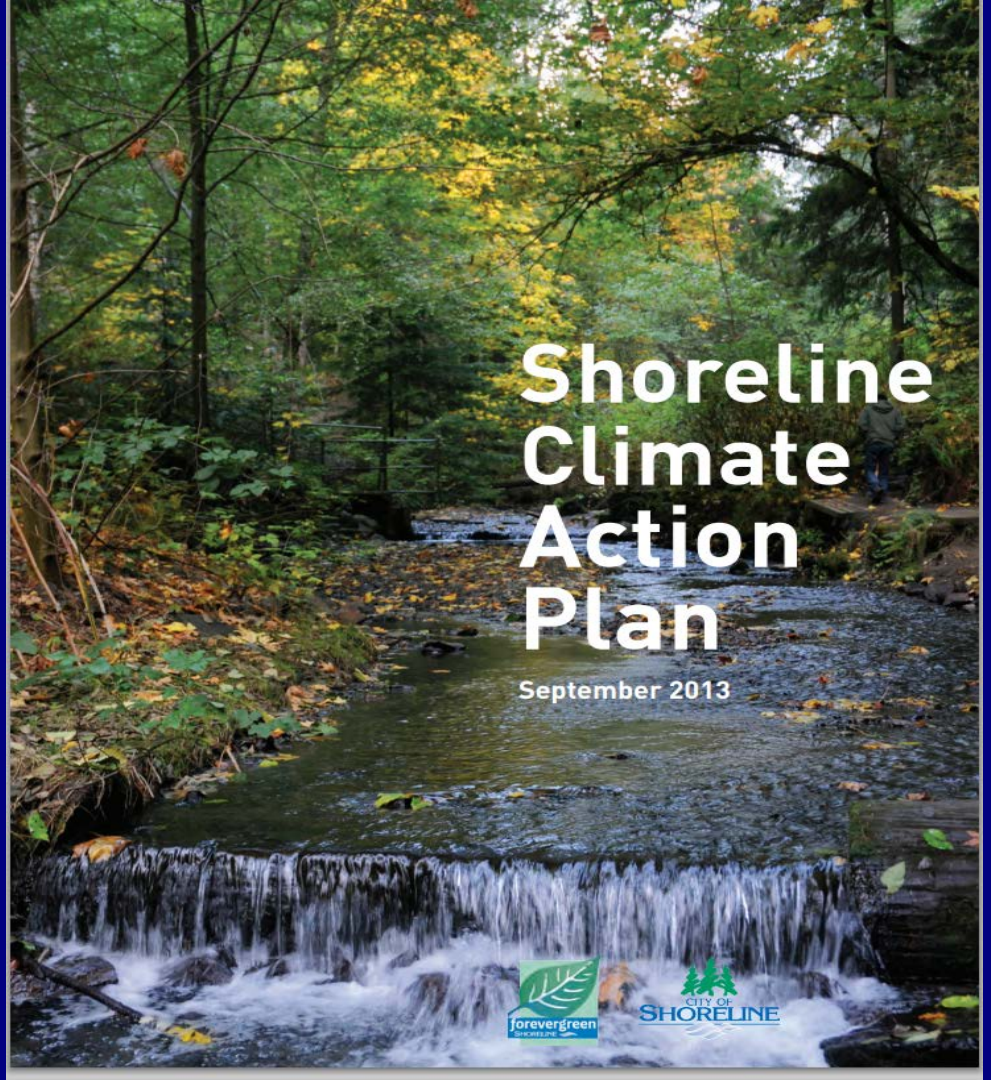
Implementation of Climate Action Plan and Setting Priority Recommendations for 2018-2020

City Council

October 30, 2017



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SHORELINE

Energy and Water

Materials and Waste

Transportation, Land Use, and Mobility

Urban Trees, Parks, and Open Spaces

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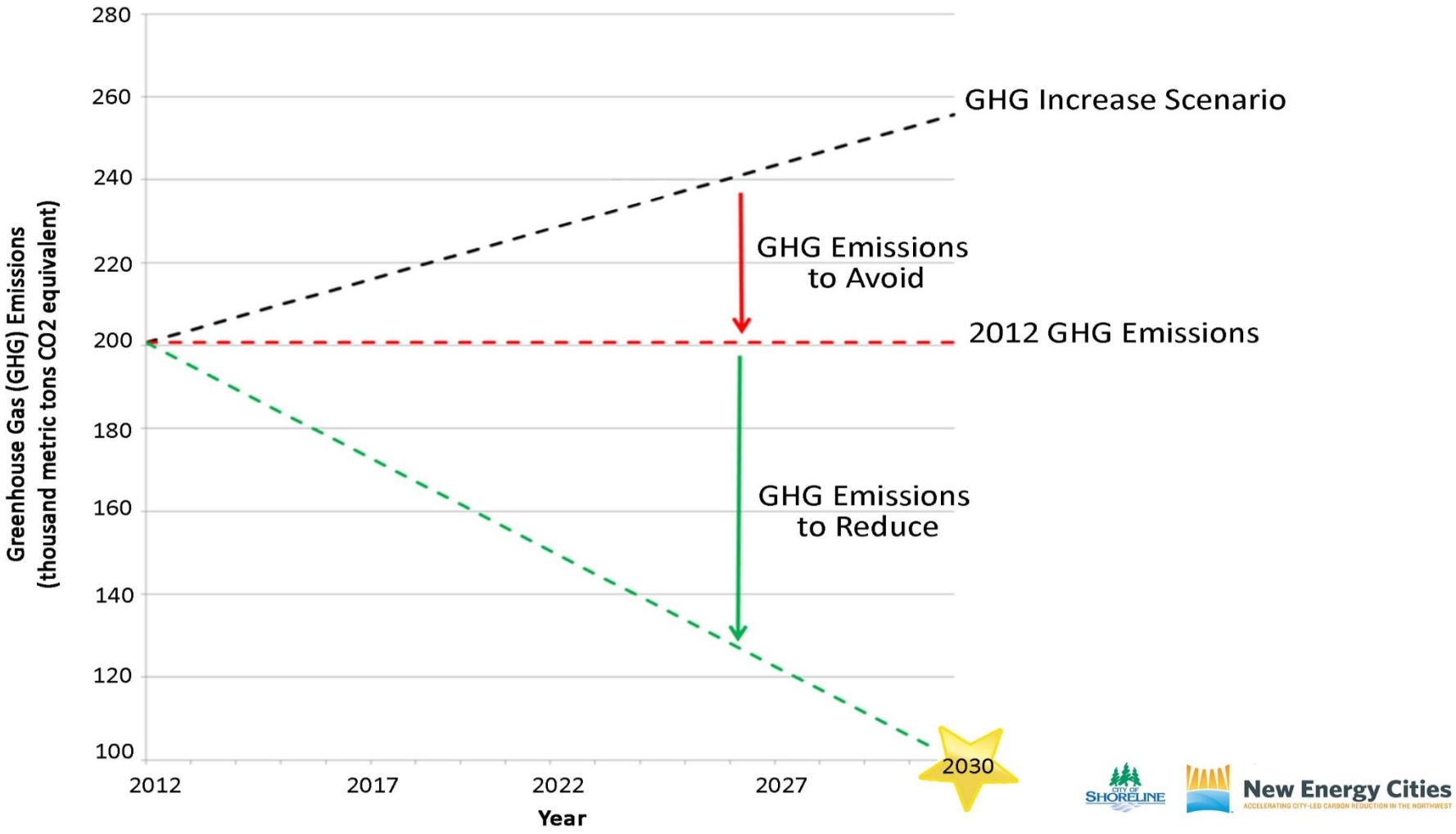
Climate Action Plan Objectives

- Reduce energy consumption.
- Increase renewable energy production and use.
- Reduce water consumption.

- Increase recycling and reuse to reduce solid waste sent to the landfill.
- Reduce GHG emissions embodied in materials and food consumed.

Adopted Carbon Reduction Targets

- 80% reduction by 2050 (80x50)
- 50% reduction by 2030 (50x30)
- 25% reduction by 2020 (25x20)
- Same target as King County
- Based on scientific consensus on what is necessary to avoid >2 degree C/3.6 F (catastrophic) warming


280
260
240
220
200
180
160
140
120
100
Greenhouse Gas (GHG) Emissions
(thousand metric tons CO2 equivalent)
2012
2017
2022
2027
Year
GHG Increase Scenario
GHG Emissions
to Avoid
2012 GHG Emissions
GHG Emissions
to Reduce
2030
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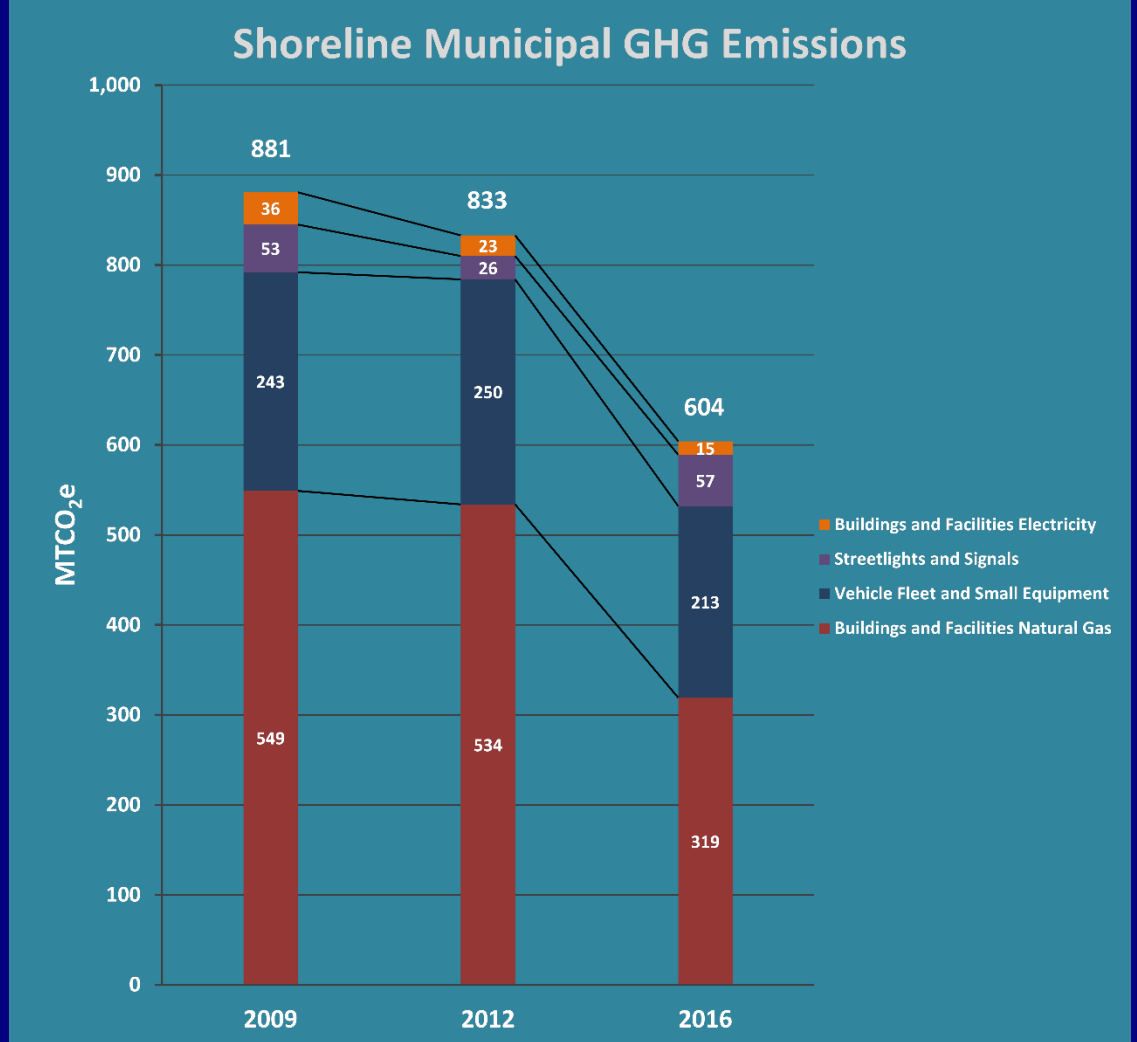
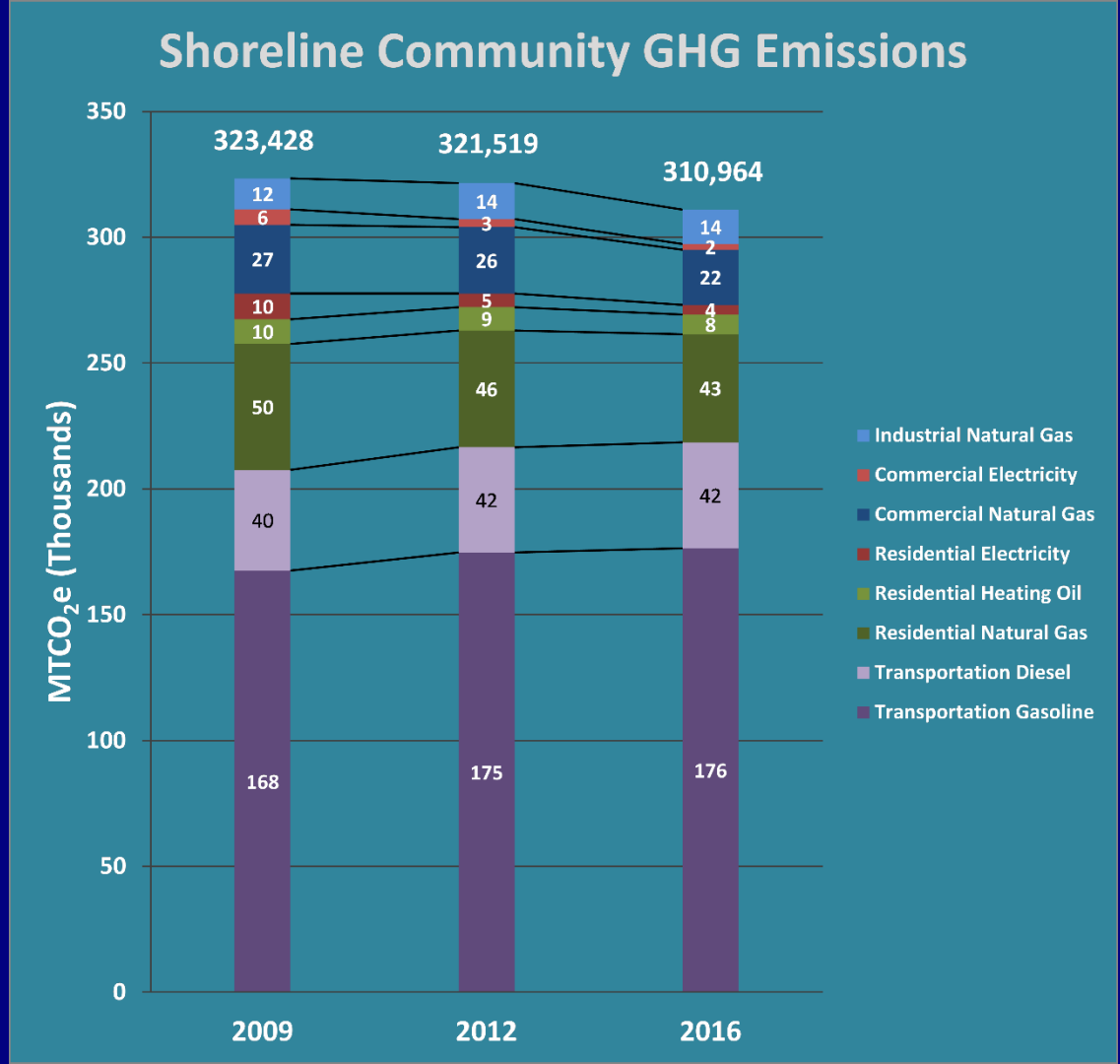
New Energy Cities
ACCELERATING CITY-LED CARBON REDUCTION IN THE NORTHWEST

Municipal emissions decreased 31% between 2009 & 2016

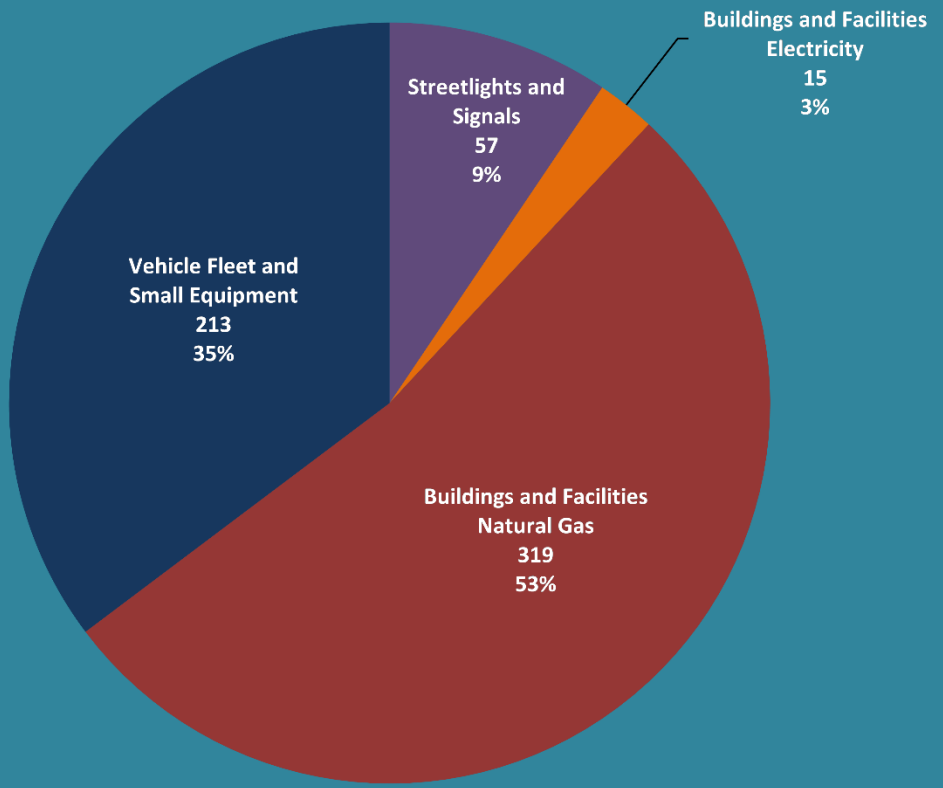


Community emissions decreased 4% between 2009 & 2016



2016 Municipal GHG Emissions

Total: 604 $MTCO_2e$



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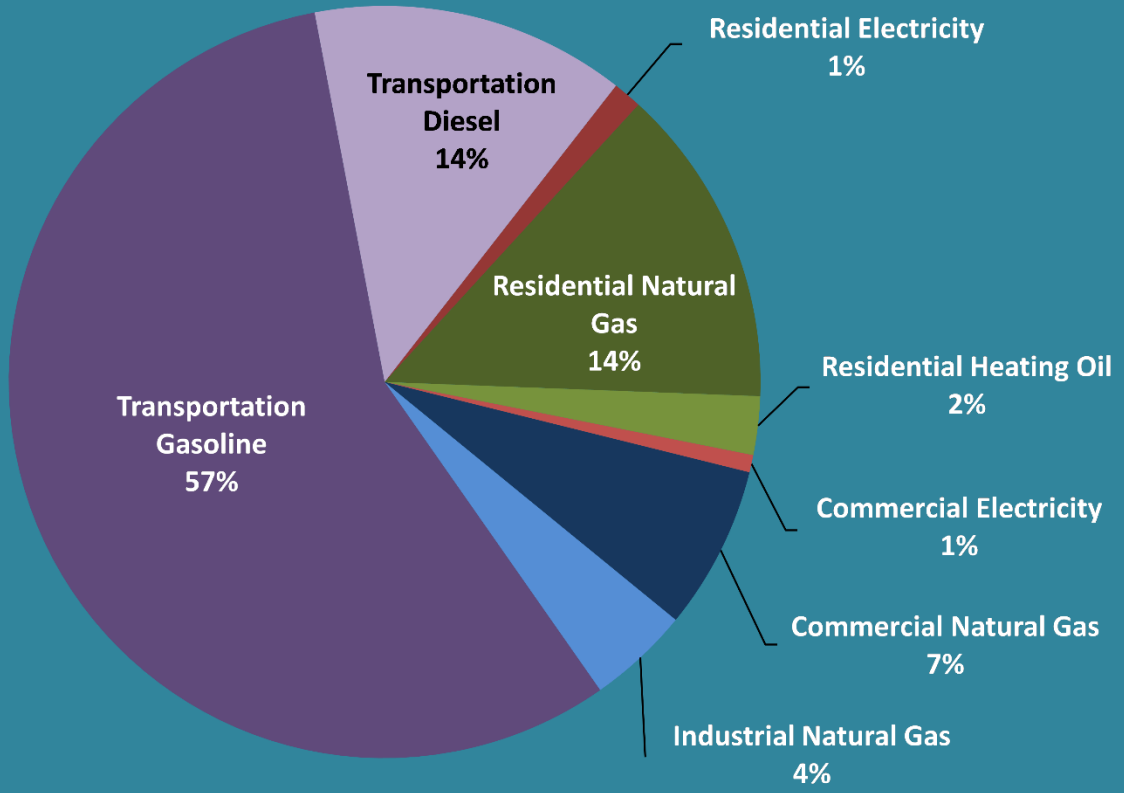
In 2016, the Shoreline Pool produced 92% of the GHG emissions from municipal/City buildings and facilities, and 95% of the GHG emissions from natural gas used by municipal/City buildings and facilities.

2016 Shoreline Community Emissions

Total: 310,964 $MTCO_2e$



Complete- The recommendation has been implemented.

In Process- The recommendation is currently underway and will be completed.

On-Going- The recommendation is currently underway, but is a continuous process of improvement.

No Progress- No work has been done.

Complete- 11 recommendations; 24% of total.
In Process- 3 recommendations; 7% of total.
On-Going- 21 recommendations; 47% of total.
No Progress- 10 recommendations; 22% of total.

78% of the recommendations are either complete, in process, or on-going.

2017-2018 Council Goal 2

Improve Shoreline's infrastructure to continue the delivery of highly-valued public services:

- Action Step #5: Implement the 2016-2019 Priority Environmental Strategies, including adoption of incentives for environmentally sustainable buildings, exploration of district energy, update of the City's “forevergreen” website, and continued focus on effective storm-water management practices including restoration of salmon habitat.

2016-2019 Priorities

- Adopt Living Building Challenge Ordinance (became Deep Green Incentive Program)
- Examine feasibility of District Energy
- Conduct Solarize campaign

Potential 2018-2020 Priority Recommendations

- Achieve citywide Salmon Safe certification (2018);
- Explore expanding green building regulations to commercial zoning (2018);
- Encourage retrofits of existing buildings to use water and energy more efficiently, and to fuel-switch from heating oil and natural gas to electric heat pump or other less carbon-intensive technologies (2019); and
- Implement recommendations from the District Energy Feasibility Study (2020).

10 Salmon-Safe Developer Accreditation PRINCIPLES for developing ecologically functional urban sites

SALMON SAFE

Seattle Art Museum Olympic Sculpture Park Salmon-Safe Certified 2010

CONNECT TO WATERSHED CONTEXT

Every project and property is part of something bigger. Know your watershed. Many watersheds have specific restoration or recovery plans defineing strategies that can benefit important species. Incorporate these strategies into your development planning decisions.

UW Bothell Re-certified Salmon-Safe 2013

INTEGRATE HABITATS

Restore degraded habitat based on pre-development native species and ecosystems as well as future need for climate change adaptations. Habitat diversity can make project sites more resilient and adaptable. A site can support larger natural systems through corridor linkages.

Pringle Creek Community Certified Salmon-Safe 2010.

START WITH SITE ECOLOGY

Approach landscape ecological systems as site infrastructure and incorporate them early in the design process. Habitat can be retained, reestablished, or both, as part of site development. Design your site to avoid impacting wetlands, streams, riparian areas, and wildlife habitat.

Turner Construction Salmon-Safe accredited 2010.

PROTECT HABITAT AND WATER QUALITY DURING CONSTRUCTION

Implement construction site pollutant control and runoff protection measures that achieve zero sediment discharge. Protect and salvage healthy native soils, vegetation, and habitat structures

OMSI Salmon-Safe Re-certified 2013

MANAGE WATER AT THE SOURCE

Disperse and infiltrate stormwater on site through Low Impact Development (LID) approaches to reduce pollution and downstream impacts. Design site to reduc stormwater runoff by minimizing impervious rooftop areas and reduced roadway widths and pervious road system

Nike World Campus Salmon-Safe Re-Certified 2012

DESIGN FOR THE LAND

Consider each part of the project, including buildings, open space, parking, stormwater retention features, as contributing components of the greater hydrology and ecology. Structure and buildings can also positively contribute to natural system performance.

PCC Natural Markets Edmonds Salmon-Safe certified 2011

PRIORITIZE WATER CONSERVATION

Install rainwater harvest systems to balance water budgets. Limit water demand by selecting native and non-native vegetation adapted to site conditions and climate.

WSUV Certified Salmon-Safe 2010

CARE FOR LAND OVER TIME

Encourage consistent post-development land management practices by embedding riparian restoration, irrigation management, and integrated pest management practices into site management guidelines, policies, or project legal documents.

University of Washington Salmon-Safe certified 2011.

CLEAN WATER FOR SALMON

Manage projects with an ongoing commitment to low input landscaping, habitat restoration that filters contaminants, and low-impact (LID) designs in future development phases.

zHome Salmon-Safe certified 2011

DESIGN LEARNING LANDSCAPES

Development presents opportunities for interpretive signage and/or demonstration projects highlighting features that contribute to an ecologically functional urban landscape.

Salmon-Safe Assessment Process

- Pre-assessment meeting and preparation support
- Comprehensive site assessment
- Report of team findings and recommendations
- Certification upon acceptance of recommendations
- Publicity and/or recognition campaign
- Annual review of project activity

Certification Benefits

- Independent validation of environmental performance
- Operational efficiencies, cost savings, risk reduction
- LEED innovation credit
- On-call expert guidance
- Communicate to regulators regarding ESA/CWA
- Position as environmental leader

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TO PORTLAND PARKS AND WATERSHEDS
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SAVE.
Look for the Salmon Safe label at PCC Natural Markets. | salmonsafe.org


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106
395
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672

HIGHWAY 99 RUNOFF

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SALMON SAFE

WEBER THOMPSON

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92% of Orca diet is Salmon

PASSIVE HOUSE

20 Passive House Projects,
of **20,000** square feet or larger,
Under construction in King County by year **2020**.

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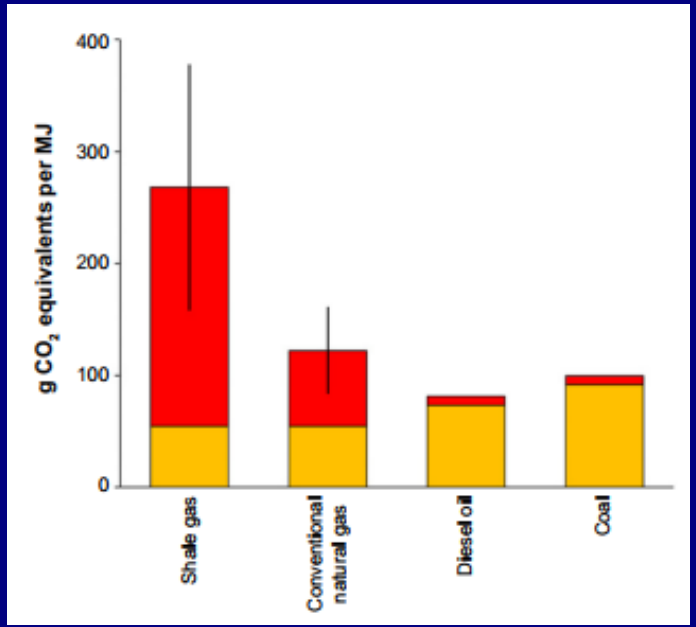
Pounds of CO_2 emitted per million British thermal units (Btu) of energy for various fuels

Coal (anthracite)	228.6
Coal (bituminous)	205.7
Coal (lignite)	215.4
Coal (subbituminous)	214.3
Diesel fuel and heating oil	161.3
Gasoline (without ethanol)	157.2
Propane	139.0
Natural gas	117.0

The greenhouse gas footprints of shale gas, conventional natural gas, oil, and coal expressed as g CO_2 equivalents per MJ of heat produced



Yellow indicates direct and indirect emissions of carbon dioxide. Red indicates methane emissions expressed as CO_2 equivalents