HUPMOBILE - Holistic sustainable mobility solutions

Final Seminar: journey towards holistic mobility and planning

REA
Riga Energy Agency

# RIGA TOWARDS CLIMATE NEITRALITY

## SUSTAINABLE ENERGY AND CLIMATE ACTION PLAN 2030

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# RIGA: BASELINE


- Size: **304 km$^2$**
- Population: **627 000 (2020)**
- Capital: **50% of the population** and **60% of economically active businesses** are concentrated in Riga and Riga agglomeration
- Northern European city: **60% of energy resources are used for heat production**

**30.09.2008**
**Riga: the first Latvian municipality to sign the Covenant of Mayors**

**06.07.2010**
**Riga City Sustainable Energy Action Plan 2010-2020**

**08.07.2014**
**Riga Smart City Sustainable Energy Action Plan 2014-2020**

**06.07.2021**
**Riga Sustainable energy and climate action plan**

# RIGA ENERGY AGENCY (REA) HISTORY

REA
Riga Energy Agency

- REA is an independent, non-profit municipal establishment,
- Founded in 2007 for the purpose of:
  - planning, management, monitoring and coordination of sustainable energy supply and consumption,
  - promotion of energy efficiency and renewable energy sources in Riga City Municipality,
  - enhancing the shift to sustainable transport modes and solutions,
  - promotion of energy efficient renovation of city's housing stock and public buildings,
  - as well as, rising awareness amongst the local population on sustainability issues and ensuring public awareness and public involvement within its core activities.

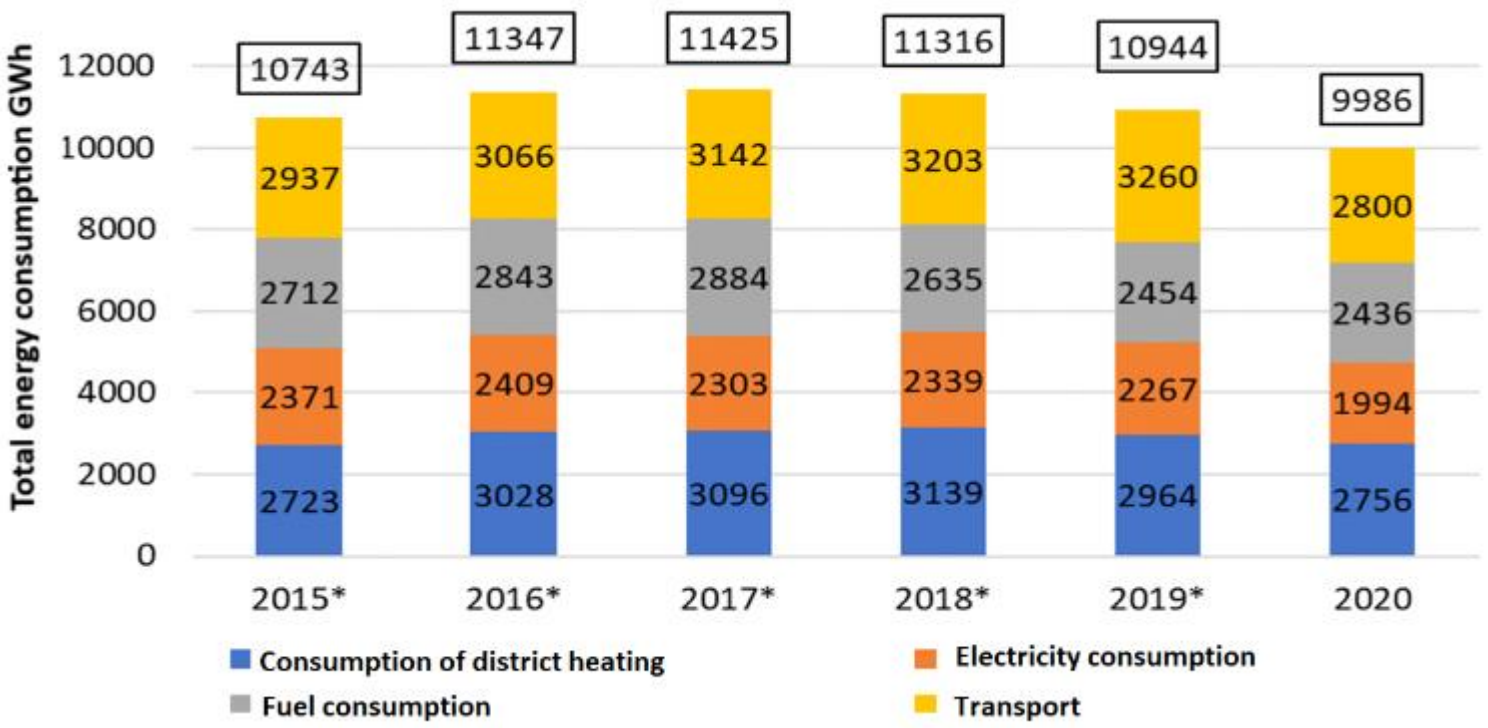
# ENERGY PLANNING FRAMEWORK

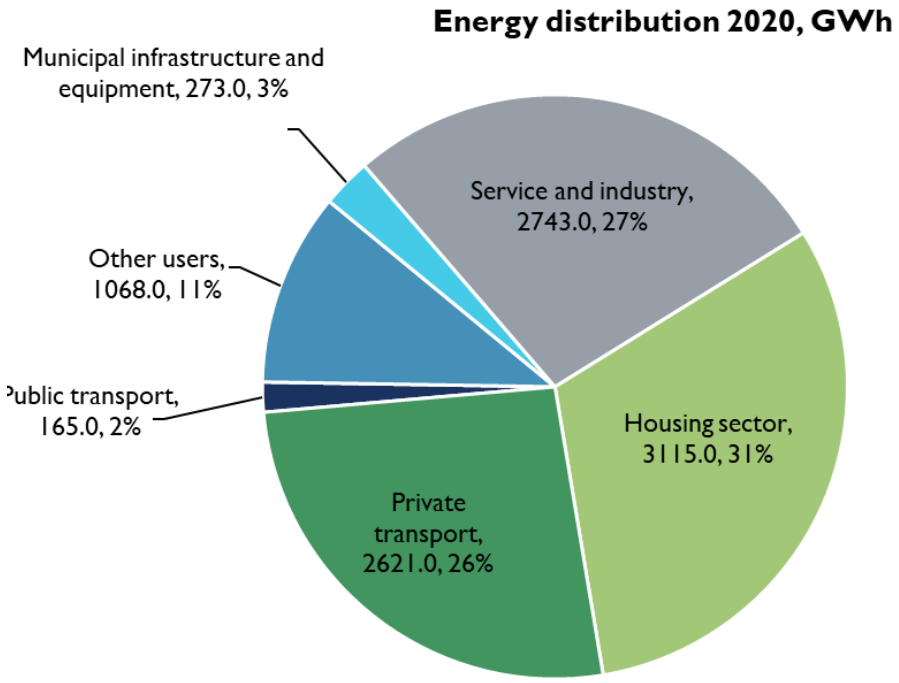
- In 2021 Riga joined the Paris Climate Declaration **"Cities Leading the Way to Climate Neutrality"**
- Municipal **Climate Neutrality Commission** has been established in the Riga City Council to coordinate the achievement of climate and emission reduction goals

*"Our goal is to make Riga the first climate neutral city in the Baltic states and we want to be among the first 100 climate neutral cities in Europe"*

*Mārtiņš Staķis, Mayor of Riga*

# ENERGY CONSUMPTION OF THE CITY OF RIGA



# CHALLENGES

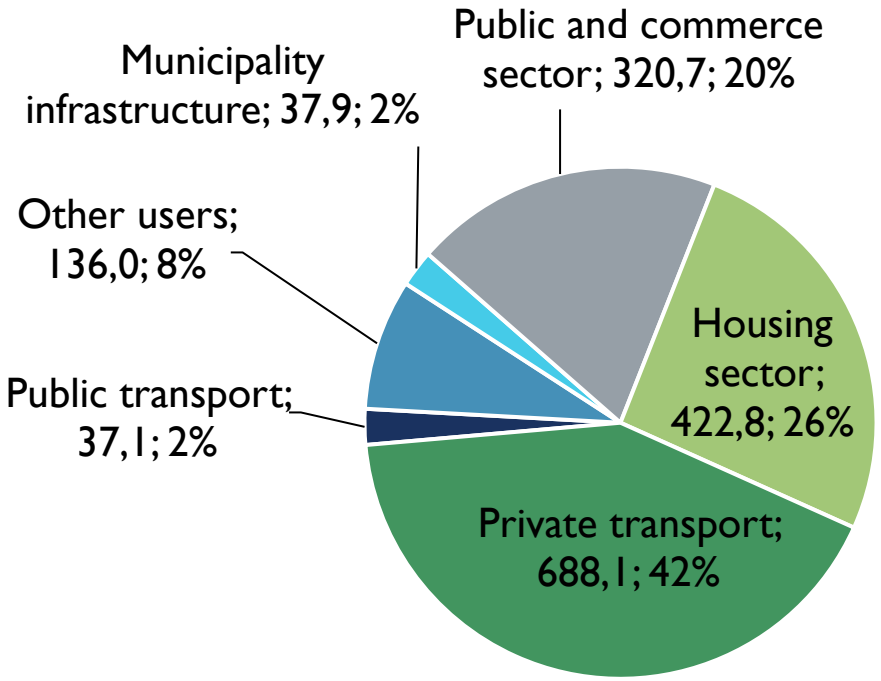
- **Transport sector** contributes to 44,4% of total $CO_2$ emissions in Riga city in 2020. The challenge is to reduce emissions although the vehicle mount on streets increases every year.
- Riga city has been struggling in improving the **housing sector energy efficiency** and energy poverty. It is estimated that there are about 6000 buildings in need of deep renovation.
- Although the share of renewable energy sources in city centralized heating system in 2020 was 31,8%, there is a need for **zero emission technologies in heat supply**.

# TARGET

Climate neutrality 2030 municipality infrastructure

Be the first climate neutral city in Baltic states and top 100 cities EU 2040-2045

# $CO_2$ EMISSIONS AND TARGETS OF THE CITY OF RIGA




| Target | Target value | Target year | Base value | Base year |
|---|---|---|---|---|
| **Reduce total $CO_2$ emissions** | -25% | 2030 | 1742 $ktCO_2$ | 2019 |
| | -72% | | 4295 $ktCO_2$ | 1990 |
| **Reduce $CO_2$ emissions in energy production sector** | -25% | 2030 | 914 $ktCO_2$ | 2019 |
| **Reduce $CO_2$ emissions in the transport sector** | -30% | 2030 | 729 $ktCO_2$ | 2019 |
| **Riga city council infrastracture** | -100% | 2030 | 38$ktCO_2$ | 2019 |

New energy planning framework for Riga is based on the **Cities4ZERO** methodology, which aims to closely integrate urban decarbonisation actions and the implementation of smart city solutions using a systemic thinking approach.

Thus, based on the basic principles of systemic thinking and the application of system dynamics to the analysis and solution of environmental problems, **an integrated environmental policy is developed**.

# BOLD CITY VISION-2050

# RIGA CITY SUSTAINABLE ENERGY AND CLIMATE ACTION PLAN – 2030

# (SECAP-2030)

Horizon 2020

atelier
Positive Energy Districts

# MODELLING OF THE ENERGY AND CLIMATE SCENARIOS

- **VISION – 2050:** (macro) modelling tools (LEAP, EU CALC)

LEAP

EUCALC

*Explore sustainable European futures*

Horizon 2020

EUCityCalc

EUROPEAN CITY CALCULATOR

# «BIG» DATA

Establishment of a **municipal urban data repository**, aimed to support development of smart energy services:

- Data from heat and electricity networks – to increase network efficiency, reduce energy losses, etc.
- Heat and electricity consumption data – to optimize network management, integration of decentralized solutions, development of energy communities, etc.
- Energy performance of buildings – to improve the energy performance of buildings and the quality of the living environment
- Financial data related to energy efficiency – to evaluate the potential of the energy efficiency market

Horizon 2020

i-nergy

Artificial Intelligence for Energy

# RECENT ACTIVITIES

- Implementation of energy management system
- Bold city vision
- Development of one- stop-shop
- Pilot project for construction material exchange point
- Development of stakeholder group and guidelines for implementation of circular economy principles in city planning and development

# THANK YOU FOR YOUR ATTENTION!