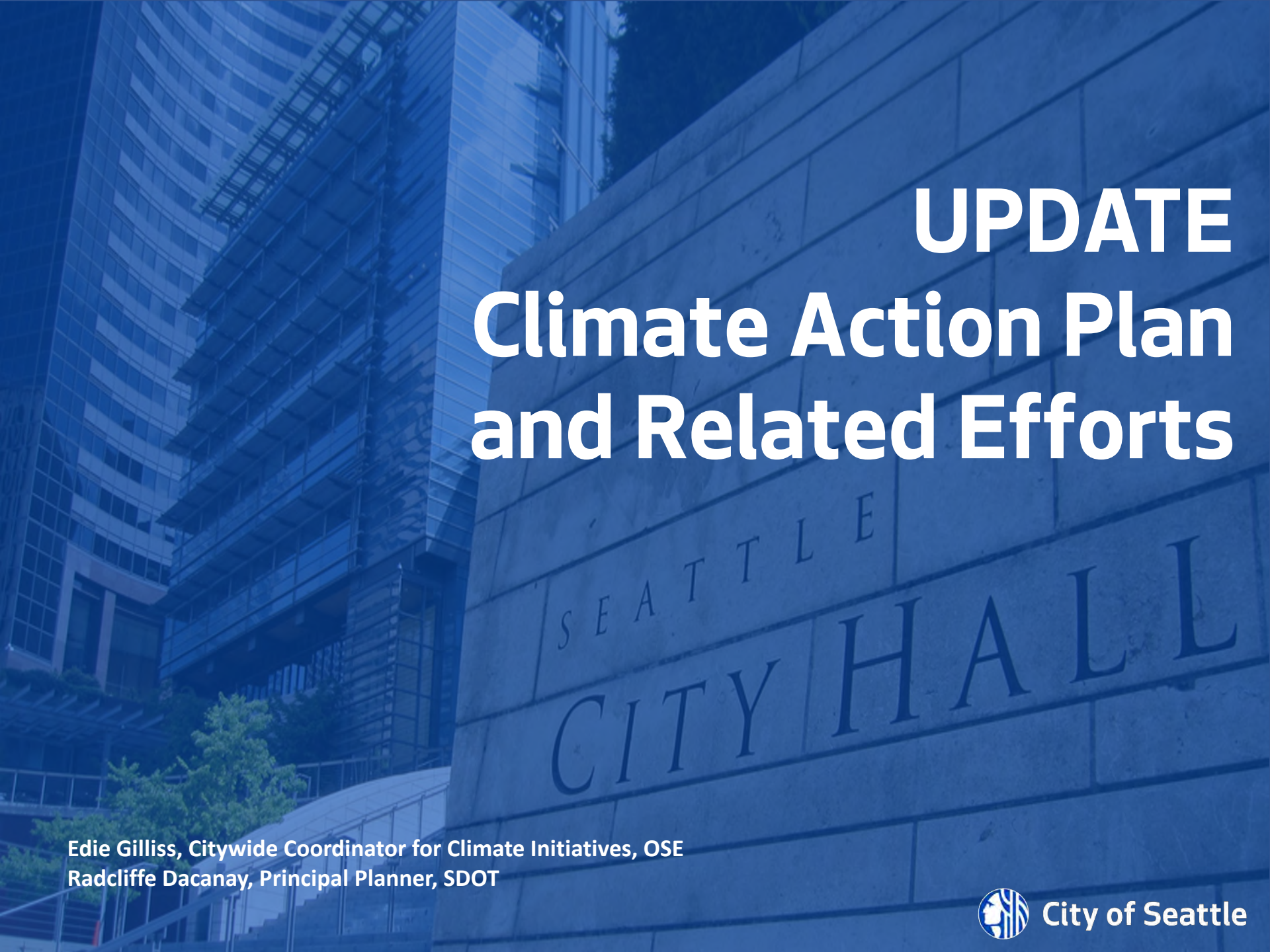
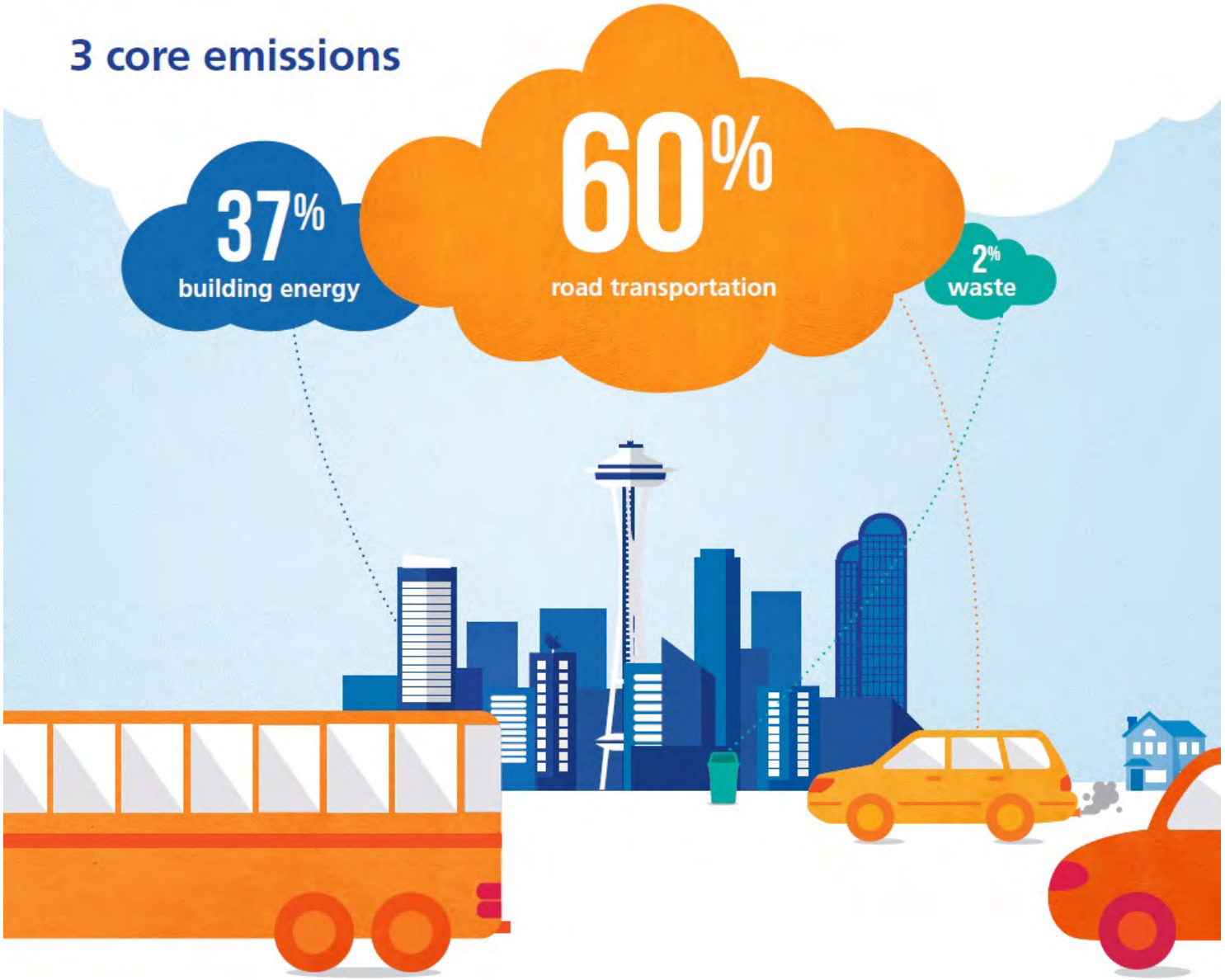


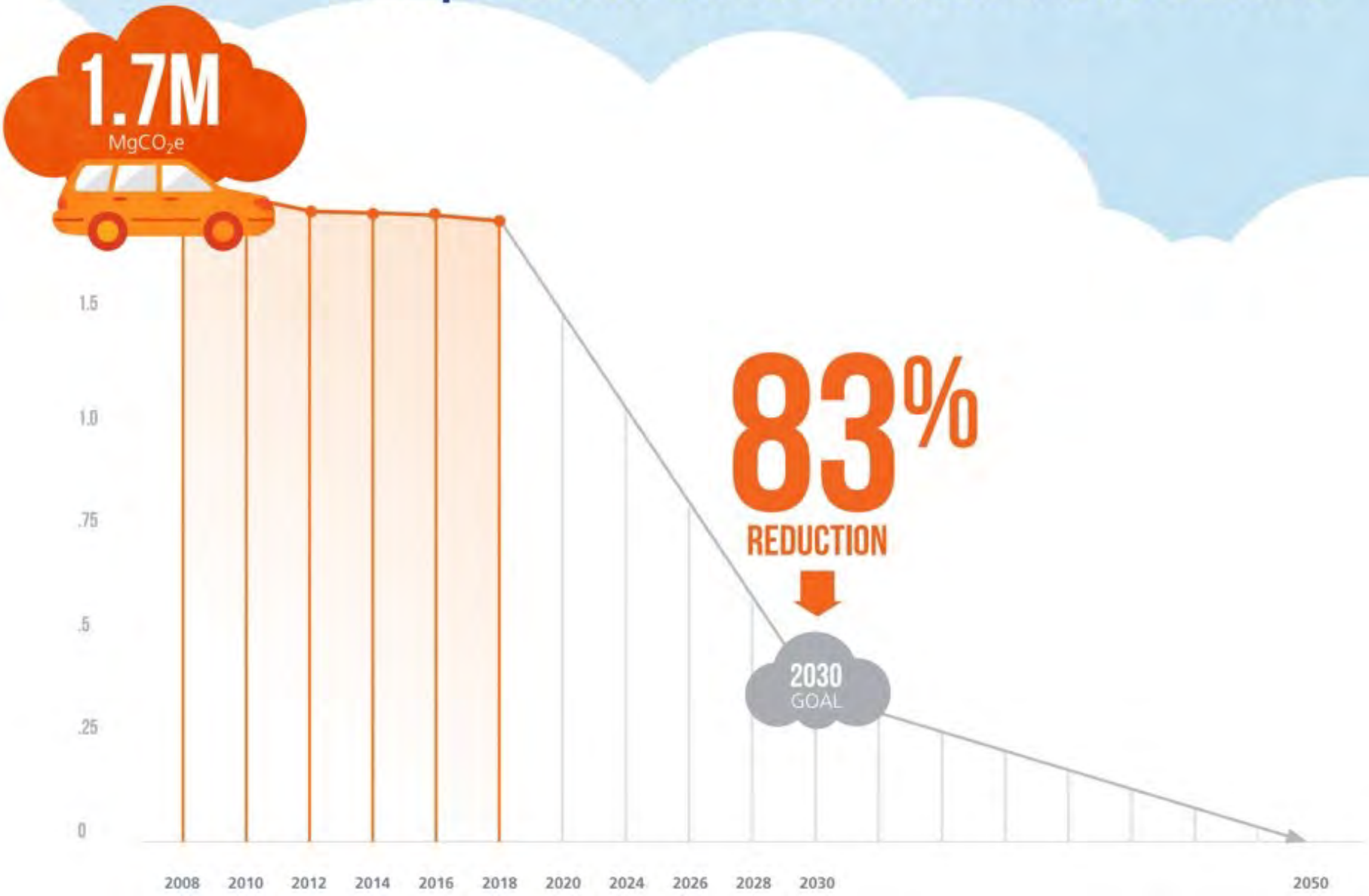
UPDATE
Climate Action Plan and Related Efforts

Edie Gilliss, Citywide Coordinator for Climate Initiatives, OSE
Radcliffe Dacanay, Principal Planner, SDOT

City of Seattle


3 core emissions
37%
building energy
60%
road transportation
2%
waste

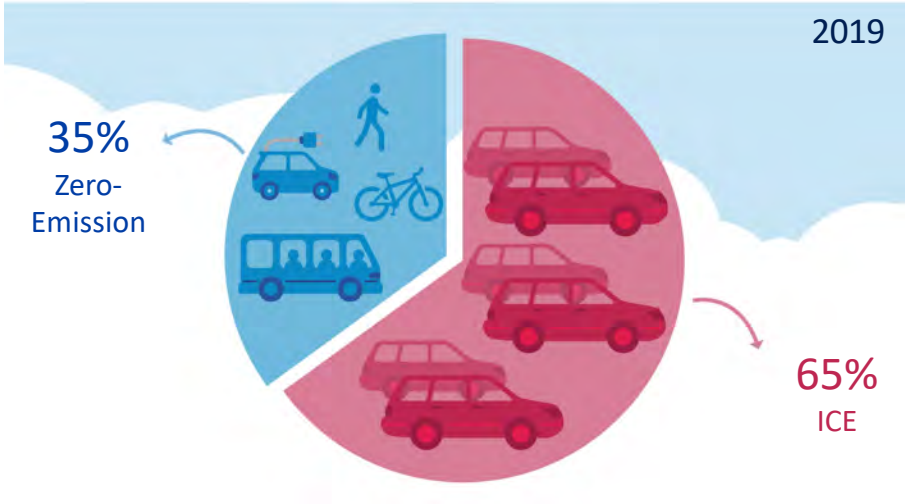
Transportation Emissions Reductions Needed



Most of Seattle's emissions come from the transportation sector, and personal vehicles alone account for 51% of all emissions.

Reducing transportation emissions 83% by 2030 will require a concerted, coordinated effort to shift trips away from single-occupancy vehicles and increase the adoption of electric vehicles.

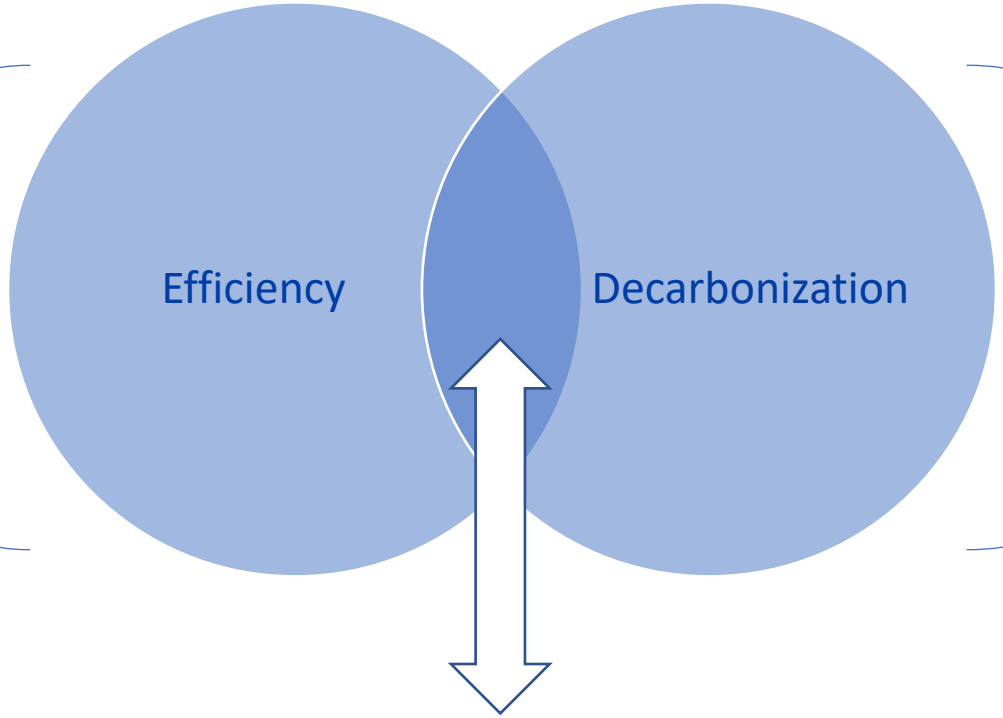
In 2019, 65% of all trips were made in internal combustion engine (ICE) vehicles.



SDOT's goals is for 9 out of every 10 personal trips to be zero emissions by 2030. Transit, walking, biking, and trips in electric vehicles (EVs) accounted for 35% of trips on average weekday (PSRC Household Travel Survey, 2019).

Transportation Pathway for ZERO Carbon by 2050:

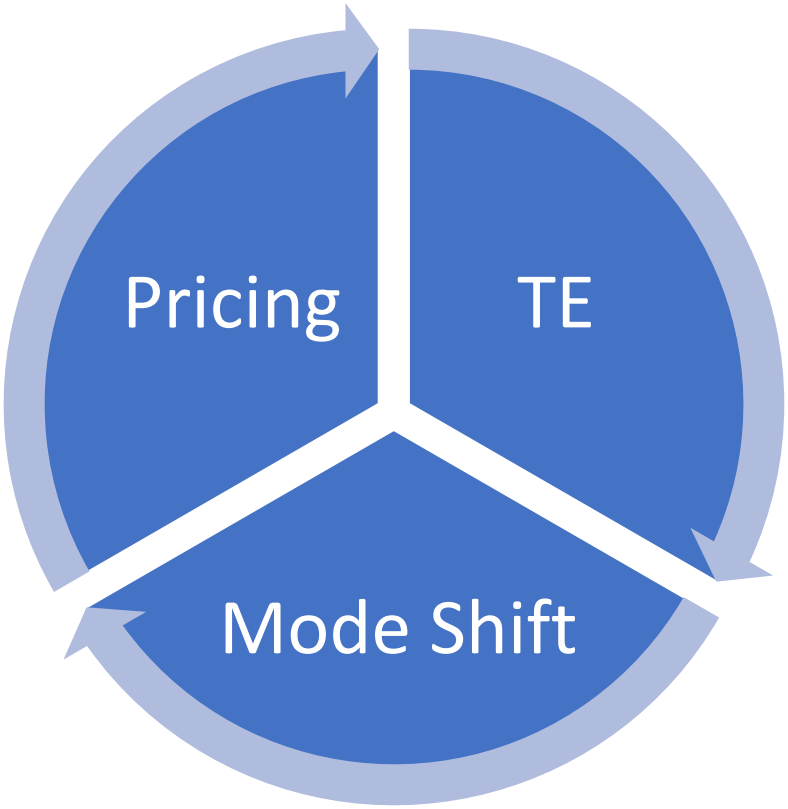
*Reduce VMT
*Transportation Demand Mgmt
*Expand Transit
*Walking/biking
*Increased density
*Road pricing
*Vehicle MPG stds



Removing carbon from transportation energy:
*Electrification (Seattle's TE Blueprint)
*Clean Fuel Std.

Aggressive Efficiency + Aggressive Decarbonization = Carbon Free by 2050

Reducing Seattle's Transportation GHG



Seattle's Clean Transportation Electrification Blueprint

Electrifying Our Transportation System

2030 North Star Goals

- 100% of shared mobility is electric
- 90% of personal trips are zero emission
- 30% of goods delivery is zero emissions
- 100% of City fleet is fossil fuel free
- 1 or more ‘Green & Healthy’ Streets *(Zero Transportation Emission Areas)*
- Infrastructure required to stay ahead of TE adoption is installed and operational

EV Readiness Ordinance (EVRO)

- Amended land use code in 2019
- Requires 40amp 220v plugs installed in all new off-street parking stalls
- Residential: 20-100% of spaces
- Non-residential: 10% of spaces
- Flexibility for utility upgrades

Public Charging Infrastructure

- Seattle City Light installing 20+ public DCFC
- SDOT permit for curbside chargers (EVCROW)
- Reduced off peak rate to incentivize TNC charging
- Partnering with environmental justice communities to co-plan charger projects

Zero Emission Last Mile Deliveries

- Seattle Neighborhood Delivery Hub
- Nation's 1st ZE last mile delivery pilot
- Microhub- central drop-off/pick up location for goods in common carrier parcel lockers

Climate + Congestion Calculator Prototype

Summary + Caveats

- **Provides SDOT a model:** quantifying how our work programs / investments impact VMT and transportation emissions
- **Allows SDOT to toggle combinations of strategies** – at different "intensities" – to achieve necessary GHG reduction
- **Still just a model!** Helpful thought exercise to validate and/or challenge our perceived notions

Climate + Congestion Calculator Prototype

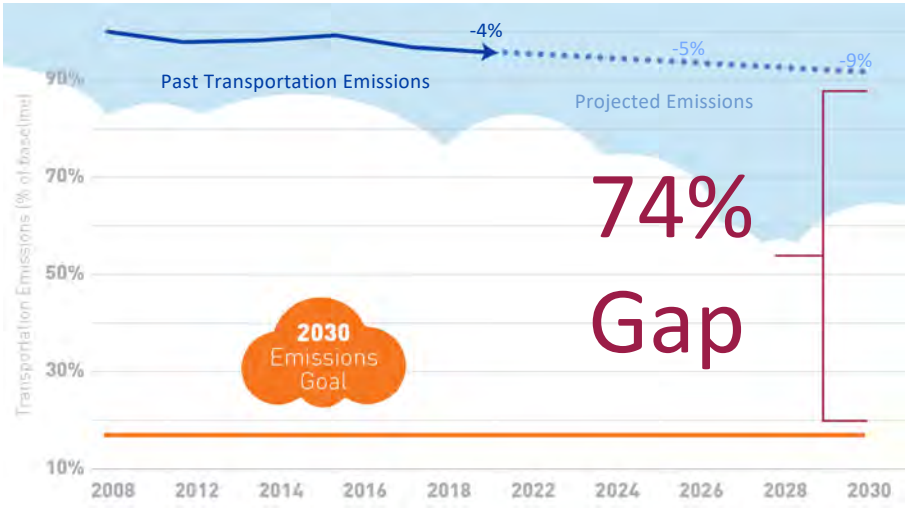
Strategy List

TDM and Mobility Options	Commute Trip Reduction (CTR) Program
	Transportation Management Programs (TMPs)
	Increased Remote and Hybrid Work
	Eliminate Employer Parking Subsidies
	Bike Share Reduced Fare Program
	Shared Electric Scooter Reduced Fare Program
	Personal E-Bike Purchase Incentives and Growth
	Bike Share Program
	Shared Electric Scooter Program
	Car Share Program
	First/Last Mile Microtransit Services
Walk and Bike Investments	Bike Master Plan Implementation
	Stay Healthy Streets
	Green and Healthy Streets
Transit Operations and Investments	Bus Speed and Reliability Improvements
	Bus Service Increases
	Streetcar Service Increases
	Reduced Transit Fare Programs
	Link Light Rail Expansion

Pricing and Curbside Management	Congestion Pricing
	Comprehensive Bridge Tolling
	Low Emission Zone
	TNC Pricing Structure
	Gas Tax Increases
	Dynamic Parking Pricing
	Expanding Paid On-Street Parking
	Increasing On-Street Parking Rates
	Charging for On-Street Parking on Sunday
	Increasing Commercial Parking Tax
	Changes to Residential Parking Requirements
Freight	Commercial Loading Improvements
	Delivery Vehicle Registry & Fee
	Zero Emission Delivery Alternatives
Electrification	Electrification of Personal Vehicles
	Electrification of Freight Vehicles
	Electrification of Shared Mobility Vehicles
Land Use	Increase Commercial/Mixed Use Zoning

If we continue with business as usual, we will miss our emissions reduction goal by 74%.

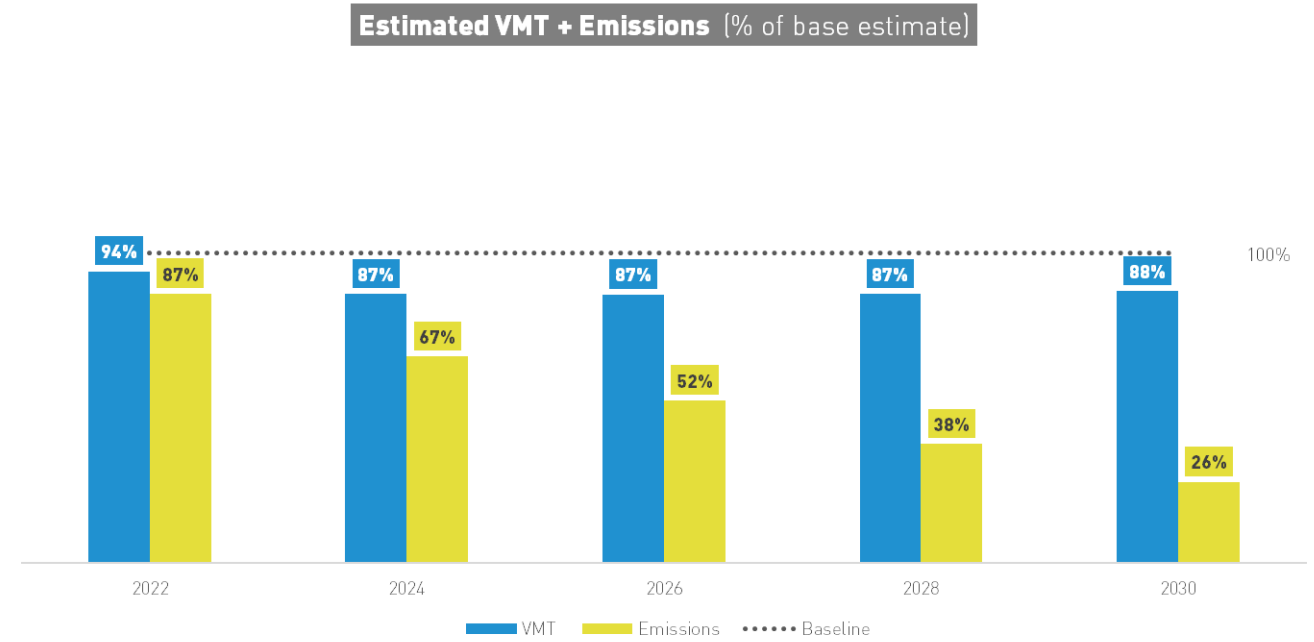
Even in the most optimistic scenarios, SDOT's current programs are only projected to decrease emissions an additional 5% by 2030 (on top of the 4% reduction we achieved from 2008 to 2018).



Climate + Congestion Calculator Prototype

Preliminary Results: "Aggressive" Scenario (3% pop growth)

- All strategies implemented as "on"
- All strategies follow "aggressive" pathway
- Population and freight continue to grows similarly to previous decade



What needs to happen to get there?

People take twice as many transit trips on an average weekday, which requires an 89% increase in transit service.

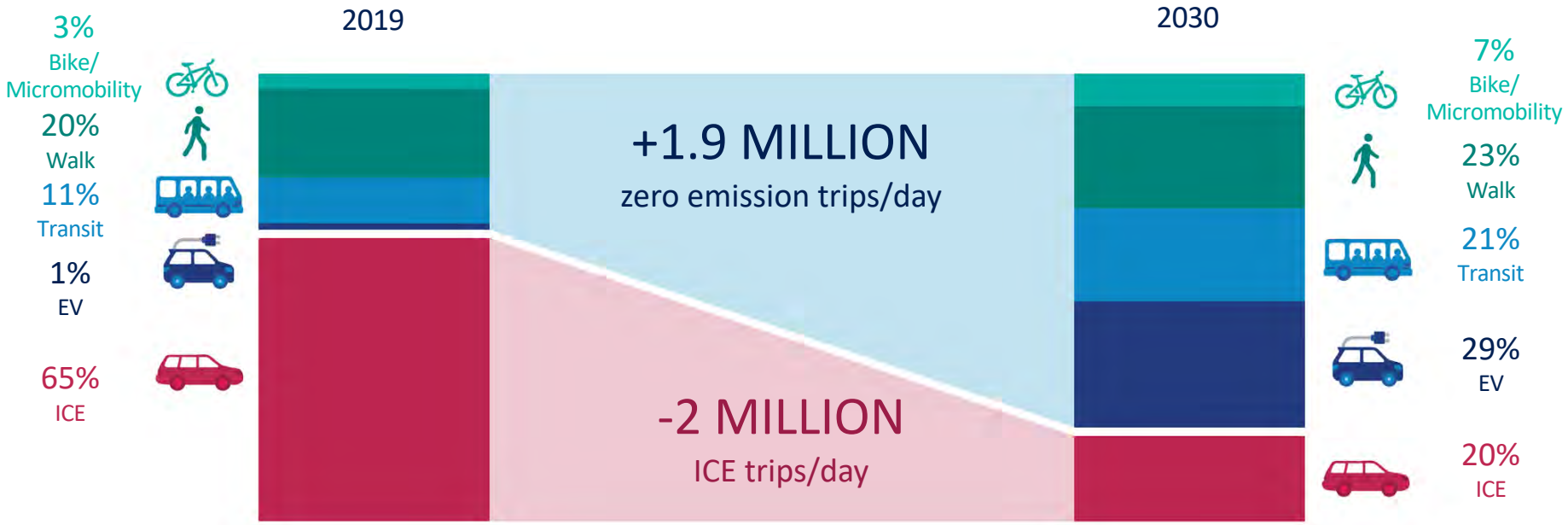
1 out of 2 cars on the road is an EV, compared to 1.6% today.

3 out of 4 commuters who currently drive shift to other modes or working from home as a result of CTR, TMPs, and changing work habits.

We implement a range of parking and road pricing strategies that reduce driving 10%.

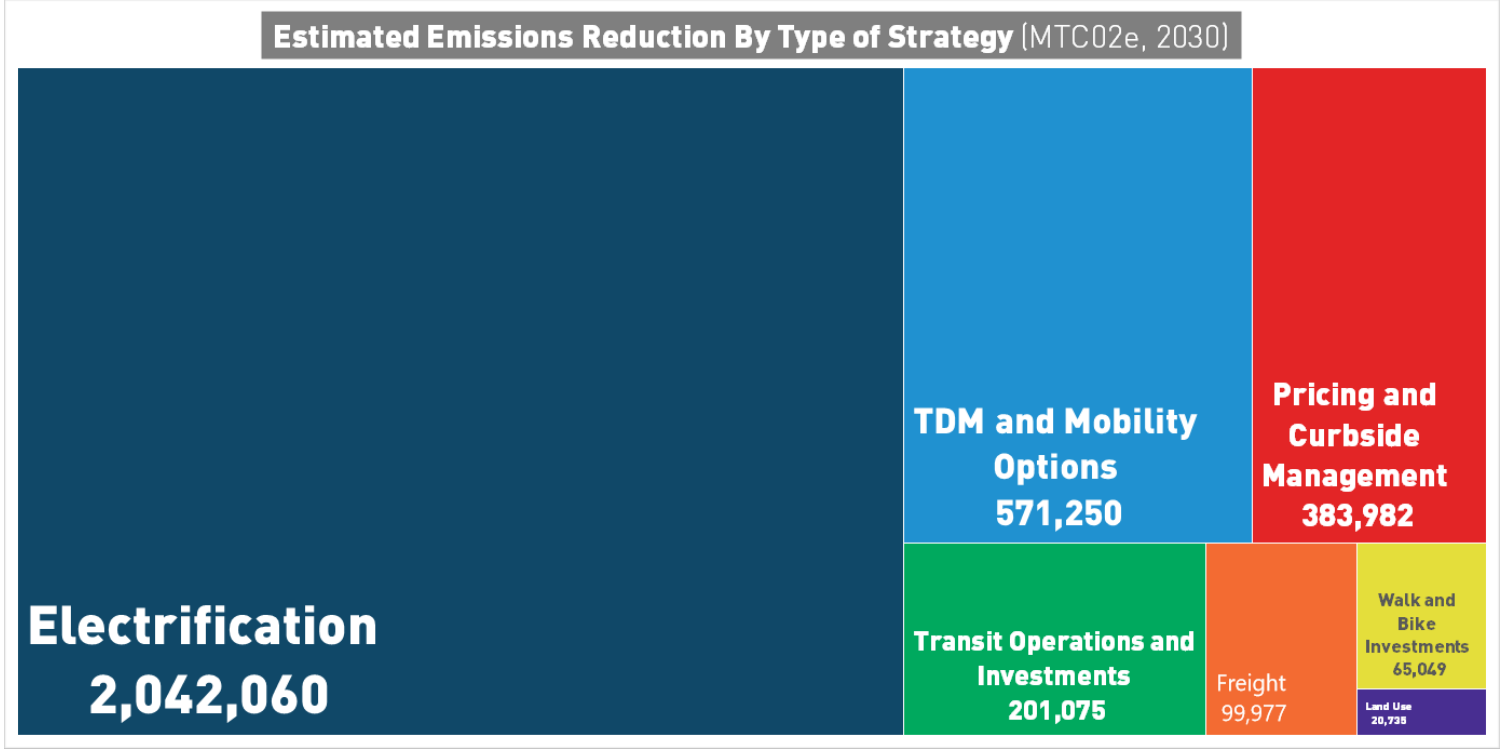
We double the number of trips made by bike and shared micromobility by completing the bike network and expanding bike and scooter share programs.

What would our mode split look like?

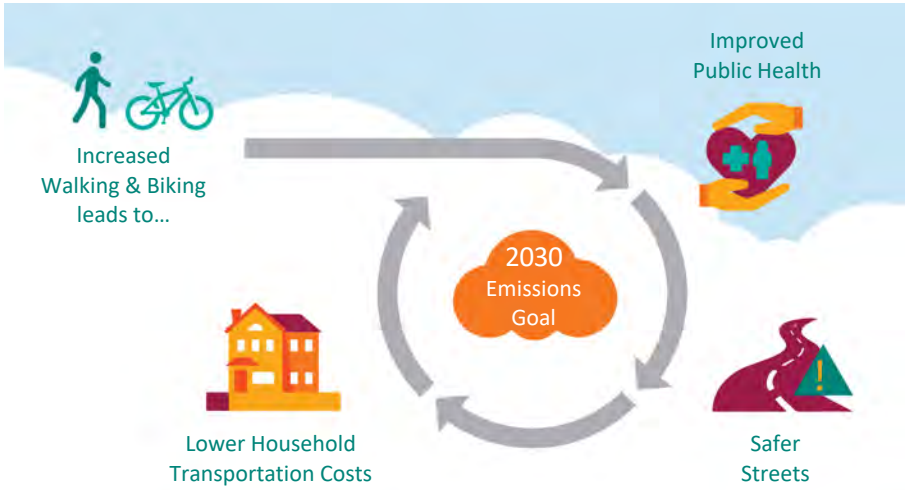


Climate + Congestion Calculator Prototype

Emissions Reduction : “Aggressive” (+ 3% pop growth)



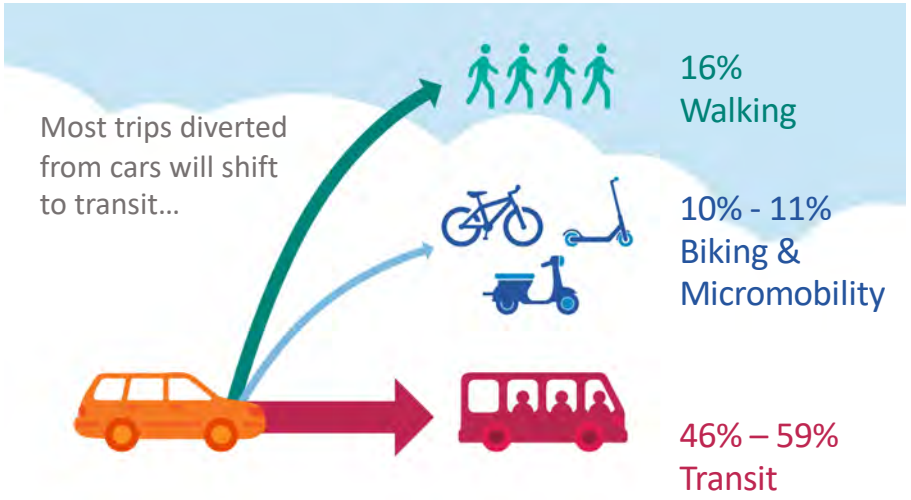
Investing in walking and biking will reduce emissions and deliver a multitude of co-benefits.



Improvements to encourage more walking and biking are projected to decrease transportation emissions 1-3% by 2030 while also improving public health, helping create safer streets, and lowering household transportation costs.

Continued investment in transit will underpin our ability to meet our climate goals.

In addition to generating direct emissions reductions, investments to improve and expand transit will play an outsized role in enabling many other emissions reduction strategies. Most trips diverted away from a car by other strategies are projected to shift to transit.



Adopting equitable road and parking pricing policies would support our efforts to reduce transportation emissions on multiple fronts.

Pricing strategies, including congestion pricing, encouraging shared TNC trips, and gradually increasing the commercial parking tax, could reduce emissions 5-10% by 2030 and generate millions of dollars to reinvest, spurring further reductions.

Q&A