

# **Mid-Term Review**

**SDG Catalytic Investment Joint Programme**

## **Green Finance Facility to Improve Air Quality and Combat Climate Change in North Macedonia**

**Final report**

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**for the**

**United Nations Development Programme  
in North Macedonia**

**April 23, 2025**

## **Acknowledgements**

The Midterm Review (MTR) team would like to extend its gratitude to all those at the Government of North Macedonia, Joint SDG Fund, UN agencies, EBRD, Partner Financial Institutions, project consultants and the beneficiary SMEs and households for their time for the interviews and valuable insights. Our special thanks go to Green Finance Facility team at UNDP North Macedonia and IOM North Macedonia for organizing the meetings and responding to the requests for documents promptly to enable the conduct of this MTR in a short time frame, as well as the Evaluation Manager from UNDP North Macedonia for the guidance. The report reflects the findings of the independent MTR and may not necessarily coincide with the opinions of the participating UN agencies, EBRD, the Government of North Macedonia, or the Joint SDG Fund. All the omissions are those of the authors.

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**Table 1 Project and evaluation information details**

<b>Project/outcome Information</b>		
<b>Project/outcome title</b>	Green Finance Facility to Improve Air Quality and Combat Climate Change in North Macedonia	
<b>Project Number</b>	UNDP Atlas: 00144270 Quantum: Outcome 1: 00132098 & Outcome 2: 00132099 UN Joint SDG Fund: 00122764	
<b>Corporate outcome and output</b>	Outcome 3, Output 3.1 (description enabling policy and reg. environment strengthened for low emissions development and resilience to climate change); project outcome description: SMEs have greater access to finance for accelerating transition to RE and EE solution.	
<b>Country</b>	North Macedonia	
<b>Region</b>	Western Balkans	
<b>Date project document signed</b>	26.10.2021	
<b>Project dates</b>	<b>Start</b>	<b>Planned end</b>
	July 2022	July 2026
<b>Total committed budget</b>	USD 46,674,431 (of which 46,500,000 for the main project) Joint SDG Fund: USD 7,974,431 (of which USD 174,431 for the preparatory stage) Government of North Macedonia: USD 0.8 million Co- funding by local banks \$6,500,000 EBRD commitment- USD 31 million to the PFIs for Outcome 1	
<b>Project expenditure at the time of evaluation</b>	Estimates (unofficial data) by 31/12/2024: Total expenditures (unofficial estimates): USD 1,358,909.80 Total expenditures and commitments: USD 6,212,943.55 The above does not include EBRD allocations	
<b>Funding source</b>	SDG Fund	
<b>Implementing party<sup>1</sup></b>	UNDP North Macedonia	
<b>Gender Equality Marker</b>	GEN 2.3	
<b>]Evaluation information</b>		
<b>Evaluation type (project/outcome/thematic/country programme, etc.)</b>	Project	
<b>Final/midterm review/ other</b>	Midterm	
<b>Period under evaluation</b>	<b>Start</b>	<b>End</b>
	July 2022	March 2025
<b>Evaluators</b>	Lilit V. Melikyan, Dimitrija Sekovski	
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<b>Evaluation dates</b>	<b>Start</b>	<b>Completion</b>
	January 31, 2025	April 25, 2025

<sup>1</sup> This is the entity that has overall responsibility for implementation of the project (award), effective use of resources and delivery of outputs in the signed project document and workplan.

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## Abbreviations

CSO	Civil Society organization
DO	Direct observation
EBRD	European Bank for reconstruction and Development
EE	Energy Efficiency
EU	European Union
ERC	Energy Regulatory Commission of North Macedonia
EUR	Euro
EV	Electric Vehicle
EURIBOR	Euro Interbank Offered Rate
FGD	Focus Group Discussion
GHG	Greenhouse Gas Emissions
GFF	Green Finance Facility to Improve Air Quality and Combat Climate Change in North Macedonia
GDP	Gross Domestic Product
GEFF	Green Economy Financing Facility (EBRD)
HH	Household
JP	Joint Programme
IOM	International Organization for Migration
KII	Key Informant Interview
LNOB	Leave No-one Behind
MTR	Midterm Review
MW	Megawatt
MACEF	Macedonian Center for Energy Efficiency
MTRSME	Survey of beneficiary SMEs conducted for this MTR
M&E	Monitoring and Evaluation
NGO	Nongovernmental organization
OECD	Organization for Economic Cooperation and Development
ProDoc	Project Document
PUNO	Participating UN organizations
PwD	Persons with Disabilities
PBP	performance-based payments
PV	photovoltaic
PSC	Project Steering Committee
PFI	Participating financial institution
RE	Renewable Energy
RC/O	UN Resident Coordinator Office
RF	Results Framework
SME	Small and Medium Size Enterprise
SMART	Specific, Measurable, Attainable, Relevant, Time-bound
SDG	Sustainable Development Goals
SROP	Scope and Rules of Procedure (SROP)
TOR	Terms of Reference
TA	Technical assistance
TOC	Theory of Change
UNECE	United Nations Economic Commission for Europe
UNEG	United Nations Evaluation group
UNDP	United Nations Development Programme
USD	United States Dollar
WHO	World Health organization

## Executive summary

[1] “Green Finance Facility to Improve Air Quality and Combat Climate Change in North Macedonia (GFF)” UN Joint Programme (JP), estimated at USD 46 million, is supported by the Joint Sustainable Development Goals Fund (SDG Fund) and implemented by the United Nations Development Programme (UNDP), the International Organization for Migration (IOM) and the United Nations Economic Commission for Europe (UNECE) in North Macedonia in partnership with the European Bank for Reconstruction and Development (EBRD), the Government of North Macedonia, and local participating financial institutions (PFIs). GFF is pioneering an innovative financial mechanism that provides access to affordable finance for small and medium-sized enterprises (SMEs) and underserved households (HH) in North Macedonia. It aims to stimulate investments in renewable energy (RE) and energy efficiency (EE), to accelerate the adoption of green solutions, enhance innovation, reduce energy use, and contribute to better air quality and combatting climate change. To incentivize the SMEs and HHs to take advantage of the loans, it also offers technical assistance (TA) and performance-based payments (PBPs). Under Component 1, the facility provides a credit line to PFIs which in turn lend to SMEs at a target Internal Rate of return (IRR) of 3 – 5 percent, plus USD 3.9 million in TA and ex-post PBPs up to 10 percent of the amount of the original loan. Under Component 2, for underserved HHs, the facility aims to provide USD 6.5 million in loans through local banks, with an expected IRR of 5 – 6 percent, complemented by TA and PBPs equal to up to 30 percent of the original loan amount. There are 7 groups of underserved households per design: Female-headed HHs; Single Parents, HHs with Persons with Disabilities (PwD) Roma HHs, employees affected by COVID-19, remittance recipients and returning migrants.

[2] UNDP commissioned this midterm review (MTR) of the project, on behalf of all the agencies involved as stipulated by the agreement with the joint SDG Fund, in February 2025, to assess the progress towards the achievement of the JP objectives and key results, review the JP’s strategy, assess the risks to sustainability, and provide forward-looking recommendations to enhance implementation efficiency, effectiveness, and sustainability, as well as adequate exit. The primary users of the evaluation include: the Joint SDG Fund, participating United Nations Organizations (PUNOs), EBRD, the Government of North Macedonia, PFIs, eligible SMEs and HHs and their unions. The Theory of Change (ToC) was slightly revised by the MTR team, together with the reconstruction of the Results Chain, and used in the MTR to assess the project’s causal pathways. The MTR followed a mixed method approach, based on triangulation of information gathered from the desk review, Key informant interviews (KII), Focus Group Discussions (FGD), Direct Observations (DO), and SME survey (MTRSME). Contribution analysis was used when attribution was not possible to establish.

## FINDINGS

### Relevance of design/internal coherence

[3] The format of the JP allowed the participating agencies (PUNOs and EBRD) to utilize and build on the expertise of each agency in the pursuit of the objectives of the project in a holistic way, but had some challenges too, in particular related to the different timeframes for reporting and payments. Plus, the interconnectedness meant that one agency could not do its work until the other completed its part. The program design is innovative, bringing in private finance to join public funding (Government) and the Joint SDG fund support to promote green energy. There are certain elements in the design, however, that posed challenges for the implementation of the project. (1) There is a contradiction between the decision to choose the banks for Outcome 2 only from those not involved in Outcome 1 (to diversify and to ensure that there is a enough attention to the underserved households) and budgeting only 30,500 USD for communication/outreach (to stimulate banks’ ownership over that), given that the smaller banks have less resources for marketing and lack of willingness to invest significant resources in that (already

demonstrated); 30,500 USD is even less than the 5 percent allowed by the Joint SDG Fund, and perhaps this restriction should not have applied to funding for outreach (as opposed to publicity). (2) The terms of the loans/grant size were kept as at the stage of ProDoc design, while as the time passed, similar credit lines for the SMEs emerged. (3) Certain not well justified eligibility restrictions, e.g., in the part of leasing were applied. (4) A restrictive cap was applied on the grant amount at 30 percent PBP - max USD 7,000 per verified project/loan for Outcome 2. (5) There were issues with the definition of two underserved HH groups. (7) The expectation of a solid share of solar projects under Outcome 2 did not materialize so far with the majority of the HHs choosing heat pumps, with the need for heat comfort being cited as the dominant reason coupled with affordability: this preference could have been identified at the design stage and more incentives applied for solar. (8) The fully commercial post-project vision, with no need for concessionality, does not seem and have to be the case for smaller, women-owned SMEs and the underserved HHs and some grant-based schemes might well be needed (e.g., supported by the Government), as is the case in many countries. The JP's log frame indicators are SMART (Specific, Measurable, Attainable, Relevant, Time-bound), but could have included an indicator on PM2.5 and PM10: this was requested by the Government recently (it was at the stage of implementation at MTR). And secondly, the targets on energy saving/Greenhouse Gas (GhG) reductions might be overoptimistic.

### Effectiveness

[4] **Component 1.** 47 SME sub-projects were financed, with a total value exceeding USD 11.1 million, in various sectors (transport, energy, manufacturing, retail and medical services, etc.) The desire for more solar projects has materialized: most SMEs invested in rooftop and land-based photovoltaic panels (PVP), while the adoption of EE machinery, insulation, and electric vehicles (EV) was lower. The average loan for SMEs was estimated at EUR 0.3M (capped at EUR 1M) with the actual being close, at EUR 226,577. GFF influenced many SMEs' decisions to apply for GFF loans, due to the PBPs, but moderately for most, with some SMEs indicating they were already committed to their projects, with other factors like financing terms and project feasibility also shaping the decisions. The JP has successfully reached SMEs and expanded the awareness of the benefits of RE/EE, including the smaller ones, but less so for the small women-owned ones. Similarly, while the majority of SMEs believed that the GFF has positively impacted their business operations – contributing to financial stability, EE improvements, operational growth, having experienced or expecting to experience financial savings and environmental impacts, including reduced air pollution, this was less so for smaller, women-owned SMEs, indicating differences in access to resources, financial literacy, or the ability to fully leverage GFF support, and the need for targeted outreach and support mechanisms to ensure equitable benefits and understanding of those, including potentially with sector-specific assistance, improved accessibility to TA and/ or enhanced post-financing follow-up. Job creation appeared to be the least realized benefit, suggesting that some businesses require more time to assess the full impact of their investments, and a need for longer time-frame in monitoring to allow for better understanding of the long-term effects of GFF financing. *Leveraging finance.* EBRD aims at EUR 30 million (more than the planned EUR 27 million) with EUR 23 million already committed. Thus, for Outcome 1 the finances leveraged were, overall, on track. **Component 2.** 30 underserved HHs were supported with access to affordable finance and TA for RE/EE solutions, but only 17 by MTR were verified. The value of household projects financed was at USD 264,138. Only 4 HHs chose solar and PVP systems, falling short of expectations. The average loan size was expected to be USD 11,600 but was at around 8,000 USD. The HHs would not have taken the loan without the PBPs. *Leveraging finance.* Only 50 percent of the financing committed by the banks has materialized, resulting from 2 banks from the initial list withdrawing, and the 2 new ones joining taking time (one of which was on board for 2 months only by the MTR); this was one of the main factors that negatively affected the pace of the project.

[5] **For both Outcome 1 and 2** there was *mostly high level of satisfaction with PFIs* (but with some SMEs having faced challenges in obtaining adequate loan application support and delays with verification and hence, payments) and the advisory support in selecting the appropriate technology, enabled by the UNECE-updated EBRD technology selector, helping the SMEs and HHs receive up-to-date information on the best suited technologies. As for the *results compared to the targets*, (a) the number of loan officers trained surpassed the targets (with almost equal female/male shares) along with reported outreach numbers, with (b) the remaining targets not met however, both for Outcome 1 and 2, in terms of number of beneficiaries, energy saved, installed RE capacity, annual energy saved and GhG emissions avoided (but the gap not too large for Outcome 1). The main reasons for the latter were: (a) the lengthy process of agreeing on legal terms between EBRD and UNDP (affecting the timeframe for the training of Project and Verification Consultants); (b) the time needed to find the replacements for the 2 withdrawn banks for Outcome 2 and due to UNDP lengthy procedures for the engagement with private sector entities needed for the micro-assessments; and (c) the time it took to identify the Project Consultant and Independent Assessor (due to a limited consulting market) and the project staff. The process for obtaining licenses for PV installations has been slower than anticipated affecting the planned timeline for verification (especially affecting Outcome 1). *Leaving No One behind (LNOB)*. The results in the areas of gender empowerment were promising with (a) 18 SMEs out of 46 with Female Business Owners or Women-Led; (b) 97 female loan officers trained and 24 Female-Headed HHs (59 percent) and (c) women constituting 62 percent of the applicants. 19 Children and Youth (0-17 years) benefitted under Outcome 2. There were however only 3 HHs with PwDs and no single Roma applicant. There could have been a more target-oriented outreach by the PUNOs for Component 2: at the time of the MTR a more proactive Communication plan (than in 2023 and 2024) was developed, as mentioned, together with proposals for campaigns plans for PFIs for the project and their products.

[6] *The potential systemic change and impact is there* - to catalyze innovation in the financial sector to unlock additional financing for the SDG - but this is more the case so far for the larger SMEs; for the rest more time is needed to demonstrate. And the same - for the developmental impact on local communities. The *Remaining barriers* include, *inter alia*, (1) the limited knowledge among the potential beneficiaries for Outcome 2 as well as smaller, women-owned SMEs about the benefits of the RE/EE and financial literacy, making the expanding of engagement and providing advisory support important; (2) the slow process for obtaining licenses for PVP, affecting the willingness to pursue this (the JP plans to engage in policy advocacy to support improving the enabling environment for RE and EE investments) and the grant disbursement, due to in part, long process of verification.

### **Efficiency**

[7] **Management arrangements.** The JP governance is formally established, with transparent decision-making and, overall, clear roles. The JP was mostly efficient, and the quality of execution was satisfactory, overcoming major external challenges at the start. The quality of coordination and oversight provided by the RC/O was satisfactory with monthly coordinating meetings, but there could have been better interconnectedness between Outcome 1 and 2 in relation to outreach. *Reporting* is in line with Joint SDG Fund reporting requirements but could improve with regards to reporting cumulative results. In relation to *M&E*, the scope of the SMEs' database available to the project should improve to enable better risk monitoring and timely action (the HH database is extensive). Risks and lessons were recorded and reported separately in UNDP system (Quantum and Quantum+). The lessons could be better documented and shared, including regionally. **Communication.** The *communication on behalf of the PFIs* in the part of *Outcome 1* has ensured successfully engaging even smaller SMEs, but could do better in (a) attracting more of new clients, especially women-owned smaller-SMEs; (b) utilizing digital engagement; and (c) ensuring regional coverage. For *Outcome 2* there was limited awareness of the GFF among the potential

HH beneficiaries. As for the *communication on behalf of the PUNOs*, there was outreach to associations of RE professionals and vendors, associations of underserved HHS (PwDs, Roma, diaspora), and municipalities, but mostly to introduce the JP, while a more in-depth collaboration is needed to ensure the awareness of the final potential beneficiaries: this was planned at the MTR, as part of the proactive outreach campaign for 2025. **Visibility.** The communications products reflect the “joint” nature of the programme. There could be improvements (a) with measures taken to avoid confusion among the (potential) beneficiaries (e.g., with EBRD’s GEFF) (b) outreach materials featuring links to the PFIs, and (c) more illustrative social media presence.

### **Risk Management**

[8] The risks identified in the ProDoc were overall appropriate at the time the ProDoc was drafted but could have envisioned the risks of competition in case additional credit lines appearing, and the risks emanating from the pool of banks for Outcome 2 to be comprised of smaller banks. The risk monitoring has a room for improvement.

### **Sustainability, scaling up and replication**

[9] The Program does not have, as yet, a feasible *exit strategy*: it is planned for 2025. The *central Government Ownership* is strong, with it fulfilling its obligations financially overall on time and taking keen interest in GFF, enabled by the GFF goals’ strong alignment with national policies, and regular consultations. The JP project could have been guided more, linking it with the relevant ongoing and planned Government initiatives. The GFF has prioritized building buy-in from local communities too with outreach, but as mentioned, there is a need for a deeper level engagement. The strength of *national ownership by private sector partners* was affected by external factors and has a room for improvement, with more guidance needed.

[10] *Likelihood for sustainability. SMEs* that appeared more inclined to consider reinvesting in RE/EE without grant support included those (a) with higher energy (more than 20 percent) and operational cost savings, (b) expecting to benefit from GFF for more than 6 years, (c) in energy and manufacturing, as well as (d) with male-ownership. This highlighted the importance of: longer-term monitoring of cost savings and demonstrating clear cost-benefit outcomes to the others to encourage SME-led investments, exploring additional incentives or post-financing advisory support, additional financial planning support and offering guidance on reinvestment strategies. The male-female ownership related differences point potentially to differences in financial access, financial literacy, risk perception, credit exposure or reliance on external funding, indicating the need for additional financial planning support to make long-term investment decisions, coupled with tailored, perhaps sector-specific advisory services (including post-loan) and financial incentives. For the *HHS*, the presence of a grant component seems to be very important for the sustainability. For them the advisory support could be enhanced for solar and biomass solutions to encourage their uptake. The strong correlation between transparent financing conditions and program satisfaction, highlighted the importance of ensuring clear, well-communicated loan terms to further improve beneficiary confidence. Thus, even though the likelihood of financial sustainability of the financial instruments devised and launched once the Joint SDG Fund support ends, for the larger SMEs demonstrates seems strong, for the other beneficiaries this needs more time and engagement. The project has supported the likelihood for sustainability and scale up in the country by training more loan officers than planned, and choosing a local consulting company for Outcome 1, thus strengthening its capacity for future engagement. But still, further efforts are needed to (a) engage with the local stakeholders, ensuring they can sustain the program's impact and for the beneficiary HHs and the smaller, women-headed SMEs increase uptake; (b) facilitate addressing regulatory barriers; (c) clearly outlining tailored strategies to reach some of the groups, e.g., Roma. The project needs at least one year no-cost extension and potentially a second phase (provided that funding for PBPs is secured) for the model to

mature and sustainability assured. And still, while the banks will likely continue without this particular type of PBP schemes (having similar schemes with concessional rates, run, in particular by the EBRD), this would serve the larger SMEs, for whom the RE/EE investments are becoming the part of Business-as-Usual; *the smaller SMEs, especially the women-owned ones and underserved HHs* might need schemes whereby the Government could step in financing the PBPs (as well as potentially other funders) and this needs to be explored, coupled with increasing their awareness of the benefits of RE/EE, including in synergies with the institutions that promote that too. And so, while the GFF management has engaged various stakeholders (professional business associations (banking and solar energy), Chamber of Commerce, municipalities, local associations representing target group etc.) this needs to be deeper not only in terms of ensuring the reach to the membership, but also for pooling resources and designing their roles for the post-project engagement as building blocks for sustainability. In particular, synergies could be probed with the (a) Just Transition initiative<sup>2</sup>; (b) the to-be established-Fund for EE<sup>3</sup>; (c) SME and Circular Economy Centers under the Chamber of Commerce; (d) municipalities in the context of them now obliged to develop strategies for tackling Air pollution, (e) National Reform Agenda<sup>4</sup>, etc.

[11] The table below presents the rating for the 5 evaluation criteria

Category.	Sub-category	Rating <sup>5</sup>	Rationale and Achievement Description
	<b>Design</b>		While the design is innovative, with blended finance for SDGs, there are elements that could have been better designed for internal coherence (separation of the eligible banks for Outcome 1 and 2 was not well aligned with the small amount budgeted for own outreach (and while there is 5 percent cap by the Joint SDG Fund on Communications, this should not have been treated as the same category as outreach), and there were some issues with definitions of eligible underserved HH groups.
<b>Progress/ Results to date</b>	<b>Overall Objective</b>		The facility aims to increase North Macedonia's RE generation by 10.7 MW over four years, ultimately leading to 80,000 tonnes of GHG avoided and 86,000 MWh of energy saved. The non-training/outreach targets were not reached but were close for Outcome 1. There is a satisfactory progress towards the objective in the light of the lengthy delays and challenges at the start. This is an average rating between Outcome 1 and Outcome 2 (see below)
	<b>Outcome 1</b>		For 2022/2023 combined the number of (a) officers trained was triple the plan of 20, around half of whom women; and (b) 2046 businesses were reached against the plan of 700. The programme is anticipated to extend loans to 105 SMEs, while at the MTR there were 47 (for 2022 and 2023 combined) verified against the plan of 55, with an additional 6 in the process of approval. For 2022 and 2023 combined, the total value of (a) PBPs allocated was USD 12500 against USD 1,400,000 planned; (b) loans was USD 10,984,990 against the 16,000,000 planned; (c) annual energy saved was 35,000 MW against 979.57 MW planned; (d) Estimated GHG emissions avoided was 263.25 against the planned 31,761 tCO <sub>2</sub> e/year.; and (e) RE capacity added was 0.2 against 3 MW planned.
	<b>Outcome 2</b>		650 HHs of marketable but underserved groups were to adopt RE and EE technologies for the whole of project duration, and 300 for 2022/2023, with the actual cumulative at 30. For 2022-2023 combined the value of (a) estimated energy saved was 426 MW against 2,300 MW planned; (b) the estimated GHG emissions avoided was 123 against 2,007 tCO <sub>2</sub> e/year planned; (c) RE capacity added was 0.14 MW against 1.0 planned; (d) loans extended was at 264,138 USD against 3,200,000 USD planned; (e) PBPs allocated was 108397 against USD 850,000 planned. For 2022/2023 combined the number of (a) loan officers trained was 6 times the planned number of 20, around half of whom women and (b) individuals reached through marketing efforts was reported as 23210 against the planned 3660.
	<b>Management efficiency</b>		The program could be credited for strong adaptive capacity, addressing major external challenges in reasonable time (long delays in legal agreement between EBRD and UNDP, withdrawal of 2 banks from Outcome 2, limits of local consulting market). The EBRD outreach to smaller, women-owned SMEs and PUNO outreach to underserved HHs could have been more efficient. Coordination between the stakeholders was overall strong but could improve in terms of joint outreach for Outcome 1 and 2. M&E could be improved with a better database on SMEs and capturing and documenting lessons learnt could already be put on a regular and more -in-depth basis and wider sharing.

<sup>2</sup> <https://www.cif.org/news/climate-investment-funds-approves-85-million-launch-north-macedonia-coal-phase-out>

<sup>3</sup> <https://bankwatch.org/publication/a-well-designed-national-energy-efficiency-fund-in-north-macedonia-will-enable-long-term-energy-savings-in-the-residential-and-public-sectors>

<sup>4</sup> [https://mep.gov.mk/data/MK\\_Reform%20Agenda\\_EN.pdf](https://mep.gov.mk/data/MK_Reform%20Agenda_EN.pdf); source: Ministry of European Affairs

<sup>5</sup> To use the traffic light (3-point scale) signifiers: 'Green' signifies on-track to fully achieve results by end date or satisfactory/highly satisfactory. 'Yellow' signifies majority of results on-track, but with 1-3 months delays in implementation or moderately satisfactory. 'Red' signifies not on-track to achieve with major delays and complications or unsatisfactory.

Category. Sub-category	Rating <sup>a</sup>	Rationale and Achievement Description
<b>Risk management</b>		Risk management is overall satisfactory but could benefit from closer monitoring and reflection in the Annual reports.
<b>Sustainability</b>	Financial	Likely for larger SMEs. For smaller, women-led SMEs and underserved HHs, more time is needed and clear financial mechanisms, including a scheme with continued PBPs by the Government after the JP end
	Institutional	Likely for larger SMEs. For smaller, women-led SMEs and underserved HHs, more time is needed and clear institutional mechanisms, including a scheme with continued PBPs by the Government after the JP end
	Community	Clear outreach and institutional mechanisms need to emerge for engaging with hard-to-reach groups, like Roma
	Environmental	The project is already demonstrating clear environmental benefits. However, certain risks are associated with electric vehicles and discarded solar panels, particularly concerning toxic waste disposal if not properly managed. While the Government of North Macedonia has established a regulatory basis for waste management, updates are needed to fully address new types of waste streams such as EV batteries and PV modules. Furthermore, enforcement and implementation challenges remain, which may affect the country's ability to adequately manage these environmental risks over time.

## Recommendations

category	Recommendation	Details
<b>Underserved HH groups</b>	1. Enlarge and fine-tune the eligible underserved HH groups. Redefine the group of women-headed HHs and introduce a cap on income for remittance recipients. For the enlargement, commission research). The potential additional groups may include: young families, HHs with more than 3 children, HHs with single income, foster families, single-person households, etc.	UNDP, IOM, UN RC
<b>PFI engaged in Outcome 2 Outreach</b>	2. Allow/ensure the larger banks, involved in Outcome 1 to engage in outcome 2	EBRD, UNDP
	3. <b>Outcome 1:</b> Ensure targeted outreach to women-owned smaller-SMEs. Synergise with the Business Women's Association and the SME Centre under the Macedonian Chamber of Commerce. Encourage higher participation from underrepresented locations, developing region-specific awareness initiatives	UN RC, UNDP, IOM and EBRD
	4. <b>Outcome 2:</b> (a) <u>Finalise the plan for an outreach campaign raising awareness about the JP</u> , using social media, vendors, municipalities, Ministry of Labour and Social Policy and its Centers of Social work, ads on the websites of the CSOs (associations of the underserved HHs), TV and radio, meetings with the CSO membership, etc. Develop targeted strategies for reaching hard-to-reach groups, like Roma. Allocate more financial resources for it from the project budget. (b) <u>Combine the outreach on the awareness of the GFF with the awareness RE/EE benefits, emphasizing solar</u> (a) Use success stories and visuals to promote RE, and especially solar solutions through social media, banks, and municipalities; (b) Highlight the long-term RoI of RE technologies (with a focus on solar); (c) Promote bundled solutions that combine RE (solar in particular) with EE upgrades; (d) Emphasize how RE (solar in particular) can help HHs avoid moving into higher electricity tariff blocks	
	<b>For Both Outcome 1 and 2</b>	
	5. Coordinate better the awareness activities of GFF (a) between Outcome 1 and 2 where appropriate, for cost-effectiveness (e.g., reaching out to vendors), and (b) with other PUNO projects	
<b>Communication Visibility</b>	6. Ensure that the webpages on GFF (EBRD, FPIs under Outcome 1) do not create a confusion among the beneficiaries and other stakeholders with the other existing schemes, e.g., GEF of the EBRD. Ensure that GFF webpages and pages on social media(s) include a map with users, calculation results and Green Stars (part of a Government project) and video testimonials and combine with visibility efforts of UNDP "Air pollution" project	EBRD and UNDP
	7. Require PFI under both Outcomes to feature information about GFF. Ensure clearer expectations from the PFIs regarding Outreach, (including in monetary terms), for marketing, as well as build their capacity for that	
<b>Additional Support and Advisory Services</b>	8. <u>Outcome 1:</u> Provide post-loan advisory support to help smaller- SMEs make future RE investments, especially for women-owned one	UNDP and EBRD
	9. <u>Outcome 2:</u> Design and implement additional support schemes for RE/RE+EE investment by HHs, including but not limited to post-loan advisory support, with a particular emphasis on solar, but potentially also biomass	
<b>PBP terms - HHs</b>	10. Remove the cap for the grant size for the underserved HHs for the solar RE/RE+EE schemes (potentially also biomass)	UNDP

category	Recommendation	Details
<b>Eligibility criteria for leasing</b>	11. Make trailers and trucks eligible, with the condition of the replacement	UNDP and EBRD
<b>Targets/indicator</b>	12. Submit a request to the Joint SDG Fund to revise down the ambitious targets for energy saving and GhG reduction for HHs. 13. Include indicators on PM2.5 and PM10	UNDP
<b>No-cost extension</b>	14. Request 1 year no cost extension from the SDG fund	UNDP
<b>M&amp;E</b>	15. (a) Ensure updated SME database monthly, with information on size, sector, location, technology (b) develop mini action plans per HH group with outreach effectiveness assessments biannually (c) prepare for reporting on SDGs' contribution	UNDP
<b>Reporting</b>	16. (a) Include columns on cumulative results and targets in the reporting format (b) Include a Risk Monitoring table in Annual reports, updating the risks and mitigation measures (c) Request that applicants submit a declaration confirming they will manage waste in accordance with the country's legislation and best practices.	UNDP
<b>Synergies for sustainability and regional replication</b>	17. Explore synergies with (a) Just Transition Initiative, (b) to-be-established EE fund; (c) Municipality strategies for tackling air pollution and green energy promotion; (d) Government of North Macedonia own schemes for EE/RE promotion for smaller-SMEs and HHs; (e) National Reform Agenda, (f) regional financing mechanisms for green projects, etc.	Government of North Macedonia, UNDP

# 1. Introduction

1. “Green Finance Facility to Improve Air Quality and Combat Climate Change in North Macedonia (GFF)” UN Joint Programme (JP), estimated at USD 46 million, is supported by the Joint Sustainable Development Goals Fund (SDG Fund). The JP was designed and selected from 100 submissions globally through a competitive call from the Joint SDG Fund.<sup>6</sup> Applicable on Joint Programmes is the UN Guidance Note on New Generation of Joint Programmes 2022.<sup>7</sup> The JP is implemented by the United Nations Development Programme (UNDP), the International Organization for Migration (IOM) and the United Nations Economic Commission for Europe (UNECE) in North Macedonia in partnership with the European Bank for Reconstruction and Development (EBRD), the Government of North Macedonia, and local participating financial institutions (PFIs). The GFF pioneered an innovative financial mechanism that provides access to affordable finance for small and medium-sized enterprises (SMEs) and underserved households (HHs) in North Macedonia. It aims to stimulate investments in renewable energy (RE) and energy efficiency (EE) to accelerate the adoption of green solutions, enhance innovation, reduce energy use, and contribute to better air quality and combatting climate change.
2. UNDP commissioned this midterm review (MTR) of the JP in February 2025, on behalf of all the agencies involved as stipulated by the agreement with the Joint SDG Fund. The primary audiences/users of the evaluation include: the Joint SDG Fund, participating United Nations Organizations (PUNOs), EBRD, The Government of North Macedonia, PFIs) eligible SMEs and HHs and their unions.
3. The rest of the report proceeds as follows:
  - Chapter 2 describes the background of the project and the project design;
  - Chapter 3 describes the Evaluation scope and objectives,
  - Chapter 4 describes the Evaluation Methodology and Data Analysis
  - Chapter 5 describes the Findings,
  - Chapter 6 is on Conclusions,
  - Chapter 7 suggests the Lessons Learnt, and
  - Chapter 8 concludes with recommendations.

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<sup>6</sup> UN North Macedonia RC Press Release 2022 North Macedonia’s Green Financing Facility selected among top ten SDG blended finance instruments in the world, to receive funding from the Joint SDG Fund, <https://northmacedonia.un.org/en/172117-north-macedonia%E2%80%99s-green-financing-facility-selected-among-top-ten-sdg-blended-finance> last accessed 03/25/2025

<sup>7</sup> Joint IN SDG Fund, Guidance Note on a New Generation of Joint Programmes October 2022 [Unsdg | Guidance Note on a New Generation of Joint Programmes](#) last accessed 03/25/2025

## 2. Background

### 2.1. Context and Problem statement

4. North Macedonia, a landlocked upper middle-income country in the Western Balkans applied for European Union (EU) membership in March 2004 and was granted EU candidate status in December 2005. The EU held its first intergovernmental conference with North Macedonia in July 2022. Full-fledged EU membership by 2028 remains a strategic goal for the Republic of North Macedonia. The country has already made great strides in reforming its economy over the last decade, e.g., with integration into the European manufacturing chain.
5. North Macedonia is amongst regional leaders with the highest score in trade, tax and energy policies, but falling behind in tourism, digital society and transport policy.<sup>8</sup> The economy is recovering from the surge in energy and food prices triggered by Russia's war in Ukraine<sup>9</sup>. The economy is forecast to grow by 2.2 per cent in 2024 and 3.5 per cent in 2025 on the back of a recovery in external and domestic demand, helped by easing inflationary pressures and rising wages, as well as the pick-up in investments driven by infrastructure projects.<sup>10</sup> North Macedonia faces significant medium-term challenges, however, including: low employment rate (45.5 percent), high structural unemployment (13.5 percent), low productivity, large informal economy (38 percent of GDP in 2022), energy dependency, insufficient infrastructure, polarised and unstable political landscape against a backdrop of inter-ethnic strife, and emigration to the EU of young people facing a 25.5 percent unemployment rate. Arresting emigration and boosting productivity are crucial for re-accelerating income convergence with the EU. North Macedonia is also exposed to climate change and will be impacted by the EU-Carbon Border Adjustment Mechanism. Addressing these challenges requires, among other measures, accelerating the green transition.<sup>11</sup>
6. In North Macedonia, more than 47 percent of electricity generation was coal-fired in 2022 and the share of power in emissions was 57 percent.<sup>12</sup> The share of modern renewables in final energy consumption (SDG 7.2) in 2021 was 19.48 percent.<sup>13</sup> Furthermore, only a small percentage of the population are utilizing RE/EE solutions. North Macedonia has significant RE, especially solar

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<sup>8</sup> OECD (2024) "Western Balkans Competitiveness Outlook 2024: North Macedonia, available at [https://www.oecd.org/en/publications/western-balkans-competitiveness-outlook-2024-north-macedonia\\_8207326d-en.html](https://www.oecd.org/en/publications/western-balkans-competitiveness-outlook-2024-north-macedonia_8207326d-en.html) last accessed 03/25/2025

<sup>9</sup> IMF (2024): Republic of North Macedonia: 2023 Article IV Consultations and First review under the Precautionary and Liquidity Line; Press Release, Staff report and Statement by the Executive Director for Republic of North Macedonia] <https://www.imf.org/en/Publications/CR/Issues/2024/01/25/Republic-of-North-Macedonia-2023-Article-IV-Consultation-and-First-Review-Under-the-544112>, last accessed 03/25/2025

<sup>10</sup> EBRD: North Macedonia. Transition Report 2024-25 [https://www.ebrd.com/content/dam/ebrd\\_dxp/assets/pdfs/office-of-the-chief-economist/transition-report-archive/transition-report-2024/country-assessments-2023-24/south-eastern-europe/Transition-Report-2024-25-North-Macedonia.pdf](https://www.ebrd.com/content/dam/ebrd_dxp/assets/pdfs/office-of-the-chief-economist/transition-report-archive/transition-report-2024/country-assessments-2023-24/south-eastern-europe/Transition-Report-2024-25-North-Macedonia.pdf) last accessed 03/25/2025

<sup>11</sup> IMF (2024): Republic of North Macedonia: 2023 Article IV Consultations and First review under the Precautionary and Liquidity Line; Press Release, Staff report and Statement by the Executive Director for Republic of North Macedonia], <https://www.imf.org/en/Publications/CR/Issues/2024/01/25/Republic-of-North-Macedonia-2023-Article-IV-Consultation-and-First-Review-Under-the-544112>, last accessed 03/25/2025

<sup>12</sup> IEA, North Macedonia, <https://www.iea.org/countries/north-macedonia/electricity>

<sup>13</sup> IEA, North Macedonia <https://www.iea.org/countries/north-macedonia/renewables>

energy potential. The estimated total national technical potential for installed solar energy was 14,000 MW<sup>14</sup>, with installed solar generation at only 30 MW<sup>15</sup> or around 2 percent of the national technical potential, however. Until recently the legal framework was not supportive of small producers of solar energy or for producer-consumer schemes.

7. The World Health Organization (WHO) recently ranked the capital city of Skopje as Europe’s third most polluted city. European Environmental Agency (EEA) data on air pollution in North Macedonia are alarming, as shown in **Figure 1** which shows the percentage of urban

**Figure 1 Percentage of urban population exposed to concentrations above EU standards for selected air pollutants, North Macedonia**

Country	Population weighted annual mean (PM2.5)	Attributable deaths (PM2.5)	Population weighted annual mean (NO2)	Attributable deaths (NO2)	Population weighted annual mean PEAK (O3)	Attributable deaths (O3)
North Macedonia	22.8	3,640	15.7	330	77	210
EU27	11.4	238,000	14.1	48,000	92	70,000
Total	11.5	268,000	15.7	66,000	91	81,000

<https://www.eea.europa.eu/en/topics/in-depth/air-pollution/air-pollution-country-fact-sheets-2024/north-macedonia-air-pollution-country-fact-sheet-2024>

population exposed to concentrations above EU standards for selected air pollutants (2022). Climate change, including changing wind patterns and strength, can not only exacerbates air pollution problems, but also increase existing gender inequalities as it leads to increases in the energy and economic poverty of women who have higher rates of unemployment and frequently are the heads of single-parent households with several dependents. Air pollution is exacerbated by HH heating and remains a serious problem, contributing to premature deaths - estimated at more than 3,800 extra deaths attributed to air pollution every year in the country,<sup>16</sup> in particular those of infants. The estimated welfare loss associated with air pollution in North Macedonia was equivalent to 17.5 percent of GDP in 2019.<sup>17</sup> While the effects of air pollution are felt in the short term, the composition of North Macedonia’s energy mix and economy has longer-term environmental implications.<sup>18</sup>

8. North Macedonia is maintaining the top spot among Western Balkan countries in the energy transition, having, *inter alia*:

<sup>14</sup> IRENA - COST-COMPETITIVE RENEWABLE POWER GENERATION: Potential across Southeast Europe [https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical\\_Profiles/Europe/North-Macedonia\\_Europe\\_RE\\_SP.pdf](https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Europe/North-Macedonia_Europe_RE_SP.pdf) last accessed 25/03/2025, last accessed 25/03/2025

<sup>15</sup> Energy and water services regulatory commission of the Republic of North Macedonia- Annual report 2020 [https://www.erc.org.mk/page\\_en.aspx?id=342](https://www.erc.org.mk/page_en.aspx?id=342) last accesses 25/03/2025

<sup>16</sup> OECD Data Explorer. [https://stats.oecd.org/Index.aspx?DataSetCode=EXP\\_MORSC#](https://stats.oecd.org/Index.aspx?DataSetCode=EXP_MORSC#).

<sup>17</sup> GFDRL. 2023. “Think Hazard: FYR of Macedonia.” <https://thinkhazard.org/en/report/241-fyr-of-macedonia> last accessed 25/03/2025

<sup>18</sup> WBG (2024): “Western Balkans; North Macedonia Country Compendium, Country Climate and Development report” <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099092624072036221/p17920510eb24a0561a98b1a8b00a307db2> last accessed 25/03/2025

- adopted its Energy Law in May 2018 (which harmonised the energy legislation of North Macedonia with the EU Third Energy Package) with updates from 2023 stipulating that the operators of battery energy storage systems will enter the electricity market;
  - signed the Sofia Declaration on the Green Agenda, which commits to pursue the target of a carbon-neutral continent by 2050, along with the rest of the EU;
  - adopted in November 2022 the EU Regulation 1227/2011 (“REMIT Regulation”) as well as the introduced the EU Regulations 347/2013 and 2015/1222 in the legislation;
  - launched a day-ahead energy market in May 2023;
  - adopted a decree enabling the National Electricity Market Operator – MEMO to issue guarantees of origin;
  - set the overall target of achieving a 38 percent share of RE in the gross final energy consumption, is outlined in the National Energy and Climate Plan (NECP), with the government intending to increase installed solar energy capacity from the 31.5 MW (2024) -slightly more than 2 percent of the national technical potential, to 1,400 MW;<sup>19</sup>
  - declared total phasing out of coal by 2027<sup>20</sup> in Energy Development Strategy 2020-2040 with 45 percent of total energy production to come from RE sources by 2040;
  - approved bills on the first four strategic partnerships in the energy sector, after several years in the making.<sup>21</sup> A record high number of energy licenses were issued,<sup>22</sup> spurred by a combination of legal reforms and the photovoltaic (PV) projects of state-owned power utility Elektranina Severna Makedonija (ESM);<sup>23</sup> and
  - elaborated a new draft Law on Renewable Energy Sources, which is set to introduce statistical transfers with other countries as well as energy communities and guarantees of origin and simplify the procedures.
9. Also, the Government has adopted *2024 programme to support vulnerable customers*, in which short-term measures included assistance for purchasing new high efficiency single split air conditioners for heating and long-term measures, focusing on incentivising low energy consumption, retrofitting buildings, upgrading household appliances, and installing PV panels or solar-thermal collectors.
10. Thus, transitioning to a more sustainable energy mix through increased production of RE (particularly solar) and EE retrofitting of buildings and homes is a major strategic objective of the Government. But more remains to be done, for example:
- the EU provisions regarding active customers and citizen energy communities are yet to be transposed;

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<sup>19</sup> North Macedonia Energy Development Strategy until 2040 (2020) <https://www.moep.gov.mk/en/node/1224> last accessed 25/03/2025

<sup>20</sup> Balkan Green Energy news, March 13, 2024: the Government of North Macedonia sends two energy bills to parliament <https://www.ebrd.com/news/2023/north-macedonia-launches-just-energy-transition-investment-platform-at-cop28.html>, last accessed 25/03/2025

<sup>21</sup> <https://balkangreenenergynews.com/government-of-north-macedonia-sends-two-energy-bills-to-parliament/>

<sup>22</sup> CMS, Renewable energy in North Macedonia <https://cms.law/en/int/expert-guides/cms-expert-guide-to-renewable-energy/north-macedonia> last accessed 25/03/2025

<sup>23</sup> Balkan Green Energy news January 29, 2024 North Macedonia posts 160% growth in 2023 in new renewables capacity <https://balkangreenenergynews.com/north-macedonia-posts-160-growth-in-2023-in-new-renewables-capacity/>, last accessed 25/03/2025

- Under the current legal framework, virtual producers, namely aggregators, commercially integrate only electricity producers from RE sources connected to the distribution grid (NB: an aggregator can be either an electricity producer or a supplier). As of 2023, 15 aggregators were registered in the electricity market;<sup>24</sup>
  - There is long waiting time to get the licenses from the EVN (the power distribution and supply company) for the PV projects, with EVN working at capacity, especially in some areas of the country. In 2024 there was an 18 percent y/y drop in RE licences;<sup>25</sup>
  - There are no measures stimulating the import and production of electric vehicles (with the shortage of the infrastructure among the main reasons); and
  - Although electricity prices are constantly increasing and new Energy Law has fully liberalized the electricity market, the national electricity price is still lower than the EU average. Considering North Macedonia's accession to the EU process and liberalization of the country's energy market, electricity prices are expected to continue to increase, which puts more financial pressure on HHs and businesses
11. Efforts have been constrained by low awareness of the options available and the value of RE and EE solutions by SMEs and individuals/HHs, especially among the groups targeted by this program. Also, SMEs and individuals have been reluctant to invest in these types of products due to the high upfront cost and the relatively long payback period (in the form of lower utility bills). Accelerating the country's energy transition requires both increasing awareness and a banking sector that provides affordable finance to businesses and HHs for these types of investments. Current available financial products are limited in scope and access.

## 2.1. The project

12. By providing both underserved HHs and SMEs with financing to install RE/EE technology, the facility aims to increase North Macedonia's RE generation by 10.7 MW over four years. The programme is anticipated to extend loans to 105 SMEs and 650 HHs of marketable but underserved groups to adopt RE and EE technologies, ultimately leading to 80,000 tonnes of greenhouse gas emissions (GhG) avoided and 86,000 MWh of energy saved. To incentivize the SMEs and HHs to take advantage of the loans supported by the facility, it also offers technical assistance and performance-based payments (PBPs). The loans are disbursed through local banks.
- Under **Component 1**, for SMEs, the facility provides a credit line to partner financial institutions (banks and a leasing company), which in turn lend to businesses at a target Internal Rate of Return (IRR) of 3 – 5 percent. The facility also provides USD 3.9 million in technical assistance (TA) and ex-post, PBPs up to 10 percent of the amount of the original loan; and

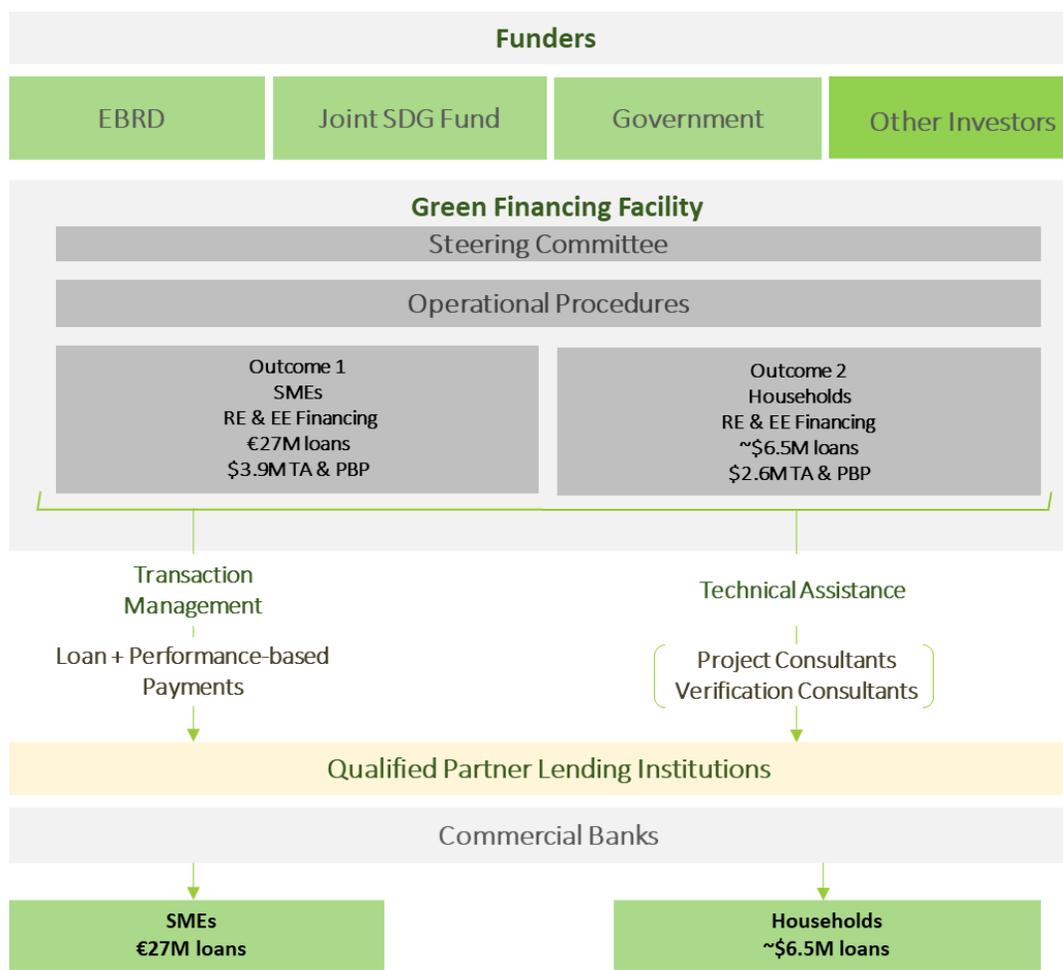
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<sup>24</sup> Energy Community Secretariat (November 2024): North Macedonia, Annual Report, available at [https://www.energy-community.org/dam/jcr:974aa15f-7448-491f-81e5-892e1021ec1b/IR2024\\_NorthMacedonia.pdf](https://www.energy-community.org/dam/jcr:974aa15f-7448-491f-81e5-892e1021ec1b/IR2024_NorthMacedonia.pdf) last accessed 03/25/2025

<sup>25</sup> Jan 20, 2025, N. Macedonia sees 18% y/y drop in 2024 renewable energy licenses, <https://seenews.com/news/n-macedonia-sees-18-percent-y-y-drop-in-2024-renewable-energy-licences-1269545> last accessed 25/03/2025

- Under **Component 2**, for underserved HH, the facility aims to provide USD 6.5 million in loans through local banks, with an expected IRR of 5 – 6 percent. This is also complemented by TA and PBPs equal to up to 30 percent of the original loan amount (but capped at 7000 USD per verified HH).<sup>26</sup> There are 7 groups of underserved HHs per design (see **Section 5.1** for the discussion on this): (1) Female- headed HHs; (2) Single Parents; (3) HHs with Persons with Disabilities (PwD); (4) Roma HHs; (5) Employees who were affected by COVID -19; (6) Remittance recipients; and (7) Returning migrants

**Figure 2: Description of the Joint Programme**



Source: Project document

13. The GFF is described in **Figure 2. Box 1** describes the Structures of Outcome 1 and Outcome 2 as per the ProDoc. The Theory of Change (ToC) as featured in the Project Document (ProDoc) is described **Figure 3**.

<sup>26</sup> mentioned in the Validation Methodology of the Independent Assessor which is also part of the Agreement with the banks for Outcome, not in the ProDoc

### Box 1 Structures of Outcome 1 and Outcome 2 as per the ProDoc

**Outcome 1: SMEs have greater access to finance for accelerating a transition to renewable energy and energy efficiency solutions.** Outcome 1 focuses on the setup and implementation of Business RE/EE Financing. The project's activities (UNDP and EBRD) for Outcome 1 include defining the rules and procedures, setting up sub-lending arrangements and documentation with local PFIs and providing training (UNECE) for project and verification consultants. Once the GFF Outcome 1 is launched - the project will provide monitoring and reporting services and administer the PBP's relying on its partners (EBRD) for transaction management.

**Output 1.1: Finance allocated to banks and borrowers.** EBRD will provide USD equivalent of EUR 27M (USD31.4M as per UN Oct 2021 exchange rate) in the form of credit lines to local banks who on-lend these funds to SMEs in the form of sub-loans for investments into RE and EE solutions that are in-line with the Policy Statement (set of rules) that will be established for the Facility. The average loan is estimated at EUR 0.3M while it will be capped at EUR 1M.

**Output 1.2: Performance-based payments deployed to qualifying commercial projects.** The UNDP/Joint SDG Fund will provide USD 3.14M that will be allocated to loan recipients in the form of ex-post performance-based payments (PBP) for installed projects that have been externally verified to meet the established and agreed investment criteria. PBP will range in value from 5 percent to 10 percent of the loan value. Applications that only include EE will receive a PBP of 5 percent of the loan value while those in RE and those combining both RE and EE will receive a PBP grant of 10 percent. The rates of concessionality are determined based on the past market experience and lessons learned from EBRD's previous programme for supporting SME EE – WeBSEFF (the funds were fully on-lent by end of 2018) as well as analysis that confirm barriers for RE are higher.

**Output 1.3: Projects designed and verified with technical assistance** The TA with support from the Joint SDG Fund will be delivered by two separate groups of consultants – Project Consultants (PCs) and Verification Consultants (VCs), which will work with the banks and with clients. Both groups will be trained and provided with advisory support on the design and verification of RE and EE projects. **The Project Consultant** will provide technical assistance to the banks and loan recipients supporting the project design and lifecycle to ensure that projects align with the investment criteria. A technology selector tool (based on EBRD's existing tool) will be developed as part of the GFF efforts to maximize environmental and economic outcomes. **The Verification Consultant** will ensure that funded investments have been completed according to the original investment plans. Performance-based payments to sub-borrowers are only paid following successful verification by selected verification consultants of the completed Sub-projects.

**Outcome 2: Target groups, especially women and female headed households have greater access to finance for accelerating a transition to renewable energy and energy efficiency solutions** Outcome 2 focuses on the setup and implementation of GFF Retail RE/EE Financing and activities which are similar to the ones developed under Outcome 1, albeit with a different source of finance, different local partners, different level of concessionality and greater promotion and advisory support to borrowers. Outcome 2 activities of UNDP and IOM include defining the rules and procedures, setting up sub-lending arrangements and documentation with local banks, and providing training for Project Consultant and Independent Assessor. Once the Outcome 2 is launched, the project (UNDP and IOM) will provide monitoring and reporting services and administer the PBP grants. Outcome 2 specifically targets female-headed households, single-parents, households with PwD, Roma households, and employees who were affected by COVID-19. To tap into remittances, the project also targets remittance recipients and returning migrants.

**Output 2.1: Loans to borrowers.** At least 2 local mid-tier banks will provide loans to eligible borrowers to finance investments in RE and EE solutions. Borrowers will be provided with a list of equipment that meets the necessary energy generation and savings criteria as well as suppliers who sell such equipment. The list of technologies for investment in EE and RE will be detailed in the list of eligible equipment that will build on EBRD's Technology selector: <http://technology-mk.ebrdgeff.com/> from the Green Energy Financing Facility (GEFF).

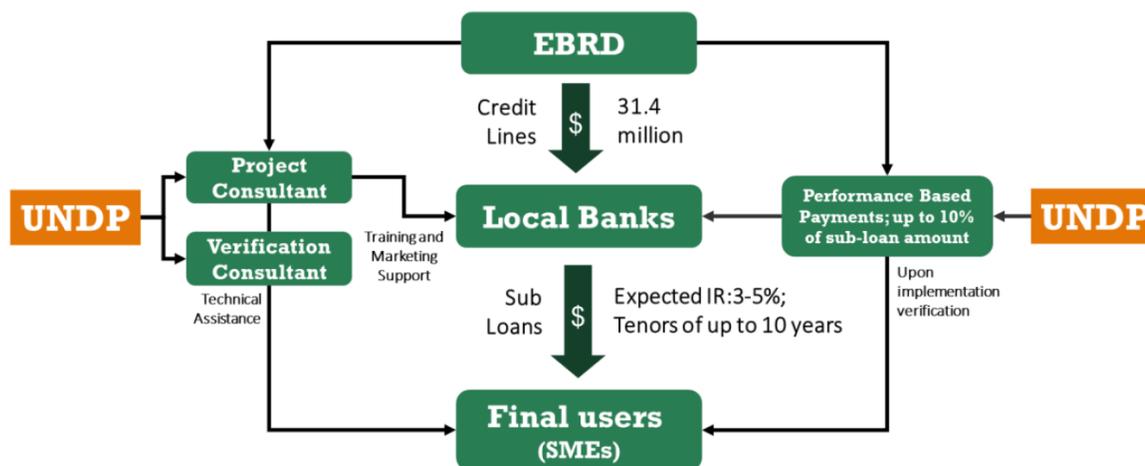
**Output 2.2: Performance-based payments (PBPs) deployed to qualifying retail projects.** The UNDP and IOM will use the Joint SDG Fund grant to provide USD 1.95M for PBP to borrowers for installed projects that have been externally verified to meet the established and agreed investment criteria. In an effort to tap into the remittance revenues, the programme aims to extend USD 0.45M out of USD 1.95M to remittance recipients and returning migrants. PBP will be calculated as a percentage of the total investment and will be 30 percent of the sub-loan amount. This concessionality rate is defined as slightly higher than the currently applied concessionality rate available on the market via the GEFF programme of 15-20 percent. The additional 10 percent top-up on the going market concessionality rate is added to ensure adequate incentivization of the GFF target groups, which are less affluent than the GEFF target groups.

**Output 2.3: Projects designed and verified with technical assistance** UNDP will engage consultants to provide TA to the banks and borrowers to design qualifying investment plans and conduct post-implementation verifications. Also, IOM will specifically support returning migrants and remittance recipients. As in Outcome 1, there will be two separate sets of consultants – **Project Consultant** (PC) and Independent Assessors (**Verification Consultants** -VCs). The PCs and IA (VCs) for Outcome 2 will be engaged via separate procurement processes.

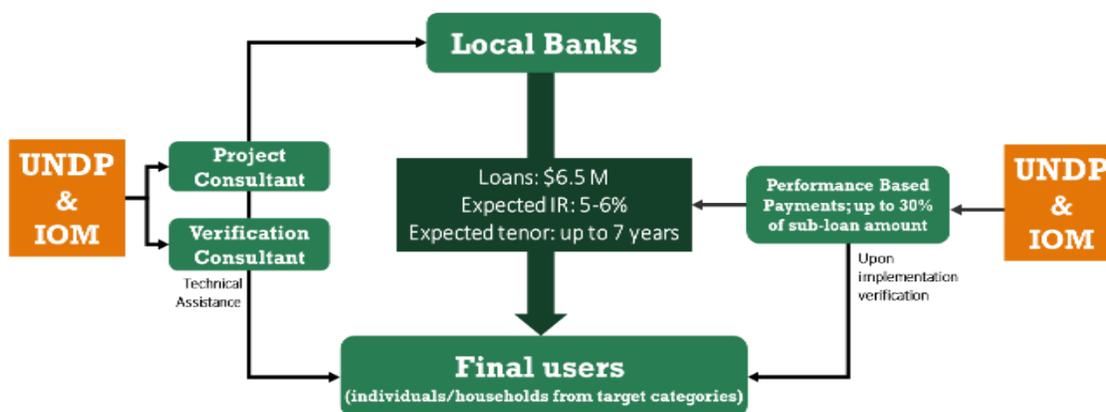
The **Project Consultants** will provide TA to the banks and loan recipients (borrowers) to support the project design process and ensure that projects are designed in line with project criteria/contributing to project outcomes and using the best technologies

available on the market. The PCs will be responsible for the same delivery as in Outcome 1 but with households as the end-borrower. The **Independent Assessor** (Verification Consultant) will ensure that the projects financed by loans have been completed substantially on the basis of original investment plans and have been used by users from the designated marketable but underserved groups. PBPs will only be paid to borrowers after successful verification of the completed project..

**Outcome 1**



**Outcome 2**



Source: ProDoc

14. **Table 2** presents the Stakeholders' mapping. **Figure 4** describes the roles in the JP .

**Table 2: Stakeholder Mapping**

Category	Role in the project
Joint SDG Fund	Funder
The Government of North Macedonia	Co-financing of USD0.8M, Endorsement and coordination - National Council for Sustainable Development and its Sector Working Groups (SWG) on Environment and on Competitiveness and Innovation- coordination with key national stakeholders (e.g., government, CSO, IFIs, academia, etc.).
UN RC	Coordination of UN work on the project
EBRD	Credit line provider
Commercial Banks	Sub-loans Co-financing- 6,500,000 USD
Project consultants	Expected to provide TA to the banks and loan recipients supporting the project design process to ensure that projects align with the investment criteria. The PCs were to become the backbone of project implementation and be responsible for the following areas: <ul style="list-style-type: none"> <li>a) Pipeline development and structuring support: Assist banks to develop a pipeline of qualifying projects by providing potential borrowers with consultation services to identify their specific RE and EE investment requirements and to support them in designing relevant solutions;</li> <li>b) Supporting the project lifecycle: Ensure that eligibility is determined in-line with the GFF Policy Statement; prepare project assessment documents/investment plans that will explain the benefits and savings of the underlying RE/EE investment, and assist the borrowers with the formulation of loan applications;</li> <li>c) Capacity building/ initial training: Train loan officers at banks to ensure that the technical criteria of the Facility are clearly defined in all project documentation, are consistently applied, and are updated throughout the life of the Facility. Loan officers were also to be trained to collect and analyse sex-disaggregated data to support evidence-based design of financial products and decision making;</li> <li>d) Marketing and awareness-raising: Provide assistance in marketing the Facility to ensure that the widest range of stakeholders are informed about the offer and its benefits driving uptake. The outreach was to utilize chambers and CSOs to ensure businesses from underrepresented groups including women-owned businesses are reached; and</li> <li>e) Monitoring: Ensure consistent communication among the banks, project developers, the Verification Consultants, and other stakeholders, and establishes an efficient tracking, monitoring and reporting system to ensure accurate data and standard forms are utilized including those facilitating sex-disaggregated data collection</li> </ul>
Verification consultants	Ensuring that funded investments have been completed according to the original investment plans. PBPs to sub-borrowers are only paid following successful verification by selected verification consultants of the completed Sub-projects.
SMEs	Final beneficiaries
Underserved Households	Final beneficiaries
CSOs/NGOS	Local organizations that work with targeted groups (female headed households, single-parents, households with PWD, Roma, remittance recipients, returning migrants and employees affected by COVID-19) Local organizations uniting SMEs, RE/RE vendors, etc
Investors	Target for public awareness
Vendors of RE and EE products and solutions	Key participants in the value chain.
Local media	Partners to increase local media coverage of RE and EE investments and innovations as key solutions to local environmental issues and family well-being
Local Government	Partners for the project advancement, identification of the vulnerable households, and scaling up
General public in North Macedonia	Target for public awareness

**Figure 3. Theory of Change from the ProDoc**

<p><b>Goal</b> North Macedonia advances towards a low-emission sustainable development pathway via the utilization of renewable energy and energy-efficient solutions, benefiting both women and men and target groups</p> <p><b>Goal Statement</b> If access to finance and incentives are improved, together they will trigger investments into renewable energy and energy efficiency solutions that will contribute to improved air quality, reduced CO2 emissions, and sustained socio-economic growth</p> <p><b>Outcomes</b> 1. SMEs have greater access to finance for accelerating a transition to renewable energy and energy efficiency solutions. 2. Target groups/households, especially women and women-headed households, have greater access to finance for accelerating a transition to renewable energy and energy efficiency solutions.</p> <p><b>Barriers</b> 1. Local financial institutions have limited interest in lending for the acquisition of RE and EE solutions. 2. Limited willingness of SMEs and individuals to prioritize investments in RE/EE. 3. Low absorption of financial instruments by women and women-owned companies. 4. Target groups perceive RE as costly and complicated. 5. Remittance recipients have adopted EE solutions but are not prioritizing investments in RE solutions.</p> <p><b>Assumptions</b> 1. Local Banks, suppliers, and service providers are willing to participate in the project. 2. SMEs and households are financially able &amp; triggered to invest in RE and or EE solutions given the new financial instruments that include incentives and technical support mechanisms. 3. Targeted stakeholders are made aware of the project.</p> <p><i>Source: ProDoc</i></p>
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15. There were three main changes that happened since the start of the project

a) **Change in the Project Steering Committee (PSC).**

It was set up, co-chaired by the Deputy Prime Minister for Economic Affairs in the Government of North Macedonia and the UN RC and held the first meeting on 22.06.2023. After the Presidential and parliamentary elections in April and May, respectively, the reorganization of government, including introduction of a new Ministry of Energy, Mining and Mineral Resources in June 2024 led to new members of PSC appointed, and the replacement of the previous Deputy Prime Minister for Economic Affairs with the Office of the President of the Government;

b) **Change in the banks- Outcome 1:** Withdrawal of NLB Bank Skopje and Stopanska Banka Skopje. Sparkasse Leasing joining instead; and

c) **Change in the banks - Component 2.** Withdrawal of Stopanska Banka Bitola and Halk Bank in 2023 for external reasons, led to their replacement (TTK bank and Mozhnosti Savings House) and this took and takes time

**Figure 4: Roles in the Joint Programme**

	Outcome 1: SME loan program	Outcome 2: Household loan program
Transaction Management	EBRD	UNDP
Technical Assistance	EBRD, UNECE	UNDP, IOM

*Source: Project document*

### 3. Evaluation scope and objectives

16. The MTR covers the time from the start of the project to March 2025. The objective of the MTR is to assess progress towards the achievement of the JP objectives and key results, both developmental and financial, as specified in the Project Document and assess the early signs of programmatic success or failure with the goal of identifying the necessary changes to be made, if required, in order to set the JP on-track to achieve its intended results. The MTR is also tasked to review the JP's strategy, assess risks to sustainability, and provide forward-looking recommendations to enhance implementation efficiency, effectiveness, and sustainability as well as adequate exit.
17. The MTR is based on the following four categories: i) Design; ii) Progress/Results to date; iii) Management efficiency; iv) Risk management and v) Sustainability (see **Annex 1: TOR**). The evaluation questions under these criteria are presented in **Table 3**.

**Table 3: MTR Criteria and questions**

MTR Criteria	Evaluation questions
Design/ Relevance (Internal Coherence)	<ul style="list-style-type: none"> <li>• How internally coherent is programme design?</li> <li>• How relevant are the proposed financial instruments and other programmatic interventions? What are the benefits and shortcomings of a joint programme approach? Are synergies and cross-cutting expertise sharing of different UN entities achieved? Do they contribute to a more wholistic solution for the challenges of leveraging finance, climate change action and air pollution in the country?</li> <li>• To what extent were the relevant gender, youth and other Leaving No One Behind (LNOB) issues raised in the JP design, including the results framework (RF)?</li> <li>• Are the JP's log frame indicators SMART (Specific, Measurable, Attainable, Relevant, Time-bound)?</li> <li>• Are planned midterm and end-of-project targets realistically achievable and if not, what should change?</li> <li>• Is the JP's implementation timeframe sufficient to complete planned activities and achieve envisaged results and if not, what should change?</li> </ul>
Effectiveness/R esults to date (Including cross-cutting aspects)	<ul style="list-style-type: none"> <li>• What are the key results achieved against the JP RF in relation to the key outcome indicators and their end-of-project targets?</li> <li>• What are the remaining barriers to achieving the JP objective for the remainder of the project?</li> <li>• To what extent the solution(s) developed to date could be scaled to other countries/regions of economic sectors? What modifications are advised to achieve that?</li> <li>• What is the scope and scale of additional financing leveraged by the JP and why? Were the co-financing targets realized? Is there evidence to support the reported financial leverage based on evidentiary documents and direct financial flows to the financial instruments?</li> <li>• Do the results/progress to date have the potential to achieve systemic change and/or demonstrative impact in the future beyond the JP to catalyse change, innovation and evolution in the financial sector – either public, private or developmental – in the country to devise new means or solutions to unlock additional financing for the SDGs?</li> <li>• Have the financial solutions/instruments developed led to (or has the potential to lead to developmental impact for the local communities, SMEs and population (including in terms of financial savings) as well as the environment in terms of accelerating SDG achievements and how could the impact strategy be improved? What additional activities are recommended to enable replication and scale up?</li> <li>• Can any unintended or unexpected positive or negative effects be observed because of the JP interventions?</li> <li>• What were the factors behind the successes and challenges of the project? IN particular, what were the factors that led to partnership with EBRD and how these can be used to foster similar engagements with other DFIs/IFIs?</li> <li>• Will the planned results contribute to gender equality and disability inclusion?</li> <li>• How likely is that benefits of the programme will accrue equally to women and persons with disabilities.</li> <li>• Were the planned results in the areas of gender equality, women's rights and disability inclusion achieved?</li> </ul>
Efficiency	Management arrangements:

MTR Criteria	Evaluation questions
	<ul style="list-style-type: none"> <li>Was the JP overall efficient so far and in line with the ProDoc? Have changes been made and are they efficient?</li> <li>Are responsibilities and reporting lines clear?</li> <li>Is decision-making transparent and undertaken in a timely manner? Is a JP governance body formally established with clear roles?</li> <li>What was the quality of execution of the PUNOs/Implementing Partner(s)?</li> <li>What was the role and what was the quality of coordination and oversight provided by the RC/O?</li> <li>What needs to change in the above point to make the management of the JP more efficient?</li> </ul> <p>Reporting and communications:</p> <ul style="list-style-type: none"> <li>How well the JP team and partners undertake and fulfil Joint SDG Fund reporting requirements?</li> <li>How well were the results and lessons derived from the JP been documented, shared with key partners, and internalized by partners?</li> <li>What was the quality of external communication: are proper means of communication established or being established to inform the JP progress and intended impact to the stakeholders and the public at large? Was a JP communication strategy developed and is it being followed? Do communications products reflect the “joint” nature of the programme?</li> </ul>
Risk Management	<ul style="list-style-type: none"> <li>Were the risks identified in the ProDoc, Annual Reports the most important and whether the risk ratings applied are appropriate and up to date? Should the risk matrix be revised and if yes, then how?</li> <li>Are there any socio-economic, political or other risks that may jeopardize sustainability of the JP outcomes?</li> </ul>
Sustainability	<ul style="list-style-type: none"> <li>What is the likelihood of financial sustainability of the financial solutions/instruments devised and launched once the Joint SDG Fund support ends? What is the likelihood of the banks continuing without the scheme and what is the interest from the SMEs to borrow without it?</li> <li>How strong is the country ownership – both from public and/or private sector partners? Does the financial solution/instrument have sufficient country buy-in from the relevant public and private partners, from the demand and supply sides, to ensure sustainability following the completion of the JP?</li> <li>Does the programme have a realistic and feasible exit strategy and approach to phase out assistance? Are the actions and results from project interventions likely to be sustained, ideally through ownership by the local partners and stakeholders?</li> <li>Has the JP developed and leveraged the necessary and appropriate partnerships – both public/private and developmental – to achieve its intended results and ensure sustainability of actions? What was the UN’s role in ensuring the instrument’s sustainability and impact once the program closes?</li> <li>What mechanisms are in place to ensure long-term environmental benefits beyond the project lifecycle?</li> <li>To what extent have SMEs and households developed long-term adoption habits for RE/EE solutions beyond JP incentives?</li> <li>To what extent have private sector investors shown willingness to continue financing renewable energy and energy efficiency (RE/EE) solutions beyond the JP?</li> <li>What are the key factors that will require attention to improve prospects of sustainability, scalability, or replication of project outcomes/outputs/results?</li> </ul>

*Source: adapted from the ToR and reflects the comments received at the Inception stage*

## 4. Evaluation approach and methodology

### 4.1. Overall approach

- The MTR is compliant with the United Nations Evaluation Group (UNEG) Norms and Standards for Evaluation in the UN System (2016)<sup>27</sup> and UNDP guidance for conducted evaluations

<sup>27</sup> United Nations Evaluation Group (UNEG) Norms and Standards for Evaluation in the UN System (2016) [https://www.unevaluation.org/unev\\_publications/unev-norms-and-standards-evaluation-un-system](https://www.unevaluation.org/unev_publications/unev-norms-and-standards-evaluation-un-system), last accessed 25/03/2025

(2021).<sup>28</sup> Organization for Economic Cooperation and Development (OECD) Development Assistance Committee (DAC) criteria lie behind the scope of the MTR, but limited to the questions that were set in the evaluation Terms of Reference (TOR) for this MTR (see **Annex 1: TOR**). The MTR followed a collaborative and participatory approach ensuring close engagement with the JP team, government counterparts, private and public sector partners, direct beneficiaries, the Joint SDG Fund Secretariat and other key stakeholders.

19. The ToC from the ProDoc was overall coherent, and captured the innovative design of the project, but did not spell out the logical linkages; it was reconstructed in **Box 2**, and together with the Results Chain developed under this MTR (see **Figure 5**) was used throughout the MTR to assess the JP’s causal pathways and ensure a comprehensive evaluation of progress toward intended results. These were validated by the project team and PUNOs during the inception phase. There are three elements which were lacking:
- There is an assumption lacking on the enabling environment in the country sufficient to support scaling up (laws, regulations, institutional mechanisms)
  - There could have been a mid-term Outcome to capture monetary benefits of the beneficiary SMEs and households; and finally
  - An outcome (mid-to long term) is lacking on the positive impact on air quality.

**Box 2 Reconstructed TOC**

**Barriers**

- ✓ Local financial institutions have limited interest in lending for the acquisition of RE and EE solutions.
- ✓ Limited willingness of SMEs and individuals to prioritize investments in RE/EE.
- ✓ Low absorption of financial instruments by women and women-owned companies.
- ✓ Target groups perceive RE as costly and complicated.
- ✓ Remittance recipients have adopted EE solutions but are not prioritizing investments in RE solutions.

**Goal** North Macedonia advances towards a low-emission sustainable development pathway via the utilization of renewable energy and energy-efficient solutions, benefiting both women and men and target groups

- **If** access to finance and incentives are improved, **then** together they will trigger investments into renewable energy and energy efficiency solutions
  - *SMEs will have greater access to finance for accelerating a transition to renewable energy and energy efficiency solutions;*
  - *Target groups/households, especially women and women-headed households, have greater access to finance for accelerating a transition to renewable energy and energy efficiency solutions.*
- **If** the model proves to be successful and if the enabling environment is conducive, **then** it will be scaled up both commercially and also possibly, with the continuation of PBPs funded by the government or others
- **If** investments into renewable energy and energy efficiency solutions increase, **then** this will lead to monetary savings for the HHs and SMEs, energy savings, lower emissions and contribute to improved air quality, and sustained socio-economic growth
- **If** the model proves to be successful in North Macedonia, **then** it will be replicated in the Balkans

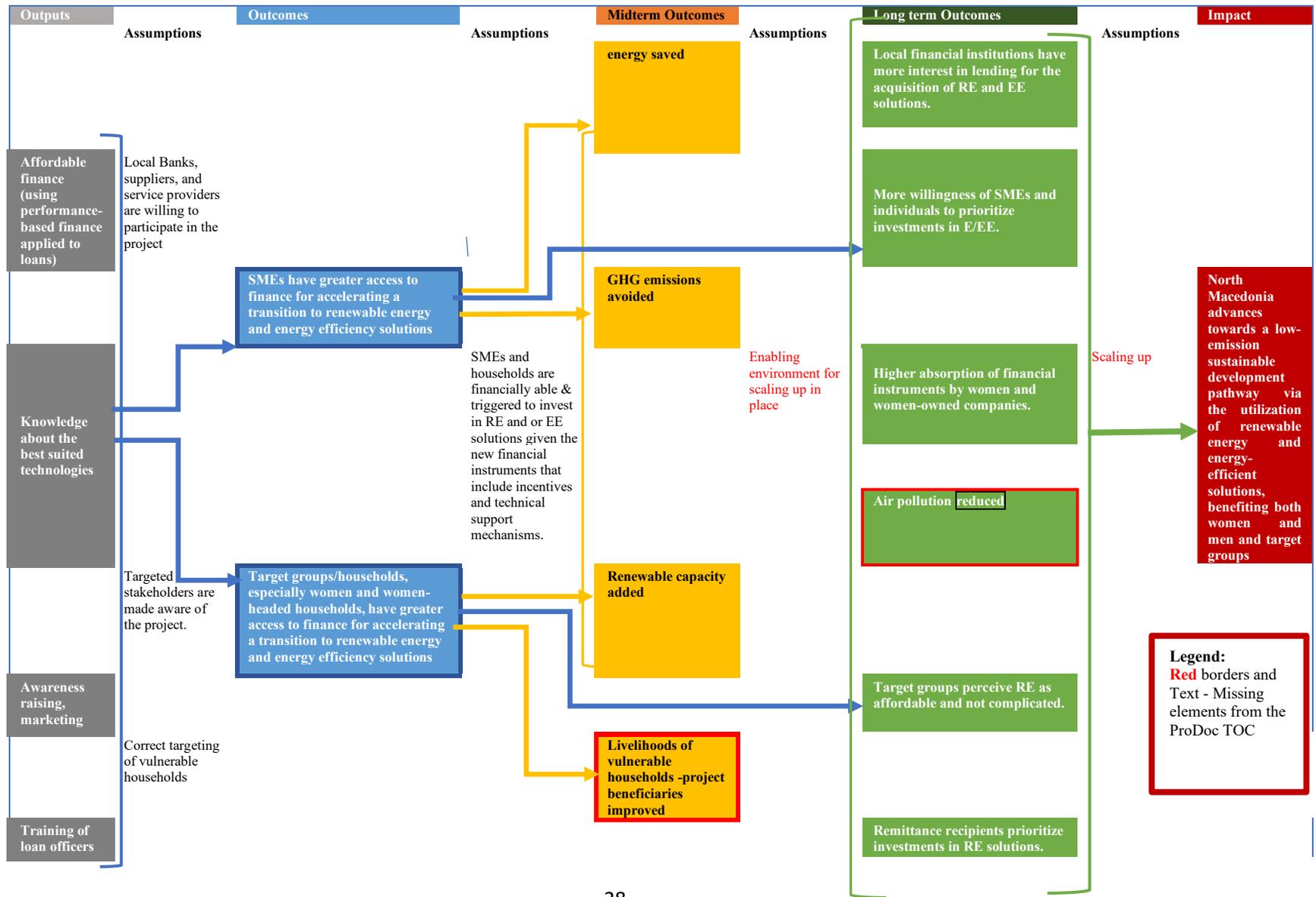
**Assumptions**

- Local Banks, suppliers, and service providers are aware of the project and willing to participate in the project.
- SMEs and households are financially able and triggered to invest in RE and or EE solutions given the new financial instruments that include incentives and technical support mechanisms.
- Enabling environment for scaling up in place

*Source: adapted by MTR Team from the GFF version from the ProDoc*

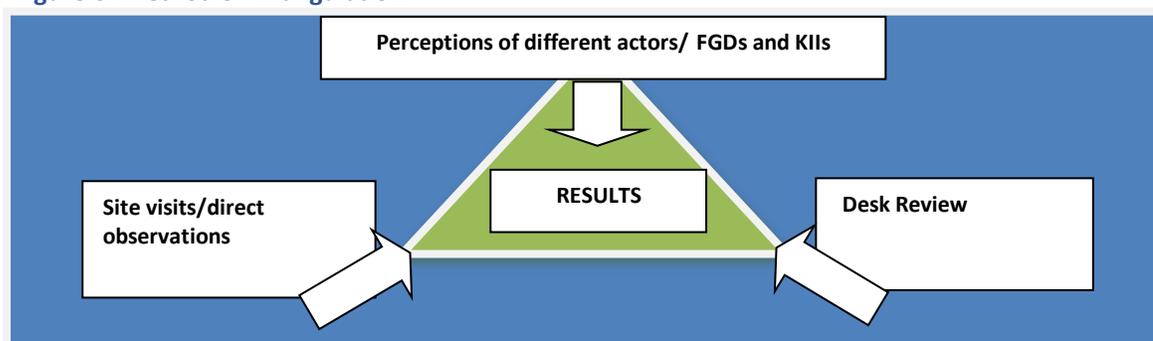
<sup>28</sup> UNDP guidance for conducted evaluations (2021) <https://erc.undp.org/pdf/evaluation-guideline-section/section-2.pdf> last accessed 25/03/2025

Figure 5 Reconstructed results Chain



20. The MTR applied a mixed methods approach combining both qualitative and quantitative approaches to answer the different evaluation questions.
21. To ensure that the evaluation provides evidence-based information that is reliable, **triangulation** was used as to minimize bias and enhancing the credibility of the information gathered from the document review, the interviews and the site visits, through multiple data sources of information (see [Figure 6](#) *Error! Reference source not found.*).

**Figure 6: Method of Triangulation**



22. Triangulation was based on the information gathered from the following sources:
  - **Document review:** The MTR team reviewed all relevant sources of information including documents prepared during the preparation/design phase, the JP reports, JP revisions, national strategic and legal documents, third party reports, etc. (see [Annex 4 List of supporting documents reviewed.](#));
  - **Key Informant interviews (KII):** with stakeholders with programmatic roles/affiliation, including but not limited to: JP PSC, representatives of the PUNOs and UN RC office, key government officials, representatives of the PFIs, local government, associations representing underserved households, business associations, representatives of related projects, Joint SDG Fund Secretariat, consultants engaged by the JP, etc. (see [Table 4, Annex 3 List of individuals or groups interviewed or consulted, and sites visited.](#) and [Annex 2: Additional methodology-related documentation](#) for the KII guides);
  - **SME survey** – referred to as **MTRSME** in this report (see [Annex 2-7: Survey instrument- Evaluating SME Experiences and Impact in the Green Finance Facility Program](#), and the separate [Appendix on SME Survey report- Evaluating SME Experiences and Impact in the Green Finance Facility Program](#), with the accompanying database);
  - **FGDs** with HHs (see [Annex 2: Additional methodology-related documentation](#) for the FGD guides); and
  - **Direct Observations: Visits to 2 SMEs and -2 HHs for case studies** - recipients of loans and PBPs from the GFF, see the case studies in this report.
23. [Table 4](#) describes the sample frame and sample size- as planned and actual



**Table 4 Sample size and sample frame**

Data collection method	Number of KIIs/FGDs	Number of interviewees/FGD participants Planned	Number of interviewees/FGD participants Actual
Interviews	<b>Planned-29 Actual- 56</b>	<ul style="list-style-type: none"> <li>3 representatives of PUNO</li> <li>3 Project staff from UNDP</li> <li>1 from RC Office,</li> <li>1 EBRD</li> <li>1 UNDP air pollution project representatives</li> <li>6 representatives of participating banks and 6 loan officers</li> <li>One person- Local government</li> <li>2 CSOs</li> <li>1 Independent Assessor / Verification Consultant</li> <li>1 representative from the SDG Fund</li> <li>1 representative from MACEF</li> <li>1 representative from the related WB project on RE</li> <li>1 representative from Association of Journalists of Macedonia</li> </ul>	<ul style="list-style-type: none"> <li>2- SDG Fund</li> <li>1-IOM, 1 – UNECE , 2. EBRD</li> <li>3- RC Office</li> <li>13 current and former UNDP CO staff including 2 project consultants</li> <li>One person- Local government</li> <li>8 -central government</li> <li>12 representatives of banks</li> <li>11 CSOs/NGOs (MACEF, SOLAR, Chamber of Commerce, Business Women Association, MBA, Consumers Union, Diaspora, 2 Roma, PwD)</li> <li>1 representative from the related WB project on RE</li> <li>1 HH</li> </ul>
SME survey (MTRSME)		<ul style="list-style-type: none"> <li><b>Planned: 46.</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Actual 25, &gt; 50% response rate</b></li> </ul>
FGD with SMEs	1 FGD	Minimum 5 SMEs from Skopje ideally representatives from different sectors, different size and working with different banks. Must include women owned ones. This will not be representative, but given that there will be also SME survey, it is acceptable	Did not happen <sup>29</sup>
FGDs with HHs	2 FGDs	One in Skopje and one in the region, 6-8 person each, working with different banks, with different vulnerabilities. At least half -women. Given that there are currently 30 HH beneficiaries, engaging 10 in the 2 FGDs, is expected to be acceptable.	1 FGD with 4 HHs from Skopje
2 FGDs with consultants	2 groups of	<ul style="list-style-type: none"> <li>1 FGD with Project consultants</li> <li>1 FGDs with verification Consultants</li> </ul>	<ul style="list-style-type: none"> <li>1 FGDs with 2 verification Consultants</li> <li>1 FGD with 2 representatives from the Independent Assessor / Verification Consultant</li> </ul>
Visits to beneficiaries	SMEs and HHs	<ul style="list-style-type: none"> <li>1-2 SMEs: outside Skopje</li> <li>1-2 HHs: outside Skopje,</li> </ul>	<ul style="list-style-type: none"> <li>2 SMEs outside Skopje</li> <li>2 HHs Outside Skopje</li> </ul>
<b>Total</b>			<b>68 (59 Key informants; 27 SMEs; 7 HHs)</b>

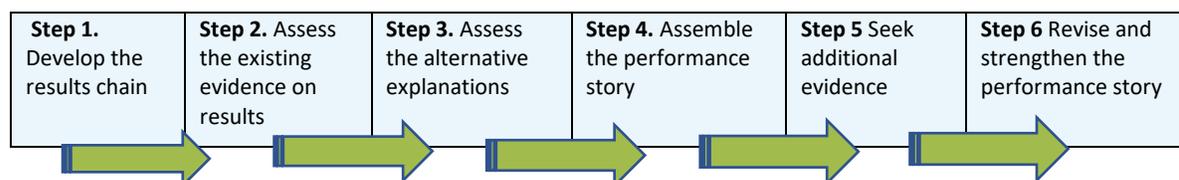
## 24. Thus, the team

- interviewed the representatives of all the participating banks and PUNOs;
- conducted FGDs and KIIs with all the consultants engaged;
- achieved more than 50 percent response rate for the MTRSME survey (25 SMEs, with the 50 percent at 23). Plus, 2 SMEs were visited; and
- Conducted a FGD with 4 HHs, plus 3 HH was interviewed, of which 2 were visited

<sup>29</sup> The MTR team was notified that it was very challenging to organize

25. In the assessments of the outcomes an attempt was made to attribute the results to the program when feasible: when not feasible, **contribution analysis** was used, as presented schematically below (see **Figure 7**).<sup>30</sup> For example, the decision of a Household/SME to get a loan to install an RE solution might be induced not only by the JP supported credit line but by other factors, e.g. changes in the legislation, and /or the Government's promotional activities,, However, where the link to a project-led activity could be clearly established attribution analysis could be used: this would be for example, in the case of benefits accrued due to the installation of a RE solution.

**Figure 7: Steps in Contribution Analysis**



26. The cross-cutting issues were evaluated, considered and analysed throughout the evaluation.
- The MTR used gender-responsive methodologies and tools and ensured that gender equality and women's empowerment, as well as other cross-cutting issues, principles of Leaving No One Behind (LNOB) and SDGs are incorporated into the MTR report. The data collection instruments presented in the Annexes to this report contain specific questions on that. More specifically, the evaluation approach, including data collection and analysis methods, focused on gender and human rights aspects, to be responsive and appropriate for analysing gender equality, equity and human rights issues. This involved posing targeted questions and employing gender criteria to guide the assessment. For example, the following were employed:
    - ✓ *Differential Impact Analysis*: Examining how program outcomes differ for men and women.
    - ✓ *Gender-Specific Needs and Priorities*: Assessing the extent to which gender-specific needs and priorities are addressed in program design and implementation.
    - ✓ *Disparities in Access*: Identifying any disparities in access to program benefits between genders; and
    - ✓ *Contribution to Women's Empowerment*: Evaluating how the program contributes to women's empowerment and gender equality.
  - Environmental impact is part of the Results Framework of the project and hence was the core part of the focus of the MTR; and
  - Knowledge Management (KM) as a cross cutting issue, was also in the focus in the part of analysis of project management.

<sup>30</sup> Based on John Mayne, "Addressing Attribution Through Contribution Analysis: Using Performance Measures Sensibly", The Canadian Journal of Program Evaluation Vol. 16 No. 1 Canadian Evaluation Society, 2001. <https://utppublishing.com/doi/pdf/10.3138/cjpe.016.001> last accessed 25/03.2025

27. Thus, the MTR employed diverse range of data sources and processes to ensure the inclusion of diverse stakeholders, including the most vulnerable. Evaluation questions and ways how each were addressed are described in **Annex 2: Additional methodology-related documentation**
28. **Annex 2-1 Evaluation Matrix.**

29. Ratings are provided for the five criteria outlined above in an MTR Ratings Summary Table in the Executive Summary of this report, namely for: *Design, Effectiveness, Efficiency, Risk Management and Sustainability*. Colour coding is used to rate the progress in a ‘traffic light system’ based on the level of progress achieved per outcome area, assigning a rating on the progress for the JP objective and each outcome. Based on UNDP Guide for terminal evaluation reports, the traffic light (3-point scale) signifiers: ‘Green’ signifies on-track to fully achieve results by end date or satisfactory/highly satisfactory. ‘Yellow’ signifies majority of results on-track, but with 1-3 months delays in implementation or moderately satisfactory. ‘Red’ signifies not on-track to achieve with major delays and complications (see **Table 5**).

**Table 5: Rating guide**

Targets met
Majority of targets on track, within a few months to meet the targets
Majority of targets Off-track

## 4.2. Ethical considerations

30. All the necessary measures were taken to protect the rights and confidentiality of informants in line with the UNEG *‘Ethical Guidelines for Evaluators’*<sup>31</sup> and UNEG *Guidance on Integrating Human Rights and Gender Equality in Evaluation*<sup>32</sup>, and as well as *OHCHR Guidance on Human Rights-Based Approach to Data*<sup>33</sup>. Ethical dimensions were taken into consideration by the evaluators, particularly when working with beneficiaries and sensitive data. Through this the measures were taken to protect the rights and confidentiality of informants. The ethical principles of integrity, accountability, respect, and beneficence are forward-looking and support achieving the 2030 Agenda for Sustainable Development.

## 4.3. Data Analysis

31. An Outcome and Output Performance Assessment was utilized to facilitate a comprehensive assessment of the program's self-reported outputs and outcomes, based in the reconstructed TOC, testing the validity of the assumptions and interconnected influences between different levels of results along the reconstructed results chain. For Desk review, content analysis was performed guided by the evaluation questions. The information collected from the KIIs and FGDs against the evaluation questions was triangulated with the information from other interviews, desk review, MTRSME survey, data from internal databases on the SMEs and HHs,

<sup>31</sup> UNEG, 2020, Ethical Guidelines for Evaluation: <http://www.unevaluation.org/document/detail/2866>, last accessed 25/03/2025

<sup>32</sup> UNEG Guidance on Integrating Human Rights and Gender Equality in Evaluation [https://www.unevaluation.org/uneq\\_publications/integrating-human-rights-and-gender-equality-evaluations](https://www.unevaluation.org/uneq_publications/integrating-human-rights-and-gender-equality-evaluations), last accessed 25/03/2025

<sup>33</sup> OHCHR Guidance on Human Rights-Based Approach to Data <https://www.ohchr.org/en/documents/tools-and-resources/human-rights-based-approach-data-leaving-no-one-behind-2030-agenda>, last accessed 25/03/2025

and direct observations. Regular validation meetings were conducted with the Program Manager to get feedback on the emerging trends in the interview responses

32. The evaluation incorporated comprehensive measures for quality assurance, including quality reviews. This process entailed ensuring evaluations of processes and outputs adhere to the highest standards of excellence. This included the review of the draft Inception report and the draft of the main report by the evaluation reference group, as an external review mechanism, aligning with established norms to reinforce the credibility of quality assurance processes.

## 4.5. Background information on evaluators

33. The composition of the evaluation team ensured complementarity of the background and skills of team members, gender balance and the mix of international and local expertise.
  - **Lilit V. Melikyan**, the Team Leader, is an economist with more than 25 years of experience in the advisory and evaluation roles related to the projects in infrastructure, climate change adaptation and mitigation. With expertise in socio-economic/pro-poor and institutional aspects in infrastructure and environmental governance, she has advised on subsidy/output-based aid schemes and tariff reforms in many countries of the world. She has also advised on institutional aspects of climate change mitigation and adaptation. In her evaluation capacity she has evaluated complex projects and programs, with a focus on sustainable energy and environment, disaster risk reduction and climate finance, working for a multitude of UN agencies, multilateral development banks, bilateral aid agencies and international NGOs; and
  - **Dimitrija Sekovski, PhD**, is a development professional specializing in project design, implementation, monitoring, and evaluation. With expertise in environmental sustainability, infrastructure, governance, and disaster risk reduction, he has designed and assessed numerous donor-funded projects, applying OECD-DAC criteria and mixed-methods approaches. His work ensures alignment with national priorities, EU policies, and international best practices, with a strong focus on institutional capacity development, performance-based funding, and results-based management. As a consultant, he has supported UN agencies, international financial institutions, consulting firms, and governments in enhancing project planning, execution, and impact assessment.

## 4.6. Limitations

34. The MTR was conducted under significant time constraints. This affected the number of the SMEs and HHs there were possible to visit.
35. The FGD with the SMEs did not happen. Plus, while it was planned to conduct 2 FGDs with the HHs- one of which outside Skopje- only 1 FGD with the HHs from Skopje was organized. The MTR team compensated for that by organizing additional HH interviews and site visits.

36. The findings from the MTRSME survey need to be treated with caution as there were only 25 SME respondents (out of 46). While this is a representative sample, the numbers are small.

## 5. Findings

### 5.1. Relevance of design/internal coherence

#### 5.1.1. Benefits and shortcomings of a joint programme approach

37. The interviewees for this MTR were unanimous that the format of the JP allows the participating agencies to utilize and build on the specialization and expertise of each agency, allowing to synergize in the pursuit of the objectives of the project. In particular, this applies to the strong implementation capacity of UNDP, that allowed it to put the implementation of this innovative project into motion, going through a year-long negotiations with EBRD, as well as bringing to the table the benefits of its multifaceted portfolio that encompasses projects under both Energy and Environment and Social Inclusion portfolios, including projects tackling air pollution. IOM brings in its expertise in the matters related to migration, returning migrants and remittances, while UNECE - its expertise related to sustainable energy. EBRD, on its end, joined in with an accumulated experience of the running similar schemes for the SMEs before (SME Competitiveness<sup>34</sup>, and SME Reboot<sup>35</sup>). Overall, this contributed to a more holistic solution for the challenges of leveraging finance, climate change action and air pollution in the country,
38. The JP format had some challenges too, in particular related to the different schedules for reporting and payments (EBRD vs UNDP rules). There was also significant interconnectedness, i.e., one agency could not do their work until the other completes its part.

#### 5.1.2. Internal coherence of programme design

39. The project design was overall strong, responding to the needs, especially for the needs of vulnerable households, well reflected in third party reports.<sup>36</sup> Also, the design targets well the various sources of financing for the RE/EE, bringing these under one “roof” of the project

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<sup>34</sup> EBRD: SME Competitiveness Support programme: Building Competitive SMEs in the Republic of North Macedonia available at <https://web-sme-csp.com/republic-north-macedonia/wp-content/uploads/sites/5/2019/03/Brochure-N-Macedonia-ENG-F-20190328.pdf>, last accessed 11/04/2025 and also <https://www.ebrd.com/home/news-and-events/news/2021/ebrd-and-eu-to-boost-competitiveness-of-small-and-medium-sized-enterprises-in-north-macedonia.html> last accessed 11/04/2025

<sup>35</sup> <https://www.ebrd.com/home/news-and-events/news/2022/ebrd-and-donors-help-reboot-small-businesses-in-north-macedonia.html> last accessed 11/04/2025

<sup>36</sup> See for example, Climate Action Europe (CAN), 2024 "Overcoming barriers for renewable energy deployment in the Western Balkans: The case of North Macedonia and Serbia", available at <https://caneurope.org/content/uploads/2024/01/FINAL-policy-brief.pdf>, last accessed 11/04/2025

40. There was a certain contradiction between the decision to choose the banks for Outcome 2 only from those not involved in Outcome 1<sup>37</sup> (which was led by the desire to diversify and to ensure that there is enough attention paid to the underserved HHs) and budgeting only USD 30,500 for communication, given that the smaller banks (smaller, since the larger ones were involved in Outcome 1) have less resources for marketing, with some not even having a marketing department. The low budget was justified by those designing the project by the desire to build the ownership of the banks related to outreach, but this has proven to be overly optimistic as recorded in the project documents (unwillingness of the banks to invest significant resources in the marketing). It was also constrained by the cap on the communications budget at 5 percent of the total Joint SDG Fund financing amount (NB: USD 30,500 is even less than that), but it could be argued that this is related to publicity only, and that communication for outreach purposes should not be counted against this cap. See [Recommendation 2](#)
41. The interviewees for Outcome 1 commented also that the terms of the loans were not as favourable as they were at the time of design. EBRD has been implementing similar projects in the past – SME Competitiveness, SME Re-boot - with 15 percent grant amount. Here the condition is 10 percent for the RE/RE+EE, and only 5 percent for EE. All but one bank representative reflected that unless they ensure 10 percent it is challenging to disburse the loans. They also reflected that the current terms are being compared by the SMEs with other credit lines, including (a) European Investment Bank (EIB)- 3.5 percent fixed via the Macedonian Development Bank<sup>38</sup>, (b) Hungarian credit line- 1.95 percent fixed in Macedonian Denar, with very wide scope<sup>39</sup>; (c) the Government's 20-30 percent subsidy for capital investments, since 2021, subject to budget availability,<sup>40</sup> and (d) AfD line with 3.5 percent.<sup>41</sup> It is not always that the GFF is the most preferred option. So, they argued that given that time has passed since the project design, there should have been an option to be flexible about the terms. The issues listed above were behind the hesitation of ProCredit Bank in terms of taking the 2<sup>nd</sup> tranche.
42. There was an expectation in the ProDoc that *“an average investment mix could be: \$4,500 for a solar PVs for 4KWp of solar power; \$ 2,500 insulation; \$ 1,500 EE home appliances, and \$ 1,500 EE heating appliances”*. As will be demonstrated in the Section 5.2.1 this did not materialize, which points out that the behavioural study conducted as part of the baseline could have been more effective in identifying preferences and this might have prompted designing a more attractive incentive scheme for the solar PVs for Outcome 2.
43. While the desire to see more RE (and solar, in particular) projects, according to the ProDoc applied to both Outcomes, the share of the grant is differentiated for the RE only for Outcome 1: for Outcome 2 it is the same 30 percent.

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<sup>37</sup> ProDoc, page 12: *“focuses on the setup and implementation of GFF Retail RE/EE Financing and activities which are similar to the ones developed under Outcome 1, albeit with a different source of finance, different local bank partners, different level of concessionality and greater promotion and advisory support to borrowers.”*

<sup>38</sup> EIB press release 17 July 2023, “North Macedonia: EIB Global unlocks €100 million of EU investment with Development Bank of North Macedonia to boost green transformation of SMEs” <https://www.eib.org/en/press/all/2023-275-eib-global-unlocks-eur100-million-of-eu-investment-with-development-bank-of-north-macedonia-to-boost-green-transformation-of-smes> last accessed 11/04/2025

<sup>39</sup> <https://www.mbdp.com.mk/mk/Products/KreditiranjePrekuBankiProizvod/27>

<sup>40</sup> Government of North Macedonia. (2023). Program to Support the Use of Renewable Energy and Energy Efficiency in Households, available at <https://www.economy.gov.mk/content/documents/Sektroski%20programi/PROGRAMA%20OIE%20EE%202023.pdf>

<sup>41</sup> <https://www.mbdp.com.mk/en/Products/KreditnaLinijaProizvod/17?cookieS=1> last accessed 11/04/2025

44. One of the PFIs, engaged in Outcome 1, Sparkasse Leasing, had disbursed only €600,000 out of the €3 million allocated and argued that leasing is often not the preferred option for the SMEs compared to taking a loan for the purchase, and the terms are even more of a challenge for them than for the banks, and in addition there are restrictions in terms of the eligibility for trucks and trailers<sup>42</sup>. See [Recommendation 12](#).
45. There is a cap on the grant amount of 30 percent PBP – max USD 7,000 per verified project/loan for the HHs.<sup>43</sup> This limits the max loan size offered by both banks (Silk Road Bank and TTK Bank), engaged currently under Outcome 2, and is restrictive, in part because the (UN) exchange rate has changed since the time of the Agreements with UNDP. It also limits and slows down the delivery of the incentive (ex-post, PBP) upon verification.
46. There is an error in the ProDoc as it says that EBRD's ESS (Environmental and Social Standards) will apply. But this should apply only with regards to Outcome 1 and not Outcome 2.
47. The vision of the project from the ProDoc was that upon project completion: (a) financial services and the market for RE/EE solutions will be enhanced. With a larger and more active market - new market entrants such as product vendors, service providers and financial solutions are expected; (b) the increased level of supply and demand would drive competition resulting in more affordable products, lowering payback periods, and reducing or eliminating the need for concessionality; and (c) some of the participating banks will continue to service this market segment. The latter point was thought to be likely, based on the EBRD's lessons learned from the WeBSEFF program,<sup>44</sup> which showed that once the product is well accepted and widely known on the market the demand continues and increases. While the above might well be the case for the larger SMEs, it is not necessarily the case for the smaller ones as well as underserved HHs. The experience from the Western (as well as Eastern) Europe indicates that there are support programs for them, both in terms of concessional credits, grants, and alike. Hence schemes whereby the Government (as well as potentially other funders) step in to finance the PBPs need to be explored (see [Section 5.5.4](#) for further discussion).

### 5.1.3. Extent of addressing LNOB in the design

48. Outcome 2 aimed to serve important groups of stakeholders who have not been included in other support mechanisms. As part of ProDoc preparation there was no robust study into the identification of these groups (taking the LNOB list was the basis) and the definition. As it stood at the MTR, the latter is as described in [Table 6](#).

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<sup>42</sup> Trucks and trailers are not eligible under the program because they run on fossil fuels. Sparkasse Leasing, however, think they should be eligible. Replacing old (more polluting) truck and trailers with new ones fits within the overall program objectives. Such approach is accepted when purchasing fossil-fuel run machinery already and the same can apply to truck and trailers. If trucks and trailers become eligible, then Sparkasse Leasing can utilize the remaining funds far more easily.

<sup>43</sup> It is mentioned in the Validation Methodology of the Independent Assessor which is also part of the Agreement with the banks for Outcome 2 (not in the ProDoc.)

<sup>44</sup> [https://ebrdgeff.com/seff\\_facilities/commercial/](https://ebrdgeff.com/seff_facilities/commercial/)

Table 6: Target Groups

Name of target group	Definition	Additional
<b>Female-Headed Households</b>	A family or group of relatives living together in which a female employee or business owner is the primary earner of income i.e., she has the highest level of income compared to the other member(s) of the household.	Dominant or main income earner is female, with a formal job with the only or highest wage in the household.
<b>Single Parents</b>	According to the Law on Social Protection of the Ministry of Labor and Social Policy (Official Gazette No. 104/2019), "single parent" is a parent who alone exercises the parental rights and duties for the child, due to the fact that the other parent is unknown, deceased, missing or for justified reasons temporarily or permanently does not exercise parental rights and duties. In addition, single parents who are the primary caregivers (over 50% parental rights) fall under this target group.	The other parent is unknown Deceased, Missing For justified reasons temporarily or permanently does not exercise parental rights and duties Primary caregivers (over 50% parental rights)* Single parents who were never married
<b>Households with PwDs</b>	According to the Law on Social Protection (Official Gazette No. 104/2019) a "person with a disability" is a person who has long-term physical, intellectual, mental, or sensory disorders that interact with various obstacles and can prevent his/her full and effective participation in society on an equal basis with the others.	
<b>Roma Households</b>	A member(s) of household belonging to the ethnic group of Roma, by self- determination and affiliation.	Individual(s) or member(s) household who, by self- determination and affiliation, belongs to the ethnic Romani community in the country and follows the cultural norms and
<b>Employees who were affected by COVID-19<sup>45</sup></b>	Citizens who within the period from March 2020 until March 2022 had either: 1) incurred medical expenses as a consequence of Corona virus disease (COVID-19) in the amount equivalent to or exceeding US\$3,000.00 in the period from March 2020 to March 2022 or 2) lost one of their immediate family members as a result of Coronavirus disease (COVID-19).	Incurred and paid medical expenses as a result of Corona virus disease (COVID-19) in the amount of or exceeding US\$3,000.00 USD Lost one of their immediate family / household members as a result of COVID-19.
<b>Returning migrants</b>	Persons returning to their country of citizenship after having been international migrants (whether short term or long term) in another country and who are intending to stay in the country for at least one year" (UN DESA, Recommendation on Statistics of International Migration, Revision 1 (1998) p.94).	North Macedonia citizen living/working abroad and returned to country since 2020
<b>Remittance recipient</b>	Personal monetary transfers, cross border or within the same country, made by migrants to individuals or communities with whom the migrant has links. Remittances, usually understood as the money or goods that migrants send back to families and friends in origin countries, are often the most direct and well-known link between migration and development. Global estimates of financial transfers by migrants include transactions beyond what are commonly assumed to be remittances, as the statistical definition used for the collection of data on remittances is broader (see IMF, 2009). Also, such estimates do not cover informal transfers.	Families staying behind include: spouses, 1st / 2nd line relatives, parents, children

Source: Project administration documents, received from the PM

<sup>45</sup> This target group was initially included because the design of the JP took place during the Covid-19 crisis/pandemic. The eligibility criteria are same or similar to crisis measures introduced/applied by the Government and Central bank at that time, which are no longer applicable. PFIs are not promoting this group as eligible, no applicants to date, and requests received to remove it from target groups under Outcome 2.

49. Interviews indicated that the definition of the group “*female-headed HH*” (Group 1 in the table above) needs revision as the combined income of the husband and wife can be substantial. International Labour Organization (ILO) definition for Woman-headed household is “*households where either no adult men are present, owing to divorce, separation, migration, non-marriage, or widowhood; or where the men, although present, do not contribute to the household income, because of illness or disability, old age, alcoholism or similar incapacity (but not because of unemployment). Household headship has ‘real’ (de facto) and ‘perceived’ (de jure) dimensions. The de facto head is the main decision-maker responsible for financial support and welfare of the household. The de jure head, traditionally associated with the man ‘breadwinner’, is a person who usually lives with the household and is recognized as head of household by its other members. Often implicit in woman’s headship is the perceived problematic of the de facto status running counter to the established de jure norm, that is, man’s headship*”.<sup>46</sup>
50. Several interviewees raised a question about the “remittance recipients” category: while the desire to direct the remittances into EE/RE is well justified, given that the remittances from expatriate workers constitute a high 16 percent of GDP<sup>47</sup>, being recipients of remittances does not necessarily imply being “underserved”. Similarly – for the rerunning migrants, this status, while desirable, does not imply being “underserved”. A cap on the income of the HHs of these groups would address this concern
51. The arguments above raise the necessity for redefining the eligibility criteria. Several suggestions were made by the interviewees for other eligible types of HHs: Young families; Single person HHs; HHs with single income; Foster families; HHs with multiple children (the threshold can be set, e.g., 3 or more children); HHs of the recipients of social pensions (while individual social pension recipients may have low income, their household as a whole might still be creditworthy if other members have additional earnings). etc. On the other hand, the category of “Employees who were affected by COVID -19” is redundant.
52. Thus, while the extent of addressing LNOB is strong, certain fine-tuning is needed. It is recommended that the redefinition is based on an analysis of statistical data.(Census 2021). See **Recommendation No 1** (already partly in progress).

#### 5.1.4. Quality and Relevance of the Results framework

53. The JP’s log frame indicators were SMART (Specific, Measurable, Attainable, Relevant, Time-bound). There could have been an indicator on PM2.5 and PM10, as tackling air pollution is the primary goal of the project. Inclusion of these indicators was requested by the Government in the latest PSC Meeting, which was followed by a discussion, that took a decision to act on it and

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<sup>46</sup>[https://www.unescwa.org/sd-glossary/woman-headed-household#:~:text=Women%2Dheaded%20households%20are%20similar%20to%20incapacity%20\(but%20not%20because](https://www.unescwa.org/sd-glossary/woman-headed-household#:~:text=Women%2Dheaded%20households%20are%20similar%20to%20incapacity%20(but%20not%20because)

<sup>47</sup>38th EBES Conference Proceedings - Volume I (2022): International Remittances: A Source of Development Finance –Evidence from North Macedonia. By Jovanovski K and Jusufu L., available at <https://repository.ukim.mk/bitstream/20.500.12188/16646/1/Jovanovski.%20K.%2C%20Jusufi.%20L.%2C.pdf>

develop the methodology (on February 20, 2024); the draft methodology was ready at the time this MTR was drafted, see [Recommendation No 14](#).

54. There is a 4- block tariff structure to incentivize energy savings for household customers under universal service supply, from the lowest thresholds of 210 kWh/month to a monthly consumption exceeding 1050 kWh (introduced in 2022). This affects their decision on the typology of technologies they choose, to allow to stay on that tariff along but within the overall affordability constraints. This was partly the reason for the majority opting for heat pumps, but the main one is that is the priority as seen by them in terms of their HH needs. This could potentially be affected also by already mentioned cap of USD 7000 USD (on the 30 percent PBP) per verified project/loan.<sup>48</sup> See [Recommendation 10](#)
55. The fact that the majority of the HHs chose heat pumps limits the energy -saving potential. The latter is affected, *inter alia*, by the methodology of calculation whereby the baseline is calculated based on the actual size of the dwelling, while the HHs may occupy only part of the rooms to save on costs prior to installation and then move to occupy the whole of the dwelling post-installation, using the same amount of energy. Given the arguments above the targets for installed capacity and energy saving for Outcome 2 might be overstretched. See [Recommendation No 12](#)

## 5.2. Effectiveness

### 5.2.1. Key results achieved against the JP RF and the factors behind

56. After this slow start the project has gained pace.

#### **A. Outcome 1**

57. **Table 7** describes the performance for **Outcome 1**. 46 SME sub-projects financed [NB there is some discrepancy in the figures provided to the MTR team, as the latest data states 47,<sup>49</sup> also featured in parts of this report), with a total value exceeding USD 11.1 million. Businesses in various sectors were supported, helping them adopt sustainable solutions, including transport, energy, manufacturing, retail and medical services. The desire for more RE (and particularly solar) projects- as reflected in the ProDoc- has materialized: most SMEs invested in rooftop and land-based photovoltaic systems, while adoption of EE machinery, insulation, and electric vehicles was lower. The average loan size was expected to be at EUR 0.3M (capped at EUR 1M) while the actual one was slightly lower, at EUR 226,577<sup>50</sup>.

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<sup>48</sup> mentioned in the Validation Methodology of the Independent Assessor which is also part of the Agreement with the banks for Outcome

<sup>49</sup> due to time lag between consultant monitoring/reporting/expected signing by year end and official contract signing/entry in EBRD's Management Information System (in early 2025).

<sup>50</sup> Project data

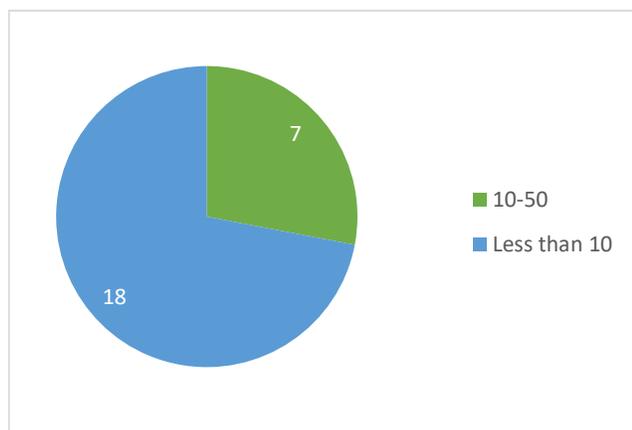
**Table 7 A summary of status of the SME sub-projects is provided in Annex 1 with the Report**

Type of technology	No. of projects	EUR amount	USD amount
RE - roof top PVP	19	3,712,204	3,894,102
RE - land PVP	10	4,617,476	4,843,732
RE - heating & cooling systems	4	1,148,590	1,204,871
<b>TOTAL RE</b>	<b>33</b>	<b>9,478,270</b>	<b>9,942,705</b>
<b>TOTAL EE+RE (PVs +medical equipment, insulation, electrical vehicles)</b>	<b>5</b>	<b>657,899</b>	<b>690,136</b>
EE (vehicles – electric + plug-in hybrids)	7	442,880	464,581
EE (machines only)	1	49,900	52,345
<b>TOTAL EE</b>	<b>8</b>	<b>492,780</b>	<b>516,926</b>
<b>TOTAL GFF</b>	<b>46</b>	<b>10,628,949</b>	<b>11,149,768</b>

Source: project data

58. GFF has successfully reached SMEs, including smaller ones, with most participating businesses having fewer than 10 employees (MTRSME), as could be seen in **Figure 8**.

**Figure 8 No. of SME by size (number of employees)**



Source: MTRSME

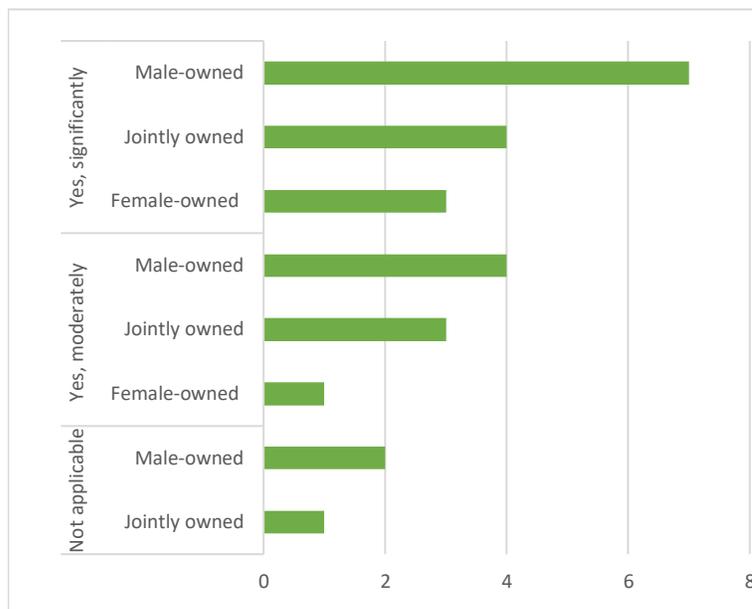
59. The majority of businesses reported a positive impact (or an expected one) of the GFF program on their business operations, suggesting that the program has effectively contributed to financial stability, EE improvements, or operational growth (Error! Reference source n

ot found.). However, variations in responses across different ownership types (e.g., male-owned, female-owned, or jointly owned businesses) could indicate differences in access to resources, financial literacy, the ability to fully leverage GFF support, gender roles, credit exposure/indebtedness level<sup>51</sup>, etc.). The lower levels of perceived impact by the female-owned or jointly owned smaller SMEs could suggest the need for targeted outreach and support mechanisms to ensure equitable benefits and the understanding of it across all business types. Ensuring that all SMEs experience tangible benefits from the program may require sector-specific assistance, improved accessibility to technical support, or enhanced post-financing follow-ups (see **Recommendation No 3**).

<sup>51</sup> In info-sessions of the project team with PFIs, indebtedness especially in post crisis period, vis-a-vis employment/income security and regulatory requirements (exposure limits) was highlighted

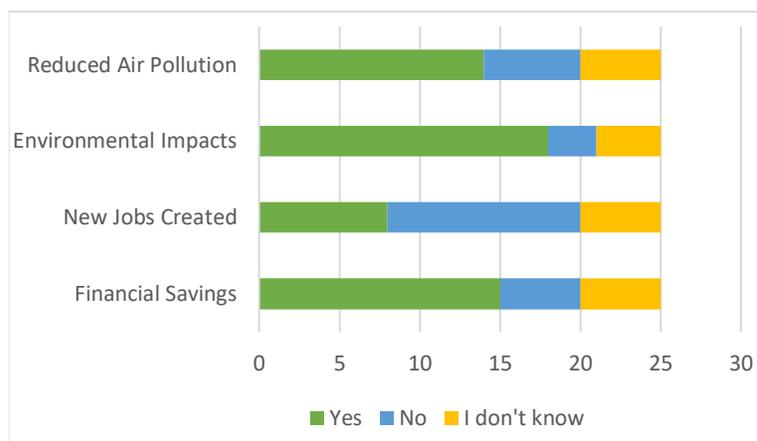
60. The key benefits SMEs have experienced or expect to experience as a result of their participation in GFF-supported projects, include financial savings and environmental impacts, with most respondents confirming they have already observed or anticipate these positive outcomes. Reduced air pollution is also recognized as a major advantage, highlighting the fact that the beneficiaries do acknowledge this link and reinforcing the potential for sustainable impact of GFF financing. However, job creation appears to be the least realized benefit, with a significant portion of respondents indicating that their projects have not yet resulted in new employment opportunities. Additionally, across all categories, a portion of SMEs responded, "I don't know," suggesting that some businesses require more time to assess the full impact of their investments (see [Figure 11](#)) These findings suggest that while the GFF is delivering clear financial and environmental benefits, its direct influence on job creation may be more limited or take longer to materialize. Further monitoring and impact assessment could help businesses and program managers better understand the long-term effects of GFF financing.

**Figure 10 Perceived Impact of the GFF on SME Business by Ownership Type**



Source: MTRSME

**Figure 9 Expected/Experienced SME Benefits of GFF-Supported Projects**



Source: MTRSME

61. The MTRSME survey registered mostly high satisfaction with:

- **Financial Institutions:** SMEs largely reported positive experiences with the PFIs, though some faced challenges in obtaining adequate loan application support.
- **Advisory support in selecting the appropriate technology.** This was particularly valued, although not a novelty, with EBRD having the similar assistance under previous schemes (EU funded SME-Competitiveness and SME -Reboot)
- **As for the GFF as a whole, 9 out of 25 businesses,** were not entirely satisfied, most likely related to the delays in getting PBPs due to delays with verification

62. **Table 8** indicates that the *performance by PFIs under component 1* varies. Sparkasse Bank is in the lead position, followed closely by the PCB, but at half that level by Sparkasse Leasing. As for Komercijalna Bank, they have been engaged in the schemes for 4 months only effectively by the time the MTR.<sup>52</sup> They had one large potential client but it did not materialize, and at MTR there were only 3 clients (4 mln USD signed, but not verified as yet).

**Table 8: performance by PFI: Component 1**

	Sparkasse Bank		PCB		Sparkasse Leasing		TOTAL	
	Nr	Amount	Nr	Amount	Nr	Amount	Nr	Amount
a. Verified	3	81,361	1	17,000	3	124,056	7	222,417
b. Ongoing verification	1	1,000,000	1	600,000	0	0	2	1,600,000
c. Disbursed waiting for finishing of investments	16	5,437,040	16	2,882,928	6	506,727	38	8,826,695
Approved or in process	4	1,696,120			2	387,186	6	2,083,306
<b>Total</b>	<b>24</b>	<b>8,214,521</b>	<b>18</b>	<b>3,499,928</b>	<b>11</b>	<b>1,017,969</b>	<b>53</b>	<b>12,732,418</b>
Pipeline in banks	6	4,330,000			1	22,396	7	4,352,396
<b>Total with pipeline</b>	<b>30</b>	<b>12,544,521</b>	<b>18</b>	<b>3,499,928</b>	<b>12</b>	<b>1,040,365</b>	<b>60</b>	<b>17,084,814</b>
<b>Total disbursed and verified (a)+(b)+(c)</b>	<b>20</b>	<b>6,518,401</b>	<b>18</b>	<b>3,499,928</b>	<b>9</b>	<b>630,783</b>	<b>47</b>	<b>10,649,112</b>
Average loan size		<b>325,920</b>		<b>194,440</b>		<b>70,087</b>		<b>226,577</b>

Source: Project data

63. The MTR team conducted 2 site visits to 2 SMEs in which are presented in the case studies below. These demonstrate the discussed emerging benefits for the SMEs, and stimulating women's empowerment with female entrepreneurship.

<sup>52</sup> Komercijalna joined in December 2024 (on condition of significant project extension). NLB and Stopanska Skopje (both in ProDoc) have withdrawn interest in participation in Outcome 1.

### Case Study 1: Eko Energy – Family-Run Solar Farm in Kumanovo Accelerates Investment with GFF

**Location:** Kumanovo / **Business Type:** Small enterprise / **Sector:** Electricity, gas, steam, and air conditioning supply / **Technology:** Land-based photovoltaic (PVP) system / **Total Investment:** EUR 995,971 / **Grant Received:** EUR 99,597.10 (10%) / **Bank:** Sparkasse Bank.

In Kumanovo, the family-owned enterprise Eko Energy 2022 DOOEL has successfully completed a large-scale land-based solar project, supported by GFF. Managed by Snezhana and Dobrin Petrushevski, the company invested nearly EUR 1 million in the construction of a photovoltaic plant to produce electricity for sale. While the family was already considering the investment, the availability of GFF's 10% performance-based grant played a key role in accelerating their decision. "We were already aware of the benefits and planning the investment, but the grant made it easier to commit and move forward faster," said Snezhana.



In addition to financing, the GFF provided technical support through expert consultants, helping the family select efficient technology and ensuring a smooth project implementation. The project was verified in June 2024, and the grant of nearly EUR 100,000 was disbursed accordingly

*Source: Interview by MTR team*

### Case Study 2 - Powering Business with Sun and Innovation

**Location:** Tetovo / **Business Type:** Security company (Sekuritats M DOOEL) / **Technology:** 30 kWp rooftop photovoltaic (PV) system + Electric Vehicle (BEV MG4 EV124) / **Total Investment (Leasing):** Nearly EUR 35,000 / **Grant:** 10% performance-based grant / **Leasing Provider:** Sparkasse Leasing.

Zekije Bedzeti, founder and owner of Sekuritats M DOOEL, a woman-led security company based in Tetovo, embraced innovation by integrating solar energy and electric mobility into her business operations. With support from GFF, the company invested in a 30 kWp rooftop PV system and an electric vehicle, which is directly charged using energy produced by the PV system



"We are very happy with the project combination—it works perfectly for our company's needs," Zekije said. "The synergy between solar power and electric mobility has proven to be an efficient solution for our daily operations." Her story illustrates how GFF is enabling female entrepreneurs to drive business sustainability through clean energy investment.



*Source: Interview MTR team*

64. EBRD website features 6 success stories. Three of these are on the purchase of EVs, one each for the 3 SMEs. While this is promising, there are no cases of services obtaining EV fleets (taxi, delivery, etc.).<sup>53</sup> **Box 3** presents the 3 success stories from the EBRD website (not verified by the MTR evaluators) for Outcome1, highlighting yet again the growing popularity and benefits of the solar system for the SMEs, but also the benefits of the heat pumps, that in these cases are considered as RE (see the discussion under the sub- Section (B) in this Section. .

<sup>53</sup> There is however such a taxi service in NM <https://beeride.eu/contact-us/here>

### Box 3: SME stories for Outcome 1

#### Transkop Bitola has invested in 105,8 kW photovoltaic plant to reduce electricity costs and provide a continuous supply of electricity

Transkop A.D. Bitola is a company registered in 1989, with long-standing experience in passenger transport within North Macedonia as well as internationally. The company operates the intercity and suburban bus station in Bitola, from which numerous intercity and international bus lines depart. The company is committed to providing high-quality and safe transport for its passengers, with regular vehicle maintenance and strict adherence to schedules. The need and awareness for investing in renewable energy sources has existed in this company for several years, but the challenge of how to implement the entire process was the obstacle. After learning about GFF Macedonia, we decided to invest in a photovoltaic system. With this investment, the company Transkop managed to reduce energy consumption and contribute to reducing the impact on the environment.



In accordance with the investment in renewable sources, the company was provided financial support of 10% grant, which is crucial for their project. After completing the project, they stated that the process was simple, and that they look to the future with great optimism, that this investment will bring them long-term savings and a contribution to nature protection. Overall, the total investment cost verified is 52,210.02 EUR (without VAT). This installation generates an annual PV Energy production of 130,173.9 kWh. Thanks to this investment, supported by financing and technical assistance from the GFF program, solar production enables energy use avoided 130,2 MWh in the annual electricity consumption sourced from the public distribution grid, and a reduction of greenhouse gas emissions by 105,6 tonnes/year of CO2 equivalent.

#### Agnesa DOOEL Bitola Leads the Way in Energy Efficiency with Replacement of a pellet boiler with an eligible air-to-water heat pump

Agnesa DOOEL Bitola, a well-established company in North Macedonia, has been a trusted supplier of construction materials, plumbing, drainage, and household products since its founding on April 17, 2000. With two stores in Bitola, the company provides a wide range of goods, including electric and hand tools, sanitary fittings, furniture fittings, paints, and more. The company's long-standing reputation for quality and service has allowed it to thrive in the local market for over two decades. Recently, Agnesa DOOEL Bitola recognized the need for a more energy-efficient solution to heat its commercial premises. Currently, the company heats only 350 m<sup>2</sup> of its 1,100 m<sup>2</sup> showroom with a pellet boiler, using 3 to 6 bags of 15 kg pellets daily. As the entire space is set to be converted into a showroom, heating the full 1,100 became essential. To meet this need, Agnesa DOOEL Bitola decided to invest in a heat pump system (air-to-water type) with the support of the Green Finance Facility in North Macedonia. This strategic investment aims to reduce energy consumption, lower operational costs, and support the company's sustainability goals.



The new heat pump system will not only cover the entire showroom area but will also provide an eco-friendly alternative to the pellet boiler, thus reducing the company's carbon footprint. Project Impact The total investment cost for the project is approximately €30,000, with €22,680 allocated through a loan provided by the Green Finance Facility thru Sparkasse Bank. Key benefits of the investment include:

- **Energy Savings:** The company expects to avoid 49.30 MWh/year of primary energy use, equating to 177.50 GJ/year.
- **Environmental Sustainability:** By transitioning to the heat pump system, Agnesa DOOEL Bitola will significantly reduce its carbon emissions and reliance on non-renewable energy sources.
- **Increased Property Value:** With the energy-efficient upgrade, the commercial property will see a boost in overall market value, contributing to long-term financial stability.
- **Cost Efficiency:** The company will achieve lower heating costs and improve operational efficiency, allowing resources to be redirected to other areas of the business.
- **Comfort and Confidence:** The heat pump system will provide a consistent and comfortable indoor climate for customers visiting the showroom, further enhancing the shopping experience.

#### Laminat Bitola has invested in 49,05 kW PV plant to reduce electricity costs and provide a continuous supply of electricity

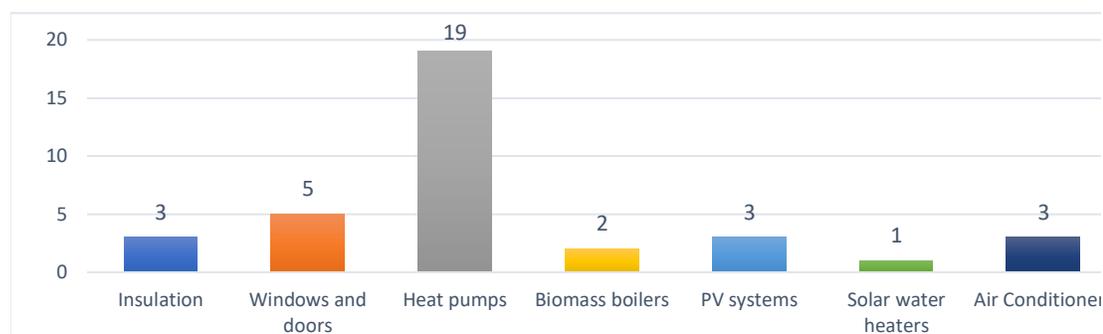
Laminat Dooel Bitola is a company registered in 2002, engaged in the sale of laminate flooring and related products in Macedonia. The company was provided financial support of 10% grant, which is important for their project. The company Laminat Dooel Bitola secured this investment through GFF PFI ProCredit Bank, in a total amount of EUR 16,946.09 (without VAT). This installation generates an annual PV Energy production of 60232.48 kWh. Thanks to this investment, supported by financing and technical assistance from the GFF program, solar production enables energy use avoided 60,2 MWh in the annual electricity consumption sourced from the public distribution grid, and a reduction of greenhouse gas emissions by 48,8 tonnes/year of CO2 equivalent.

Source: [https://ebrdqeff.com/macedonia\\_gff/](https://ebrdqeff.com/macedonia_gff/)

## **B. Outcome 2**

65. As for **Outcome 2**, 30 underserved HHs were supported with access to affordable finance and technical assistance for RE and EE solutions, but only 7 UNDP and 5 IOM, that is, 12 have been verified prior to 2024 Annual report (17 by the time the MTR was being conducted). The value of HH projects financed was at USD 264,138.<sup>54</sup> The average loan size was expected to be USD 11,600: the actual average size was smaller, around USD 8500 (for UNDP applicants - USD 9,205 and IOM - USD 8,305).<sup>55</sup>
66. As **Figure 11** indicates, the vast majority of HHs chose Heat pumps, with the immediate need for comfort and affordability as the main drivers for this according to the Interviews with the SMEs and the project’s energy consultants. Only 4 HHs chose solar water heaters and PV systems. This goes against the expectation in the ProDoc (as mentioned earlier) that “an average investment mix could be: \$ 4,500 for a solar PVs for 4KWp of solar power; \$ 2,500 insulation; \$ 1,500 EE home appliances, and \$ 1,500 EE heating appliances”. But the fact that 2 HHs chose biomass boilers and 4 HHs- solar water heaters and PV systems, indicates that there is a potential to stimulate these more. Plus, some of the heat pump recipients indicated that they consider going for a solar solution as the potential next step. It is also important to note that the heat pumps with Coefficient of performance (COP)<sup>56</sup>>=4,3 qualify as RE<sup>57</sup> and the heat pumps funded under the project are considered as RE. The heat pumps financed under Outcome 2 are in the range of COP from 4.3 to 5.2.<sup>58</sup>

**Figure 11 A summary of status of the HH sub-projects**



Source: Project data

67. The interviewed HHs for this MTR were highly satisfied with the project and commented that they would have not taken the loan if not the grant component. They also highly appreciated

<sup>54</sup> Project data

<sup>55</sup> Project data; the value in the ProDoc assumed zero inflation during implementation; it has proven to be the contrary - high 2-digit inflation peaking at end 2022, with a slow decline since and tightened credit supply/higher interest rates since (source: World Bank data)

<sup>56</sup> The COP is a ratio between the rate at which the heat pump transfers thermal energy (in kW), and the amount of electrical power required to do the pumping (in kW). For example, if a heat pump used 1kW of electrical energy to transfer 3 kW of heat, the COP would be 3.

<sup>57</sup> Decision 2013/114/EU: (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013D0114&qid=1744361171086>) clarifies the calculation for the share of energy from heat pumps, setting the threshold for renewable energy from electrically driven heat pumps as having an SPF > 2.5 that ensures the COP >4.3, qualifying it as renewable under EU Directive 2009/28/EC and Decision 2013/114/EU.

<sup>58</sup> GFF uses the document Revision and Update of the Green Economy Financing Facility (GEFF) Technology Selector Tool for North Macedonia <https://unece.org/sed/documents/2023/04/reports/revision-and-update-green-economy-financing-facility-geff-technology> where is stated that COP for Heat pumps should be >=4.3.

the advice they got from the project consultants. This is not a novelty in NM for the SMEs, as the EBRD’s GEF also has such a component for HH, but this was a novelty for this category of households, i.e., underserved.

68. The MTR team conducted 2 site visits to beneficiary HHs: the case studies are presented below. One of them, a returning migrant has opted for a PV system, while the other – a heat-pump. The latter highlighted how tailored financial instruments and targeted grants can empower households—particularly women-led ones—to lead the shift toward cleaner energy choices.

**Case Study 3 Sevim Berzati – Empowering Female-Headed HHs through Smart Energy Investments**

**Location:** Tetovo / **Household Type:** Female-headed household / **Technology:** Heat pump combined with floor heating / **Total Investment:** EUR 9,500 / **Loan Amount:** EUR 5,400 (repayable over 2 years) / **Bank:** Silk Bank / **Performance-based grant:** EUR 4,100 / **Heated Area:** 150 m<sup>2</sup>

Sevim Berzati, a working professional (she learned about GFF opportunities at the municipality of Tetovo where she works) and the primary breadwinner in her traditional family, is among the early adopters of renewable energy solutions supported by the GFF. Her household received financial assistance to install a monobloc air-to-water heat pump combined with underfloor heating and integrated hot water storage. The system significantly improves indoor comfort across the entire 150 m<sup>2</sup> home while reducing long-term energy costs. “The grant made all the difference—without it, we wouldn’t have applied,” Sevim shared. With support from Silk Bank and project consultants, her project was successfully verified, and she now repays the remaining EUR 5,400 over a 2-year period. Inspired by the experience, she plans to continue investing in energy-saving measures—next up is an energy-efficient façade. “I hope these kinds of support programs will continue. They’re really helpful,” she added. Her story highlights how tailored financial instruments and targeted grants can empower households—particularly women-led ones—to lead the shift toward cleaner, smarter energy choices



*Source: Interview MTR team*

**Case Study 4 Sinisha Badar – Returning Home to Build an Energy-Independent Future**

**Location:** Shtip / **Household Type:** Family of four (husband, wife, two children) / **Technology:** 6 kW rooftop PV system / **Total Investment:** EUR 6,500 (repayable over 2 years) / **Grant Received:** EUR 1,950 (30% performance-based grant) / **Bank:** Silk Bank

Sinisha Badar, a returnee from Canada after losing his job during the Covid-19 pandemic, chose to invest in his family’s energy future through GFF. Upon returning to Shtip with his wife and two children, he installed a 6-kW rooftop solar system with a vision of energy self-sufficiency. “We wanted our new home to be energy self-sufficient. Living and working abroad, we saw so many great examples. I hope we will inspire our neighbours and friends,” Sinisha said. The 30% grant he received after verification played a key role in his decision: “The grant was a dealbreaker.” With the savings, Sinisha now plans to further improve his home’s efficiency. “I’ll use the grant money to invest in energy-efficient doors and window systems for even greater savings,” he added. Sinisha’s story reflects how targeted support through GFF can help returning migrants reintegrate sustainably while promoting green living in their communities.



*Source: Interview MTR team*

### **C. Outcome 1 and 2**

69. For both Outcome 1 and 2
- the number of loan officers trained surpassed the targets: for outcome 1 - 64 Loan officers trained: (30F/34M) and for Outcome 2- 120 Loan officers were trained (67F/53M). According to the project management, the targets were underestimated. There was a Training of Trainers (ToT) too and all benefitted from the training by an international consultant engaged by UNECE. The training, coupled by the updated technology selector (supported by UENCE), that is on EBRD website currently, (<http://technology-mk.ebrdgeff.com/>) ensured that the beneficiary SMEs and HHs had received an up-to-date information on the best suited technologies suitable for their needs.
  - The targets were exceeded also in terms of potential beneficiaries reached, as reported (here too, according to the project management, the targets were underestimated);
    - ✓ For the SMEs: Number of businesses reached was reported as 2046 for 2022/2023 combined against the plan of 700 (1552M and 439F)
    - ✓ For HHs, Number of individuals reached through marketing efforts cumulative for 2022-2023 was reported as 23210 against the planned 3660. No sex-disaggregation is provided in the Results report
70. The remaining targets were not met however both for Outcome 1 and Outcome 2 (see [Error! Reference source not found.](#))
- **Outcome 1:** The programme is anticipated to extend loans to 105 SMEs, while at the MTR there were 47 (for 2022 and 2023 combined) verified against the plan of 55, with an additional 6 in the process of approval. For 2022 and 2023 combined, the total value of (a) PBPs allocated was USD 12500 against USD 1,400,000 planned; (b) loans was USD 10,984,990 against the 16,000,000 planned; (c) annual energy saved was 35,000 MW against 979.57 MW planned; (d) Estimated GHG emissions avoided was 263.25 against the planned 31,761 tCO<sub>2</sub>e/year.; and (e) RE capacity added was 0.2 against 3 MW planned; and
  - **Outcome 2:** 650 HHs of marketable but underserved groups were to adopt RE and EE technologies for the whole of project duration, and 300 for 2022/2023, with the actual cumulative at 30. For 2022-2023 combined the value of (a) estimated energy saved was 426 MW against 2,300 MW planned; (b) the estimated GHG emissions avoided was 123 against 2,007 tCO<sub>2</sub>e/year planned; (c) RE capacity added was 0.14 MW against 1.0 planned; (d) loans extended was at 264,138 USD against 3,200,000 USD planned; (e) PBPs allocated was 108397 against USD 850,000 planned. For 2022/2023 combined the number of (a) loan officers trained was 6 times the planned number of 20, around half of whom women and (b) individuals reached through marketing efforts was reported as 23210 against the planned 3660.

## 5.2.2. The scope and scale of additional financing leveraged by the JP

71. The co-financing targets (see [Table 9](#)) were not realized in the part of Outcome 2 for the reasons that were discussed: the withdrawal of the 2 banks from the ProDoc and the time it took to find replacement and long micro-assessments (due to UNDP procedures for the engagement with private sector entities).
72. For Outcome 1 the targets were expected to be realized<sup>59</sup> with some reallocations expected

**Table 9 Plans for additional financing that had to be leveraged**

Private Finance Leverage	Private Funds (USD)	SDG Fund (USD)	Public Funds	Private Funds Leverage USD	Public Funds Leverage
Outcome 1	13,400,000	3,910,000	800,000	8.0:1	0.2:1
Outcome 2	6,500,000	2,600,000	0	2.5:1	0.0:1
<b>Total</b>	<b>37,900,000</b>	<b>7,800,000</b>	<b>800,000</b>	<b>4.9:1</b>	<b>0.1:1</b>

Source: ProDoc

soon (see [Table 10](#)). EBRD was to provide USD equivalent of EUR 27M (\$31.4M as per UN Oct 2021 exchange rate) in the form of credit lines to local banks for on-lending of these funds to SMEs in the form of sub-loans for investments into RE and EE solutions that are in-line with the Policy Statement (set of rules) established for the Facility. EBRD is aiming at EUR 30.0 million (in an extended timeframe - to enable also the verifications to be completed and PBPs to be disbursed):

- *Signed and committed* – EUR 23.0 million credit lines to support SMEs through four partners financial institutions (PFIs): Sparkasse Bank A.D. Skopje, ProCredit Bank A.D. Skopje, Sparkasse Leasing DOO Skopje, and Komercijalna Banka A.D. Skopje;
- *Signed and uncommitted*- EUR 1.5 Million, by Sparkasse Leasing A.D. Skopje; and
- *Planned redirection*: ProCredit Bank’s second tranche of EUR 3.5m was not committed as the bank wanted to evaluate the effects of the Hungarian credit line on the market. That amount together with the remaining EUR 1 million will be offered to Sparkasse Bank who expressed interest to use all the remaining available amount, according to EBRD. [NB: the 2024 Annual Report mentions EBRD providing EUR 24.5 million, but this is an error, since the EUR 1.5 million by the Sparkasse Leasing A.D. Skopje is unconfirmed, as in [Table 10](#); the commitment is expected in 2025 only]

73. The Government of North Macedonia funds (USD 0.8m), already disbursed in full to EBRD as part of the advances according to the schedule of payments stipulated in the UNDP-EBRD agreement (Attachment 5) see [Table 10](#), were used for PBPs in Component 1 – for the SMEs and are blended with the funds from Joint SDG Fund. Total expenditures against the part of the advances from the Government of North Macedonia funds (as of 03/2025) was USD 114,444. At the MTR, there were discussions on the advances to be expensed/cleared after

<sup>59</sup> There is evidence to support the reported financial leverage based on evidentiary documents and direct financial flows to the financial instruments

payment of the PBPs to the SMEs following the verifications (by consultants) given the experienced delays.

**Table 10 - Financial Leverage, actual, January 2025**

	Source of financing	Name of investor	Type of financing	Actual Amount Leveraged at MTR	Notes
<b>Outcome 1</b>	IFI	Sparkasse Bank A.D. Skopje	loan	EUR 14.0m (2 lines of EUR 7.0m)	Over 100 %, compared to the plan from the ProDoc (provided documentation is available upon the confirmation of the reallocations)
		ProCredit Bank A.D. Skopje	loan	EUR 3.5m	
		Sparkasse Leasing A.D. Skopje	loan	EUR 1.5 m (1 <sup>st</sup> tranche) EUR 1.5 m (2 <sup>nd</sup> tranche)	
		Komercijalna Bank A.D. Skopje		EUR 4.0 m	
	public			US\$ 0.8 mln	
<b>Outcome 2</b>	private	Silk Road Bank A.D. Skopje	Bank's funds	US\$ 1,6 m	Around 50%
	private	TTK Bank	Bank's funds	US\$ 1.6m	
	private	Savings House "Mozhnosti"		Due diligence/micro assessment underway	
<b>TOTAL</b>				<b>US\$ 27,0 Million committed</b>	

Source: Project data

### 5.2.3. Factors behind challenges during the implementation and remaining barriers

74. The reasons for not meeting the targets are multi-fold. The ones related to program design were described in [Section 5.1.2](#).
75. The reasons behind the slow start of the project are listed below, both internal and external
- External:
    - ✓ elections in April and May 2024 with certain impact on the appetite for investments;
    - ✓ the high Euro Interbank Offered Rate (EURIBOR) makes the EBRD credit lines expensive, resulting in hesitation by some banks to join the GFF under Outcome 1 (given that the two of the banks planned did not join);
    - ✓ the selection process for Project Consultant and Independent Assessor required repeat announcements due to a limited consulting market, complex solicitation requirements and time of year (holiday season)
  - Internal
    - ✓ Finalization of the Agreement between UNDP and EBRD took longer than expected as it was the first of this kind between the two entities, with complex coordination and clearance processes. The Agreement was signed on 24.03.2023. This delay affected the overall Programme timeframe in 2023;

- ✓ The delay in developing a training curriculum as well as in conduct of the tailored trainings for Project and Verification Consultants was due to the late signing of an agreement between EBRD and UNDP, which subsequently delayed the selection of Project and Verification Consultants, that were to be trained by the UNECE consultants; and
- ✓ Contracting process: the lead PUNO, UNDP, completed the recruitment and selection of project personnel for GFF, namely a Project Manager and Monitoring and Communications Associate, who were fully on board at the beginning of Quarter 4 of 2022, while the ProDoc was signed in 10/2021.

76. The reasons that relate to the implementation *per se*, include:

- Internal
  - ✓ The outreach by the PUNOs focused so far mostly on the promotion of the JP , rather than the promotion of the financial product. There were several reasons for that. The project with the Silk Road Bank was operational for 6 months only by the MTR and with TTK-around 2 months. But also, there was an ambiguity as to who should be in charge of the that under Outcome 2. There was a verbal agreement reached among the agencies that this will be done predominantly by the banks, to boost their ownership, with the support of the consulting company hired by UNDP; the ProDoc only vaguely mentions the responsibility of the banks for marketing. As discussed earlier this underestimated the fact that smaller banks with limited resources for marketing would be engaged under Outcome 2, given the restriction that was applied (i.e.,. the banks under Outcome 1 not involved in Outcome 2). Plus, the efforts to engage a consulting company did not produce a result so far and two individual consultants were hired The issue of the small communication budget was discussed, but the need to do more by the PUNOs could have been acknowledged by the PUNOs sooner. At the time of the finalization of the MTR, UNDP and IOM have already taken measures to improve this based on the recommendations from the draft of this report, e.g., with a more proactive outreach campaign design (see [Recommendation 4](#) and Section 5.3.2)
  - ✓ While in the ProDoc there was a position of the Monitoring and Communications Associate, the person originally in this position left and the name of the position was redefined only as Monitoring Associate. Having said that, there is a *Communication Officer* position for the cluster of the projects under Democratic Governance Practice of UNDP that includes also the Green Portfolio (2 projects), including the GFF.
  - ✓ There was a staffing issue with the JP having just 2 staff members for 10 months. At the time of the MTR a proactive Communication plan was developed: while the reaming budget (from the amount of \$30,500 for communications mentioned in the ProDoc), was only USD 7,490; the available funds in other budget lines could be used for outreach
  - ✓ While the project conducted a study on the “Life, health, well-being and the environment study Behaviour Change Communication Strategy For UNDP North Macedonia”, after the project was shortlisted, that focused on understanding the motivational enablers and barriers that shape the household spending behaviours regarding the adoption of EE/RE

solutions among seven target groups, there was insufficient analysis of the preferences of the HHs, leading to the overly optimistic expectations related to the uptake by them of the solar solutions- solar heaters and PVs (mentioned earlier) and hence no specific measures to target that were put in place. The need for the latter could have been revealed sooner with more focus on that in the outreach. The HHs choose heat pumps predominantly for the affordability reason and because these serve their immediate needs for comfort, but still, the advantages of the solar solutions could be emphasized more with additional support measures, see [Recommendation 4](#); and.

- ✓ The challenges in grant disbursement, regulatory approvals, and outreach gaps remain key barriers to broader adoption (MTRSME). Improving program effectiveness, simplifying the grant process, expanding engagement efforts, and providing post-financing advisory support will be important. By addressing these challenges, the GFF program can further enhance its long-term impact on SME’s sustainability and green energy adoption.
- External
  - ✓ The limited knowledge among the potential beneficiaries for Outcome 2 about the benefits of the RE/EE is a barrier, and addressing this should be part of the Outreach campaign. See [recommendation 4](#). The same applies to the very small, especially women-owned businesses - see [recommendation 3](#); and
  - ✓ The process for obtaining licenses for PVP installations has been slower than anticipated, thus affecting the pace of verification of RE projects (majority of SME projects) supported by GFF, as well as the willingness for some to opt for this technology. While the exact duration for the completion of most PVP sub-project varies, it does takes several months. This further slows down the disbursement of the ex-post incentives – PBP grants to SMEs and HHs. According to the project Plan 2025, the JP team plans to engage in policy advocacy to identify bottlenecks and improve the enabling environment for RE and EE investments. This includes working with government agencies to streamline permitting processes and reduce barriers to investments in RE and EE. At least part of the reasons is related to the network is at capacity especially in parts of the county., but there are things that could be improved (see discussion under [Section 5.5.2 C](#)).

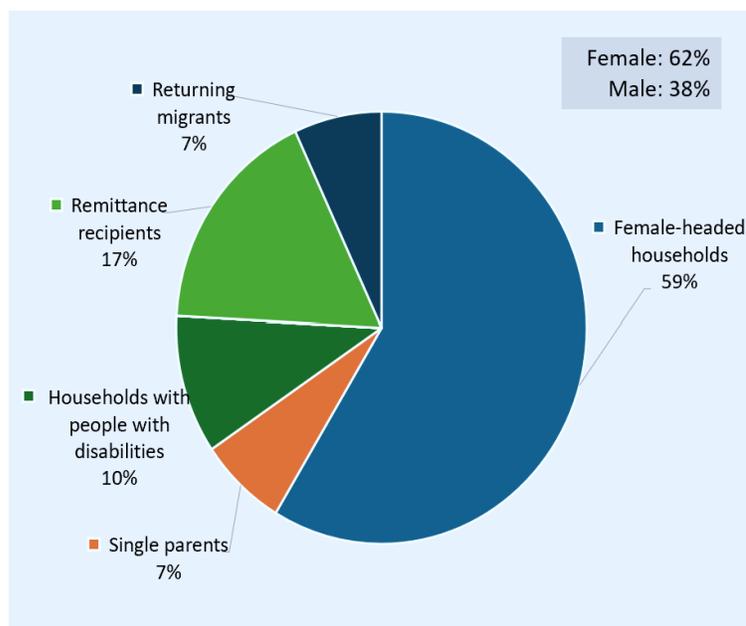
#### 5.2.4. Cross-cutting/LNOB

77. The results in the areas of gender equality, women’s rights are promising, [Figure 12](#) shows the type of HH beneficiaries:
- Female Business Owners and Women-Led Businesses: 18 out of 46 SMEs financed, benefiting from USD 2,019,583.42 (EUR 1,924,663) in GFF financing and technical assistance; and
  - Female Headed Households: 24 (including remittance recipients and returning migrants, benefiting from GFF finance and technical assistance)

78. There were 97 Female Loan Officers Trained: (across both Outcomes). Women constitute 62% of the applicants. Number of Children & Youth (0-17 years) Benefited (Outcome 2) was 19. Having said that:

- The disability inclusion could have been more prominent.<sup>60</sup> There were only 3 beneficiary HHs with PwDs. With more than 130 association of the PwDs, ensuring reaching the membership of all of these is a challenge, but it is possible with a targeted strategy (see **Recommendation 4**);

**Figure 12: Share of beneficiary households by eligibility criteria**



Source: Project data

- there was no single Roma applicant. There are significant challenges in reaching out effectively to Roma community, but it is, again possible with a targeted strategy (see **Recommendation 4**); and
- Women-headed Households comprised 59 percent, the largest share. As discussed in the Section 5.1.2, there are issues with the definition of this category, and the actual recipients may not necessarily be classified as underserved.

### 5.2.5. Potential for systemic change and impact

79. The discussion in this Chapter to this point illustrates that the progress to date indicates the potential to achieve systemic change and demonstrative impact in the future beyond the JP to catalyse change, innovation and evolution in the financial sector –public, private, developmental – in the country to devise solutions to unlock additional financing for the SDGs, but that this is only emerging and more time is needed for the evidence to mature (see **Table 11**) coupled with the adjustments in the implementation as recommended.

<sup>60</sup> UNEG Guidance on Integrating Disability Inclusion in Evaluations and Reporting on the UNDIS Entity Accountability Framework Evaluation Indicator <https://unevaluation.org/document/detail/3050>, last accessed 25/03/2025

**Table 11: Contribution to SDG targets to date**

Description	Indicator	Baseline	Project impact	Contribution	Unit	By 01/2025
<b>SDG Target 7.2:</b> By 2030, increase the substantially the installed RE capacity share of RE in the global energy mix.	Contribution of the project to the increase in the installed RE capacity generation potential	Installed capacity in the country excluding big hydro (586 MW) is 194 MW (source Annual report 2020, Energy Regulatory Commission of North Macedonia (ERC <sup>61</sup> ))	10.7 MW	5.5	%	<b>4.84</b>
	Contribution of the project to the increase in the installed solar capacity generation potential	Installed capacity in the country 30 MW (source Annual report 2020, ERC)	10.7 MW	35.7	%	<b>4.84</b>
	Contribution of the project to the increase in the RE share in total energy consumption	RE generation in the country in 2020 - 1,498 MWh (source Annual report 2020, ERC)	16,052 MWh	1.1	%	<b>NA</b>
<b>SDG Target 7.3:</b> By 2030, double the global rate of improvement in energy efficiency.	Contribution of the project to the annual final energy consumption reduction target	Annual reduction target for the country up to 2030 2,406,616 MWh (source NDC)	70,068 MWh	2.9	%	<b>NA</b>
<b>SDG Target 13.2:</b> Integrate climate change measures into national policies, strategies and planning; Indicator 13.2.2: Total greenhouse gas emissions per year	Contribution of the project to the annual GHG emission targets (up to 2030)	GHG emission reduction target for the country up to 2030 - 3,328.82kt (source NDC figure 4)	80.51 kt	2.4	%	<b>0.24</b>
Additional indicators	Share the final energy consumption reduction target in the sector industry for 2030	Reduction target for the sector industry in 2030 - 922,538.5 MWh (Source NDC)	81,000 MWh (Outcome 1)	8.8	%	<b>979.57</b>
	Share of the final energy consumption reduction target for all sectors in 2030	Reduction target for all sector in 2030 - 3,238,82 MWh (Source NDC figure 4)	86,200 MWh (Entire project)	2.7	%	<b>979.71</b>

Source: The table from the ProDoc populated by the MTR team based on the information from the Results Framework report 2024-

80. While the financial solutions/instruments developed have not as yet led to developmental impact for the local communities, SMEs and population (including in terms of financial savings) as well as the environment in terms of accelerating SDG achievements there is certainly a potential for it. The impact strategy can be improved by several means, listed in the [Chapter 8](#) on Recommendations.

<sup>61</sup> ([https://www.erc.org.mk/Default\\_en.aspx](https://www.erc.org.mk/Default_en.aspx))

## 5.3. Efficiency

### 5.3.1. Management arrangements

81. The responsibilities and reporting lines are overall clear. However, there are still a few issues. The expectations from the PFIs, in terms of their communication to potential beneficiaries and visibility of the GFF could have been clearer (see later in this Section). There is also an issue with the Technology selector, indicating that legal/ownership matters required more attention: while it is owned by EBRD GEF programme, and they have certified administrators, UNECE TA within the GFF supported its update and adaptation, but this has not changed the ownership and administration of the tool. Also, each product financed by GFF receives a GEF certificate from the Tool. This adds to the confusion that some of the stakeholders have between GFF and GEF. And finally, at the time of the MTR. EBRD was organizing training on the tool and addition of new products for e-mobility/transport, and it was unclear how can the JP access the trainings or administration of the tool.
82. The JP governance is formally established. The decision-making is transparent. The roles are clear overall. The Government, however, has expressed a desire to be engaged more in the implementation process: this would have benefitted from more clarity in the Scope and Rules of Procedure (SROP) for the PSC.
83. The JP was overall efficient. The JP team, together with the partners, managed to overcome the major external challenges at the start for this innovative project, and embark on implementation even if with 1 year delay.
84. The quality of execution of the PUNOs/Implementing Partners was satisfactory. Mostly the inefficiencies were connected with the 2 (two) banks mentioned in the ProDoc for Outcome 2 deciding not to join. The PUNOs could be credited with finding the alternatives in a reasonable time frame, but the long process of micro-assessment by UNDP added delays. There were inefficiencies related to own outreach however, too, as was described.
85. The quality of coordination and oversight provided by the RC/O was satisfactory with monthly coordinating meetings, but there could have been better interconnectedness between Outcome 1 and 2 in relation to outreach. See [Recommendation 5](#)

### 5.3.2. M&E, Reporting and Communications

#### 5.3.2.1. *M&E, Learning and Reporting*

86. The JP team and partners fulfilled Joint SDG Fund reporting requirements. However, the quality of reporting could improve with regards to reporting cumulative results.
87. The challenges of the JP format found their reflection in the M&E. For example, the Indicator 2.1.3 overlaps in the groups (women, women-headed households, remittance recipients and returning migrants) between UNDP and IOM. This makes it challenging for the project management in terms of planning and projections of delivery.
88. For Outcome 1, UNDP should ensure regular flow of information from the banks on the SMEs, including sectors, location, types of technology; this should be part of better monitoring, including monitoring of risks, with emergent risks better analysed and communicated to the partners (see [Section 5.4](#)). The SME database that the JP management has thus needs to be improved. As for Outcome 2, while the database is extensive, a more granular M&E approach is needed to track participation and barriers by subgroup, for example, by developing mini action plans per group and conducting outreach effectiveness assessments biannually. See [Recommendation 15](#).
89. At the time of the MTR, no agency and not the JP office were monitoring and reporting the results on the contribution of the project to SDGs, as in [Table 11](#) (the source of which is the ProDoc): clarity is needed in this regard. The Joint SDG Fund does not require reporting against this annually, but it will be needed closer to the end of the project, and it would have been useful to have it for the MTR.
90. In the Annex 8 of the ProDoc there is plan for an "Online platform for easy access and sharing of data, information and knowledge between partners". At UNDP there are: (i) Shared site/depository of materials with all partners including the Government, and (ii) Database with the consultants and banks for the status of applications and verifications. UN RCO has a GFF shared site for PUNOs. It includes folders and archives since GFF inception through present. None of these is used for learning at this stage however; the former could serve that purpose.
91. While the results were well documented, the reasons behind those could have been better analysed and timely action ensured. With this project aiming at regional replication, the lessons already could be better documented (currently only a small section in the annual reports), shared and discussed with key partners, internalized by partners and solutions found and acted upon.

#### **5.3.2.2. Communication**

92. There was a JP communication Plan developed in 2023 (effectively not acted upon) with annual updates (2024, 2025 with the latter including a general cross-sectoral public awareness campaign on air pollution and climate change for PUNOs).
93. There are information materials on the PUNO and EBRD websites (see [Box 4](#)). The opportunities are limited by the fact that the JP (as all the UNDP projects) cannot have its own social media page and webpage; there are a few posts on IOM, UNDP, UN RC and UNECE websites and FB

pages for North Macedonia. The communications products reflect the “joint” nature of the programme. But there could be improvements in terms of visibility and measures taken so that the beneficiaries are not confused. For example, under Outcome 1, the link to the project is going through the GEF sub-page on EBRD page, [https://ebrdgeff.com/macedonia\\_gff/](https://ebrdgeff.com/macedonia_gff/) with GEF being a credit line for the households, and this could be confusing. See **Recommendation No 7**

**Box 4: GFF Information posts**

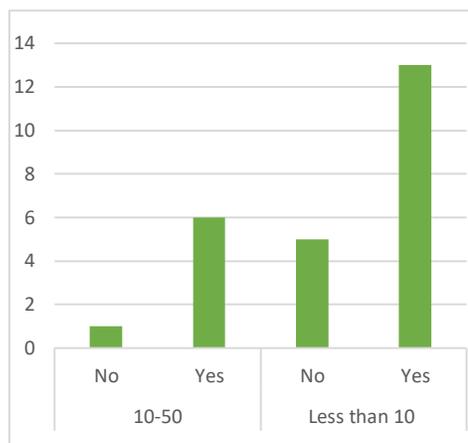
**UNDP** Transparency Portal: Preparatory phase <https://open.undp.org/projects/00129831>  
**United Nations Joint SDG Fund:** SDG Finance - Catalytic Investment  
 Green Financing Facility to Improve Air Quality & Combat Climate Change in North Macedonia  
<https://northmacedonia.un.org/en/252896-new-%E2%80%9Cgreen%E2%80%9D-loan-options-underserved-smes-and-individuals-north-macedonia>  
**United Nations North Macedonia** – New “green” loan options for underserved SMEs and individuals in North Macedonia  
<https://northmacedonia.un.org/en/252896-new-%E2%80%9Cgreen%E2%80%9D-loan-options-underserved-smes-and-individuals-north-macedonia>  
**UNDP** – GREEN FINANCE FACILITY TO IMPROVE AIR QUALITY AND COMBAT LIMATE CHANGE IN NORTH MACEDONIA  
<https://www.undp.org/north-macedonia/projects/green-finance-facility-improve-air-quality-and-combat-climate-change-north-macedonia>  
**UNDP** – UNDP AND EBRD HAVE PARTNERED TOGETHER TO IMPLEMENT THE GREEN FINANCE FACILITY (GFF) PROJECT  
<https://www.undp.org/north-macedonia/news/undp-north-macedonia-and-ebrd-have-partnered-together-implement-green-finance-facility-gff-project>  
**EBRD** – Green Finance Facility - North Macedonia  
<https://www.ebrd.com/work-with-us/projects/psd/53583.html>  
**IOM** - ACCELERATING GREEN FINANCE IN NORTH MACEDONIA: Introducing the Green Financing Facility  
<https://north-macedonia.iom.int/news/accelerating-green-finance-north-macedonia-introducing-green-financing-facility>  
**UNECE** – A New Financing Mechanism or Green Investments in North Macedonia  
<https://w3.unece.org/sdg2024/story-8.html>  
**UNECE** - Trainings on Design and Verification of Energy Efficiency and Renewable Energy Projects  
<https://unece.org/sustainable-energy/events/trainings-design-verification-ee-re-projects>

Source: Project documents

94. ***Communication on behalf of the PFIs***  
 a) ***in the part of Outcome 1.***

- With the exception of ProCredit Bank (<https://www.pcb.mk/gff.nspx>) there are no announcements on the websites the other banks, while they feature other credit lines, Including by EBRD. <https://www.sparkasse.mk/mk/business-clients>; <https://www.s-leasing.mk/operativen-lizing.nspx>; <https://www.kb.com.mk/pravni-kreditni-linii.nspx> . See **Recommendation No 6**
- The GFF has successfully engaged SMEs (see **Figure 13**), including smaller ones among them as mentioned, but it was less so for the female owned ones (see **Figure 14**). The projects own results records indicate

**Figure 13 SME Size and Awareness of RE Before GFF Participation**



Source: MTRSME

that the Number of businesses reached through marketing efforts was 1552M and 439F only.

- The SMEs which expect longer term of benefits from their investment were more likely to be aware of the project (see Figure 15) and presumably already in the lookout for financing options From the KIIs it was also revealed that the banks first and foremost promoted the GFF among the existing clients, and it is a question how successful was gaining *de novo* clients.
- According to the MTRSME survey digital engagement remains underutilized.
- And finally, there were Regional Disparities in participation (based in MTRSME survey): Kavadarci and Kumanovo had the highest engagement, while other locations showed lower awareness and participation.

Figure 14 Awareness Source of the GFF by SME Ownership Type

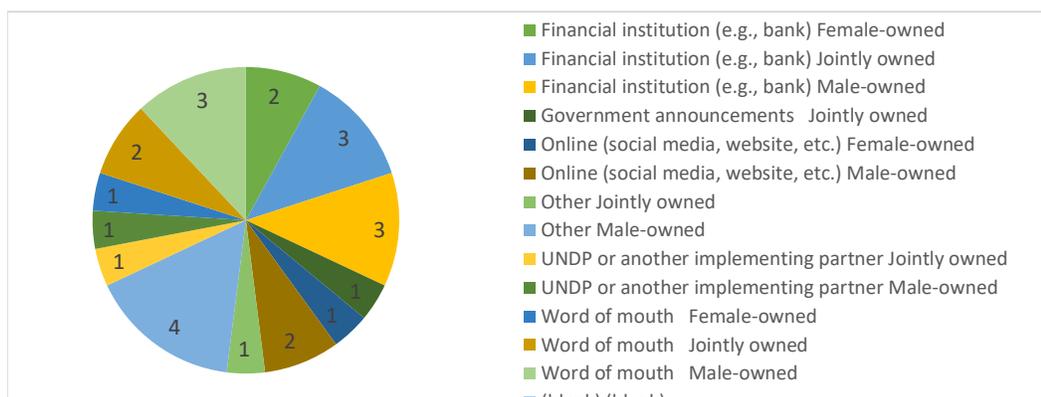
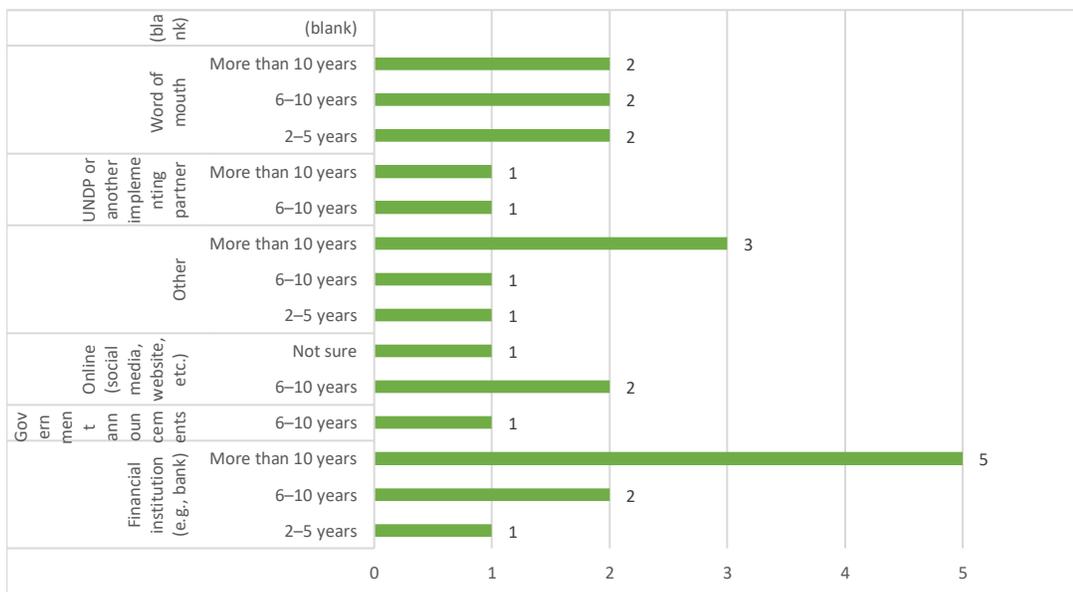


Figure 15 SME Awareness of the GFF and Expected Duration of Benefits



Source: MTRSME

- b) For **Outcome 2**, The potential beneficiary HHs had limited awareness of the GFF among the potential HH beneficiaries, coming from the PFIs (KIIs, FGDs). They mostly heard about the project through the word of mouth, and not by following the social media pages of the banks. At the MTR the 2 PFIs, TTK had already developed promotional materials published on their websites and social media. <https://www.ttk.com.mk/>, but not the Silk Road Bank (there is however a news story on Silk Road website, <https://www.srb.mk/Medija?Cat=&Item=174>).
95. UNDP is requesting a marketing plan as part of engaging the PFIs, but there should be clearer expectations from PFIs (including in monetary terms), for marketing, reflected in the agreements with them as well as their capacity building for that. At the time of the MTR, the JP has developed proposals for campaigns plans for PFIs for the JP and their products. A calculator for calculating the reduction of pollution with small greeting cards (PM 1.5 and PM 10) – potentially with an application- could be developed by UNDP, to be used by the PFIs, as well as for obtaining a Green Star (under the Government program). See **Recommendation No 7**.
96. The **communication on behalf of the PUNOs**, By MTR, for Outcome 2, the PUNOs (UNDP and IOM in this case) proactively engaged in a variety of communication activities to promote the Programme initiatives and accomplishments. These efforts included public awareness events, targeted workshops, participation in conferences and outreach events to inform stakeholders and the wider community about green financing opportunities and sustainable practices. The programme has developed and disseminated a range of communication products, such as informative briefs, presentations, info graphics, reports, and statements highlighting the benefits of green investments. Additionally, regular updates were shared through newsletters and social media platforms to keep the public and partners informed about the programme's progress and impact. External communication was satisfactory in terms of raising the awareness about the project among the potential partner organizations, e.g., associations of RE professionals and vendors (SOLAR, <https://solar.org.mk/> MACEF <https://macef.org.mk/> ), Associations of underserved households (PwDs, Roma, diaspora), and municipalities. However, the follow up actions were yet to materialize, e.g., with meetings with members, placing outreach materials on their websites, and physical locations with flyers, and alike. As mentioned earlier, in Section 5.2.3, there were several reasons for that, including but not limited to the ambiguity as to the extent to which the products' outreach was to be implemented by the PFIs or the PUNOs (with a verbal agreement at the start of the project that this should be done by the PFIs, with the support of a consulting company hired by the project but challenges emerging- with engaging the latter, with vagueness around the expectations from the PFIs and their limited resources for large scale outreach, etc). At the MTR:
- there was already a more proactive Communications/Outreach plan developed for 2025, which is overall in line with the recommendations of this report, but could be strengthened with (a) specific sub-Action plans for the specific groups of underserved; (b) plans to put a special emphasis on the solar energy; (c) more specific plans for the

underrepresented regions, as well as (d) ensuring the reach of the members of the CSOs representing the underserved HHs. Direct outreach is needed to the vendors (via SOLAR and individually), the Ministry of Social Policy, Demographics, and Youth and its Centers for Social Work, Citizen Information centres at municipalities, etc. See [Recommendation 4](#);

- the TORs for the energy consultants were enlarged to include outreach activities (this was in progress at the time of finalizing this report); and
  - more funding that the remaining USD 7,500 USD need to be found.
97. Closer cooperation could be ensured with the other projects of the PUNOs to ensure targeted dissemination of the outreach materials as well as visibility efforts, and policy pursuits. Additionally, the outreach materials could feature links to the PFIs, both for Outcome 1 and Outcome 2. See [Recommendation 6](#).
98. GFF webpages and pages on social media(s) –by the PUNOs, but also EBRD and PFIs - could be more informative, e.g., include a map with users, calculation results and Green Stars (part of a Government project) and video testimonials See [Recommendation 6](#)

## 5.4. Risk Management

99. The risks were identified in the ProDoc: the risk ratings applied were overall appropriate at the time the ProDoc was drafted, but perhaps could have envisioned the risks of competition in case additional credit lines appear. More comments are presented in [Annex 6 Risk Matrix from the ProDoc with cpmments](#)). While the risk of the bank withdrawals was listed the mitigation action is more about the banks under Outcome 1 than Outcome 2, plus the analysis overlooked the fact that the larger banks engaged under Outcome 1 were precluded from participating in Outcome 2, leaving a lesser pool of banks for Outcome 2 with smaller banks with limited marketing infrastructure and resources. Similarly, the risks emanating from the delays in obtaining PV licenses (impacting the desire to install and, in case of it happening impacting the pace of the project, delaying verifications), was overlooked (see [Section 5.2.3](#). The project intends to advocate the government for addressing the barrier, as discussed.
100. The risks were not reflected in full in the Annual reports, featuring the changes and measures taken. The Risk Long in the Quantum (see [Box 5](#)) is more comprehensive, but could include (a) the risk of the emergence of similar schemes with potentially more favourable terms; and (b) the risk of red tape with licensing, permits and alike slowing down the rate of adoption. The Annual reports should include the matrix with appropriate updates and mitigation measures. See [Recommendation 16](#).
101. Social and Environmental Screening (SES) was updated on 29.03.2024. It states that the project applies appropriate measures of waste storage, management and disposal according to the

environmental management standards of the UNDP and EBRD and in accordance with the applicable laws and regulations of North Macedonia. But it also states that some of the RE/EE loan applicants / end-users (beneficiaries), may need to develop Waste Management Plans with the help of consultants (the MTR concurs). The MTR Team concurs that the project is already demonstrating clear environmental benefits, but that certain risks are associated with electric vehicles and discarded solar panels, particularly concerning toxic waste disposal if not properly managed. While the Government of North Macedonia has established a regulatory basis for waste management, updates are needed to fully address new types of waste streams such as EV batteries and PV modules. Furthermore, enforcement and implementation challenges remain, which may affect the country's ability to adequately manage these environmental risks over time. See [recommendation 16](#).

### Box 5: The Risk log from Quantum at the time of the MTR

**Risk Category\*** 1. Social and Environmental **Risk Subcategory\*** 1.5. Climate change and disaster risks

**Event \*** There is a risk that the businesses stability and their ability to invest in renewable energy (RE) and energy efficient (EE) solutions may be impacted. Consequently, the demand for loan supported performance-based payments may be lower than expected. The economic crisis is also an opportunity to invest in RE and EE. **Causes\*** As a result of the energy crisis, rising prices (inflation) and interest rates (cost of finance) in Europe. **Impacts\*** The crisis, lower demand for finance and business ability to borrow or repay a loan, will impact the dynamic of project implementation. **Impact \*** 3- Intermediate **Likelihood\*** 3 – Moderately likely **Risk Significance/ Level\*** Moderate **Risk Level \*** Exploratory **Risk Treatment:** EBRD and PFIs: Ensuring adequate financing terms vis-à-vis the market conditions and borrowers financing capacity. UNDP and stakeholder organizations: Outreach and promotion of GFF offer and the benefits from RE/EE technology solutions.

**Risk Category\*** 2. Financial **Risk Subcategory\*** 2.5. Delivery

**Event \*** There is a risk that there will be limited uptake of the product by target beneficiaries/SMEs. **Impacts \*** May have a significant adverse impact on the planned implementation of project activities, deliverables and disbursement. **Causes \*** As a result of low level of awareness, risk tolerance and economic decline of target beneficiaries/SMEs. **Impact \*** 5 – Extreme **Likelihood\*** 3 - Moderately likely **Risk Treatment:** UNDP and stakeholder organizations: Outreach and promotion of GFF offer and the benefits from RE/EE technology solutions. In addition, Project Consultants provide technical assistance to beneficiaries (individuals/households of target groups), including financial analysis and selection of appropriate RE/EE solutions for the investment.

**Risk Category\*** 1. Social and Environmental **Risk Subcategory\*** 1.5. Climate change and disaster risks

**Event \*** Low awareness among members of the target groups of beneficiaries (female-headed households, single parents, people with disability, employees affected by Covid-19, Roma households, returning migrants and remittance recipients) and their willingness and capacity to invest in renewable energy (RE) and energy efficient (EE) solutions. Consequently, the demand for loan supported performance-based payments may be lower than expected. The economic crisis is also an opportunity to invest in RE and EE. **Causes \*** As a result of the energy crisis, rising prices (inflation) and interest rates (cost of finance) in Europe. **Impacts \*** The crisis, lower demand for finance and beneficiary ability to borrow or repay a loan, will impact the dynamic of project implementation. **Impact \*** 3 – Intermediate **Likelihood\*** 3 - Moderately likely **Risk Significance/ Level\*** Moderate **Risk Level \*** Exploratory **Risk Treatment:** PFIs: Ensuring adequate financing terms vis-à-vis the market conditions and borrowers financing capacity. UNDP and stakeholder organizations: Outreach and promotion of GFF offer and the benefits from RE/EE technology solutions.

**Risk Category\*** 2. Financial **Risk Subcategory\*** 2.5. Delivery

**Event \*** Insufficient funding from private sector (leveraging) for RE/EE investments. **Causes \*** Withdrawal of commitment to GFF of two of the three of the commercial banks which had expressed interest and are named in the GFF Project Document **Impacts \*** May have a significant adverse impact on the planned implementation of project activities, deliverables and achievement of results. **Impact \*** 5 – Extreme **Likelihood\*** 3 - Moderately likely **Risk Significance/ Level\*** Moderate **Risk Level \*** Exploratory **Risk Treatment:** UNDP and IOM: Outreach to the financial institutions and development of terms of reference for a call to be published to attract more FIs (licensed and supervised by the National Bank of North Macedonia) to commit and join the Programme. Two FIs (1 bank and 1 savings house) have expressed interest. Call for FIs published on 3/29/24.

*Source: Project management*

102. The MTR team concurs that:

- The GFF aims to significantly contribute to gender equality and women's economic empowerment by providing access to affordable finance and technical assistance to

women and female-headed households, among other target groups, for investment in renewable energy and energy efficiency solutions;

- The design of the JP (particularly Outcome 2) – in terms of target groups, results and targets were informed by a gender analysis and that technical assistance, trainings, communications strategy; and
- Gender-sensitive indicators are included into the M&E set-up of the JP. In addition, Outcome 2 includes target groups of beneficiaries of RE/EE finance such as female-headed households and single parents (mostly women). However, the MTR notes that for the Indicator on outreach for Outcome 2, the results were not sex-disaggregated, although they were supposed to be; in some cases, it would indeed be difficult, even impossible (e.g., in the case of the social media impressions) but wherever possible it should be sex-disaggregated, e.g., in relation to outreach events

103. The disparities in access for women-owned smaller-SMEs and their reasons could have been identified sooner however (and the same for Roma and HHs with PwDs) and acted upon

## 5.5. Sustainability, scaling up and replication

### 5.5.1. Country ownership

104. The central Government ownership is strong, demonstrated by the Government fulfilling its obligations financially on time (with only minor delays) and taking keen interest in the JP. The fact that the GFF is strongly aligned with the national priorities is one of the reasons for this. Efforts have been made by the JP management to enhance government ownership of the GFF initiatives. This included regular consultations with government agencies, aligning program goals with national policies even more, and involving government representatives in key decision-making processes. Perhaps something that could have been done more by the central government is linking the JP with other initiatives by the Government with potential synergies (informing, facilitating meetings), see more in [Section 5.5.4](#)). Also, according to the ProDoc there should have been regular interaction with the National Council for Sustainable Development – the highest national body overseeing sustainable development processes, and the relevant Sector Working Groups (e.g., the national aid and sector policy coordination system, including government, civil sector, academia, donors and IFIs): it did not seem to have happened.

105. The GFF has prioritised building buy-in from local communities too, with outreach, but more in-depth engagement is needed with synergies sought with their existing and planned initiatives

106. The strength of national ownership by private sector partners was affected by external factors, and resulted in 2 banks not entering into the program despite their commitments in the ProDoc.

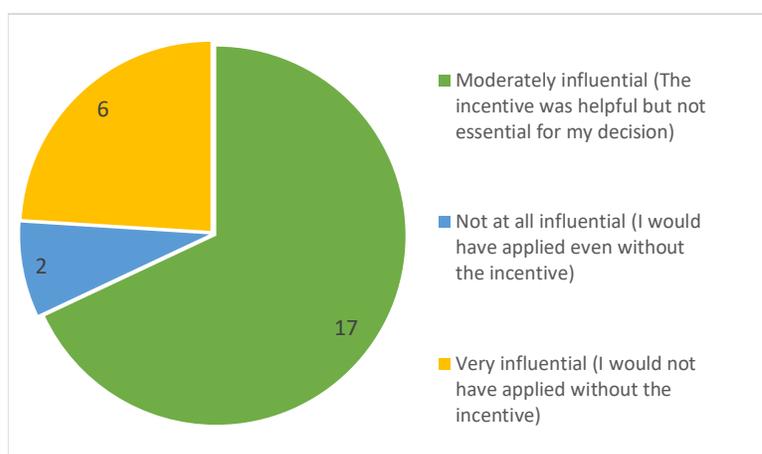
107. Thus, the financial solutions/instruments demonstrate early signs of sufficient country buy-in from the relevant public and private partners, from the demand and supply sides, to support the likelihood of sustainability following the completion of the JP, but more time is needed for this to fully materialize.

## 5.5.2. Likelihood of sustainability and scaling up

### A. SMEs

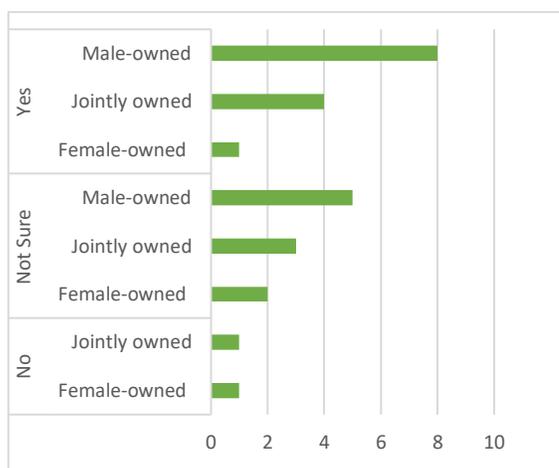
108. The PBPs (5 percent or 10 percent) influenced many SMEs’ decisions to apply for GFF loans, making financing more attractive by reducing costs, but with a moderate influence, (see Figure 18) and some businesses stated the incentives had little to no impact, indicating they were already committed to their projects (MTRSME). It further shows that while

Figure 18 Influence of PBPs on GFF Loan Applications



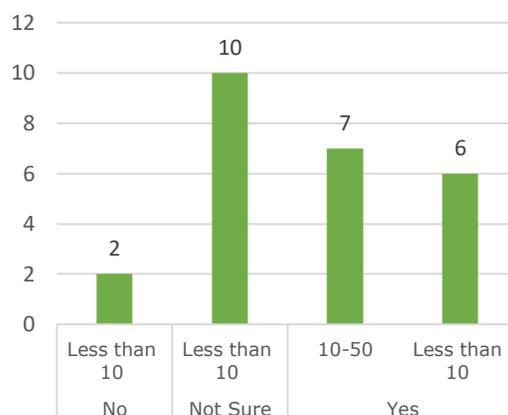
Source: MTRSME

Figure 16 Future RE/EE Investments Without grant compared to Business Ownership



Source: MTRSME

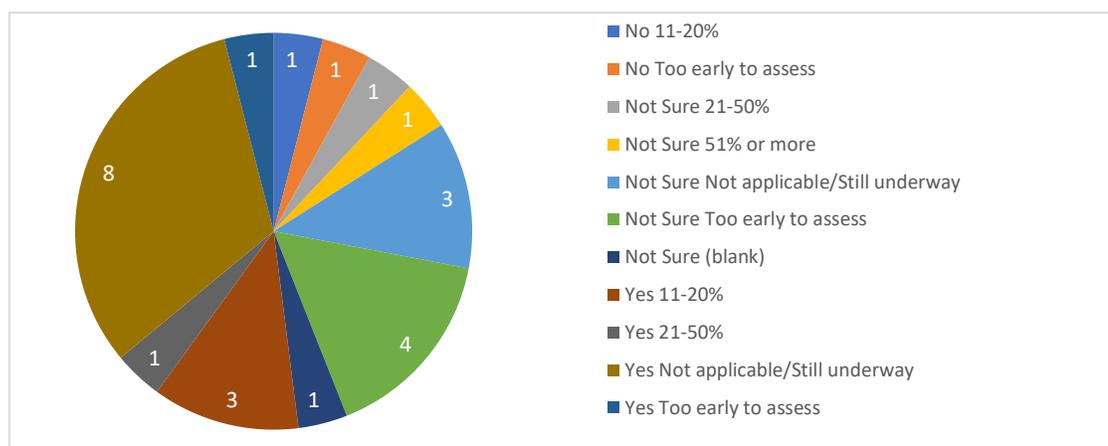
Figure 17 Willingness to invest in RE/EE projects in future without grant support by SME size



the SMEs demonstrate early signs of sustainability potential without grant support, but that it varies between the larger SMEs and the smaller, women-owned (see [Figure 16](#) and [Figure 16](#))

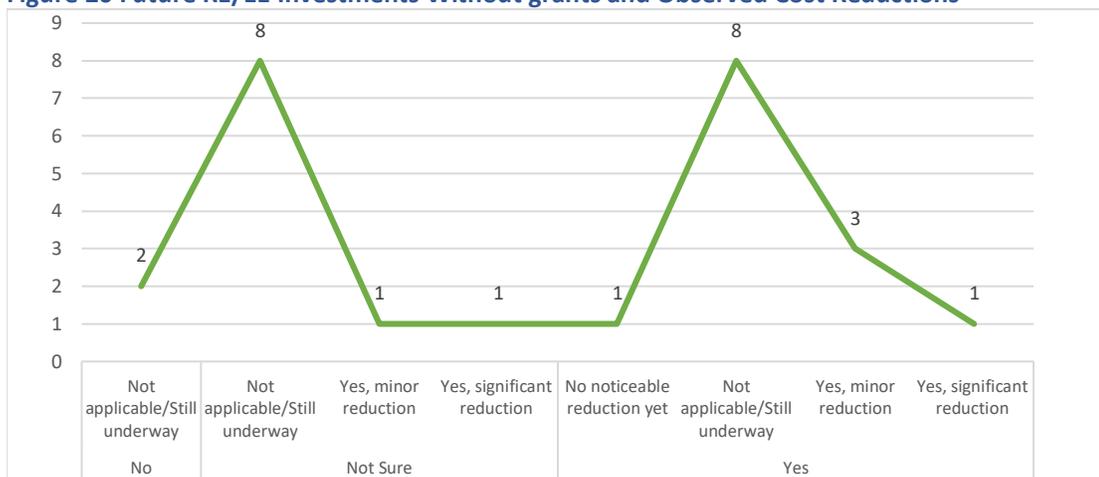
109. SMEs that reported higher energy savings (21 percent and more) and costs savings appeared more inclined to consider reinvesting (see [Figure 19](#) and [Figure 19](#)). This demonstrates the need for not only ensuring the reach to the smaller, women-owned businesses about the program per se, but also with awareness raising about the benefits of the EE/RE technologies (especially solar), and also the need or longer-term monitoring and post -installation guidance.

**Figure 19 Future RE/EE Investment Plans Without grants and energy saving**



Source: MTRSME

**Figure 20 Future RE/EE Investments Without grants and Observed Cost Reductions**



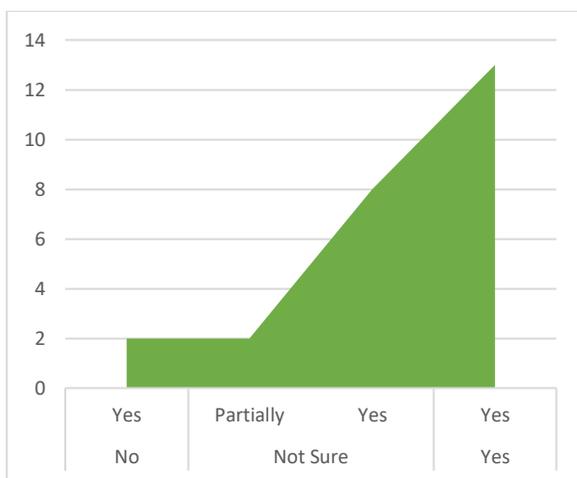
Source: MTRSME

110. Other factors like the perception of the fairness of financing terms and clarity also play a role in shaping the decisions about future investments and recommending to others (see [Figure 21](#) and [Figure 21](#)). Thus, businesses with a positive financing experience feel more confident in

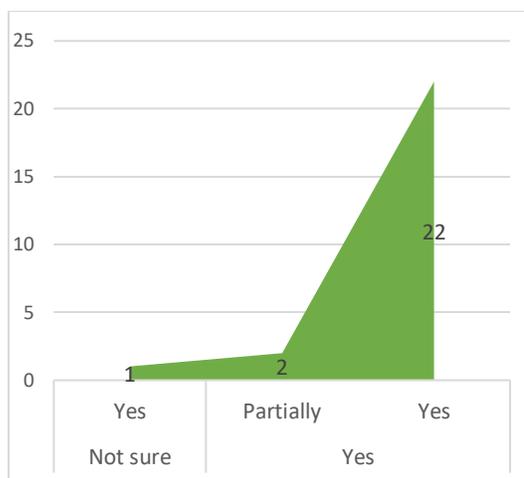
independently funding future funding opportunities. Most interviewees for this MTR expressed their satisfaction with transparency and fairness, but there were a few that commented that this does not necessarily apply to every branch and every bank and there is a room for improvement.

111. **Figure 16** male-owned businesses are most likely to reinvest in RE/EE projects without external financial support, indicating a higher level of confidence or financial capacity among these businesses. Female-owned businesses show lower levels of willingness, with some respondents remaining uncertain (about future financing. and **Figure 22**) This discrepancy may reflect differences in financial access, risk perception, or reliance on external funding among business ownership types. The presence of "Not Sure" responses suggests that some SMEs may need additional financial planning support or clearer projections of cost savings to make long-term investment decisions. To encourage broader self-financing in the future, tailored advisory services, financial incentives, and capacity-building programs could help bridge the gap, particularly for female-owned and jointly owned businesses

**Figure 21 Future RE/EE Investments Without grants and Loan Terms' Perception**



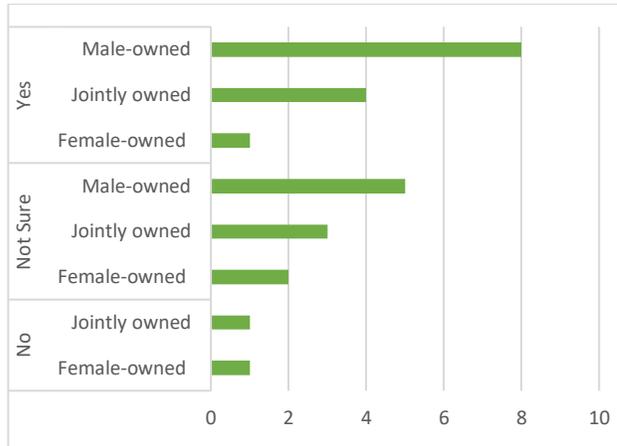
**Figure 22 GFF Program Recommendation and Perceived Fairness of Loan Terms**



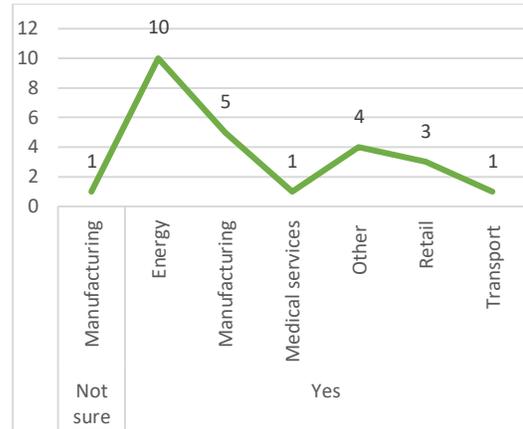
Source: MTRSME

112. SMEs in the energy and manufacturing were more likely to recommend the GFF program, suggesting that businesses in this industry have found significant value in its support, reinforcing the program's relevance for capital-intensive sectors with high energy needs. Conversely, medical services, retail, and transport sectors had lower recommendation rates, which may indicate that GFF's financing and support mechanisms are less suited to their needs or that awareness in these industries is lower. The presence of "Not Sure" responses in manufacturing suggests that some businesses may need more clarity on the long-term benefits of GFF participation (see **Figure 23**) These findings (MTRSME) highlight the importance of sector-specific engagement strategies to improve outreach, tailor financing solutions, and enhance the perceived benefits across a wider range of industries.

**Figure 23 Future RE/EE Investments Without External Support by Business Ownership**



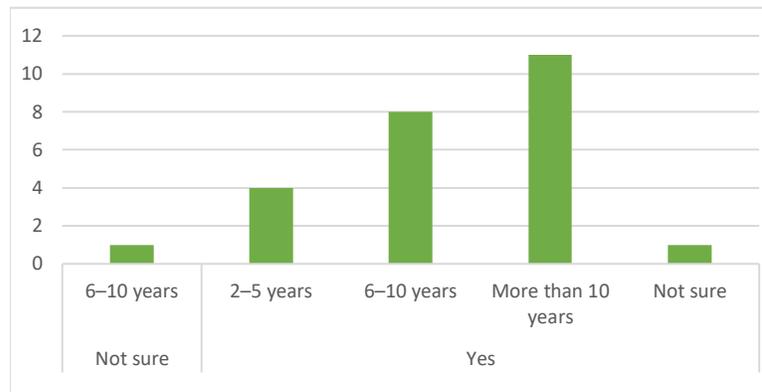
**Figure 24 Recommending GFF to other SMEs by sector**



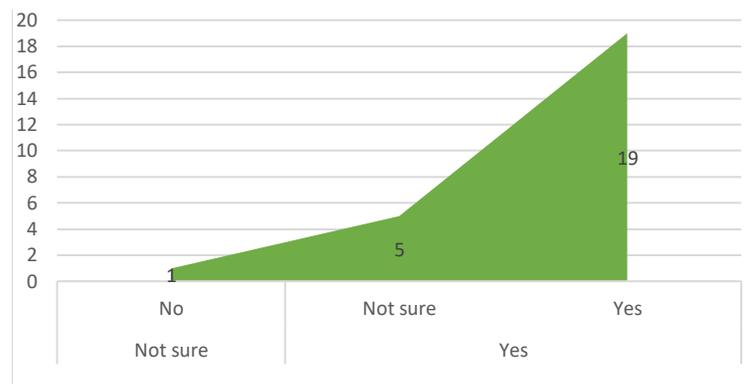
Source: MTRSME

113. SMEs which expect to benefit from GFF for more than 6 years were more likely to recommend the program. This suggests that businesses with long-term gains from GFF investments perceive the program as valuable and impactful. Conversely, SMEs expecting to benefit for only 2–5 years were less likely to recommend the GFF, possibly indicating that they saw the benefits as more limited in scope or duration. A small number of "Not Sure" responses suggests that some businesses are still uncertain about GFF's long-term impact

**Figure 26 Recommending GFF and Expected Duration of Benefits**



Source: MTRSME



Source: MTRSME

(see [Figure 24](#)). These findings reinforce the importance of sustained program benefits in driving positive recommendations and suggest that enhancing long-term support and follow-up measures could further strengthen SME confidence in GFF.

114. SMEs planning to implement future RE/EE projects were the most likely to recommend the GFF program, indicating that businesses seeing long-term benefits were also strong advocates. A smaller portion of respondents were uncertain about recommending the GFF, which could be linked to uncertainty in their own future investment plans. Meanwhile, very few respondents outright stated that they would not recommend GFF, suggesting that dissatisfaction is limited (see [Figure 26](#)) These findings highlight the importance of continued engagement with SMEs, ensuring they receive ongoing support that encourages future investments in RE/EE projects. Strengthening post-loan advisory services may help convert uncertain businesses into long-term GFF supporters. see [Recommendation 8](#)).

### **B. Underserved Households**

115. Examining the HH database mapping of the choice of the technology with typology of underserved HHs, did not reveal a correlation between the investment in solar technologies with specific groups (e.g., female-headed HHs, Roma communities, etc.). But the database does not feature information on the HH income. There could be a correlation between HH income and solar adoption. A small- scale targeted research could be undertaken to establish if such a correlation exists, and in the future iterations of the project this could be used to design a more diversified support scheme.
116. The fact that some of the HHs mentioned in the interviews that they view the heat pumps as the first step, and they think about going for solar as the next step.

### **C. Overall**

117. While the banks would continue without this particular type of schemes, as they are likely to have similar schemes with concessional rates for the SMEs, it is a question whether these schemes would be attractive to the very small, especially women -owned businesses. Similarly, for the HHs, there is less certainty about the sustainability of the model on a purely commercial basis, and plus, there is no similar scheme. Hence, boosting sustainability prospects these groups would require the maturing of the model and proactive synergies with the existing and planned support schemes (as in [Section 5.5.4](#))
118. Even with these early signs for the sustainability for the larger SMEs, the project needs 1 year no-cost extension (see [Recommendation 14](#)) due to lost time at the start, for the model to mature; the vast majority of the interviewees for this MTR thought that the project needs a second phase (provided that donor funding is secured for the PBPs) for this.
119. The GFF has already supported the sustainability and scaling up prospects by training more loan officers that planned. Plus, under Outcome 1, the Solo Consulting company is one of the first in North Macedonia to win and execute a contract to cooperate with EBRD. Since that they had gone ahead and won two more similar contracts; thus, the project indirectly stimulated the strengthening of the consulting market (unintended positive result). Further

capacity-building/awareness raising initiatives are needed however to strengthen the skills and knowledge of local stakeholders, ensuring they can sustain the program's impact and for the beneficiary households to increase uptake.

120. There are no major socio-economic, political or other risks that may jeopardize sustainability of the JP outcomes. But
- there are challenges to reach some of the hard-to reach groups of HHs, the sustainability of the schemes for whom is not likely to be assured without a strong grant element funded by the government or other donors. Plus, it requires more time than the planned duration of the project to develop long-term adoption habits for RE/EE solutions beyond JP incentives by the subgroups mentioned.
  - financial literacy, especially among women-led small SMEs and part of the underserves HHs, is a risk for sustainable adoption of RE/EE solutions. It is recommended that a targeted financial education campaign is integrated in future iterations of the project.
121. The GFF acknowledges that there are policy barriers for scalability within North Macedonia. The project management is planning to engage in policy advocacy to identify bottlenecks and improve the enabling environment for RE and EE investments. This includes working with government agencies to streamline permitting processes and reduce barriers to investments in RE and EE. Other potential ideas could include: e.g.. publishing basic information necessary for potential investors in RE to help them in the calculation of the investment, such as prices of land, grid connection, and other costs; Information on grid connection procedures and capacities made publicly available;<sup>62</sup> supporting the Government in making the entire procedure for all types of RES projects publicly and easily available; and a one-stop-shop system for wind and solar projects could be established;<sup>63</sup> and developing RE finance framework that combines public and private sources and allocates the national budget needed<sup>64</sup> (for the latter see also discussion under the [Section 5.5.2](#)) These ideas could be included in the potential next phase of the JP (see also in the [Section 5.5.2](#))
122. The measures to promote sustainability and scalability in North Macedonia, if ensured would promote, in turn, ensuring long-term environmental benefits beyond the project lifecycle

### 5.5.3. Summary of Key Factors affecting sustainability prospects

123. The key factors that positively affect the sustainability prospects for the GFF for both SMEs and HHs include the (a) declining costs of RE solutions and (b) overall strong national ownership,

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<sup>62</sup> *ibid*

<sup>63</sup> See Climate Action Network, Europe (2024); Overcoming barriers for renewable energy deployment in the Western Balkans: The case of North Macedonia and Serbia, available at <https://caneurope.org/overcoming-barriers-for-res-deployment-in-the-wb-north-macedonia-and-serbia/>, last accessed April 10, 2025

<sup>64</sup> IRENA and UNDP (2021), De-risking investments in the Republic of North Macedonia: Renewable energy finance and policy landscape focusing on power, heating and cooling. In line with the Macedonian Nationally Determined Contributions on Climate Change, International Renewable Energy Agency, United Nations Development Programme, Abu Dhabi. ISBN 978-92-9260-345-8, available at [https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2021/Oct/IRENA\\_UNDP\\_De-risk\\_Investments\\_North-Macedonia\\_2021.pdf](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2021/Oct/IRENA_UNDP_De-risk_Investments_North-Macedonia_2021.pdf) last accessed 25/03//2025

coupled with the efforts in line with the actions towards EU membership). The negative factors include: (a) persisting regulatory barriers coupled with limited network capacity, (b) limited financial literacy, (c) limited knowledge of the benefits of RE by some parts of the smaller women-owned SMEs and underserved households, (d) low purchasing power by some groups of the HHs (making the affordability one of the two key factor in making their technology choices); (e) Limited consulting market, although there have been improvements, including with the support of the project; and (f) the missing RE finance framework that combines public and private sources and allocates the national budget needed.<sup>65</sup>

124. The key factors that positively affect the sustainability prospects for the GFF in the part of SMEs include: (a) the track record for similar schemes run by EBRD and other development agencies as well as the Government- at the time of the MTR and also the prospects in the future, as well as (b) the RE/EE measures slowly but surely becoming the part of new normal,<sup>66</sup> But this is true more for the larger SMEs, and/or those engaged in energy and manufacturing. For the smaller, and in particular women-owned SMEs, the sustainability prospects will be boosted with much more in terms of awareness of the benefits of RE/EE in general and the project in particular. See [Recommendations 3](#).

125. As for the underserved HHs, the other factors that affect the sustainability prospects negatively include:

- Difficulties to reach some of the groups, e.g., Roma (coupled with a certain level of mistrust that exists between them and the mainstream banking system). UNDP needs to devise strategy specifically on how to engage Roma under GFF. Multiplicity of the CSOs representing some of the groups, in particular HHs with PwDs. whereby there are more than 130 of them, coupled with weak links between the governance bodies of some of the NGOs and their members. See [recommendation 4](#)
- Certain level of mistrust between the HHs and the municipal structures, as conveyed by the participants of the FGDs, while the role of the municipalities will be increasing in terms of their engagement in strategies to tackle air pollution. See [recommendation 17\)](#)

#### 5.5.4. Partnerships and exit strategy

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<sup>65</sup> IRENA and UNDP (2021), De-risking investments in the Republic of North Macedonia: Renewable energy finance and policy landscape focusing on power, heating and cooling. In line with the Macedonian Nationally Determined Contributions on Climate Change, International Renewable Energy Agency, United Nations Development Programme, Abu Dhabi. ISBN 978-92-9260-345-8, available at [https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2021/Oct/IRENA\\_UNDP\\_De-risk\\_Investments\\_North-Macedonia\\_2021.pdf](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2021/Oct/IRENA_UNDP_De-risk_Investments_North-Macedonia_2021.pdf) last accessed 25/03//2025

<sup>66</sup> See also IRENA and UNDP (2021), De-risking investments in the Republic of North Macedonia: Renewable energy finance and policy landscape focusing on power, heating and cooling. In line with the Macedonian Nationally Determined Contributions on Climate Change, International Renewable Energy Agency, United Nations Development Programme, Abu Dhabi. ISBN 978-92-9260-345-8, available at [https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2021/Oct/IRENA\\_UNDP\\_De-risk\\_Investments\\_North-Macedonia\\_2021.pdf](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2021/Oct/IRENA_UNDP_De-risk_Investments_North-Macedonia_2021.pdf), p.25 , p.25

126. The JP does not have as yet a realistic and feasible exit strategy and approach to phase out assistance. According to the Annual report 2024, it is supposed to be developed in 2025. According to the Annual Report 2024 the presumed exit strategy is seen as being based on the following: Coordinated Actions with UN Entities: Partnerships with Stakeholders: Government Ownership: and Building Buy-In and Capacity (discussed in the sections above).
127. The GFF has engaged with international financial institutions (IFIs), development finance institutions (DFIs), professional business (banking and solar energy) associations and local financial institutions to pool resources and share best practices. These partnerships have been crucial in building a support system for the program and as a necessary step towards sustainability. But these could be at deeper level and more sustained, as discussed. And the scope could be larger, to ensure that all the building blocks are in place and facilitated to increase the likelihood of the sustainability. For example, close partnership with the SME Centre and the Centre for Circular economy established under the Macedonian Chamber of Commerce could help to use their resources on the training of the SMEs, especially the smaller ones.
128. There are existing and planned government initiatives, that it is recommended that the project partners for the future financial sustainability of the project, namely that could support continuation of PBPs for vulnerable groups post-project. North Macedonia suffers from a high share of energy poverty – 23,8 percent in 2020<sup>67</sup> which is durable due to a combination of widespread material deprivation, poorly insulated dwellings, and overdependence on fuelwood use.<sup>68</sup> Vulnerable consumers cannot be considered as investors, they need to be supported to be able to invest.<sup>69</sup> This is a practice in many EU countries.<sup>70</sup>
129. As argued earlier establishing these synergies with the existing and upcoming government-supported schemes, could be supported more by the government representatives in the PSC. In particular, (see **Recommendation 17**) synergies could be probed with the:
  - a. *Just Transition initiative*:<sup>71</sup>. Under its Roadmap, one of the initiatives is on “Promoting An Energy Efficiency Retrofit Programme For Low-Income HHs” and stipulates “In The Coal-Dependent Areas<sup>72</sup>: Implementing a programme for the lower-income quarter of the areas’ HHs’ targeting 32,485 HHs. Also, a ‘Solar for Low-Income HHs offers’ programme will help eligible HHs access affordable clean energy by providing them with free solar systems that can help them unlock long-term savings on their HH electricity bills. A similar 3 per cent or increased rate and a similar EUR 5,000 or increased amount

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<sup>67</sup> Eurostat. (2023). Inability to keep home adequately warm—EU-SILC survey. Available at [https://ec.europa.eu/eurostat/databrowser/view/ilc\\_mdes01/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/ilc_mdes01/default/table?lang=en) last accessed 25/03/2025

<sup>68</sup> Stojilovska, A. (2020). Energy Poverty in a Subsistence-Like Economy: The Case of North Macedonia. In Perspectives on Energy Poverty in Post-Communist Europe (George Jigla Anca Sinea Ute Dubois Philipp Biermann, pp. 99–116). Routledge.

<sup>69</sup> Climate Action Network, Europe (2024); Overcoming barriers for renewable energy deployment in the Western Balkans: The case of North Macedonia and Serbia, available at <https://caneurope.org/overcoming-barriers-for-res-deployment-in-the-wb-north-macedonia-and-serbia/> last accessed 25/03/2025

<sup>70</sup> See for example, European Environmental Bureau” 2024, Policy Brief .”How renewables can help vulnerable households”, Available at <https://eeb.org/wp-content/uploads/2024/09/SCFTJTF-brief.pdf> last accessed 25/03/2025

<sup>71</sup> Climate Investment Funds (CIF) Press Release, Mar 20, 2024, Just Transition North Macedonia <https://www.cif.org/news/climate-investment-funds-approves-85-million-launch-north-macedonia-coal-phase-out> , last accessed 25/03/2025

<sup>72</sup> The Roadmap focused on the municipalities of Kicevo and Bitola for on the ground measures

is envisaged to ensure that a larger part of the HHs renovating their houses will be low-income.

- b. *The to-be-Fund for EE.*<sup>73</sup> The initial project from the World Bank will be targeting public buildings only, but there are already calls to expand and include EE support schemes for vulnerable consumers (with a grant component), with, *inter alia*, recommendation that the Development Bank of North Macedonia uses JASPERS advisory support to set up EE incentive schemes responding to the needs of different categories of end consumers, with repayment based on energy savings (as is the case in Kosovo)<sup>74,75</sup>
- c. There are (potential) national financing mechanisms, including
  - **government budget allocations**
    - ✓ *Municipalities* in the context of the plans that many of them are developing (as per the new legal requirement) to tackle air pollution, and more broadly, as important actors in the energy transition with RE projects<sup>76</sup>, supporting, among others, HHs to make the switch to more efficient heating systems.<sup>77</sup> Interesting to note that in 2016-2018 the city of Skopje had introduced schemes for purchasing pellet stoves by HHs with the municipality budget;<sup>78</sup>
    - ✓ The *Government Program on assisting vulnerable households* with subsidies for EE/RE solutions for the replacement of their home appliances (2024, see [Section 2.1](#)); and
    - ✓ National Reform Agenda<sup>79</sup> (GFF contributes to Policy Area 2: Energy/Digital Transition Sub-Area of the Reform and Growth Agenda 2024-2027)<sup>80</sup>
  - **green bonds** North Macedonia announced debut green bond issue of EUR 10mln on October 3, 2023 to support initiatives aimed at safeguarding the environment, as well as financing environmental projects (with 4.75 percent

<sup>74</sup> See for example CEE Bankwatch (2024): “A well- designed energy efficiency fund in North Macedonia will enable long-term energy savings in the residential and public sectors”, available at: <https://bankwatch.org/publication/a-well-designed-national-energy-efficiency-fund-in-north-macedonia-will-enable-long-term-energy-savings-in-the-residential-and-public-sectors> last accessed 25/03//2025

<sup>74</sup> See for example CEE Bankwatch (2024): “A well- designed energy efficiency fund in North Macedonia will enable long-term energy savings in the residential and public sectors”, available at: <https://bankwatch.org/publication/a-well-designed-national-energy-efficiency-fund-in-north-macedonia-will-enable-long-term-energy-savings-in-the-residential-and-public-sectors> last accessed 25/03//2025

<sup>75</sup> JASPERS, JASPERS support for IPA III, *JASPERS*, 14 March 2024. Available at: <https://bankwatch.org/wp-content/uploads/2024/12/JASPERS-support-for-IPA-III.pdf> last accessed 25/03//2025

<sup>76</sup> Colovic Lesoska, A. (2022). Exploring Pathways for Low-Impact Energy Solutions in North Macedonia. Available at [https://ekosvest.com.mk/wp-content/uploads/2022/07/Low-Impact-Energy-Solutions\\_Principles-and-Recommendations\\_2022.pdf](https://ekosvest.com.mk/wp-content/uploads/2022/07/Low-Impact-Energy-Solutions_Principles-and-Recommendations_2022.pdf) last accessed 25/03//2025

<sup>77</sup> Djinlev, V. (2022). Analysis of Alternatives to Coal-Based District Heating for the Bitola Region in North Macedonia. Available at [https://bankwatch.org/wp-content/uploads/2022/12/2022-11\\_Analysis-of-alternatives-to-coal-based-district-heating-for-the-Bitola-region-in-North-Macedonia.pdf](https://bankwatch.org/wp-content/uploads/2022/12/2022-11_Analysis-of-alternatives-to-coal-based-district-heating-for-the-Bitola-region-in-North-Macedonia.pdf) last accessed 25/03//2025

<sup>78</sup> amounting to MKD 5.89 million (EUR 95 000) in 2016 and increased to EUR 208 000 in 2017 and amounted to EUR 91 000 in 2018. This incentive provides a refund of up to 70% of the total value of pellet stoves, limited to MKD 30 000 (EUR 500) per household. In the period between 2016 and May 2018, 812 households were subsidised (1 161 applications). Source: Ministry of Economy of the Republic of North Macedonia), “The Decision on the total installed capacity of preferential electricity producers”, available at [www.economy.gov.mk/Upload/Documents/ilovepdf\\_com-1.pdf](http://www.economy.gov.mk/Upload/Documents/ilovepdf_com-1.pdf).

<sup>79</sup> Government of North Macedonia, Reform and Growth Facility for the Western Balkans: Reform Agenda of North Macedonia 2024-2027 [https://mep.gov.mk/data/MK\\_Reform%20Agenda\\_EN.pdf](https://mep.gov.mk/data/MK_Reform%20Agenda_EN.pdf); source: Ministry of European Affairs, last accessed 25/03//2025

<sup>80</sup> Subareas: 2.1.3 Renewables (reform area 2.1.3.1, note it describes deployment authorizations pg. 45 and delays); Sub area 2.1.5 Energy Efficiency and Air Pollution (reform area 2.1.5.1 – GFF pertaining only to households and firms,)

annual interest and a maturity of two years). It is planned that the proceeds from these auctions will be channelled towards the Energy Efficiency Fund via the state-run Development Bank to companies with favourable financing for projects focused on environmental protection <sup>81</sup>(see point (b) above).

130. Pursuing these and other similar avenues would make the exit strategy more robust and align better with SDG financing principles. However, while the current landscape of renewable energy policy and finance offers several avenues for boosting the country's renewable energy potential, there are some barriers that include a missing renewable energy finance framework that combines public and private sources and allocates the national budget needed.<sup>82</sup>

### 5.5.5. Replication in the region

131. The Project management has started identifying stakeholders that can benefit from the program's model and sharing experience with the colleagues from the other Balkan countries. There was already interest from a few Balkan countries (e.g., Montenegro). Efforts are being made to establish regional partnerships that can support the expansion of the GFF. This includes engaging with regional development banks and other financial institutions to replicate the program's success in neighbouring countries. But additionally, there should be better capturing of the lessons and sharing, as mentioned earlier.

132. Policy harmonization under the Sofia Declaration on the Green Agenda and other EU frameworks is already happening given the EU accession processes in these counties. This is yet another enabling factor. But there is less than desired level of alignment with recent policies and initiatives, such as the Green Deal and the associated [Green Agenda for the Western Balkans](#)<sup>83</sup>. The Green Agenda for the Western Balkans is shared between the region and the European Union, having been adopted with the Economic and Investment Plan for the Western Balkans and endorsed by the leaders of the region through the Sofia Declaration in November 2020.

133. Other enabling factors would include reaching out to existing regional green financing frameworks. A few of such regional green financing frameworks are listed below;

- **EU Clean energy transition**<sup>84</sup> focuses on investments in RE, EE and supporting the transition from coal, contributing to the decarbonisation objectives of the Green Agenda and the 2030 climate and energy targets. Since 2021, the European Commission

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<sup>81</sup> <https://www.intellinews.com/north-macedonia-announces-debut-green-bond-issue-294441/>

<sup>82</sup> IRENA and UNDP (2021), De-risking investments in the Republic of North Macedonia: Renewable energy finance and policy landscape focusing on power, heating and cooling. In line with the Macedonian Nationally Determined Contributions on Climate Change, International Renewable Energy Agency, United Nations Development Programme, Abu Dhabi. ISBN 978-92-9260-345-8, available at [https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2021/Oct/IRENA\\_UNDP\\_De-risk\\_Investments\\_North-Macedonia\\_2021.pdf](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2021/Oct/IRENA_UNDP_De-risk_Investments_North-Macedonia_2021.pdf) last accessed 25/03/2025

<sup>83</sup> EU Commission (2023): "A GREEN AGENDA for Western Balkans [https://enlargement.ec.europa.eu/document/download/75bf7bef-0ecc-40ba-893a-4d45d4ea6ddb\\_en?filename=factsheet\\_wb\\_green\\_agenda\\_en.pdf](https://enlargement.ec.europa.eu/document/download/75bf7bef-0ecc-40ba-893a-4d45d4ea6ddb_en?filename=factsheet_wb_green_agenda_en.pdf)

<sup>84</sup> [https://cinea.ec.europa.eu/programmes/life/clean-energy-transition\\_en](https://cinea.ec.europa.eu/programmes/life/clean-energy-transition_en) see also Clean Energy Transition partnership at <https://cetpartnership.eu/>, last accessed 25/03/2025

has committed EUR 1.25 billion to support the implementation of the Green Agenda, including TA, and investments in EE, RE, transition from coal and investments in environmental management;

- The Western Balkans Investment Framework (**WBIF**) is supporting 17 flagship investment projects of solar and wind energy plants, rehabilitating existing hydropower plants and improving the electricity transmission network.<sup>85</sup> Further investments and grants under the WBIF are planned to support the green transition, together with the recently adopted Energy Support Package for the Western Balkans;
- The **Regional Energy Efficiency Programme** drives the renovation wave by scaling up comprehensive EE measures in public, residential and private buildings;<sup>86</sup> and
- To help the transition from coal in the region, the EU has been supporting the **platform for Coal Regions in Transition in the Western Balkans**.<sup>87</sup>

134. North Macedonia has already benefited from regional blended finance instruments, such as the Green for Growth Fund (GGF)<sup>88</sup>- an investment fund that aims to mitigate climate change and support sustainable development, mainly by investing in actions that aim for lower energy consumption, use of resources and GhG emissions. The fund is an early example of blended finance structure, formed by a public-private partnership that leverages risk capital from public institutions with private capital to increase investment volumes and channel them to regions and sectors that would not otherwise attract such flows. The dedicated financing is channelled to households and businesses via local financial institutions, and through direct investments to eligible projects. A TA Facility offers technical expertise and know-how to support the successful implementation of these investments. So far, the bulk of projects financed have focused on EE rather than RE with no record of green bonds being used.<sup>89</sup> The JP could benefit from links to GFF.

135. Learning from other countries is also important , e.g., in the case of the mentioned JASPERS Program.

## 6. Conclusions

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<sup>85</sup> Western Balkans Investment Framework. <https://www.wbif.eu/>

<sup>86</sup>Energy Community, : Regional Energy Efficiency Programme (REEP) for the Western Balkans". Available at [https://www.energy-community.org/regionalinitiatives/donors/Regional/EBRD\\_WB\\_EE.html](https://www.energy-community.org/regionalinitiatives/donors/Regional/EBRD_WB_EE.html) , last accessed 25/03/2025

<sup>87</sup> Energy Community, "The initiative for Coal Regions in Transition in the Western Balkans". Available at <https://www.energy-community.org/regionalinitiatives/Transition/coal.html> last accessed 25/03/2025

<sup>88</sup> <https://www.ggf.lu/>

<sup>89</sup> IRENA and UNDP (2021), De-risking investments in the Republic of North Macedonia: Renewable energy finance and policy landscape focusing on power, heating and cooling. In line with the Macedonian Nationally Determined Contributions on Climate Change, International Renewable Energy Agency, United Nations Development Programme, Abu Dhabi. ISBN 978-92-9260-345-8, available at [https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2021/Oct/IRENA\\_UNDP\\_De-risk\\_Investments\\_North-Macedonia\\_2021.pdf](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2021/Oct/IRENA_UNDP_De-risk_Investments_North-Macedonia_2021.pdf), p.26

136. The JP is innovative in leveraging IFI, private and government finance with the joint SDG funding to promote sustainable energy, the lack of which is the key factor behind the North Macedonia's significant air pollution problem. The latter is recognized by the Government of North Macedonia with a recent Government Action Program for Cleaner Air 2024 – 2030.<sup>90</sup> Plus, North Macedonia is a leader in implementing reforms to promote RE and EE. Hence the project is aligned with and contributing to Government's key priorities. The design of the JP is overall strong, with results-based financing in the form of PBPs, combining TA and financing for the SMEs and the underserved HHs to adopt RE/EE technologies. While Component 1 follows a similar design to two other previous projects which EBRD has led (SME competitiveness and SME Reboot), for the Component 2 the JP has identified an unmet need by the HHs who are not on state assistance, qualify for bank loans but find them unaffordable; with this it aimed at contributing to LNOB objective of the SDG agenda. This included addressing a challenge with high outward migration that North Macedonia is facing, combined with the objective of directing some of the large remittance flows into RE/EE. This was in contrast to the Government's subsidy scheme for RE/EE technologies/products operated on a first-come, first-served basis. For an innovative project it is not surprising that several challenges became apparent only after it started, including the long time-frame that was needed to iron out the legal terms of the agreement between EBRD and UNDP- the first such agreement for UNDP. The risk of the bank withdrawals was foreseen, but perhaps not that this will happen right at the start, for external reasons, necessitating to find replacements, resulting in yet more delays compounded by the lengthy procedure for UNDP micro-assessment. The limitations of the local consulting market were another reason for delays. The decision to restrict the participation of the banks under Outcome 1 in Outcome 2 was driven by the desire to diversify the list of banks involved in GFF and ensure that the underserved groups received the attention they needed, but perhaps the risks emanating from this decision were underestimated. The project may wish to reverse this (see **Recommendation No 2**) but with or without this change the PUNOs need to do more outreach than currently for Outcome 2, as the banks under Outcome 2 taking ownership in terms of outreach requires them to allocate significant resources for that which they lack. There were other issues with the design, like with the definition of some of the groups of underserved, certain eligibility restrictions under Outcome 1 and caps for the PBP under Outcome 2, as well as with the RF (not including indicators for air pollution) but all these could be addressed for the remaining time frame.
137. The long initial delay, caused by multiple factors, as discussed, led to not achieving the targets not related to training of loan officers and outreach. But also, while the RF outreach targets are surpassed for both Outcome 1 and Outcome 2, this does not capture that (a) there was less of this for the smaller-women -owned SMEs and (b) ensuring that the potential end -beneficiaries of Outcome 2 are aware of the project, as the communication was often channelled to the management of the CSOs, and this was not always the most effective way of reaching these groups. The latter was related to an agreement at the project start that the outreach will be led by the banks, with some support from UNDP hired consultants. The fact that there were only 3 HHs with PwDs and no Roma applicant serves to demonstrate this. At the time of writing this report a much more proactive outreach plan was developed for 2025, addressing this. The SME numbers are close to targets, with most of the SME projects in RE (with significant share of PVs),

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<sup>90</sup>Government of North Macedonia (2020): Energy Development Strategy until 2040 <https://www.moep.gov.mk/en/node/1224> , last accessed 25/03/2025

and this was one of the objectives of the project. The beneficiary SMEs reflected on emerging benefits they see, including with energy and cost savings, but less so in relation to (a) jobs created, (b) the sectors other than energy and manufacturing, and (c) women-owned smaller-SMEs. This indicates the need to do more in reaching them with the information on the program/products, but also awareness raising of RE/EE and its benefits, with longer-term monitoring and advice. In contrast to the majority of SMEs, the HH beneficiaries mostly chose heat pumps, and while these qualify as RE, the very small numbers choosing solar related technologies, in contrast to what was expected for in the program design is concerning. This could have been established at the project design stage with a larger share of PBPs for the solar technologies. At this stage, there are several measures that could be taken, e.g., removing the cap on the PBP of 7000 USD for the solar and biomass (+EE) projects coupled with more substantial advisory support. See [Recommendation No 9](#).

138. Both the SMEs and the HHs were highly appreciative of the advisory support they received that was coupled with the technology selector- an EBRD tool that was updated by UNECE. These factors combined allowed the beneficiaries to choose the most suitable technology for them.
139. The management arrangements are adequate and the coordination by the RC office are satisfactory with monthly coordinating meeting, although there is room to cross-complement the outreach activities under the two outcomes. The JP team was overall efficient, displaying strong adaptive capacity, in the face of major challenges at the start. What could have been done better and should be a focus now is a massive outreach campaign to ensure the visibility of the project for the intended final beneficiaries of Outcome 2- with their list fine-tuned and enlarged - via multiple channels, along with ensuring more by the banks' outreach. For Outcome 1 too, there should be more outreach to the women-owned smaller-SMEs; for this closer engagement could be established with the SME Centre under the Macedonian Chamber of Commerce and the Association of Women Entrepreneurs. Even with these measures the Program may need a second stage for the model of financing to be ironed out, and the JP management should already look for potential funding sources. Certain improvements are needed in terms of reporting, M&E, and risk monitoring and reporting.
140. There should be clear requirements to the PFIs to feature information on their websites clearly separating it from the EBRD's GEFF, and the same for EBRD's website. As it stands now, the information is confusing for the potential beneficiaries. For the PFIs under Outcome 2, the recommendation to the PUNOs to do more with outreach does not imply that the PFIs could do less: there should be ownership from them and this should be facilitated by (a) clear requirements in the agreements with them (including featuring information on the GFF on their websites and social media; and producing and disseminating booklets) and (b) supporting them in this. (see [Recommendations 6 and 7](#)).
141. The sustainability of the program after the SDG Funding phase on a commercial basis is likely for the larger, male owned SMEs, those in energy and manufacturing, and those that plan to benefit from their investments more long-term. For the rest, and especially the women-owned smaller-SMEs there is a need for more in terms of outreach, awareness raising and advisory support. Thus, it is early to state that there are solid grounds for sustainability for his group as well as the underserved HHs: for these more time is needed with more focus on them and also the project should explore opportunities of future engagement of the government- providing

grants' share in the loans. For that, already synergies should be explored, e.g. (a) with municipalities, in the context of their strategies supporting green projects, vulnerable groups as well as tackling air pollutions strategies; (b) the to-be-established EE Fund; (c) the Government's Just Transition program, (d) the Government's programme to support vulnerable customers, that includes measures for assistance for purchasing new high efficiency single split air conditioners for heating, upgrading household appliances, and installing photovoltaic panels or solar-thermal collectors, (e) National Reform Agenda<sup>91</sup> (GFF contributes to Policy Area 2: Energy/Digital Transition Sub-Area of the Reform and Growth Agenda 2024-2027)<sup>92</sup>, etc. (see [Recommendation 17](#)).

142. More could be done already in capturing and sharing lessons with the other countries in the region, many of which have already expressed a desire to implement a similar scheme. Also, links should be established with the regional financing mechanisms for green energy, as one of the potential mechanisms for replication

## 7. Lessons Learnt

143. While it is somewhat early for formulating a full list of lessons learnt for the GFF at this stage, a few of these could already be identified:

- When planning projects with innovative partnerships, especially for the projects on financing for development, with partners that are new for the UN in joint programs and projects, the time that would be needed for reaching agreements on the legal terms of should not be underestimated;
- Market conditions change and the new entrants – in this case the new providers for concessional loans for green technologies- may disrupt the calculations on the proposed financing terms. This needs to be taken into account with potentially more flexibility at the point of project start;
- Robust methodologies are needed in defining the eligibility criteria for the beneficiary groups for the concessional lending as well as understanding their preferences in terms of the offered technologies;
- “Communication – as outreach to potential beneficiary groups” should be distinguished from Communication – as publicity” in terms of budgeting;
- In the engagement with the domestic financial institutions, their capacities for marketing should be part of their assessment, to allow for realistic expectations from them, along with including specific requirements on the latter in the agreements;

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<sup>91</sup>Government of North Macedonia, Reform and Growth Facility for the Western Balkans: Reform Agenda of North Macedonia 2024-2027 [https://mep.gov.mk/data/MK\\_Reform%20Agenda\\_EN.pdf](https://mep.gov.mk/data/MK_Reform%20Agenda_EN.pdf); source: Ministry of European Affairs, last accessed 25/03//2025

<sup>92</sup> Subareas: 2.1.3 Renewables (reform area 2.1.3.1, note it describes deployment authorizations pg. 45 and delays); Sub area 2.1.5 Energy Efficiency and Air Pollution (reform area 2.1.5.1 – GFF pertaining only to households and firms,)

- Specific subgroups from the larger list of residents that would fall under the LNOB categories, might need tailored approaches to be developed to reach them; and
- “Sustainability” for concessionary loans for the underserved groups of SMEs and HHs does not necessarily imply fully commercial modality; sustainable schemes for the coverage of the concessional part (e.g., grants) of the loans could also qualify and should be considered.

## 8. Recommendations

135. The Recommendations are listed in **Table 12**. Cross references are included in the report, explaining the rationale.

**Table 12: List of recommendations**

category	Recommendation	Details
<b>Underserved HH groups</b>	1. Enlarge and fine-tune the eligible underserved HH groups. Redefine the group of women-headed Households and introduce a cap on income for remittance recipients. For the enlargement commission research the soonest. The potential additional groups may include: young families, HHs with more than 3 children, HHs with single income, foster families, single-person households, etc.	UNDP, IOM, UN RC Within 1-2 months
<b>DFIs engaged in Outcome 2</b>	2. Allow/ensure the larger banks, involved in Outcome 1 to engage in outcome 2	EBRD, UNDP
<b>Outreach</b>	<p>3. <b>Outcome 1:</b> Ensure targeted outreach to women-owned smaller-SMEs. Synergise with the Business Women’s Association and the SME Centre under the Macedonian Chamber of Commerce, Encourage higher participation from underrepresented locations and Develop region-specific awareness and training initiatives</p> <p>4. <b>Outcome 2:</b>            (a) Finalise the plan for an outreach campaign <i>raising awareness about the project</i> for Outcome 2, using social media, vendors, municipalities, Ministry of Labour and Social Policy and its Centers of Social work, ads on the website of the CSOs (associations of the underserved HHs), ads on the TV and radio, meetings with the CSO membership, etc. Developed targeted strategies for reaching hard-to-reach groups, like Roma. Allocate more financial resources for it from the project budget.            (b) <i>Combine the outreach on the awareness of the GFF with the awareness RE/EE benefits, emphasizing RE, and solar solutions in particular</i> (a) Using success stories and visuals to promote RE (and solar in particular) through social media, banks, and municipalities; (b) Highlighting the long-term return on investment of RE technologies (with a focus on solar); (c) Promoting bundled solutions that combine RE (with a focus on solar) with EE upgrades; (d) Emphasizing how RE (and solar specifically) can help households avoid moving into higher electricity tariff blocks</p> <p><b>For Both Outcome 1 and 2</b></p> <p>5. Coordinate better the awareness activities on the GFF (a) between Outcome 1 and 2 where appropriate, for cost-effectiveness (e.g., reaching out to vendors) and (b) with other PUNO projects</p>	UN RC, UNDP, IOM and EBRD Design within 1 month
<b>Communication Visibility</b>	<p>6. Ensure that the webpages about GFF (EBRD, FPIs under Outcome 1) do not create a confusion among the beneficiaries and other stakeholders with the other existing schemes, e.g., GEFF of the EBRD. Ensure that the GFF webpages and pages on social media(s) include a map with users, calculation results and Green Stars (part of a Government project) and video testimonials and combine with visibility efforts of UNDP “Air pollution” project</p> <p>7. Require PFI under both Outcomes to feature information about GFF, Ensure clearer expectations from the PFIs regarding Outreach, including in monetary terms), for marketing) as well as their capacity building for that.</p>	EBRD and UNDP 2 months

category	Recommendation	Details
<b>Additional Support and Advisory Services</b>	8. <u>Outcome 1</u> : Provide post-loan advisory support to help smaller- SMEs future RE investments, especially for women-owned one 9. <u>Outcome 2</u> : Design and implement additional support schemes for RE/RE+EE investment by HHs, (with a focus on solar but potentially also biomass) including but not limited to post-loan advisory support	UNDP and EBRD <u>Design</u> : 1 month <u>Implementation</u> : to follow above and continuous
<b>PBP terms for underserved HHs</b>	10. Remove the cap for the grant size for the underserved HHs for the solar and biomass RE/RE+EE schemes	UNDP: 1 month
<b>Eligibility criteria for leasing</b>	11. Make trailers and trucks eligible, with the condition of the replacement	UNDP and EBRD: 1 month
<b>Targets/indicator</b>	12. Submit a request to the Joint SDG Fund to revise down the ambitious targets for energy saving and GhG reduction for HHs. 13. Include indicators on PM2.5 and PM10	UNDP within the next 2 months
<b>No-cost extension</b>	14. Request 1 year no cost extension from the SDG fund	The request already sent by UNDP
<b>M&amp;E</b>	15. (a) Ensure that the project has complete databases for the beneficiary -SMEs -updated monthly, including information on their size, sector, location, technology (b) develop mini action plans per target group of underserved HHs and conduct outreach effectiveness assessments biannually. (c) prepare for reporting on SDGs' contribution	UNDP Next 2 months
<b>Reporting</b>	16. (a) Include columns on cumulative results and targets in the annual reporting (b) Include a Risk Monitoring table in Annual reports, update the risks and measures (c) Request that applicants submit a declaration confirming they will manage waste in accordance with the country's legislation and best practices	UNDP Next 2 months
<b>Synergies for sustainability and regional replication</b>	17. Explore synergies with (a) Just Transition, (b) to-be-established EE fund; (c) Municipality strategies for tackling air pollution; (d) Government of North Macedonia own schemes for EE/RE promotion for smaller-SMEs and HHs; (e) National Reform Agenda,, (f) regional financing mechanisms for green projects, etc.	Next 6 months

## Annexes

### Annex 1: TOR

#### 1. BACKGROUND

Green Finance Facility to Improve Air Quality and Combat Climate Change in North Macedonia (GFF) UN Joint Programme (JP), estimated at USD 46 million, is supported by the Joint SDG Fund and implemented by the United Nations Development Programme (UNDP) in North Macedonia in partnership with the European Bank for Reconstruction and Development (EBRD), the Government of North Macedonia, the International Organization for Migration (IOM), United Nations Economic Commission for Europe (UNECE) and local financial institutions. GFF is pioneering an innovative financial mechanism that provides access to affordable finance for small and medium-sized enterprises (SMEs) and underserved households in North Macedonia. It aims to stimulate investments in renewable energy (RE) and energy efficiency (EE) to accelerate the adoption of green solutions, enhance innovation, reduce energy use, and contribute to better air quality and combating climate change.

By providing both underserved households and businesses with financing to install RE and EE technology, the facility aims to increase North Macedonia's renewable energy generation by 10.7 MW over four years. The programme is anticipated to extend loans to 105 SMEs and 650 households of marketable but underserved groups to adopt renewable and efficient energy technologies ultimately leading to 80,000 tonnes of greenhouse gas emissions avoided and 86,000 MWh of energy saved.

To incentivize the SMEs and households to take advantage of the loans supported by the facility, it also offers technical assistance and performance-based payments. The loans are disbursed through local banks, and women, and single parents are prioritized, alongside households that receive remittances or contain returning migrants. Groups of eligible underserved households also include Roma, persons with a disability and employees affected by Covid-19.

For SMEs, the facility provides a credit line to partner financial institutions (banks and leasing companies) which in turn lend to businesses at a target IRR of 3 - 5%. The facility also provides US\$ 3.9 million in technical assistance and ex-post, performance-based payments (PBPs). The PBPs to SMEs are up to 10% of the amount of the original loan. For households, the facility will provide US\$ 6.5 million in loans through local banks, with an expected IRR of 5 - 6%. This is also complemented by technical assistance and performance-based payments equal to up to 30% of the original loan amount.

#### 2. SCOPE OF WORK, RESPONSIBILITIES AND DESCRIPTION OF THE PROPOSED WORK

#### 3. Expected Outputs and deliverables

##### MTR Deliverables

#	Deliverable	Description	Timing	Responsibilities
1	<b>MTR Inception Report</b>	MTR team describes in the inception report the approach and methodology that has been set for the MTR.	Within 2 weeks of signing of contract.	MTR team submits inception report to JP team.  JP team to share inception report with MTR reference group and receives feedback and validation (via call or email).
2	<b>Presentation of initial findings</b>	Data collection, assessment and initial findings	Within 2 weeks of inception report.	MTR team presents to JP team and the MTR reference group (via call or email).
3	<b>Draft MTR Report</b>	Full draft MTR report including major annexes	Within 2 weeks of presentation of initial findings.	MTR team submits draft MTR report to JP team. JP team to share draft MTR report with MTR reference group and receive feedback and validation (via call or email).
4	<b>Revised MTR report with audit trail and final MTR report</b>	Revised MTR report with audit trail detailing how all received comments have (and have not) been addressed in the final, clean version of the MTR report	Within 2 weeks of receiving comments on draft MTR report.	MTR team submits revised MTR report to JP team.  JP team to share with MTR reference group.

## MTR management arrangements

### **JP team:**

This MTR will be commissioned by UNDP Country Office North Macedonia. The principal responsibility for managing this MTR resides with the UNDP Democratic Governance Unit, PUNOs and RCO. The MTR Team will be under the direct supervision of the UNDP Country Office North Macedonia. The MTR Team is expected to engage, interact, and collaborate with PUNOs, Key Government Ministries, and relevant Stakeholders in Private Sector and Civil Sector.

A desk space will be made available at the UNDP Country Office if needed. The MTR Team is responsible for providing their work equipment (hardware/software). The UNDP Democratic Governance Unit and the PUNOs will be responsible for liaising with the consultant to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

### **Roles and Responsibilities**

The UNDP, PUNOs and RCO will organize the evaluation and provide the strategic oversight of the evaluation process, including the approval of key outputs. The UNDP, PUNOs and RCO will take responsibility to:

- Manage the evaluation by assigning an evaluation manager for the evaluation.
- Convene and facilitate the management arrangements for the Evaluation through the MTR Reference Group and SC mechanisms.

The **evaluation manager** manages the evaluation process through all phases including:

- Finalizing this TOR.
- identifying the evaluation team.
- preparing and managing the budget.
- setting up the evaluation committee and evaluation reference group.
- ensuring quality assurance mechanisms are operational and effectively used.
- consolidating and sharing comments on draft inception and evaluation reports with the evaluation team.
- ensuring that the team has access to all documentation and information necessary to the evaluation.
- facilitating the team’s contacts with local stakeholders.
- supporting the preparation of the field mission by setting up meetings and field visits, providing logistic support during the fieldwork and arranging for interpretation, if required.
- organizing security briefings for the evaluation team and providing any materials as required.
- conducting the first level quality assurance of the evaluation products.
- Providing the main interlocutor between the team, represented by the team leader and the focal point, and PUNOs to ensure a smooth implementation process.

### **MTR reference group:**

Oversight of the MTR will be provided by a MTR reference group composed of the RC, Joint SDG Fund Secretariat, select representatives from all PUNOs, and other JP stakeholder groups as relevant. The MTR reference group will have the responsibilities described in section 6 above. The MTR reference group members could also accompany the MTR team during field visits, if necessary.

### **MTR team:**

An MTR team will be comprised of two independent consultants, 1 international (team leader) and 1 national (team expert). The team leader is expected to have extensive experience in sustainable development financing or investments, and the team expert, is expected to have specialty in conducting programme/project evaluations.

The MTR team leader (international consultant) will be responsible for:

113. Completion of the MTR inception report in coordination with the team expert.
114. Conduct MTR interviews and field visits in coordination with the team expert and JP team.
115. Completion of the presentation of initial findings.
116. Completion of the draft MTR report.
117. The overall design, writing, quality assurance and completion of the final MTR report and audit trail of how all comments from MTR reference group and other stakeholders have been addressed.

The MTR team expert (national consultant) will;

118. Work closely with the MTR team leader and the JP team.
119. Contribute to the inception report including a detailed plan for interview and field visits.
120. Conduct data collection and contribute to the presentation on initial findings and the draft MTR report.
121. Conduct and confirm any follow up data/information requirements to complete the revised, final MTR report with audit trail and the final MTR report.

The consultants cannot have participated in the JP preparation, formulation, and/or implementation (including the writing of the Project Document) and should not have a conflict of interest with JP related activities.

## **4. Payment Modality**

Payment to the individual contractor will be made based on the deliverables accepted and upon certification of satisfactory completion by the manager. The expected outputs, deliverables and payment schedule is as follows:

<b>Deliverables/Outputs</b>	<b>Payment Schedule</b>	<b>Review and approvals required.</b>
Submission and approval of the Inception Report, including a methodology note and evaluation matrix (based on meetings, the desk review and preliminary analysis of the available information provided).	20%	Deputy Resident Representative, UNDP CO North Macedonia; Programme Officer, Democratic Governance Unit, UNDP CO North Macedonia; M&E focal point, UNDP CO North Macedonia; and PUNOs
Upon submission of technically satisfactory Draft MTR Report (as per the template provided by UNDP) and presentation of findings.	40%	
Upon approval of the Final technically satisfactory MTR Report (as per the template provided by UNDP) and Evaluation Brief.	40%	

## Annex 2: Additional methodology-related documentation

### Annex 2-1 Evaluation Matrix

MTR Criteria	Evaluation questions	Measures/ Indicators	Data Collection Instrument(s)	Data Source(s)	Data Analysis
Design/Relevance (Internal Coherence)	1. How relevant are the proposed financial instruments and other programmatic interventions? What are the benefits and shortcomings of a joint programme approach? Are synergies and cross-cutting expertise sharing of different UN entities achieved? Do they contribute to a more holistic solution for the challenges of leveraging finance, climate change action and air pollution in the country?	Extent of relevance	Desk review KII	Project, partner and third -party reports	Comparative analysis rating
	2. To what extent were the relevant gender, youth and other Leaving No One Behind (LNOB) issues raised in the JP design, including the RF?	Extent of reflection	Desk review	Project, partner and third -party reports	Comparative analysis rating
	3. Are the JP's log frame indicators SMART (Specific, Measurable, Attainable, Relevant, Time-bound)?	Extent of adhering to SMART guidelines	Desk review	Project, partner and third -party reports	Comparative analysis rating
	4. Are planned midterm and end-of-project targets realistically achievable and if not, what should change?	Extent of relevance of the set objectives to the context and resources	Desk review KIIs FGDs	Project, partner and third -party reports KII and FGD notes	Qualitative analysis Rating
	5. Is the JP's implementation timeframe sufficient to complete planned activities and achieve envisaged results and if not, what should change?	Extent of relevance of the set objectives to the context and resources	Desk review KIIs FGDs	Project, partner and third -party reports KII and FGD notes	Qualitative analysis Rating
Effectiveness/Results to date	6. What are the key results achieved against the JP RF in relation to the key outcome indicators and their end-of-project targets?	Extent of achievement of key results as planned	Desk review KIIs FGDs	Project, partner and third -party reports KII and FGD notes SME Survey	Qualitative analysis Quantitative analysis: comparison of the targets to the results Rating
	7. What are the remaining barriers to achieving the JP objective for the remainder of the project?	Perceptions on the extent/changes in the barriers	Desk review KIIs FGDs	Project, partner and third -party reports KII and FGD notes	Qualitative analysis
	8. To what extent the solution(s) developed to date could be scaled to other countries/regions of economic sectors? What modifications are advised to achieve that?	Perceptions on the scalability	Desk review KIIs FGDs	Project, partner and third -party reports KII and FGD notes FGD survey	Qualitative analysis
	9. What is the scope and scale of additional financing leveraged by the JP and why? Were the co-financing targets realized? Is there evidence to support the reported financial leverage based on evidentiary documents and direct financial flows to the financial instruments?	Extent of achievement of key results as planned	Desk review KIIs	Project, partner and third -party reports KII notes	Qualitative analysis Quantitative analysis: comparison of targets/results Rating

MTR Criteria	Evaluation questions	Measures/ Indicators	Data Collection Instrument(s)	Data Source(s)	Data Analysis
	10. Do the results/progress to date have the potential to achieve systemic change and/or demonstrative impact in the future beyond the JP to catalyse change, innovation and evolution in the financial sector – either public, private or developmental – in the country to devise new means or solutions to unlock additional financing for the SDGs?	Perceptions on the scope of impact	Desk review KIIs	Project, partner and third -party reports KII notes	Qualitative analysis
	11. Have the financial solutions/instruments developed led to (or has the potential to lead to developmental impact for the local communities, SMEs and population (including in terms of financial savings) as well as the environment in terms of accelerating SDG achievements and how could the impact strategy be improved? What additional activities are recommended to enable replication and scale up?	Perceptions on the scope of impact	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis
	12. Can any unintended or unexpected positive or negative effects be observed because of the JP interventions?	Extent of the emergence of unintended results	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis
	13. What were the factors behind the successes and challenges of the project? IN particular, what were the factors that led to partnership with EBRD and how these can be used to foster similar engagements with other DFIs/IFIs?				
Cross-Cutting	14. Will the planned results contribute to gender equality and disability inclusion?	Extent of relevance of the planned GESI measures for achieving the planned results	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis
	15. How likely is that benefits of the programme will accrue equally to women and persons with disabilities?	Extent of likelihood	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis
	16. Were the planned results in the areas of gender equality, women's rights and disability inclusion achieved? <sup>93</sup>	Extent of achievement of key results as planned	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis Quantitative analysis: comparison of the targets to the results Rating

<sup>93</sup> Guidance on Integrating Disability Inclusion in Evaluations and Reporting on the UNDIS Entity Accountability Framework Evaluation Indicator  
<https://unevaluation.org/document/detail/3050>

MTR Criteria	Evaluation questions	Measures/ Indicators	Data Collection Instrument(s)	Data Source(s)	Data Analysis
Efficiency	<b>Management arrangements:</b> 17. Was the JP overall efficient so far and in line with the ProDoc? Have changes been made and are they efficient?	Extent of efficiency: timeliness, cost - effectiveness, etc	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis Quantitative analysis: comparison of the planned and actual timeline, and costs Rating
	18. Are responsibilities and reporting lines clear?	Extent of clarity of management structure	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis Rating
	19. Is decision-making transparent and undertaken in a timely manner? Is a JP governance body formally established with clear roles?	Extent of transparency of decision-making	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis Rating
	20. What was the quality of execution of the PUNOs/Implementing Partner(s)?	Extent of positive perceptions on the quality of implementation	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes SME survey	Qualitative analysis Rating
	21. What was the role and what was the quality of coordination and oversight provided by the RC/O?	Extent of positive perceptions on the quality of execution	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis Rating
	22. What needs to change in the above point to make the management of the JP more efficient?	Recommendations on the changes needed regarding programme management	KIIs FGDs	KII notes FGD notes	Qualitative analysis
	<b>Reporting and communications:</b> 23. How well the JP team and partners undertake and fulfil Joint SDG Fund reporting requirements?	Quality of reporting	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis rating
	24. How well were the results and lessons derived from the JP been documented, shared with key partners, and internalized by partners?	Extent of capturing the lessons learnt	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis rating
	25. What was the quality of external communication: are proper means of communication established or being established to inform the JP progress and intended impact to the stakeholders and the public at large? Was a JP communication strategy developed and is it being followed? Do communications products reflect the “joint” nature of the programme?	Extent of positive perceptions on the quality of external communication	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis Rating

MTR Criteria	Evaluation questions	Measures/ Indicators	Data Collection Instrument(s)	Data Source(s)	Data Analysis
<b>Risk Management</b>	26. Were the risks identified in the ProDoc, Annual Reports the most important and whether the risk ratings applied are appropriate and up to date? Should the risk matrix be revised and if yes, then how?	Extent of the relevance of the originally identified risks	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis Rating
	27. Are there any socio-economic, political or other risks that may jeopardize sustainability of the JP outcomes?	Perceptions of the current risks	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis Rating
<b>Sustainability</b>	28. What is the likelihood of financial sustainability of the financial solutions/instruments devised and launched once the Joint SDG Fund support ends?	Extent of likelihood of financial sustainability	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis Rating
	29. How strong is the country ownership – both from public and/or private sector partners? Does the financial solution/instrument have sufficient country buy-in from the relevant public and private partners, from the demand and supply sides, to ensure sustainability following the completion of the JP? Does the programme have a realistic and feasible exit strategy and approach to phase out assistance? Are the actions and results from project interventions likely to be sustained, ideally through ownership by the local partners and stakeholders?	Extent of strength of country ownership	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis Rating
	30. Has the JP developed and leveraged the necessary and appropriate partnerships – both public/private and developmental – to achieve its intended results and ensure sustainability of actions?	Extent of leveraging necessary and appropriate partnerships	Desk review KIIs FGDs	Project, partner and third -party reports KII notes FGD notes	Qualitative analysis Rating
	31. What mechanisms are in place to ensure long-term environmental benefits beyond the project lifecycle?	Presence/scope of mechanisms in place to ensure long-term environmental benefits beyond the project lifecycle	Desk review KIIs	Project, partner and third -party reports KII notes	Qualitative analysis Rating
	32. To what extent have SMEs and households developed long-term adoption habits for RE/EE solutions beyond JP incentives?	Enhanced adoption habits for RE/EE solutions beyond JP incentives by the SME and Households	Desk review KIIs FGDs SME survey	Project, partner and third -party reports KII notes FGD notes SME Survey	Qualitative analysis Rating
	33. To what extent have private sector investors shown willingness to continue financing renewable energy and energy efficiency (RE/EE) solutions beyond the JP?				
	34. What are the key factors that will require attention to improve prospects of sustainability, scalability, or replication of project	Perceptions on the key factors to	Desk review KIIs FGDs	Project, partner and third -party reports KII notes	Qualitative analysis

MTR Criteria	Evaluation questions	Measures/ Indicators	Data Collection Instrument(s)	Data Source(s)	Data Analysis
	outcomes/outputs/results? What was the UN's role in ensuring the instrument's sustainability and impact once the program closes?	enhance the chances for sustainability		FGD notes	

## Annex 2-2 KII Guide for the JP partners and the Government

Evaluation questions	Partners	Government
<b>Internal Coherence Design</b>		
1. How relevant are the proposed financial instruments and other programmatic interventions? Is the logic of the project design internally coherent? What are the benefits and shortcomings of a joint programme approach? Are synergies and cross-cutting expertise sharing of different UN entities achieved? Do they contribute to a more wholistic solution for the challenges of leveraging finance, climate change action and air pollution in the country?	x	x
2. Are planned midterm and end-of-project targets realistically achievable and if not, what should change?	X	X
3. Is the JP's implementation timeframe sufficient to complete planned activities and achieve envisaged results and if not, what should change?	X	X
<b>Effectiveness</b>		
4. What are the key results achieved against the JP RF in relation to the key outcome indicators and their end-of-project targets?	X	X
5. What are the remaining barriers to achieving the JP objective for the remainder of the project?	X	X
6. To what extent the solution(s) developed to date could be scaled to other countries/regions of economic sectors? What modifications are advised to achieve that?	X	X
7. What is the scope and scale of additional financing leveraged by the JP and why? Were the co-financing targets realized? If not why?	X	X
8. Do the results/progress to date have the potential to achieve systemic change and/or demonstrative impact in the future beyond the JP to catalyse change, innovation and evolution in the financial sector – either public, private or developmental – in the country to devise new means or solutions to unlock additional financing for the SDGs? If yes how and if not, why?	X	X
9. Have the financial solutions/instruments developed led to (or has the potential to lead to) developmental impact for the local communities and population as well as the environment in terms of accelerating SDG achievements? If yes, how and if not - why? How could the impact strategy be improved? What additional activities are recommended to enable replication and scale up?	X	X
10. What were the factors behind the successes and challenges of the project? IN particular, what were the factors that led to partnership with EBRD and how these can be used to foster similar engagements with other DFIs/IFIs?	x	x
11. Can any unintended or unexpected positive or negative effects be observed because of the JP interventions?	X	X
12. Were the planned results in the areas of gender equality, women's rights and disability inclusion achieved?	X	X
13. Will the planned results contribute to gender equality and disability inclusion? If yes, how and if not, why?	X	X
14. How likely is that benefits of the programme will accrue equally to women and persons with disabilities? If yes, how and if not why?	X	X

Evaluation questions	Partners	Government
<b>Management arrangements:</b>	X	X
15. Was the JP overall efficient so far and in line with the ProDoc? Have changes been made and did they improve efficiency?		
16. Are responsibilities and reporting lines clear? Why do you think so?	X	X
17. Is decision-making transparent and undertaken in a timely manner? What needs to improve?	X	X
18. What was the quality of execution of the PUNOs/Implementing Partner(s)? What needs to improve?		X
19. What was the role and what was the quality of coordination and oversight provided by the RC/O? What needs to improve?		X
<b>Reporting and communications:</b>		X
20. How well the JP team and partners undertake and fulfil Joint SDG Fund reporting requirements?		
21. How well were the results and lessons derived from the JP been documented, shared with key partners, and internalized by partners?		X
22. What was the quality of external communication: are proper means of communication established or being established to inform the JP progress and intended impact to the stakeholders and the public at large? Was a JP communication strategy developed and is it being followed? Do communications products reflect the “joint” nature of the programme?	X	X
<b>Risk Management</b>	X	X
23. Are there any socio-economic, political or other risks that may jeopardize sustainability of the JP outcomes?		
<b>Sustainability and Scaling up</b>		
24. What is the likelihood of financial sustainability of the financial solutions/instruments devised and launched once the Joint SDG Fund support ends?	X	X
25. Are the actions and results from project interventions likely to be sustained? Does the financial solution/instrument have sufficient country buy-in from the relevant public and private partners, from the demand and supply sides, to ensure sustainability following the completion of the JP?	X	X
26. Does the programme have a realistic and feasible exit strategy and approach to phase out assistance?	X	X
27. Has the JP developed and leveraged the necessary and appropriate partnerships – both public/private and developmental – to achieve its intended results and ensure sustainability of actions? Please bring examples?	X	X
28. What mechanisms are in place to ensure long-term environmental benefits beyond the project lifecycle?	X	X
29. To what extent have private sector investors shown willingness to continue financing renewable energy and energy efficiency (RE/EE) solutions beyond the JP?	X	X

## Annex 2-3 KII Guide for the banks (managers and loan officers)

- 1) How familiar are you with the JP objectives? What do think about them?
- 2) How did the participation in the JP fit into your bank's strategy?
- 3) Did you have such programs related to RE/EE financing before? If yes, please describe?
- 4) What motivated you to take part?
- 5) What do you think about the Programme design? What should have been done differently? What is missing? What changes are needed in your view?
- 6) How do you rate the success of the programme so far at your bank? Why do you think so? What were the factors supporting or otherwise? What could be improved?
- 7) What do you think about the training of loan officers and why do you think so? What should eb improved? What percent of your trained loan officers were women?
- 8) What steps did you take to address LNOB principle in the selection of beneficiaries?
- 9) What do you think about the Program Management? Was it efficient and transparent? Please explain why do you think so? What needs to change of at all?
- 10) Are you being kept informed about the overall progress of JP, lessons learnt and next steps? If yes how? Does anything need to change?
- 11) What do you think about the communication and marketing strategies of the JP? Please explain? What needs to change?
- 12) What are the remaining barriers to achieving the JP objective for the remainder of the project?
- 13) To what extent have private sector investors shown willingness to continue financing renewable energy and energy efficiency (RE/EE) solutions beyond the JP in your view?
- 14) To what extent have SMEs and households developed long-term adoption habits for RE/EE solutions beyond JP incentives in your view?
- 15) Do the results/progress to date have the potential to achieve systemic change, innovation and evolution in the financial sector – either public, private or developmental? If yes how and if not, why? And what needs to be done to make it more likely?
- 16) Do you plan to continue similar line of work in the future? If yes, how would the affordability of the terms be supported?
- 17) Are you sharing your experience with other banks? If yes, what is their reaction?

#### Annex 2-4: KII Guide for the consultants

- 1) How did you get engaged in the project?
- 2) What is your role in the project's scheme?
- 3) What do you think about the training you received? What could have been done differently?
- 4) What do you think about the role you perform? What are the successes and challenges? Please reflect on
  - Pipeline development and structuring support
  - Supporting the project lifecycle
  - Train loan officers at banks
  - Marketing and awareness-raising
  - Ensure consistent communication among the banks, project developers, the Verification Consultants, and other stakeholders,
  - Monitoring- and reporting system to ensure accurate data and standard forms are utilized
- 5) Have you installed RE/EE in your homes? If not, then why?
- 6) Was there anything missing in the project design: If yes what?
- 7) How would you assess the knowledge and skills gained by SMEs, households, and banks? Please elaborate on any specific areas of improvement or remaining gaps.
- 8) Do you think the project approach would be sustainable? If yes in what way? If not, then why?

## Annex 2-5: KII guide for SMEs

- 1) Tell us about some basic facts about your SME: line of business, location, size, male or female management; share of female households, existence/ not od policies to employ vulnerable members of society
- 2) What is your line of business?
- 3) How did you hear about the project?
- 4) What were the reasons for not using RE/EE before?
- 5) What was the trigger for you to install?
- 6) How effective was the communication/marketing campaign?
- 7) What do you think about the service at the bank?
- 8) What did you install and how happy are you with your installations?
- 9) What do you see as main benefits, including monetary? And challenges?
- 10) Was the advice that you receive about technologies useful? If yes in what way? If not, then why?
- 11) Have you/are you planning to use RE/EE in your other businesses or homes? If not, then why?
- 12) Would you recommend/have you recommended to other businesses to use RE/EE? Why and how?
- 13) Was there anything missing, something that the project could do and did not?

## Annex 2-6: FGD guide for the underserved Households

- 1) Tell us about some basic facts about your Households: how large is it? Male or female headed?  
Number of small children
- 2) How did you hear about the project?
- 3) What were the reasons for not using RE/EE before?
- 4) What was the trigger for you to install?
- 5) How effective was the communication campaign?
- 6) What do you think about the service at the bank?
- 7) Was the advice that you receive about technologies useful? If yes in what way? If not, then why?
- 8) How happy are you with your installations?
- 9) What do you see as main benefits, including monetary? And challenges?
- 10) Was there anything missing, something that the project could do and did not?
- 11) With the experience and knowledge, you have gained do you feel confident in applying for similar opportunities in the future without external assistance?
- 12) What should the project do to reach out to more categories of vulnerable households that experience specific challenges?

## Annex 2-7: Survey instrument- Evaluating SME Experiences and Impact in the Green Finance Facility Program

### Introduction

Thank you for participating in this survey. Your feedback will help us evaluate the Green Finance Facility (GFF) and improve its impact for SMEs. The survey will take approximately 10 minutes to complete. If your project is still underway, you may skip questions that are not applicable.

### Section 1: Engagement and Awareness

1. How did you first learn about the Green Finance Facility (GFF) project? (Please select one)
  - Government announcements
  - Financial institution (e.g., bank)
  - Online (social media, website, etc.)
  - UNDP or another implementing partner
  - Word of mouth
  - Other

1.1 If other, please specify \_\_\_\_\_
2. Before participating in GFF, were you aware of renewable energy (RE) and energy efficiency (EE) financing opportunities?
  - Yes
  - No

### Section 2: Financial Institution Experience

3. Which financial institution did your SME work with for GFF financing?
  - Sparkasse Bank
  - ProCredit Bank
  - Komercijalna Banka
  - Silk Road Bank
  - TTK Bank
  - Other

3.1 If other, please specify \_\_\_\_\_
4. How would you rate your experience with the financial institution during the loan application process?
  - Excellent
  - Good
  - Average
  - Poor
  - Very Poor
5. Were you provided with adequate information and assistance to prepare your loan application?
  - Yes
  - No
  - Partially

### Section 3: Project Details and Outcomes

6. What type of RE/EE project did your SME implement with GFF support? (Select all that apply)

- Rooftop photovoltaic (solar panels)
- Land-based photovoltaic systems
- Heating and cooling systems (e.g., heat pumps, AC)
- Energy-efficient machinery
- Insulation and building upgrades
- Electric vehicles
- Other

6.1 If other, please specify \_\_\_\_\_

7. What was the total loan amount your SME received for this project?
- Less than USD 50,000
  - USD 50,000 – USD 100,000
  - USD 100,001 – USD 250,000
  - USD 250,001 – USD 500,000
  - More than USD 500,000
8. What was the total cost of the RE/EE project including the GFF loan and any other costs covered by your company?
9. If applicable, by what percentage has your SME's energy use decreased as a result of the GFF-supported project?
- 0-10%
  - 11-20%
  - 21-50%
  - 51% or more
  - Too early to assess
  - Not applicable/Still underway
10. Apart from the loan, did your business receive any technical assistance or support from the GFF programme?
- Yes
  - No
11. Have you observed any reduction in operational costs due to energy efficiency improvements?
- Yes, significant reduction
  - Yes, minor reduction
  - No noticeable reduction yet
  - Not applicable/Still underway

#### **Section 4: Satisfaction and Feedback**

12. Overall, how satisfied are you with the support provided by the GFF program?
- Very satisfied
  - Satisfied
  - Neutral
  - Dissatisfied
  - Very dissatisfied
13. Were the terms and conditions of the loan clear and fair?
- Yes
  - No
  - Partially
14. Do you believe the GFF program has positively impacted your business operations?

- Yes, significantly
- Yes, moderately
- No noticeable impact yet
- Not applicable

15. What benefits have you experienced, or do you expect to experience as a result of this project? (Please provide details where applicable)

Revenue increases (in local currency or USD):	Yes/No/I don't know
Number of new jobs created, or positions added:	Yes/No/I don't know
Energy savings (in terms of reduced energy bills or kilowatt hours saved):	Yes/No/I don't know
Environmental impacts (e.g., reduced waste, lower emissions, water conservation):	Yes/No/I don't know
Reduced air pollution:	Yes/No/I don't know
Other	Yes/No/I don't know

15.1 If other areas, please specify \_\_\_\_\_

16. To what extent did the availability of performance-based incentives (grants of 5% or 10% of the project value) influence your decision to apply for the Green Finance Facility loan?

- Not at all influential (I would have applied even without the incentive)
- Moderately influential (The incentive was helpful but not essential for my decision)
- Very influential (I would not have applied without the incentive)

17. What challenges, if any, did you face during the implementation of your RE/EE project? (Open-ended)

18. What recommendations would you make to improve the GFF program for SMEs? (Open-ended)

#### Section 5: Lessons and Future Plans

19. Based on your experience, would you recommend the GFF program to other SMEs?

- Yes
- No
- Not sure

20. If you would not recommend the Green Finance Facility loan, please explain the reasons for your decision. (Open-ended)

21. Are you planning to implement additional RE/EE projects in the future with your own means?

- Yes
- No
- Not sure

22. If you are not planning to implement additional RE/EE projects in the future with your own means, what are the reasons? (Open-ended)

23. How long do you expect to continue benefiting (e.g., through cost savings, improved productivity, or environmental benefits) from the implemented RE/EE measures?

- Less than 2 years
- 2–5 years
- 6–10 years
- More than 10 years
- Not sure

24. Would you consider investing in similar RE/EE projects in the future without external financial support?

- Yes

- No
- Not sure

**Section 6: Demographics**

25. What is the primary sector of your business?

- Transport
- Energy
- Manufacturing
- Retail
- Medical services
- Other

25.1 If other, please specify \_\_\_\_\_

26. Is your business:

- Female-owned
- Male-owned
- Jointly owned

27. How many employees does your SME currently have?

- Less than 10
- 10-50
- 51-250
- More than 250

28. Where is your SME located?

- [Dropdown with municipalities in North Macedonia]

Thank you for your participation! Your feedback is invaluable in shaping future support for SMEs in North Macedonia.

## Annex 3 List of individuals or groups interviewed or consulted, and sites visited.

### Central and local Government of North Macedonia

1. **Prof. Dame Dimitrovski**, Special Advisor to the President of the Government of Republic of North Macedonia
2. **Sandra Andovska**, Head of Department for Regional and Sustainable Development
3. **Martin Markovski**, Deputy Steering Committee member
4. **Dimitar Parnardziev**, Head of Energy efficiency and climate change, Ministry of Energy
5. **Elena Ivanovska**, Ministry of Energy
6. **Jasminka Petkovska**, Head of Department for international cooperation, Ministry of environment and physical planning
7. **Valentina Petrovska Dukovska**, Advisor on rights under Guaranteed Minimum Assistance, Ministry of Labour and Social Policy
8. **Sevim Berzati** - Chief of the Cabinet of the Mayor of Municipality of Tetovo

### UN Joint SDG Fund

29. **Maria Berenguer**, Portfolio Manager.
30. **Jamaa Maalim**, Monitoring and Evaluation Officer

### UN RCO

31. **Rita Columbia**, UN RC
32. **Lilian Kandikjan** Partnerships and Development Finance
33. **Aleksandar Dimiskovski**, Communications Officer, UN RC

### UNDP CO

34. **Armen Grygoian**, Resident Representative
35. **Anna Chernyshova**, Deputy Resident Representative
36. **Anita Kodzoman**, Head of Environment Unit
37. **Ilmiasan Duti**, Head of Democratic Governance Practice
38. **Urim Kasapi**, Programme Analyst, SI Unit
39. **Gordana Popovikj Friedman**, Project Manager
40. **Antica Boglev Shishkovska**, Monitoring Associate
41. **Aleksandra Dimova Manchevska**, Project Manager, Air pollution
42. **Darko Chekerovski**, UNDP Communications
43. **Ratka Pemova**, UNDP Communications
44. **Daniela Trpkoska**, Energy Consultant, GFF
45. **Igor Panchevski**, Energy Consultant, GFF

### UNDP Dominican Republic

46. **Sanja Bojanic**, DRR, former DRR of UNDP North Macedonia

### EBRD North Macedonia

47. **Naum Ribaroski**, Senior Banker

### IOM North Macedonia

48. **Vanja Lazaridis** Project Manager

### UNECE

49. **Oleg Dzioubinski**, Regional Adviser at the Sustainable Energy Division

### EBRD Consultants

50. **Sime Pejovski**, Solo Company Consulting
51. **Lovre Ristevski**, Solo Company Consulting
52. **Ivanka Stefanovska**, Communication Consultant

#### **BAR E.C.E, Independent Assessors**

- 53. **Vladimir Tomovski** General manager
- 54. **Vladimir Gjorgievski**, Team Leader

#### **Sparkase bank,**

- 55. **Joshich Darko**, Director of SME Department
- 56. **Monika Markovska**, SME Relationship Associate

#### **Sparkase lizing**

- 57. **Marjan Manchev**, Managing Director
- 58. **David Bundalevski**, Sales Manager

#### **Komercijalna Banka**

- 59. **Biljana Hadzi-Velkova**, Manager
- 60. **Goran Ivanovski**, Coordinator Specialist in Corporate lending division.

#### **PROCREDIT**

- 61. **Aleksandar Todorov**, Deputy Branch Manager
- 62. **Afrodita Bogeska**, Business Client Advisor

#### **TTK Bank**

- 63. **Bojan Sterjovski**, Head of Retail Department
- 64. **Zoran Jovanovski**, Head of Business network direction.

#### **SILK ROAD**

- 65. **Katerina Popova**, Manager
- 66. **Ljupčo Sotirovski** Senior Product Specialist

#### **NGOs/CSOs**

- 67. **Milena Perchinkova**, Executive Secretary of the Macedonian Banking Association
- 68. **Maya Stavreva-Stojanova Maja**, President of the Macedonian Banking Association
- 69. **Stefan Trajkov**, Project Manager, SOLAR
- 70. **Gordan Jordanov**, Macedonia and Europe Director, United Macedonia Diaspora
- 71. **Jasminka Kapac Dimitrova**, Senior Project Manager, MACEF
- 72. **Jadranka Arizankovska**, advisor, Chamber of Commerce
- 73. **Valentina Disovska**, President, Macedonian Business Women's Association
- 74. **Irena Lozanovska Panchevska** REBUILD - Organization for persons with disabilities
- 75. **Semra Bajram** - SUMIT-SUMNAL/Association of Roma
- 76. **Sead Ismail** – Romano Capice Association for Development and Promotion of the Roma Community
- 77. **Marjana Lonchar, Velkova** President at Consumers Organisation of Macedonia

#### **SMEs**

- 78. **Snezhana Petrushevski**, Eko Energy – Family-Run Solar Farm in Kumanovo
- 79. **Zekije Bedzeti**, Sekuritats M DOOEL, Tetovo

#### **HHs**

- 80. **Milosh Dimikj** (female headed households)
- 81. **Gordana Toshevska** (single parents)
- 82. **Toni Stankovski**
- 83. **Ljupco Karadzov** (remittance recipients, returning migrants)
- 84. **Sevim Berzati** – beneficiary from Tetovo
- 85. **Sinisha Badar** – beneficiary from Shtip

#### Annex 4 List of supporting documents reviewed.

1. Balkan Green Energy news, March 13, 2024: the Government Government of North Macedonia sends two energy bills to parliament <https://balkangreenenergynews.com/government-of-north-macedonia-sends-two-energy-bills-to-parliament/>
2. Balkan Green Energy news January 29, 2024 North Macedonia posts 160% growth in 2023 in new renewables capacity <https://balkangreenenergynews.com/north-macedonia-posts-160-growth-in-2023-in-new-renewables-capacity/>
3. Cathy Mungall-Baldwin, Independent Consultant and Affiliate Research Fellow, Institute of Health and Wellbeing, University of Glasgow (Edinburgh, UK) “ Life, health, well-being and the environment study Behaviour Change Communication Strategy For UNDP North Macedonia”
4. CEE Bankwatch network, 20 December 2024, A well-designed national energy efficiency fund in North Macedonia will enable long-term energy savings in the residential and public sectors, <https://bankwatch.org/publication/a-well-designed-national-energy-efficiency-fund-in-north-macedonia-will-enable-long-term-energy-savings-in-the-residential-and-public-sectors>
5. CMS, Renewable energy in North Macedonia, <https://cms.law/en/int/expert-guides/cms-expert-guide-to-renewable-energy/north-macedonia>
6. CIF Press Release, Mar 20, 2024, Just Transition North Macedonia <https://www.cif.org/news/climate-investment-funds-approves-85-million-launch-north-macedonia-coal-phase-out>
7. CEE Bankwatch (2024): “A well- designed energy efficiency fund in North Macedonia will enable long-term energy savings in the residential and public sectors”, available at: <https://bankwatch.org/publication/a-well-designed-national-energy-efficiency-fund-in-north-macedonia-will-enable-long-term-energy-savings-in-the-residential-and-public-sectors>
8. Climate Action Network, Europe (2024); Overcoming barriers for renewable energy deployment in the Western Balkans: The case of North Macedonia and Serbia, available at <https://caneurope.org/overcoming-barriers-for-res-deployment-in-the-wb-north-macedonia-and-serbia/>
9. Colovic Lesoska, A. (2022). Exploring Pathways for Low-Impact Energy Solutions in North Macedonia. Available at <https://ekosvest.com.mk/wp-content/uploads/2022/07/Low-Impact-Energy-Solutions-Principles-and-Recommendations-2022.pdf>
10. Djinlev, V. (2022). Analysis of Alternatives to Coal-Based District Heating for the Bitola Region in North Macedonia. Available at <https://bankwatch.org/wp-content/uploads/2022/12/2022-11-Analysis-of-alternatives-to-coal-based-district-heating-for-the-Bitola-region-in-North-Macedonia.pdf>
11. EU – the Republic of Macedonia:”20th Meeting of the Subcommittee on Transport, Environment, Energy and Regional Development” 11/ 2024
12. EU Energy Community 2024: “North Macedonia Annual Implementation Report” 1/11/2024, available at [https://www.energy-community.org/dam/jcr:974aa15f-7448-491f-81e5-892e1021ec1b/IR2024\\_NorthMacedonia.pdf](https://www.energy-community.org/dam/jcr:974aa15f-7448-491f-81e5-892e1021ec1b/IR2024_NorthMacedonia.pdf)
13. EU Action Document for State and Resilience Building Contract for North Macedonia, 2023
14. EU Commission (2023): “A GREEN AGENDA for Western Balkansn [https://enlargement.ec.europa.eu/document/download/75bf7bef-0ecc-40ba-893a-4d45d4ea6ddb\\_en?filename=factsheet\\_wb\\_green\\_agenda\\_en.pdf](https://enlargement.ec.europa.eu/document/download/75bf7bef-0ecc-40ba-893a-4d45d4ea6ddb_en?filename=factsheet_wb_green_agenda_en.pdf)
15. European Environmental Agency, North Macedonia– air pollution country fact sheet 2024

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16. EBRD: SME Competitiveness Support programme: Building Competitive SMEs in the Republic of North Macedonia available at <https://web-sme-csp.com/republic-north-macedonia/wp-content/uploads/sites/5/2019/03/Brochure-N-Macedonia-ENG-F-20190328.pdf>,
17. EBRD Press release 12 May 2022 “EBRD and donors help reboot small businesses in North Macedonia”  
<https://www.ebrd.com/home/news-and-events/news/2022/ebrd-and-donors-help-reboot-small-businesses-in-north-macedonia.html> last accessed 11/04/2025
18. EBRD, press release 17 May 2022 Donors and ProCredit Bank boost funding for businesses in North Macedonia , available at <https://www.ebrd.com/home/news-and-events/news/2022/ebrd-donors-and-procredit-bank-boost-funding-for-businesses-in-north-macedonia.html>
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## Annex 5 Results to Date

Expected Outputs and Outcomes Indicator numbers		Expected Outputs and Outcomes Indicator numbers Definition	Baseline and Target		Data Source	2023 Targets and Actual Results		2024 Targets and Actual Results		cumulative target 2023-2024	cumulative result 2023-2024	remaining from overall target	Targets for 2025 and 26 combined	extra target	rating
			Baseline	target		target	actual	target	actual						
Outcome 1	1.1	Expected annual energy saved: 81,000 MWh	0	81,000	Q reports from project and verification consultants	2,000	130.17	33000	849.4	35,000	979.57	80,020	46,000	34,020	
Outcome 1	1.2	Estimated GHG emissions avoided (tCO2e/year)	0	75,654	As above	1,500	105.57	30,261	157.68	31,761	263.25	75,391	41,893	33,498	
Outcome 1	1.3	Renewable capacity added: 8.1 MW	0	8.1	As above	0.2	0.106	3.2	147	3	0.2	8	5	3	
Output 1.1	1.1.1	Number of sub-loans extended by PFIs: 105 (sex-disaggregated)	0	105	Q. reports from PFIs	5	1	50	46	55	47	58	50	8	
Output 1.1	1.1.2	Total value of sub-loans extended: \$31.4 M	0	3140000	As above	2,000,000	54,990	14,000,000	10,930,000	16,000,000	10984990	20,415,010	14,390,000	6,025,010	
Output 1.2	1.2.1	Total value of performance - based payments allocated:	0	3140000	Reports from project and, verification consultants and PFIs	100,000	0	1,300,000	12,500	1,400,000	12500	3,127,500	1,795,000	1,332,500	

Expected Outputs and Outcomes Indicator numbers		Expected Outputs and Outcomes Indicator numbers Definition	Baseline and Target		Data Source	2023 Targets and Actual Results		2024 Targets and Actual Results		cumulative target 2023-2024	cumulative result 2023-2024	remaining from overall target	Targets for 2025 and 26 combined	extra target	rating
			Baseline	target		target	actual	target	actual						
Output 1.3	1.3.1	Number of loan officers trained to access RE/EE project loan applications (sex-disaggregated)	0	20	Reports from project consultants and PFIs	10	4	10	64	20	68	-48	0	-48	
Output 1.3	1.3.2	Number of loan officers trained on gender-disaggregated data collection and analysis	0	20	Reports from project consultants and PFIs	10	0	10	64	20	64	-44	0	-44	
Output 1.3	1.3.3	Number of businesses reached through marketing efforts: sex-disaggregated	0	700	Reports from project consultants and PFIs	200	55	500	1991	700	2046	-1,346	0	-1,346	
Outcome 2	2.1	Expected annual energy saved: MWh	0	5,200	Quarterly reports from the project and verification consultants	0	0	2,300	425.628	2,300	425.628	4,774	2,900	1,874	
Outcome 2	2.2	Estimated GHG emissions avoided (tCO2e/year)	0	4,856.80	Quarterly reports from the project and verification consultants	0	0	2,006.80	123.06	2,007	123.06	4733.02	2,850	1833.02	
Outcome 2	2.3	Renewable capacity added:	0	2.6 MW	Quarterly reports from the project and verification consultants	0	0	1	0.142254	1	0.142254	2	2	1	

Expected Outputs and Outcomes Indicator numbers		Expected Outputs and Outcomes Indicator numbers Definition	Baseline and Target		Data Source	2023 Targets and Actual Results		2024 Targets and Actual Results		cumulative target 2023-2024	cumulative result 2023-2024	remaining from overall target	Targets for 2025 and 26 combined	extra target	rating
			Baseline	target		target	actual	target	actual						
Output 2.1	2.1.1	Total value of loans extended:	0	6500000	Quarterly reports from PFIs	50,000	0	3,150,000	264,138	3,200,000	264138	6,235,862	3,300,000	2,935,862	
Output 2.1	2.1.2	Number of loans extended by banks: 650 (sex-disaggregated)	0	650	Quarterly reports from PFIs	10	0	295	30	305	30	620	345	275	
Output 2.1	2.1.3	Number of loans extended to women and women-headed households (including returning migrants and remittance recipients):	0	227	Quarterly reports from PFIs	0	0	99	16	99	16	211	128	83	
Output 2.1	2.1.4	Number of loans extended to returning migrants and remittance recipients: 150 (sex disaggregated)	0	150	Quarterly reports from PFIs	0	0	65	7	65	7	143	85	58	
Output 2.2	12.2.1	Total value of all performance-based payments allocated	0	1950000	Quarterly reports from PFIs	0	0	850,000	108,397	850,000	108397	1,841,603	1,100,000	741,603	

Expected Outputs and Outcomes Indicator numbers		Expected Outputs and Outcomes Indicator numbers Definition	Baseline and Target		Data Source	2023 Targets and Actual Results		2024 Targets and Actual Results		cumulative target 2023-2024	cumulative result 2023-2024	remaining from overall target	Targets for 2025 and 26 combined	extra target	rating
			Baseline	target		target	actual	target	actual						
Output 2.2	2.2.2	Total value of performance-based payments allocated to returning migrants and remittance recipients:	0	450000	Quarterly reports from PFIs	0	0	205,000	11,465	205,000	11465	438,535	245,000	193,535	
Output 2.3	2.3.1	Number of loan officers trained to assess RE/EE project loan applications: (sex disaggregated)	0	20	Quarterly reports from PFIs	5	0	15	120	20	120	-100	0	-100	
Output 2.3	2.3.2	Number of loan officers trained on gender-disaggregated data collection and analysis:	0	20	Quarterly reports from PFIs	5	0	15	120	20	120	-100	0	-100	
Output 2.3	2.3.3	Number of individuals reached through marketing efforts (sex-disaggregated)	0	1,000	Quarterly reports from PFIs	100	100	560	23110	660	23210	-22,210	340	-22,550	

Source: MTR Team based on the project report

## Annex 6 Risk Matrix from the ProDoc with cpmments

Risks	Risk Level: Likelihood x Impact)	Likelihood: Certain - 5 Likely - 4 Possible - 3 Unlikely - 2 Rare - 1	Impact: Essential - 5 Major - 4 Moderate - 3 Minor - 2 Insignificant - 1	Mitigating measures	Responsible Org./Person	Comments by the Evaluation team
<b>Contextual risks</b>						
Limited capacity of the market to provide high-quality products and services to meet the expected increased demand leading to insufficient supply and delays in implementation.	8	2	4	Project consultants will conduct consultations with local providers of RE & EE solutions early in the implementation of the project to inform them of the project and expected increased demand for products and services, encouraging them to prepare.	Project consultants with guidance and oversight from UNDP, EBRD & IOM	
Limited uptake of the product by target beneficiaries	10	2	5	Awareness campaigns will be reassessed and increased to make sure that target beneficiaries are aware of the project. The awareness campaign will customize the approach towards project target groups with full understanding of their challenges and in close cooperation with stakeholder groups, such as economic chambers, CSOs, financial institutions and government bodies.	Project consultants and participating banks with guidance and oversight from UNDP, IOM & EBRD	The mitigation action is logically in contradiction with the low level of Communication budget and the fact there are only 2 project consultants
Remittance recipients and returning migrants are unable or unwilling to participate in the project.	12	3	4	Public awareness raising by IOM, marketing campaign by local banks and work of consultants as part of TA should provide additional information that will help beneficiaries better understand their return on investment, benefits of RE and EE solutions and positive impact in terms of quality of life including air quality. Also, early adopters' success, promotion of successful case studies and subsequently peer learning may also play a role in wider uptake of the product.	IOM	
Covid-19 results in a sustained economic recession reducing companies' and households' ability to invest in RE and EE solutions.	12	3	4	EBRD's experience shows that the demand for grant supported financing did not decrease due to Covid. On contrary, the participating banks are signaling stable demand, which led to signing four new agreements for both the retail and corporate clients, despite the Covid. The project will continue to monitor situation closely and take early actions and adjustments as needed.	UNDP, IOM & EBRD	

Risks	Risk Level: Likelihood x Impact)	Likelihood: Certain - 5 Likely - 4 Possible - 3 Unlikely - 2 Rare - 1	Impact: Essential - 5 Major - 4 Moderate - 3 Minor - 2 Insignificant - 1	Mitigating measures	Responsible Org./Person	Comments by the Evaluation team
<b>Programmatic risks</b>						
Limited collaboration and coordination between stakeholders, slow project implementation and limits effectiveness.	3	2	4	Conduct extensive stakeholder consultations during project development to secure buy-in from project partners and ensure coordination of project interventions. The project manager will carefully engage in and closely monitor coordination during implementation.	UNDP & RCO	
Local banks delay their participation in the project.	10	2	5	Interviews have been conducted with the local banks and they showed strong interest to participate in GFF, once established. The demand for EBRD's similar products has remained stable despite the crisis. Situation will be closely monitored and mitigation actions taken.	UNDP & EBRD	The mitigation measure overlooks the fact that Outcome 2 was a novelty in design
<b>Institutional risks</b>						
Institutional capacity/coordination of executive entities results in inadequate human resources to effectively manage project implementation.	5	2	3	Project Management team to conduct a stock take of capacities of the various entities involved in delivering the programme to identify issues early on and take actions to mitigate any issues.	UNDP & IOM	The need for significant resources for outreach (human and financial) was overlooked
<b>Fiduciary risks</b>						
Scale of loan borrowers' default on repayments.	3	3	3	The imposed repayment moratoria due to the Covid crisis disguises the real situation with the NPLs in the Macedonian banking sector. The real effects will be seen at end 1Q 2021, when the 2 <sup>nd</sup> repayment moratoria will end. This is mitigated by the fact that the largest banks on the market are reporting much better results than the initial forecasts at the start of the Covid crisis and this is mostly based on the expectations that the NPLs will remain low. The 2 <sup>nd</sup> repayment moratoria targeted only clients that have ongoing effects from the Covid crisis, and their number is minimal compared to the clients that used the first moratoria.	Individual Participating Banks with close oversight and support from EBRD	

## Annex 7 Project or programme results model or results framework.

**PROJECT MONITORING DATA [PROPOSED UPDATE, NOVEMBER 2023]**

Project Name: "Green Finance Facility to Improve Air Quality and Combat Climate Change in North Macedonia" [GREEN FINANCE FACILITY]

EXPECTED OUTPUTS	INDICATOR	DEFINITION (How is it calculated or measured)	BASELINE AND TARGET (What are the baseline and target values?)		DATA SOURCES (Indicative on where/how to find data)	2023 Targets and Actual Results		2024 Targets and Actual Results		2025 Targets and Actual Results		2026 Targets and Actual Results	
			B:0	T:		T:	A:	T:	A:	T:	A:	T:	A:
Outcome1	Outcome Indicator1.1	Expected annual energy saved:81,0CIO MWh	8:0	T: 81,000	Quarterly reports from the project and verification	T: 2,000	A: 130.17	T: 33,000	A: 0 (849.4 MWh estimated by year-end))	T: 40,000	A,	T: 6,000	A,
Outcome1	Outcome Indicator 1.2	Estimated GHG emissions avoided (tCO2e/year ): 75,654 tonnes	B:0	T: 75,654	Quarterly reports from the project and verification	T: 1,500	A: 105.57	T:30,261	A: 0 (157.68 forecasted by year-end)	T: 38,000	Ac	T:3,893	Ac
Outcome1	Outcome Indicator 1.3	Renewable capacity added: 8.1 MW	B: 0	T:8.1	Quarterly reports from the project and verification	T: 0.2	A:0.106	T: 3.2	A:O (147 kW forecasted by year-end)	T:4.0	A,	T:0.7	A,
Output1.1	Output Indicator 1.1.1	Number of sub-loans extended by PFIs: 105 (sex-disaggregated)	B: 0	T:105	Quarterly reports from PFIs	T:5	A:1	T: 50	A:46	T: 50	A,	T,	A,
Output1.1	Output Indicator 1.1.2	Total value of sub-loans extended: \$31.4M	B: 0	T: 31.4 M	Quarterly reports from PFIs	T: 2,000,000	A: 54,990	T: 14,000,000	A:10,930,000	T: 14,390,000	A,	T,	A,
Output1.2	Output Indicator 1.2.1	Total value of performance-based payments allocated: \$3.14M	B:0	T: 3.14 M	Reports from project consultants verification consultants and PFIs	T: 100,000	A:0	T: 1,300,000	A:12,500	T: 1,395,000	Ac	T: 400,000	A:
Output1.3	Output Indicator 1.3.1	Number of loan officers trained to access RE/EE project loan applications:atleast20 (sex-disaggregated)	B: 0	T:20	Reports from project consultants and PFIs	T: 10	A:4(1M,3F)	T: 10	A: 64 (34M, 30F)	T,	A,	T,	A,

Output1.3	Output Indicator 1.3.2	Number of loan officers trained on gender disaggregated data collection and analysis: atleast20	B: 0	T:20	Reports from project consultants and PFls	T: 10	A:O	T: 10	A:64 (34M,30F)	r,	Ac		Ac
Output1.3	Output Indicator1.3.3	Number of businesses reached through marketing efforts: at least700(sex disaggregated)	B: 0	T:700	Reports from project consultants and PFls	T: 200	A: 55 (44M, 11F)	T: 500	A: 1991(1552M; 439F)	T,	A,	T,	A,
Outcome2	Outcome Indicator 2.1	Expected annual energy saved: 5,200 MWh	B: 0	T:5,200	Quarterly reports from the project and verification	T:O	A:O	T: 2,300	A:425.628	T: 2,300	Ac	T:600	Ac
Outcome2	Outcome Indicator 2.2	Estimated GHG emissions avoided (tCO2e/year ): 4,856.8 tonnes	8:0	T: 4,856.8	Quarterly reports from the project and verification	T: 0	A:O	T: 2,006.8	A:123.06	T: 2,100	A,	T:750	A,
Outcome2	Outcome Indicator 2.3	Renewable capacity added: 2.6 MW	B: 0	T:2.6	Quarterly reports from the project and verification	T:O	A:O	T: 1.0	A:0.142254	T: 1.2	A,	T:0.4	A,
Output2.1	Output Indicator2.1.1	Total value of loans extended: \$6.5M	8:0	T:6.5M	Quarterly reports from PFls	T: 50,000	A:O	T: 3,150,000	A: \$264,138	T: 3,300,000	A,	T,	A,
Output2.1	Output Indicator 2.1.2	Number of loans extended by banks: 650 (sex-disaggregated)	8: 0	T:650	Quarterly reports from PFls	T: 10	A:O	T:295	A:30	T:315	A,	T:30	A,
Output2.1	Output Indicator 2.1.3	Number of loans extended to women and women- headed households(including returning migrants and remittance recipients): 227	8:0	T:227	Quarterly reports from PFls	T:O	A:O	T:99	A: 16 female headed households Singleparents3 Families with persons with disabilities 3 (UNDP 22) Returning migrants 2 Remittance recipients 6 (IOM 8)	T: 105	A,	T:23	A,
Output2.1	Output Indicator 2.1.4	Number of loans extended to returning migrants and remittance recipients: 150 (sex disaggregated)	8:0	T:150	Quarterly reports from PFls	T:O	A:O	T:65	A:8	T: 75	Ac	T: 10	Ac

Output2.2	Output Indicator 2.2.1	Total value of all performance-based payments allocated: \$1.95M	8: 0	T: 1.95 M	Quarterly reports from PFIs	T: 0	A:O	T: 850,000	A: 108,397	T: 900,000	A,	T: 200,000	A:
Output2.2	Output Indicator 2.2.2	Total value of performance-based payments allocated to returning migrants and remittance recipients: \$ 0.45M	8:0	T: 0.45 M	Quarterly reports from PFIs	T: 0	A:O	T: 205,000	A: 11,465	T: 225,000 r,	Ac	T: 20,000 r,	Ac
Output2.3	Output Indicator 2.3.1	Number of loan officers trained to assess RE/EE project loan applications:atleast20 (sex disaggregated)	8: 0	T:20	Quarterly reports from PFIs	T: 5	A:O	T: 15	A: 120		Ac		Ac
Output2.3	Output Indicator 2.3.2	Number of loan officers trained on gender disaggregated data collection and analysis: atleast20	8: 0	T:20	Quarterly reports from PFIs	T:5	A:O	T: 15	A: 120 (67F/53M)	T,	A,	T,	A,
Output2.3	Output Indicator2.3.3	Number of individuals reached through marketing efforts:1,CXJO (sex-disaggregated)	8: 0	T: 1,000	Quarterly reports from PFIs	T: 100	A: 100+	T:560	A: 23110	T: 340	A,	T,	A,