Science Based Targets for cities and the public sector

Science Based Targets

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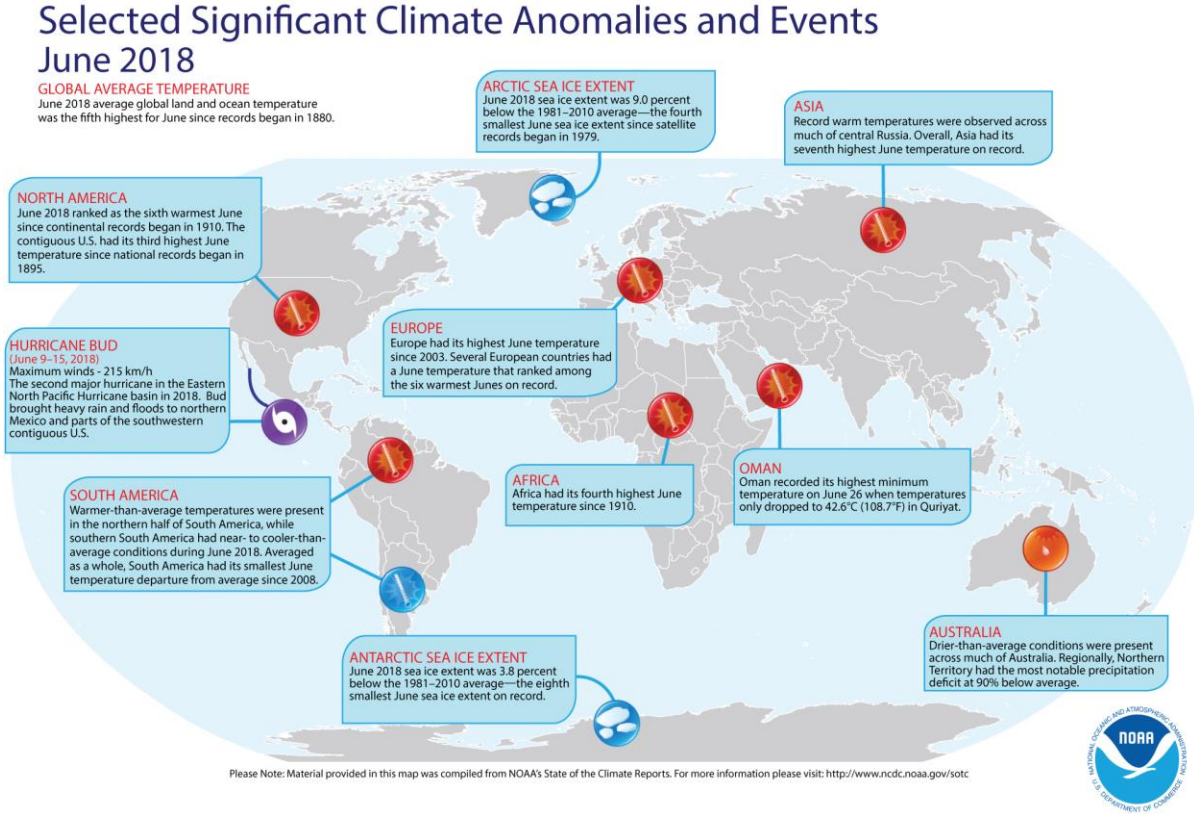
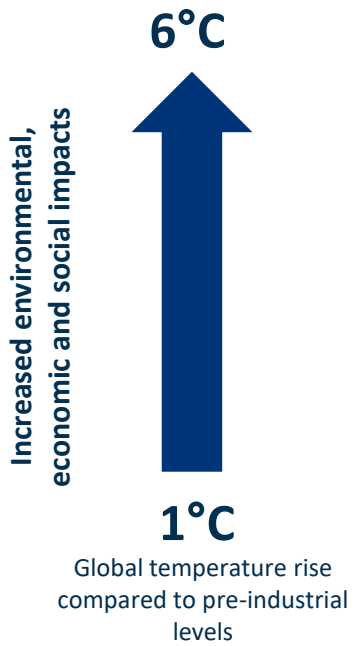
The effects are already being felt now, across the world and recent effects have been felt close to home



2°C generally acknowledged as the maximum temperature rise that can take place before these effects become dangerous

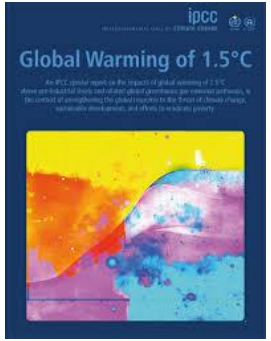


Environmental impact	Social impact	Economic impact
Decreased water availability	Health impacts from thirst and malnutrition	Food more expensive, less availability
Lower crop yields	Increased levels of disease and mortality	More damage to infrastructure and higher insurance costs
Species extinction and biodiversity loss	Increased global migration	Greater business uncertainty
Increased coastal flooding		
Increased heatwaves and floods		

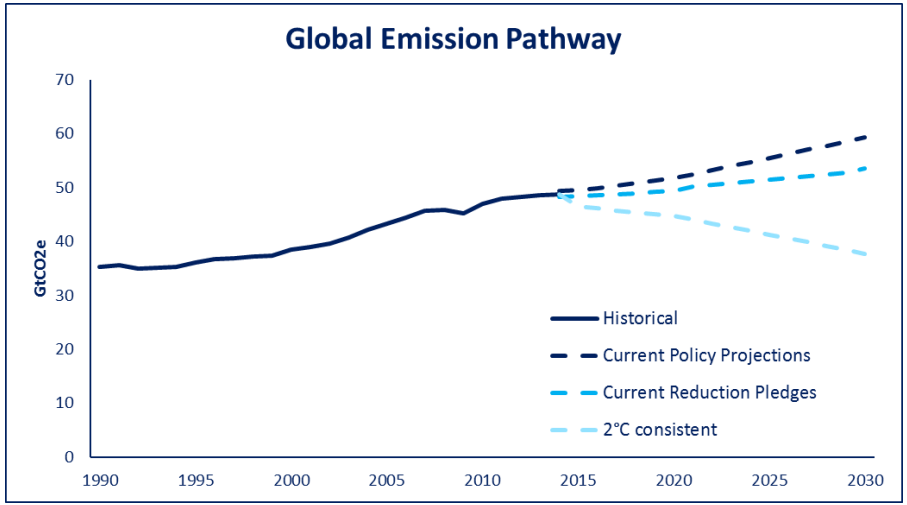
The context for science-based targets

- Paris Agreement approved by 195 nations at COP21 came into force on 4th November 2016
- Aims to hold the increase in global average temperatures **well below 2°C** and pursue efforts to limit the increase to 1.5°C
- **Emissions should peak as soon as possible**, and rapidly reduce thereafter
- Mitigation performance to be **reviewed every five years** and national targets (NDCs) increased
- New IPCC AR6 released in October 2018 with a special report specific to limiting global temperature increase to 1.5 degrees
- We should reach **net zero emissions** in the **second half of the century** (by 2050 to achieve 1.5 degrees)

COP21 · CMP11
PARIS 2015
UN CLIMATE CHANGE CONFERENCE



What are science-based carbon targets?



- Targets to reduce carbon emissions are considered “science-based” if they are in line with the level of decarbonisation required to keep global temperature increase below 2°C

Source: Climate Action Tracker, 2017

A global movement in the private sector

Science Based Target Initiative established, a collaboration between CDP, World Resources Institute, and the United Nations Global Compact aiming to make science-based target setting standard practice by 2020.

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

497 of the World's leading companies are already taking action

Cities are catching on: NYC 1.5°C Climate Action Plan

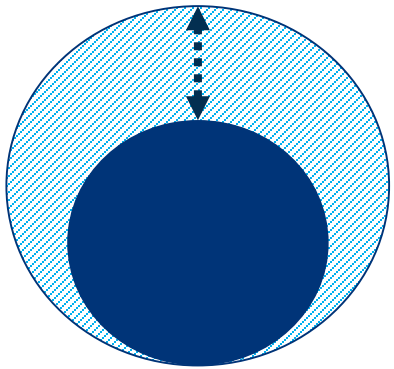
This plan is the first of its kind and lays out the pace, scale, and impact of the work NYC must do by 2020 to help achieve a 1.5°C World.

> "I signed Executive Order 26 committing NYC to the principles of the Paris Agreement, which seeks to limit global temperature rise to 1.5°C. When our national government falls down, local governments have to step up. Together, we will show that the people will solve this problem at the grassroots."

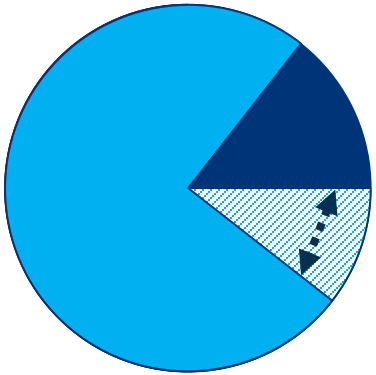
Mayor Bill de Blasio
The City of New York

Calculating a science based target involves three key steps

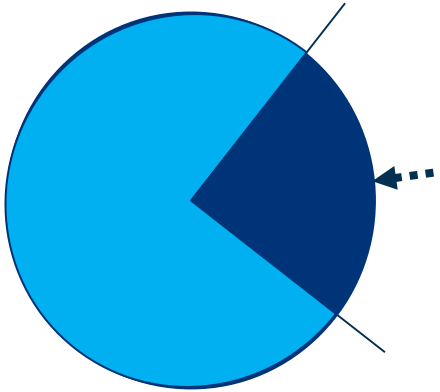
1. Assessing the global carbon budget
How large is the pie?



2. Calculating your city's carbon budget
How large is my slice?



3. Compare your budget and your footprint
Am I eating too much?



› Different methodologies will take slightly different approaches to these steps.

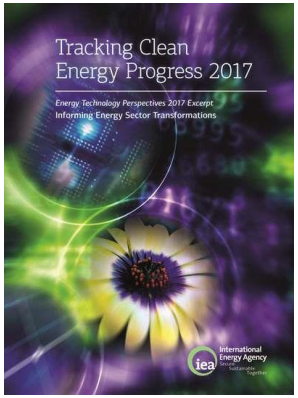
Most recognised methods for science-based targets

SDA	Sectoral Decarbonisation Approach
CSO	Center for Sustainable Organizations
CSI	Carbon Stabilisation Intensity
Absolute Emissions Contraction	
C-FACT	Corporate Finance Approach to Climate-Stabilising Targets
GEVA	Greenhouse Gas Emissions per Value Added

Overview of methodology

Global carbon budget consistent with 2°C temperature increase threshold

Sectoral carbon budgets and corresponding carbon intensities



Sectoral Decarbonisation Pathways

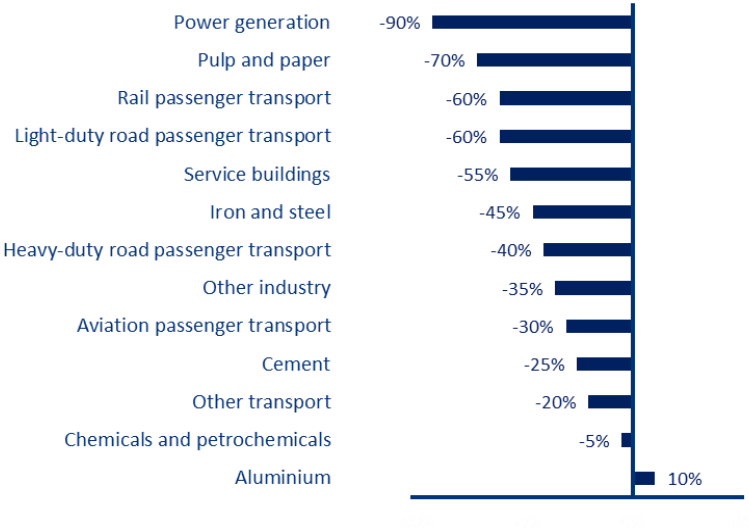
City/Region Baseline Carbon Footprint

City/Region carbon reduction pathways by sector and Science-Based Targets.

City/Region Activity Baselines and Growth Projections

Science-based target sectors and GPC footprinting

Sector absolute carbon emissions change by 2050 vs 2010



Sectors and sub-sectors covered by the GPC

STATIONARY ENERGY
- Residential buildings
- Commercial and institutional buildings and facilities
- Manufacturing industries and construction
- Energy industries
- Agriculture, forestry, and fishing activities
- Non-specified sources
- Fugitive emissions from mining, processing, storage, and transportation of coal
- Fugitive emissions from oil and natural gas systems

TRANSPORTATION
- On-road
- Railways
- Waterborne navigation
- Aviation
- Off-road

WASTE
- Solid waste disposal
- Biological treatment of waste
- Incineration and open burning
- Wastewater treatment and discharge

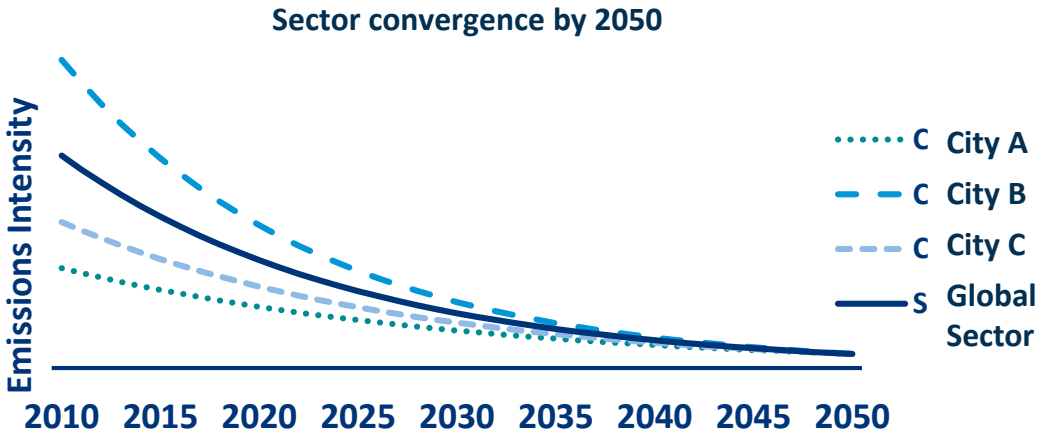
INDUSTRIAL PROCESSES AND PRODUCT USE (IPPU)
- Industrial processes
- Product use

AGRICULTURE, FORESTRY AND OTHER LAND USE (AFOLU)
- Livestock
- Land
- Aggregate sources and non-CO_2 emission sources on land

OTHER SCOPE 3

Source: Energy Technology Perspectives 2017 & Global Protocol for Community-Scale Greenhouse Gas Emission Inventories

Convergence of emission intensities



- The approach requires the carbon intensity of all organisations within a global sector converge by 2050
- This means that companies or local sectors with a carbon intensity that is already relatively low compared to the global sector are not penalised for investing early in efficiency initiatives

Key considerations in setting a target

Why should the public sector set a science-based target?

- **Demonstrate leadership in doing what's necessary** and maximise reputational benefits by adopting credible science-based targets now

- **Align your sustainability ambitions with science** – and anticipate future climate change regulation

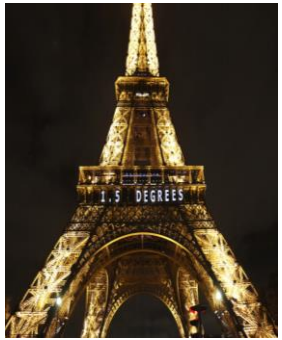
- **Achieve a greater level of cross-sector collaboration and political buy in**, leading to stronger business cases and a mandate for action

Case Study

2°C Science Based Target

West Yorkshire Combined Authority

To align to 2°C of global warming, the Leeds City Region needs to reduce emissions by 53% by 2036 against a 2015 baseline year, representing a total reduction of 7,784 $ktCO_2$



- The Leeds City Region Strategic Economic Plan outlines an ambition for the City Region to '**become a resilient zero carbon energy economy underpinned by high quality green infrastructure by 2036'.**
- In an effort to quantify and understand a route to delivering against this ambition, the Carbon Trust developed a Science Based Target based on all energy consumed within the region.
- The new target is based on the best science available, and is consistent with the aim of the Paris Agreement to limit global warming to 2°C above pre-industrial levels by the end of the century.
- The target is a key part of the LCR Energy Strategy and Delivery Plan, and is currently being consulted on with Combined Authority Leaders who are pushing to raise the level of ambition to 1.5°C and want the LCR to be the first public body to adopt a Science Based Target in the UK.

Key insights and learnings

The public sector faces similar challenges to the private sector when setting a science-based target:

- Receiving buy-in from across the business
- Getting the target approved
- Accounting for renewables
- Predicting future business growth
- Measuring value chain emissions
- Value chain target setting

But there are ways to address and minimise these challenges:

- Early and continuous engagement with key stakeholders
- Good data collection processes that improve with time
- A long-term renewable energy strategy
- Clear business case and investment plan

By following these steps, cities & the public sector can experience the benefits of setting SBTs and actual change across their operations.

Summary

- Science-based targets align a city or regions carbon reduction commitments with the latest climate science and international pledges from the Paris Agreement
- If your organisation is not ready for the scope 3 element of Science Based Targets initiative, setting a scope 1&2 science-based target still presents significant opportunities and we are able to verify these targets
- Setting a science-based target can demonstrate local area sustainability leadership, help shape a long-term carbon strategy and drive cost savings
- Members of the technical advisory group of the SBTI and have a strong track record in delivering science-based target projects

Any questions?

Keep in touch

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