

# GREENEST CITY ACTION PLAN

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IMPLEMENTATION UPDATE  
JULY 12, 2016



# OBJECTIVE

*Update Council on:*

Progress in  
implementing the  
Greenest City Action  
Plan in 2015/2016



# GREENEST CITY FRAMEWORK

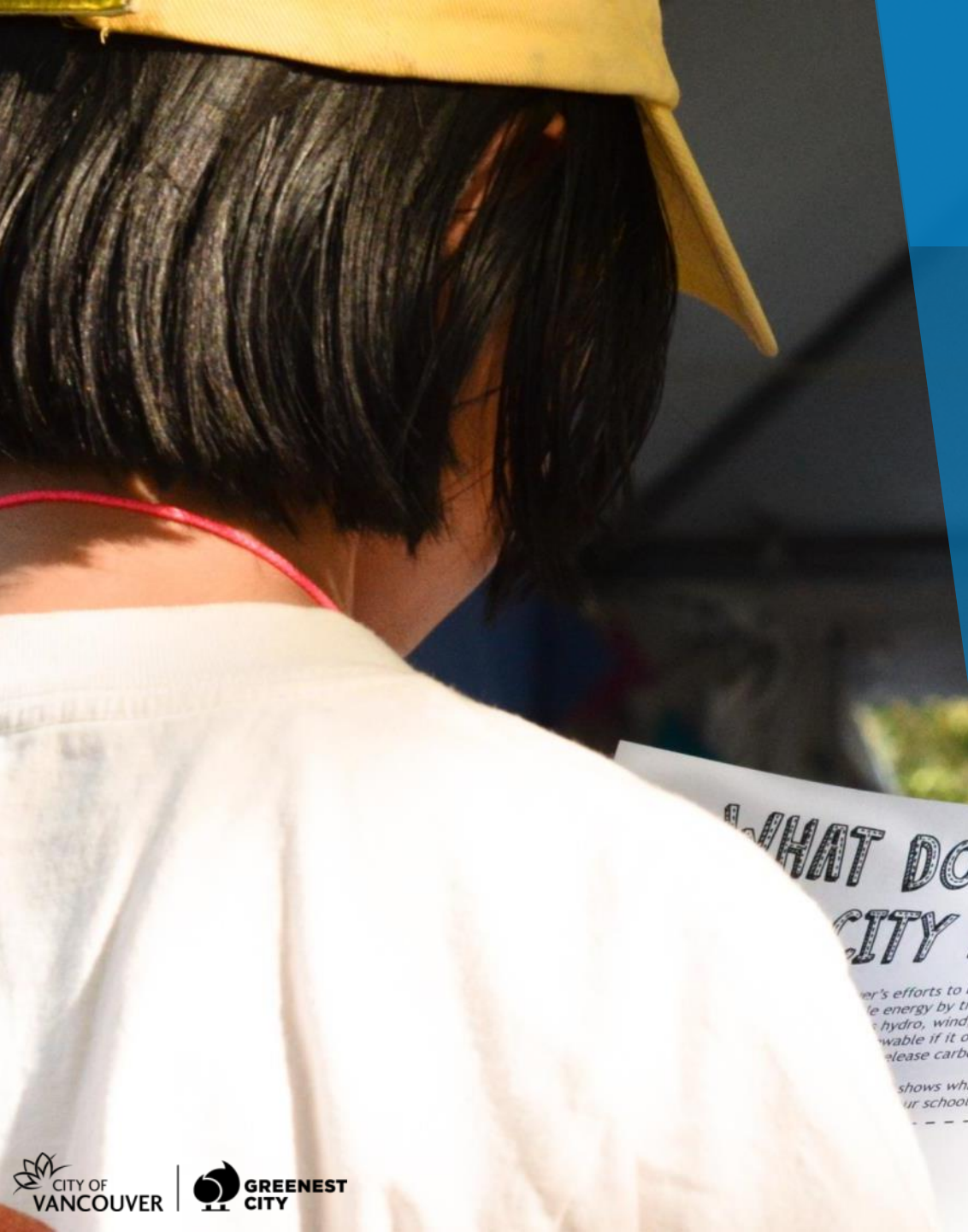
ZERO CARBON	Green Buildings	Climate & Renewables	Green Economy	Lighter Footprint
	Green Transportation			
ZERO WASTE	Zero Waste	Climate & Renewables	Green Economy	Lighter Footprint
HEALTHY ECOSYSTEMS	Access to Nature			
	Clean Water			
	Local Food			
	Clean Air			

3 high-level objectives

10 goal areas

# RESULTS TO DATE

ZERO CARBON	Green Buildings	Climate & Renewables	Green Economy	Lighter Footprint
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# CLIMATE AND RENEWABLES

## **GOAL**

Eliminate Vancouver's dependence on fossil fuels

## **2020 TARGET**

Reduce community-based greenhouse gas emissions 33% from 2007 levels

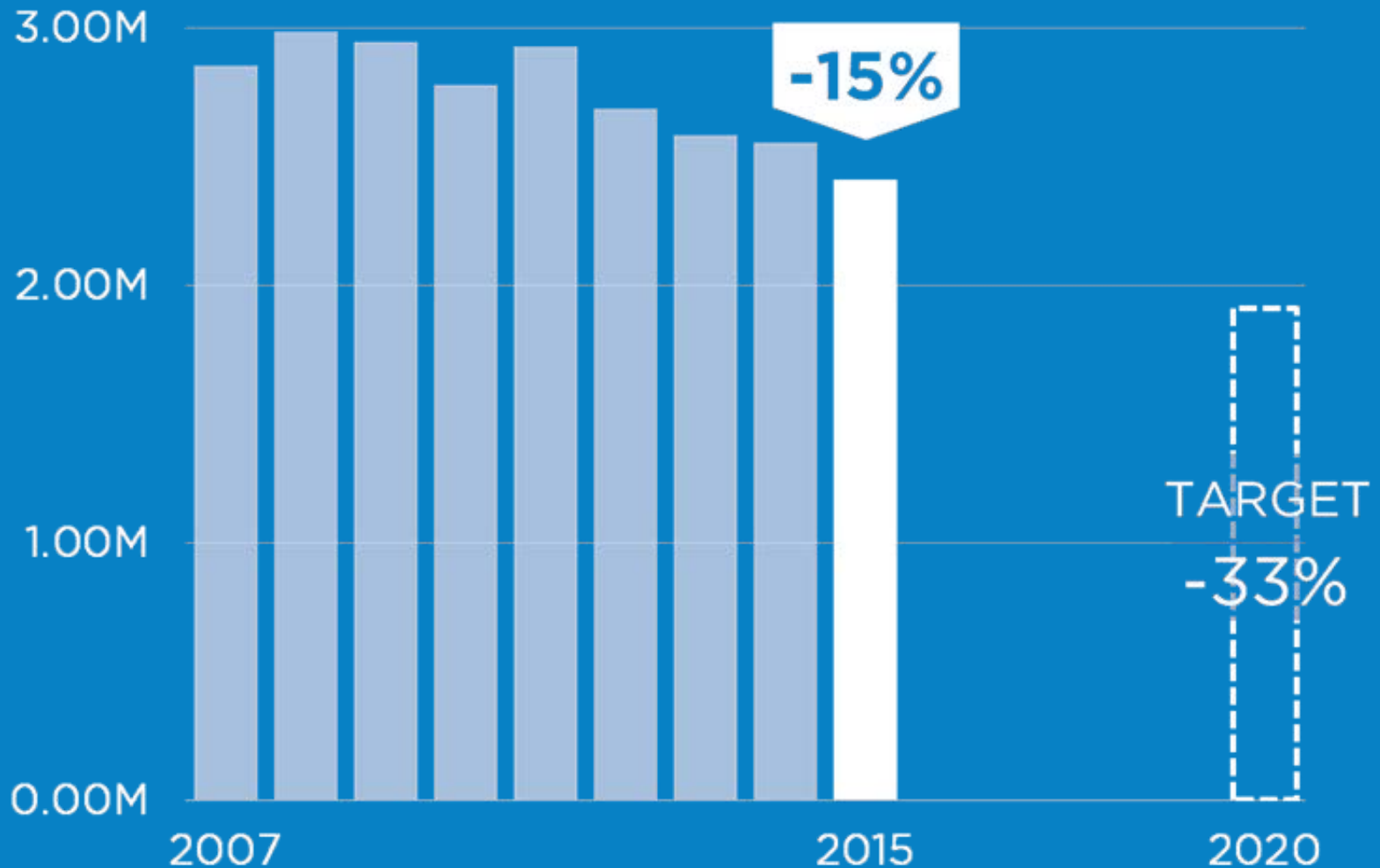
**WHAT DOES A RENEWABLE CITY LOOK LIKE?**

...er's efforts to become the Greenest City in the world, the City has pledged to use 100% renewable energy by the year 2050. This means that Vancouver will use energy from hydro, wind, solar and geo-thermal (heat stored in the ground). Renewable energy is clean, renewable if it occurs naturally, doesn't run out (like the sun), and doesn't release carbon or other pollution.

...shows what you think Vancouver will look like in the year 2050. Draw your school, your favorite park or the entire city.

# Community GHG emissions

2015: 2,410,000 tCO<sub>2</sub>e



REPORTED

**2014  
RESULT  
-7%**

ACTUAL  
**2014  
RESULT  
-10%**

gasoline  
sales

+2%

landfill gas  
generation  
model  
refinement

-4%

natural  
gas use  
decline

-3%

**2015  
RESULT  
-15%**

## CHANGES IN COMMUNITY EMISSIONS

Between 2014-2015, decline in usage led to a decrease in emissions. Also, refinements in landfill calculation methods showed more accurate emissions reductions.

# HIGHLIGHTS

## RENEWABLE CITY

derive 100% energy from renewable sources by 2050

## COP21

Vancouver's leadership on the world stage

## LANDFILL GAS CAPTURE

71% captured in 205





# GREEN BUILDINGS

## **GOAL**

Lead the world in green building design and construction

## **2020 TARGETS**

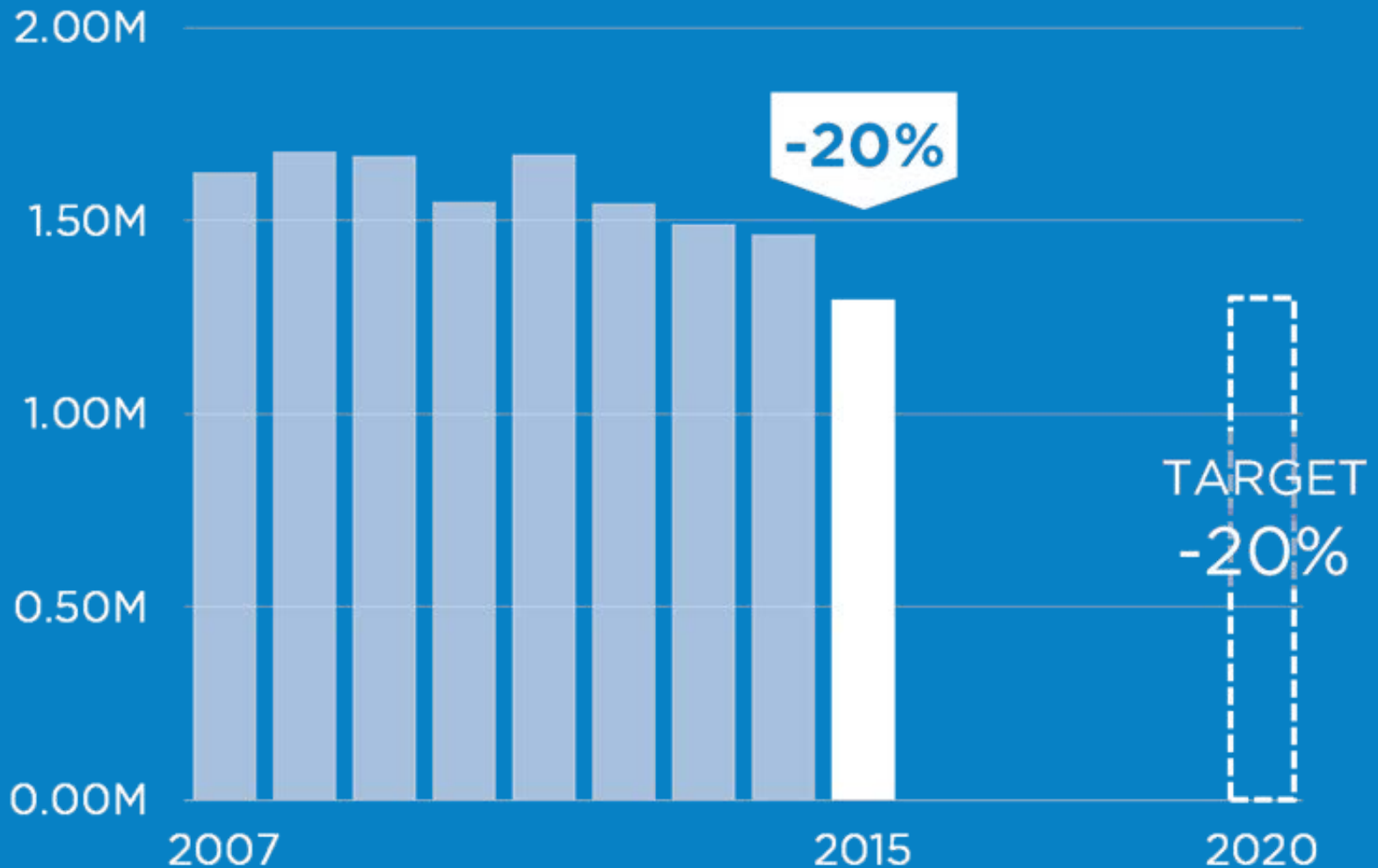
Require all buildings constructed from 2020 to be carbon neutral in operations

Reduce energy use and greenhouse gas emissions in existing buildings by 20% over 2007 levels



# Community building GHG emissions

2015: 1,295,000 tCO<sub>2</sub>e



REPORTED

**2014  
RESULT**

**-5%**

ACTUAL

**2014  
RESULT**

**-8%**

including  
industrials

**-2%**

natural  
gas use  
decline

**-10%**

**2015  
RESULT**

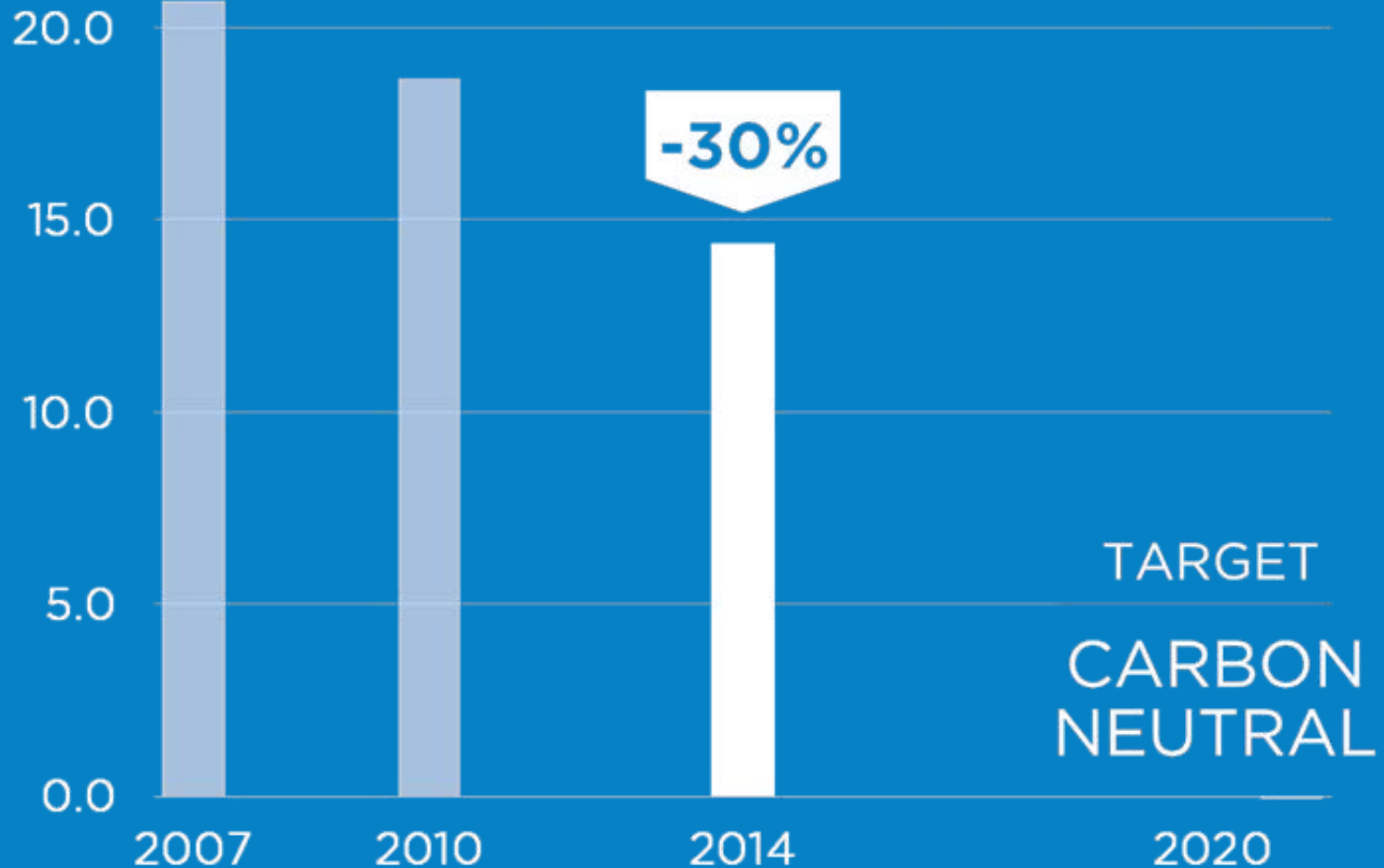
**-20%**

## CHANGES IN BUILDING EMISSIONS

Between 2014-2015, decline in usage led to a decrease in emissions.

*Carbon intensity of buildings:  
GHG emissions of newly built floor area*

2014: 14 kgCO<sub>2</sub>e/m<sup>2</sup>



# HIGHLIGHTS



RETROFIT  
FUND

\$1m leverages \$8m  
for energy savings

PASSIVE  
HOUSE

first Certified  
house completed

EMPOWERME  
PROGRAM

multi-ethnic  
engagement

# GREEN TRANSPORTATION

## **GOAL**

Make walking, cycling, and public transit preferred options

## **2020 TARGETS**

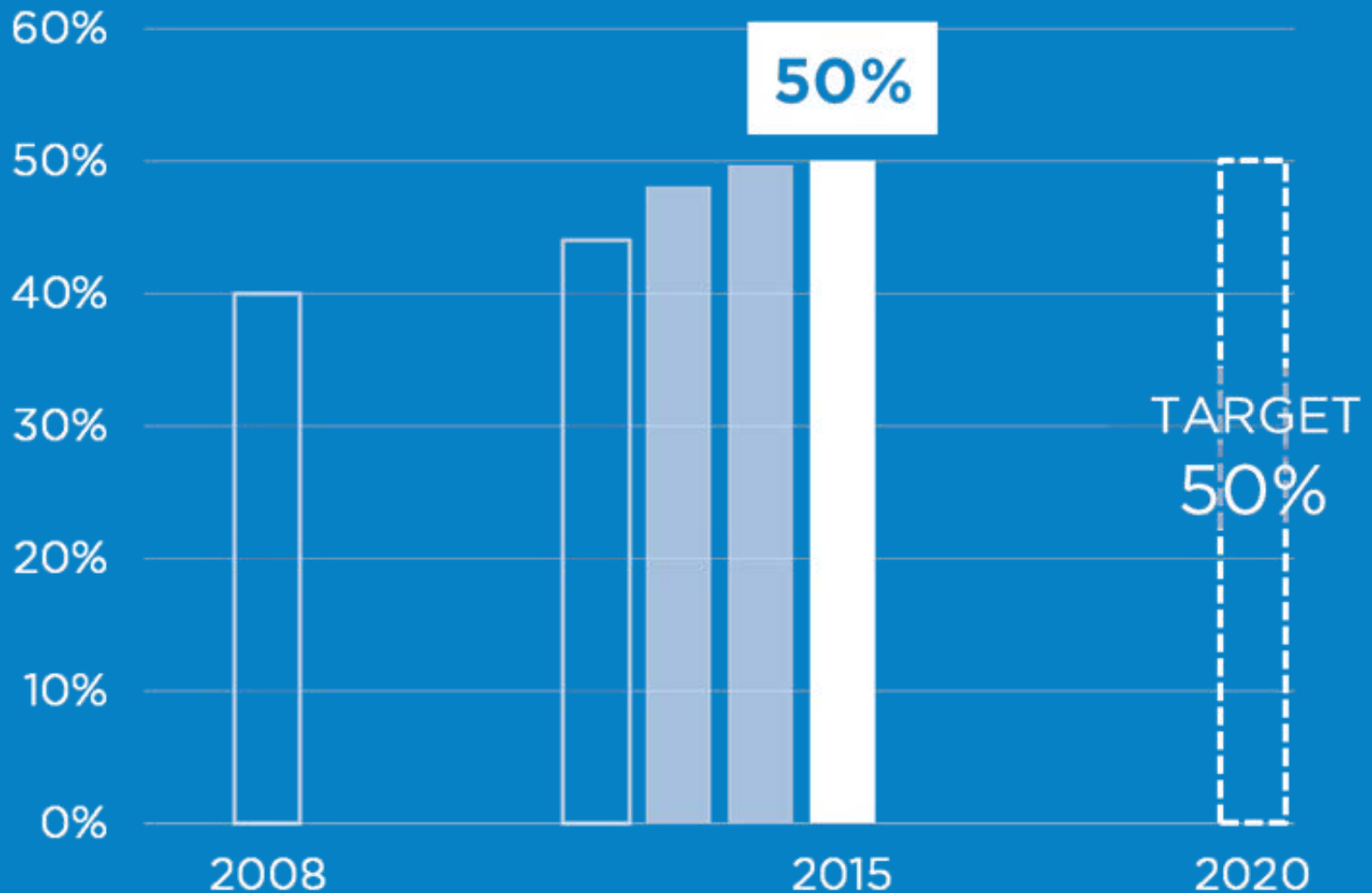
Majority (>50%) of trips by foot, bicycle and public transit

Reduce average distance driven per resident by 20% from 2007 levels



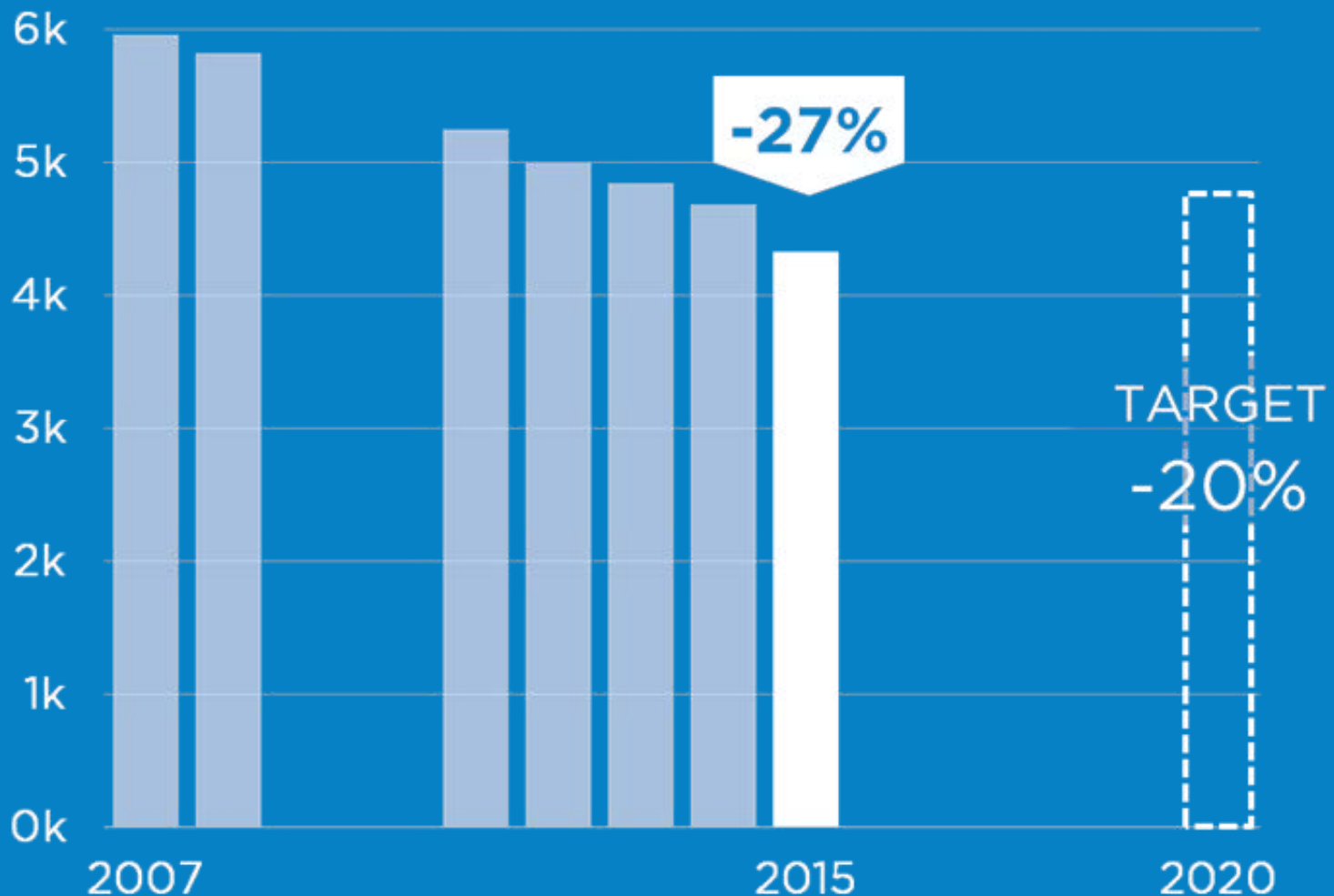
# *% mode share by walk, bike, and transit*

2015: 50%



# Annual vehicle kilometres driven per person (VKT)

2015: 4,319 km





# HIGHLIGHTS

## MOBI BIKESHARE

1,000 bicycles  
and 100 stations  
to start

## ARBUTUS GREENWAY

future  
transportation  
greenway

## INFRASTRUCTURE = RIDERSHIP

7% of trips, 10%  
of commutes  
by bike

# RESULTS TO DATE

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# ZERO WASTE

## GOAL

Create zero waste

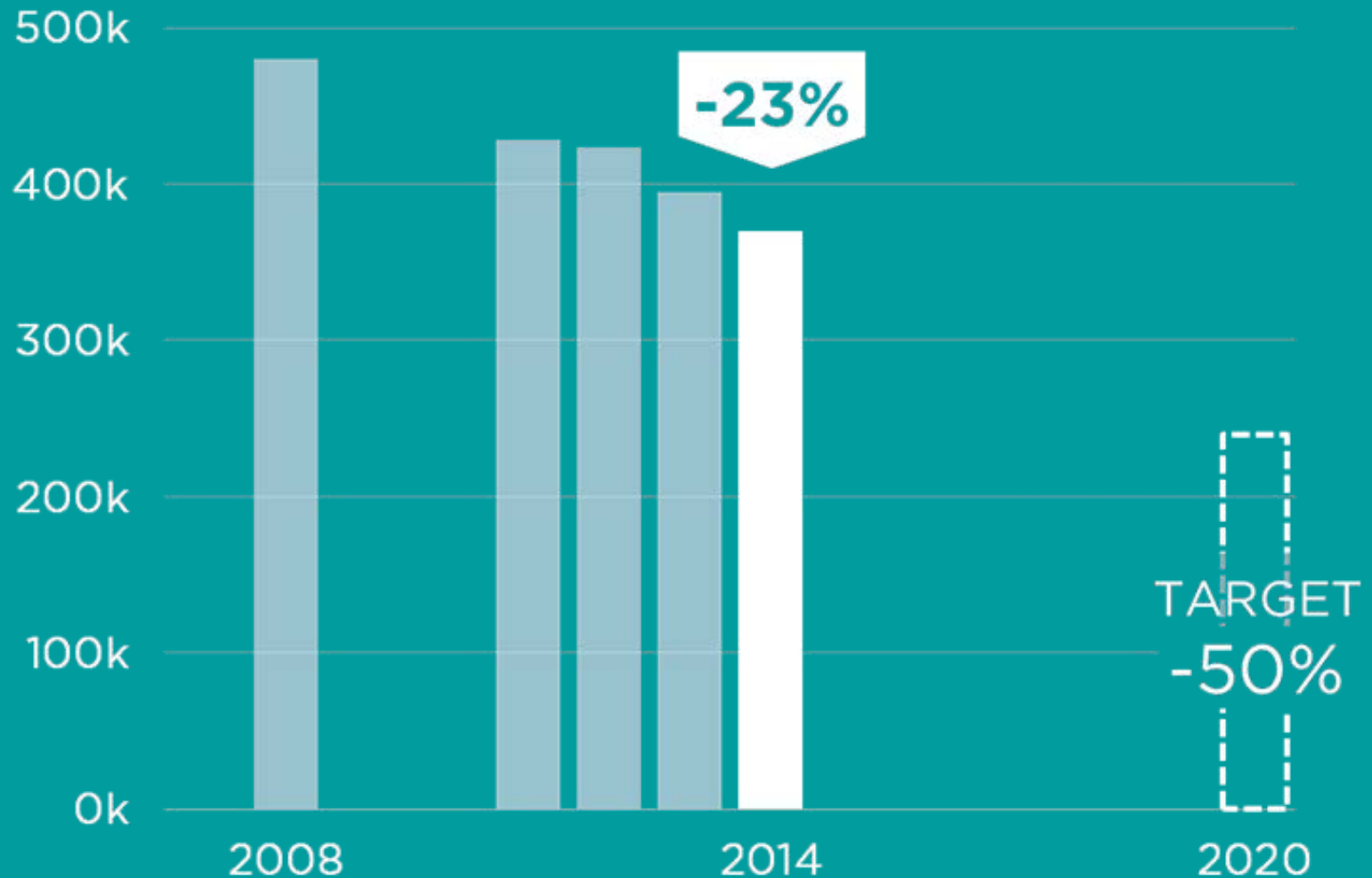
## 2020 TARGETS

Reduce total solid waste going to landfill and incinerator by 50% from 2008 levels



# Solid waste disposed to landfill and incinerator

2014: 370,000 tonnes



# HIGHLIGHTS

## CONSTRUCTION WASTE

Bylaw expanded: pre-1950s in 2017, all homes in 2018

## ORGANIC WASTE

single-family collection up 75%; garbage down 45%

## KEEP VANCOUVER SPECTACULAR

20<sup>th</sup> anniversary; 23,000 volunteers in 2015

# RESULTS TO DATE

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# ACCESS TO NATURE

## **GOAL**

Vancouver residents enjoy incomparable access to green spaces

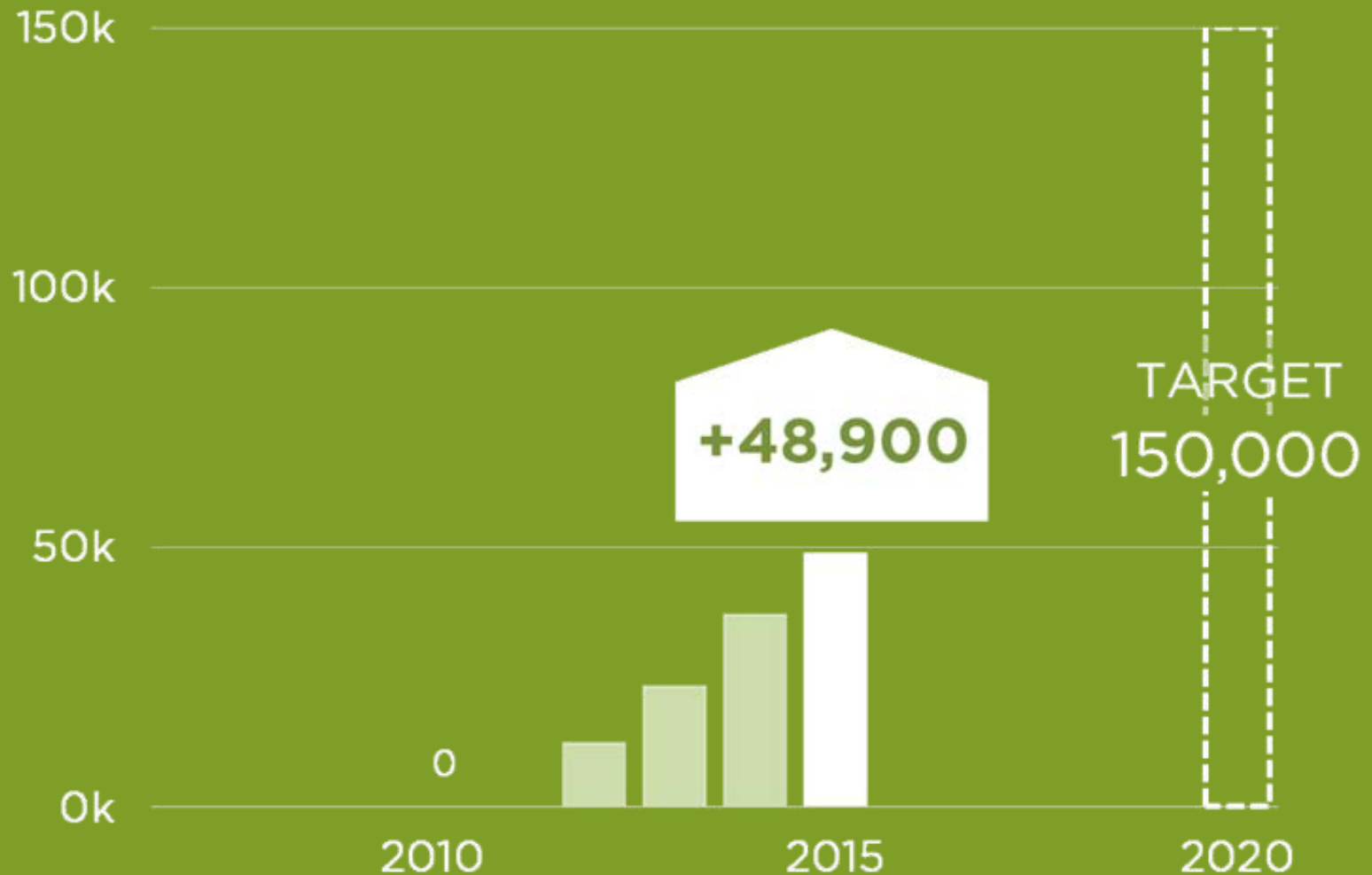
## **2020 TARGETS**

Ensure every Vancouver resident lives within a five-minute walk of a park, beach, greenway or other natural space

Plant 150,000 additional trees in the city between 2010 and 2020

*Additional trees planted*

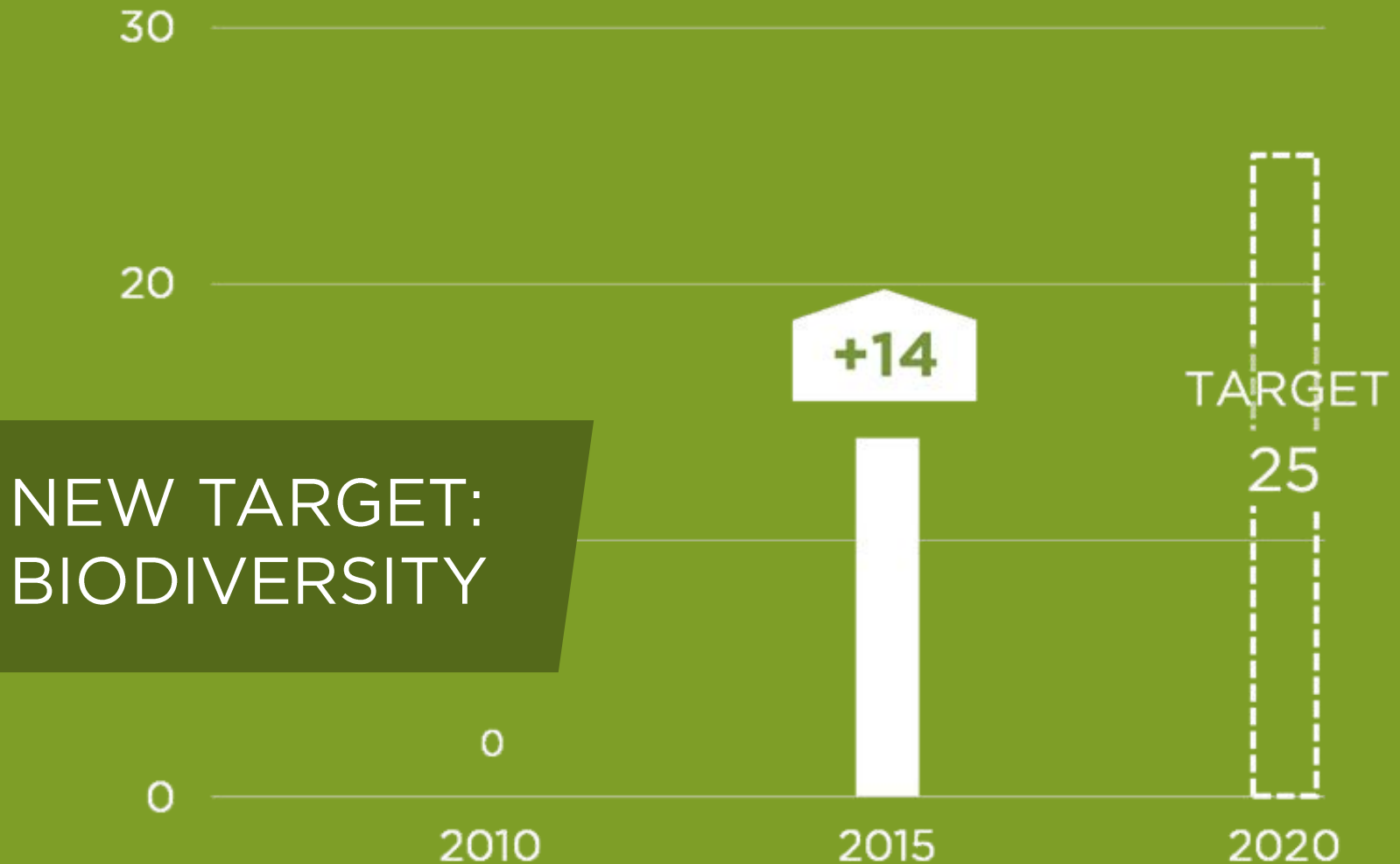
*2015: 48,900 trees*





# Hectares of natural space restored or enhanced

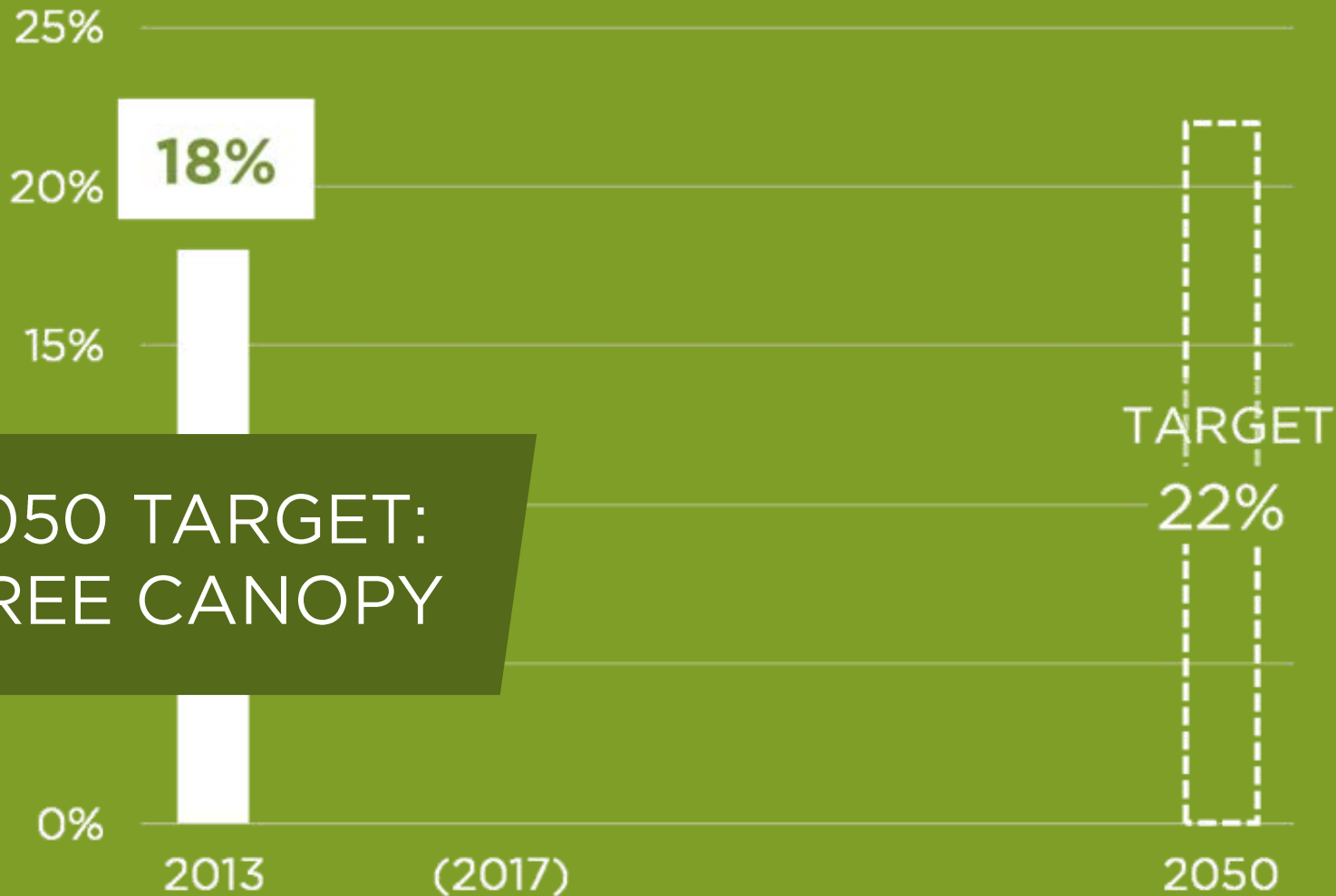
2015: 14 hectares



NEW TARGET:  
BIODIVERSITY

# Land area covered by tree leaf canopies

2013: 18%



2050 TARGET:  
TREE CANOPY

# HIGHLIGHTS

## NEW TARGETS

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**+25**

hectares by 2020

**22%**

canopy cover by 2050



## BIODIVERSITY STRATEGY

adopted strategy and new metric

## NATIVE TREES

4,100 planted in parks in 2015

## SALT MARSH NEW BRIGHTON

2ha restoration underway

# CLEAN WATER

## *GOAL*

Vancouver will have the best drinking water of any city in the world

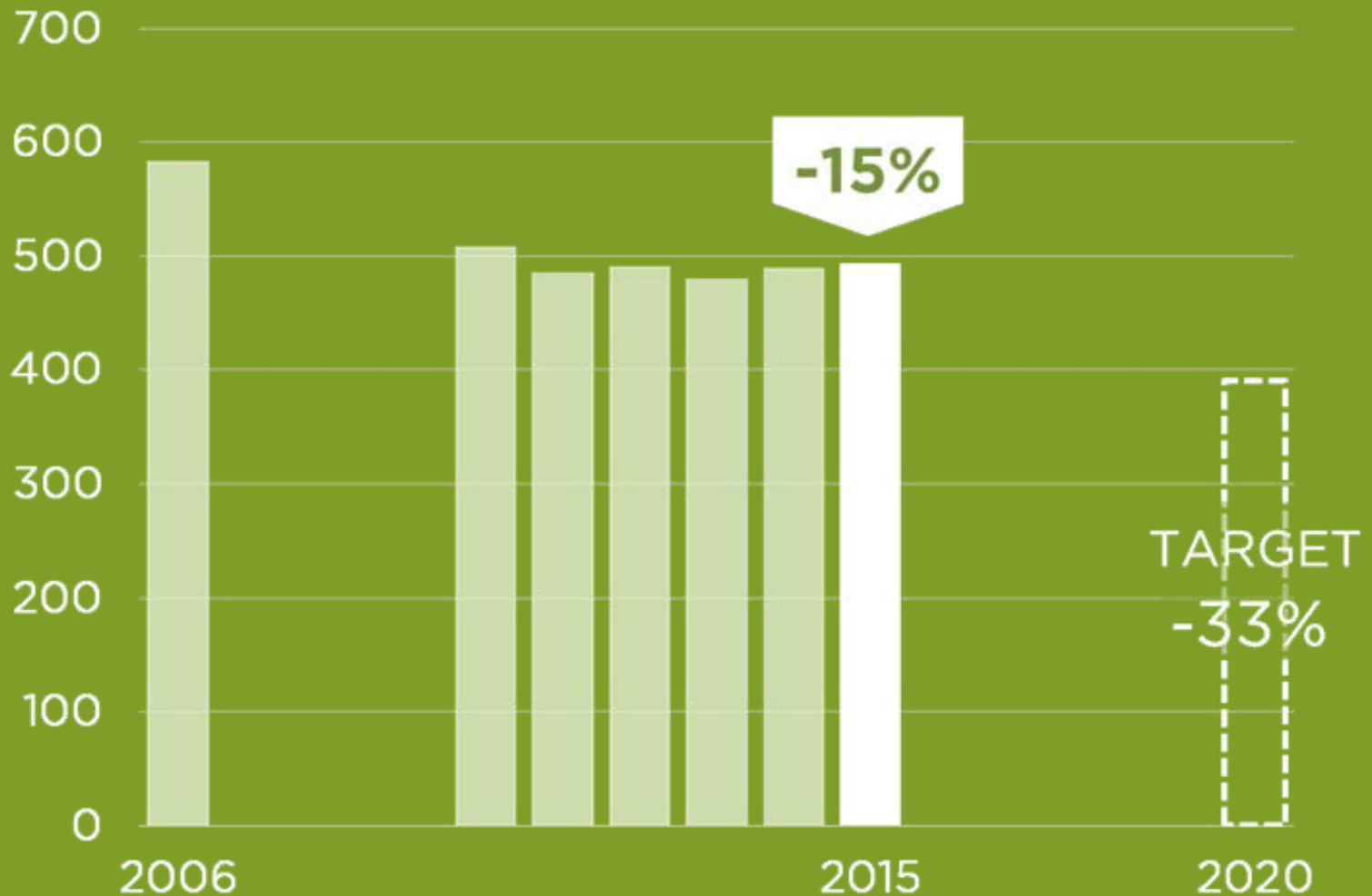
## *2020 TARGETS*

Meet or beat the strongest of BC, Canadian and international drinking water quality standards and guidelines

Reduce per capita water consumption by 33% over 2006 levels

# Water consumption per person

2015: 493 L/person/year



# HIGHLIGHTS

GREEN/NATURAL  
INFRASTRUCTURE

Integrated  
Rainwater  
Management Plan

STAGE 3  
RESTRICTIONS

reversed rising  
water consumption

FULL LOADS =  
LESS WATER

Gathering Place  
laundry volunteers



# LOCAL FOOD

## **GOAL**

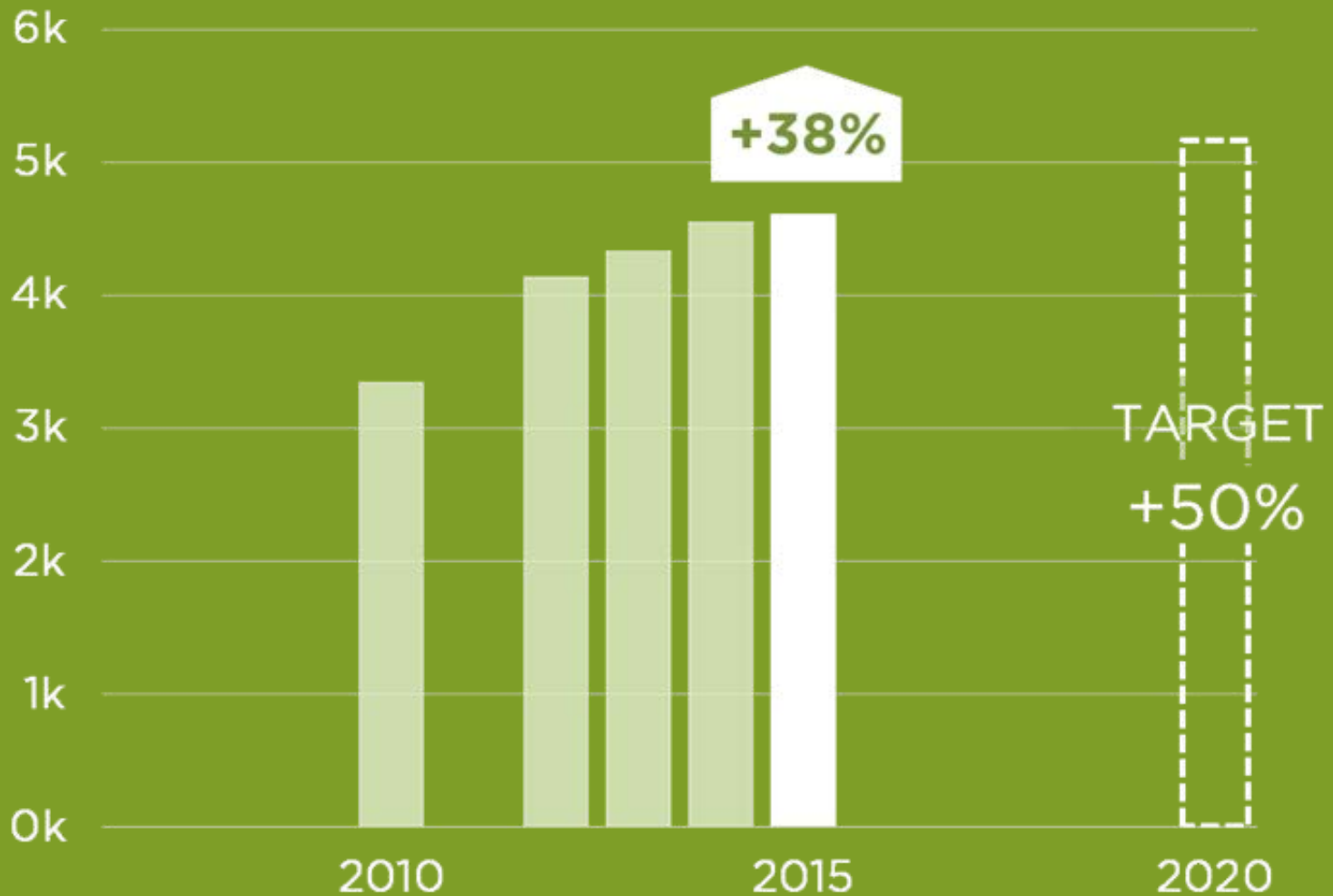
Vancouver will become  
a global leader in  
urban food systems

## **2020 TARGET**

Increase city-wide  
and neighbourhood  
food assets by a  
minimum of 50%  
over 2010 levels

## Neighbourhood food assets

2015: 4,612 food assets





# HIGHLIGHTS

## URBAN FARMING

Guidelines adopted

## COMMUNITY KITCHENS

upgrades at Boys and Girls Clubs

## FOOD RESCUE

Sustainable Food Systems Grants

# CLEAN AIR

## **GOAL**

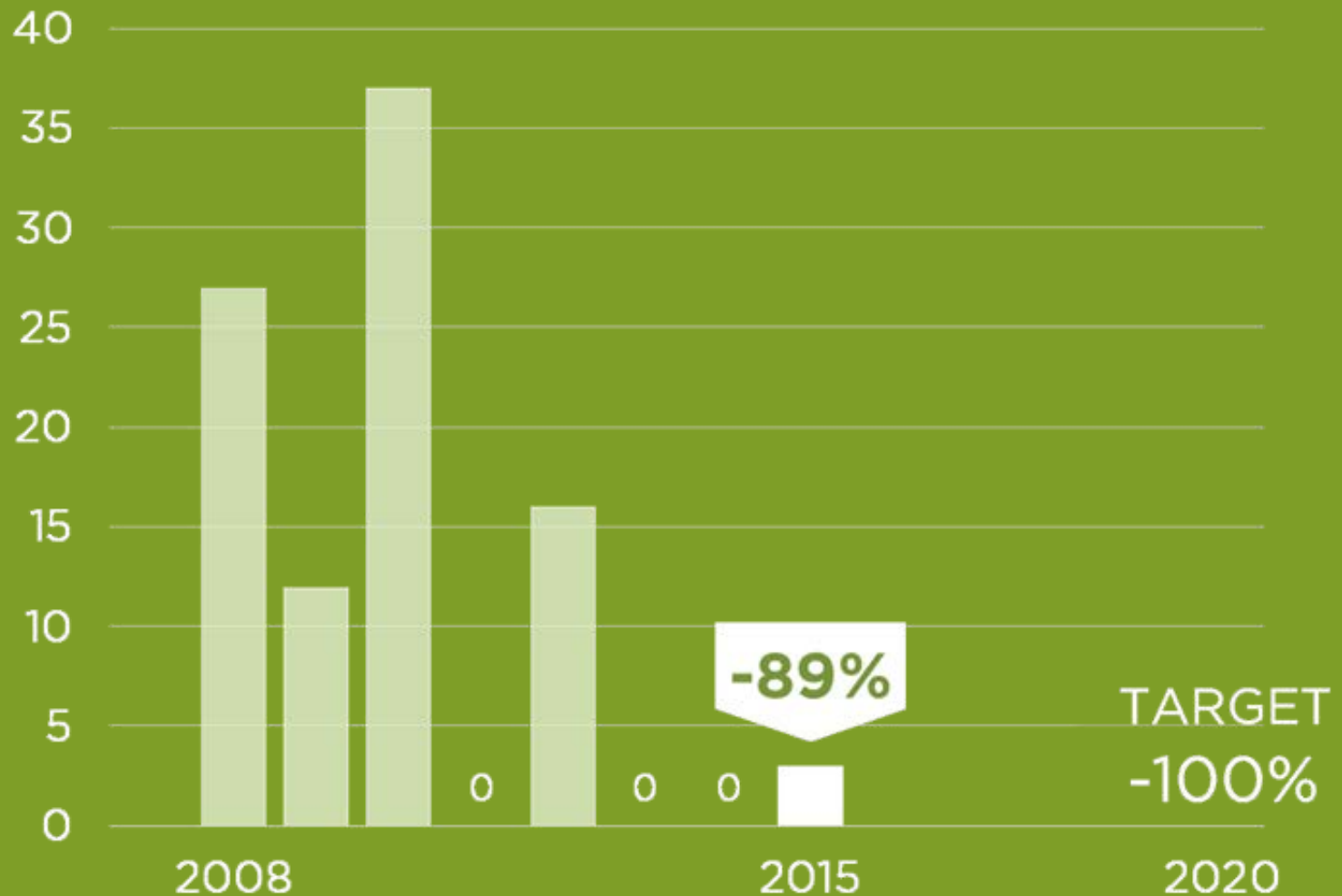
Breathe the cleanest air of any major city in the world

## **2020 TARGET**

Meet or beat the most stringent air quality guidelines from Metro Vancouver, British Columbia, Canada, and the World Health Organization

## Air quality exceedences

2015: 3 instances



# HIGHLIGHTS

## ZERO EMISSION VEHICLE ALLIANCE

BC: all new passenger  
vehicles ZEVs by 2050

## RENEWED INCENTIVES

previous three-year funding  
ran out in 10 months

# RESULTS TO DATE

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# GREEN ECONOMY

## **GOAL**

Secure Vancouver's reputation as a mecca of green enterprise

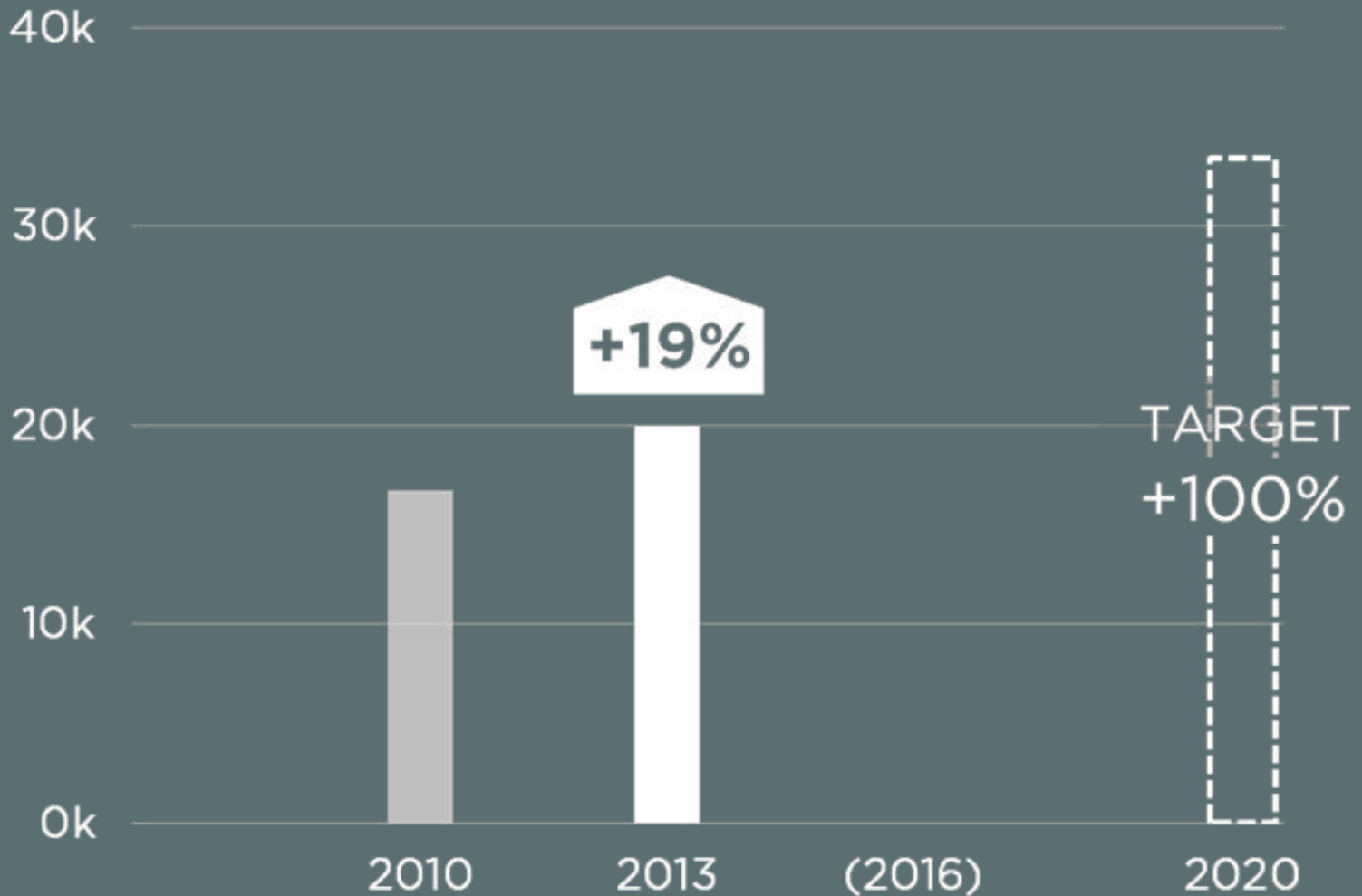
## **2020 TARGETS**

Double the number of green jobs over 2010 levels by 2020

Double the number of companies that are actively engaged in greening their operations over 2011 levels by 2020

*Green jobs*

*2013: 19,900 jobs*



# HIGHLIGHTS

## GLOBE AND COP21

Vancouver  
businesses on  
world stage

## CLIMATE PLEDGE

200 business  
signatories with  
60,000 employees

## GREEN & DIGITAL DEMONSTRATION PROGRAM

80 businesses  
applied



# LIGHTER FOOTPRINT

**GOAL**

Achieve a one-planet ecological footprint

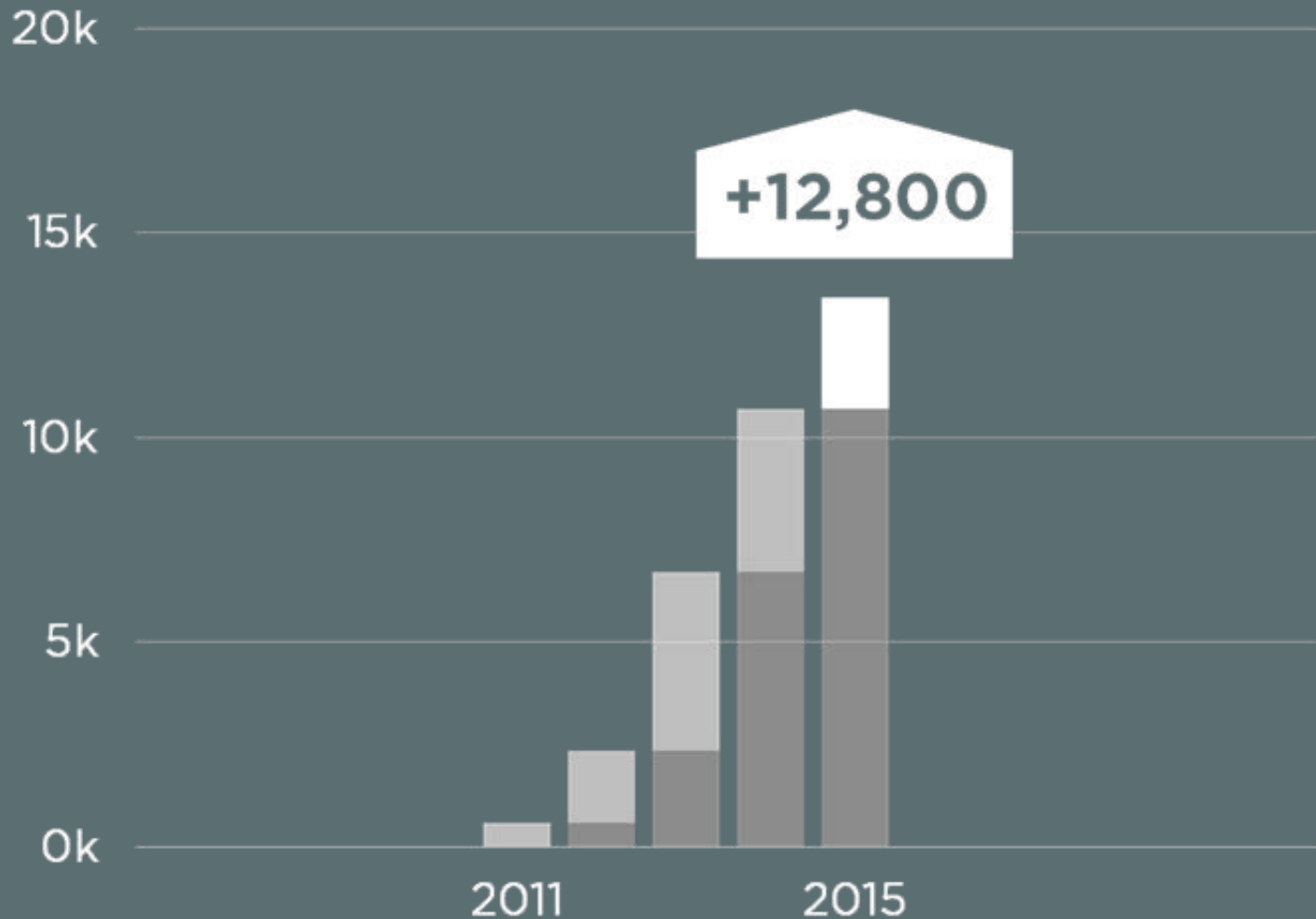
**2020 TARGET**

Reduce Vancouver's per-capita footprint by 33% from 2006 levels



# People empowered to support Greenest City

2015: 13,400 people



# HIGHLIGHTS



## CITYSTUDIO PROJECTS

YIMBY,  
Summit The City

## GREENEST CITY FUND

\$2M over 4 years;  
Build-a-Bicyclist,  
Pollinators & People

## BRIGHT GREEN SUMMER

13,000 people  
engaged

# GREEN OPERATIONS

## *2020 TARGETS*

50% reduction in GHGs  
from City operations  
from 2007 levels

70% waste diversion  
in public-facing  
City facilities;  
90% in all other  
City-owned facilities

Reduce water use in  
City operations by  
33% from 2006 levels

# HIGHLIGHTS

## GREEN OPERATIONS METRICS

**.49%**

GHGs

**.19%**

water use

**67%**

*public-facing*

**84%**

*other City-owned*

waste diversion

## LIBRARY SQUARE WATER USE

steam condensate  
heat recovery

## BUILDING ENERGY

31 largest facilities  
cut GHGs 10%,  
annual costs \$500k

## GREENEST CITY POLICE DEPT

rooftop bee hives;  
529 Garage

# VANDUSEN VISITOR CENTRE

*Site*

*Indoor  
Quality*

*Materials*

*Beauty +  
Inspiration*

CERTIFIED  
**PETAL**  
2016

# GREENEST CITY SUCCESSES

*2020 targets achieved*

**50%**

mode  
share

**-.27%**

vehicle km  
driven per  
capita

**-.20%**

building  
GHGs

**-.15%**

GHGs

**-.23%**

waste to  
landfill and  
incinerator

**+19%**

green  
jobs

*C40 Cities Awards*

Carbon Measurement  
and Planning 2015

*Earth Hour City Challenge:*

Canadian Capital 2015

*Continuing areas of focus:*

accelerating GHG reductions  
reducing water consumption  
greening businesses



QUESTIONS?