



Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 27-Jan-2022 | Report No: PIDA32889

**BASIC INFORMATION****A. Basic Project Data**

Country Serbia	Project ID P176770	Project Name Serbia Scaling Up Residential Clean Energy (SURCE) Project	Parent Project ID (if any)
Region EUROPE AND CENTRAL ASIA	Estimated Appraisal Date 24-Jan-2022	Estimated Board Date 03-Nov-2022	Practice Area (Lead) Energy & Extractives
Financing Instrument Investment Project Financing	Borrower(s) The Republic of Serbia	Implementing Agency Ministry of Mining and Energy	

Proposed Development Objective(s)

Increase the uptake of energy efficiency, sustainable heating, and rooftop solar PV by households in participating local self-government units in Serbia.

Components

Financing energy efficiency, sustainable heating, and rooftop solar investments in residential buildings
Technical assistance and implementation support

PROJECT FINANCING DATA (US\$, Millions)**SUMMARY**

Total Project Cost	145.00
Total Financing	145.00
of which IBRD/IDA	50.00
Financing Gap	0.00

DETAILS**World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	50.00
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Non-World Bank Group Financing



Counterpart Funding	95.00
Local Govts. (Prov., District, City) of Borrowing Country	45.00
Local Beneficiaries	50.00

Environmental and Social Risk Classification

Moderate

Decision

The review did authorize the team to appraise and negotiate

B. Introduction and Context

Country Context

1. **Serbia is an upper-middle-income economy which features the largest population in the Western Balkans at 7 million and the highest GDP per capita at US\$7,720.**¹ After making substantial gains in terms of political stability and institution building, in 2014 Serbia started official accession negotiations with the European Union (EU) which have been ongoing since. Despite some reform efforts, improvements in government effectiveness and accountability have stagnated in recent years, holding back stronger progress across other areas. The COVID-19 pandemic and related containment measures have taken a heavy toll on the Serbian economy, but recovery in 2021 has been strong. In the later part of 2021, the steep increase in international energy prices has contributed to inflation, with an annual price increase of 7.5 percent reported in November 2021 and higher exposure of lower income households to rising food and energy costs.²

2. **The Government of Serbia (GoS) is scaling up green investments to spur post-COVID recovery and build resilience against future shocks, especially among its most vulnerable citizens.** The Budget for 2021 has set aside close to €2.2 billion for energy efficiency, sustainable heating, district heating rehabilitation, green recovery and growth, mining, sewer network construction, wastewater treatment, and solid waste management projects and programs. Strengthening its focus on ‘green’ investments will contribute to Serbia’s ambitious climate change mitigation commitments. Serbia has been a party to the United Nations Framework Convention on Climate Change (UNFCCC) since 2001 and the Kyoto Protocol since 2008. The Serbian government submitted its Intended Nationally Determined Contribution (INDC) to UNFCCC in 2015, pledging to cut greenhouse gas (GHG) emissions by 9.8 percent by 2030 in comparison to 1990 levels. Additionally, as a Contracting Party to the *Energy Community Treaty*, Serbia has made legally binding commitments to adopting core EU energy legislation (the so-called “*acquis communautaire*”). As a signatory to the *Sofia Declaration on the Green Agenda for the Western Balkans*, aligned with the EU’s Green Deal, Serbia has committed to working towards the 2050 target of a carbon-neutral continent together with the EU.

3. **Serbia has begun developing the strategic framework for the decarbonization of its economy.** A draft Low-Carbon Development Strategy (LCDS) was prepared in 2020 with financial support of the EU, setting a more ambitious target to reduce Serbia’s GHG emissions by 33.3 percent in 2030 compared to 1990 levels. It is expected that this objective will be reflected in the update to the Intended Nationally Determined Contribution (INDC) expected to be released in 2022. In January 2021, the GoS adopted an Action Plan for the Implementation of the Government’s Programme 2020-

¹ 2020 value. Source: World Bank, World Development Indicators.

² Source: Fiscal Council of Serbia, January 4, 2022.



2022, which includes two “Green Agenda” objectives. As of January 2022, a new energy sector strategy and a National Energy and Climate Plan (NECP) are also under preparation but their release for public consultations has been delayed. The Law on Housing and Building Maintenance envisages sustainable housing development as one of the basic principles. Finally, a long-term building renovation strategy spelling out medium- to long-term targets for residential, commercial, and public buildings was finalized in 2021 and is expected to be reflected in the forthcoming NECP and Energy Strategy.

Sectoral and Institutional Context

Institutional Structure and Governance

4. **The energy sector policy agenda is implemented by several institutions at various levels.** The Ministry of Mining and Energy (MoME) is responsible for the national energy policy and leads decarbonization efforts in the energy and mining sectors. The Ministry of Construction, Transport, and Infrastructure (MCTI) is responsible for the buildings sector, including the preparation of the national buildings renovation strategy that includes energy efficiency improvements. Environmental management and monitoring are the mandate of the Ministry of Environmental Protection (MEP). Local self-government units (LSGUs) with more than 20,000 inhabitants are obliged to set objectives to improve energy efficiency, produce and implement Municipal Energy Action Plans, introduce Energy Management Systems (EnMS), and allocate funds in their budgets for the fulfilment of municipal energy efficiency obligations.

Residential Clean Energy

5. **Serbia’s energy mix is dominated by fossil fuels, while the contribution of non-traditional renewable energy sources is negligible.** In 2019, 82 percent of Serbia’s gross inland energy consumption (15.5 Mtoe) came from fossil fuels (44 percent from lignite, 24 percent from oil, and 14 percent from natural gas). Biomass (mainly firewood) and hydro respectively represented 7 and 6 percent of gross inland energy consumption, while the share of nontraditional renewable energy sources (e.g., wind, solar) is below 1 percent.³ Non-hydro renewable energy sources account for a very small share of Serbia’s electricity generation. In 2020, only about 3 percent of Serbia’s electricity generation came from non-hydro renewable energy sources, compared to 69 percent from coal and 28 percent from hydropower.⁴ Non-hydro renewable energy generation is concentrated in large wind farms, while the share of small-scale distributed generation is negligible.

6. **Households account for about one third of Serbia’s final energy consumption, and about three quarters of the energy they consume is used for heating purposes.** In 2018, households accounted for 34 percent of Serbia’s final energy consumption, followed by industry (28 percent), transport (25 percent), commercial and public services (11 percent), and agriculture and forestry (2 percent). About 75 percent of the final energy consumed by Serbian households is used for space and water heating, vs. 17 percent for lighting and electrical appliances and 7 percent for cooking.⁵ The largest share of the heating needs of Serbian households are met by firewood and coal (36 percent and 12 percent of total household energy consumption for heating in 2018⁶), while electricity, district heating, and natural gas respectively account for 24, 19, and 9 percent of the total. Residential heating is a major source of air pollution in Serbian cities, especially in winter months, when it accounts for more than 50 percent of fine particulate matter (PM_{2.5}) emissions. Particulate matter concentrations in Serbian cities are consistently above World Health Organization (WHO) guideline values.

7. **The GoS has made the participation of citizens in the energy transition – as “prosumers” of clean energy and as adopters of cleaner heating and energy efficiency solutions – a core part of its current energy sector agenda.** The GoS has put in place programs to scale up the adoption of sustainable heating solutions and distributed renewable energy in residential buildings, but these programs remain small and scale-up is difficult due to fragmented implementation across

³ Source: Eurostat.

⁴ Source: Energy Agency of the Republic of Serbia (AERS), 2020 Annual Report.

⁵ Source: Eurostat.

⁶ Source: Eurostat.



government. In 2021, the MEP launched a boiler replacement program aimed at improving air quality. In February 2021, the program issued two public calls for: (i) co-financing the procurement, replacement, reconstruction, and rehabilitation of heating boilers (RSD 200 million, €1.7 million); (ii) co-financing air pollution reduction from individual heating sources (RSD 100 million, €0.9 million). Recently adopted energy laws have created the conditions to simplify the procedure for the installation of solar panels on the rooftop of buildings, and the GoS has adopted a regulatory framework to allow Serbian households to become prosumers⁷ and sell excess generation from their solar PV systems to the grid through a net metering mechanism. In September 2021, the MoME launched its first public call for subsidies for solar panels, with the long-term ambition of reaching 30 percent of Serbian households equipped with solar PV systems.⁸

Energy Efficiency

8. **Serbia lags peer countries in terms of overall energy intensity of the economy.** In 2018, Serbia's total final energy consumption per unit of GDP PPP was 0.078 toe per thousand 2015 US\$ PPP. This value was significantly higher than the one of the EU-27 (0.056 toe per thousand 2015 US\$ PPP), but also higher than the one of other WB6 countries (e.g., North Macedonia and Albania, with 0.062 and 0.057 toe per thousand 2015 US\$ PPP respectively) and comparable EU countries in the region (e.g., Bulgaria and Romania, with 0.070 and 0.048 toe per thousand 2015 US\$ PPP respectively).⁹ Energy prices are close to or at cost recovery, but energy taxation is marginal, thus leading to relatively low prices in regional comparison and limited incentives for investments in energy efficiency and distributed renewable generation.

9. **The residential sector has a large untapped potential for energy efficiency improvements, especially in single-family houses (SFHs).** The residential sector accounts for nearly 49 percent of total electricity consumption and about 55 percent of total heat consumption in Serbia.¹⁰ SFHs account for almost 60 percent (179 million m²) of the total surface and 97 percent (over 2.2 million units) of the total number of residential buildings,¹¹ and their average net energy demand for heating is almost twice as high the one of multi-apartment buildings (281 vs. 153 kWh/m² per year).¹² A recent WB study in Western Balkan countries with similar conditions showed that energy savings above 50 percent can be achieved in SFHs by retrofitting insulation of walls, roof, and windows.¹³ The investments required to improve the energy efficiency of residential buildings are significant, but are estimated to result in sizeable social, economic, and environmental benefits. The draft Long-Term Buildings Renovation Strategy prepared by the MCTI estimates that the total investments required for the renovation of all Serbian buildings range between RSD 2,326 billion (€19.8 billion) and RSD 9,377 billion (€79.7 billion) by 2050. Although SFHs account for the largest share of the residential building stock and many of them are very energy-inefficient, very limited instruments are in place to support energy efficiency improvements in these houses.

10. **An Administration for Energy Efficiency Financing and Promotion (hereinafter Energy Efficiency Administration, EEA) has been created within the MoME through the newly adopted 2021 energy legislation.** The EEA will replace the current budgetary fund for energy efficiency, which was just a budget line operated by the MoME. MoME will develop and oversee implementation of the national energy efficiency policy while EEA will have a task to implement this policy

⁷ "Prosumers" are generally defined as electricity consumers that produce part of their electricity needs from their own power plant and use the distribution network to inject excess production and to withdraw electricity when self-production is not sufficient to meet own needs. Source: Energy Community.

⁸ July 29, 2021 statement of the Minister of Mining and Energy Zorana Mihajlovic. Source: Executive News (Executive Newsletter, Issue No. 4848, July 30, 2021).

⁹ Source: IEA, World Indicators.

¹⁰ Source: World Bank (2020), "Serbia: Key Design Features for a Residential Energy Efficiency Program".

¹¹ Source: National Typology of Residential Buildings of Serbia (until 2012), Statistical Yearbooks (2013-2020).

¹² Source: Support for Low-Emission Development in South Eastern Europe (SLED), based on 2011 Census data from the Statistical Office of the Republic of Serbia.

¹³ Source: *Sustainable Heating Assessment in Western Balkan Countries*, World Bank Technical Assistance Project funded by ESMAP, December 2021.



based on the annual investment programs adopted by the Government each year. The EEA will provide grants (either repayable or non-repayable) to all energy consumption sectors and particularly to household sector and other types of support, which will be developed in the future. It will also provide assistance to municipalities, financial institutions, energy service companies, and consumers to implement EE measures and will be in charge for rising awareness on energy efficiency. Under the Law on Energy Efficiency and Rational Use of Energy (LEERUE), the EEA is mandated to coordinate the different energy efficiency and clean energy support programs, recognizing the link between EE and clean energy.¹⁴ In 2021, the Ministry of Mining and Energy initiated a pilot government program that finances for the first time energy efficiency investments in residential buildings.

C. Proposed Development Objective(s)

Development Objective (From PAD)

Increase the uptake of energy efficiency, sustainable heating, and rooftop solar PV by households in participating local self-government units in Serbia.

PDO-Level Indicators

11. **The project will have PDO-level results indicators**, reflecting the three constituent objectives of increasing the uptake of (i) energy efficiency (PDO Indicator 1), sustainable heating (PDO Indicator 2.ii), and rooftop solar PV (PDO Indicator 3) by households in participating local self-government units in Serbia:

- Projected lifetime energy savings stemming from energy efficiency and sustainable heating investments in residential buildings (target: 20,000,000,000 MJ).
- Number of households that have implemented energy efficiency and sustainable heating investments (target: 25,000 households), of which:
 - i. Number of households benefiting from MoME's social inclusion top-up grants (target: 2,500 households).
 - ii. Number of households switching away from traditional solid fuel heating solutions (target: 5,000 households).
- Renewable energy capacity installed (through rooftop solar PV installations; target: 4 MW).

D. Project Description

12. **Project financing will be US\$50 million divided between two components implemented simultaneously:**

- **Component 1:** Financing energy efficiency, sustainable heating, and rooftop solar investments in residential buildings (US\$45 million¹⁵).
- **Component 2:** Technical assistance and implementation support, with the overall aim to support the development of scalable financing mechanisms and remove market barriers (US\$5 million), with three subcomponents: (a) enhancing local market capacity, improving enabling environment, and strengthening public awareness (US\$0.8 million); (b) technical studies informing program design and implementation (US\$0.8 million); (c) project implementation support (US\$3.4 million).

Component 1: Financing Energy Efficiency, Sustainable Heating, and Rooftop Solar Investments in Residential Buildings (US\$45 million)

¹⁴ The existing boiler replacement program will likely remain under the management of the MEP, at least for the foreseeable future.

¹⁵ The MoME might be interested in providing additional funds from the government budget to expand the scope of the project. However, any additional public funds from the MoME will be considered parallel financing rather than IBRD-GoS co-financing.



13. **Scope:** This component will finance partial grants administered by the MoME, which will co-finance investments in energy efficiency, sustainable heating, and rooftop solar in residential buildings, which has traditionally been the most difficult market for these investments to be scaled-up. The investments will be financed through: (i) partial grants financed through the project, offered by the MoME and channeled through participating local self-governing units (LSGUs); (ii) partial grants offered by the LSGUs directly, in parallel to the IBRD financing channeled through the project; and (iii) household contributions, financed either from savings or borrowings (see below for details).

14. **Pilot experience:** The project will scale up a revised version of an existing government program, piloted in 2021, financing residential energy efficiency (EE) investments through a combination of public grants and leveraged private-sector financing. Under the program (developed with SECO's support under the RELOF 2 project), owners of single-family houses (SFHs) and apartments in multi-apartment buildings (MABs) can submit an application to their LSGU for grant co-financing (in the first pilot in 2021, up to 25 percent provided by the MoME and up to 25 percent provided by the LSGU) for the implementation of clean energy and energy efficiency measures. Two rounds of public calls, one for energy efficiency and one for rooftop solar PV were issued as pilots in 2021, and participation levels from LSGUs have been considerable although not reaching national scale. As a result of the energy efficiency call issued in April 2021 (MoME contribution RSD 220 million), 67 LSGUs (corresponding to about 40 percent of the country's total of 168¹⁶) have signed a contract with MoME to participate in the program. In terms of beneficiaries, the pilot has already completed works at 1,700 households and signed contracts with about 3,800 households. Given the increasing interest expressed by LSGUs, the MoME is planning to launch a second public call for residential energy efficiency in early 2022. The call for rooftop solar PV grants was launched in September 2021, and the MoME has signed contracts with 37 municipalities, with a budget for MoME's contribution of RSD 100 million. The revisions to the pilot program that will be introduced in the first calls financed by the project are elaborated in detail below.

15. **Roles & responsibilities:** LSGUs play a pivotal role in the program, as the entities that recruit contractors, process citizen applications and channel grants. The implementation steps of the program are the following:

- (i) The MoME launches a public call for LSGUs and cities to participate in the program (the call remains open for two months).
- (ii) The MoME and the participating LSGUs¹⁷ sign a contract confirming co-financing of grants.
- (iii) Participating LSGUs submit to the MoME a rulebook laying out the rules and steps of their local programs; the rulebook is approved by the MoME, and then adopted by the LSGUs (unless already adopted).¹⁸
- (iv) Participating LSGUs launch a public call for the selection of contractors that will implement the energy efficiency measures.
- (v) Participating LSGUs launch a public call the selection of the SFHs and apartments in MABs that will be the final beneficiaries of the local EE program; members of local energy commissions within the LSGUs process household applications, visit households to verify their eligibility, and form a final list of program beneficiaries. Citizens commit to paying their share of the costs.
- (vi) LSGUs, contractors, and citizens sign a tripartite contract, after which construction works can begin.

¹⁶ This number includes municipalities, cities, and cities with municipalities (excl. Kosovo and Metohija). Source: 2021 Annual Report of the Statistical Office of the Republic of Serbia.

¹⁷ In order to be selected by MoME to participate in the program, among other things LSGUs need to confirm that they have sufficient budget for the co-financing of the grant component.

¹⁸ Criteria for the selection of beneficiary households vary based on the LSGU. In general, the two main criteria requested by most LSGUs are: (i) proof of ownership (e.g., construction permit, obtained either through the regular permitting procedure or retroactively through legalization, proof that the homeowner has applied for legalization); and (ii) proof that the house is inhabited (e.g., electricity bill from the previous month showing a consumption above 30 kWh). In addition, some LSGUs have requested that applicants have paid all the local taxes they owed.



- (vii) At the end of the construction works, the members of the of the energy commissions within the LSGUs visit the households to verify the implementation of the energy efficiency investments and, in case of a positive outcome, disburse the grant funds directly to the construction company.

16. **Eligibility:** The Project Operations and Grant Manual (POGM), which is a disbursement condition for Component 1, will define the specific criteria for eligibility of households and investments. The principles underpinning the eligibility criteria are:

- The project will prioritize investments in SFHs, for four main reasons: (i) the thermal characteristics of Serbian SFHs are generally worse than those of larger buildings, mainly due to the unfavorable surface-to-volume ratio and the relatively older building stock; (ii) SFHs tend to rely more on polluting and less efficient coal and wood boilers for heating, whereas a significant share of MABs rely on district heating and electricity;¹⁹ (iii) lower-income households are more likely to live in SFHs;²⁰ and (iv) other national and donor-funded support schemes have so far primarily targeted public buildings and MABs. In selected cases, technically sound investments in individual apartments in MABs will be eligible.
- Supported buildings need to be (i) structurally sound; and (ii) fully finished (i.e., constructions with finished roof and façade and adequate access to primary infrastructure such as electricity, sewage, and water supply).

17. **Leveraging of LSGU and household financing:** Thanks to the financing structure, the project funds will leverage substantial sub-national and private co-financing (in the pilot implemented in 2021, the leveraging factor was 4:1). In the pilot, the MoME program provided 25 percent of the investment financing, LSGUs another 25 percent, and households 50 percent (more details on the pilot are provided below). The financing percentages will be adjusted during implementation, but will begin with a similar ratio to what was done in the pilot.

18. **Commercial bank financing of household contributions:** To improve affordability for households, the program has established a partnership with Banka Poštanska Štedionica (“Postal Savings Bank”), which has developed a targeted loan product for the program to cover the households’ contributions, complementing the partial grants offered by the MoME and the LSGUs. Banka Poštanska Štedionica is majority owned by the GoS21 and is one of the largest commercial banks in the country. It operates through branches in all post offices of the national post service, Pošta Srbije, and is responsible for handing out retirement checks to citizens. As part of the pilot run by MoME in 2021, citizens who were awarded a grant from their LSGU can apply for a commercial loan with Banka Poštanska Štedionica to cover the remaining investment based on the proforma invoice issued by the contractor. In the pilot, Banka Poštanska Štedionica offered loans with amounts ranging from RSD 50,000 to RSD 1.5 million (from about €400 to about €12,800), a fixed interest rate of 6.5 percent (9.89 percent including life insurance), debt-to-income ratio of up to 60 percent, and tenor ranging from 12 to 71 months.²² Between October 25, 2021 and December 22, 2021, Banka Poštanska Štedionica approved 34 loans, with an average amount of RSD 115,000 (€1,000) and an average repayment period of 31 months. However, this number only includes loans from LSGUs that have already signed contracts with participating households and contractors (a key

¹⁹ While comprehensive data on the heating sources used by households living in different building types is not available, 2011 Census data supports this statement: in rural areas (dominated by SFHs), virtually all households rely on firewood or coal for heating; in urban areas, among households without access to central or district heating (mainly SFHs), 60 percent use firewood for heating, 15 percent coal, 33 percent electricity, and 12 other sources (the total adds up to more than 100 percent because some households use more than one heating source).

²⁰ In 2019, across Serbia 89 percent of households belonging to the lowest income quintile lived in SFHs, compared to only 47 percent of households in the highest income quintile (source: EU-SILC).

²¹ The main shareholders of Banka Poštanska Štedionica are the Government of Serbia with 71 percent, Pošta Srbije (the national post service) with 18 percent, and Telekom Srbija with 10 percent.

²² Source: Banka Poštanska Štedionica website, http://www.posted.co.rs/krediti_efikasnost.html



requirement to be eligible for the loan), while several large LSGUs (where the number of loans requested is expected to be relatively higher) are still processing household applications and contracts with construction companies.

19. **Revisions and further developments of the project design compared to the pilot:** The first public call under the SURCE project (expected to be launched by the end of 2022) will be based on the program piloted in 2021, with some enhancements. Leveraging the delivery model adopted by the MoME for the pilot will enable a swift launch of the first public call using project funds after the project reaches effectiveness, including revisions compared to the pilot program on the following design elements:

- a. **Standardization of investments.** The project will promote the standardization of clean energy and energy efficiency investments, broadly classified into “light”, “standard”, and “advanced” packages:
 - i. “Light” renovation packages include windows and doors replacement and roof ceiling insulation (estimated cost about €2 thousand per household) and can lead to energy savings of 25-30 percent of baseline demand.
 - ii. “Standard” renovation packages include wall insulation, boiler replacement, and heat network renewal, on top of the measures included in the light package (energy savings 60-65 percent; €7-8 thousand per household).
 - iii. “Advanced” renovation packages have a cost of about €12-13 thousand per household and include heat pump, solar PV system and solar collector, on top of the measures included in the light and standard packages (excl. boiler replacement) leading to energy savings of 80-85 percent.²³

The efforts to standardize notwithstanding, additional combinations of measures that could be financed under the project include, but are not limited to: (i) simple windows and doors replacement; (ii) simple boiler replacement; (iii) incremental investments required to achieve a “standard” renovation package for households that have already implemented some form of renovation (e.g., beneficiaries of the existing boiler replacement program interested in energy efficient investments; or households that have replaced windows under the pilot program). The project will place a specific emphasis on the replacement of traditional solid fuel boilers with cleaner, more efficient boilers. In line with the pilot run by the MoME, the project will not finance the replacement of existing coal boilers with more efficient coal boilers, in order to avoid carbon lock-in. Building on the first call for proposals in September 2021, which focused solely on rooftop solar PV, the program will also provide partial grants for households that install rooftop solar PV, either as a separate measure or as a joint measure with energy efficiency improvements.²⁴ In order to prioritize certain investments over others, the possibility to offer different grant shares depending on the type of intervention being financed will be assessed. The grant level will be set in the public calls and the Project Operations and Grant Manual (POGM, for which a draft has already been developed) and will be adjusted during implementation.

- b. **Standardization across LSGUs:** To promote standardization across the program and make the program scalable and attractive for contractors, the project will work with LSGUs to standardize implementation modalities and develop standardized documents to support the work of the municipal energy commissions. Standardized guidelines and checklists will be developed for the municipalities to carry out remote screening of the applications received and identify those that will require an in-person pre-renovation visit because of

²³ Source: walk-through energy audits carried out in late October 2021 in 30 houses located in 9 LSGUs across Serbia.

²⁴ The program may merge rooftop solar PV and energy efficiency into one round of calls for proposals or keep them separate, depending on the learnings from the first pilot call for solar launched in September 2021 and feedback on demand gathered during the initial implementation phase.



technical issues with the documentation or a higher risk of fraud, thereby lessening the need for visits to all dwellings. Post-renovation visits will be carried out on a sample basis to verify that the investments have actually been implemented. In case the number of investments to be verified exceeds the capacity of the LSGU, the visits will be carried out on a sample basis to maintain a deterrent effect.

- c. **Specific emphasis on the most vulnerable households and solidarity mechanism for poorer LSGUs (social inclusion top-up grants).** Through its focus on SFHs, the project is designed to ensure that lower-income households are well represented among the potential beneficiaries of the program: households living in SFHs represent about 80 percent of households in the lowest income quintile, vs. 40 percent of households in the highest income quintile.²⁵ However, a detailed distributional assessment of household finances suggests that this group requires higher subsidy levels, particularly to take up the standard package investments. In order to further strengthen the focus on vulnerable and lower-income households and enhance their participation in the program, the project may include social inclusion top-up grants. In the first call financed by SURCE, these top-ups would be provided to lower-income LSGUs, covering part of their contribution to the program and thereby increasing the share of this group of municipalities. For future calls, the program will explore options to also target the social inclusion top-up grants on a household-level, e.g., through cross-eligibility for homeowners who are also recipients of social assistance benefits or receive energy bill discounts under the Energy Vulnerable Program²⁶ (EVP).
- d. **Adoption of World Bank Environmental & Social (E&S) and fiduciary requirements.** With the introduction of World Bank financing, the program will comply with the World Bank's ESF and the fiduciary requirements of the World Bank. The World Bank will work with the MoME and the EEA to promote adoption of ESF-compliant practices across all activities financed by the MoME and the EEA, including those financed from the GoS budget and other financiers, as part of the wider capacity building and strengthening efforts.
- e. **The World Bank will support the Government in reflecting behavioral insights in the program design and communication.** The use of behavioral diagnostics of household attitudes and knowledge, including among poorer and vulnerable households, will be critical for identifying barriers in transitioning towards cleaner and more efficient energy, and improve the program targeting as well as communication to its beneficiaries. A regional survey on energy efficiency and sustainable heating practices and attitudes is currently under preparation in collaboration with IPSOS and is expected to be administered in January-February 2022. The MoME has been informed of the survey and the communication and outreach strategy prepared for the project will fully integrate its findings.

20. **Learning-by-doing and adjustments during implementation:** The residential segment of the market for energy efficiency and clean energy is new territory for the MoME and has traditionally been the most difficult to develop at scale, even in the EU and North America. The design and implementation modalities will therefore keep the flexibility to adjust for lessons learned during implementation. Subsequent public calls under the project will incorporate lessons learned from the previous calls and introduce adjustments deemed necessary. For the first public calls under SURCE, the project will maintain the approach of periodic public calls to allow for gradual adjustments over time. In the medium term, once the financing model becomes more defined, the project will assess the possibility to transition to a program that accepts applications on a rolling basis. The project will also seek to gradually adjust grant targeting to maximize leveraging of private-sector financing and avoid market distortions. The World Bank will work closely with the MoME, the EEA, and

²⁵ Estimate based on the 2019 Household Budget Survey (HBS).

²⁶ Since not all households that are eligible for the EVP actually apply to it, cross-eligibility could be expanded to all households that are eligible for the energy vulnerable program, instead of just those that are recipient of the energy bill discounts. The household would however still need to receive the certificate of status from the local center of social assistance that confirms eligibility to the EVP.



LSGUs throughout the implementation period to scale up the program while gradually improving the targeting of government grants to those investments that have the highest energy payback and longest financial payback periods, and to those households and LSGUs that are most in need of grant support. The technical studies under Component 2b will provide important inputs to this process of gradual improvements to targeting, while ensuring broad and inclusive access to the program. Moreover, the possibility to transform a part of the grants into repayable grants will be investigated, conditional on whether a feasible repayment mechanism from an operational and legal standpoint can be identified. Repayable grants would serve as an option for LSGUs to modify their grant portion during later stages of implementation.

21. **Mid-term review:** A mid-term review in 2024 will systematically evaluate the project results and grant implementation modalities with the aim to steer the project further into the directions outlined above. Most importantly, the mid-term review will aim to steer the project towards (i) inclusive access to the program; (ii) maximum possible leveraging of private co-financing; (iii) maximum possible impact on the clean energy transition in Serbia per unit of investment; and (iv) development of a sustainable commercial market for residential clean energy and energy efficiency.

22. **Potential additional strategic partners to be engaged during implementation:**

- The project will seek to establish further partnerships with commercial banks to establish additional sources of financing for beneficiary households to cover their share of the investment cost. The project will maintain the partnership established with Banka Poštanska Štedionica under the pilot energy efficiency program run by MoME. In addition, the project will seek to involve other local commercial banks into the program to allow beneficiary households to complement the grant financing offered by the MoME and the LSGUs. In order to incentivize commercial banks to participate in the program, the World Bank and the MoME will jointly investigate the possibility for the MoME to incentivize bank participation through partial grants or TA to cover the additional costs of doing business incurred by offering loans for the type of investments and to the type of households involved in the project. The partial grants (determined in the operations manual and adjusted during implementation) would cover the incremental cost of developing new lending products, the cost of certified auditors to carry out energy audits of houses, as well as the cost of setting up appraisal capacity in the banks. Credit lines or other forms of on-lending will not be pursued under the project. This model is meant to introduce a sustainability element into the program and support the transition to private financing for clean energy and energy efficiency investments in residential buildings in Serbia.
- The project will also monitor the emergence of potential energy service companies (ESCOs) in the residential sector, although it will not seek to support the development of local contractors into full-fledged ESCOs. No ESCOs are currently operating in the Serbian energy efficiency market, except in street lighting projects and heat energy supply projects. Should suitable energy efficiency or clean energy ESCOs emerge during implementation, the project will assess the possibility to involve them into the program as an additional source of financing. The project will investigate the potential for a pilot in which ESCOs play a role, including processing household applications, applying for grants from the MoME and LSGUs and offering lending to households.

Component 2: Technical assistance and implementation support (US\$5 million)

Subcomponent 2a: Enhancing Local Market Capacity, Improving Enabling Environment and Strengthening Public Awareness (US\$0.8 million)

23. **This component will include a wide range of activities aimed at enhancing local market capacity,** improving the enabling environment, and strengthening public awareness. Among other activities, this component will support, in coordination with other IFIs and donors: (i) policy, legal and regulatory development related to energy efficiency, sustainable heating, and rooftop solar; (ii) market development and capacity building for the MoME, LSGUs, local energy commissions, contractors, and commercial banks, to screen, design, evaluate, appraise/finance, implement, and measure



clean energy and energy efficiency investments in the residential sector; (iii) communication and outreach activities to raise awareness among the Serbian population of the benefits of energy efficiency and clean energy investments and available support programs.

Subcomponent 2b: Technical Studies Informing Program Design and Implementation (US\$0.8 million)

24. **This component will finance technical studies that are needed to implement investment projects**, such as: (i) selective pre-renovation energy audits; (ii) selective technical designs and construction supervision; (iii) sample post-renovation energy audits and measurement and verification (M&V); (iv) monitoring and evaluation (M&E).

Subcomponent 2c: Project Implementation Support (US\$3.4 million)

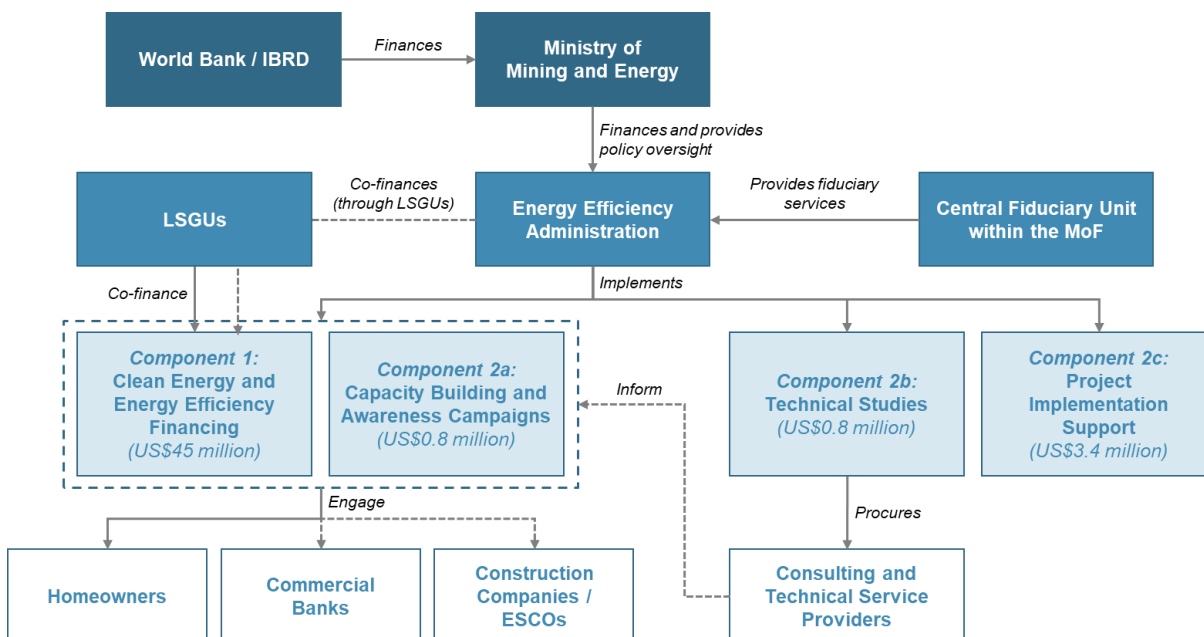
25. **This component will support activities related to the implementation of the project**, such as: (i) hiring of PIU staff (e.g., Project Manager, Technical Experts, Environmental and Social Experts, Database and Monitoring & Evaluation Expert, Legal Experts), (ii) hiring of technical experts within the LSGUs (or at the regional level), (iii) audits, and (iv) operating costs (e.g., equipment, logistics).

E. Implementation

Institutional and Implementation Arrangements

26. **The envisioned project structure and implementation arrangements are summarized in Figure 1.** The World Bank (through IBRD) will provide a US\$50 million loan to the Government of Serbia. The Ministry of Mining and Energy (MoME) will be the implementing agency and will receive and administer loan disbursements, with day-to-day project management being assigned to the Project Implementation Unit (PIU) within the MoME. The loan funds will flow into a designated account opened at the National Bank of Serbia (NBS) in MoME’s name. The MoME will co-finance local investments with the LSGUs, channeling funds from the designated account to separate accounts/sub-accounts denominated in RSD and opened for this purpose at the Treasury by the LSGUs.

Figure 1. Envisioned project structure and implementation arrangements.



Source: World Bank Staff.



27. **The project will utilize the services of the Central Fiduciary Unit (CFU) within the MoF for procurement and financial management.** The CFU was established within the MoF in October 2017 to provide fiduciary support (procurement and financial management activities) to all World Bank supported projects in Serbia. CFU staff will work with the technical staff of the MoME with regard to technical aspects of project implementation.

Legal Operational Policies

Triggered?

Projects on International Waterways OP 7.50

No

Projects in Disputed Areas OP 7.60

No

Summary of Assessment of Environmental and Social Risks and Impacts

28. **Of ten Environment and Social Standards (ESSs), five are relevant to the project.** These are: ESS 1) Assessment and Management of Environmental and Social Risks and Impacts; ESS 2) Labor & Working Conditions; ESS 3) Resource Efficiency and Pollution Prevention and Management; ESS 4) Community Health and Safety; and ESS 10) Stakeholder Engagement and Information Disclosure.

29. **The environmental risk is considered Moderate.** The project is not expected to have significant adverse environmental risks and/or impacts. On the contrary, given its overall green and energy efficiency footprint, it will likely result in positive impacts in the long run. However, there are several short-term risks, mostly related to small scale civil works on already existing facilities (single-family houses and multi-apartment buildings) under Component 1. The main environmental risks in this regard could be identified as: (i) impacts on ground and surface water, soil, and air contamination (dust and noise); (ii) Occupational Health and Safety (OHS) issues and access to work sites; (iii) inadequate waste management. Component 2 should have no significant environmental impacts as it is focusing on TA, strengthening policies and practices. The Project will not include works outside the already existing parameters, thus impacts from these activities (if managed and mitigated adequately) are expected to be typical for construction works, and as such, to be low in magnitude, predictable, reversible, and temporary.

30. **Given that the exact locations of the investments are not known with certainty, the MoME has prepared the Environmental and Social Management Framework (ESMF) that will be implemented** in order to identify adverse impacts and risks, manage them properly, and specify legislative and regulatory framework, procedures, and institutional responsibilities. The ESMF also sets forth a screening mechanism to ensure that substantial or high-risk activities are not financed under the Project, as well as activities on cultural heritage or within protected areas and sensitive habitats. The ESMF ensures that site-specific Environmental and Social Management Plans (ESMPs) or an ESMP checklist will be prepared for sub-project activities and will include site-specific impacts and mitigation measures, with clearly defined procedures for screening, mitigation, monitoring, and responsibility roles. The ESMF also includes provisions for the avoidance of any sensitive environments or protected areas, guidance for pollution prevention and environmentally sound resource use under ESS3, and any guidance on cultural heritage or chance finds as stipulated under ESS8. The ESMF was disclosed on January 19, 2022 on MoME’s website for public consultations.²⁷

²⁷ Call for consultations on MoME’s website: <https://www.mre.gov.rs/aktuelnosti/oglasna-tabla/javne-konsultacije-za-surce-projekat-public-consultations-surce-project>



31. **The social risks are considered Moderate and overall expected impacts are positive.** Risks can be effectively mitigated through the developed ESF instruments and the proposed tailored communication and outreach strategy. The activities under component 1 will involve minor civil works, with no labour influx and thereby associated risk, with no land acquisition needs. Component 2 supports TA aimed at optimizing project benefits and has negligible adverse social impacts. The overall risk rating is Moderate to highlight the importance of implementing an effective stakeholder engagement and outreach campaign throughout the duration of the project. These potential risks will be readily addressed through the project design and additional mitigation measures developed through the ESF instruments (ESMF, SEP, LMP and ESCP).

32. **To prevent possible social risks, the design of the project envisages the integration of citizens and stakeholder engagement.** In the Stakeholder Engagement Plan (SEP) a comprehensive engagement strategy inclusive of a dedicated civic platform has been adopted with a specific target to reach the underserved part of the population. The project also includes specific strategies like subsidies and targeting mechanisms to ensure that poor and vulnerable households adequately benefit from the project. To explore additional targeting of vulnerable households, the project will conduct a survey among households eligible for social assistance/energy vulnerable program benefits, to confirm the share of homeowners among them as well as their level of interest in energy efficiency improvement.

33. **The SEP also defines the establishment of the project-level GRM** to enable local communities, and affected stakeholders to raise grievances and seek redress in the case they perceive a negative impact arising from the project's activities.

34. **No major risks are expected concerning small civil work activities in component 1**, such as the installation of solar panels and better insulation. The national labor and OHS framework offers a solid framework which the LMP builds upon. Despite the low SEA/SH risks the LMP has called for a Code of Conduct for project workers and a grievance mechanism equipped to receive confidential complaints. The project workers will receive training on the prevention of SEA/SH.

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APPROVAL

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