



# Yerevan and Sustainable Energy Development

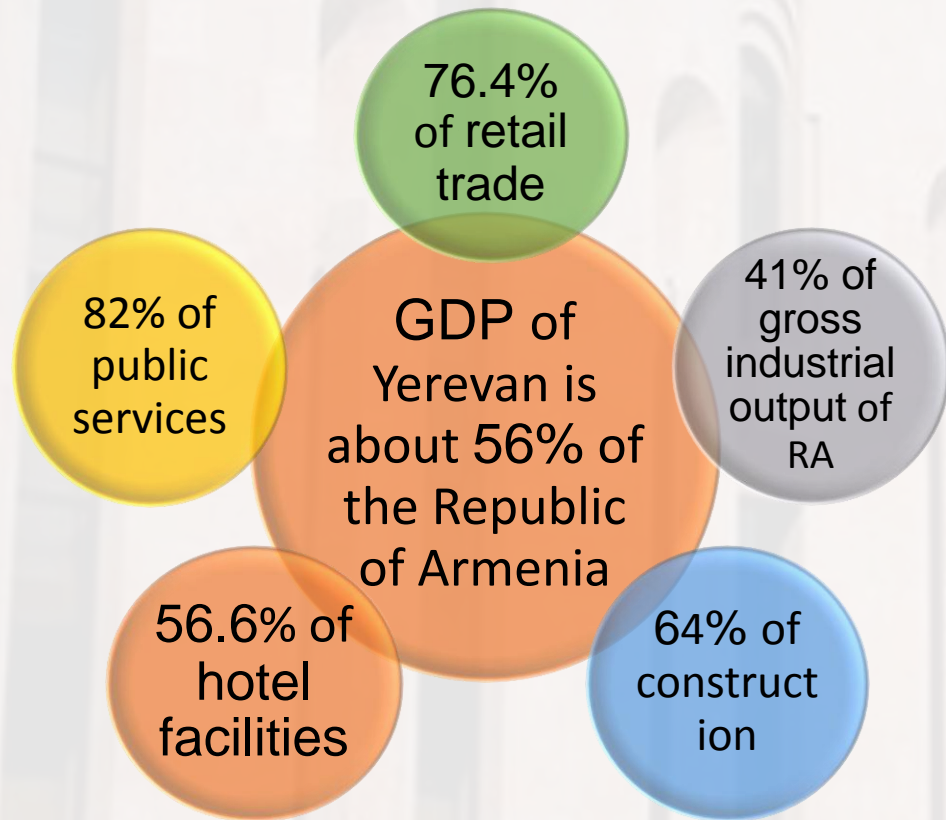
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**Tigran Sargsyan**

Head of development and  
investment programs  
department ©Vardan Petrosyan



# Economy of Yerevan



# Why is important to have sustainable energy strategy?

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- REDUCE AIR POLLUTION
- REDUCE ENERGY CONSUMPTION COSTS
- EFFICIENT COMMUNITY BUDGET MANAGEMENT
- QUALITY OF SERVICES PROVIDED BY THE CITY
- CREATE MORE GREEN JOBS







## The Covenant of Mayors and Sustainable Energy Action Plan

7624  
signatories



Commitment and initiation

Where are we? Base year emission

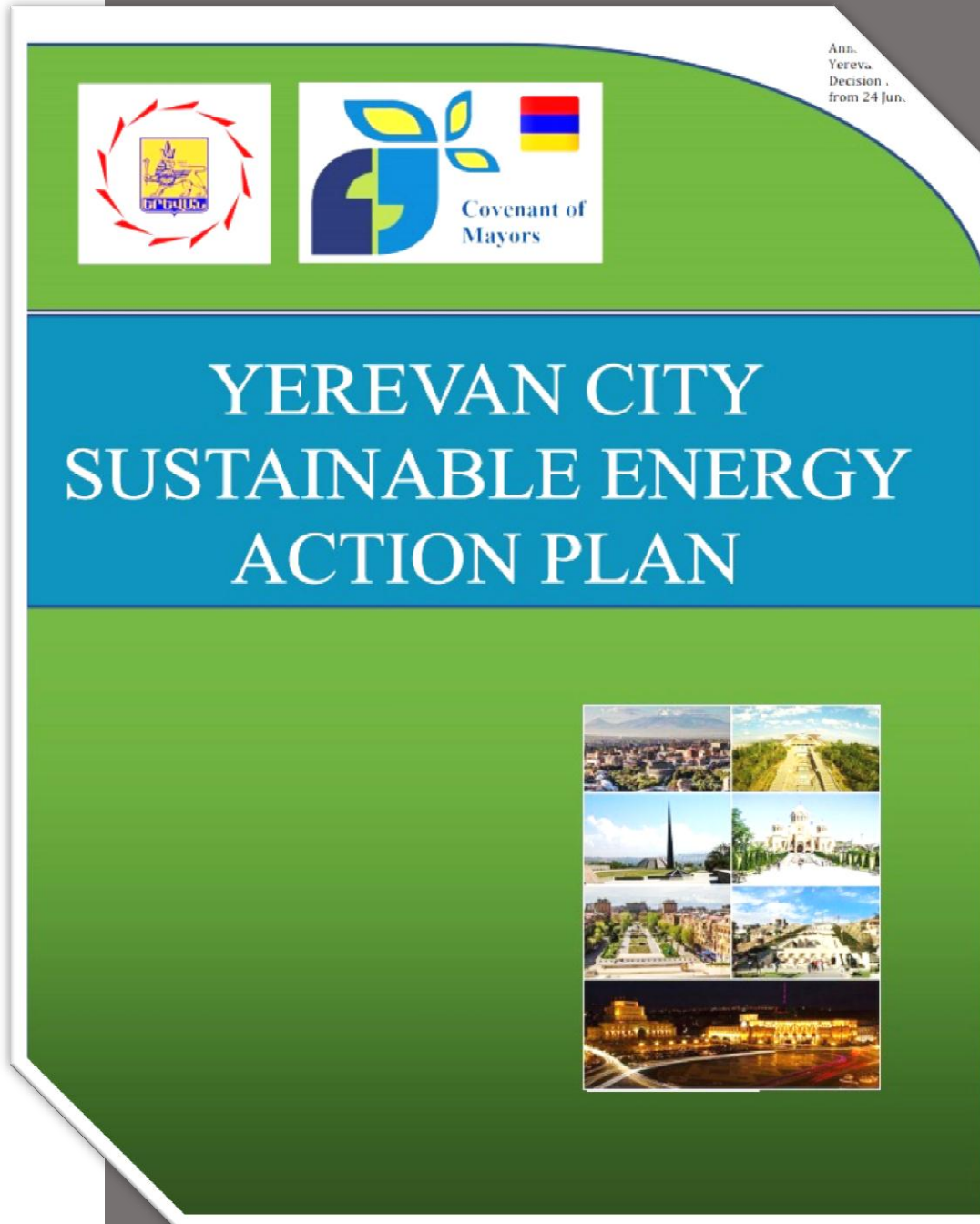
Where do we want to go?

How do we get there?

Action Plan approval and submission

Implementation

Monitoring and reporting





Implementation of the actions can lead to at least **21%** reduction of the GHG emissions

**193 202.5 tonnes CO2 instead of 1 150 000 tonnes CO2**



TRANSPORT



RESIDENTIAL BUILDINGS



PUBLIC BUILDINGS



MUNICIPAL SOLID WASTE



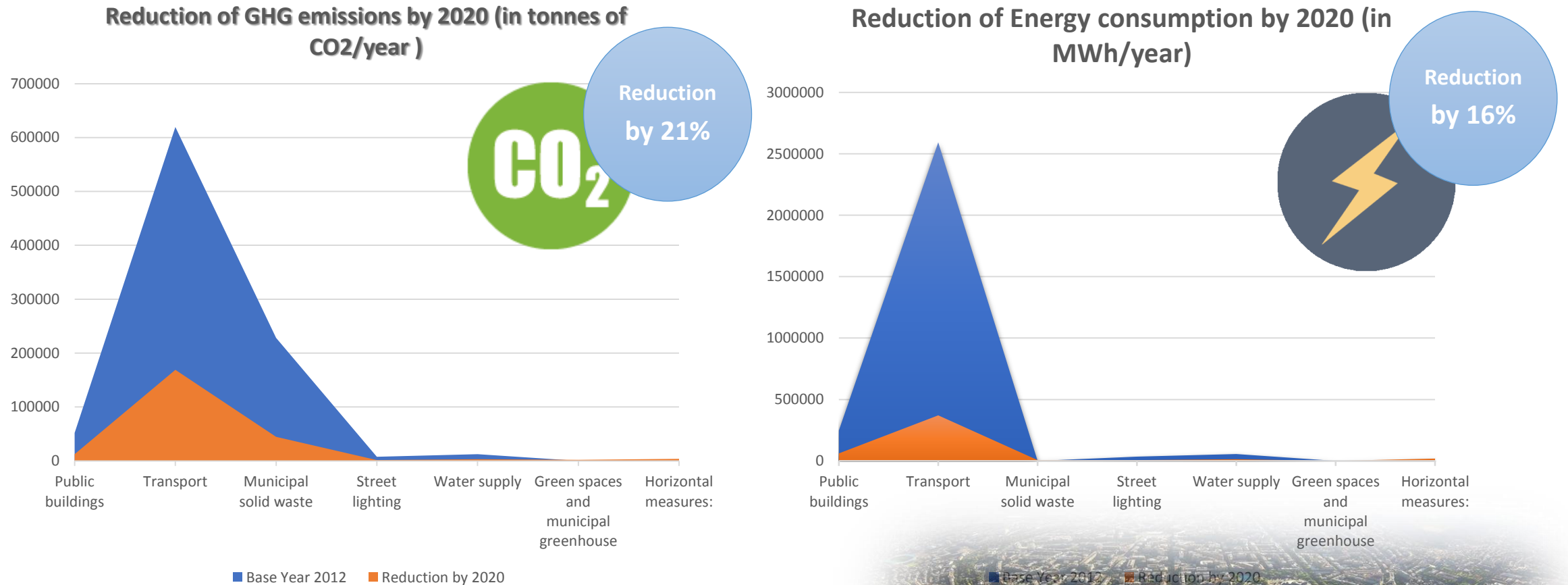
STREET LIGHTING



WATER SUPPLY



# Results anticipated from implementation of the SEAP activities by sectors



# Transport

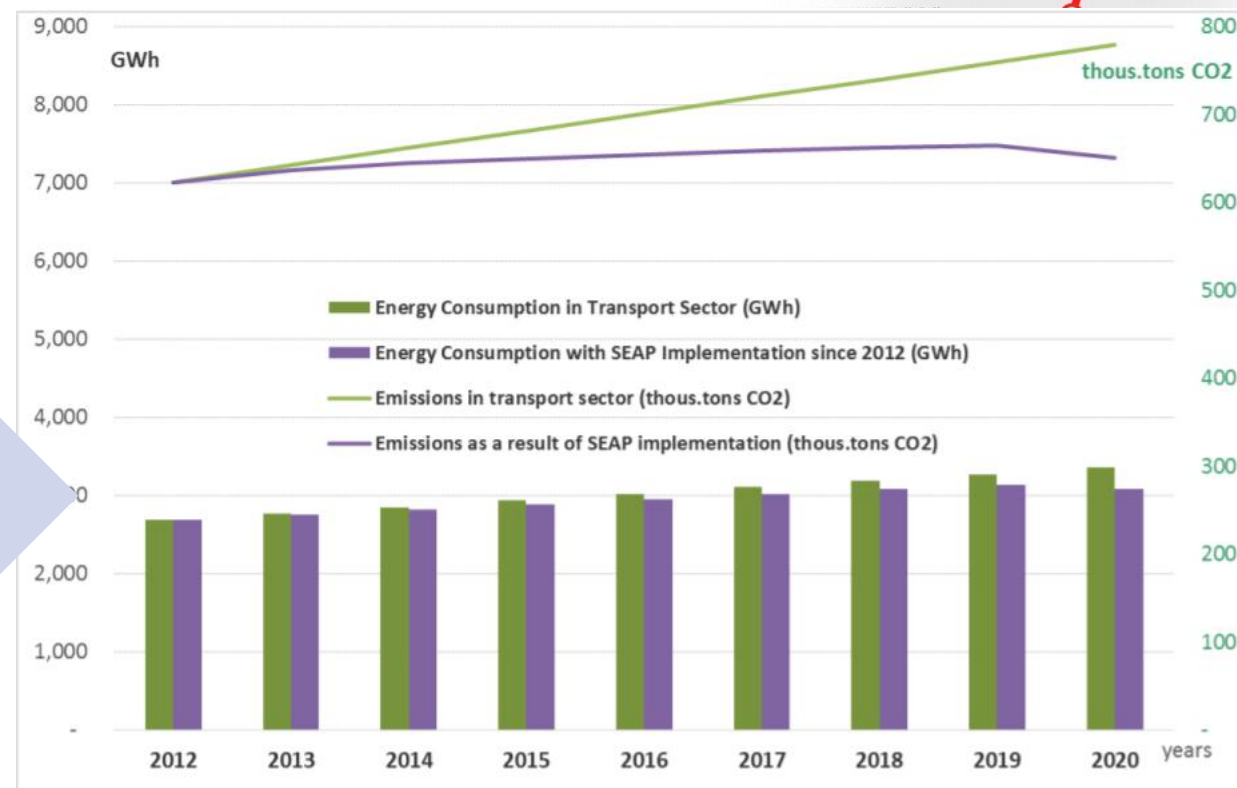


- Municipal transport
- Public and private transport
- Road infrastructure

7 Mitigation measures

370806 MWh energy saved

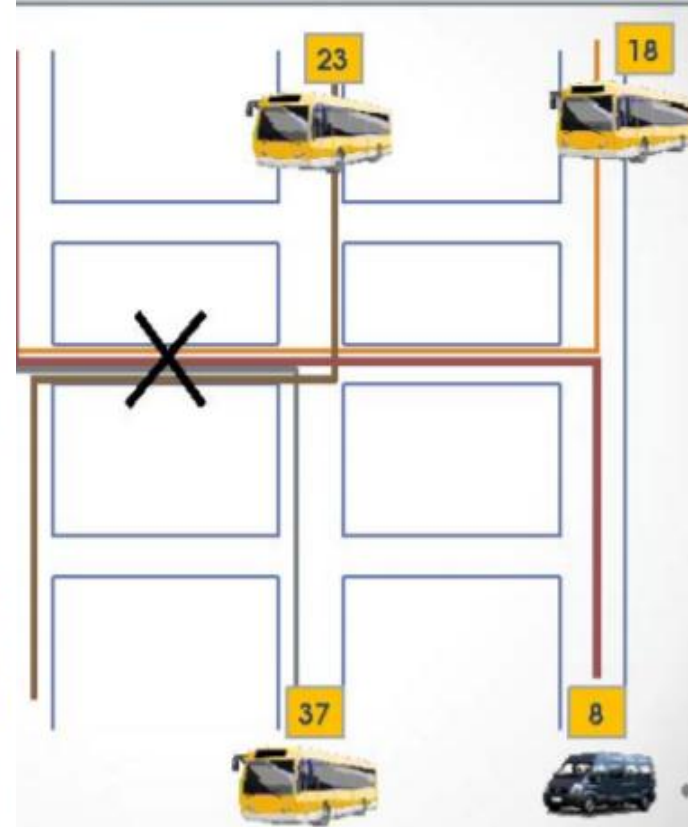
168999 t CO<sub>2</sub> avoided



Total energy saved yearly in the transport sector for 2012-2020 (GWh) and CO<sub>2</sub> emissions avoided yearly (thousand t CO<sub>2</sub>)



# Public Transport



# Public buildings



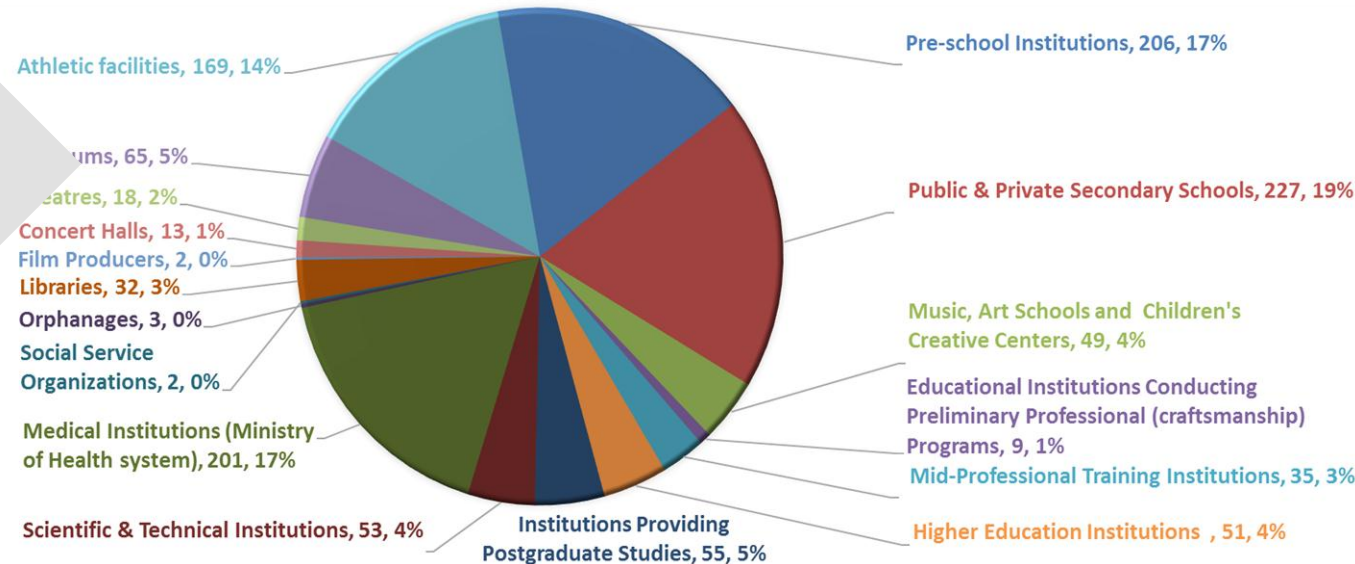
More than 40% of public buildings (1,190 buildings, of which 501 are under municipal control or administration) are located in Yerevan and occupy a total area of approximately 5.7 million m<sup>2</sup>.

-Administrative buildings  
-cultural, educational, sport, healthcare buildings under municipality's control

8 Mitigation measures

61302 MWh energy saved

12471 t CO<sub>2</sub> avoided

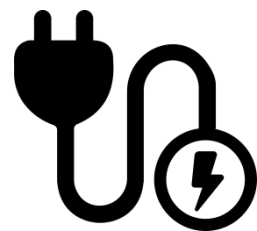


Quantitative and percentage proportion of public buildings in Yerevan



# Municipal Solid Waste

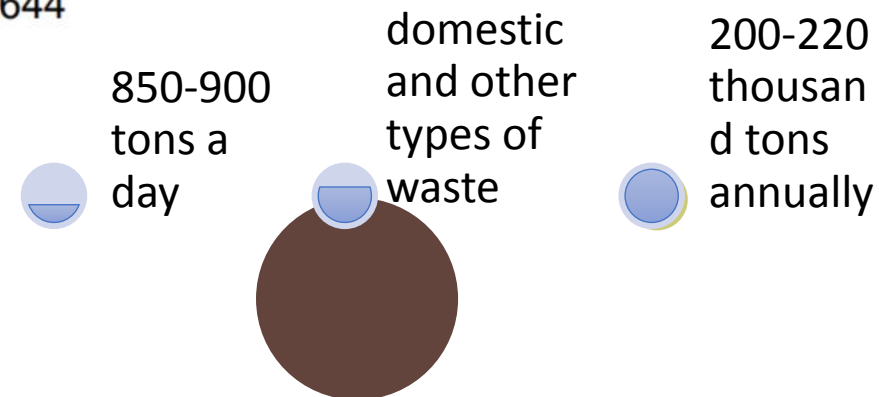
Nubarashen landfill is one of the largest landfills of municipal solid waste. It started to be used as landfill since 1950 and is located about 9-10 kilometers to the south-east from the center of the capital city occupying an area of approximately 52.3 hectares.



Energy carriers saving, MWh/year		Emission reduction, tonnes of CO <sub>2</sub>
Electrical energy	Natural gas	
7.000		44,644

## Activity M.1. Mitigation measure in the MSW sector, methane extraction project

The project on upgrading/closing the Nubarashen landfill, extraction of methane and generation of electrical energy there which is implemented with the support of the European Investment Bank.





**CITY LIGHTING SYSTEM**



# CITY LIGHTING SYS



- Improving energy efficiency and reliability of the city lighting system
- Installation of solar batteries for outdoor lighting

3 Mitigation measures

6921 MWh energy saved

1536 t CO<sub>2</sub> avoided



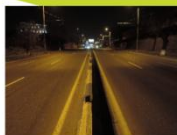
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Նախկինում



Բարձր ճնշման  
նատրիումային  
լամպեր



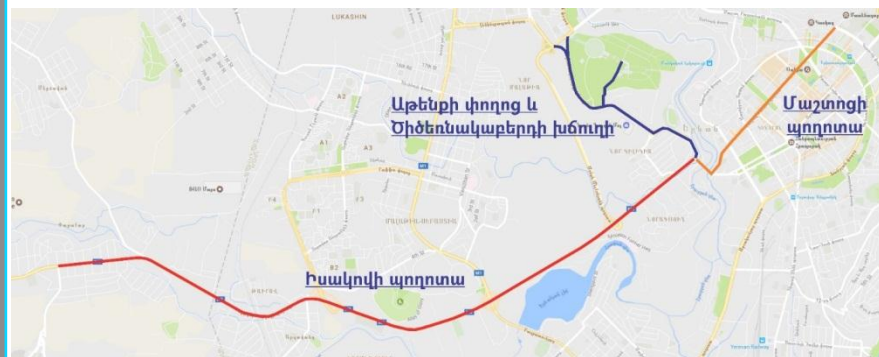
Համեմատություն



Լուսարձակող  
դիողային լամպեր

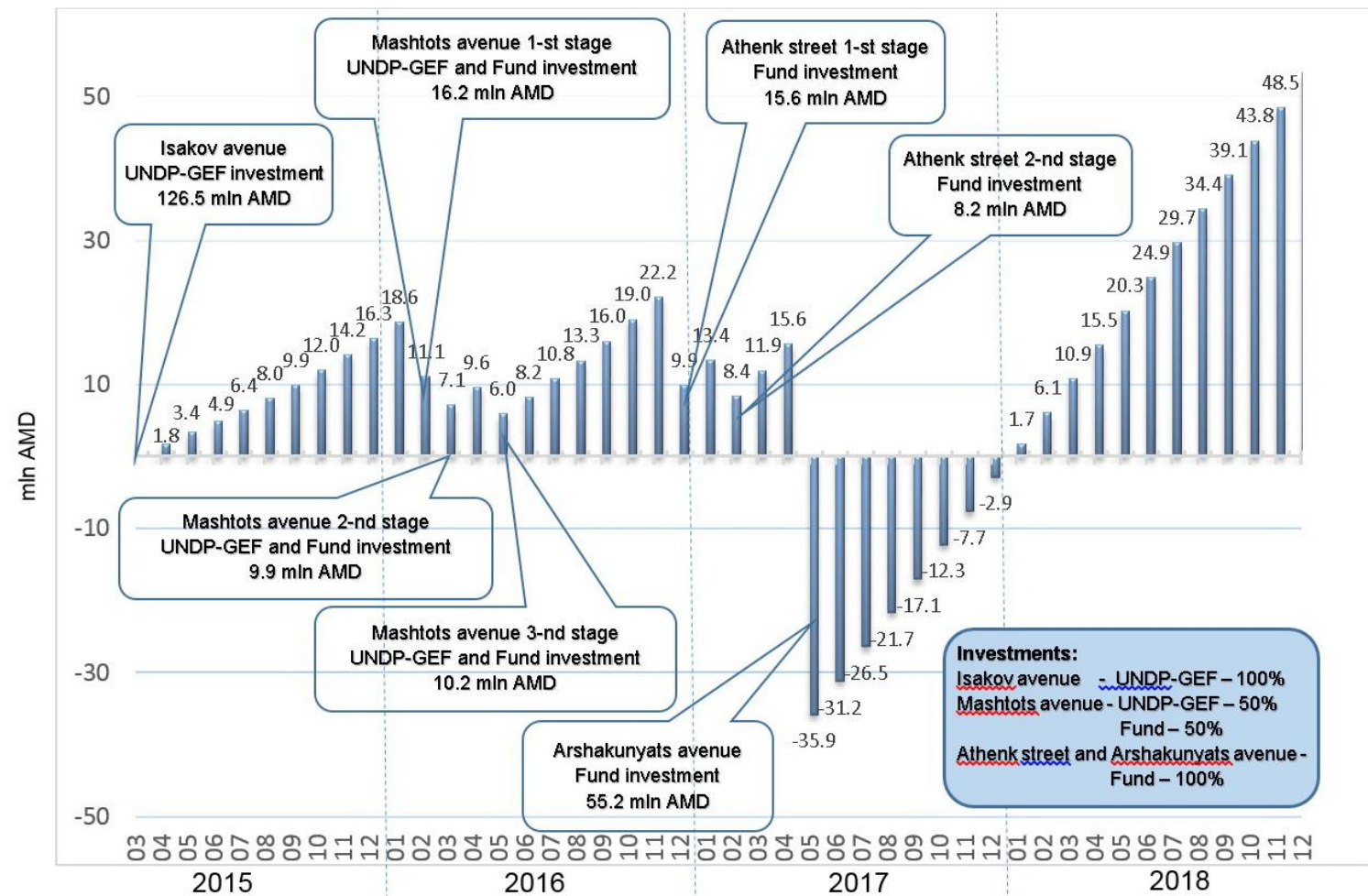


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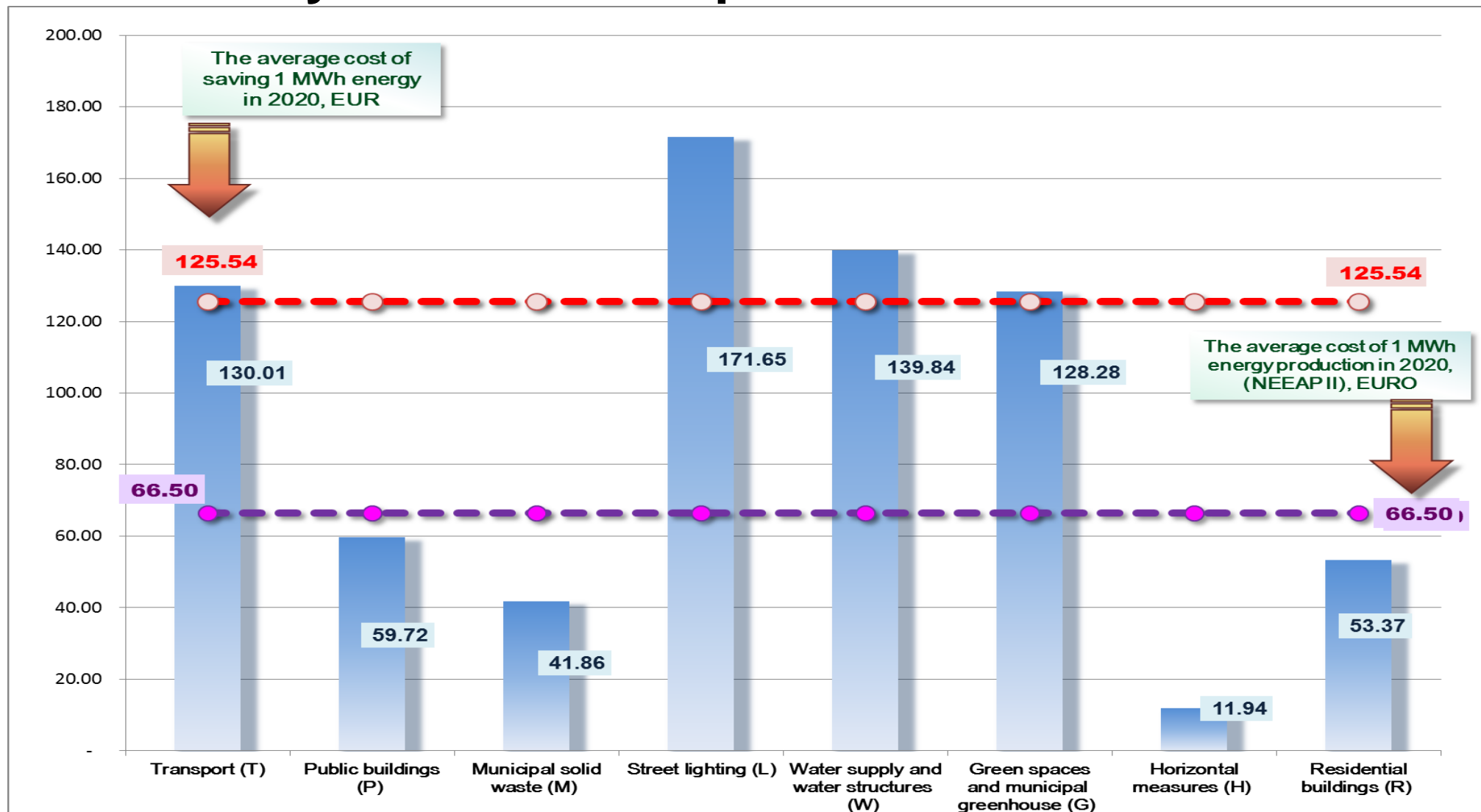




**Cash Flow of the  
Yerevan  
Municipal  
Lighting Energy  
Efficiency  
Revolving Fund –  
from 2015 till  
present -**

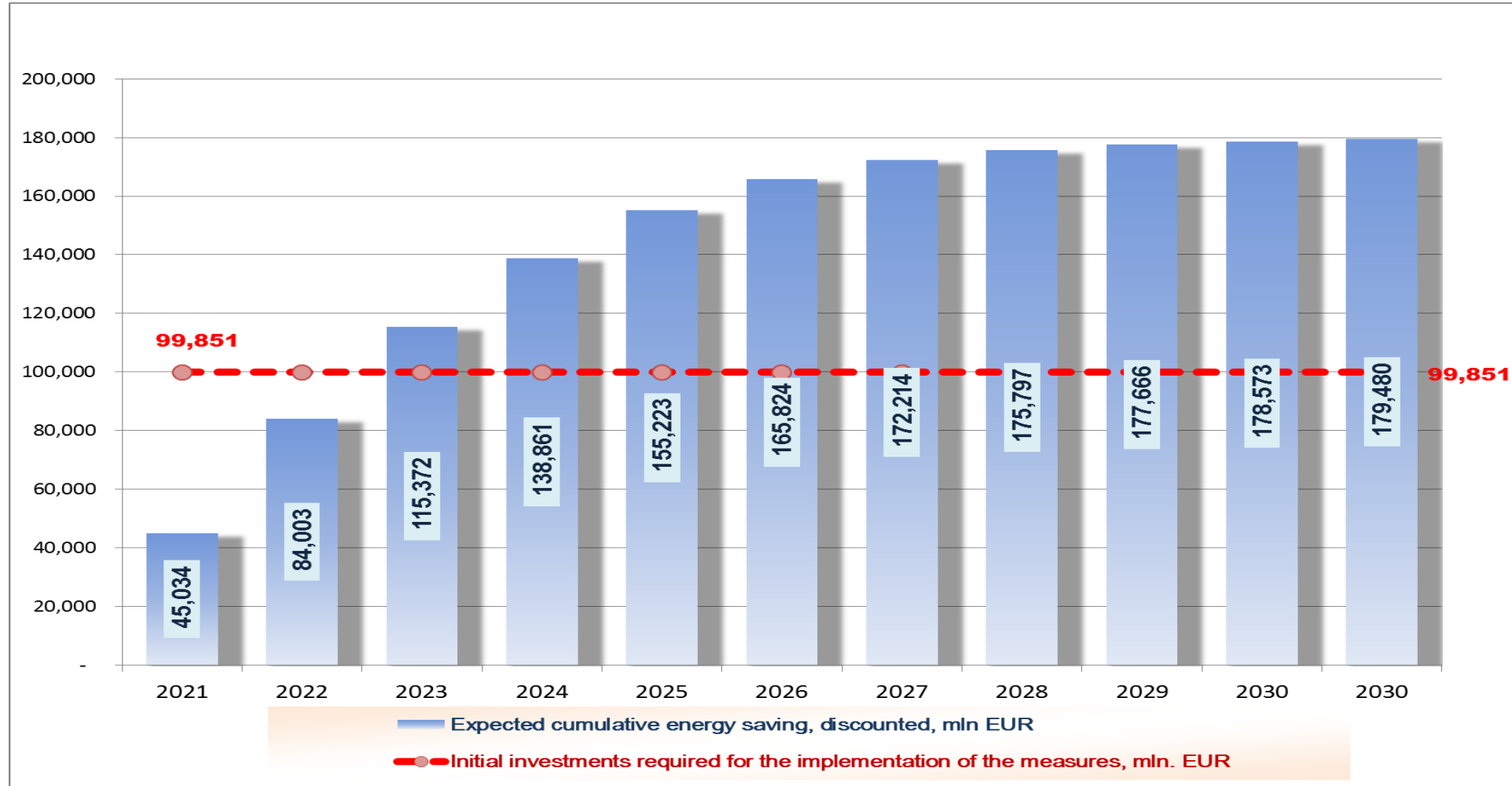


# Investment rationale in view of the weighted average cost (in EUR) of energy production in the energy system of the Republic of Armenia





# Long-term cumulative payback on energy efficiency measures (in thousand EUR)





Actions toward sustainable future of the city is our everyday goal.





# Our partners



*Empowered lives.  
Resilient nations.*



# Thank you!

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Yerevan City Municipality

