

# 2014 HIGHLIGHTS



# Seattle's Vision:

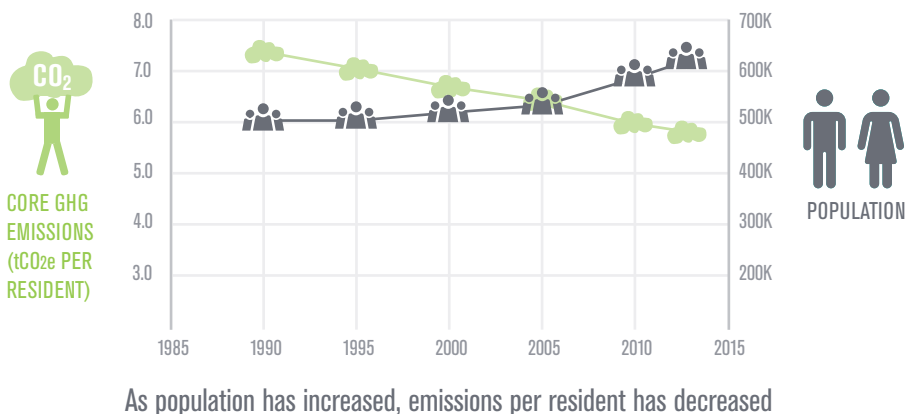
# CARBON NEUTRAL, CLIMATE READY

## CARBON NEUTRAL

Seattle once again leaped to the forefront of climate leadership when it became the first city in the nation to adopt a comprehensive plan of action to achieve the audacious goal of becoming a carbon neutral city. Becoming carbon neutral is a much bigger vision than reaching a greenhouse gas reduction milestone. A carbon neutral Seattle will be a more socially and economically just city, a healthier city and a more prosperous city.

### Seattle's Greenhouse Gas Emissions

On a per person basis, Seattle's core emissions (emissions in the transportation, energy and waste sectors) declined 22% since 1990 and 6% since 2008. Looking at emissions on a per person basis illustrates the benefits of urban living, and the value of Seattle accommodating a growing population with lower per person vehicle travel and carbon neutral electricity. In fact, the average Seattleites' emissions are about one-half less than the average U.S. resident.



## CLIMATE READY

In addition to drastically reducing our emissions, Seattle is also committed to preparing for the unavoidable weather changes residents and businesses will experience in the coming decades. How prepared and resilient we are as a community will be critical to maintaining our high quality of life.

## SEATTLE IS AT THE FOREFRONT OF CLIMATE LEADERSHIP

**FIRST CITY** in the nation to adopt a comprehensive plan of action to become a **CARBON NEUTRAL CITY.**



SEATTLE'S  
CORE EMISSIONS:

**1/3rd LESS** than in the rest of **KING COUNTY.**

**50% LESS** than for the **UNITED STATES AS A WHOLE.**

# REPORT CONTENTS

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*This report highlights a few of the “quick start” actions called out in the 2013 Seattle Climate Action Plan which are moving us down the path to carbon neutrality and community preparedness.*



## TRANSPORTATION & LAND USE:

Transportation Choices  
& Complete Communities ..... 3



## BUILDING ENERGY:

Performance Requirements,  
Incentives & Assistance ..... 5



## WASTE:

Waste Reduction &  
Process Improvements..... 7



## PREPAREDNESS:

Preparing for a  
Changing Climate ..... 9

Status of the “quick start” actions can be found here:  
<http://www.seattle.gov/environment/climate-change>

PREPARED BY:



SEATTLE OFFICE OF  
**Sustainability & Environment**





TRANSPORTATION CHOICES & COMPLETE COMMUNITIES:

*Making it easier to  
get you where you want to go*

Photo: Seattle Department of Transportation (SDOT)

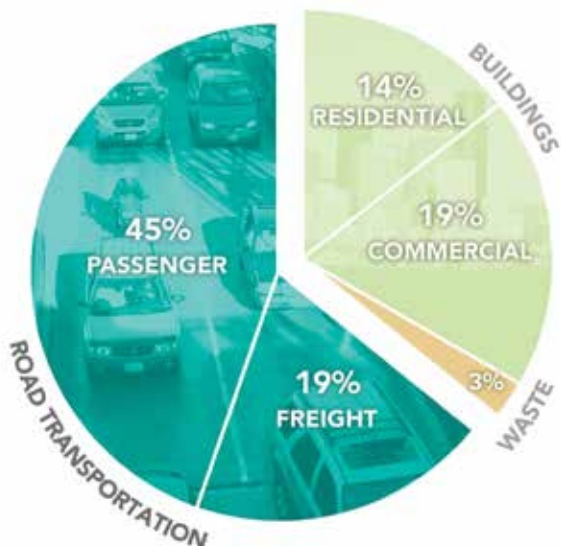
## THE IMPACT OF TRANSPORTATION

Road transportation is Seattle's largest source of greenhouse gas emissions and presents the greatest opportunity for individuals to make an impact. The good news is that Seattleites are driving cleaner cars and putting less miles on them resulting in an overall decline of per person transportation emissions. Our challenge lies in the fact that as our city continues to grow, Seattle's total transportation emissions also continues to rise.

## OUR APPROACH TO REDUCING IMPACT

The best way we can reduce Seattle's transportation impact on the climate is to make walking, biking, and riding the bus the easiest ways for you to get around. People who can meet many of their daily needs by walking, biking or riding transit also benefit from lower overall household costs, improved health, thriving local business districts and increased opportunities for housing and jobs. Furthermore, money spent on cars and gasoline creates less than half as many local jobs as money spent on other goods and services.

## 2012 SEATTLE CORE EMISSIONS



## OUR PROGRESS



**59% INCREASE**  
in bikers  
since 2011.



**27% INCREASE**  
in pedestrians  
since 2011.



**12% INCREASE**  
in daily bus  
boardings in  
2 years.



\*According to  
Walk Score™

**8TH MOST**  
walkable large  
city in the US.\*

# ACTIONS SUPPORTING TRANSPORTATION CHOICES AND COMPLETE COMMUNITIES



## Protected Bike Lanes

Seattle has added more than nine miles of protected bike lanes throughout the city and plans are in the works to add 14 more miles in the next two years. While appealing to all cyclists, they are especially inviting to new riders, contributing to the overall growth in bicyclists Seattle has seen in recent years.



Photo: SDOT



## Safe Routes to School

The Safe Routes to School (SRTS) program has used a combination of engineering, education, encouragement, and enforcement to achieve an increase in students walking and biking to school. In 2014, the SRTS program made physical improvements at 20 school sites; and provided funding to 29 schools and community organizations for education and encouragement programs.



Photo: SDOT



## Transit Information Kiosks

In partnership with King County Metro and Seattle City Light, Seattle Department of Transportation installed four transit information kiosks with ORCA card readers at RapidRide stops along Third Avenue in downtown Seattle. These kiosks improve transit connections by making it quicker and easier to board RapidRide buses and improve the rider experience for all riders.



Photo: SDOT



## Parklet Program

The Seattle Department of Transportation's Parklet Program converts on-street parking spots into public spaces for all Seattleites to enjoy. A parklet, which essentially is an extension of the sidewalk into the street, creates a new public space for community activation and economic activity. Seattle currently has 6 parklets open and another 9 in the pipeline.



Photo: SDOT







## ENERGY: PERFORMANCE REQUIREMENTS AND INCENTIVES & ASSISTANCE

# *Leading the way with efficient, comfortable buildings*

Photo: Kristie McLean

### THE IMPACT OF BUILDING EMISSIONS

Seattle's clean and carbon-neutral electricity sets our city apart; however, building energy still accounts for over 20% of our greenhouse gas emissions. Those emissions are primarily from the use of oil and natural gas in our furnaces, boilers, and water heaters. We have achieved significant reductions in our building energy emissions largely due to a strong conservation ethic and a robust commitment to energy efficiency. The Climate Action Plan includes numerous tools intended to improve our energy performance outcomes.

### THE BENEFITS OF EMISSION REDUCTION

Conservation and efficiency measures not only help reduce Seattle's reliance on fossil fuels, but there is a major downstream benefit as well: the more of our clean hydropower we conserve, the more we can sell to other utilities to be used by communities outside Seattle, which reduces their need to use fossil fuels. By increasing readily available information about our energy use, providing assistance and incentives to reduce use, and continuing to improve our energy code, Seattle continues to set the standard.

### 2012 SEATTLE CORE EMISSIONS



### OUR PROGRESS

#### 14,190 Homes

could be powered for one year with the amount of energy saved in 2013. (121,290 MWh)



 = 1000 Houses



Our solar capacity is now **6 MW -- 38 times** more than in 2008.



Over **1,000** residents & businesses have installed solar panels in Seattle since 2006.



#### 4% Reduction

in City facility energy use since 2008.

# ACTIONS SUPPORTING PERFORMANCE AND INCENTIVES & ASSISTANCE



## Energy Benchmarking

Seattle is one of ten cities that have enacted energy benchmarking policies requiring building owners to track energy performance and annually report to the City. With an unprecedented 99% of required buildings reporting, Seattle's building owners and managers are well-poised to use this data to substantially reduce their energy use.



Photo: Kristie McLean



## Energy Code Update

Seattle's recently updated energy code is one of the most advanced in the nation. Seattle's new commercial buildings are expected to use, on average, 11.3% less energy than those built to the already strong national standards and major renovations are now required to approach those same levels of efficiency.



## Community Power Works

The Community Power Works' (CPW) home energy upgrade program has transitioned from its pilot phase to an ongoing program. Most homes continue to save approximately 30% on their energy use when they go through the CPW program. CPW upgrades to date will prevent the release of over 220,000 tons of greenhouse gas emissions over the lifetime of the measures.



The HomeWise weatherization program helps low income Seattle homeowners and rental property owners get free weatherization services which help residents save energy, lower heating and cooling costs, and save money on utility bills. Since 2013, HomeWise has helped over 1,500 households achieve greater comfort with no cost to them.



Photo: Seattle Office of Housing







## WASTE: WASTE REDUCTION

# *Picking up the pace toward zero waste*

Photo: e Workshop, Cast Architecture & Shahreyar Ataie

## LEADERS IN WASTE REDUCTION

Seattle has been a recognized leader for responsible waste management for decades. Emissions from waste declined 22% total and 37% (yes, 37%!) per person since 1990 thanks to progressive and highly effective policies and programs reducing the total amount of waste generated and increasing the amount of the remaining waste recycled or composted.

## 2012 SEATTLE CORE EMISSIONS



## KEEPING OUR LEAD WITH “ZERO WASTE”

Seattle’s waste reductions programs take a “Zero Waste” approach. Zero Waste uses a “whole systems” view of the flow of resources and waste through a community. While our recycling accomplishments are laudable, a Zero Waste approach means we don’t stop at just having some of the best recycling rates in the nation. Recycling will continue to be a critical component of our waste reduction—and emissions reduction—strategy; however, Seattle is also breaking new ground in implementing strategies that reduce consumption and minimize waste altogether as well as working to ensure products are made to be reused, repaired or recycled back into nature or the marketplace.

## OUR PROGRESS



**56%**

of waste is recycled in both the residential and commercial sectors in 2013.



**66% Decrease**

in polystyrene in commercial garbage from 2008 to 2012. This is a direct result from the 2009 polystyrene ban.



**27% Decrease**

decrease in landfill waste since 2006.



# ACTIONS SUPPORTING WASTE REDUCTION



## Banning Compostables in Garbage

Seattle Public Utilities (SPU) engaged businesses and residents to develop the City's pioneering requirement to compost food and found overwhelming support. Starting in 2015, food is no longer allowed in residential or commercial garbage in Seattle. This change is expected to divert 38,000 tons of compostable food from the landfill annually.



## New Construction and Demolition Waste Requirements

With a goal of recycling 70% of construction waste by 2020, Seattle Public Utilities is phasing in disposal bans from construction, remodeling and demolition activities. Materials targeted include: unpainted concrete and asphalt paving, whole bricks, metal, cardboard, new construction gypsum scrap, carpet, plastic film, clean wood and tear-off asphalt shingles.



Photo: SDOT



## Piloting Separation of Self-Hauled Loads

Waste brought directly to transfer stations by residents and businesses has the lowest recycling rate of our waste streams. Seattle Public Utilities is working to make it easier to recycle this waste and is piloting separation of self-hauled loads with over 50% construction and demolition waste, on the flat floor of the new South Transfer Station.



Photo: SPU



## Stepped up Outreach & Education

Seattle Public Utilities partnered with King County, Bartell Drugs and BioBag USA to promote food composting. In a month-long campaign, more than 10,000 kitchen compost collectors and compostable bags were sold at deeply discounted prices. The multimedia advertising campaign garnered more than 11 million impressions.



Photo: SPU





## PREPARING FOR A CHANGING CLIMATE

# *Managing for today's weather, and tomorrow's climate*

Photo: Kristie McLean

## THE IMPACT OF CLIMATE CHANGE

Flooding, heat waves, and extreme high tides are not new challenges in Seattle, and we have strategies for responding to them. However, climate change will shift the frequency, intensity, and timing of these events, and what we now consider an extreme event will become the new normal. If we are not prepared, the events will significantly impact our community's economy, infrastructure, and health. Therefore, it is critical that Seattle prepares for the impacts of a changing climate.

## OUR APPROACH TO PREPAREDNESS

The most significant changes in Pacific Northwest climate will be to temperature, precipitation, and sea level. From a utility perspective, Seattle Public Utilities and Seattle City Light have been assessing the impact and preparing for a changing climate for years. We are building on that work to develop a citywide Climate Preparedness Strategy. Because our socially vulnerable communities are also the most climate vulnerable, equity is a core guiding principle for the Strategy.

## WHAT THE FUTURE HOLDS



### SEA LEVEL RISE

Increase in sea level will lead to greater coastal flooding and likely resulting in property damage and other economic losses.



### MORE EXTREME PRECIPITATION

Wetter winters and more extreme precipitation events are expected and could increase the risks of landslides and urban flooding.



### REDUCED MOUNTAIN SNOWPACK

Reductions in snowpack and changes in stream flows will affect how we operate Seattle's water and hydropower generation systems.



### INCREASED TEMPERATURES

Increasing summer temperatures and more extreme heat events will increase the frequency and severity of heat stress, respiratory disease and energy demand for cooling.



# ACTIONS THAT ARE HELPING TO PREPARE FOR A CHANGING CLIMATE



## Seattle Green Stormwater Infrastructure

Seattle Public Utilities, Seattle Department of Transportation, multiple community-based organizations and hundreds of residents came together to design the Delridge Neighborhood Greenway and Natural Drainage System project. The project, slated for construction in 2015, will manage over 4 million gallons of stormwater a year.



## On-going research

Seattle City Light continues to research the effects of climate change on hydropower generation and transmission and distribution. This research will improve our understanding of the impacts of glacial melt and altered stream flow on reservoir operations and the impacts of high wind and lightening patterns on system reliability.



Photo: Andrew Filer



## Seattle Urban Forest Stewardship Plan

Trees not only make our city a more beautiful place to live, but also help manage stormwater, clean our air and water, reduce flooding and landslides, and improve our health. In 2014, the Trees for Neighborhoods program helped Seattle residents plant 1,000 trees in yards across the city.



Photo: SDOT



## Engaging the Community

With Seattle's Office of Emergency Management and Parks & Recreation, the Office of Sustainability & Environment co-hosted four community events in South Seattle about disaster preparedness, water and electricity conservation, and climate change. More than 500 people attended four events, including a Halloween Festival, a Lantern Walk, a Thanksgiving Feast, and a Holiday Bazaar.



Photo: Seattle Department of Neighborhoods







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