

Copenhagen 2025

Climate and Green Growth

Putting Visions into Practice

Co₂oBricks Mid-Term conference
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Global Challenges
COPENHAGEN
SOLUTIONS



Copenhagen
Carbon Neutral
by 2025



Copenhagen

- a green, smart and CO2-neutral city



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Copenhagen
Carbon Neutral
by 2025



Copenhagen

- » Capital of Denmark: 92,6 km² (0.2 % of DK)
- » 10 districts
- » Inhabitants: 539,542
1,000 new inhabitants every month.
640,000 in 2025
- » Households: 291,000 (1.7 person/household)
- » Living in apartments: 92%
- » 24,000 companies and 326,000 workplaces
- » Part of the Oresund Region and the Capital Region of Denmark



The Global Challenge

- Climate Change
- Rising demand for Resources
- Rising Energy Prices
- The Cities' role
- Green Growth

Global Challenges
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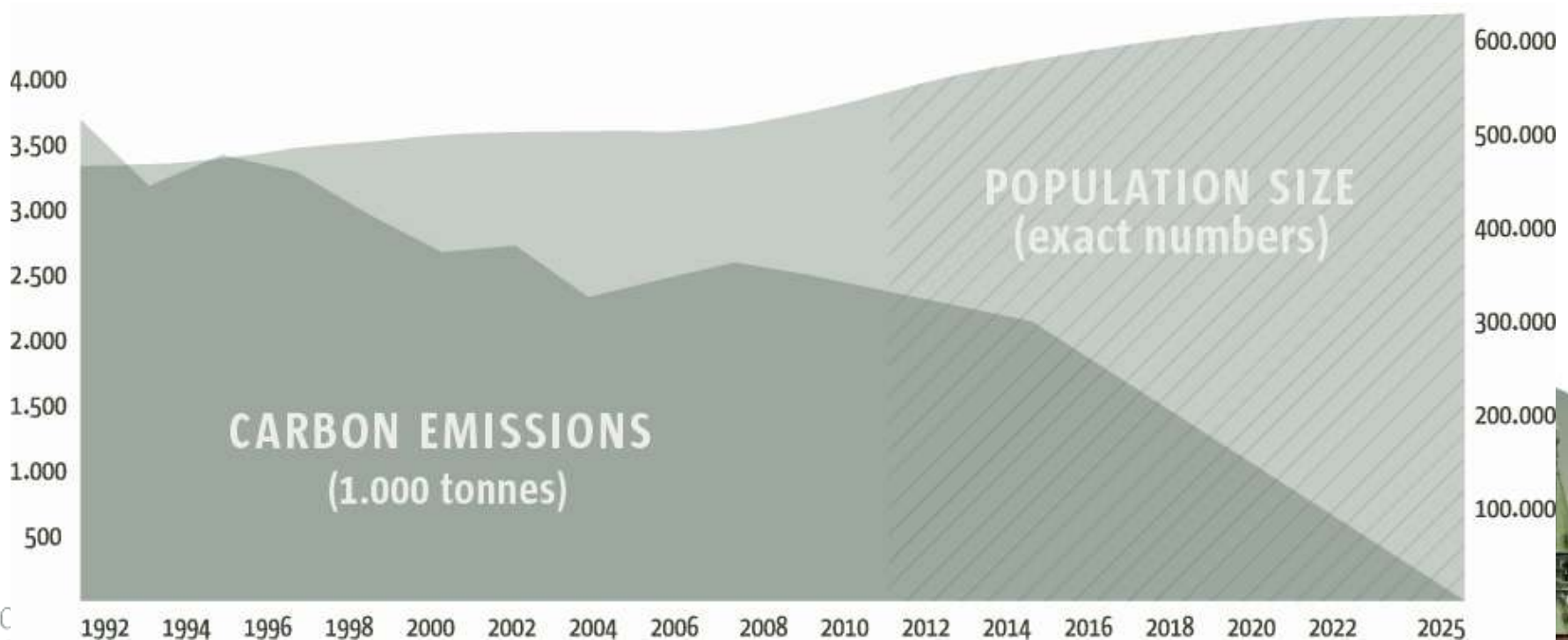


Copenhagen
Carbon Neutral
by 2025

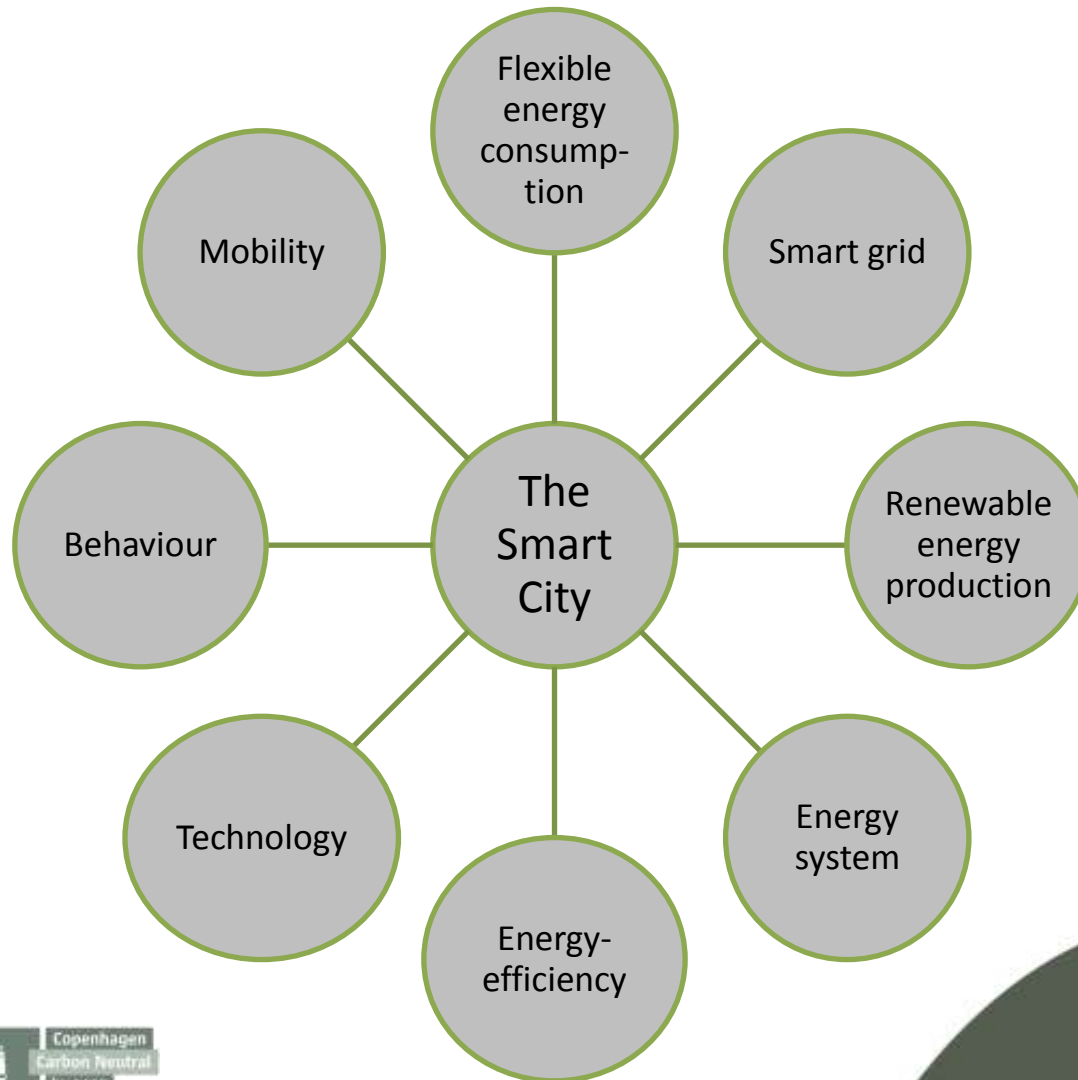


CPH 2025 – Our Challenges

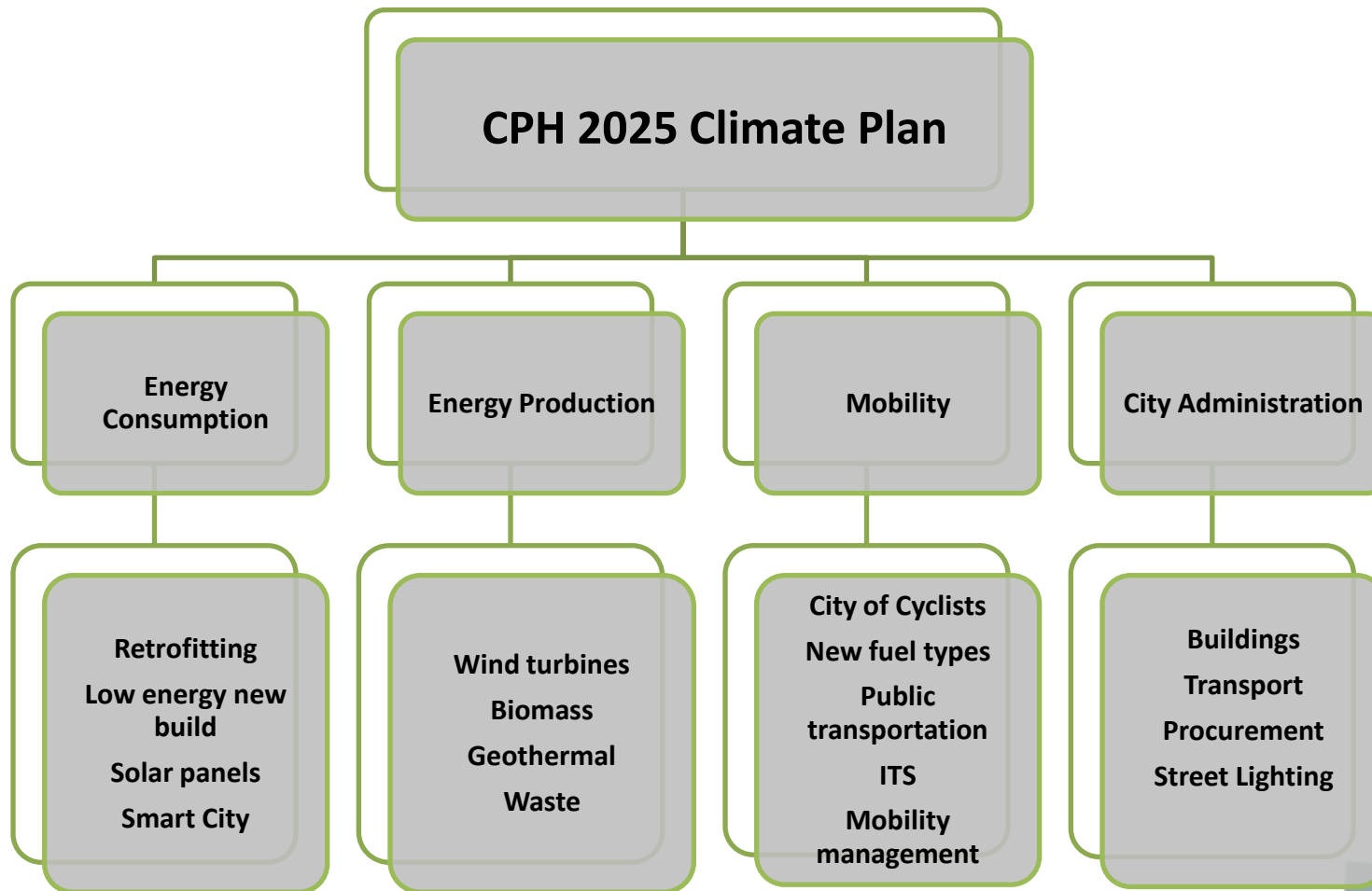
- » CO2: From 20 pct to 100 pct reduction in 10 years
- » Population: 20 pct increase in 2025



CPH 2025 - Smart City



CPH 2025: Our focus

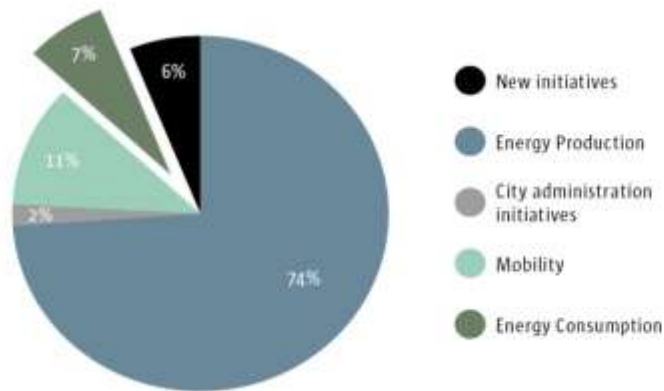


Energy consumption in buildings

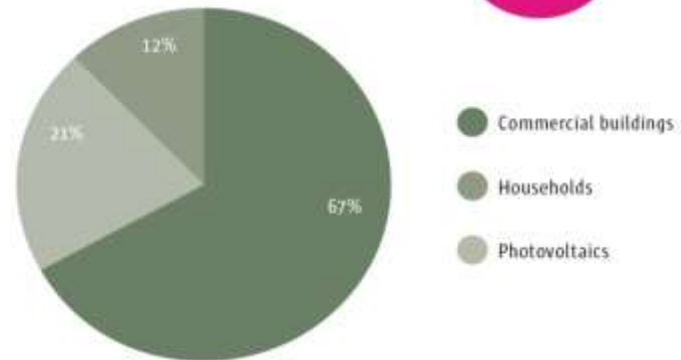
Major goals for 2025:

- » 20 pct. reduction in heat consumption
- » 20 pct. reduction of electricity consumption in commercial and service companies
- » 10 pct. reduction of electricity consumption in households
- » Installation of solar cells corresponding to 1 pct. of electricity consumption in 2025

SHARE OF TOTAL CARBON REDUCTION



ALLOCATION OF REDUCTIONS FROM ENERGY CONSUMPTION INITIATIVES



80.000
TONS CO₂

Energy consumption in buildings



Challenges

- » Population growth with 20%
- » Future proof buildings
- » 70% of buildings before first building code
- » Large proportion of buildings worthy of preservation
- » Financial incentives
- » Knowledge



Energy Consumption in buildings



Main initiatives

- » Strategy for energy efficient buildings in CPH
- » Focus on possible barriers in legislation
- » New financial and organizational models
- » Procedures and guidelines within the City Authority for improved energy efficiency
- » Urban renewal projects
- » Energy efficiency in social housing



Energy Consumption in buildings



- » Model for energy savings in the commercial and service companies
- » Dissemination of solar panels
- » Knowledge and accumulation of experience
- » Smart City
 - » Data infrastructure and public data
 - » Flexible consumption and smart grid

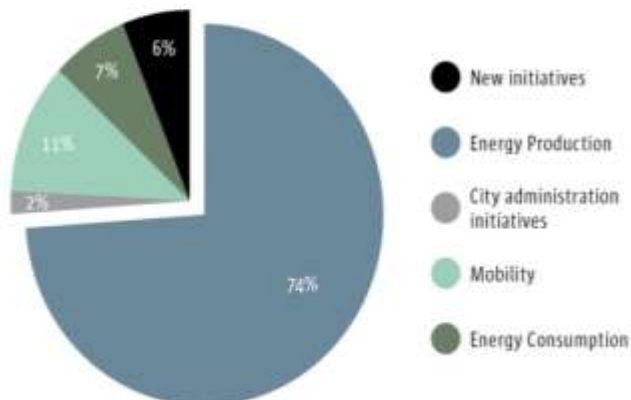


Energy Production

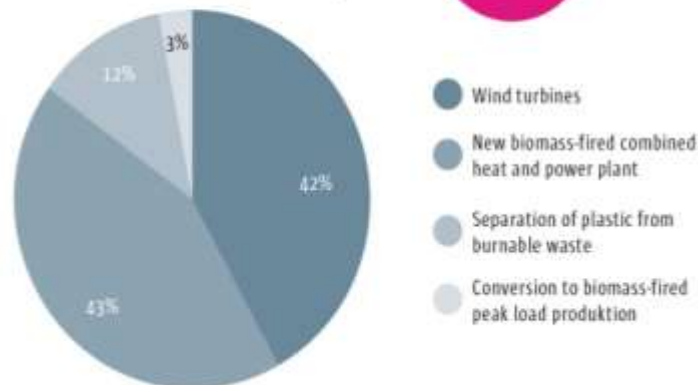
Major goals for 2025:

- » District heating in Copenhagen is carbon neutral.
- » Electricity production is based on wind and biomass and exceeds total electricity consumption in Copenhagen.
- » Plastic waste from households and businesses is separated.
- » Biogasification of organic waste

SHARE OF TOTAL CARBON REDUCTION



ALLOCATION OF REDUCTIONS FROM ENERGY PRODUCTION INITIATIVES



855.000
TONS CO₂

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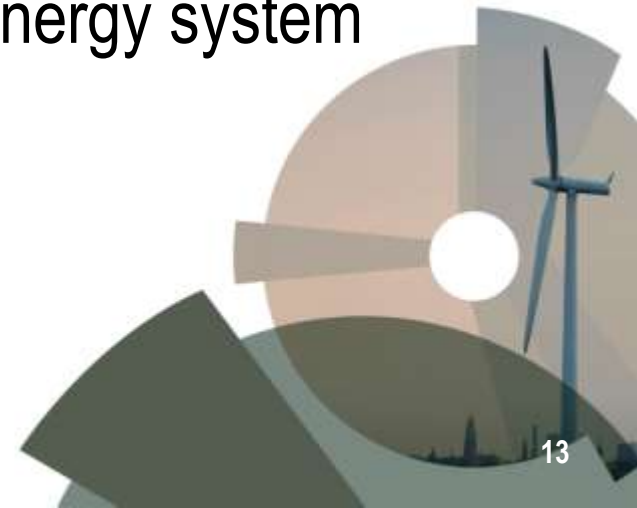


Energy Production



Main initiatives:

- » 100 wind turbines before 2025
- » Production of heat and power based on biomass
- » The role of geothermal, heatpumps and solar heat
- » Waste in the energy system

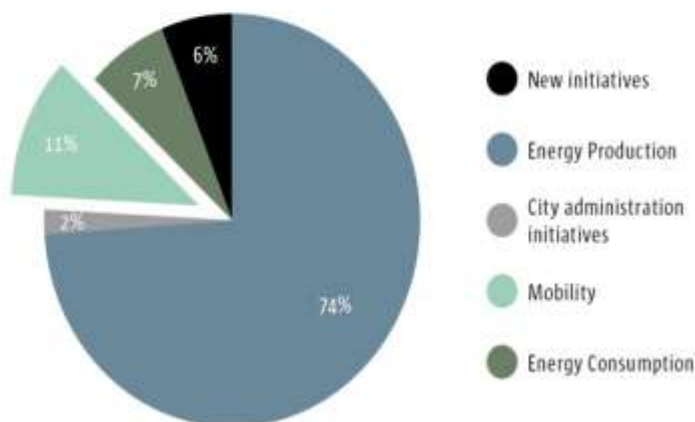


Mobility

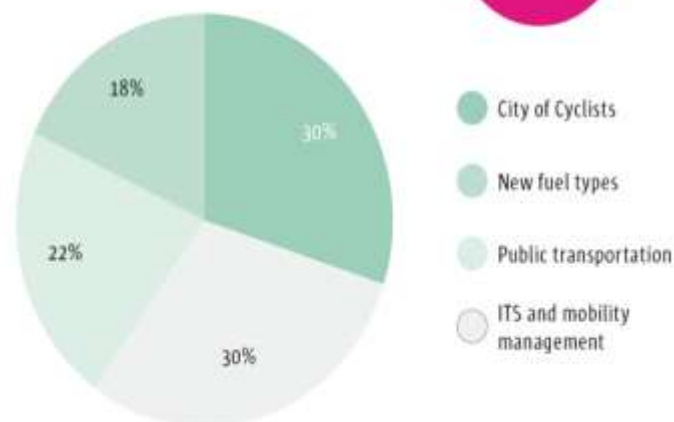
Major goals for 2025:

- » 75 pct. of all trips in Copenhagen are on foot, by bike or public transport
- » 50 pct. of trips to work or school in Copenhagen are by bike
- » 20 pct. more passengers use public transport
- » Public transport is carbon neutral
- » 20-30 pct. of all light vehicles run on new fuels such as electricity, hydrogen, biogas or bioethanol
- » 30-40 pct. of all heavy vehicles use new fuels

SHARE OF TOTAL CARBON REDUCTION



ALLOCATION OF REDUCTIONS FROM MOBILITY INITIATIVES



135.000
TONS CO₂

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CLIMATE CAPITAL
COPENHAGEN

Mobility



Main initiatives:

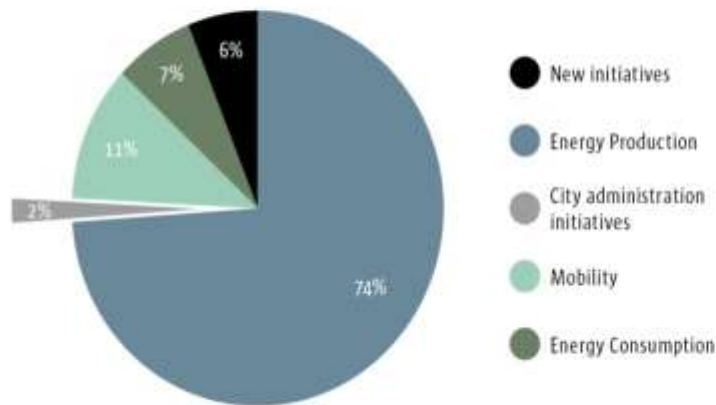
- » On the way to being the world's best city for cyclists
- » Cars on electricity, hydrogen and biofuels
- » Wider use of public transport
- » Intelligent traffic management improves traffic flow
- » Mobility planning and inducement

City Administration Initiatives

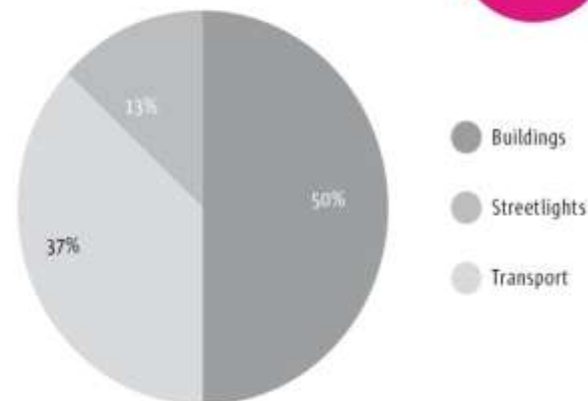
Major goals for 2025:

- » Reduce energy consumption in municipal buildings by 40 pct.
- » Municipal new build up to 2015 meets the requirements of the 2015 Low Energy Class and up to 2020 meets the requirements of the 2020 Low Energy Class.
- » The City administration's vehicles run on electricity, hydrogen or biofuels
- » The energy consumption for street lighting in Copenhagen is halved
- » There is a total of up 60,000 sq meters solar panels on existing municipal buildings and municipal new build

SHARE OF TOTAL CARBON REDUCTION



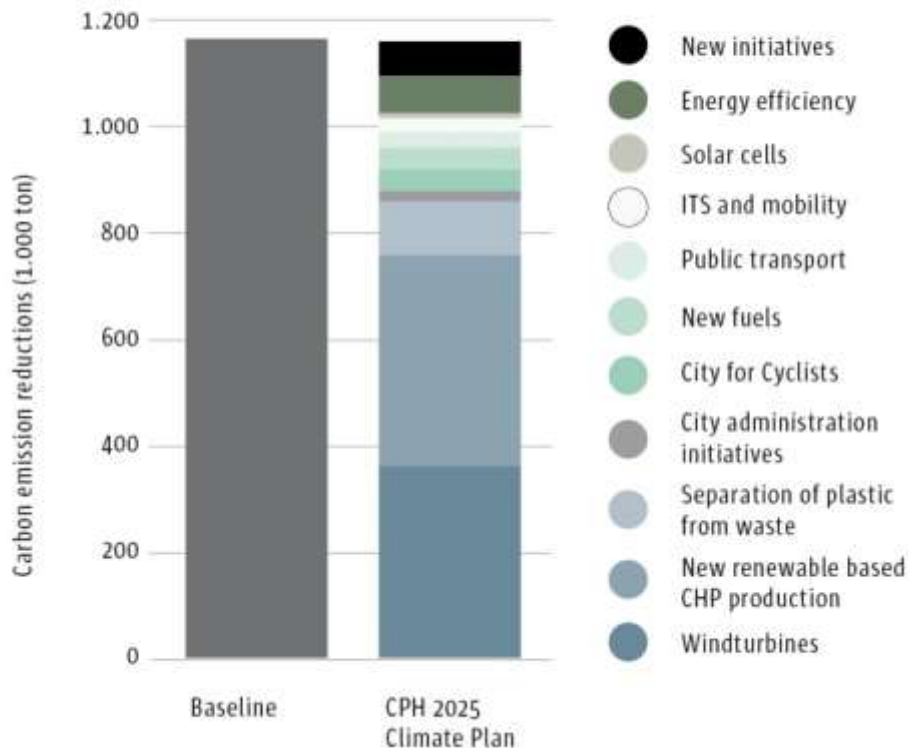
ALLOCATION OF REDUCTIONS FROM CITY ADMINISTRATION INITIATIVES



20.000 TONS CO₂

Carbon neutrality in 2025 - ambitious, but realistic

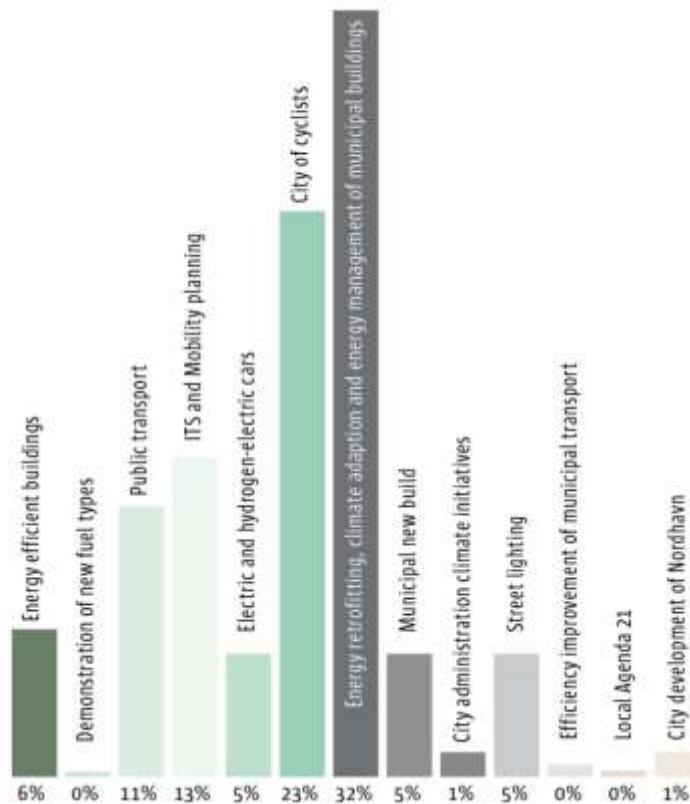
CARBON EMISSION REDUCTIONS



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Municipal investments 2013-25



Municipal investments 2013-25:
DKK 2.7 bn.

Municipal investments 2013-16:
DKK 1.4 bn.

Savings 2013-25:
DKK 1.1 bn.

Yearly savings after 2025:
DKK 125 mio.

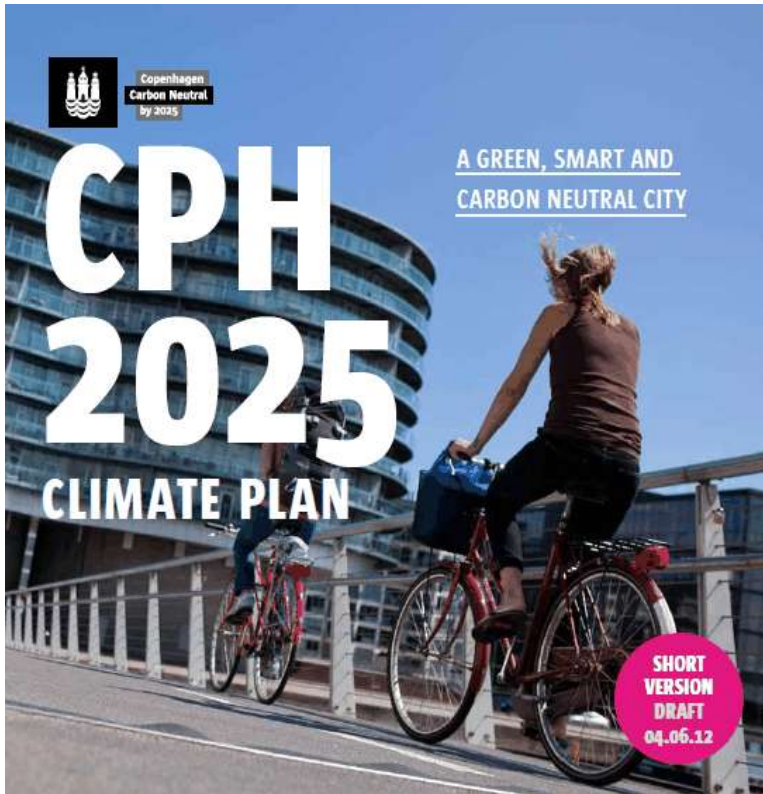
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Effect on employment

Green investment	DKK million	Jobs pr million invested	Effekt on employment (man years)
Municipal investments	2.700	1,3	3.000
Low energy new buildings	6.000	1,3	8.000
Energy retrofiting	3.600	1,3	5.000
Energy production	10-15.000	1,3	13-20.000
Total	22-27.300		29-36.000

The road to COPENhagen 2025



- **CO**mmitments
 - » Strong political commitments in the City Council
 - » Financial support to new initiatives
- **CO**llaboration
 - » Broad stakeholder involvement
 - » New partnership models
- **CO**ordination
 - » Common business plans
- **CO**mmunication

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Thank you for your attention

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