



CLIMATE ACTION PLAN PORT OF VANCOUVER

Commission Workshop
July 13, 2021



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2019 GHG Inventory, Forecast & Reduction Targets

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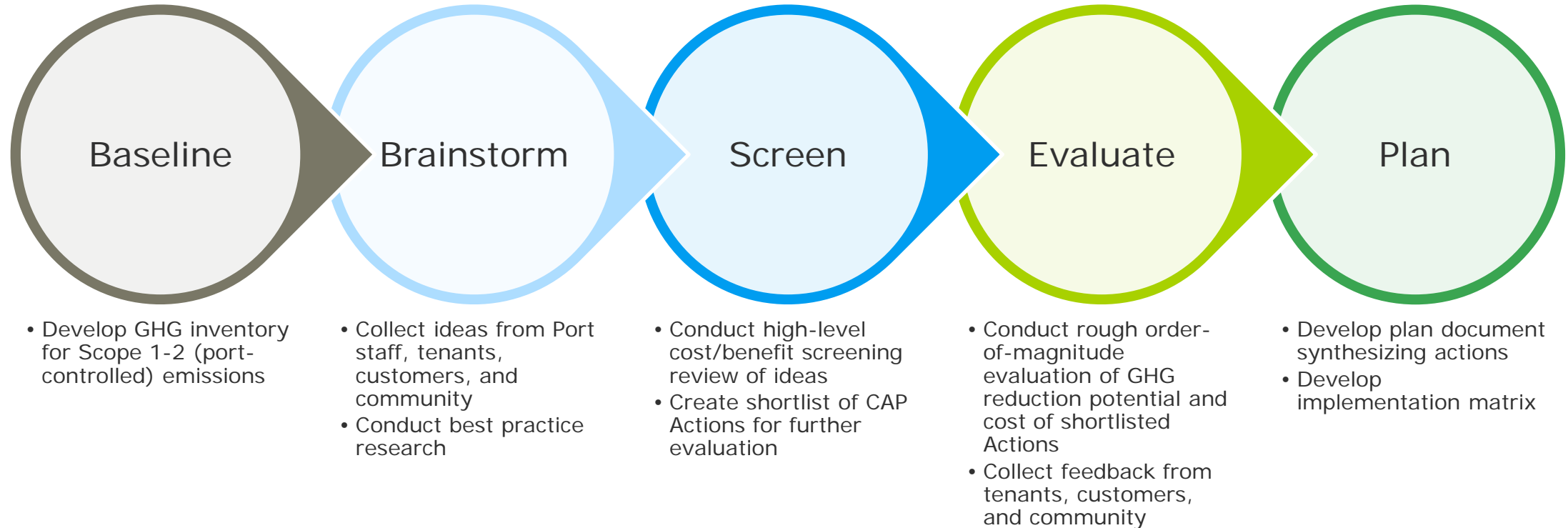
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PROJECT OVERVIEW

The Port of Vancouver is developing a Climate Action Plan as part of its 2018 Strategic Plan, comprised of a greenhouse gas (GHG) inventory for port-controlled operations and GHG reduction measures for port-wide activities. We undertook the following process to develop the CAP.



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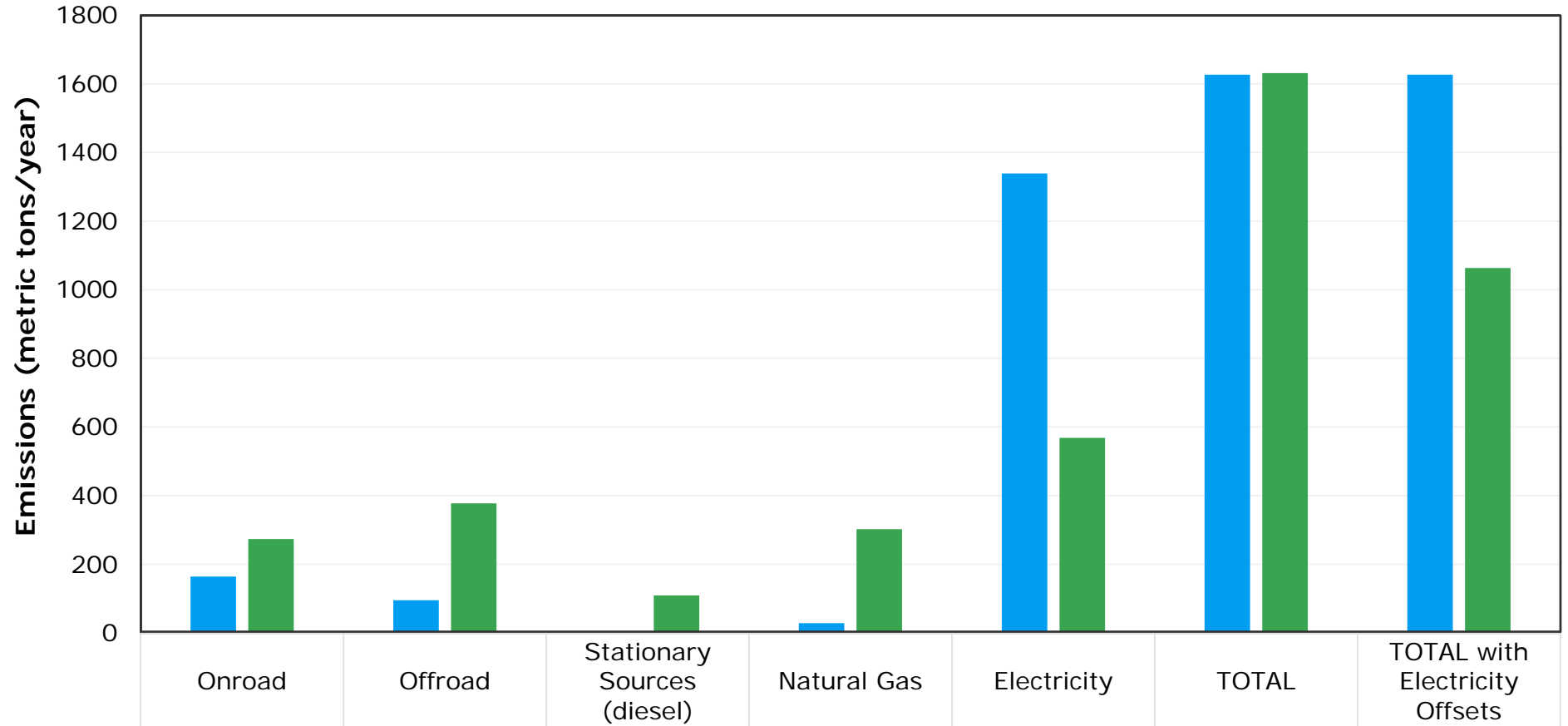
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2019 PORT OF VANCOUVER INVENTORY RESULTS

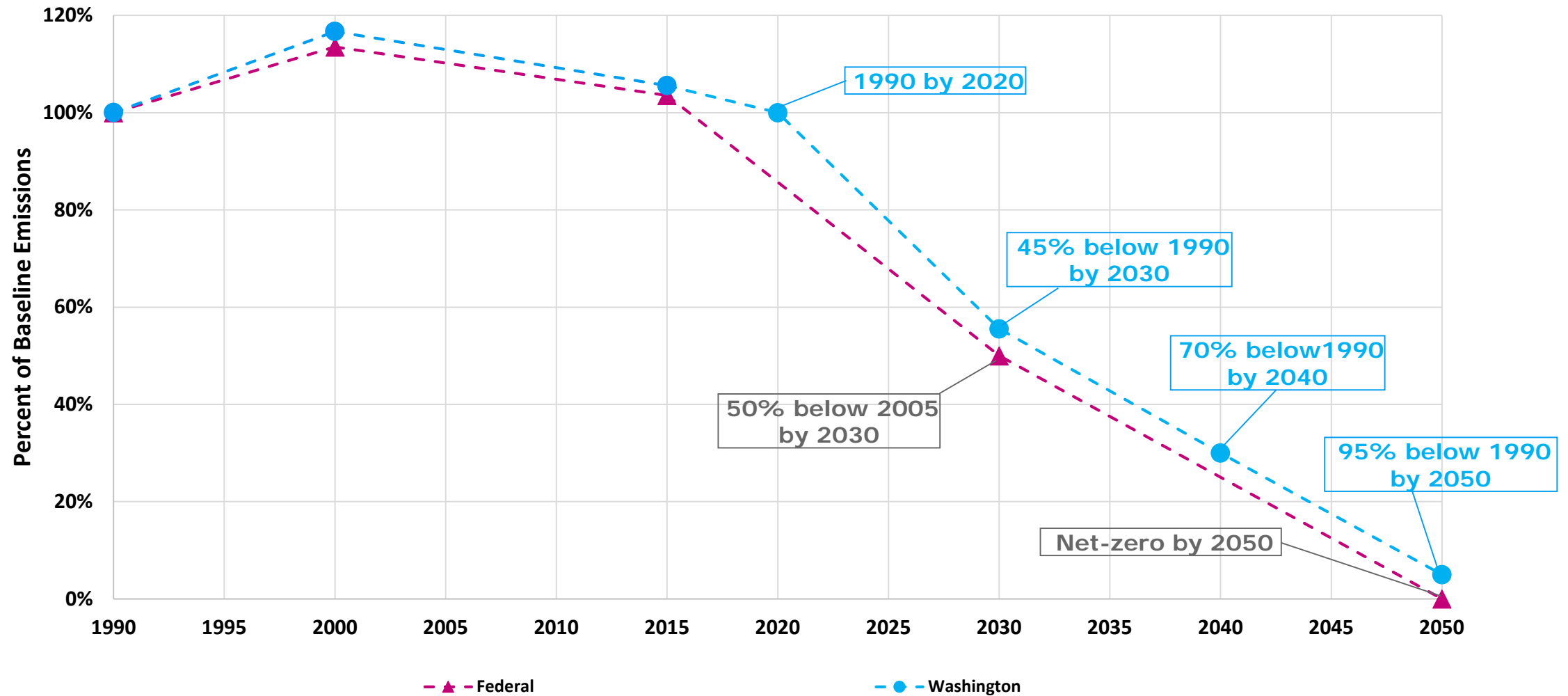
SCOPES 1 & 2

Annual CO2e Emissions by Source Category



■ 2005 Emissions (metric tons/year)	164	95.3	0	28.4	1,339	1,626	1,626
■ 2019 Emissions (metric tons/year)	273	378	109	303	568	1,631	1,063

FEDERAL AND STATE GREENHOUSE GAS REDUCTION TARGETS



Sources:

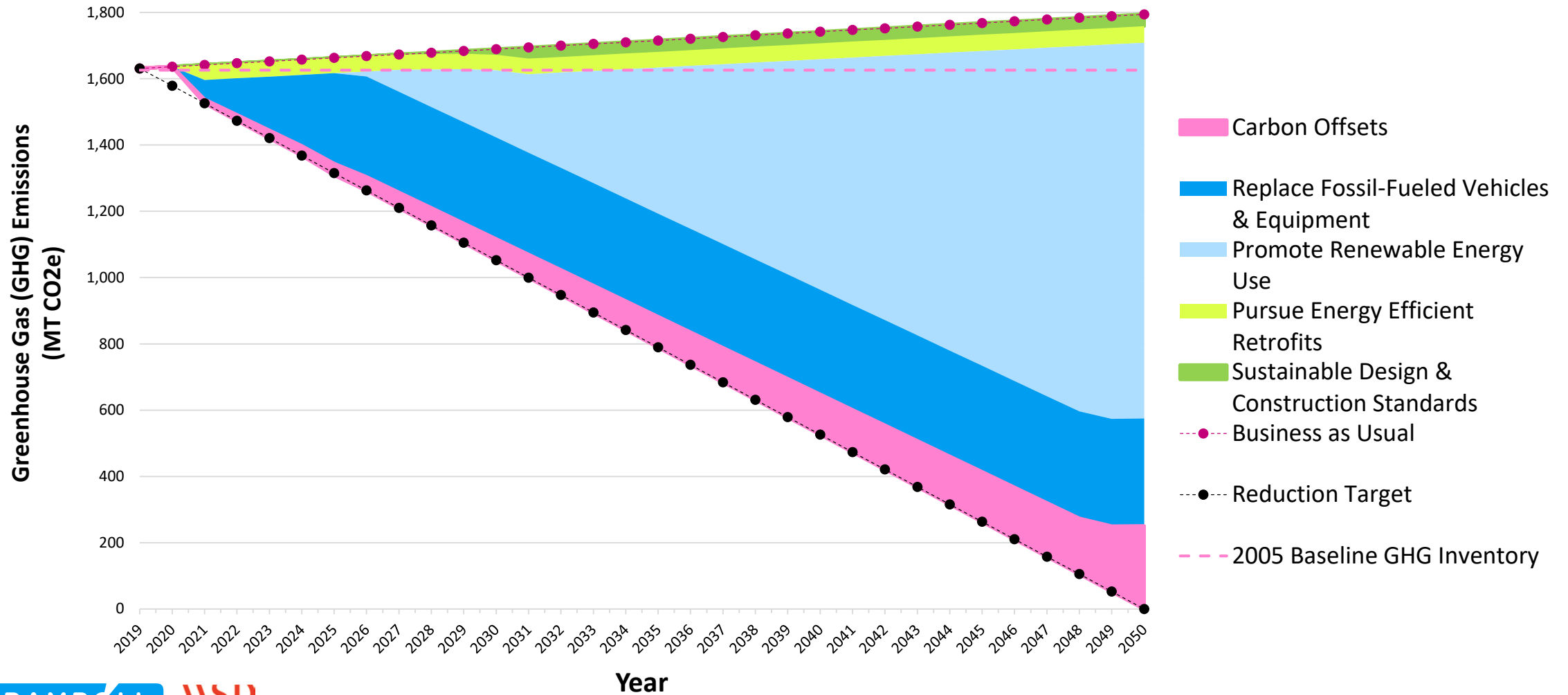
Washington Department of Ecology. 2020. <https://ecology.wa.gov/Air-Climate/Climate-change/Greenhouse-gases>. Targets from Bill 2311 (6/2020).

EPA. <https://cfpub.epa.gov/ghgdata/inventoryexplorer/#allsectors/allsectors/allgas/gas/all>.

<https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/>

TOWARD CARBON NEUTRALITY

ANTICIPATED REDUCTIONS FROM SCOPE 1-2 ACTIONS



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GHG REDUCTION, COST & CO-BENEFITS EVALUATION CATEGORIZATION

Cost Range (000s)

Low = <\$100

Medium = \$100-500

High = >\$500

GHG Reduction Potential

Low = <100 MTCO₂e

Medium = 100-300 MTCO₂e

High = >300 MTCO₂e

Implementation Timeline

Near-Term = By 2025

Mid-Term = By 2035

Long-Term = By 2050

Co-Benefits



Operational cost savings



Water conservation



Waste reduction



Reduced congestion



Air quality benefits



Health benefits







Community benefits



Partnership opportunities

PHASING PLAN

SCOPE 1-2 ACTIONS

Action	Initiative	Near-Term	Mid-Term	Long-Term
 Develop Sustainable Design & Construction Standards	Apply sustainability standards to new construction projects			
	Develop sustainable construction standards such as low-carbon concrete and asphalt, low-emission construction vehicles, construction waste reduction, and materials reuse			
 Pursue Energy Efficiency Retrofits	Continue lighting retrofits			
	Install occupancy sensors, building controls, programmable thermostats and smart meters			
	Replace aging HVAC units with energy efficient technology			
 Promote Renewable Energy Use	Explore renewable energy opportunities including onsite solar power generation, small-scale wind generation, geothermal energy, and replacement of natural gas			
 Upgrade or Replace Fossil-Fueled Vehicles and Equipment	Electrify or hybridize diesel and gasoline powered vehicles and equipment			
	Install EV charging infrastructure			
	Replace use of diesel with low carbon fuels such as renewable diesel			

IMPLEMENTATION PLAN

SCOPE 1-2 ACTIONS

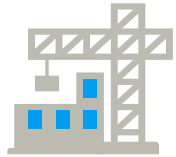


Pursue Energy Efficiency Retrofits

	Cost Range	GHG Reduction Potential	Implementation Timeline			Co-Benefits
			Short	Mid	Long	
<ul style="list-style-type: none"> Continue lighting retrofits 	Low	Low	█			\$
<ul style="list-style-type: none"> Install occupancy sensors, building controls, programmable thermostats and smart meters 	Low	Low	█			\$
<ul style="list-style-type: none"> Replace aging HVAC units with energy efficient technology 	Medium	Low	█	█		\$

IMPLEMENTATION PLAN

SCOPE 1-2 ACTIONS







Upgrade or Replace Fossil-Fueled Vehicles and Equipment

	Cost Range	GHG Reduction Potential	Implementation Timeline			Co-Benefits
			Short	Mid	Long	
<ul style="list-style-type: none"> Electrify or hybridize diesel and gasoline powered vehicles and equipment; install EV charging infrastructure 	High	Medium				
<ul style="list-style-type: none"> Replace use of diesel with low carbon fuels such renewable diesel 	Medium	Medium				





PHASING PLAN

SCOPE 3 ACTIONS

Action	Initiative	Near-Term	Mid-Term	Long-Term
 Reduce Emissions from Employee Commute	Work with C-Tran to provide transit service to the Port and provide transit subsidies to employees	■		
	Install bicycle infrastructure such as secure parking and showers to promote bicycle commuting	■		
	Support effective carpool options	■		
	Promote telecommuting through enhanced virtual work infrastructure and policies	■		
 Reduce Business Travel Emissions	Offset emissions from business travel	■		
	Promote use of low-carbon ground transport options for business travel	■		
 Reduce Emissions Related to Solid Waste	Provide recycling services and infrastructure	■		
	Develop a waste reduction plan	■	■	
 Reduce Emissions Related to Water Use	Promote the use of green infrastructure to manage stormwater	■	■	■
	Explore water system efficiencies	■	■	




PHASING PLAN

SCOPE 3 ACTIONS, CONT.

Action	Initiative	Near-Term	Mid-Term	Long-Term
 Develop Sustainable Design & Construction Standards	Develop sustainability standards for new construction projects on port property			
	Develop sustainable construction standards such as low-carbon concrete and asphalt, low-emission construction vehicles, construction waste reduction, and materials reuse for projects occurring on port property			
 Create Incentives & Partnerships	Explore carbon reduction during collaborations on agreements with tenants/customers			
	Pursue partnerships, incentives, and grant opportunities to support tenant/customer energy efficiency, equipment electrification and other carbon reduction initiatives			
	Emphasize and increase marketing efforts to pursue innovative business opportunities and renewable, clean energy projects			
 Promote Tenant Energy Efficiency Initiatives	Promote lighting retrofits by tenants			
	Promote installation of occupancy sensors, building controls, programmable thermostats and smart meters by tenants			
 Promote Renewable Energy Use by Tenants	Promote replacement of aging HVAC units with energy efficient technology in tenant facilities			
	Support onsite renewable energy generation by tenants			
	Encourage tenants to replace natural gas use with low carbon/renewable alternatives			

PHASING PLAN

SCOPE 3 ACTIONS, CONT.

Action	Initiative	Near-Term	Mid-Term	Long-Term
 Promote the Upgrade of Fossil-Fueled Tenant Vehicles and Equipment	Promote the electrification and hybridization of diesel and gasoline powered vehicles and equipment	[Blue bar]		
	Install common use EV charging infrastructure	[Blue bar]		
	Promote the replacement of diesel with low carbon fuels such as biodiesel, renewable diesel, and hydrogen	[Blue bar]		
	Evaluate the use of fuel cells for heat and power, mobile equipment, and locomotives		[Blue bar]	
	Promote the use of clean trucks and low carbon drayage vehicles		[Blue bar]	
 Promote Low-Carbon Marine Operations	Evaluate the use of shorepower options for vessels visiting the Port		[Blue bar]	
	Facilitate the development of a terminal equipment inventory to help target new investments and grant opportunities	[Blue bar]		
	Encourage visits by cleaner or more fuel-efficient vessels	[Blue bar]		
	Explore partnerships to promote shipping via the river system for eastbound cargo	[Blue bar]		
 Reduce Emissions from Rail Operations	Promote idle reduction by rail vehicles/equipment (including locomotives)	[Blue bar]		
	Evaluate the development of infrastructure to support electric locomotives for on-port switching operations	[Blue bar]		

IMPLEMENTATION PLAN

SCOPE 3 ACTIONS



Create Incentives & Partnerships

	Cost Range	GHG Reduction Potential	Implementation Timeline			Co-Benefits
			Short	Mid	Long	
<ul style="list-style-type: none"> Explore carbon reduction during collaborations on agreements with tenants/customers 	High	High	[Blue bar covering Short, Mid, and Long]			
<ul style="list-style-type: none"> Pursue partnerships, incentives, and grant opportunities to support tenant/customer energy efficiency, equipment electrification and other carbon reduction initiatives 	Medium	High	[Blue bar covering Short and Mid]			
<ul style="list-style-type: none"> Emphasize and increase marketing efforts to pursue innovative business opportunities and renewable, clean energy projects 	High	High	[Blue bar covering Short, Mid, and Long]			

IMPLEMENTATION PLAN

SCOPE 3 ACTIONS



Promote Low-Carbon Marine Options

	Cost Range	GHG Reduction Potential	Implementation Timeline			Co-Benefits
			Short	Mid	Long	
<ul style="list-style-type: none"> Evaluate the use of shorepower options for vessels visiting the Port 	High	High	[Blue bar covering Short, Mid, and Long]			
<ul style="list-style-type: none"> Facilitate the development of a terminal equipment inventory to help target new investments and grant opportunities 	Low	Medium	[Blue bar covering Short and Mid]			
<ul style="list-style-type: none"> Encourage visits by cleaner or more fuel-efficient vessels 	Medium	Medium	[Blue bar covering Short and Mid]			
<ul style="list-style-type: none"> Explore partnerships to promote shipping via the river system for eastbound cargo 	Low	Medium	[Blue bar covering Short and Mid]			

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NEXT STEPS

Week of	7/12	7/19	7/26
Commission meeting/workshop			
CAP email address closes 7/16/21			
Incorporate commission and public comments			
Complete final CAP document			
Incorporate CAP actions in 2022 budget process			

Bright ideas. Sustainable change.

