



# ENERGY SUMMIT 2022

in Bosnia and Herzegovina



**USAID**  
FROM THE AMERICAN PEOPLE



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British Embassy  
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Ministry of Foreign Trade and  
Economic Relations of BiH



State Electricity Regulatory  
Commission



Regulatory Commission for  
Energy of RS



Regulatory Commission for  
Energy in FBiH

UNDER THE AUSPICES OF



# Dekarbonization of Energy Sector

Instruments and programs for  
enabling and accelerating the  
decarbonization process in  
Bosnia and Herzegovina

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## PART I: Overview of the current state and obligations

- Current state of the energy sector
- Objectives and obligations of decarbonization
- Impact on BiH

## PART II: Accelerating transition towards clean energy

- ETS and CBAM
- GoO and auctions for RES
- Civic energy
- E-mobility
- Solar on the consumer side

## PART III: Rationalization of energy consumption

- NIF
- ESCO
- Housing Reconstruction Program
- Obligation Schemes
- Local EE programs



PART I:

# Review of the current state and decarbonization obligations

# What has Bosnia and Herzegovina committed itself to?

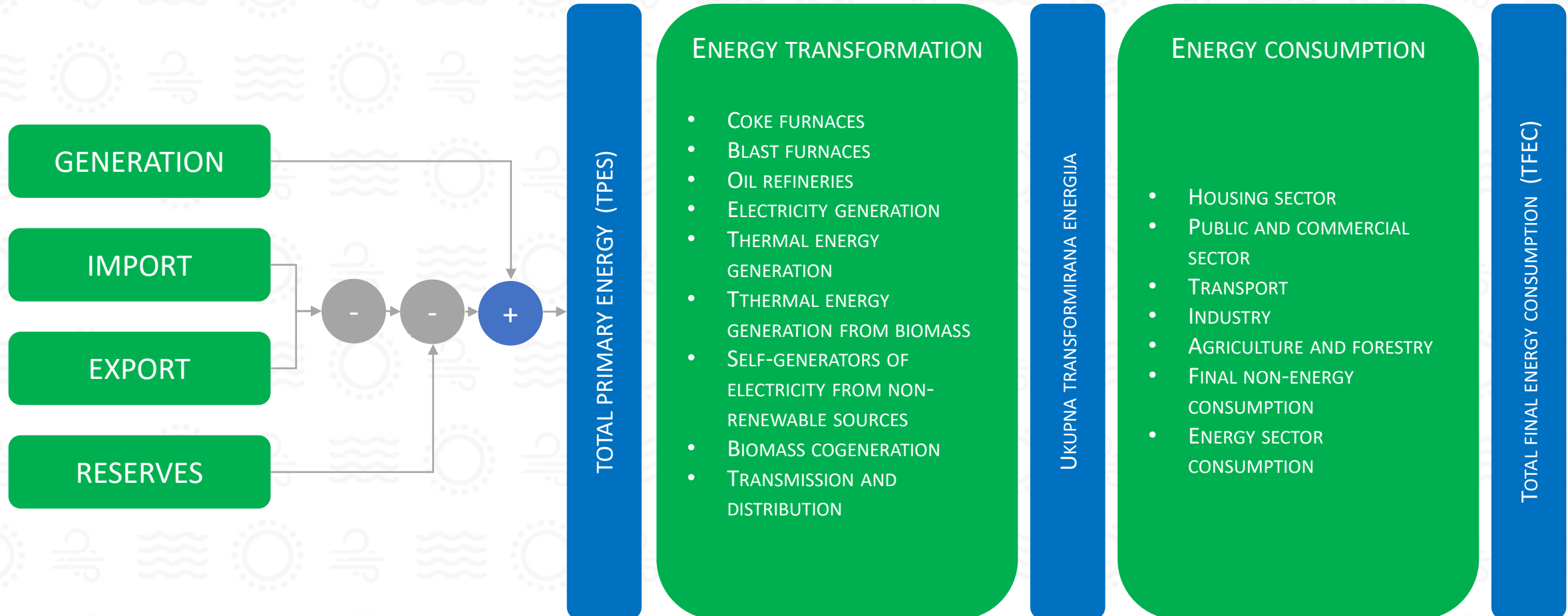
## Sofia Declaration

Climate, energy, mobility

We are committed to working with the EU to achieve the 2050 carbon-neutral continent target, introducing a strict climate policy and reforming the energy and transport sectors.

- EU Climate Act
- Energy and climate goals by 2030.
- Integrate national energy and climate plans
- Climate change adaptation strategies
- EU Emissions Trading Schemes (ETS)
- European Climate Pact
- Review and revise, as appropriate, all relevant legislation
- Assessment of the socio-economic impact of decarbonization
- Giving priority to energy efficiency
- Renovation programs for private and public buildings
- Increasing the share of renewable energy sources
- Reduce and phase out coal subsidies
- Actively participate in the initiative of the Mining Region in Transition for the Western Balkans
- Energy poverty and financing schemes for household reconstruction

# Which sectors does decarbonization target?



Accelerating the  
transition to clean  
energy

EU Directive 2009/28 /  
EC  
40% of RES in final  
consumption by 2020

## Intervention groups

Rationalization  
of energy  
consumption

EU Directive  
2018/2002  
32.5% reduction in  
consumption by  
2030

NDC:  
33.2% reduction in  
emissions by 2030  
Sofia Declaration:  
Climate neutrality by  
2050



PART II:

# Accelerating transition towards clean energy

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INSTRUMENTS AND PROGRAMS FOR ENABLING AND ACCELERATING THE DECARBONIZATION PROCESS IN BOSNIA AND HERZEGOVINA | 2022



# ETS and CBAM

## ETS

- Designed with a tendency to successively reduce emissions
- The funds raised are used for decarbonization
- In the period 2013-2019, EU members collected EUR 49 billion in revenues through the auction of EU ETS licenses



Pred BiH se nalazi ili ETS ili CBAM  
Treće opcije nema!  
Odabirom BiH preuzima ili prepušta kontrolu  
nad oporezivanjem emisija

## CBAM

- Designed to prevent carbon leaks in the EU
- Planned implementation from 2026
- It will initially be introduced for importers in the following sectors: metal, aluminium, cement, fertilizers and electricity

# ETS and CBAM – expected impact on BiH

## ETS

- it is expected that the total load ranges from 168 to 281 million KM, of which **at least 50% is spent on financing decarbonization**

Scenario	Funds raised, BAM million
All industries - full permit price - 69.36 EUR / t CO <sub>2</sub>	2.653,3
All industries - with free licenses	1.290,5
Kantor study – 6,625 EUR/t CO <sub>2</sub>	cca 352

Što prije je potrebno pokrenuti aktivnosti na uspostavi ETS-a koji će biti značajan alat u procesu dekarbonizacije BiH

## CBAM – metal, cement, aluminum

- payments based on the CBAM mechanism, represent the original income of the EU, ie. **the fiscal burden of the population in BiH**

Indicators	Value
Export decline	22 – 27%
Employee decline	2706 - 3320
Decline in revenue, mil BAM	371,32 - 456,71



# RES incentive system

- ... public bidding procedure with the aim of collecting bids for the construction of plants for the electricity generation from renewable sources and exercising the right to incentives, where the subject of the tender is the selling price of electricity generated in large plants, according to the given technology and capacity ...
- Open and location
- Detailed description of the process, time frame and responsibilities
- ✓ Law on Renewable Energy Sources of the Republic of Srpska (SG RS 127/22)
- ✓ Preliminary Draft Law on Renewable Energy Sources and Efficient Cogeneration of the Federation of BiH (prepared)
- ✓ Auction regulations - in preparation by TA GIZ DecES

# Guarantees of origin for renewable energy sources

- Instrument for the promotion of electricity use from RES
  - Capacity 1MWh - validity 12 months
  - IB: electronic issuance, transfer and cancellation of GP
  - Reliable and accurate system
  - Supervision
  - Electricity, high-efficiency cogeneration, hydrogen
- ✓ Competence of institutions and tasks
  - ✓ Clear and transparent legal framework
  - ✓ Domain protocol
  - ✓ Methodology for residual mix calculation
  - ✓ Electronic register GP
  - ✓ GP market: national and international



# Renewable energy communities

Emphasis on economic participation of citizens, small and medium enterprises and public institutions



Republika Srpska Electricity Law: Civil Energy Communities

Law on Electricity of the Federation of BiH: Civil Energy Communities

In preparation  
(TA USAID EPA)



Law on Renewable Energy Sources of the Republic of Srpska: Renewable Energy Communities

Pre-draft Law on Renewable Energy Sources of the Federation of BiH

In preparation  
(TA GIZ DecES)

In preparation  
(TA GIZ DecES)

Ordinance on Renewable Energy Communities and Buyers-Generators

Rulebook on Renewable Energy Communities

In preparation  
(TA GIZ DecES)

# Prosumer / customer-generator



Law on Renewable Energy Sources of the Republic of Srpska: generatort

U pripremi

Ordinance on Renewable Energy Communities and Buyers-Generators

Pre-draft Law on Renewable Energy Sources of the Federation of BiH

Rulebook on prosumers

... the final customer, who operates within his premises **located within limited areas** and who **generates** electricity from renewable energy sources for his own consumption, or who can **store or sell** electricity generated from renewable energy sources that he has produced, whereby for customers who do not belong to the household category these **activities do not represent** their **main commercial or professional activity**



# Electromobility

Promotion of renewable electricity in the transport sector by 2030

EnCS Study BiH: (i) 9% share of RES in transport, 0.317% public and road traffic, about 8000 electric vehicles

EnCS Study BiH: (ii) 9.9% share of RES in transport, 0.313% public and road traffic, about 10,000 electric vehicles



Law on Renewable Energy Sources of the Republic of Srpska

Offices on the use of RES and other alternative fuels in transport (fuels, participation, measures, supervision)

# SolarCET – consumer solar support

Development of  
Interactive Solar Atlas  
(ISA)

Financing mechanisms  
and subsidies for solar in  
households

Optimization of  
project design and  
implementation

- It addresses the lack of information, reliable data and capacity on the part of investors / end users
- It implies the development of a detailed ISA for Cazin, Gradiška, Mostar and Prijedor in the first phase, and for the rest of BiH a transitional solution with user inputs
- Development of a financial mechanism based on grant co-financing for households
- Development of ESCO or similar mechanism for financing solar in SMEs and public sector
- Implementation of a public call for 4 local governments to co-finance solar in households - grant 100,000 USD
- Development of guidelines for optimal design and implementation of solar energy projects



## SolarCET – presentation of ISAs in other states



Minimal Optimal

VENTE TOTALE

AUTOCONSOMMATION

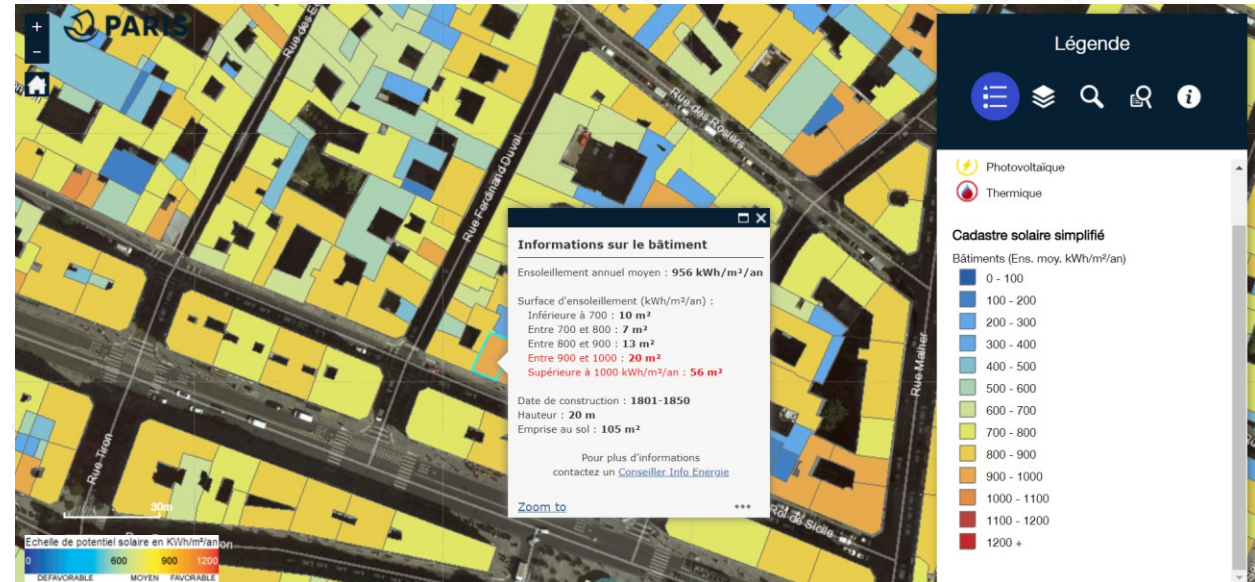
THERMIQUE  
EAU CHAUDE

### Estimation économique sur 20 ans

 <b>REVENUS</b> <b>73 000 €</b>	 <b>INSTALLATION À PARTIR DE</b> <b>56 500 €</b>	 <b>GAINS</b> <b>16 500 €</b>
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Votre habitation est située dans la limite de 500m autour d'un site ou monument classé. Sachez que votre projet demandera un accompagnement particulier et sera soumis à un avis d'un architecte des Bâtiments de France. N'hésitez pas à **nous contacter**, nos experts vous accompagneront de près dans ces démarches.

### Estimation énergétique sur 20 ans







19.3

PART III:

# Rationalization of energy consumption

INSTRUMENTS AND PROGRAMS FOR ENABLING AND ACCELERATING THE DECARBONIZATION PROCESS IN BOSNIA AND HERZEGOVINA | 2022

4.7





# National investment framework- NIF

- For EE in the public sector 3-4 million EUR / year is available through the Funds, and over 70 million through various international programs (Governments of Sweden and Japan, kfW, EBRD, BEEP, GEF, GCF, Slovak Aid, EU, etc.)
- **Over EUR 360 million** is needed for the reconstruction of public sector facilities
- NIF aims to ensure the optimization of the use of available funds
- It was adopted at the state and entity levels

ROI  
investments

Up to 5 years

5 - 10

10 - 15

Over 15 years

Proposal of financial sources / mechanisms

preparation

implementation

All except grant

all, a grant from the public budget  
max 20%

Own funds, credit,  
grant or other  
available mechanisms

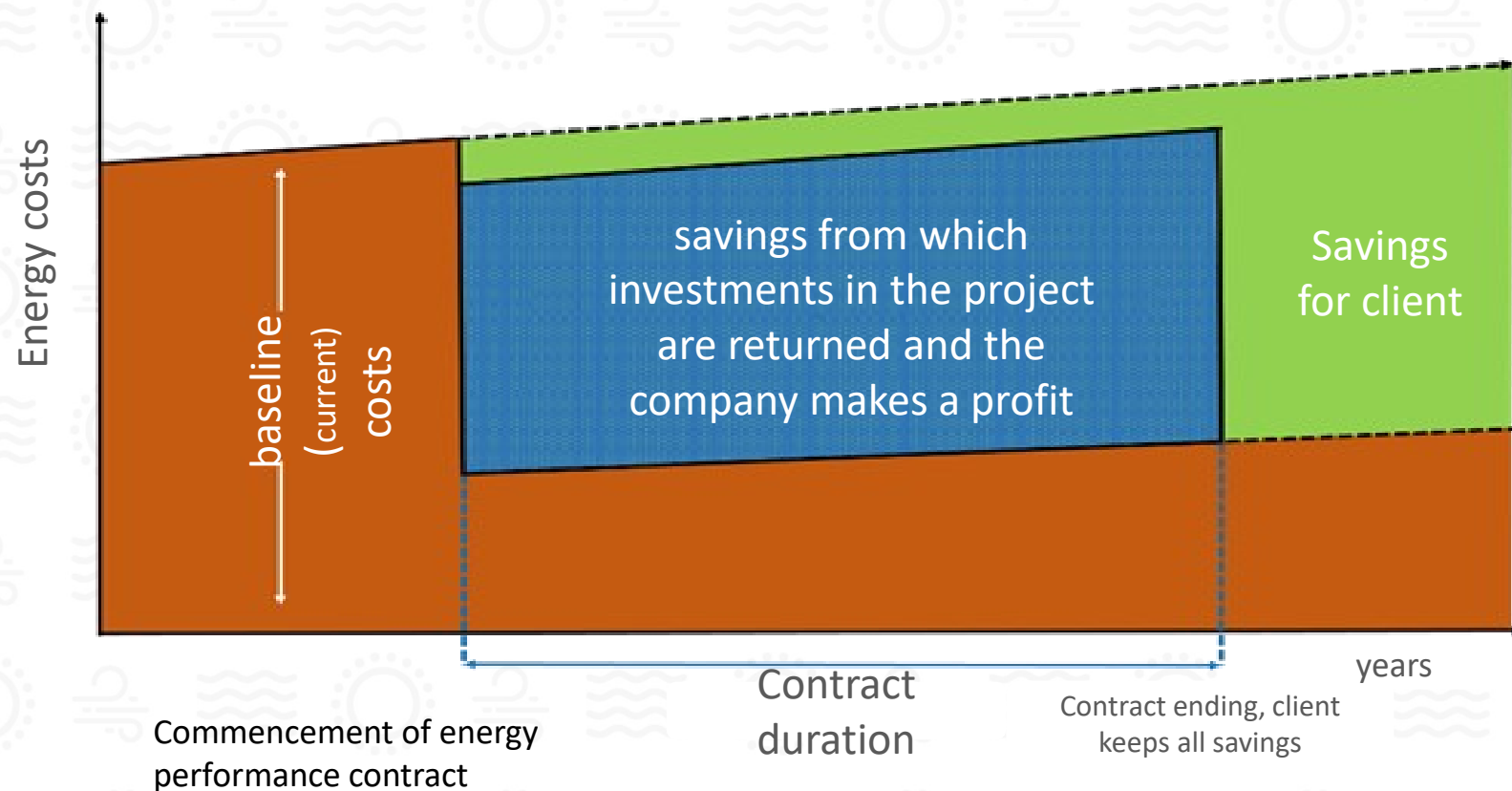
all, grant from the public budget max 50%, loan  
max up to 12 years

all except loans, grant  
from the public budget 50  
- 80%



# ESCO financing model

- Energy Service Companies (ESCOs) - implement energy efficiency projects that are **funded through and focused on achieving savings**
- ESCO offers a turnkey service
- **Wherever there is energy**, ESCO can be applied!





## User

- Paying the investment through running costs - does not affect public debt!
- One partner for all
- Both high quality and affordable is selected!
- If there are no savings, there are no payments!
- The obligation of management and maintenance is on the company!
- For others, energy prices are rising, and for the consumer saving is rising!
- **New for users, lack of implementation capacity**



## Company

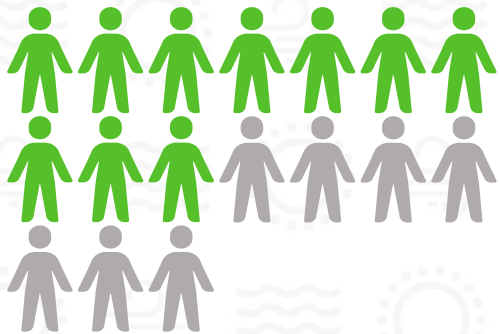
- ESCO can be any company
- The ESCO itself defines the technology, measures and ways to achieve savings
- ESCO projects are awarded to the highest quality, not the cheapest bidder
- Opportunities for long-term and successful business partnerships
- Profit and sustainable business
- **Lack of regulation - UNDP technical assistance**



## EE public sector – UNDP results

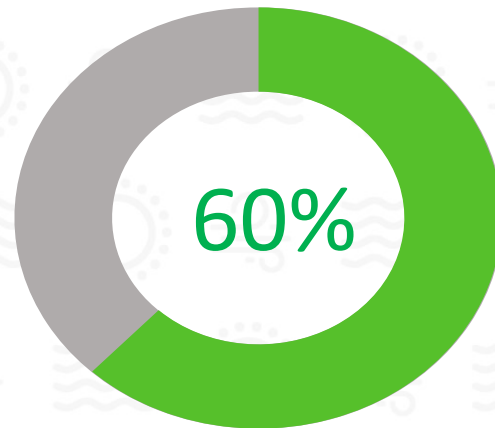


Annually 20,000 t eqCO<sub>2</sub>



More than 3,000

Green jobs



Energy savings

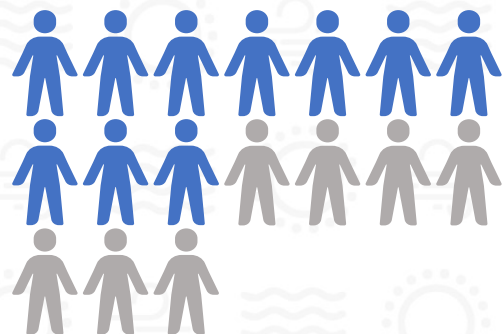
- 363 public buildings renovated
- 13 public lighting systems
- 5 FNEs with a capacity of 700 kW
- Public budget savings over 6 million KM
- The first ESCO project for 4 facilities in SBK
- Contract signed for 10 years - renovation + delivery of thermal energy
- Contract value 2.2 million KM + VAT
- Guaranteed energy savings - 39.50%
- Emission savings - 402.69 tons of CO<sub>2</sub> / year



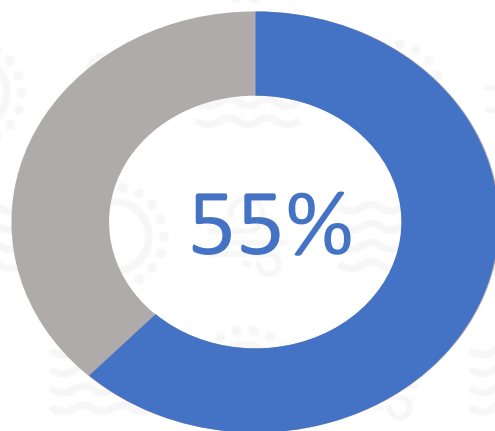
## EE public sector – next steps



+15,000 t eqCO<sub>2</sub>



+2,000  
Green jobs



Energy savings

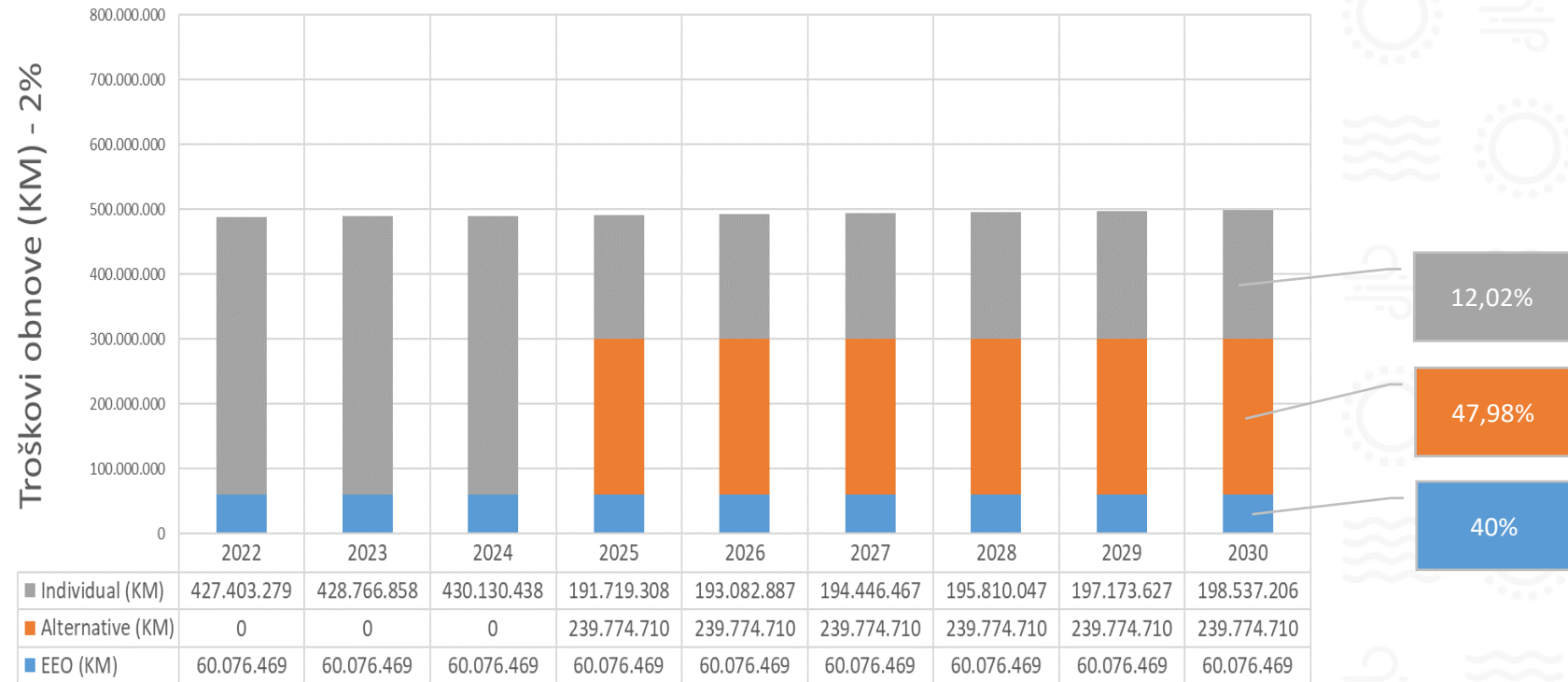
- 244 public buildings renovated
- 16 public lighting systems
- 2 FNE systems
- Ongoing TD for the first ESCO in public lighting - Cazin
- Expected savings - 99762 kWh / year
- Emission reduction - 74.28 tons of CO<sub>2</sub> / year
- 38 new ESCO projects in preparation:
- 3 heating systems
- 9 buildings
- 15 lighting systems
- 4 waste vehicles - the first in the world!





## Housing renovation programs in the housing sector

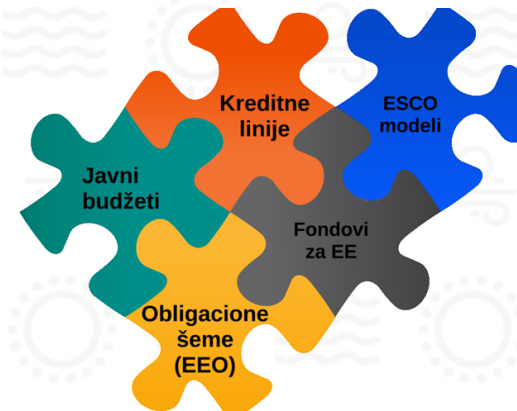
- Building renovation strategy
- Proposal of implementation mechanism through housing sector renovation programs.
- Proposal for introduction of fees intended for the system of incentives for renovation of buildings in Bosnia and Herzegovina.





## EE housing sector - Obligation scheme for EE

- Systemic approach to EE financing
- Directive 2012/27 / EE - Energy distributors must make savings with their customers
- Amendments to the entity and BD BiH laws on EE + Ordinance / Regulation + 5 Rulebooks
- Transparency through three levels
  - ✓ Legislation and Regulation
  - ✓ Regulatory supervision
  - ✓ Information system



**3000 ktoe**  $\xrightarrow{0.5\%}$  **15 ktoe**  $\xrightarrow{\quad}$  **175 MkWh**  
Finalna energija 2017-2019 (bez transporta)

**0.96 KM/kWh**  $\xrightarrow{100\%}$  **170 Miliona KM**  $\xrightarrow{30\%}$  **50 Miliona KM**  
Cijena uštede za niži novo mjera EE (fasade, prozori, krov) Ukupna vrijednost investicije 70% iz drugih izvora

**GODIŠNJE**

OBLIGATION

SYSTEMIC APPROACH

CONNECTING FINANCIAL MECHANISMS

BENEFITS / INTEREST

CALCULATION / NECP



# Local financing mechanisms

## Revolving fund

for energy efficiency projects of public buildings, SMEs and energy efficiency improvements in public lighting systems within the entity funds

## Cantonal mechanisms (TK and ZHK)

for sustainable financing of energy efficiency projects of housing and SMEs  
+  
Pilot project of subsidizing fuel switch in households in KS

## Mechanisms in 36 JLS

for sustainable financing of energy efficiency projects in the housing sector

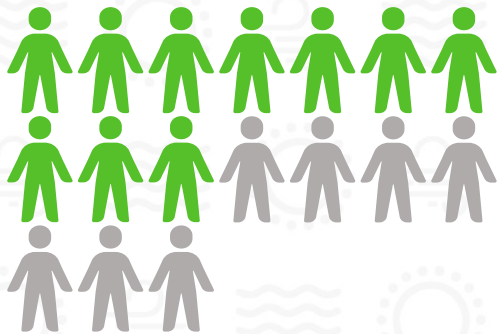




## EE SME – UNDP results and next steps

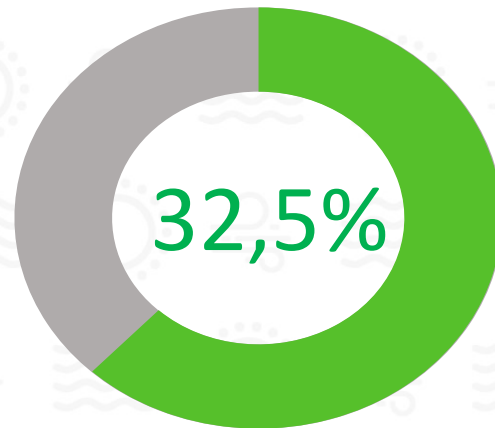


Annually 345 t eqCO<sub>2</sub>



More than 100

Green jobs



Energy savings

- 15 SMEs in TK supported - total savings of over 133 thousand KM
- 8 fuel-switch projects
- 4 solar systems for own consumption
- 3 EE improvement projects in the generation process

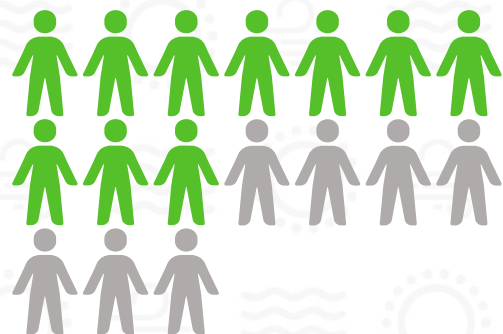
- A new project for SMEs in the metal, aluminium, cement and electricity sectors is being prepared
- Implementation of EE and RES investments with 1 million USD of available grant



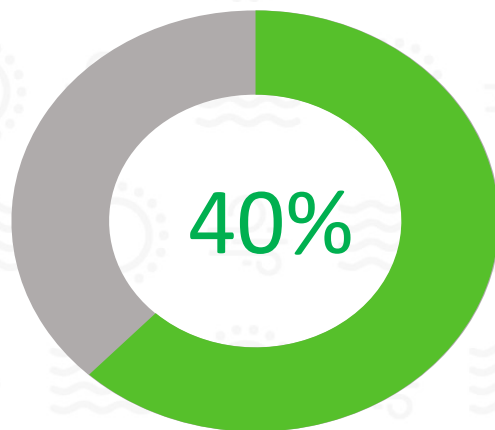
## EE housing sector - UNDP results and next steps



godišnje preko 5,000 t eqCO<sub>2</sub>



više od 1,000  
zelenih radnih mjesta



uštede energije

- 30 returnee's households - solar off-grid
- 600 households in KS - fuel-switch
- 232 households in TK - EE measures, fuel-switch and 2 FNE

- A new phase of subsidies for households in Sarajevo Canton is coming soon
- 36 LGU subsidies for households - EE measures, fuel-switch and RES
- 4 LGU subsidies for solar in households - \$ 100,000 grant



Key message

*The faster we switch to renewable energy and hydrogen, combined with greater energy efficiency, the faster we will be truly independent and master our energy system.*

*- Ursula von der Leyen,  
European Commission President, 2022*



# Thank you for your attention

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