

FUNDING OPTIONS FOR REPLACEMENT OF SOLID FUEL HEATING APPLIANCES – *FOCUS ON BULGARIA AND POLAND*



Sustainable Domestic Heating and
Renovation in CEE and SEE Conference,
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BULGARIA

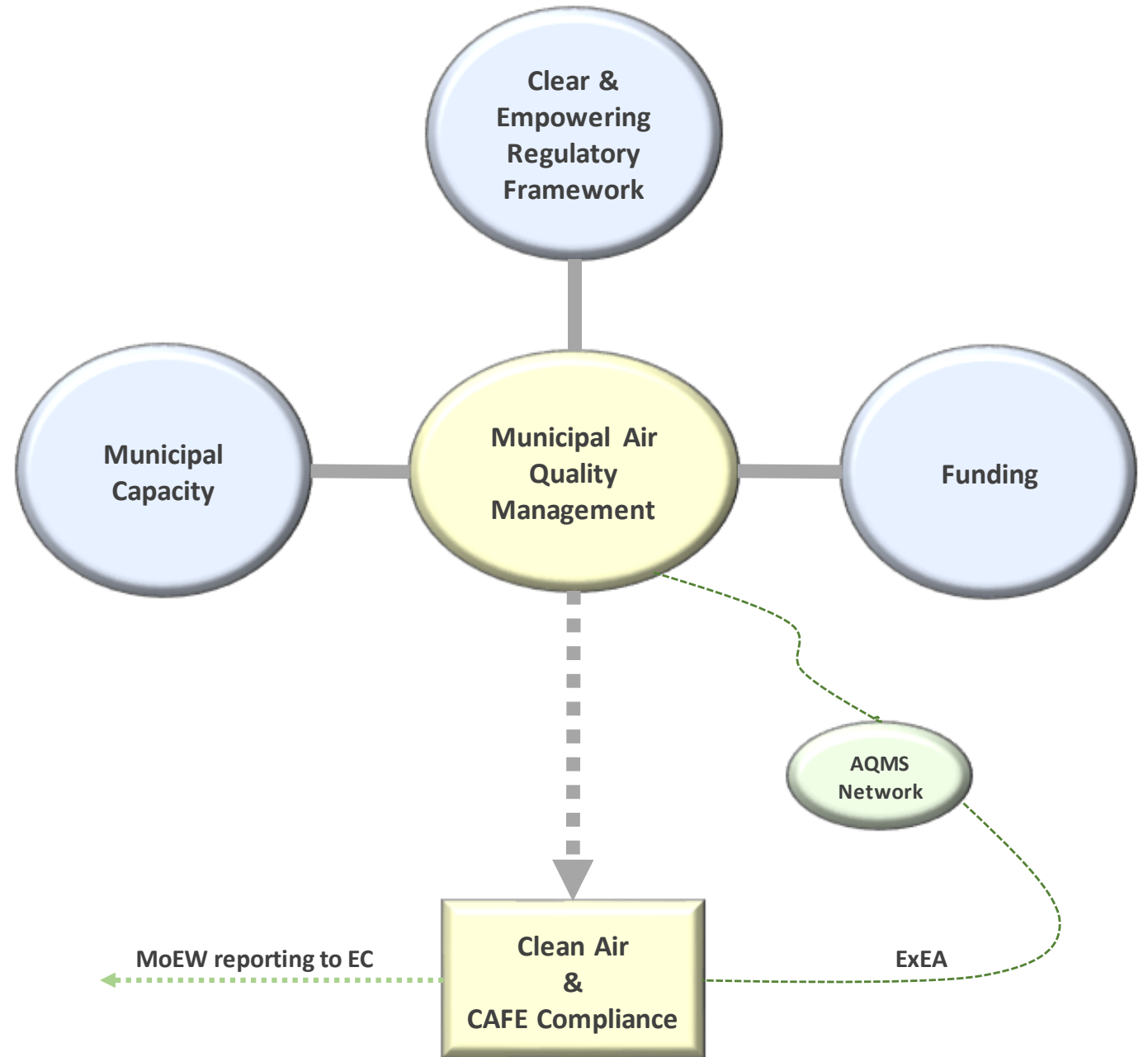


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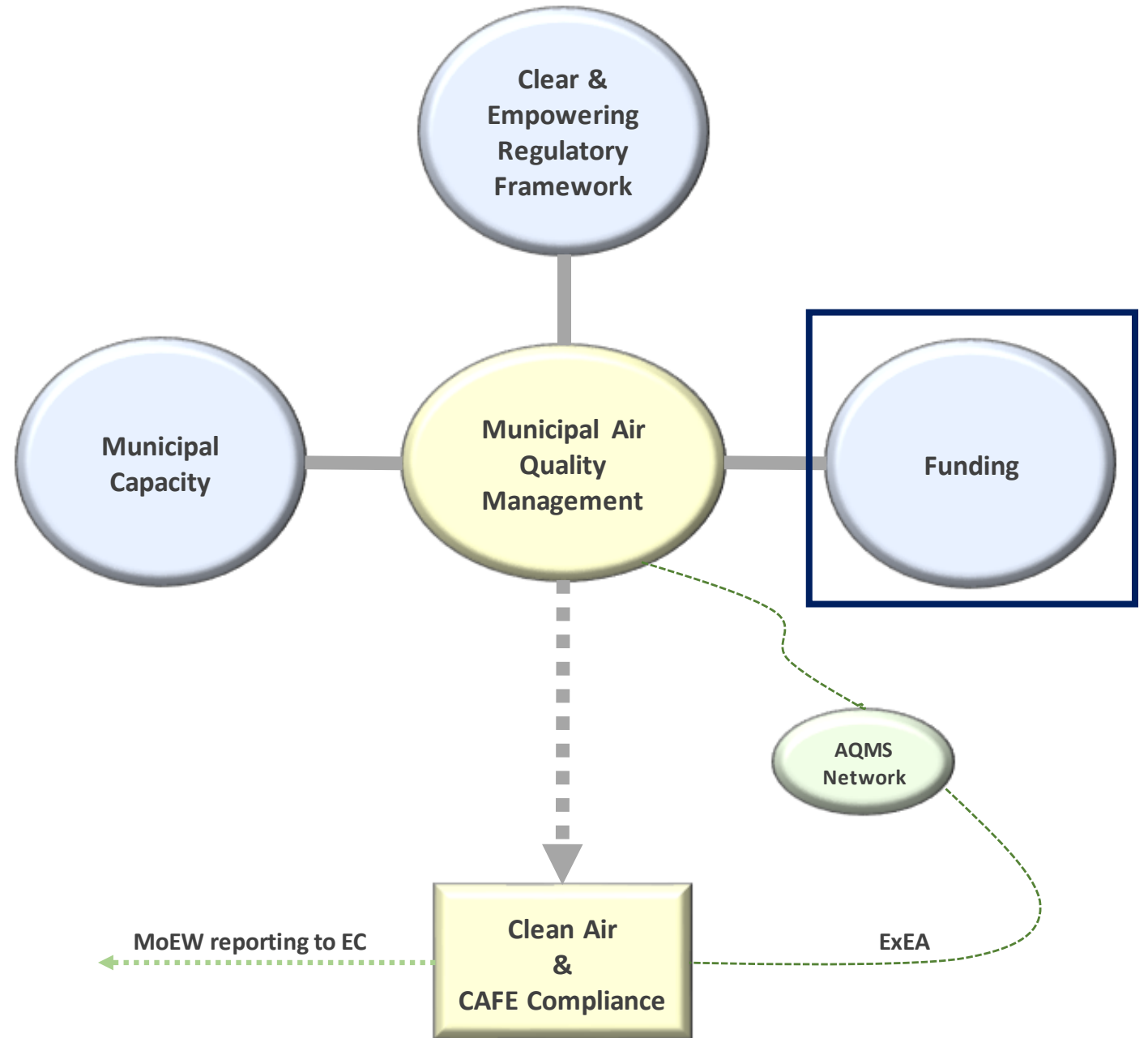
Background to World Bank engagement in AQ in Bulgaria

- 3.5 years experience of World Bank advisory support to MoEW in developing two strategic programs
 - ❑ National Air Quality Improvement Program (NAQIP)
 - ❑ National Air Pollution Control Program (NAPCP)
- The biggest challenge and the main route to achieving AQ compliance is the implementation of residential heating measures
- A “three pillar” approach is proposed to enable implementation of NAQIP and NAPCP

Three pillars of
an AQ
implementation
enabling
environment



Three pillars of
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The Evolving Provisions of the EU's Energy, Climate Change and AQ Frameworks should be taken into Account in Implementing the NAQIP

- Use of renewable biomass (firewood) maybe CO₂ neutral but even when high-quality firewood is burned in Eco-Design stoves there are adverse air quality effects.
- Switching from solid fuels to electricity will mean additional demand and pressure on the energy grid
- Substitution of Eco-Design stoves (coal) or natural gas (re)connection for old, polluting stoves may go contrary to EU policies such as the European Green Deal (EGD) to reduce dependency on fossil fuels

Recommendations – risk management:

- Be aware of the connections between AQ, energy and climate change policies and their development
- Public funding may be spent more efficiently if air quality and energy efficiency measures are combined
- It may be wise to adapt investment funding eligibility criteria to accommodate foreseeable developments in air quality, energy and climate change policies
- Promote sustainable solutions for residential heating based on renewable energy sources (RES)
- Consider how more detailed recommendations on NAQIP implementation may be integrated in other national strategic documents

Determining the Appropriate Criteria for Stove Replacement Funding is Important

- Careful consideration should be given to defining
 - ❑ The priorities against which municipalities will be selected for funding
 - ❑ The forms in which funds might be allocated by selected municipalities to eligible households.

- Specifically, to:
 - ❑ Establish priorities for allocating funds that complement and strengthen achievement of GoB's air quality and pollution control policy objectives and emissions reduction targets
 - ❑ Consider whether municipalities should be given discretionary powers over the forms in which they may allocate grant funds to households (i.e. disbursement options other than 100% grant funding, such as partial grant funding linked to ability to pay), thereby expanding the reach of the available funds

OPE 2021-2027 Funding Will Not be Enough to Replace all the SFAs

- Current situation and estimated need for additional resources:

	SFAs
Number of SFAs in the twenty-eight NAQIP municipalities (2011 census)	420 743
Number of SFAs to be replaced in the LIFE IP project 2018-2024	10 500
Number of SFAs to be replaced in Sofia through OPE 2014-2020	15 000
Number of SFAs assumed to be replaced in six other municipalities through OPE 2014-2020	60 000
Indicative number of SFAs to be replaced by OPE 2021-2027: source, third draft of OPE 2021-2027	90 000
Remaining number of SFAs to be replaced beyond OPE 2021-2027	245 243

- More than 200,000 traditional SFAs may need replacing beyond OPE 2021-2027 if Bulgaria's legally binding AQ targets are to be met. The residual financing gap is estimated to be between BGN 425 and 910 million.
- Meeting the stove replacement program targets requires that full replacement of SFAs is achieved in NAQIP municipalities by 2030.

Therefore, Supplementary Funding for Stove Replacement is Needed

- OPE 2021-2027 and a supplementary funding (program) would need to run concurrently in an integrated planning framework.
- An alternative is to provide supplementary funding through an additional program to parallel OPE 2021-2027, an option which would increase administrative and operational complexity significantly.

Additional Considerations for Meeting AQ Objectives

- Disbursement of funding alone will not achieve the desired objectives in the absence of local regulations to establish LEZ's to restrict or ban the use of certain fuels and/or SFAs.
- Eligible alternatives to solid fuel appliances (SFAs) need to be clearly defined in the context of Bulgaria's Energy Strategy and the EU Green Deal.
- The potential beneficial role that fiscal instruments and economic incentives can play in encouraging households to replace SFAs should be carefully examined.
- The need for and extent of supplementary funding beyond OPE 2021-2027 must be established.

POLAND



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Poland's Clean Air Priority Program

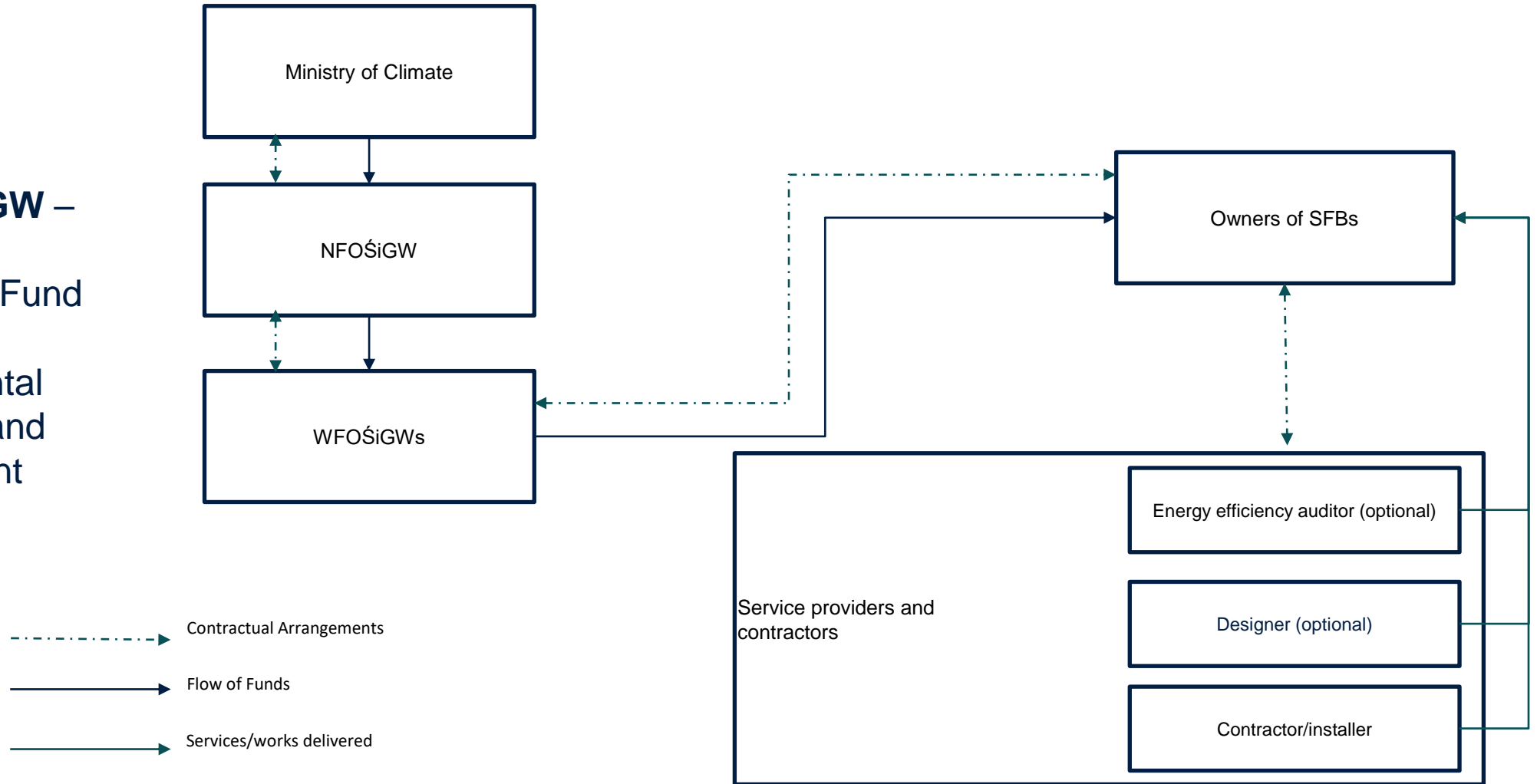
- 10-year national program (2019-2029) – PLN 103 billion (EUR 24 billion)
 - ❑ PLN 63.3 billion (EUR 15 billion) for subsidies, loans to municipalities and tax reliefs.
 - ❑ PLN 40 billion (EUR 9 billion) for loans by commercial banks.
- A cap on funding for a single-family building (SFB) owner at PLN 53 000 (~EUR 12 000).
- Two levels of subsidies:
 - ❑ **Basic** for applicants with an annual salary of up to PLN 100 000 (~EUR 22 000)
 - ❑ **Increased** for applicants with net monthly income of PLN 1 400 (~EUR 310) per person for multi-person households and PLN 1 960 (~EUR 430) for single person households.

CAPP targets

- Number of buildings with improved thermal performance (target: **3,030,000 units**)
- Number of inefficient heat sources replaced for efficient, low emission heat sources in residential buildings (target **3,000,000 units**)
- Additional electricity generation capacity from installed photovoltaic (PV) micro installations (target: **50 MWe**)
- Reduction of final energy consumption (target: **37,500,000 MWh/year**)
- Reduction of PM₁₀ emissions (target: **210,000 Mg/year**)
- Reduction of benzo- α -pyrene emissions (target: **140 Mg/year**)
- Reduction of CO₂ emissions (target: **14,000,000 Mg/year**)

Arrangements for the stove replacement program in Poland

**N(W)FOŚiGW –
National
(Regional) Fund
for
Environmental
Protection and
Management**



World Bank's Program for Results in Poland

- **Objective** of the Program is to increase adoption of sustainable heating and energy efficiency investments in single-family buildings and reduce emissions that contribute to air pollution in Poland. Thus, supporting implementation of the Polish Clean Air Priority Program (CAPP).
- **Duration:** 5 years (2021-2025)
- **Proposed Loan:** USD 300 mln
- **Support for:**
 - Improving energy efficiency (both replacement of appliances and energy retrofit).
 - Strengthening of National Fund for Environment Protection and Water Management.
 - Accessing commercial financing.

Why the World Bank's Program for Results is Needed to Deliver Results in Poland

- 172 700 applications received by October 2020, out of which 141 000 co-financing agreements signed.
- In order for CAPP to achieve its goals in the 10-year period of the program, 300 000 renovations annually are needed.

⇒ **Need for a scalable implementation mechanism.**

⇒ **Revamping CAPP.**

⇒ **Involving commercial banks and the private sector.**

Main enhancements to CAPP through World Bank's Program for Results in Poland

- Strengthening AQ monitoring and enforcement
- Enhancing private capital mobilization
- Bolstering inclusion of low-income households
- Enhancing the implementation effectiveness and pace
- Leveraging funding

Key Takeaways

- The relative scale of stove replacement needed is considerable in both Bulgaria and Poland, which is exacerbated by important socio-economic considerations.
- Availability of funding alone is unlikely to achieve objectives in the absence of regulations and incentives to replace solid fuel appliances.
- Relying solely on grants/subsidies for stove replacement might not be the optimal and most cost-effective option. A mix of incentives is needed.
- Successful stove replacement programs require improved institutional capacities for implementation, communication, monitoring and enforcement.

THANK YOU FOR YOUR ATTENTION



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Funding options for replacement of solid fuel heating appliances –
Focus on Bulgaria and Poland

June 22, 2021