Financing Sustainable, Climate Neutral Cities – The City Perspective

2 November 2020
14:30-16:00 CET
Welcome!

There is no lack of sustainable, climate friendly and smart technologies, but there seems to be challenges to implement and upscale them in city structures. Could finance be a barrier?

- Today: Selected cities share their experiences, progress and challenges in developing a sustainable, climate neutral city; with a specific focus on the financing need and potential solutions for funding.
- We (SEI, Cleantech Scandinavia and SSE-SIR Misum) - Viable Cities’ Finance project (2020-2022), funded by Viable Cities
Our panelists

- **Gustaf Landahl**
  Head of Department of Planning and the Environment, City of Stockholm

- **Frans-Anton Vermast**
  Senior Strategy Advisor Low Carbon and Connected Urban Planning, Amsterdam City

- **Bud Braughton**
  Smart Columbus Project Manager

- **Serge De Gheldere**
  Lead at Futureproofed & Klimaatzaak; Member of the Board and Executive Committee of Leuven2030
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<td>Introduction to the session</td>
<td>Fedra Vanhuyse, Head of Societal Transitions Unit – Senior Research Fellow, Stockholm Environment Institute</td>
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| 14:35 | The city perspective                           | Gustaf Landahl, Head of Department of Planning and the Environment, City of Stockholm  
|       |                                                | Frans-Anton Vermast, Senior Strategy Advisor Low Carbon and Connected Urban Planning, Amsterdam City  
|       |                                                | Bud Braughton, Smart Columbus Project Manager                               |
| 14:50 | Financing sustainable city plans               | Serge De Gheldere, Lead at Futureproofed & Klimaatzaak; Member of the board and Executive Committee of Leuven2030 |
| 14:55 | Q&A session between moderator and panellists   |                                                                         |
| 15:30 | Q&A session with the audience                  |                                                                         |
| 15:55 | Concluding remarks                             | Fedra Vanhuyse                                                            |
House rules

- Use the Q&A chat function to post your questions for the Q&A session at 15:30 CET
- Please state your name and organization/country
- Be short and clear
Gustaf Landahl

Head of Department of Planning and the Environment, City of Stockholm
A Fossil-free and climate positive
Stockholm 2040

Gustaf Landahl
Head of dept. Planning and the environment
GrowSmarter coordinator
Development and goals

CO₂ eqv t/cap

- 1990: 5.3
- 2000: 4.5
- 2005: 4.0
- 2009: 3.4
- 2015: 2.7
- 2020: 2.2
- 2040: Goals

Real development

Fossil fuel free & Climate positive
The Stockholm climate budget 2020–2040

Emission reduction assignments to 2023

The part of the global climate budget that Stockholm intends to take on (19 Mtonnes)
Emissions and growth are decoupled
Implementation, a few examples

• The Swedish CO2 tax: 1991
• Action plans to reduce GHG-emissions: since 1996
• Combining environmental and financial information to the financial sector: 2018
• Pilot projects: The GrowSmarter project 2015-19 Created a Market for 12 Smart Solutions!: 2019
GROW SMARTER:
TRANSFORMING CITIES FOR A SMART, SUSTAINABLE EUROPE
Frans-Anton Vermast
Senior Strategy Advisor Low Carbon and Connected Urban Planning, Amsterdam City
Let’s create better streets, neighbourhoods and cities.
Energy
from fossils to clean, creating sustainable energy options for all

Smart City
approach to boost transitions

Circular Economy
from single use to restorative and regenerative use of resources

Digital
from closed to open, using tech for social value

Mobility
from crowded and polluting to smart and sustainable mobility solutions
Zuidas Mobility Experience

• Give up your car for 1 month and get €€
• Use as many different modalities
• Participate in employee research
• What does the traveler want with MaaS?
Thank you!
Want to join the movement? www.amsterdamsmartcity.com
Bud Braughton
Smart Columbus Project Manager
PROGRESS THROUGH PARTNERSHIPS

- Installed 552,000+ Smart Meters
- Installed 900+ EV charging stations
- Installed 419 workplace chargers
- Purchased 313 electric fleet vehicles
- Engaged 40% of regional car dealerships
- Opened world-class EV showcase facility
- Forged unprecedented partnerships to increase e-mobility options
- Conducted 12,400+ EV test drives
- Influenced 3,458 people to buy an EV in 3 years
USDOT PORTFOLIO

ENABLING TECHNOLOGIES
- CONNECTED VEHICLE ENVIRONMENT

ENHANCED HUMAN SERVICES
- MULTIMODAL TRIP PLANNING/COMMON PAYMENT SYSTEM
  - SMART MOBILITY HUBS
  - MOBILITY ASSISTANCE
  - PRENATAL TRIP ASSISTANCE
  - EVENT PARKING MANAGEMENT

EMERGING TECHNOLOGIES
- CONNECTED ELECTRIC AUTONOMOUS VEHICLES
  - TRUCK PLATOONING
City of Columbus

Government Operations CO\textsubscript{2}e Emissions

Sector Percentage of Total 2019

- Solid Waste Facilities: 36%
- Water & Wastewater Treatment Facilities: 29%
- Buildings & Facilities: 22%
- Vehicle Fleet: 7%
- Street Lights & Traffic Signals: 6%
Climate Action Plan

- Global Covenant of Mayors for Climate & Energy
  Goal 2017: 40% GHG Reduction of Municipal Operations from 2005 Baseline by 2030
Climate Action Plan: Renewable Energy

- Municipal Buildings Onsite Projects
- Division of Power-Power Purchase Agreements
- Private Business Investment
- Community Choice Aggregation
Promoting a ballot measure on Community Choice Aggregation to appear on the ballot for the November 3, 2020 election. If City of Columbus voters approve, it would allow the City to transition to 100% renewable energy by 2022.

**Community Choice Aggregation**

**How it will work**

**Renewable Energy**

**Same Reliable Service**

**Your Community Choice**

**100% Clean Energy**

Columbus’ goal is 100% renewable energy by 2022 and to be carbon neutral by 2050. Clean energy can include sources such as wind, solar, and battery storage.

**Clean Energy Jobs**

Through community choice aggregation and creating a large demand for renewable energy sources, Columbus can support good jobs and workforce development in the clean energy industry.

**Community Choice**

Aggregation gives the City the ability to pool residents and small businesses together as a group to buy electricity on their behalf, providing competitive pricing and more local control over the energy sources.
Serge De Gheldere

Lead at Futureproofed & Klimaatzaak;
Member of the board and Executive Committee of Leuven2030
Mitigation cost curve of all measures

This curve shows the mitigation cost of all measures. Their mitigation potential is on the x-axis and their cost in € per ton CO₂ on the y-axis. The surface of the bars represents the cost of the measure after 15 years.
Concluding remarks
Concluding remarks

National legislation necessary to push sustainable city agenda; but regulatory “holiday” for pilot projects
From pilot to scaling: private sector to step in; city government facilitator in this
Combine different investment needs to have more leverage and go to market;
Finances: balance needed
Transportation needs to be tackled – change need for commuting; add broadband; EV and biofuel cars; overcome range anxiety
Declining and rural cities: help from bigger cities – solutions available for everyone
Asking for forgiveness instead of permission?

Next sessions:
- November 9: The role of private financiers
- November 16: Funding mechanisms
- November: 16: The business case for sustainable cities finance

More info: https://smartcityscandinavia.com/
Thank you!