

# UPDATE ON WORLD BANK ENERGY EFFICIENCY PROGRAMS IN THE WESTERN BALKANS

## 24TH EECG MEETING

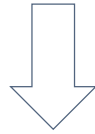
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# World Bank TA program on EE financing and delivery mechanisms in buildings sector

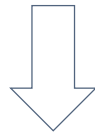
- A regional TA to better understand the residential EE market and barriers for large scale up has been launched, and it has three key components:
  - **Market assessment** – This component builds on existing studies and limited original data to better understand the residential EE market in the WB6
  - **Gap analysis** - This component analyzes the gap between what is currently in existence and what is needed to enable large scale implementation of residential EE programs
  - **Financing options**– main scope is dedicated to developing a couple of financing mechanism which could be used to implement residential EE programs at scale
- **Knowledge sharing among existing projects:** The World Bank is also actively supporting the sharing of ideas among the different country project implementation units (PIUs) in the Western Balkans. A knowledge exchange event is planned for January 2021, and data from current programs across the six countries is being benchmarked to glean best practices.

# World Bank Sustainable Heating Engagement

**Task 1:** Residential heating assessment with a focus on capitals



**Task 2:** Determine most sustainable heating options balancing costs and associated emissions



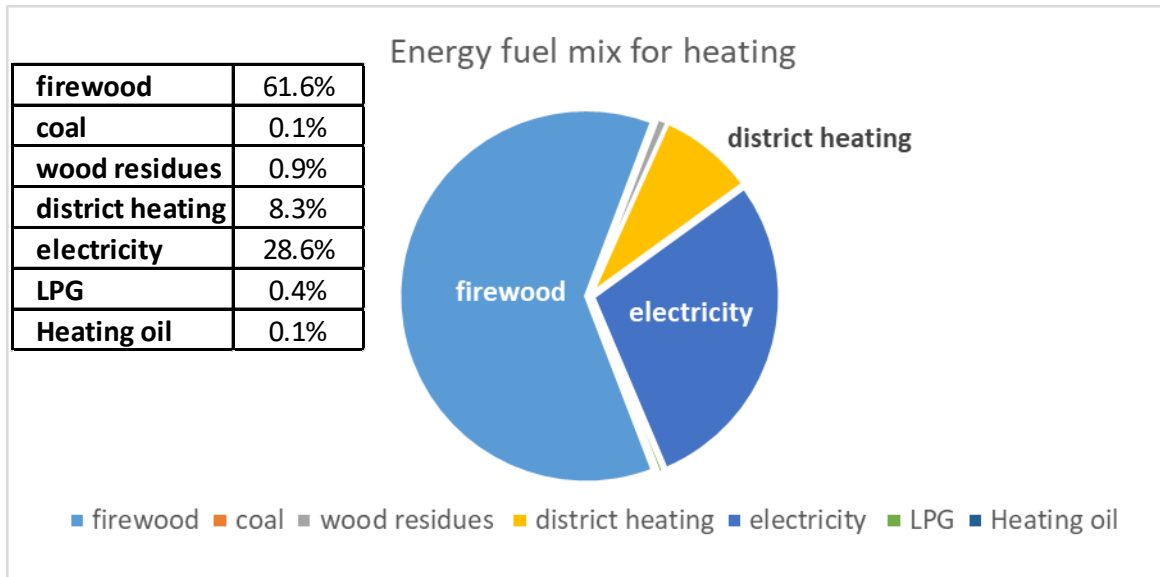
**Task 3:** Financial, regulatory and policy incentives to promote sustainable heating options



# World Bank Sustainable Heating Engagement

Information to be gathered in this phase:

- Residential building characterization (age, area)
- Existing heating options (stove, boiler, heat pump)
- Heating options characterization (age, efficiency)
- CAPEX and OPEX heating options



## PM 2.5 emissions at home From domestic heating alternatives.

335 gr/MWh	216 gr/MWh	15 gr/MWh	0.72 gr/MWh	0 gr/MWh
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## CO<sub>2</sub> emissions from domestic heating alternatives.

630 gr CO <sub>2</sub> /kWh	315 gr CO <sub>2</sub> /kWh	320 gr CO <sub>2</sub> /kWh	215 gr CO <sub>2</sub> /kWh	240 gr CO <sub>2</sub> /kWh*
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VERY DIRTY

LESS DIRTY

CLEAN

\*Grid emission factor divided by HP efficiency

# World Bank Sustainable Heating Engagement

## Aspects to be evaluated

- Indoor emissions
- Outdoor emissions
- Capex and Opex
- Infrastructure required
- Future proofing

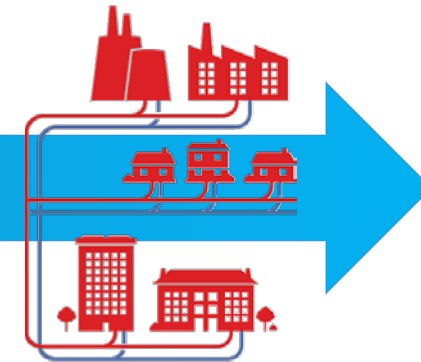
## Scenarios under evaluation

- Least cost overall
- Lowest levelized cost on economic and financial basis
- Lowest emissions
- Prorated best option

Output

## Ranking of preferred heating solutions:

1. District heating
2. Heat pumps
3. Natural gas boilers
4. Fuel oil boilers
5. ...



# World Bank Energy Efficiency Engagement

## Rationale

- Fiscal pressures on high energy costs, lack of energy security particularly during winter months, old and inefficient building stock, poor air quality— all are pressuring governments to scale up EE
- EU/Energy community obligations (e.g., renovation of >1% of central government buildings/year, NEEAP targets, building renovation strategies, EE Directive) will require more aggressive EE programs
- The Bank has invested over US\$250 million in EE in public buildings in last 15 years with strong demand for continued support
- Emphasis now is to support sustainable, scaled-up financing by supporting the development of sustainable revolving mechanisms to allow public funds to revolve, demonstrate that EE can pay for itself and better leverage EU /donor funds and eventually more commercial financing
- As the portfolio evolves, future efforts will focus on scaling up existing revolving mechanisms and expanding to the (larger) residential sector

## Current WB Engagement

Current

- BiH: Energy Efficiency in PB, AF in 2018
- Kosovo: Energy Efficiency & Renewable Energy, AF in 2020
- Montenegro: Second Energy Efficiency (2018)
- N. Macedonia: Public Sector Energy Efficiency (2020)
- Serbia: Enhancing Infrastructure Efficiency & Sustainability Program-for-Results (2017)

Future

- Albania: EE Fund for Public Buildings (proposed)
- Serbia: EE in Multifamily Apartment Buildings (proposed)
- Scaling up existing revolving mechanisms in BiH, Kosovo, Montenegro and North Macedonia (TA)

Notes: AF – additional financing; TA – technical assistance.

# World Bank EE Financing in the W. Balkans

Country	Project Name	Approval Date	Closing Date	Amount
Albania	TBD			
Kosovo	Energy Efficiency & Renewable Energy Energy Efficiency & Renewable Energy (AF)	June 12, '14 Feb 11, '20	Aug 31, '20 Dec 31, '22	US\$31m (IDA) €10 m (EU-IPA)
North Macedonia	Sustainable Energy Energy Efficiency Fund for Public Buildings	Dec 19, '06 Jan 30, '20	March 30, '13 Sept 30, '25	US\$5.5m (GEF) €25m (IBRD)
Montenegro	Energy Efficiency Energy Efficiency (AF) Second Energy Efficiency	Dec 9, '08 Dec 23, '13 June 4, '18	Dec 20, '14 March 30, '18 Dec 31, '23	US\$8.8m (IBRD) US\$6.8m (IBRD) US\$7.4m (IBRD)
Serbia	Energy Efficiency Energy Efficiency (AF) Enhancing Infrastructure Efficiency & Sustainability (P4R)	March 16, '04 June 20, '07 Nov 3, '17	Oct 31, '11 April 30, '13 Dec 31, '21	US\$21m (IDA) US\$27.3m (IDA, IBRD) US\$48m (IBRD)
Bosnia & Herzegovina	Energy Efficiency Energy Efficiency (AF)	March 13, '14 October 30, '18	Dec 31, '19 March 30, '24	US\$32m (IDA) US\$32m (IBRD)
<b>Total</b>				<b>US\$252 million</b>

Notes: AF – additional financing.

# Albania – Design of revolving financing mechanism

- In collaboration with the World Bank, the Government recently concluded analytical and advisory work which:
  - Estimated the energy efficiency potential in the public building sector
  - Designed a Revolving Energy Efficiency Fund (REEF) - a financing mechanism which enables the government to capture energy cost savings and use them to make additional EE investments
- The government has prepared a NAMA grant application to co-capitalise the REEF
- To benefit from economies of scale, the government is seeking other forms of financing to be deployed through the same revolving mechanism



# Bosnia & Herzegovina – New revolving models introduced

## BEEP – Federation of Bosnia and Herzegovina:

- Federal Ministry of Finance planned budget for 2021 to reinvest the repayment from the Cantons as the starting capital for the establishment of EE Revolving Fund.
- The PIU will undertake the piloting of innovative procurement approaches under the BEEP project, building on the Performance Based Contract (PBC) model prepared by the World Bank technical assistance component. Repayments for these investments will be received by the Revolving Fund.
- Follow up technical assistance for operationalization of the RF and piloting of innovative procurement strategies.

## BEEP – Republika Srpska

- Scalable Financing Mechanism for energy efficiency in the public sector in RS was developed under original BEEP and it will be used for the additional financing, which became effective in March this year.
- Project Steering Committee approved the list of buildings to be retrofitted under BEEP AF
- Bidding documents were published for 27 buildings and civil works for 25 buildings has started
- Mechanism to revolve funds on basis of achieved energy cost savings with partial recovery of investment costs

# Kosovo – RF operationalized with first 80 projects

- 57 Central Gov buildings retrofitted and another 29 to be completed by early April 2021 and 15 more buildings to be procured
- Kosovo EE Fund fully operationalized with recruitment of key operational staff between January – June 2020.
- EUR 10million of IPA funds provided by EU
- First call for proposals for municipal buildings was launched in April and about 100 applications were received from various municipalities
- KEEF signed 80 Project Initiation Agreements for building and street lighting projects
- Second call launched with a closing date end November
- Projects will be implemented through Energy Service Agreements that include the total cost of the project to be repaid based on estimated energy savings but not more than 15 years

# North Macedonia – New RF under Development Bank

- Government approved Energy Efficiency Fund to be created under the development bank (DBNM)
- New Bank loan (approved Jan '20) includes €5m to provide initial capital to Fund and is expected to start within a month
- Technical assistance consultancy will support the establishment and operationalization of the Fund (MoE, DBNM and MoF)
- EC has expressed interest to support the project with IPA funding

# Montenegro – Energy Savings Capture Model

- Montenegro is implementing the Second Montenegro Energy Efficiency Project funded by a loan from the World Bank.
- A key feature of the Project is the implementation of the **Energy Savings Capture Model** - first of its kind in the Western Balkans. The model allows the Government to capture energy cost savings and use them to finance additional EE investments. The model is implemented in the following steps:
  - Baseline energy consumption is ascertained through technical monitoring before investments are made
  - EE investments are then implemented
  - Energy savings are verified through technical monitoring
  - A budget allocation equivalent to the energy cost savings is requested from the Ministry of Finance for the following year
  - The Ministry of Finance allocates the funds, which are accumulated in an ESCROW account until they can be used for additional EE investments
  - The funds are then used to make additional EE investments

# Serbia – New possible EE Fund

- Under the current Program for Results, preparation of medium-term public building renovation program as one of the indicators
- Government now exploring EE Fund creation;
- Under the new government, encouraging signs are emerging that an EE fund could be established'

**Thank you!**