

# Stockholm

Fossil free and climate positiv 2040



# Climate goals

## Long term:

- A fossil free City 2040
- A climate positive City 2040
- A fossil free organisation 2030

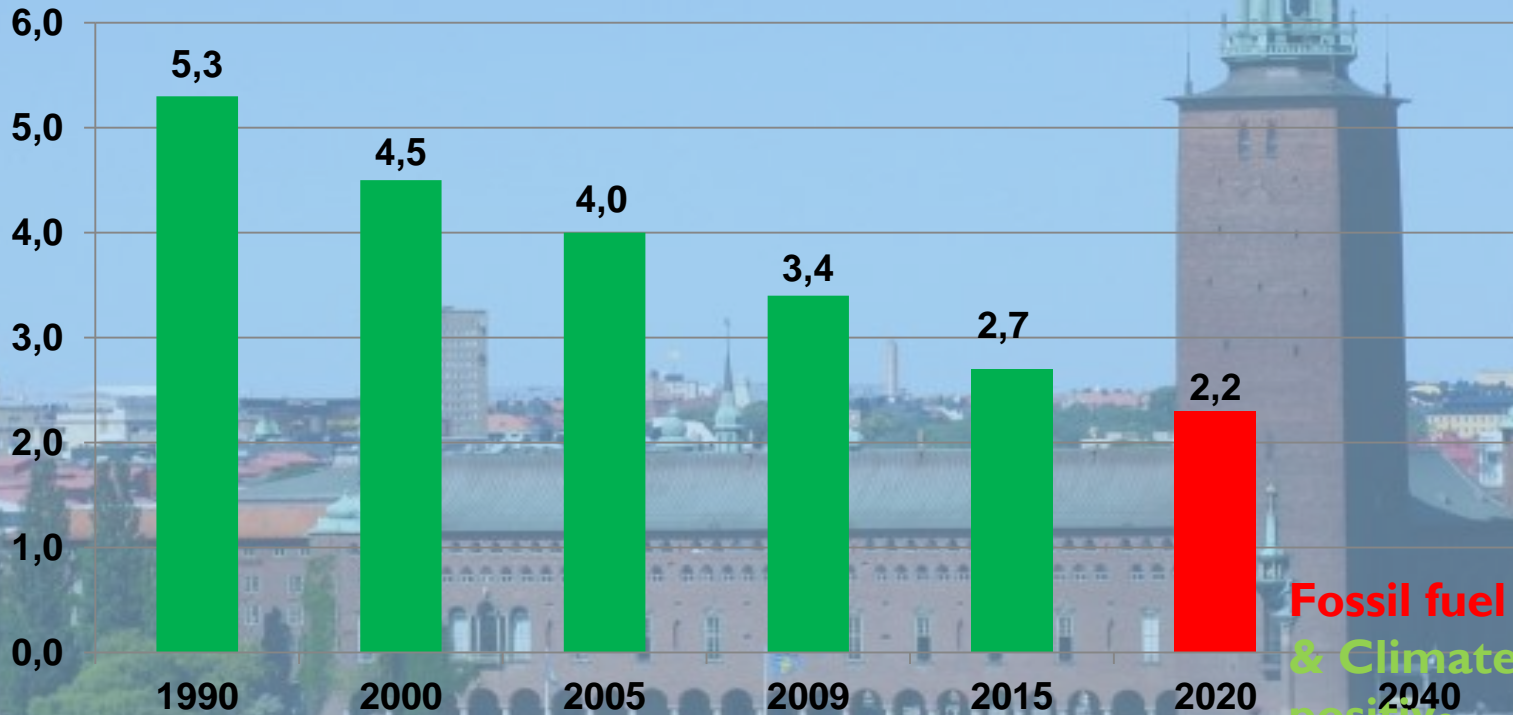
## Short term:

- Max: 1,5 tonnes /cap 2023



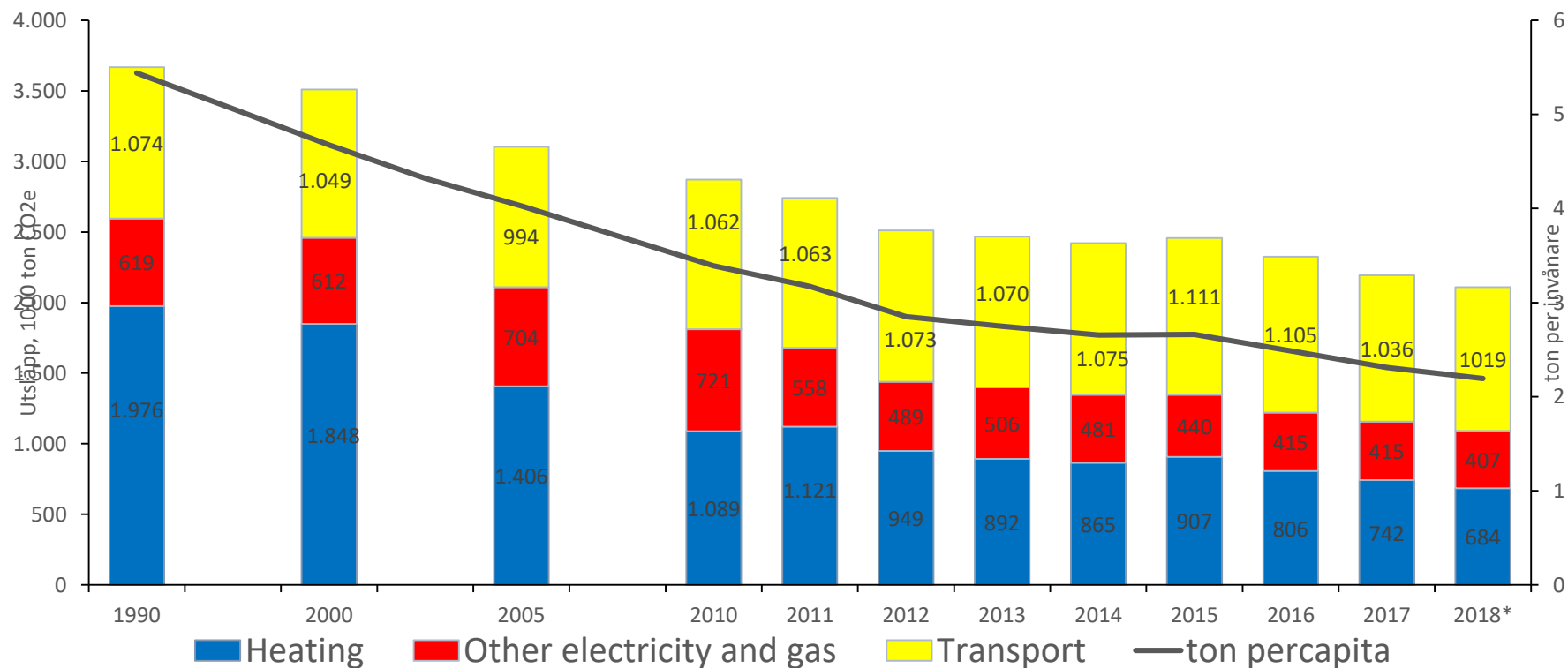
# A fossil-free and climate positive Stockholm 2040

CO<sub>2</sub> eqv t/cap

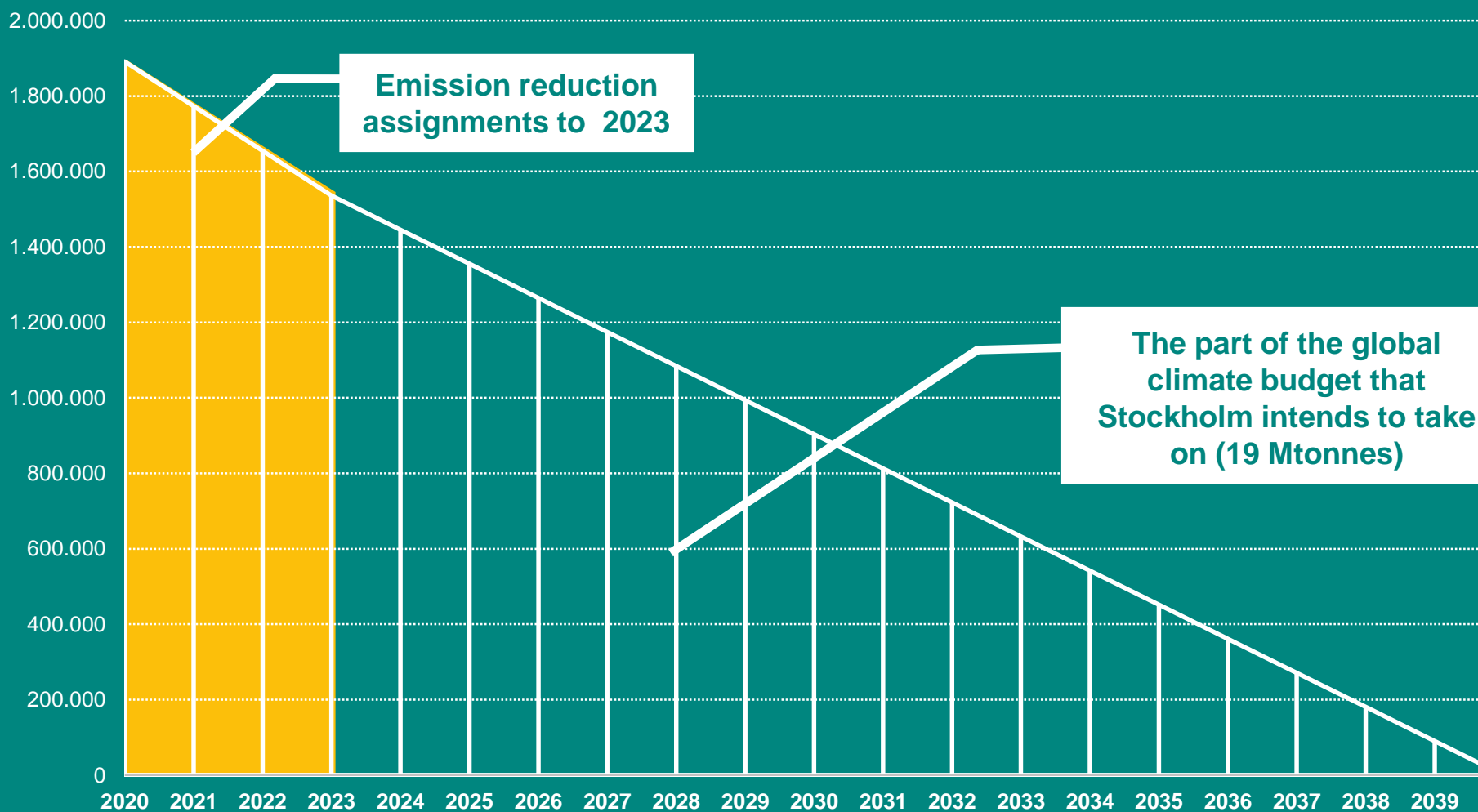


Fossil fuel free  
& Climate positive

# Green-house gas emissions 1990-2018



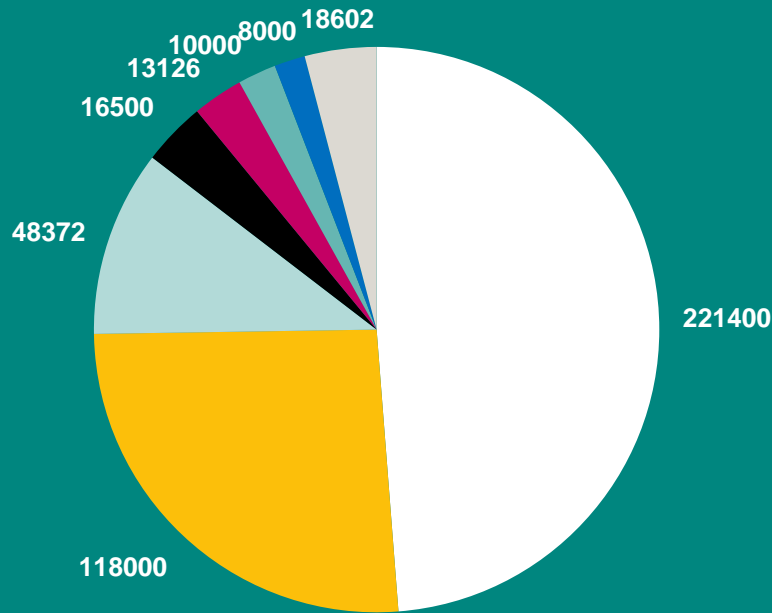
# The Stockholm climate budget 2020–2040



# Emission reduction assignments per committee



Sets the annual emission reduction to be achieved by 2023 (tonnes CO<sub>2</sub>e)



- Kommunstyrelsen
- Stockholm Exergi
- Miljö- och hälsoskyddsnamnden
- Exploateringsnamnden
- Stockholm Vatten och Avfall AB
- Trafiknamnden
- Stockholms Hamn AB
- Övriga

# Reduction targets for buildings

- Max 55 kwh/m<sup>2</sup> (heating, building electricity and hot water) when building on city owned land (30 % lower than national building codes)
- All city boards must reduce energy use by 5%
- Large renovations must improve energy efficiency by 30%

# The district heating system

- Market share >80 %
- Fossil fuel <20 %
- Electricity production eqv 1/5 of Stockholms use
- New market solutions





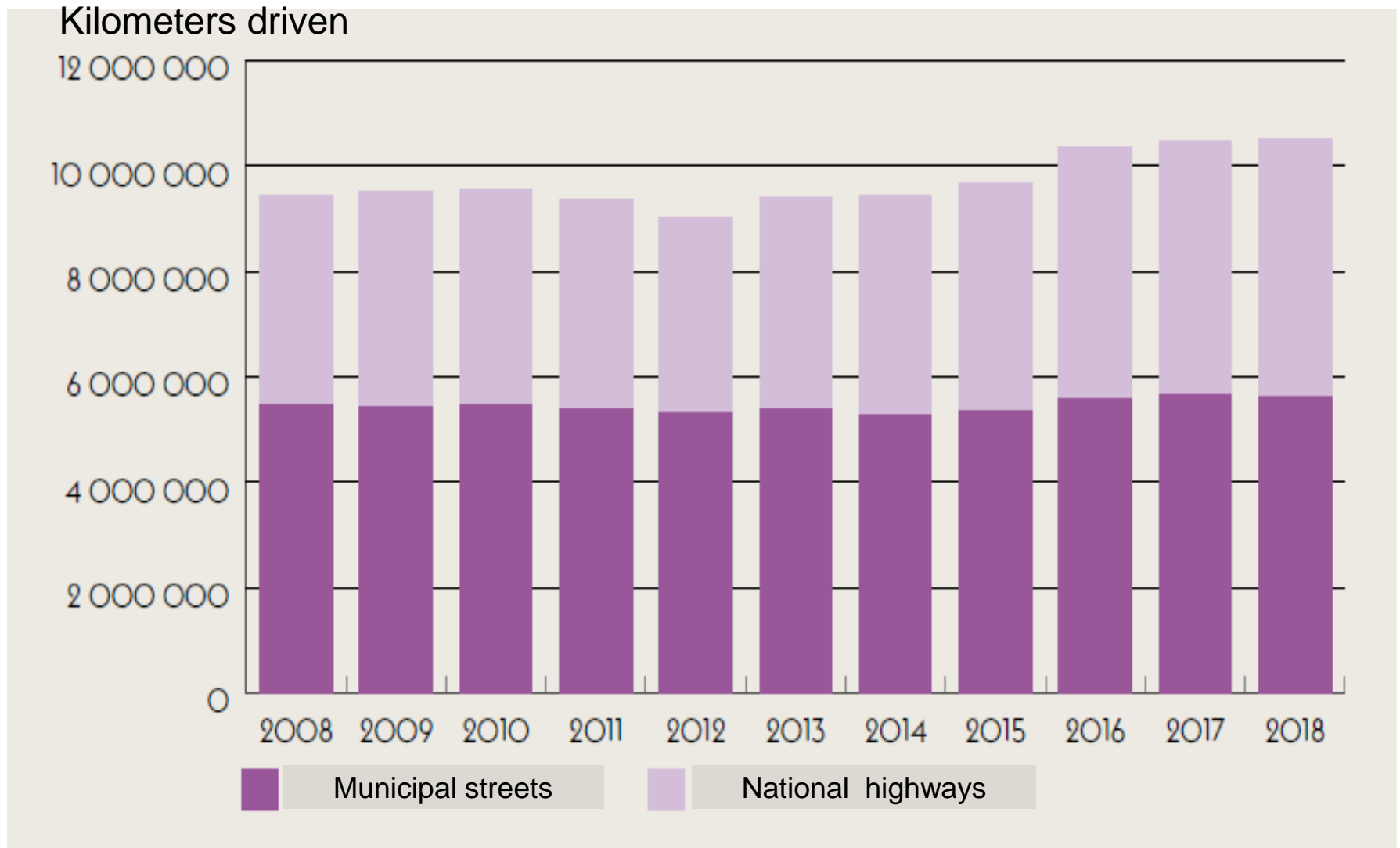
# 1990: Swedish CO<sub>2</sub>-tax

- 1990/1991 tax reform
  - Reduced tax on labour
  - Increased taxes on energy:
  - VAT on energy
  - CO<sub>2</sub> tax
  - Investment state aid for fossil free energy production
- 
- *Examples of tax*
  - *Coal: Tax 380 USD/ton*
  - *Oil: Tax 420 USD/m<sup>3</sup>*

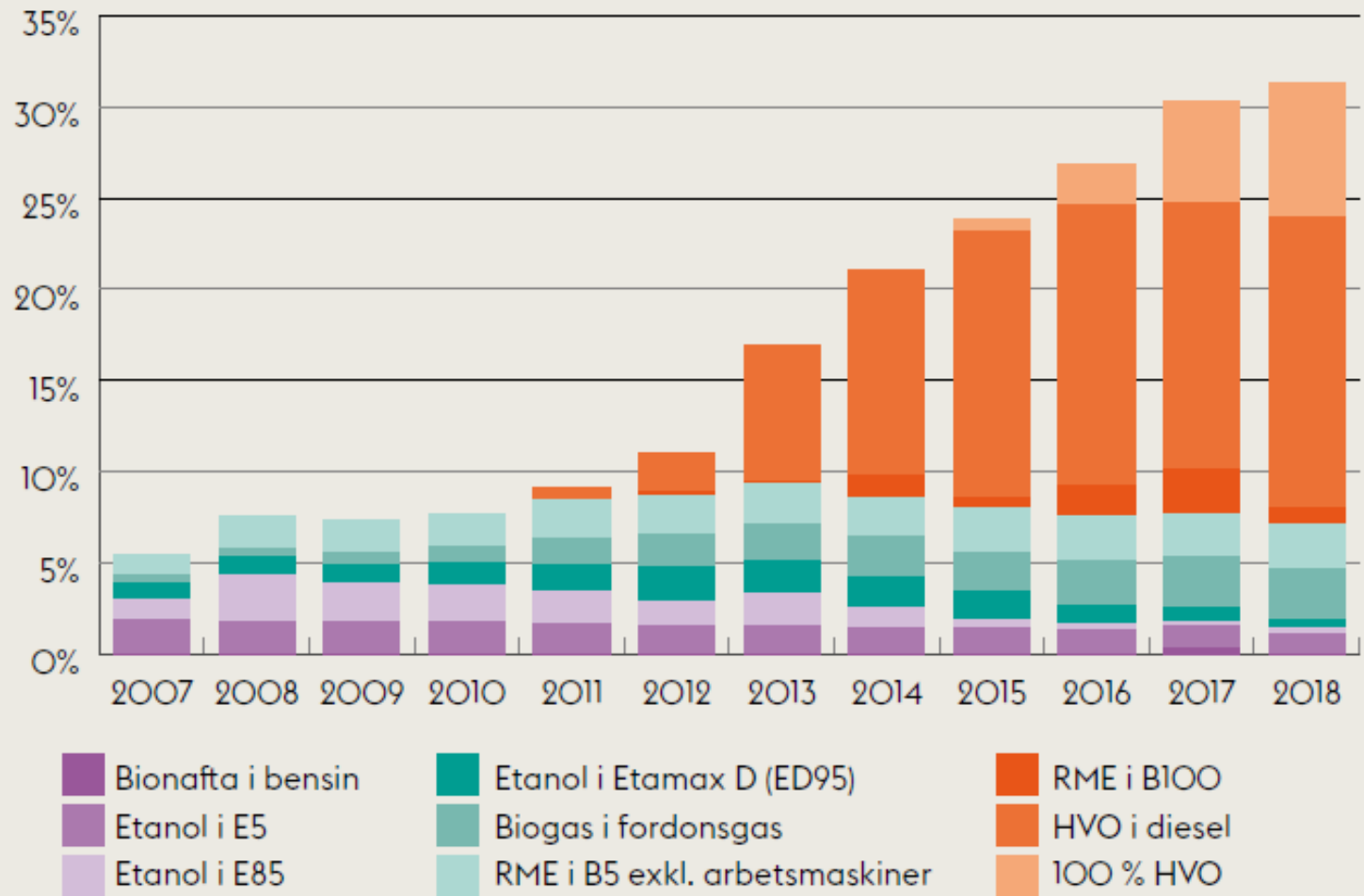
# Transport



# Development of road transport for people and goods



# Electric vehicles and renewable fuels for transport



# Conclusions

- If structured well cities can do a lot to reduce GHG-emissions!
- Sometimes national (and supernatural) legislation can create restraints on what cities can do
- Reducing these restraints must be of top priority if Climate goals are to be met.



# Thank you!

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