

# 23<sup>rd</sup> EUROPEAN WEEK of REGIONS and CITIES

Shaping Tomorrow, Together

13 October  
-30 November  
Close to You  
2025



#EURegionsWeek



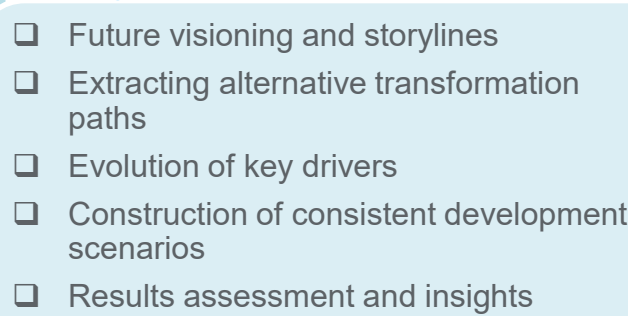
# **PLENTY-Life: Clean Energy Transition in Timiș County**

## **The Lugoj Case Study Results**

**Gabriela Fistiș - Sustainability Consultant**



## -holistic approach, co-creation with local stakeholder-

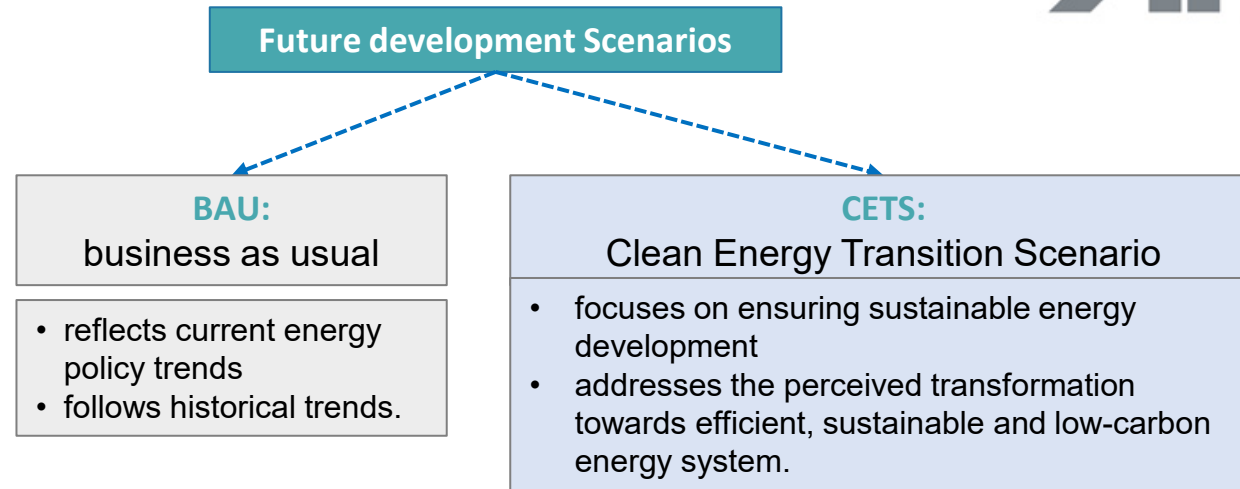


# Key Objectives of Future Scenarios

A scenario is a set of consistent parameters describing possible long-term pattern of demographic, socio-economic, and technological development of a city/region

- To help imagine a range of possible futures, explore alternative development trends and address their related challenges and opportunities to achieve the desired prospects
- Help articulate or think through key considerations and assumptions
- Identify gaps, inconsistencies, dilemmas, uncertainties and interdependencies
- Blend quantitative information and qualitative knowledge
- Extract useful information for decision-making.

# Future Development Scenarios



Scenarios differ in key assumptions; this may include more than one parameter

**BAU: Reference Scenario**  
(current energy policy)

reference values for all parameters:  
slight improvement from the current  
situation, limited innovative evolutions,  
considering historical trends

**CET Scenario**  
(ambitious vision, G7 SDGs)

increasing energy end-use efficiency

accelerated penetration of renewables

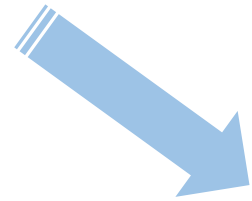
Switch to clean fuel and electrification



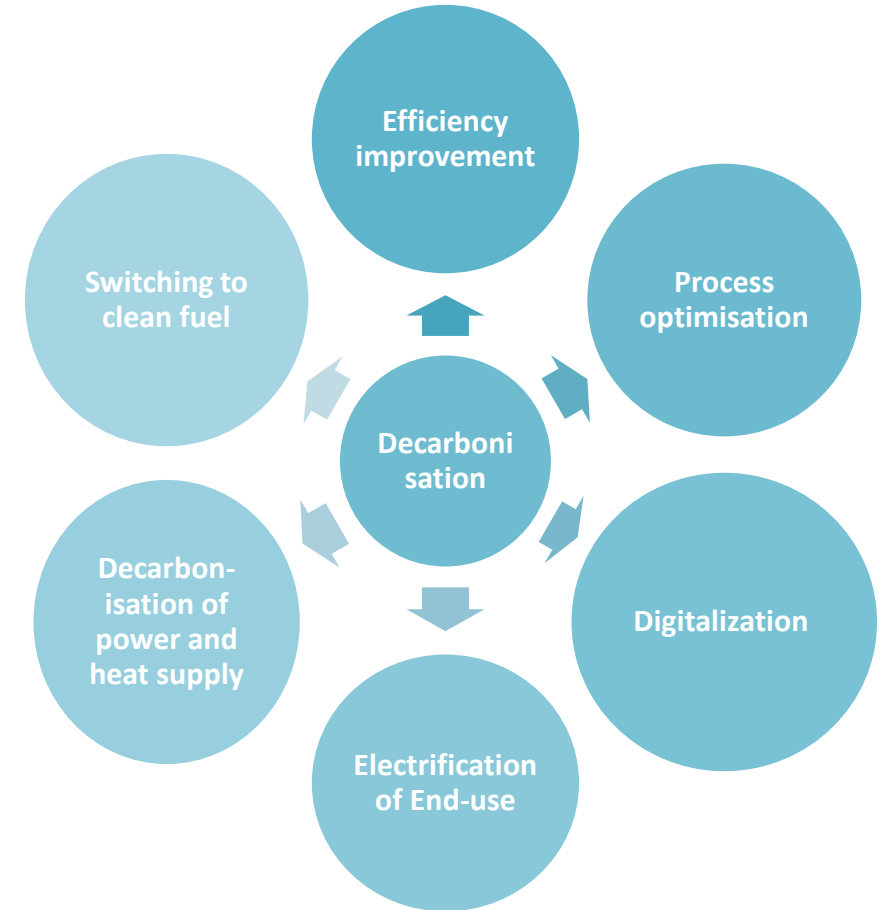
# Clean Energy Transition

## Key decarbonization drivers

- Energy efficiency improvement
- Fuel Switching: clean fuels (Biogas, H<sub>2</sub>,...)
- Promoting local/regional renewables
- Electrification of end use
- Decarbonisation of heat and power
- **Others:** Digitalization, flexibilization, sector coupling



Applied for all  
sectors



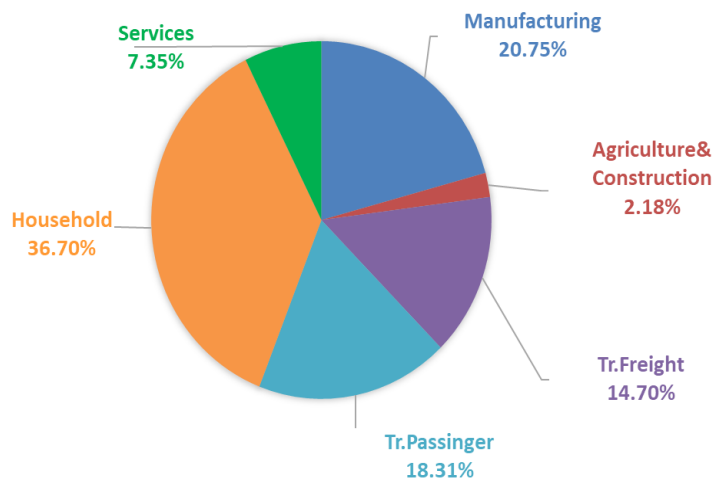
# Base year and BAU scenario



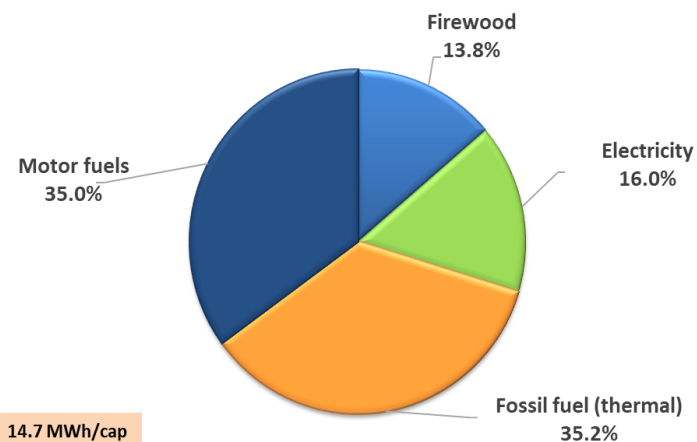
# Lugoj Energy Consumption & CO<sub>2</sub> inventory

-for the base year 2019-

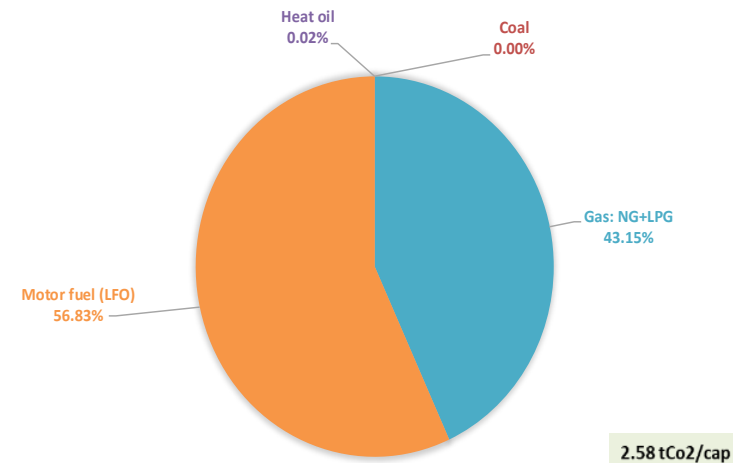
Final energy consumption by sector,  
Lugoj, 2018 (690.8 GWh)



Final energy demand by fuel,  
Lugoj, 2018 (690.8 GWh)



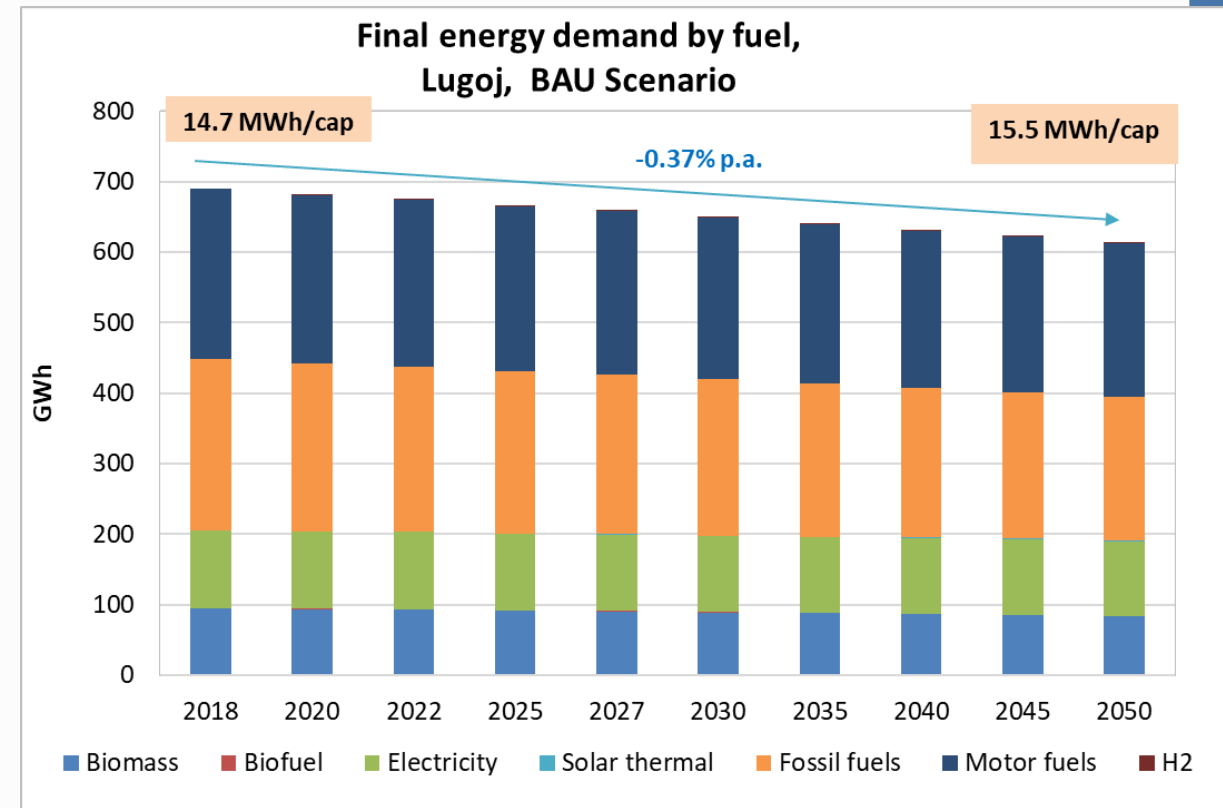
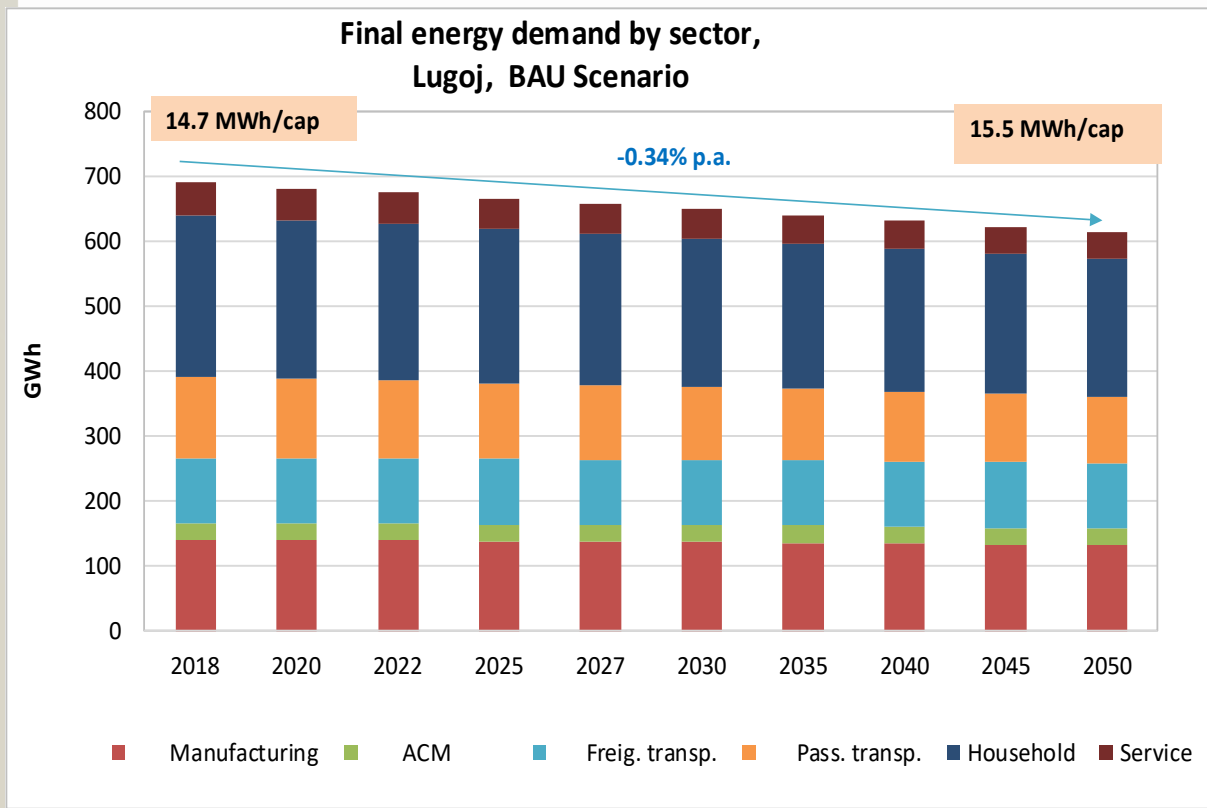
CO<sub>2</sub> emissions inventory, LU, 2018 (113.0 kt-CO<sub>2</sub>)  
Direct energy-related emissions by fuel





# Energy demand projection, Lugoj

## BAU scenario,

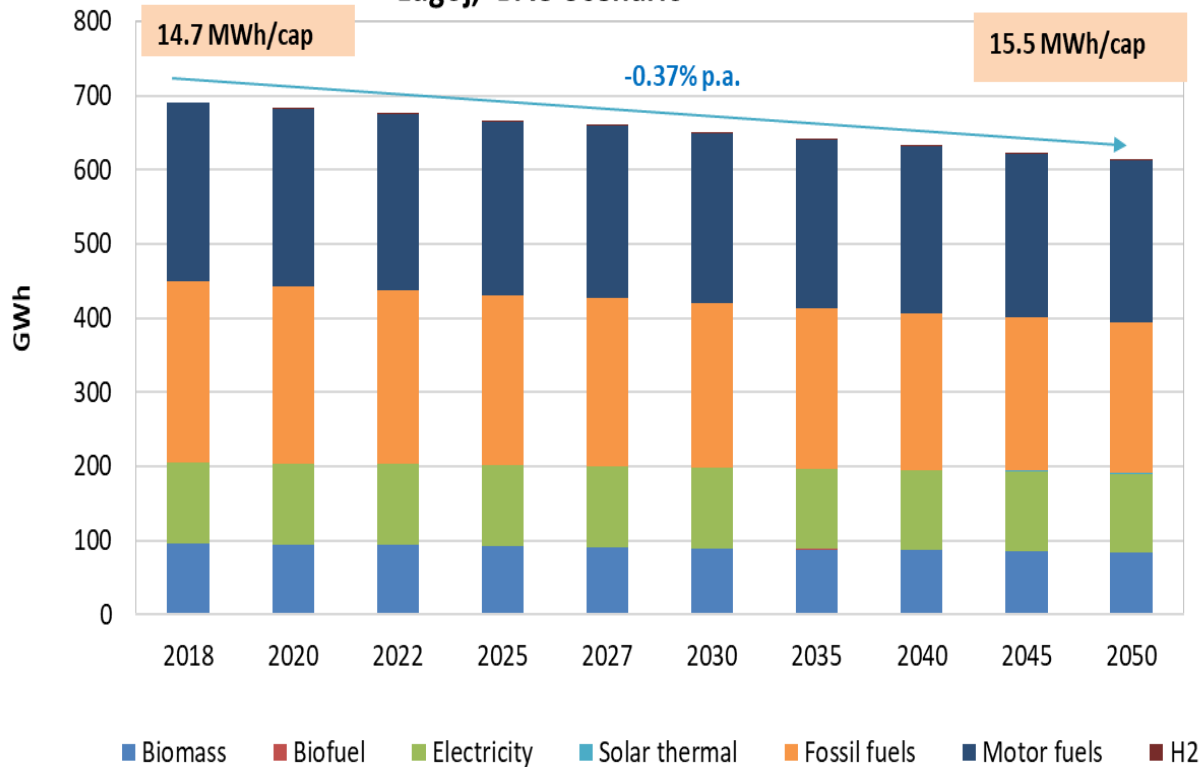


# Results of the CET-Scenario

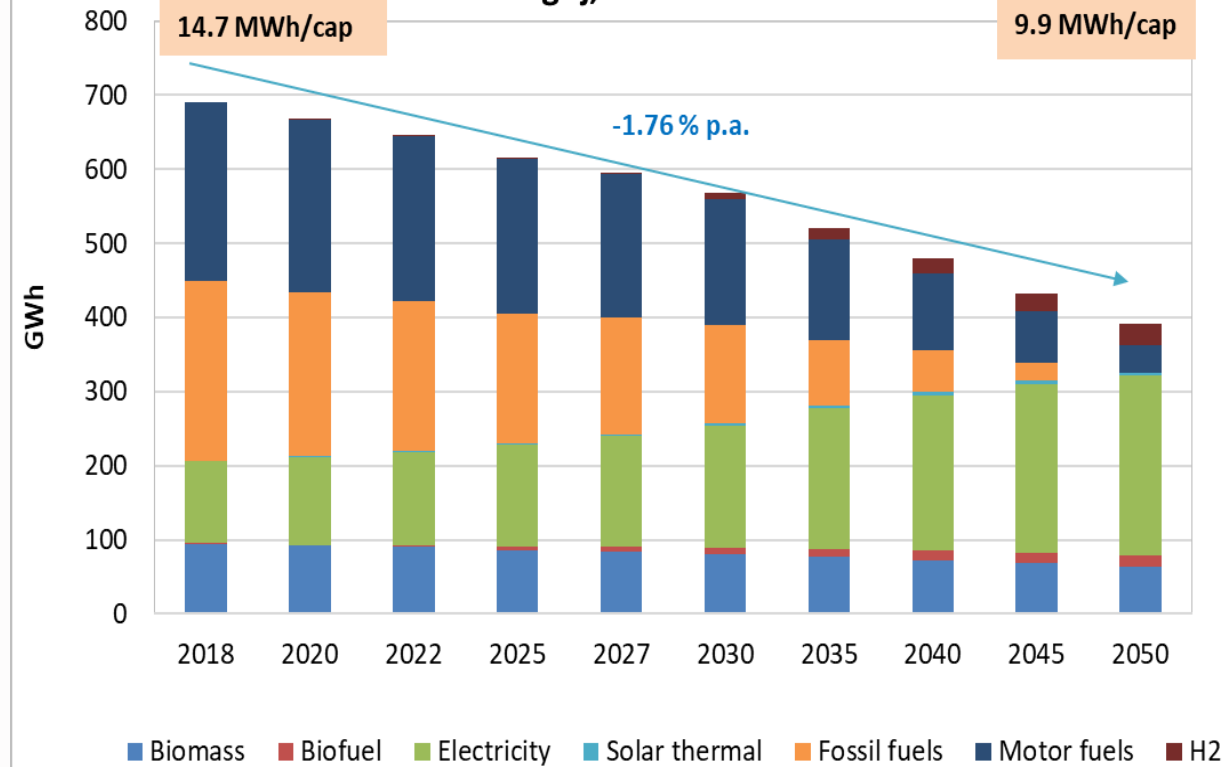


# Final Energy Demand by Fuel, *BAU and CET- Scenario*

Final energy demand by fuel,  
Lugoj, BAU Scenario



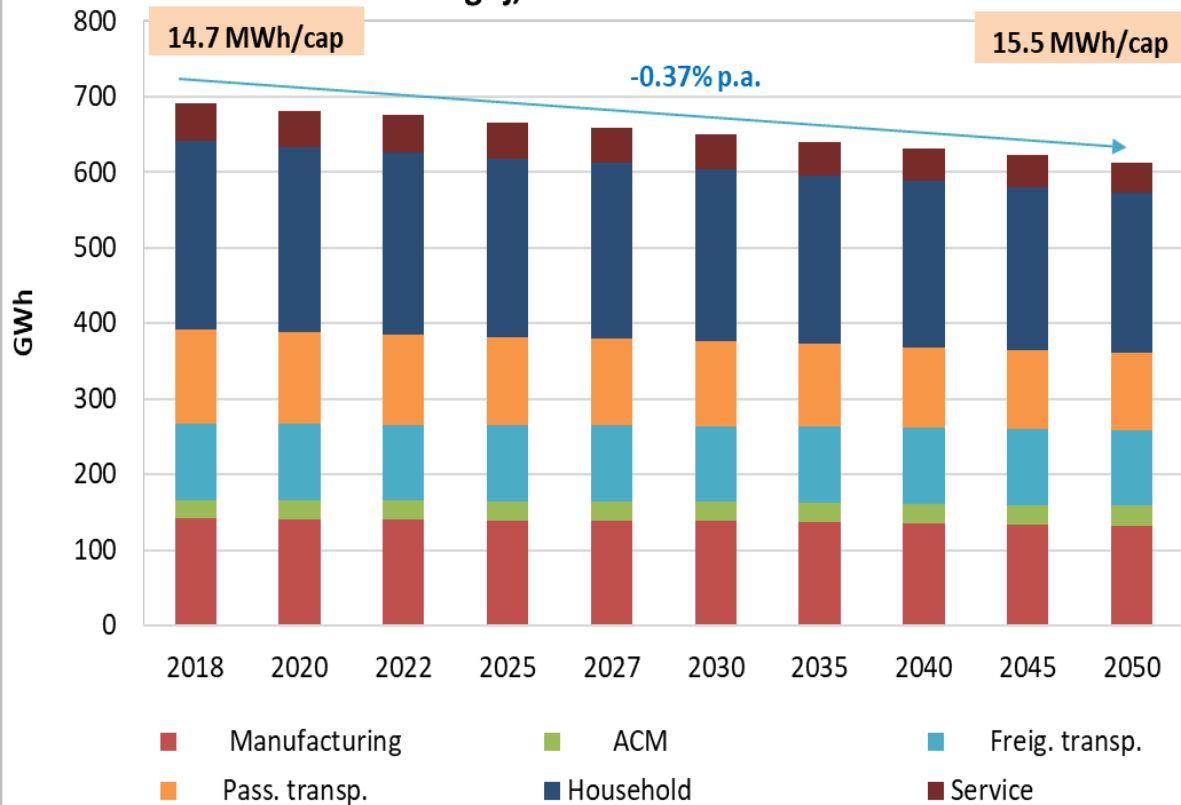
Final energy demand by fuel,  
Lugoj, CET Scenario



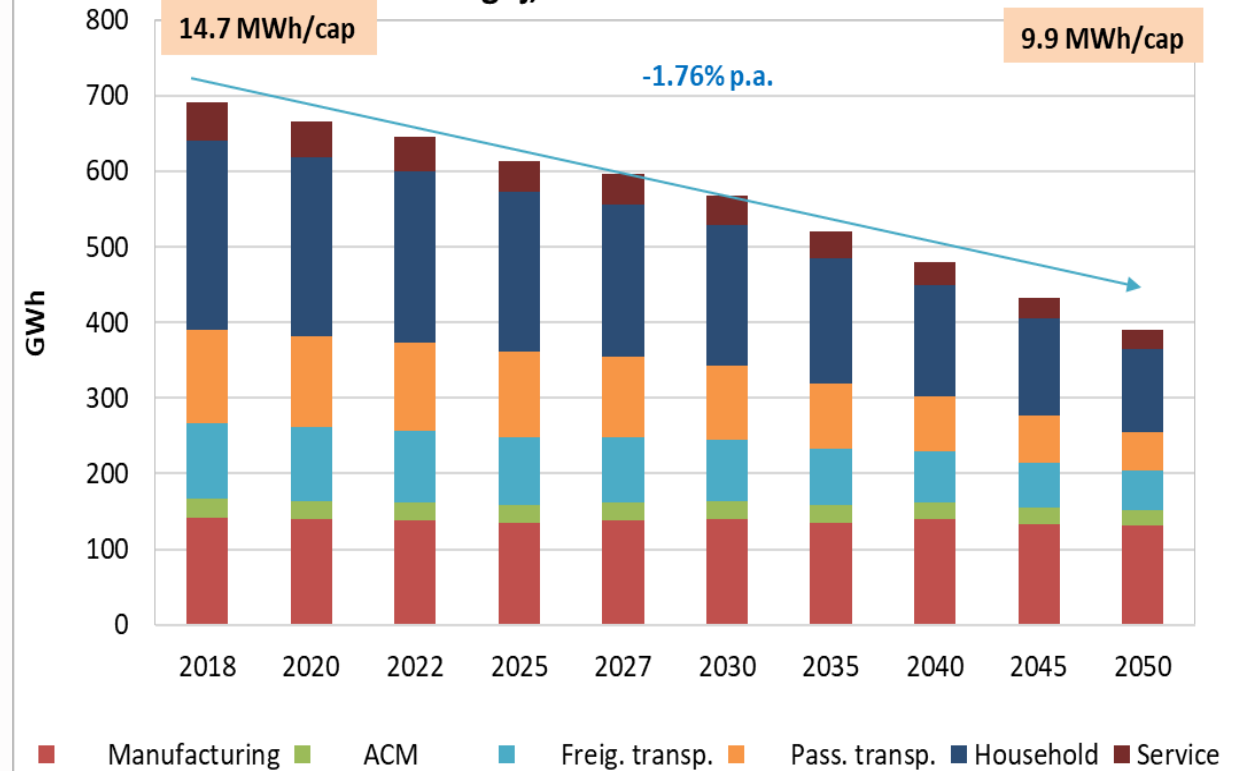
# Final Energy Demand by Sector

## - BAU and CET- Scenario-

Final energy demand by sector,  
Lugoj, BAU Scenario

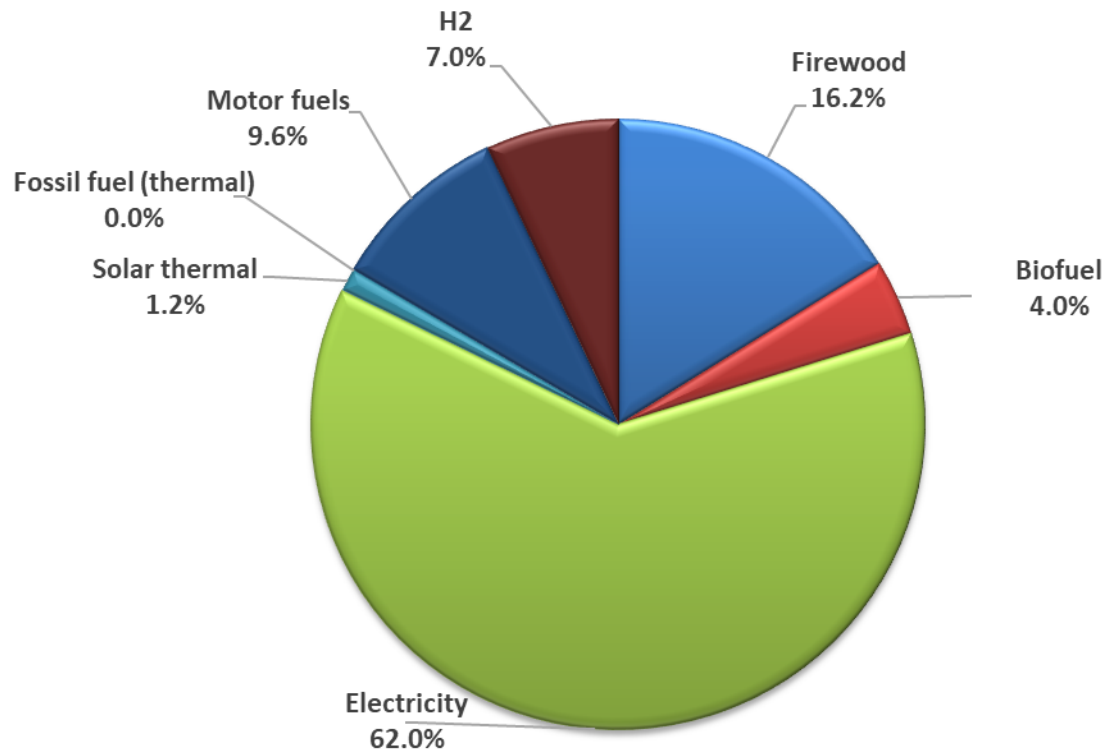


Final energy demand by sector,  
Lugoj, CET Scenario

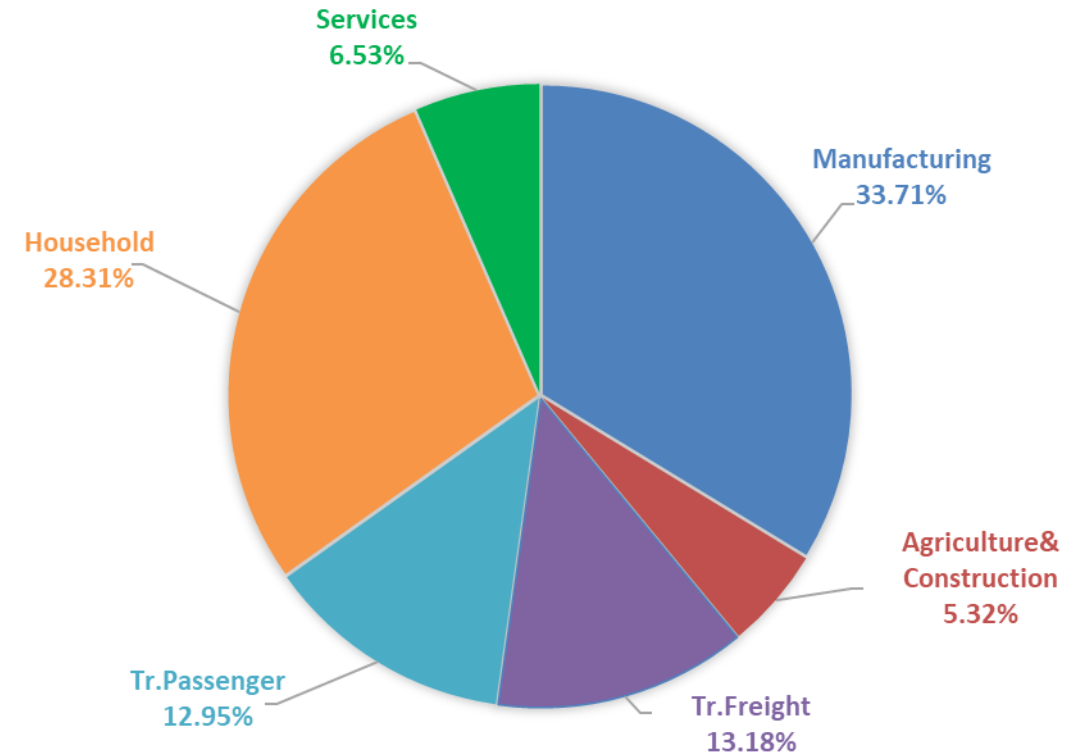


# Final energy demand by fuel and sector of Lugoj in 2050 - CET- Scenario

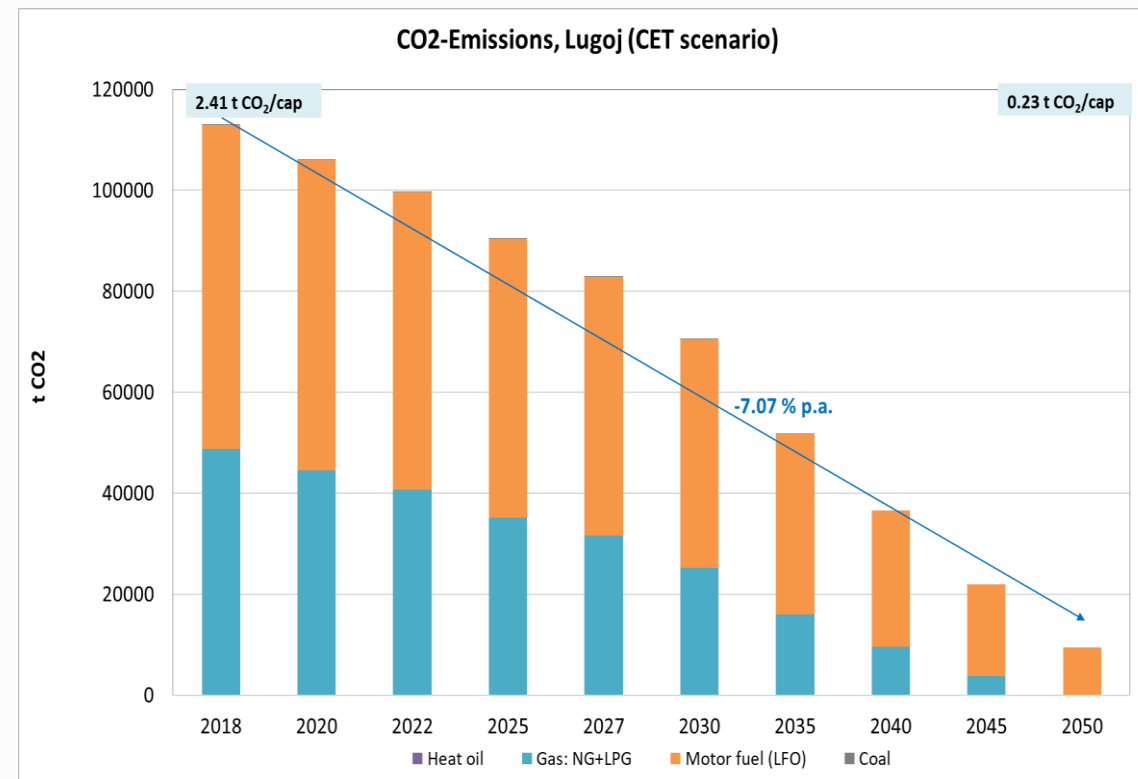
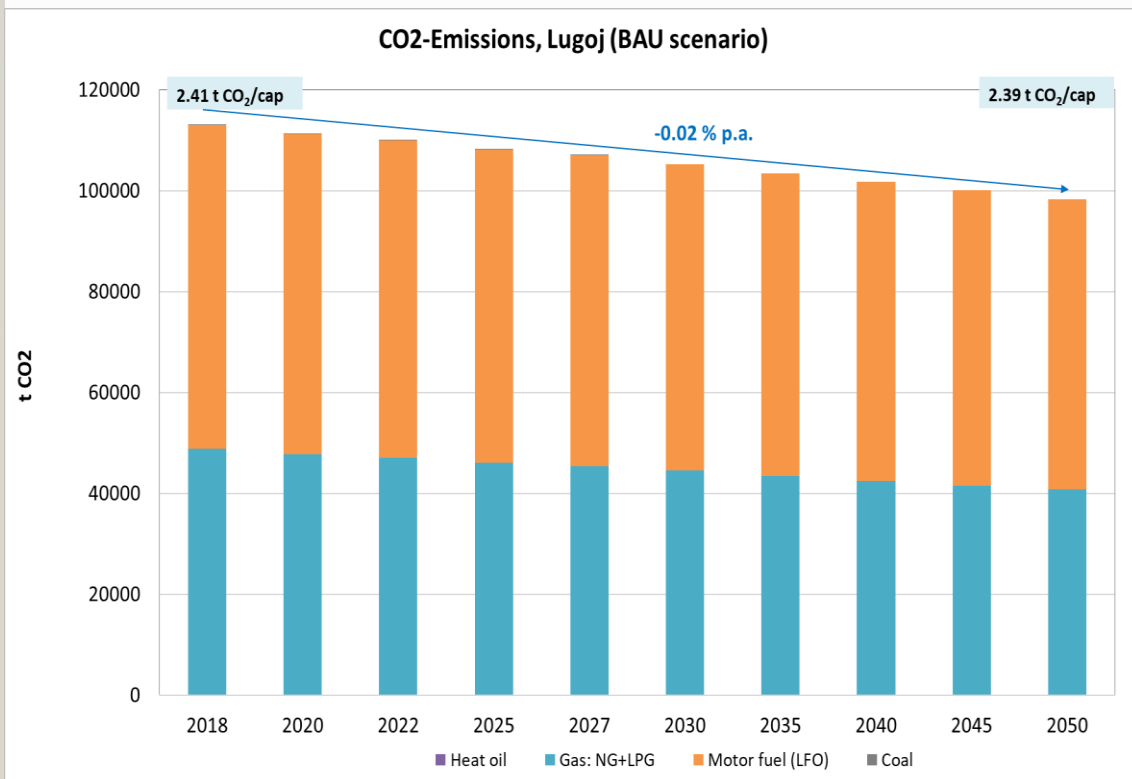
Final energy demand by fuel,  
Lugoj, CETS 2050 (390.8 GWh)



Final energy demand by sector,  
Lugoj, CETS 2050 (390.8 GWh)



# CO<sub>2</sub>- emissions by fuel- Lugoj: -BAU and CET- Scenario-



Direct city emissions, scope 1  
-92% decrease: from 113 kt CO<sub>2</sub>/a to 9.5 t kt CO<sub>2</sub>/a



# CETS (2050) result compared to the GHG Reduction Targets of the Basic Climate Law

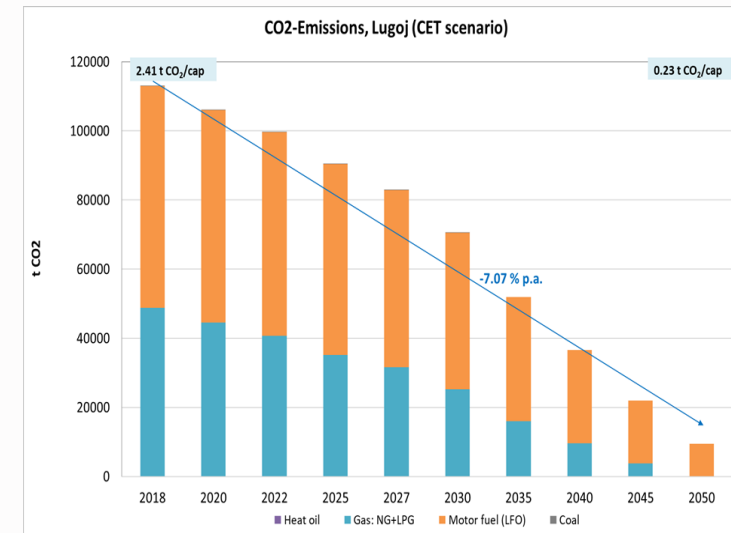
## GHG Reduction Targets



Reduction of at least **55%** of greenhouse gas emissions compared to 1990 figures acc. **“Integrated National Energy and Climate Plan 2021–2030”**



## CETS (2050) Lugoj



Reduction of the CO<sub>2</sub>-emissions of **80 %** compared to 1990 (national per- capita-value was used as reference)

**Thank you for  
your attention and interest!**

**Gabriela Fistiş**

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**[www.bluesid.eu](http://www.bluesid.eu)**

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