Internal Cost of Carbon Policy

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Portland Sustainability Commission
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Internal Cost of Carbon Policy Overview

Policy Intent

Participating bureaus

Current Scope

How it works

How we measure success

Image: Justin Katigbak

Policy Goals and Outcomes

QUANTIFY CARBON IMPACTS IN CITY INVESTMENT DECISIONS.

REWARD PROJECT APPROACHES THAT PURSUE LOW CARBON OPTIONS.

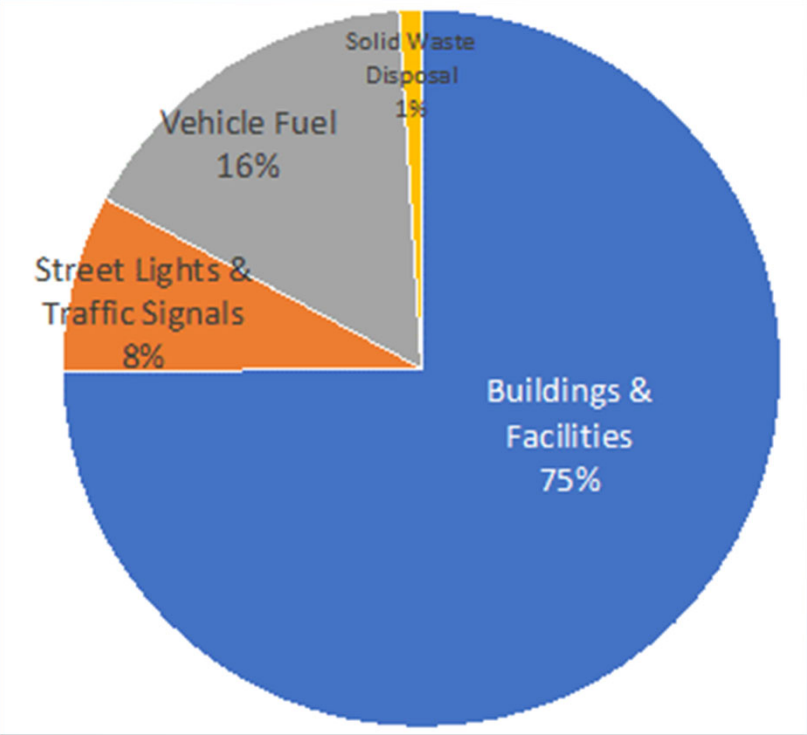
ACCELERATE CITY CARBON EMISSIONS REDUCTION.

LEAD BY EXAMPLE.

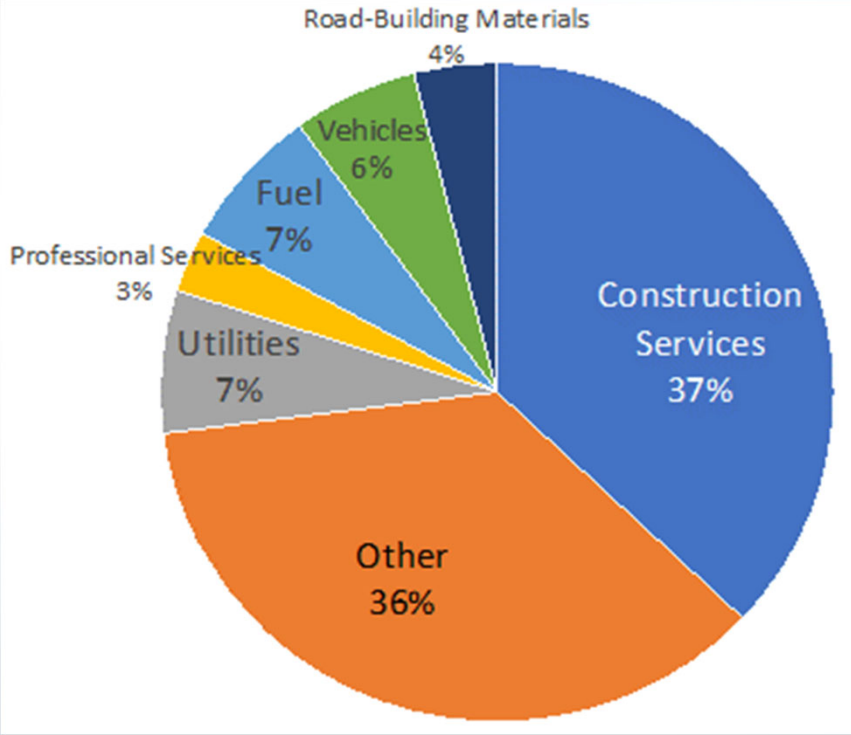
City Bureaus Involved

City Emissions Inventory

Production-Based Inventory



Supply Chain Inventory



Current Scope - Applications

New City buildings

Energy Procurement

Vehicles and mobile equipment

Transportation infrastructure construction projects

Resource management at Columbia Boulevard WWTP

Ecosystem Services

What is a Carbon Shadow Price?

- Used for project option evaluation and alternatives analysis.
- **No direct project costs are incurred.**
- Bon the **Social Cost of Carbon (SCC)**

Proposed City of Portland Carbon Shadow Price Schedule, 2020-2050

Year	Carbon Shadow Price
2020	$117 per ton CO2e
2025	$130 per ton CO2e
2030	$143 per ton CO2e
2035	$156 per ton CO2e
2040	$170 per ton CO2e
2045	$182 per ton CO2e
2050	$194 per ton CO2e

Sources of Carbon Emissions

**If scopes 1, 2 or 3 emissions are unavailable, unreliable, or not applicable across all options, staff will have the discretion to exclude one or more scopes from the analysis.*

Image: https://www.eni.com/en-IT/low-carbon/plan-counteract-emissions.html

Case Study: EV business case

Portland Water Bureau
Interstate Facility

Status quo:

Replace & maintain:

- 7 hybrid sedans
- 19 mid-sized trucks (gasoline)

EV alternative:

- Install 26 EV charging stations
- Replace sedans and trucks with EV models

Internal Cost of Carbon	Current State	Carbon Cost included ($117/tonCO2)
Life-cycle cost: status quo	$2,913,000	$ 3,082,000
Life-cycle cost: EV alternative	$2,886,000	$ 2,916,000
Life-cycle cost savings for the EV option	$ (27,000)	$ (250,000)
Breakeven (years)	29	20
Benefit/cost ratio	1.1	1.8

Implementation and Reporting

- Internal capacity building
- Tools and Resources
- Transparency and Accountability

Report to Council:
January 2022

What's Next?

- **Pipeline and pump station infrastructure**
- Electric vehicle charging infrastructure for public use
- City employee air travel
- City permitting requirements
- **Existing building renovations, retrofits, and deferred maintenance projects**
- Land use planning decisions
- Transportation planning decisions
- Solid waste management
- Waste to energy projects

Thank you.