

PSC

Climate Action Update

1. Emissions trends
 - *Kyle Diesner, Climate Action Program Coordinator*
2. 100% Renewables update
 - *Andria Jacob, Senior Manager, Energy Programs and Policy*
3. Climate Action Plan Progress and Climate Emergency update
 - *Michele Crim, Chief Sustainability Officer*
4. Vision for the future of Portland's climate work
 - *Alisa Kane, Climate Action Program Manager*



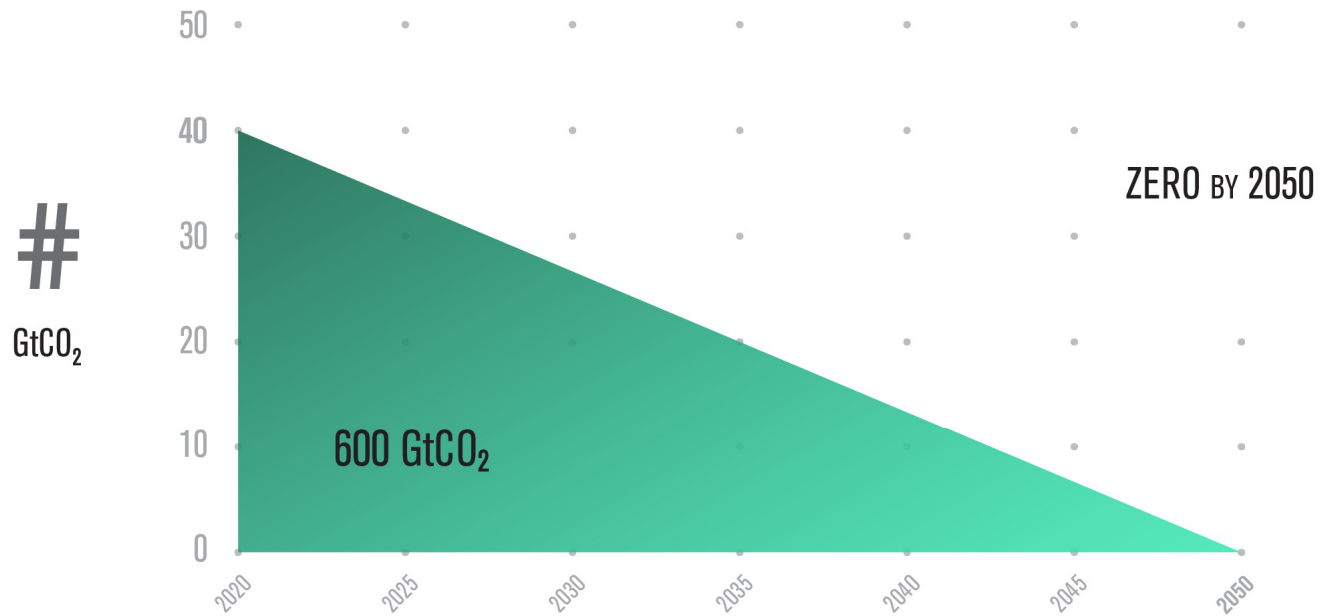
Multnomah County Updated Emissions Inventory

Kyle Diesner, Bureau of Planning and Sustainability

November 12, 2019

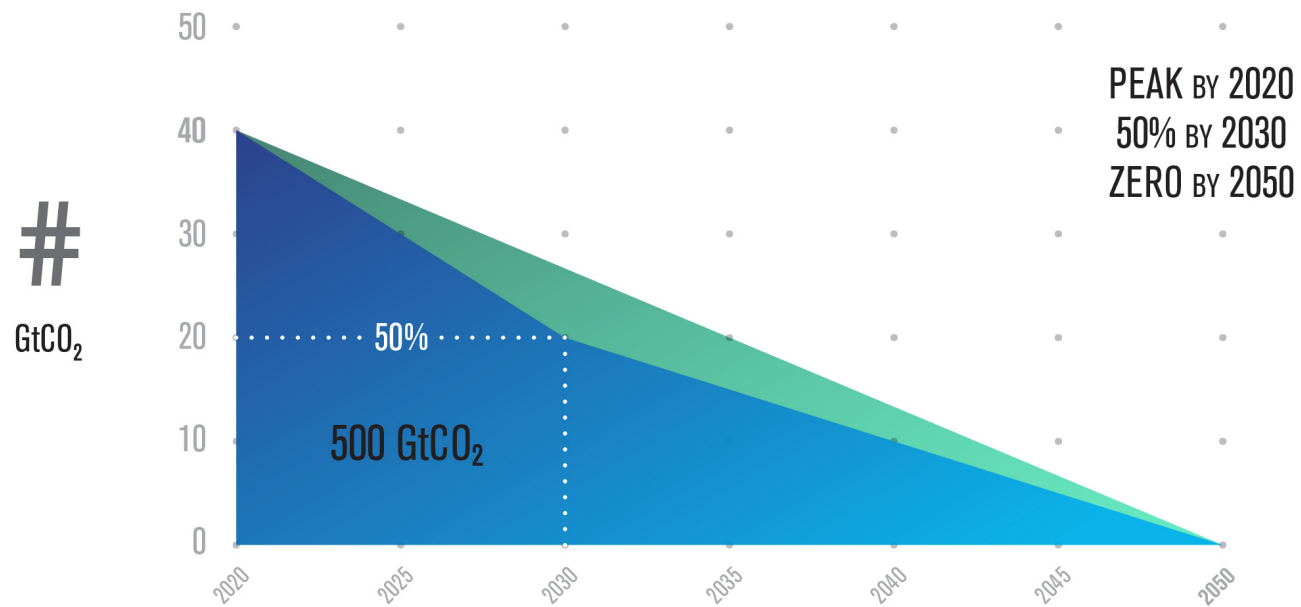
Global Carbon Budget

1.5°C Carbon Budget 500 GtCO₂



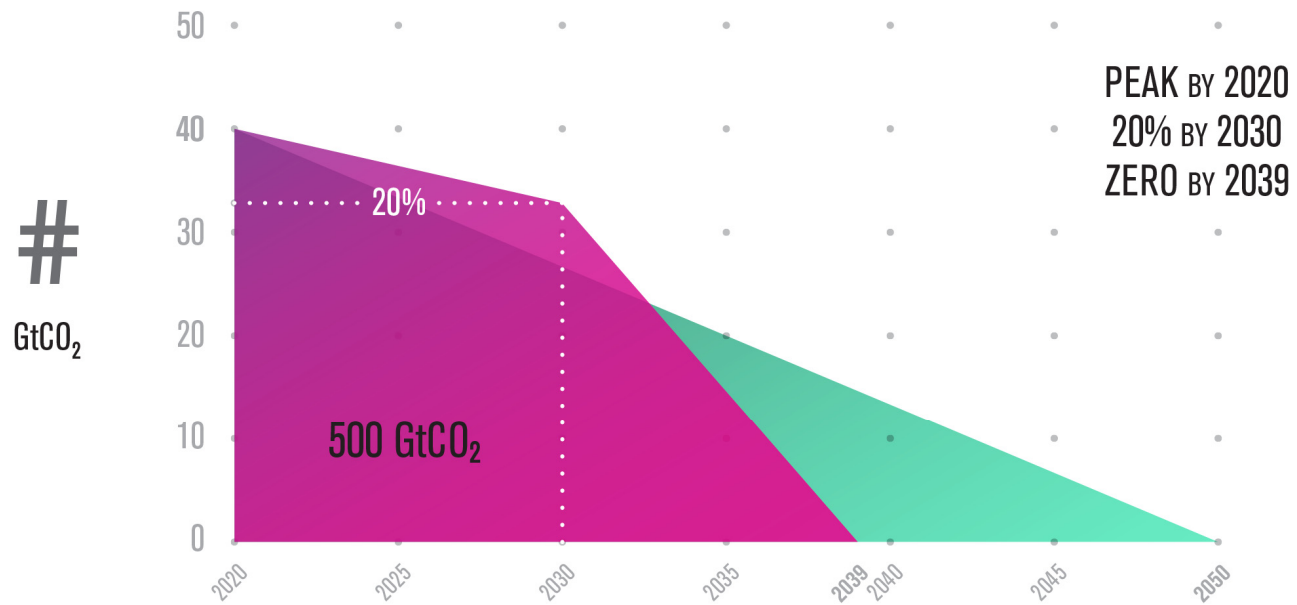
Source: Architecture 2030; Adapted from IPCC SR15, Table 2.2

Global Carbon Budget



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Global Carbon Budget

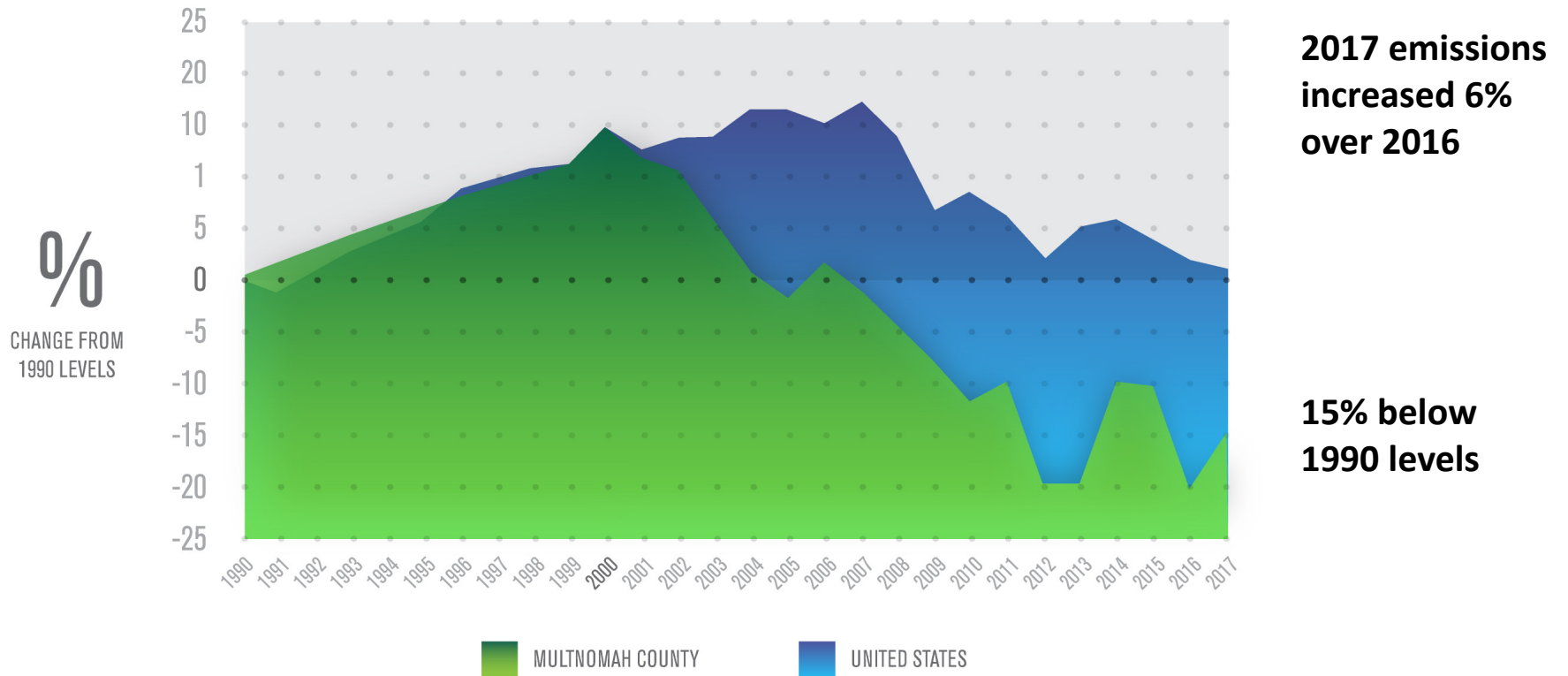


Source: Architecture 2030; Adapted from IPCC SR15, Table 2.2

Local Carbon Emission Inventories

- Sector Based Inventory, IPCC 4th Assessment (1990- 2017)
- Sector Based Inventory, IPCC 5th Assessment (1990- 2017)
- Sector Based Inventory, Utility Specific Emission Factors (2005- 2017)
- Consumption-based Emissions Inventory (2012)
- Consumption-based Emissions Inventory (2015)
- City of Portland Operations Inventory (FY '06-'07 to FY 17-18)
- City of Portland Consumption-based Inventory (2016)

Emissions have declined since peak in 2000;
but reductions have hit a plateau in recent years.



**2017 emissions
increased 6%
over 2016**

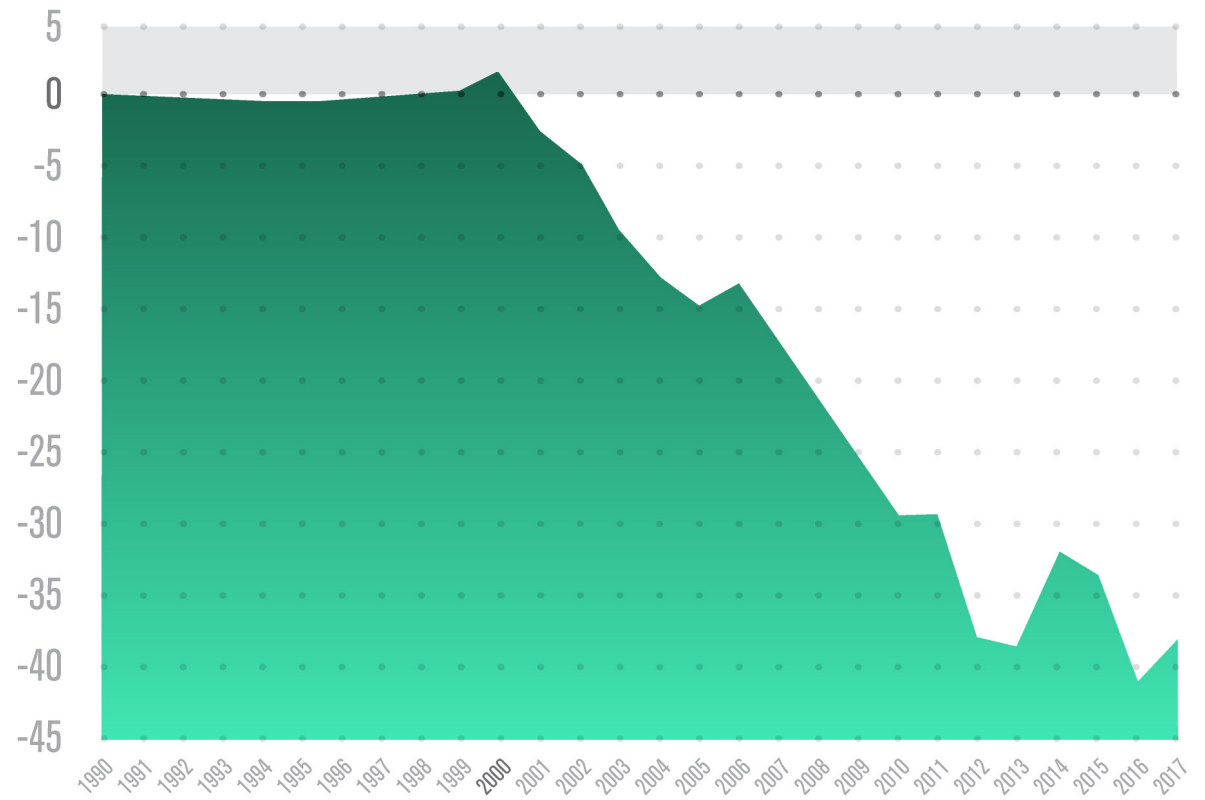
**15% below
1990 levels**

CHANGE IN CARBON EMISSIONS
MULTNOMAH COUNTY VS. UNITED STATES

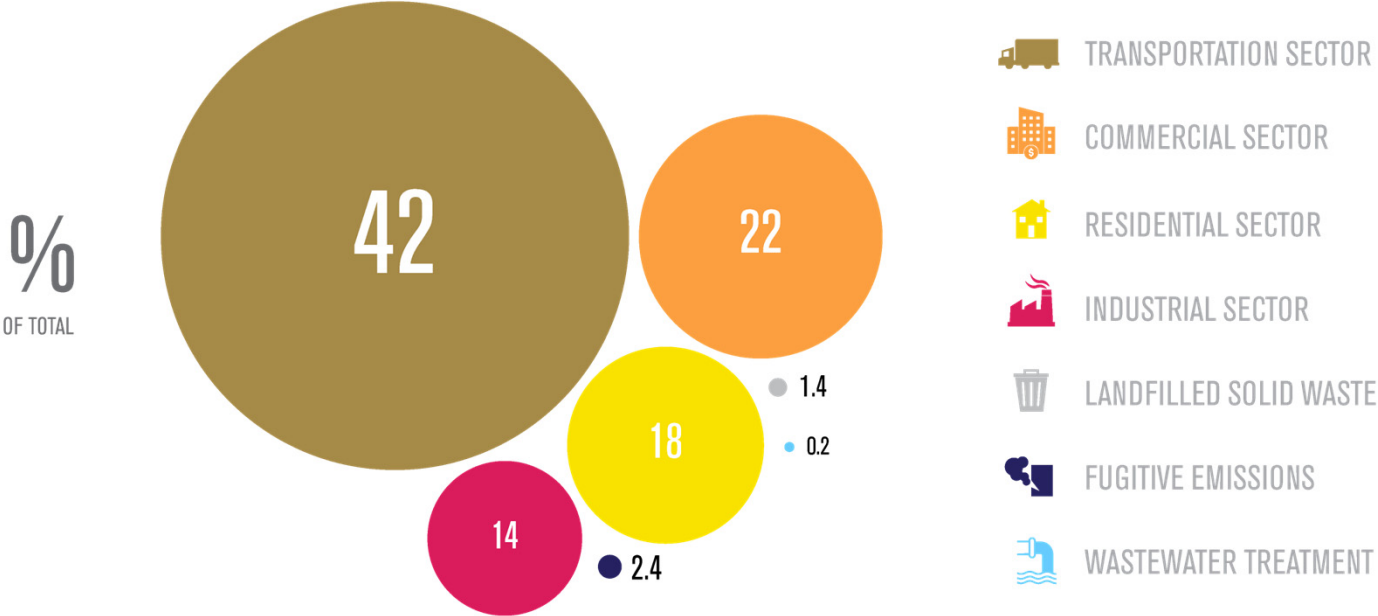
Emissions per person are 38% below 1990 levels

%
CHANGE FROM 1990 LEVELS

CHANGES IN MULTNOMAH COUNTY CARBON EMISSIONS PER PERSON



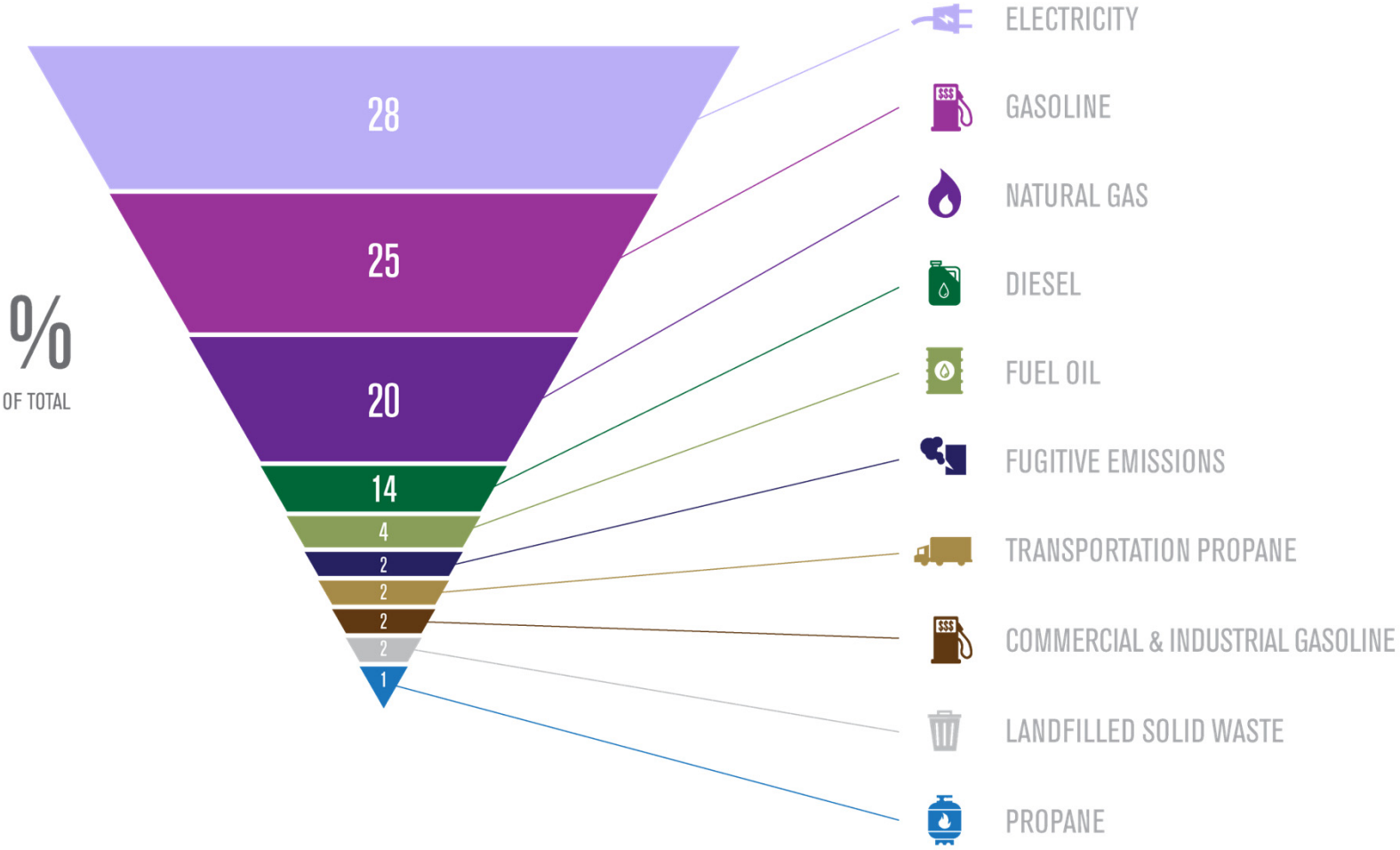
Where do Portland's carbon emissions come from?



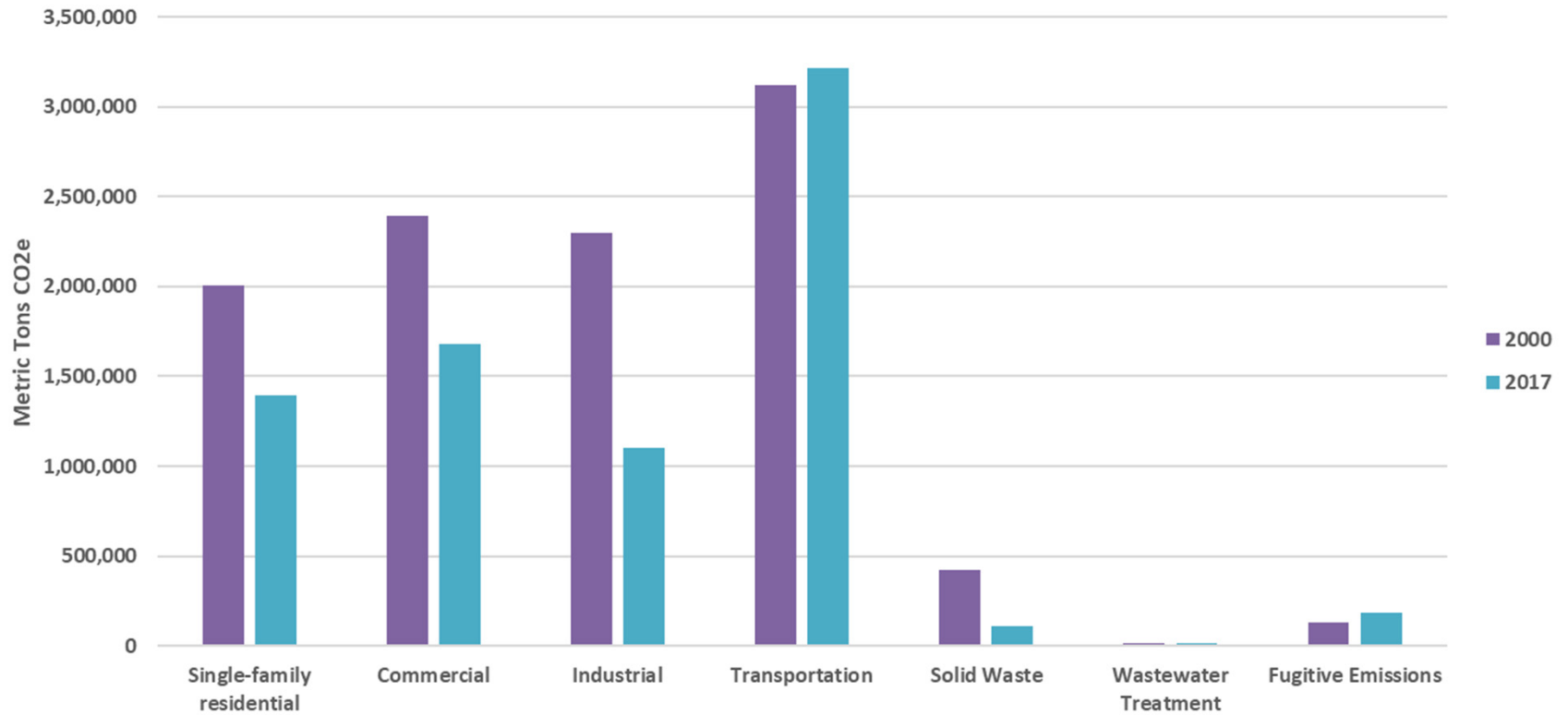
2017 MULTNOMAH COUNTY CARBON EMISSIONS
BY SECTOR

2017 Total emissions are
7,701,120 MT CO₂e

2017 EMISSIONS BY SOURCE

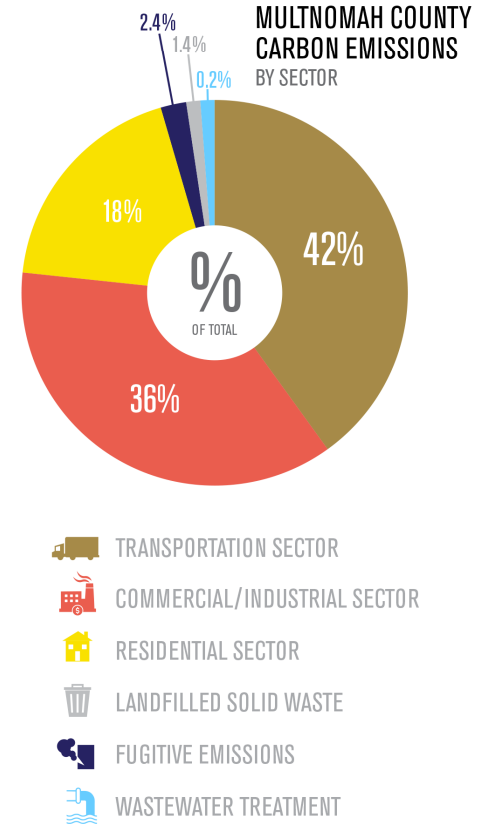
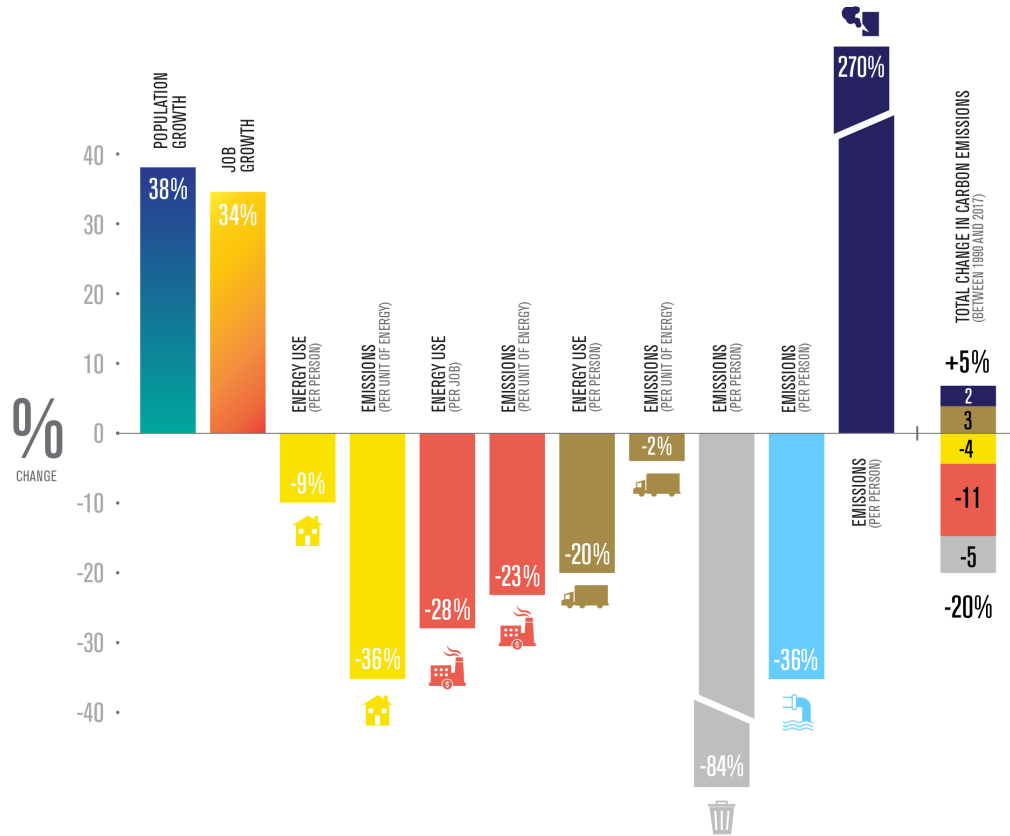


Emissions change for all sectors 2000-2017



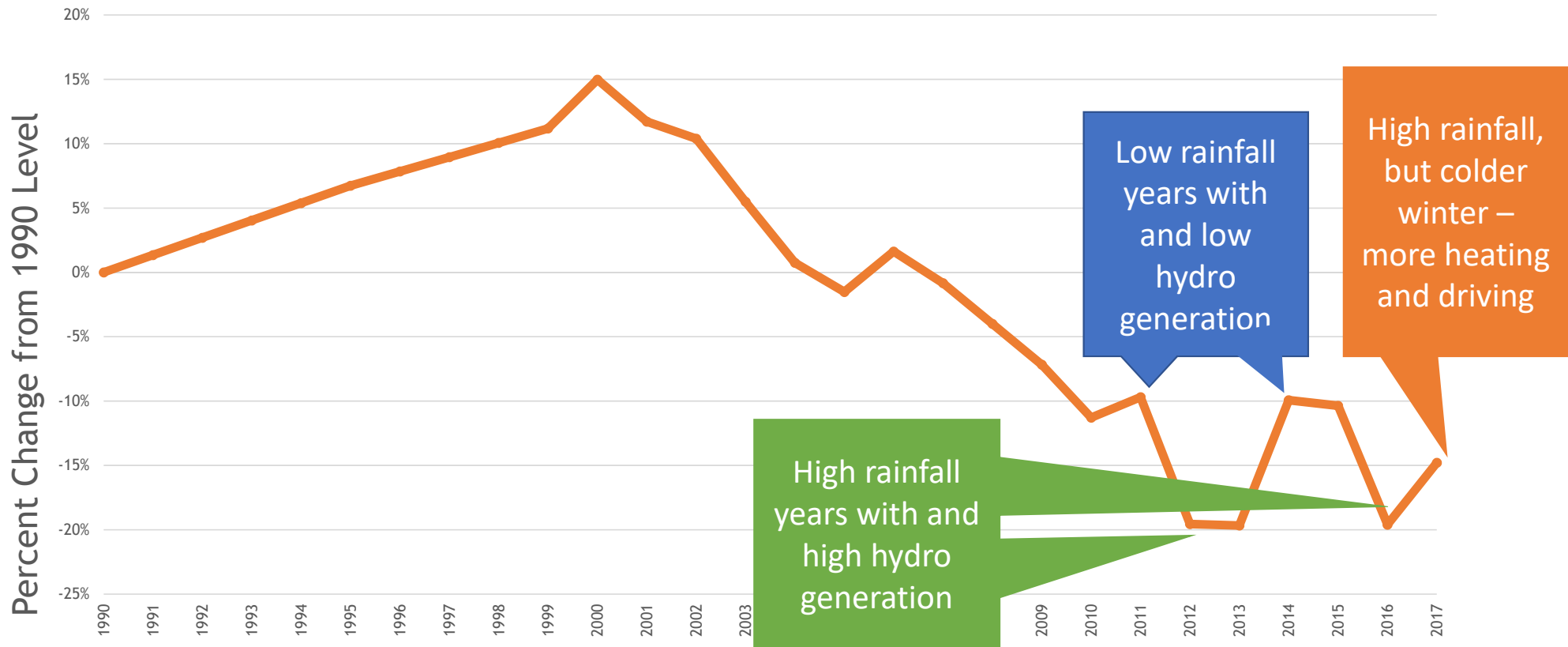
COMPONENTS OF CARBON REDUCTION

An increase in transportation and fugitive emissions balanced with decreases in other sectors produced a net decrease of about 15%.

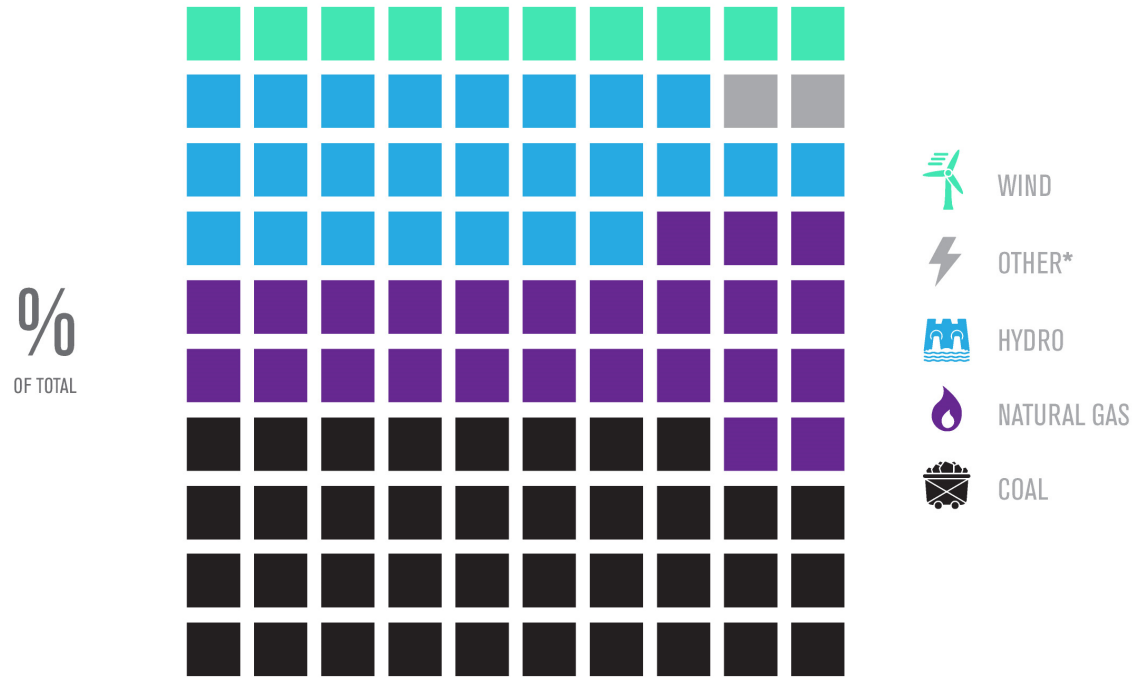


Why is the emission trend line so uneven?

Answer: Northwest Power Pool emission factors and changes in weather

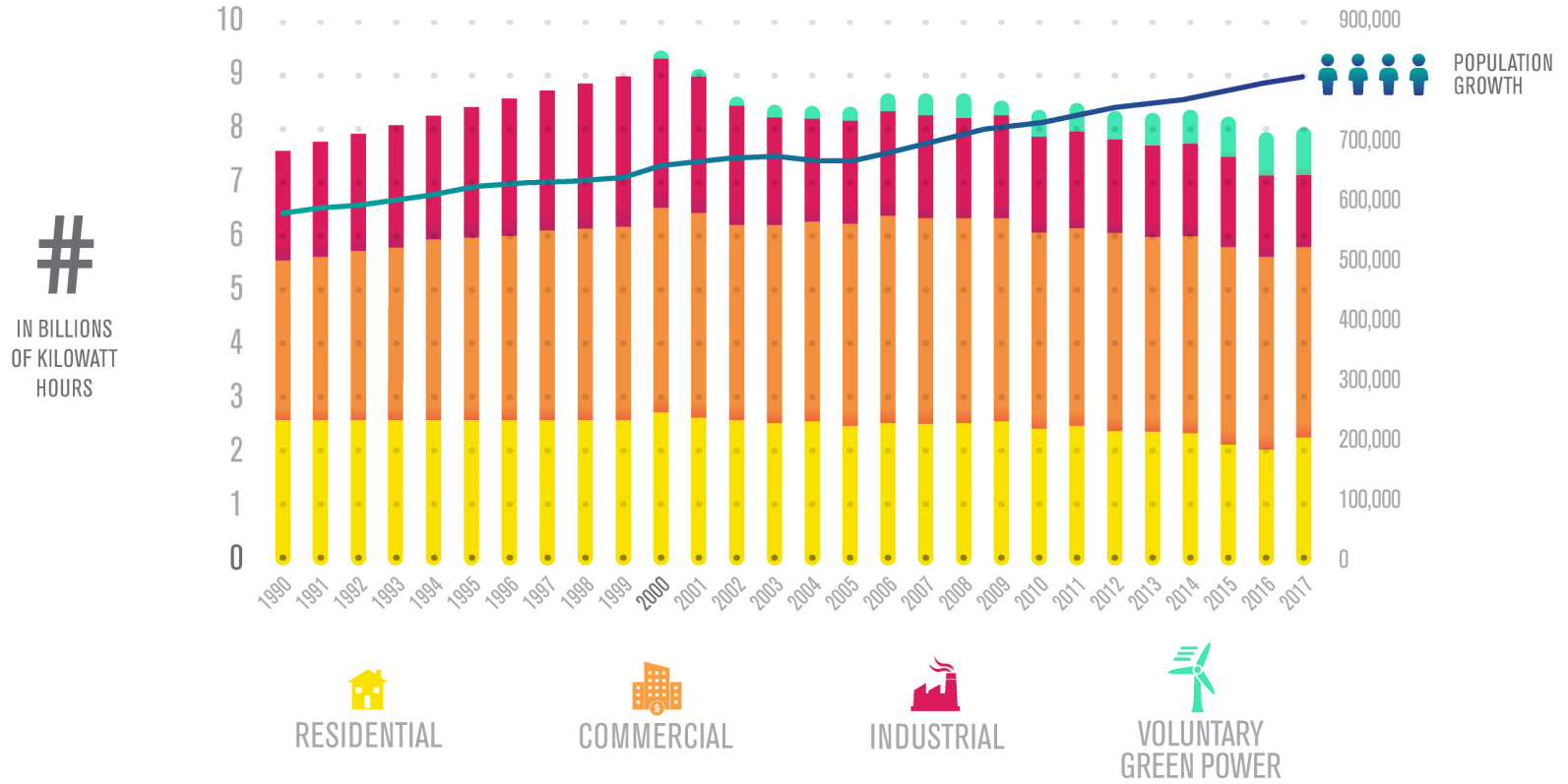


2014-2016 PGE + PACIFIC POWER ELECTRICITY GENERATION SOURCES WEIGHTED AVERAGE



*OTHER= Biomass, Nuclear, Solar, Biogas, Waste, Other non-biogenic, Other Biogenic, Petroleum, and Geothermal.

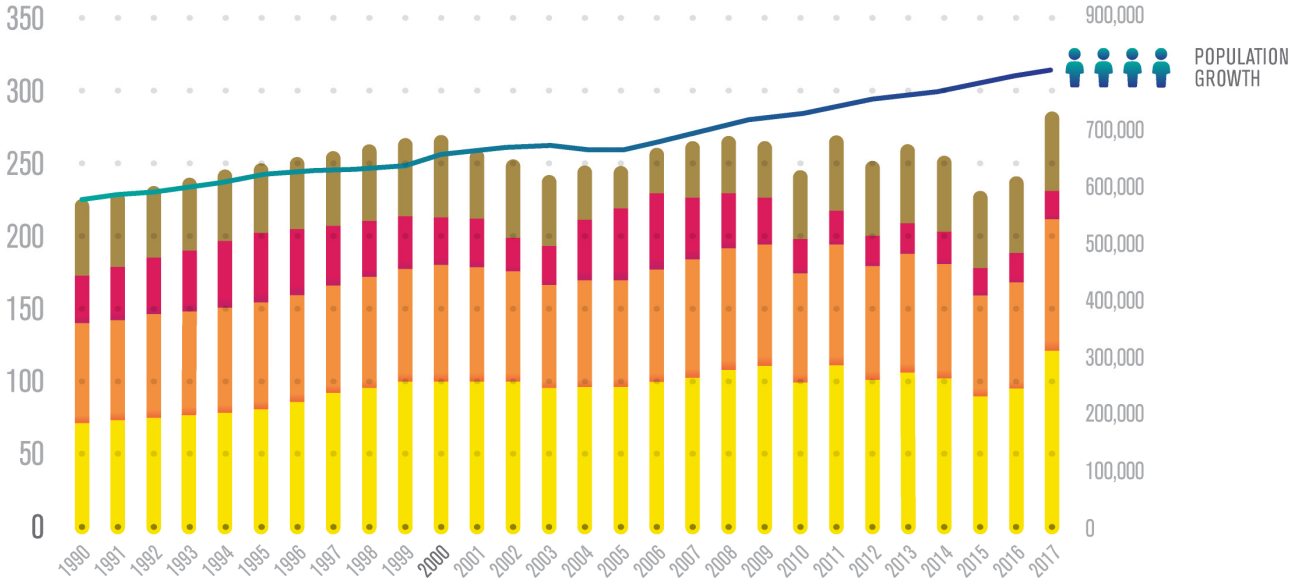
Electricity sales have declined since peak in 2000; voluntary green power reduces carbon impact.



ELECTRICITY SALES BY SECTOR
IN KWH

NATURAL GAS SALES IN THERMS

IN MILLIONS
OF THERMS




RESIDENTIAL

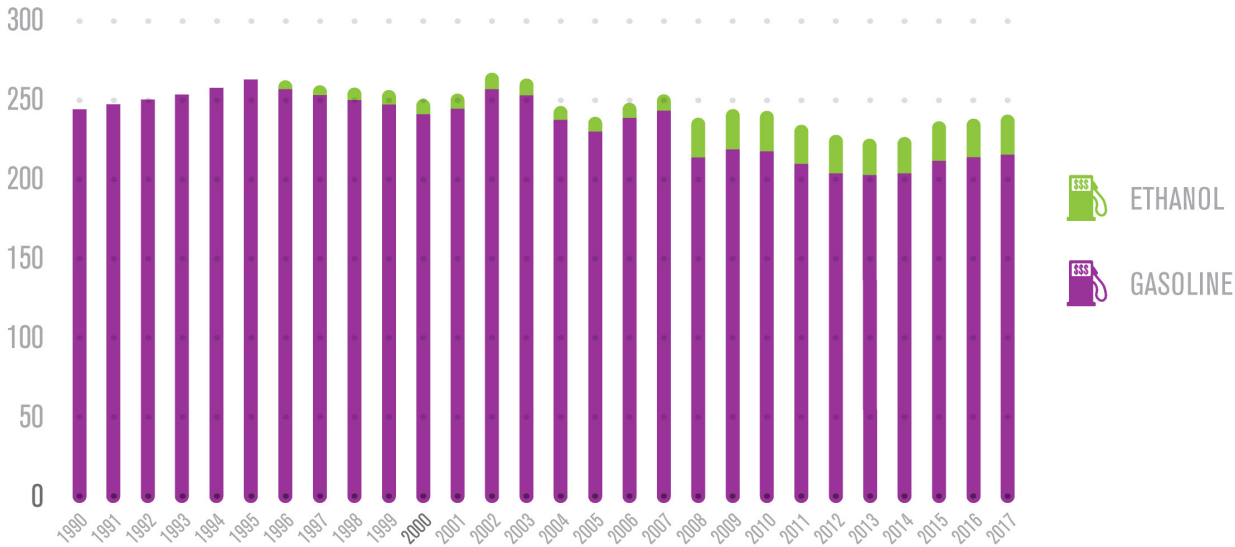

COMMERCIAL


INDUSTRIAL


TRANSPORTATION

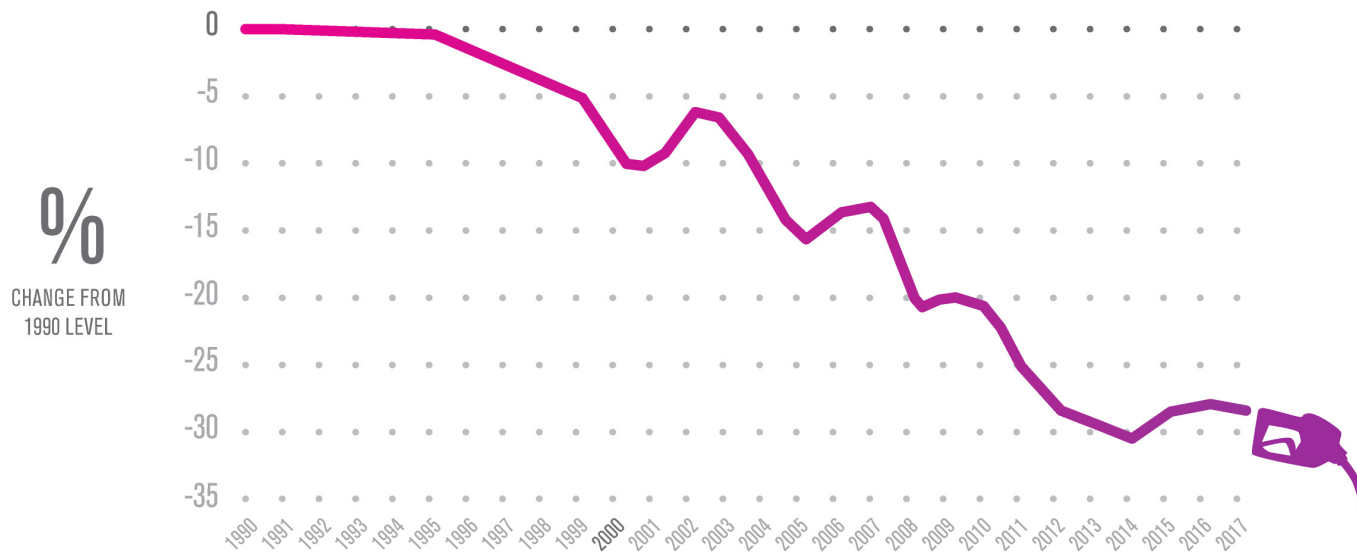
Gasoline sales generally consistent since 1990; Ethanol is reducing carbon impact.

IN MILLIONS
OF GALLONS



GASOLINE SALES
IN GALLONS

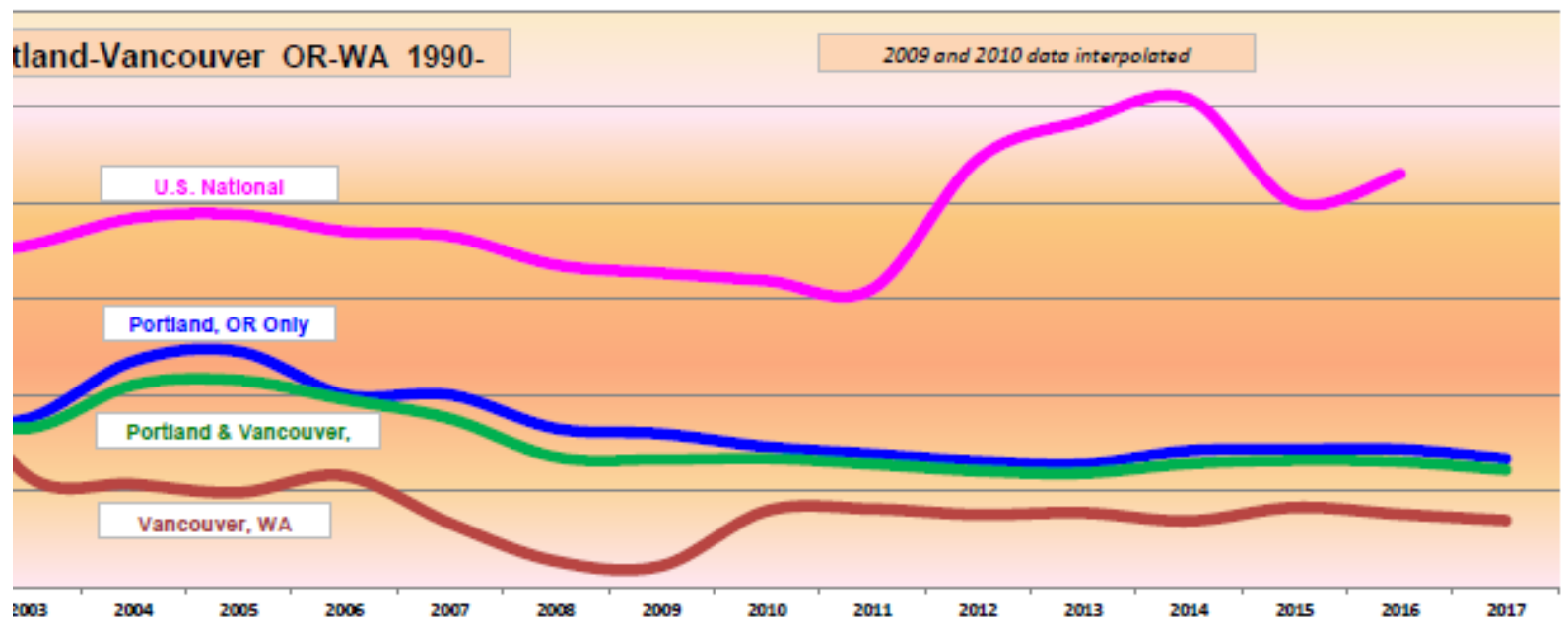
Portlanders are buying fewer gallons of gasoline today than they did in 1990.



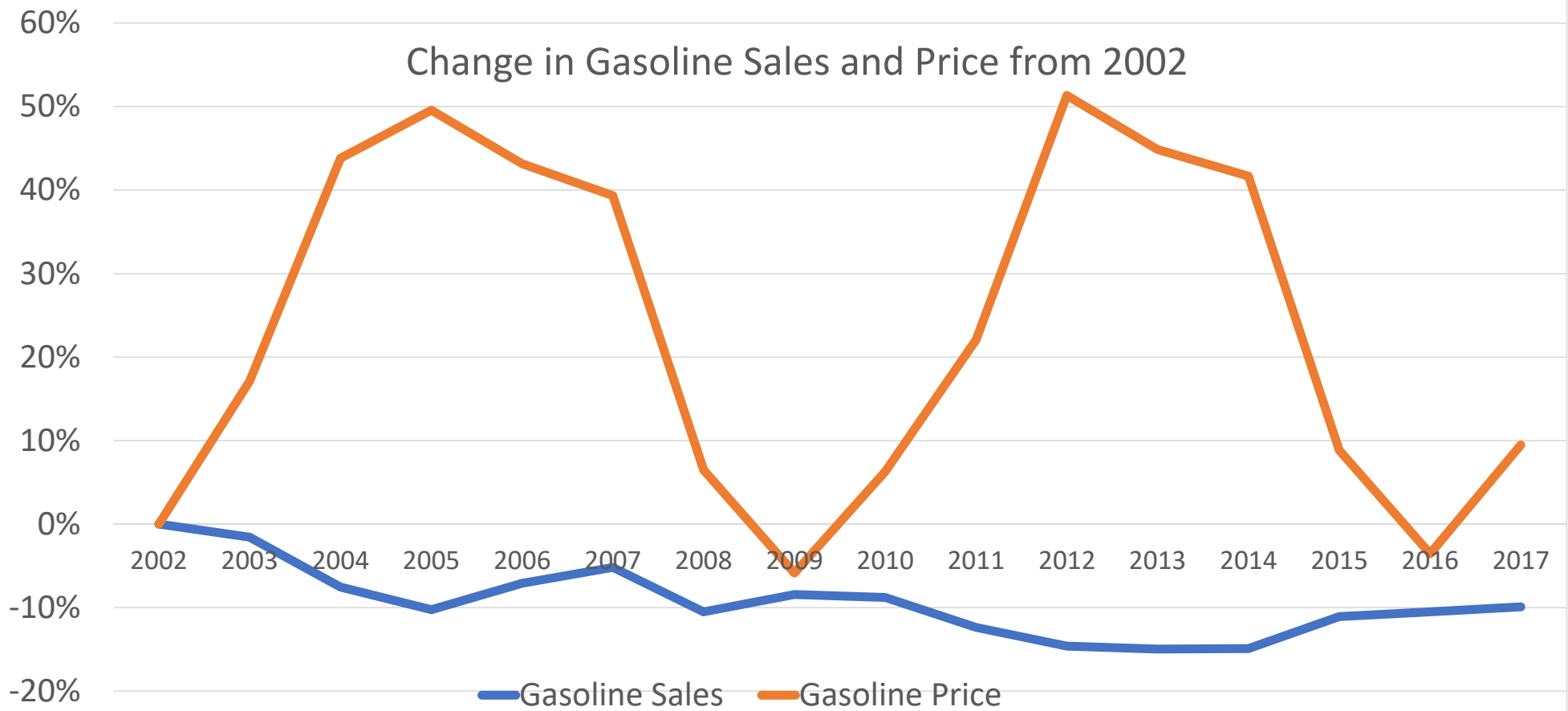
GASOLINE SALES
PER CAPITA

Metro area Daily VMT per person is flat.

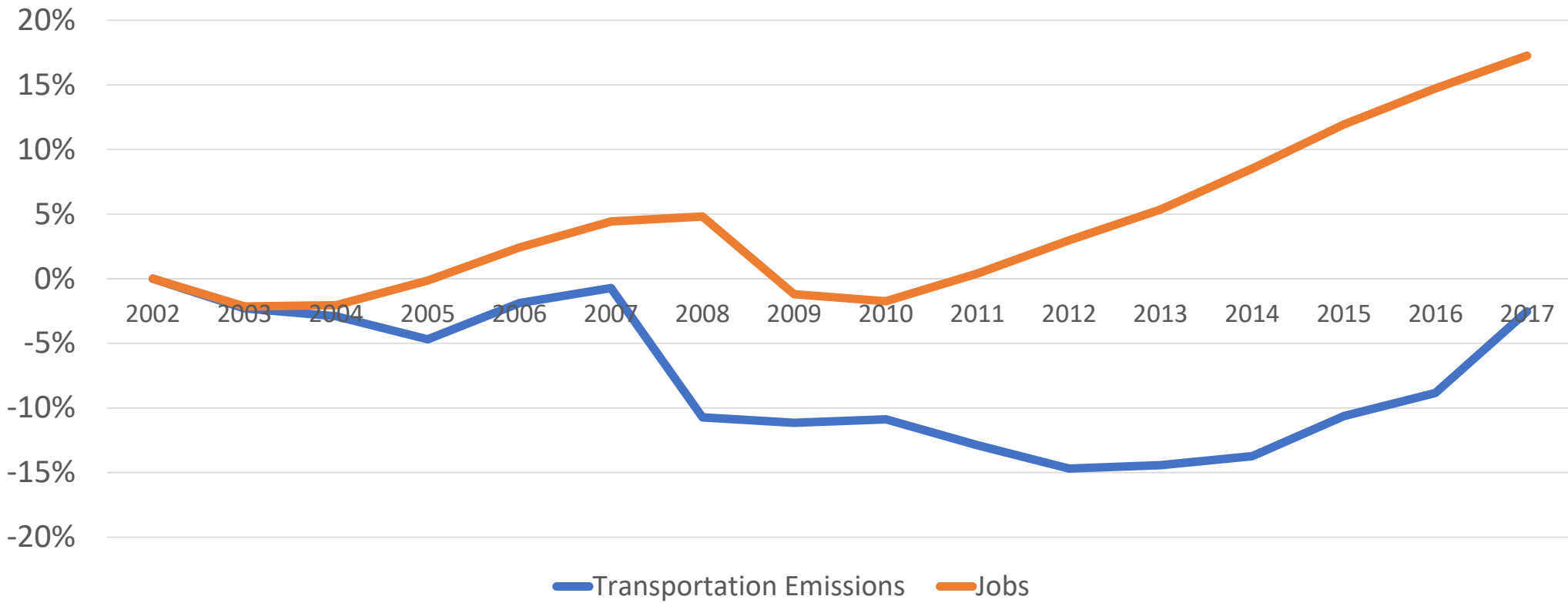
2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
19.50	20.70	20.90	20.00	20.00	19.30	19.19	18.92	18.77	18.62	18.56	18.84	18.87	18.87	18.67
18.30	18.13	17.96	18.31	17.32	16.53	16.43	17.58	17.62	17.50	17.54	17.37	17.65	17.51	17.38
19.30	20.20	20.30	19.90	19.50	18.70	18.65	18.67	18.55	18.41	18.36	18.56	18.63	18.60	18.43
23.11	23.67	23.75	23.40	23.30	22.70	22.53	22.37	22.20	24.90	25.70	26.16	24.00	24.60	



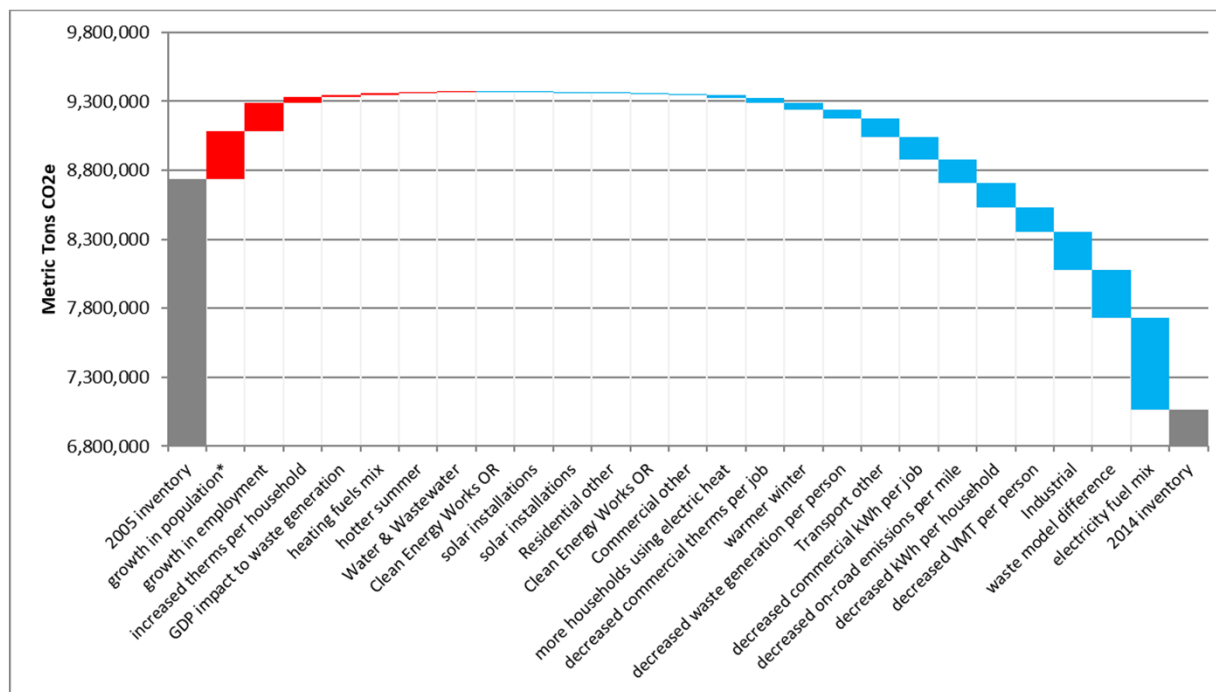
Change in Gasoline Sales and Price from 2002



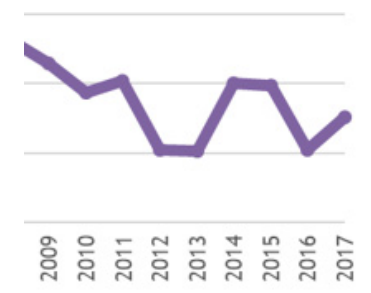
Change in Transportation Emissions and Jobs from 2002



How does the data inform Climate Action?



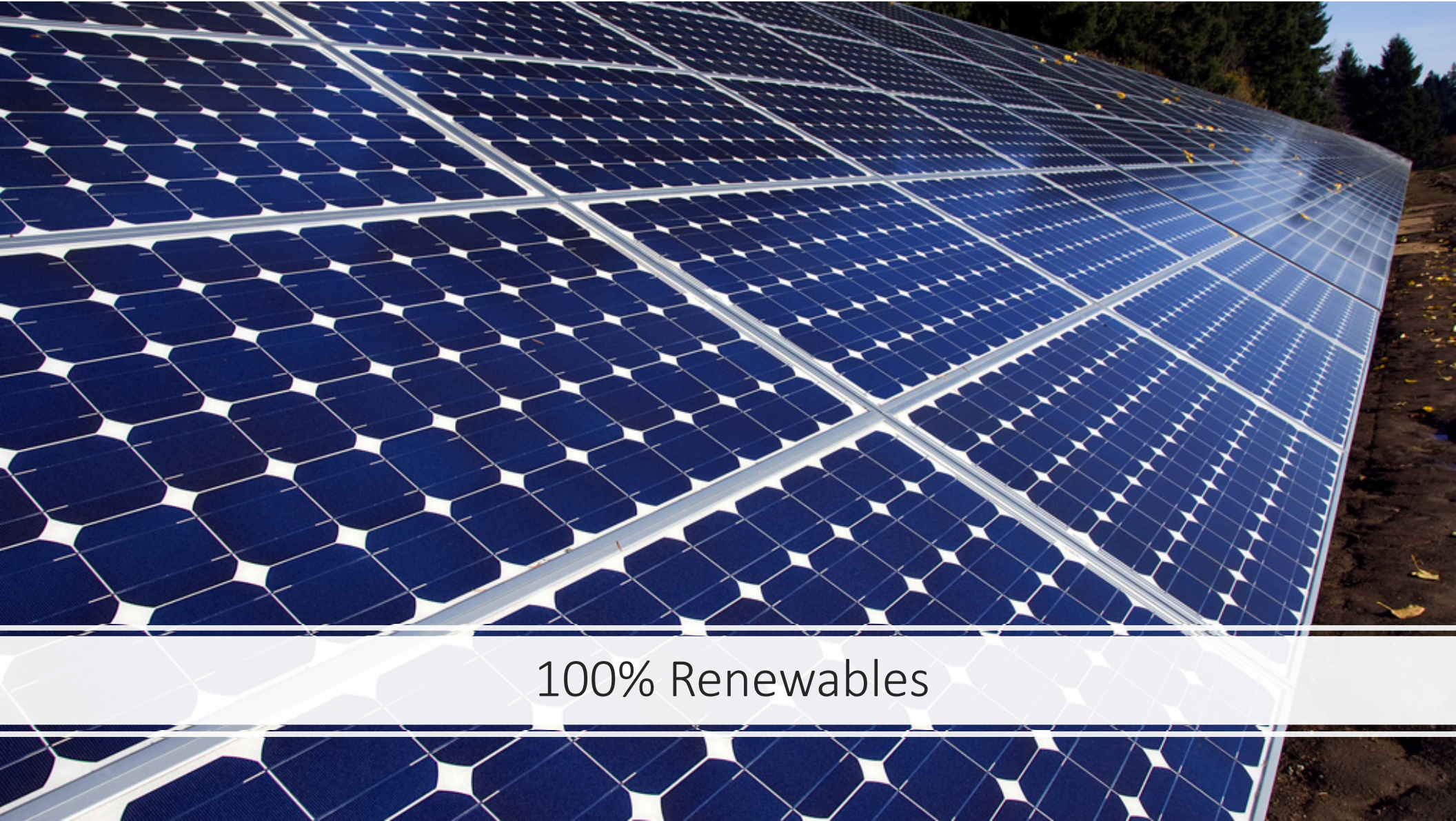
1. Carbon intensity of grid
2. Carbon intensity of transportation fuels
3. VMT per person
4. kWh per job
5. kWh per household
6. Therms per household



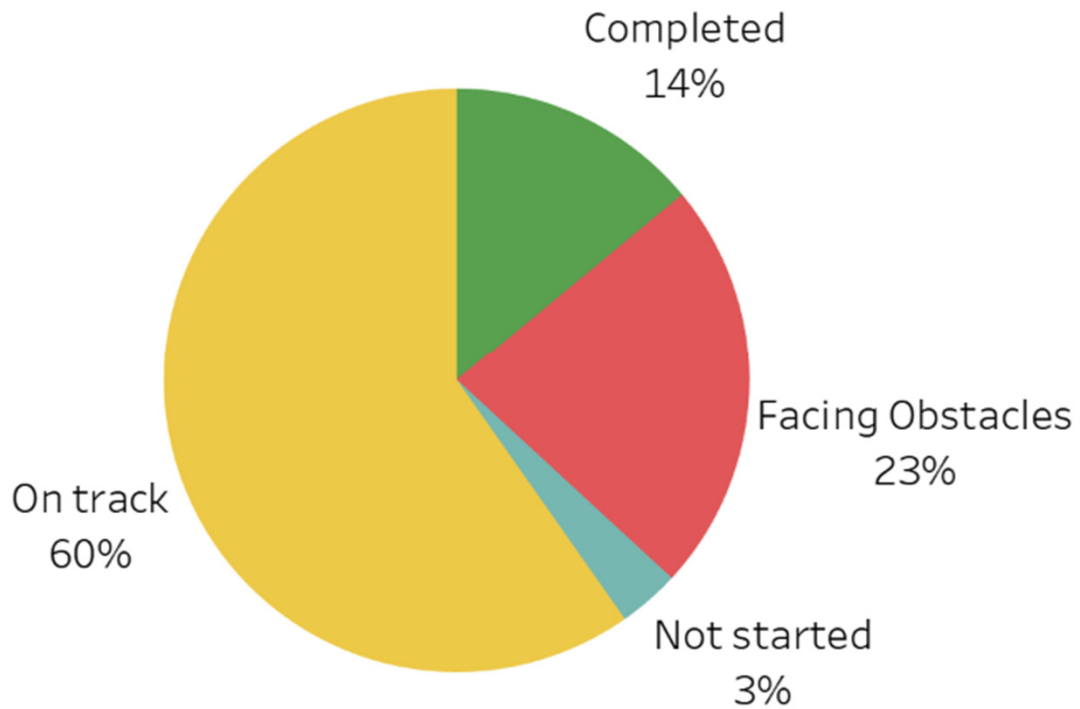
ICLEI Analysis on contributions to changes in emission trends in Portland

How do we get to net zero emissions by 2050?

- Significantly Reduce VMT (e.g. zero emission zones, congestion pricing, expanded transit access and service)
- Decarbonize the grid (e.g. strong push for voluntary renewable purchases, community solar, incentivize or require commercial and industrial sector renewables)
- Decarbonize buildings and transportation (e.g. require electric heat and 100% renewables for all new construction, update renewable fuel standard, and strong push for EVs and FAVES)
- Deep residential and commercial energy efficiency upgrades (e.g. repeal prohibition in city charter to require upgrades, price carbon to incentivize upgrades, or directly buy upgrades).
- New focus on carbon sequestration



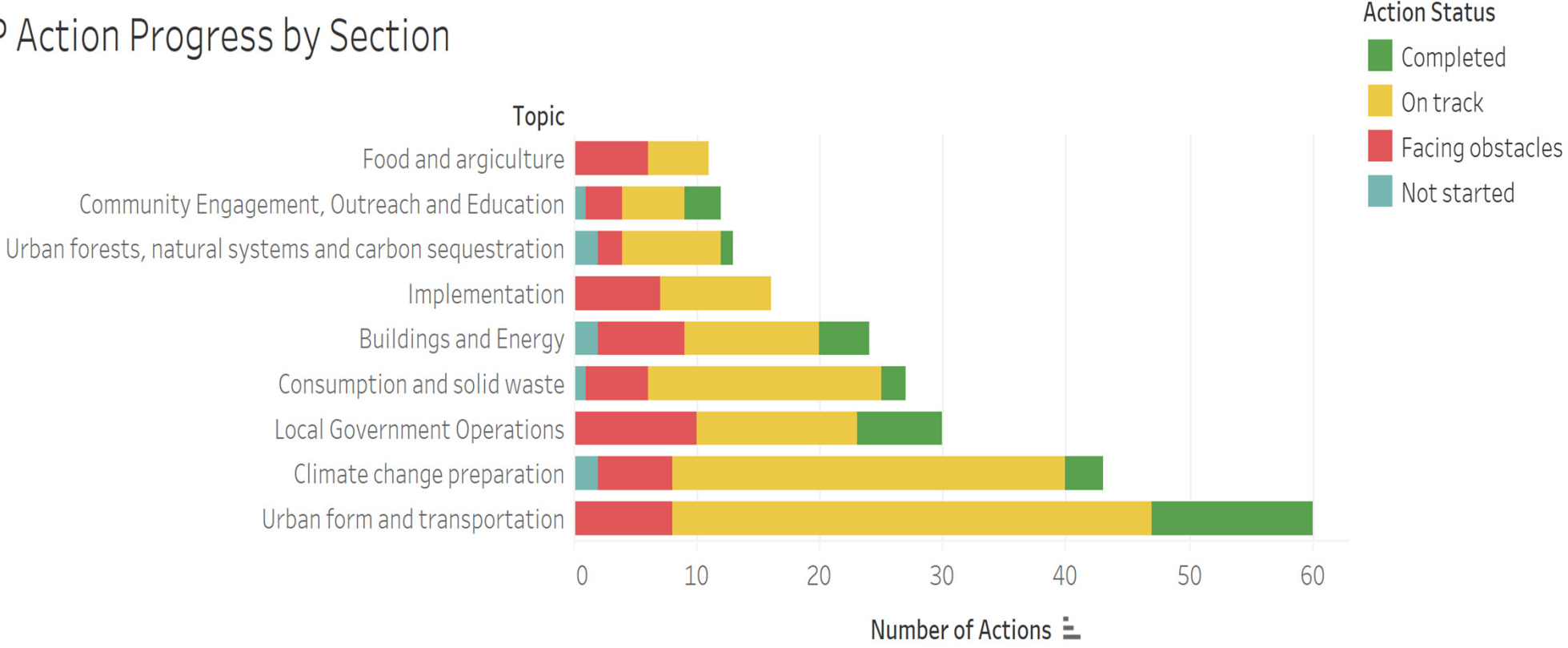
100% Renewables

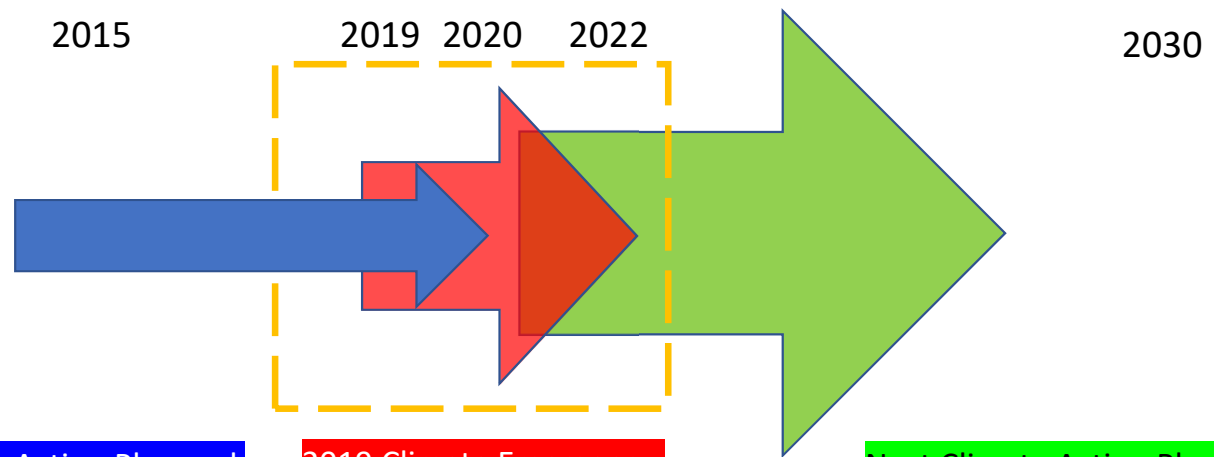


Climate Actions

Status update for ~170 actions in the 2015 Climate Action Plan

CAP Action Progress by Section





2015 Climate Action Plan and 100% Renewables:

Reduce carbon emissions and prepare for impacts in a more equitable way.

2019 Climate Emergency:

Catalyze new high impact actions to counter our emission reduction plateau and pivot to community-centered action.

Next Climate Action Plan:

Create community benefits that drastically reduce carbon emissions and build resilience.

Leverage existing efforts to inform 2022 CAP:
 PCEF engagement and implementation, ZeroCities project, community solar, pricing for equitable mobility, sustainable consumption strategy, wasted food, roadmap for decarbonizing building sector, staff capacity building to do effective community-centered climate planning.



Rethinking Climate Action in Portland

Alisa Kane, Climate Action Manager
Bureau of Planning and Sustainability









KOIN 6
6:02 101°

FIRST. LIVE. LOCAL.
WEATHER

HEAT WAVE NEXT WEEK

PORTLAND FORECAST

97°

TUESDAY

RECORD = 98°

102°

WEDNESDAY

RECORD = 96°

100°

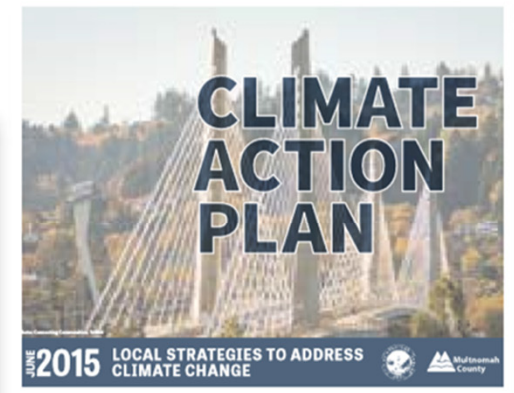
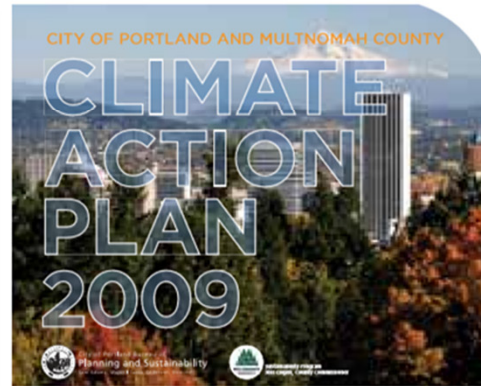
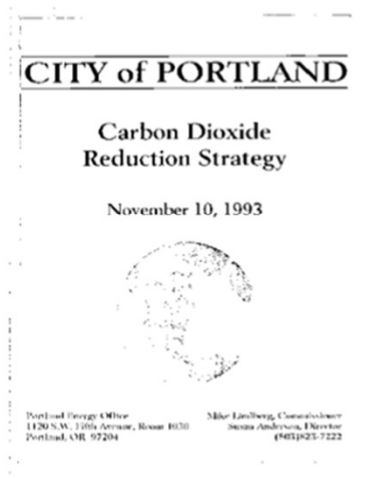
THURSDAY

RECORD = 99°



Justin Katigbak, wweek.com

History of Climate Action in Portland





Rethinking
Climate Action in
Portland

Transportation sector emissions are now 8% over 1990 levels.

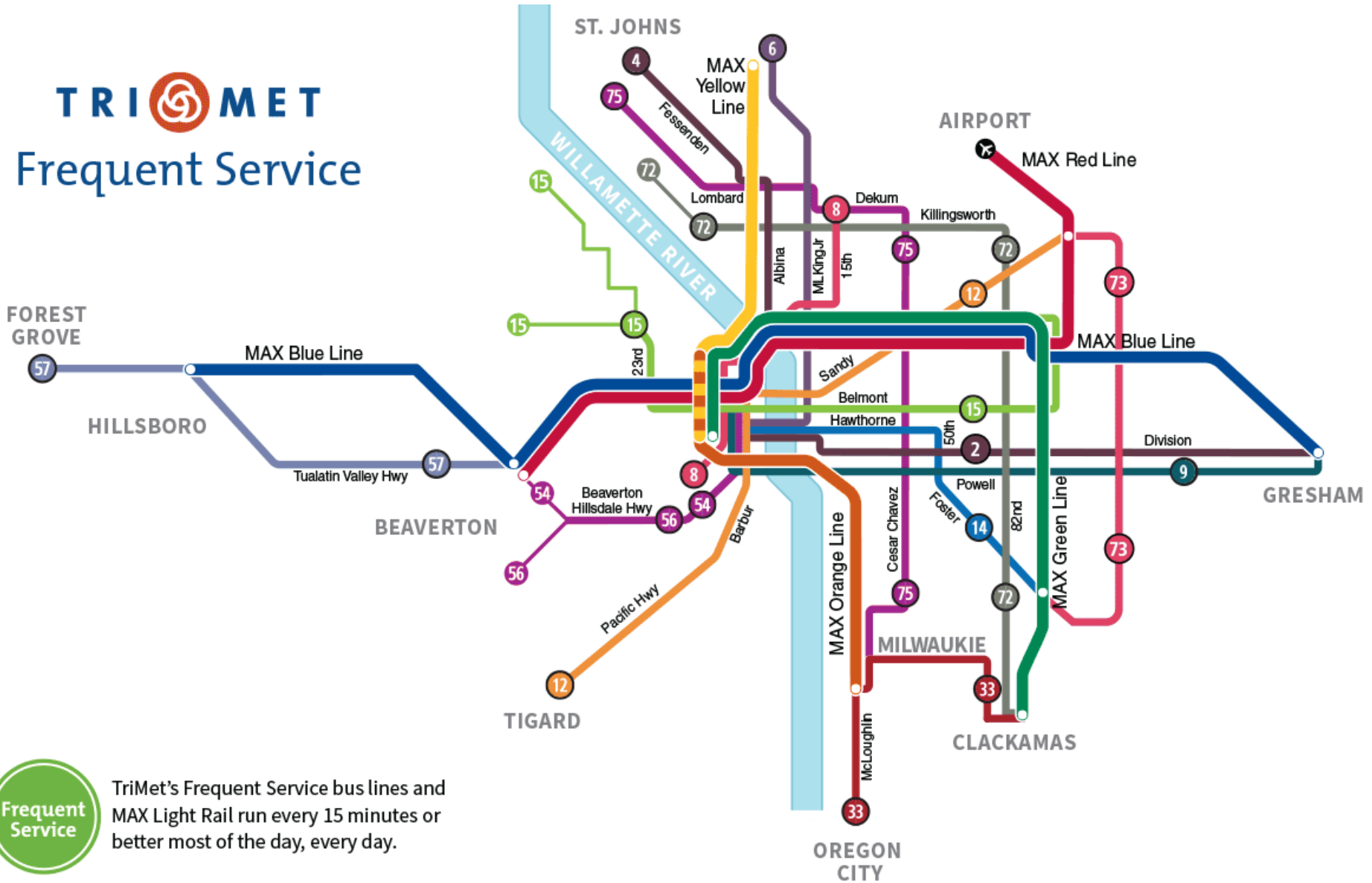
More people need to take the bus.





TRIMET

Frequent Service



TriMet's Frequent Service bus lines and MAX Light Rail run every 15 minutes or better most of the day, every day.



Rethinking
Climate Action in
Portland

Targeted Universalism

[Universal goals, targeted actions.]

(also inspired by Just Transition,
Traditional Knowledge,
Regenerative Economics and more.)

Everyone can ride the bus safely.

Who isn't safe riding the bus?











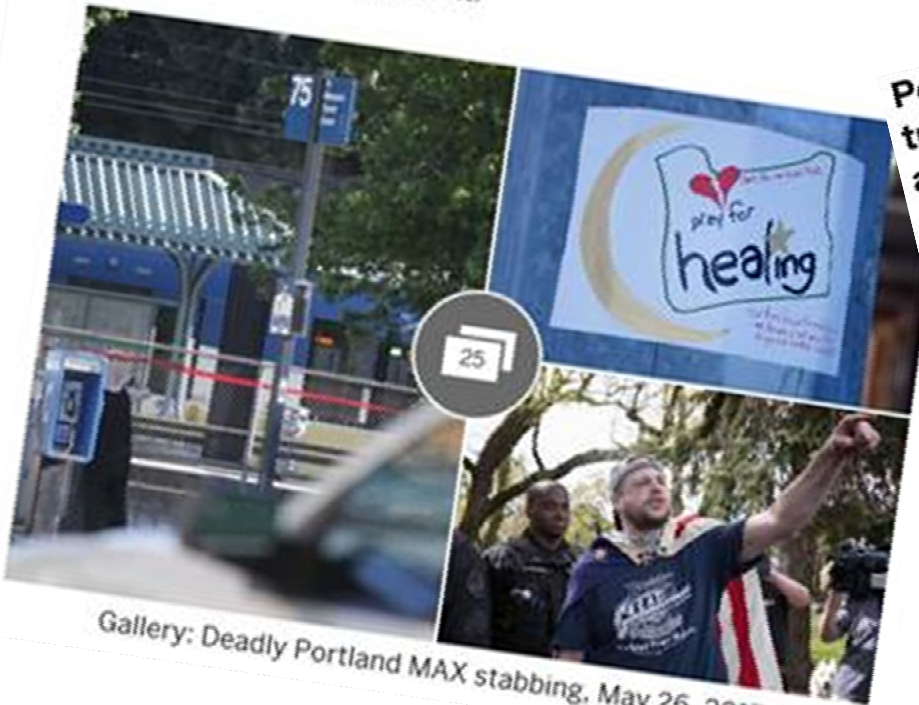
PORTLAND

2 killed in stabbing on MAX train in Northeast Portland as man directs slurs at Muslim women, police say

Updated May 26, 2017, Posted May 26, 2017

Portland has permanently banned a man from its public transportation system after a decade of terrorizing women and targeting their hair

Ashley Colman Apr 19, 2018 1:50 PM



25

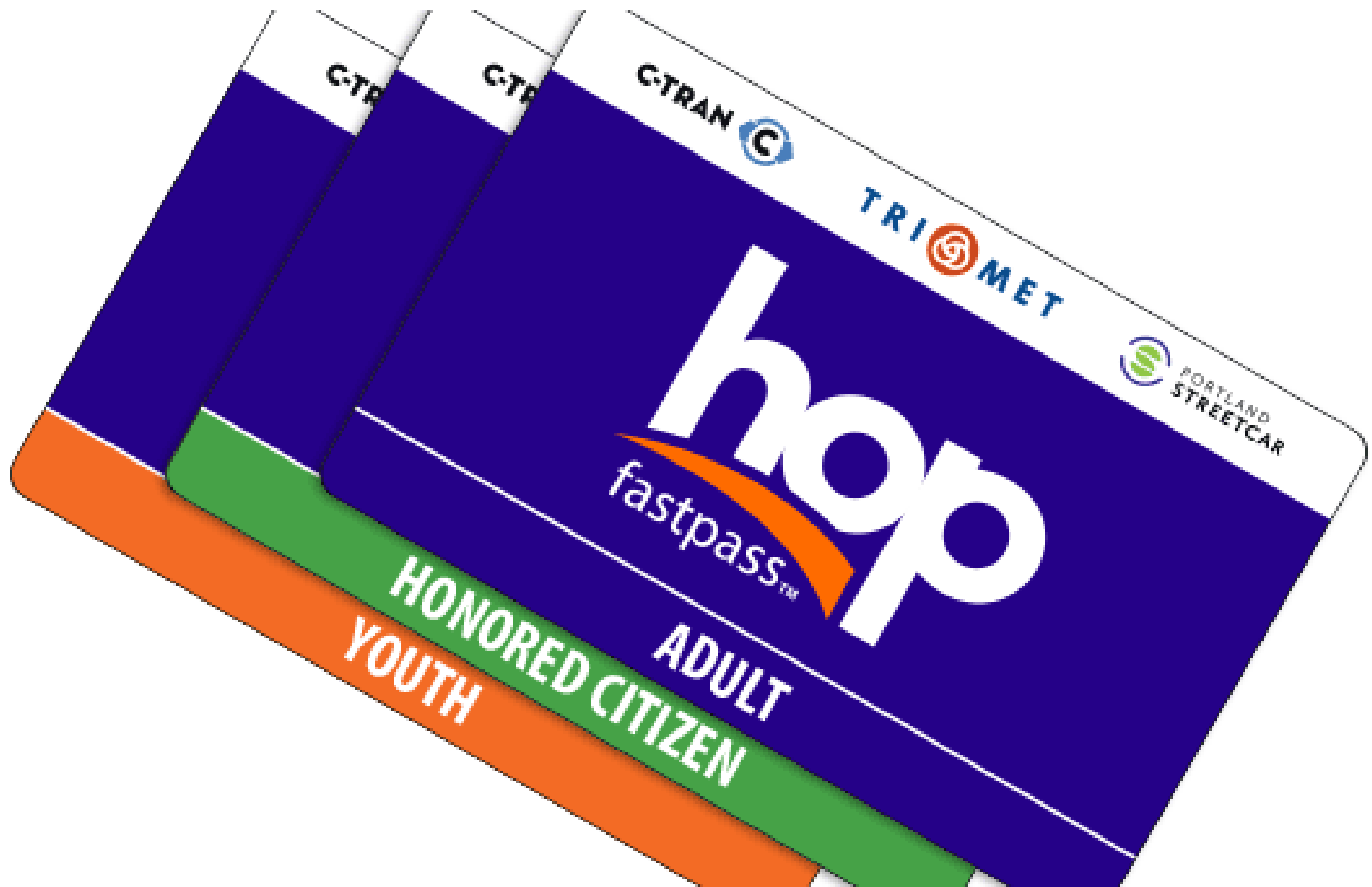
Gallery: Deadly Portland MAX stabbing, May 26, 2017



What can the City of Portland do?







C-TRAN

C-TRAN

C-TRAN 

TRIMET 

 PORTLAND STREETCAR

hop
fastpass™

ADULT


HONORED CITIZEN

YOUTH






Rethinking
Climate Action in
Portland



What does climate action look like
when we achieve our carbon goals
and center the priorities of
frontline communities?



How do we create
equitable community
benefits that drastically
reduce carbon
emissions?

"We cannot solve a crisis without treating it as a crisis. And if solutions within the system are so impossible to find, then maybe we should change the system itself." - ?

"We cannot solve a crisis without treating it as a crisis. And if solutions within the system are so impossible to find, then maybe we should change the system itself."

- Greta Thunberg

