States



Colorado Fleet Details Path to 200 EVs by 2020

February 27, 2019 • by Thi Dao



<https://www.government-fleet.com/325300/colorado-fleet-details-path-to-200-evs-by-2020>



Electric Vehicle Suitability Assessment

- 1,300 State Fleet Vehicles
- EVSE needs statewide
- Initiated 3/20/19

Thank You!

Ryan Daley

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Electrifying State Light-Duty Fleets & Transit

**Rob Gannon, General Manager, King County
Metro**

#WeTheStates

Transitioning to a Zero-Emission Fleet

NGA West Regional Transportation Electrification Workshop

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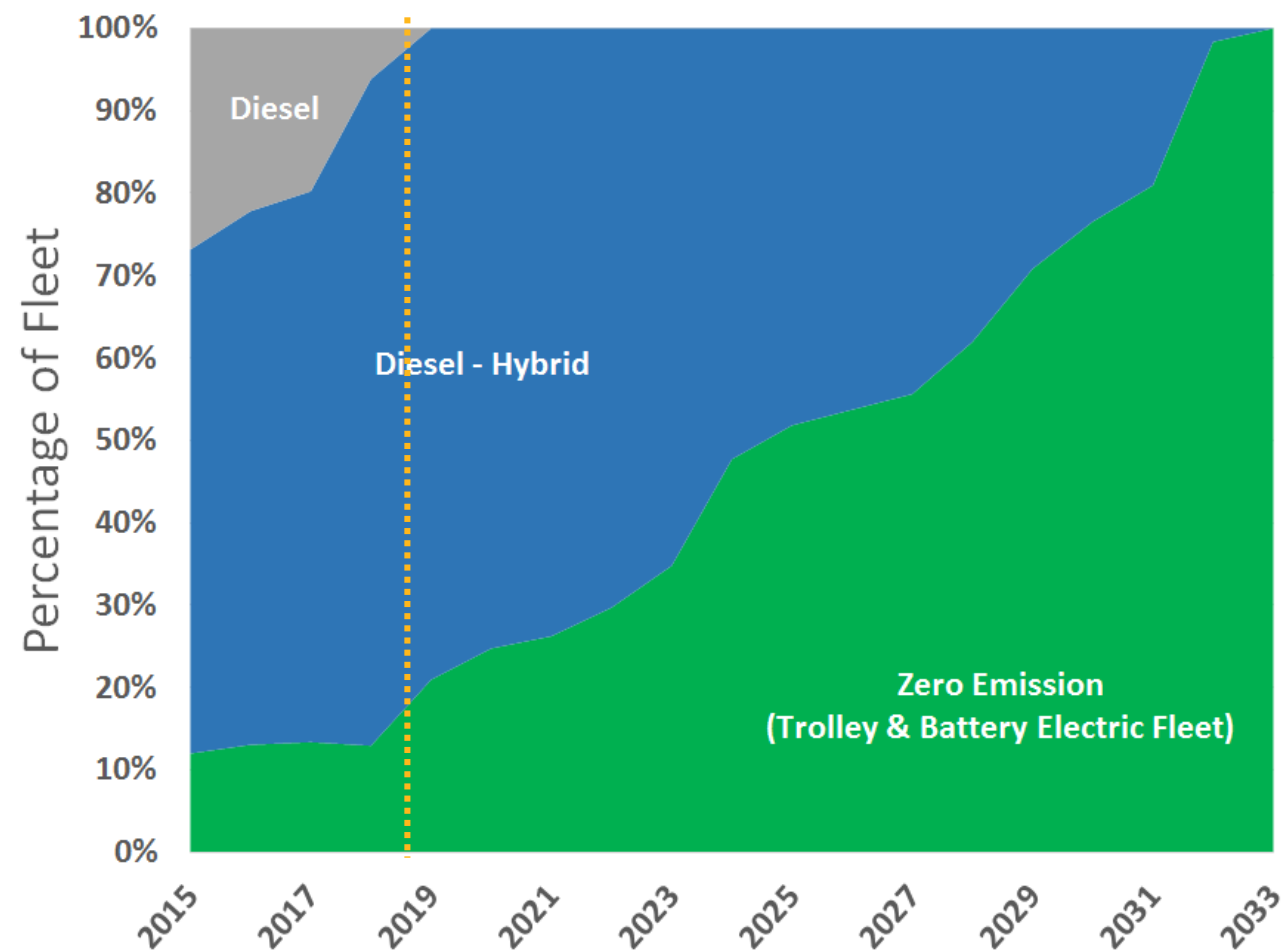
Transitioning to a Zero-Emission Fleet

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Goal: Zero-emission fleet before 2040



Where are we now



Fleet

185 Zero-Emissions Buses

(12% of our fleet)

- 174 Electric Trolley Buses
- 11 Fast Charge 40' Battery Electric Buses
- 10 Extended Range Battery Electric Buses (Test-2019)

Infrastructure

3 Fast Chargers; 2 more on the way

Where are we now



Fleet

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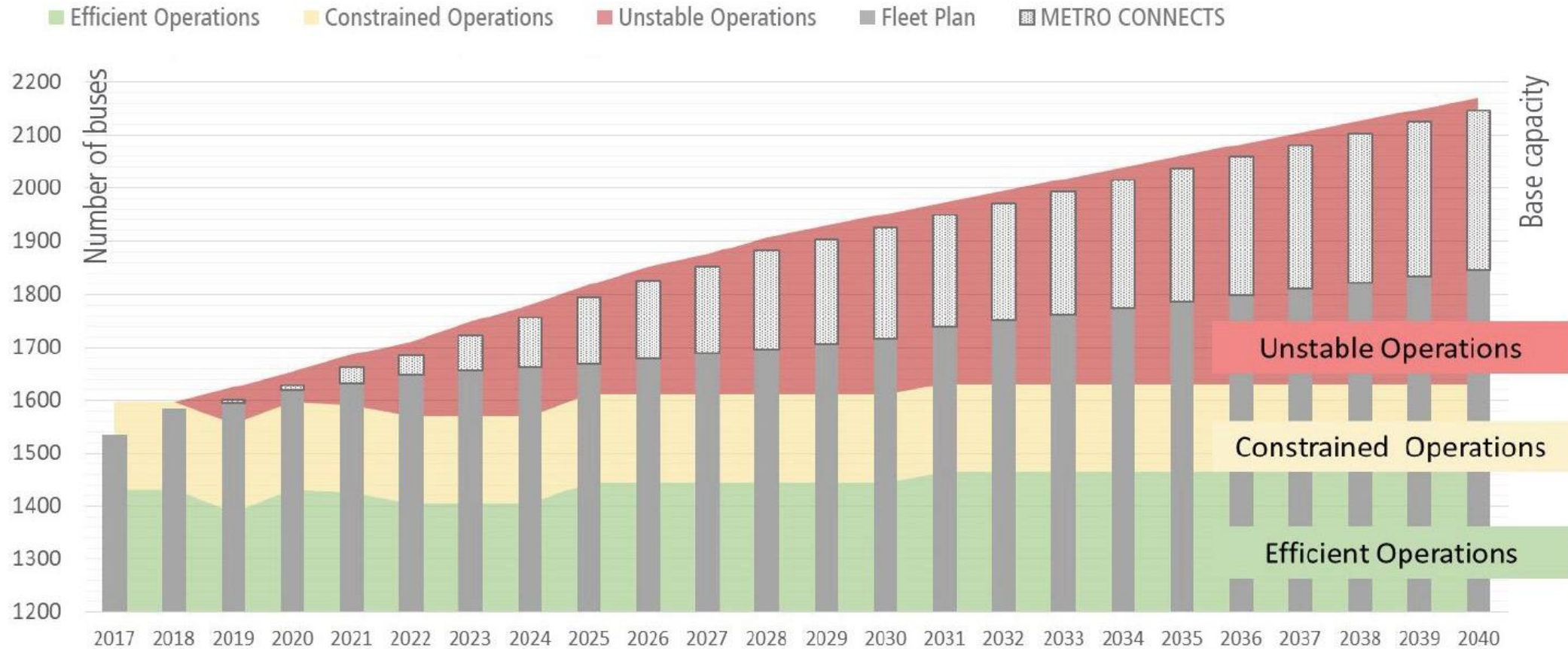
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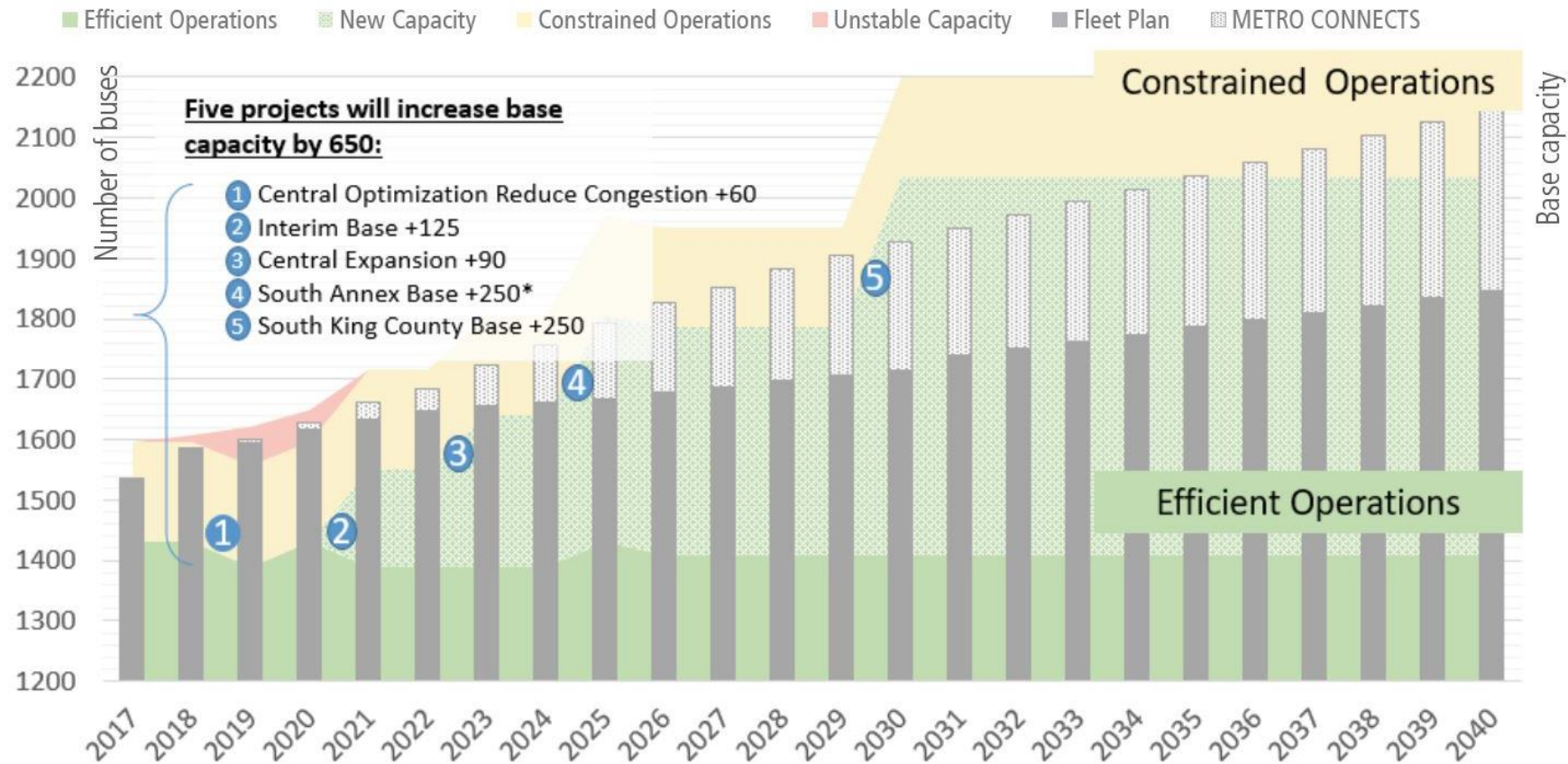
Infrastructure

3 Fast Chargers; 2 more on the way

Unstable operational capacity



Building for more stable operations



*Net add is 125 when Interim Bus Capacity of 125 is taken into account.
Dips in chart represent State of Good Repair Activities, which reduce capacity.

Advancing Equity

Prioritizing deployment in communities most vulnerable to air pollution

- Vulnerability based on air pollution levels, health conditions, and social risk factors
- South Base highest priority for transitioning to zero-emission fleet based on vulnerability of communities served

