



Financing Resource Efficient and Cleaner Products by SMEs in the EU Eastern Partnership Countries

A Stakeholders' Guidebook

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EaPGREEN
Partnership for Environment and Growth



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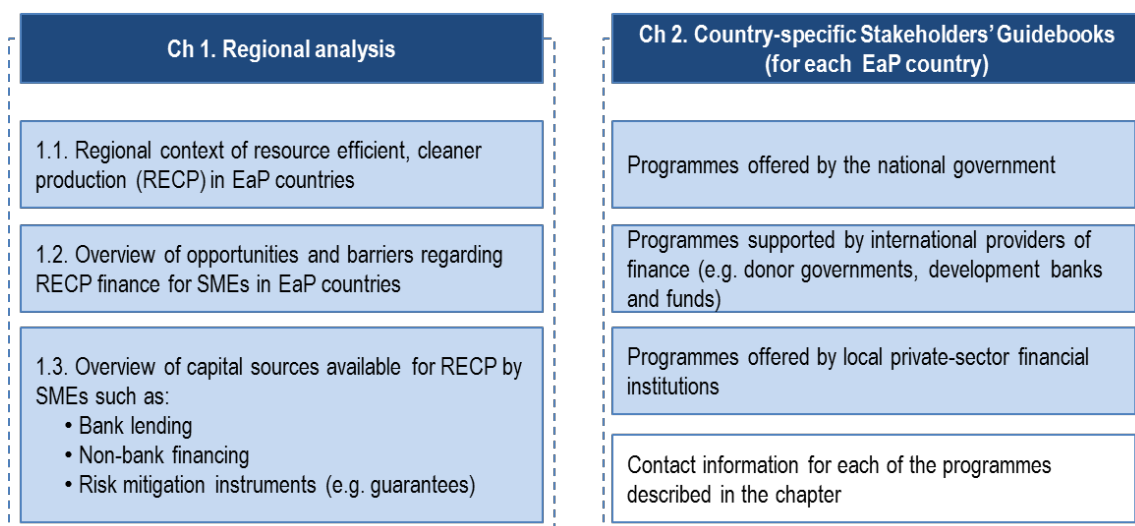
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Foreword and acknowledgement

This Stakeholders' Guidebook presents a range of financial sources and mechanisms that can be used by Small and Medium-sized Enterprises (SMEs) in the European Union Eastern Partnership countries to support Resource Efficient and Cleaner Production (RECP) measures in their operations. The report aims to help SMEs find the efficient and effective financial solutions for their particular needs for RECP investments by detailing requirements and indicating which financial institutions are involved in each country.

This Stakeholders' Guidebook focuses on addressing information gaps in SMEs' familiarity with government subsidies and financial products and programmes. It is principally intended for owners, management and practitioners of SMEs who are interested in RECP investment.

The Guidebook first provides a brief overview of the regional context of RECP activities, opportunities and barriers in the EaP countries, and currently or potentially available capital sources. Chapter 2 consists of six sub-sections by country (i.e. country-specific guidebooks). Each sub-section contains information on SME support programmes by the national government and its development co-operation partners, as well as local financial institutions, if any. The Guidebook also aims to provide contact information for each of the programmes, so that it can serve as a directory for SMEs interested in RECP investment. Information on the individual programmes was accessed on 27 February 2018.



This Stakeholders' Guidebook was developed within the framework of the project "Greening Economies in the Eastern Neighbourhood Project" (EaP GREEN), funded by the European Union and implemented by four implementing partners: the Organisation for Economic Co-operation and Development (OECD), the United Nations Industrial Development Organization (UNIDO), the United Nations Environment Programme (UN Environment) and the United Nations Economic Commission for Europe.

This Guidebook was drafted jointly by Takayoshi Kato (Policy Analyst, Environment Directorate, OECD) with Marko van Waveren Hogervorst (international finance expert for UNIDO). Tatiana Chernyavskaya (UNIDO) provided administrative and substantive support and the co-ordination role in the RECP work stream of the EaP GREEN project under which this analytical work was conducted. Valuable inputs were provided by: Ana Chorgolashvili, Malkhaz Adeishvili (Georgia); Alexander Shushkevich (Belarus); Andrii Vorfolomeiev and Ivan Omelchuk (Ukraine); Nune Harutyunyan (Armenia), as well as by colleagues from the OECD, Guy Halpern, Jean-François Lengelle, Krzysztof Michalak and David Šimek on the content, and Lupita Johanson and Victoria Elliott on the publication process.

The information and analysis presented in this Guidebook is the result of desktop research by the authors and the findings of the national RECP Clubs and Programs in general, including a needs-based analysis supported by a web-based survey conducted by UNIDO. In the course of drafting this Guidebook, UNIDO and the OECD also conducted a follow-up survey to obtain updated information on the existing support programmes for RECP in EaP countries. Further input was received during various conferences: the EaP GREEN Roundtable organised by UNIDO in April 2017 in Tbilisi, Georgia, the EaP GREEN Conference "Unlocking Private Finance for Energy Efficiency and Greener, Low-carbon Growth" organised by the OECD in June 2017 in Brussels, Belgium, and the Workshop on Green Finance Mobilisation in Georgia, organised by the OECD in June 2017 in Tbilisi, Georgia.

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Executive Summary

An increasing number of small and medium-sized enterprises (SMEs) in the EU Eastern Partnership (EaP) countries consider resource efficient and cleaner production (RECP) to be an important business issue. They are interested in better understanding how they use input materials, what their environmental impact is and what opportunities there are to improve material efficiency of production and reduce pollution. Meanwhile, many SMEs are not fully conversant with the potential of resource efficiency and how to calculate the possible economic benefits of RECP measures.

A survey¹ conducted by the United Nations Industrial Development Organization (UNIDO) in the EaP countries² showed that SMEs consider insufficient access to finance to be the greatest obstacle to implementing RECP in their operations, followed by insufficient human resources to ensure adequate compliance with environmental regulations. SMEs may be reluctant to take loans from banks, even when such loans are available from local financial institutions. Such factors as high interest rates, short repayment periods, high collateral requirements, currency risks and political and economic instability discourage SMEs in EaP countries from assuming loans to invest in RECP measures. Indeed internal funding is by far the largest financial channel through which SMEs obtain financial resources.

The survey also showed that while all EaP countries have some form of fiscal support for the development of SMEs, micro and start-up firms, only a few EaP countries (e.g. in Ukraine) have programmes with a specific focus on RECP or green investment for SMEs. Nonetheless, those general SME support programmes do not exclude RECP investment and thus could provide SMEs with funding for the RECP measures.

At the same time, adding RECP considerations to the mandates of government SME support programmes could be a powerful tool for raising awareness among SMEs of the opportunities for RECP financing. Strengthening the mandate of existing entities to support RECP measures (or establishing a separate national funding entity, if relevant) can provide dedicated support for RECP at SMEs and can also provide a mechanism for blending finance from different sources (i.e. domestic, international, public and private). The Germany-Armenia Fund and the Energy Efficiency Fund of Ukraine are two good examples.

Given the high interest rates prevailing in the EaP countries, reducing capital costs and mitigating project-related and corporate credit risks could help SMEs access financing for RECP measures. Loan (credit) guarantees are risk mitigation instruments that have already been widely provided by the EaP countries' governments (e.g. Armenia, Moldova, Ukraine) and providers of development finance. Other public interventions include, but are not limited to: grants and soft or concessional loans (Belarus, Ukraine), interest subsidies (Georgia), currency risk hedging (Armenia) and fund seeding (Georgia).

¹ With the support of the national RECP Clubs, UNIDO conducted a web-based survey for needs-based analysis.

² Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova and Ukraine.

Credit lines extended by bilateral and multilateral development financial institutions (DFIs) and donor governments have helped SMEs finance RECP measures for more than a decade in EaP countries and are still among the most important sources of capital for such investment. Such credit lines are usually extended through local commercial banks, microfinance institutions and leasing companies, among others. All the EaP countries have benefitted from multiple credit-line programmes, mainly for energy efficiency and renewable energy, and to a lesser extent for waste or water management. Some DFIs and donor governments also offer capacity-building support as part of the credit-line programmes.

DFIs and donor governments also offer various types of risk mitigation instruments, such as the InnovFin Guarantee programmes for SMEs by the European Investment Bank (EIB), which provides various risk-mitigation instruments to start-ups, SMEs, mid-caps and large companies. Donor governments also provide grants for technical assistance, for instance, through the FINTECC (Finance and Technology Transfer Centre for Climate Change) and other energy-efficiency credit-line facilities by the European Bank for Reconstruction and Development (EBRD).

There are also credit-line programmes that are not explicitly focused on RECP but on other objectives such as on gender and on export facilitation (e.g. programmes for export-oriented SMEs in the context of the Deep and Comprehensive Free Trade Areas with the European Union, or DCFTA). These credit lines are used to enable some types of SMEs in the EaP region to pursue both RECP and productivity growth of their businesses (e.g. increasing exported products).

Diversification of financial channels could help to meet the different needs of SMEs for RECP finance and complement commercial bank lending. For instance, microfinance institutions can provide small amounts of financial resources for small-scale RECP activities (e.g. replacing windows at a small factory), given their experience with smaller-sized loans and extensive networks in urban and rural areas in the country. In countries with a leasing industry, the leasing market could be useful, especially for those SMEs that seek short- and medium-term financing but that have difficulty meeting the collateral requirements commercial banks impose. Green bonds are gaining traction around the world. For SMEs in EaP countries, however, a range of issues remain, such as scalability, no guideline or criteria for green bond issuance available, nascent domestic bond markets and a lack of credit rating systems. Aggregation of small-scale RECP projects to issue green bonds (most likely led by DFIs) is one possibility worth exploring, which has some precedent in middle-income countries in Latin America.

Finally, promoting RECP by SMEs requires the governments of the EaP countries to further improve stringency, efficiency and enforcement of various policies on the environment, energy and climate change, as well as in other domains. Finance is an essential means for meeting the demand for investment in RECP, but it is primarily these policy frameworks and their implementation strategies that drive actual demand for investments. Mobilising finance at scale for RECP by SMEs thus needs comprehensive policy reforms that tackle specific socio-economic issues but manage to maintain the coherence between different policy domains that affect the efficient and “greener” growth of SMEs in the EaP countries.

1. Regional analysis

This chapter provides a brief overview at the regional level of Resource Efficient and Cleaner Production (RECP) activities, opportunities and barriers in the EaP countries, and currently or potentially available capital sources. It discusses different sources of capital, such as bank lending, non-bank intermediated financing and risk-mitigation instruments.

1.1. Resource efficient and cleaner production in EaP countries

Resource Efficient and Cleaner Production (RECP) is a preventative approach for reducing the use of materials, water and energy, minimise environmental impact and protect human health. RECP enables enterprises to comply with environmental laws and regulations while achieving higher productivity.

Despite the potential economic benefits that it offers, enterprises, and particularly small and medium-sized enterprises (SMEs), face a variety of hurdles to implementing RECP. These include access to trustworthy information, to advisory services and to technology and finance. RECP service providers can assist in overcoming such barriers by helping enterprises identify, evaluate and implement appropriate RECP solutions. The United Nations Industrial Development Organization (UNIDO) and UN Environment, under their joint global RECP Programme, have successfully co-operated on this endeavour in a number of countries.

Since 2007, based on its diverse regional and global experience, UNIDO has supported RECP initiatives in the EaP region, most prominently in Ukraine and the Republic of Moldova. While these and other initiatives within the region have confirmed the applicability and benefits of RECP, uptake of RECP methods and techniques has remained low.

RECP has great potential for economic, environmental and social benefits in the EaP countries if it can be widely implemented. The EaP GREEN programme, financially supported by the European Union, provides EaP partner countries with support in enhancing and developing delivery of RECP services. This project has helped enterprises identify, evaluate and carry out appropriate RECP solutions, and has achieved a range of success, including:

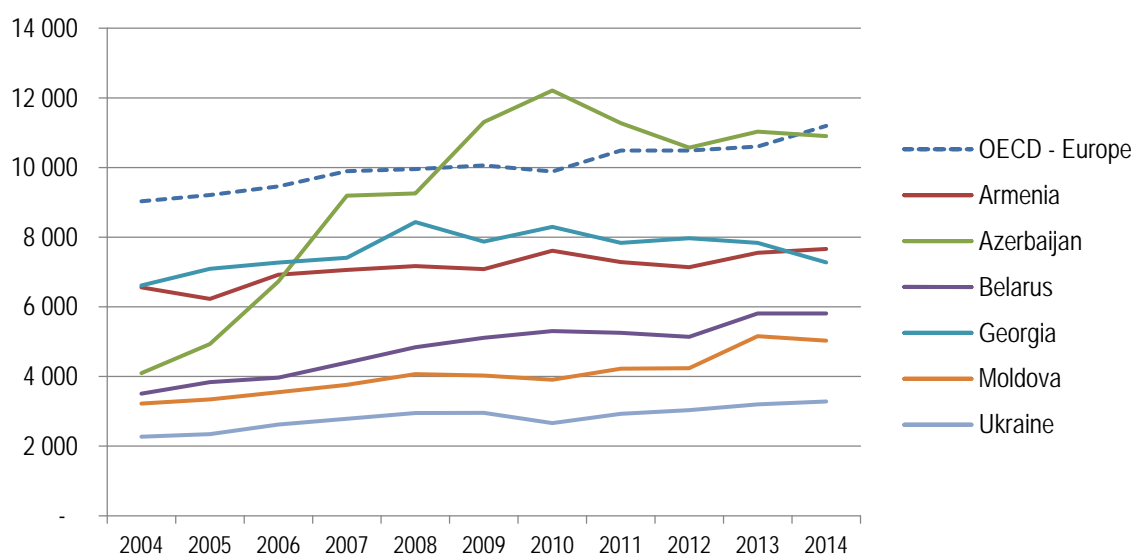
- All countries initiated policy dialogues adapting RECP to national conditions.
- More than 100 SMEs from food, chemicals and construction materials sectors were assessed, using RECP methodology developed by UNIDO and UN Environment, and began to implement RECP solutions.
- In collaboration with 20 municipalities of the EaP region, 20 RECP clubs with more than 250 member SMEs were established to scale up RECP application and stimulate peer coaching supported by RECP resource packages in six national languages.
- RECP activities were included in the National Action Plan of Belarus on Green Economy till 2020, including establishment of the Belarusian RECP Center, RECP clubs and educational programmes.

1.2. Opportunities and barriers

The EaP countries have improved the energy productivity of their economies (i.e. how much GDP is generated per unit of total primary energy supply). However, most still have room for improvement by comparison with the average among OECD member European countries (Figure 1.1). Nevertheless, it is encouraging that the UNIDO survey suggests that a growing number of small and medium-sized enterprises (SMEs) in the region have demonstrated interest in more resource efficient and cleaner production (RECP) and in acquiring greater understanding of their operations' resource efficiency and how they can improve it.

Figure 1.1. Energy productivity in EaP countries

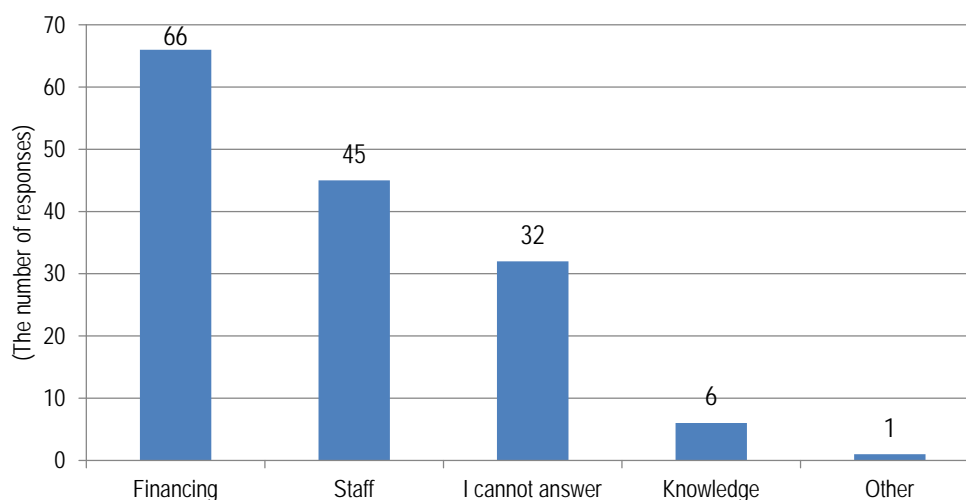
GDP per unit of total primary energy supply (TPES), in USD 2010, for 2004-2014



Source: OECD Environment Statistics (database). DOI: [10.1787/env-data-en](https://doi.org/10.1787/env-data-en) (accessed on 28 March 2018).

In reality, however, SMEs that do display such motivation often face various difficulties initiating RECP activities. The UNIDO survey shows that financing for implementing RECP measures is the most pressing need of the responding SMEs in the EaP countries (Figure 1.2).

Although the SMEs surveyed cite the lack of finance as the primary issue, many SMEs are reluctant to take out a loan even when such a financial solution is available. The reasons differ from country to country, but in general, SMEs consider bank lending too costly, given high interest rates, short repayment periods, currency risks and political and economic instability. High collateral requirements are also another challenge.

Figure 1.2. Resources needed for RECP at SMEs in the EaP region

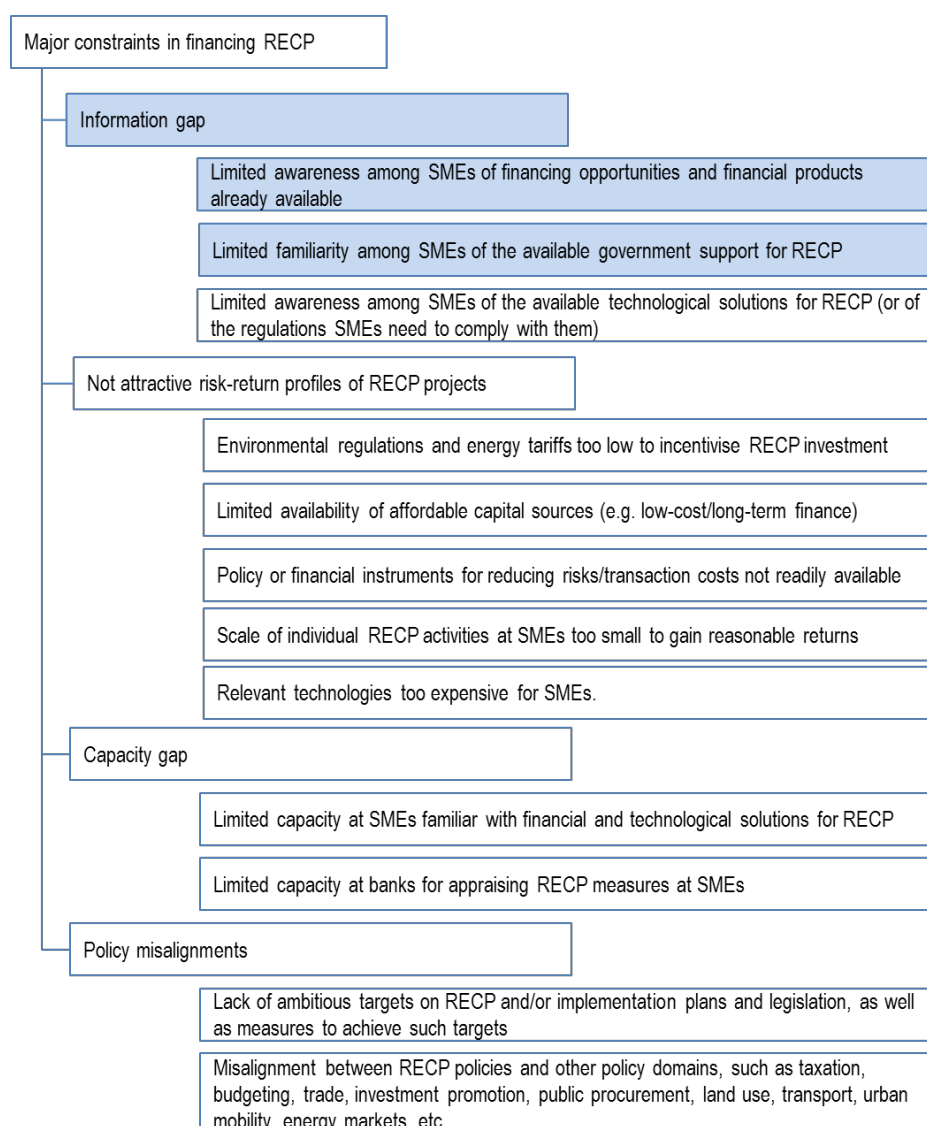
Source: UNIDO survey.

The UNIDO survey has also found that SMEs in EaP countries often do not have access to information about the available technological and financial solutions for RECP. In-house capacity for developing business plans, and qualified financial analysts for loan applications, are also short supply. Even in the countries where government support that can be used for RECP is available, many SMEs are often not aware of such opportunities or benefits.

Figure 1.3 lists the many factors that may inhibit RECP financing for SMEs in EaP countries. As noted above, although finance is an essential means of meeting the demand for investment in RECP in the EaP region, it does not necessarily create the demand for investments. Mobilising RECP finance for SMEs thus requires comprehensive policy reforms that tackle specific socio-economic issues. Meanwhile, coherence is also needed in the policy domains that affect cleaner and resource efficient growth of the companies and economies in EaP countries (see for instance, OECD 2015 and 2018). Significant progress has been made in adjusting energy tariffs and raw material prices in some EaP countries in the past decade (e.g. in Armenia, Belarus, Georgia and Ukraine), but this does not seem to have provided sufficient incentive to encourage firms to take RECP measures.

This Stakeholders' Guidebook aims to focus on issues surrounding the information gap, chiefly regarding SMEs' familiarity with government subsidies and financial products and programmes. While recognising the importance of other elements, such as regulatory frameworks, the availability of low-cost finance, maturity of technologies and the capacity of human resources at various levels, the Guidebook is intended to help SMEs navigate the evolving landscape of support measures, products and mechanisms for RECP finance. It does intend to provide an exhaustive list of financial opportunities in the EaP countries, but to outline existing and emerging examples of financial solutions for RECPs by SMEs.

Figure 1.3. Major constraints on financing RECP measures in EaP countries



Note: The blue shaded areas are the main focus of this Stakeholders' Guidebook.

Source: Authors' research.

These constraints are observed in other regions as well. As of February 2018, UNIDO is also conducting a study of RECP finance with input from Ernst & Young, in collaboration with National Cleaner Production Centers (NCPCs) in five target countries (India, China, Colombia, Tunisia and South Africa). Its preliminary findings reveal that on the one hand, SMEs and manufacturing companies face various difficulties in getting green credits or loans. These include:

- lack of credit history, collateral and professional management skills
- irregular revenues, weak financial assessment capacities and accounting systems
- incomplete business proposals in loan applications
- a perception that they are riskier than more mature companies
- a lack of funding tools for SME projects

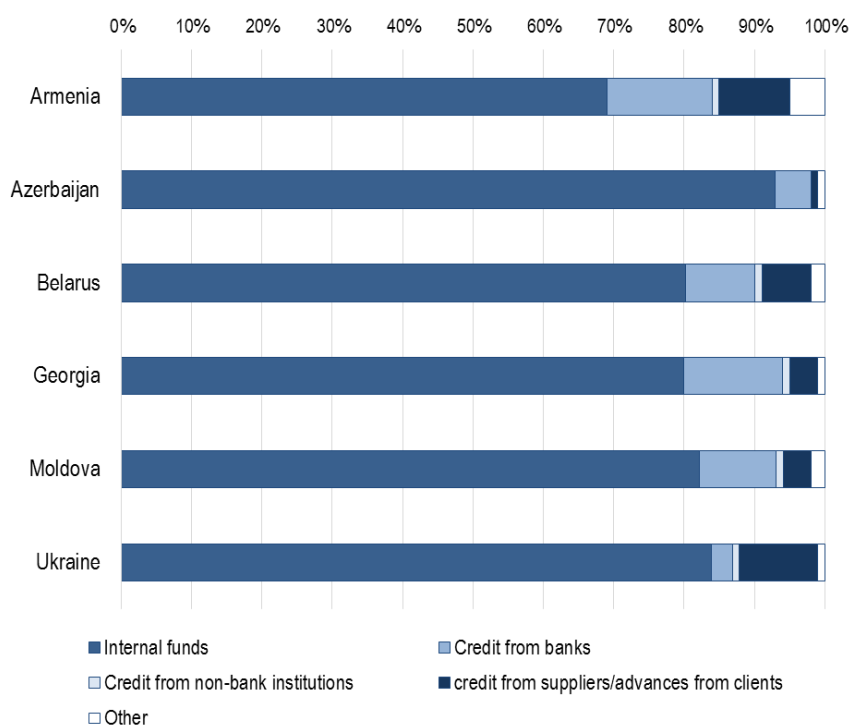
- higher lending costs for SMEs in developing countries.

On the other hand, banks and financial institutions often consider RECP intervention proposals as long-term projects with too long a time frame that are not sufficiently cost-effective. Financial institutions often consider them to be unreliable. Furthermore, infrastructure and development banks and financial institutions often lack the expertise to evaluate RECP projects, which are generally perceived as risky because of their intangible aspects.

1.3. Capital sources available to SMEs to promote RECP investment

Internal funds are by far the largest source of finance for SMEs in EaP countries, as shown in Figure 1.4, for example from 69% in Armenia to 93% in Azerbaijan between 2011 and 2014 (EBRD, 2015). Bank credits are the main external financing source, followed by non-bank credits (e.g. microfinance institutions and leasing companies). These numbers are based on research for SMEs in general, but UNIDO's research on RECP in the EaP countries confirmed that this is also largely applicable to finance for potential RECP measures.

Figure 1.4. Breakdown of finance types used by SMEs in 2011-2014



Source: Based on EBRD (2015).

There are several financial institutions in EaP countries that have provided financing to SMEs for investments in resource efficiency and cleaner production (RECP). Finance has been provided in two main ways. First, many of the institutions have channelled finance made available by international public financial sources (Table 1.1). These sources are diverse and include donor governments, multilateral and bilateral development banks and climate funds. Technical assistance for planning and implementing RECP measures is

often available with the support of donor governments and multilateral providers of finance (often in the form of grants).

Second, some local financial institutions in EaP countries have their own lending programmes and provide loans to SMEs for RECP from their balance sheets. For instance, ProCredit Bank Group operates its Eco-Credit Programme in Georgia and Moldova, and the Ukgasbank and the Megabank offer lending for RECP in Ukraine.

Some of the EaP governments already work with local financial institutions and provide companies, including SMEs, with fiscal support to facilitate investments in RECP measures or a broader range of investment activities. Belarus and Ukraine provide public financial resources to RECP through selected partner banks and leasing companies. Produce in Georgia, Georgia's state programme, while not limited to RECP investment, provides 10% co-financing of bank loan interest rates and 12% for the annual interest rate of leasing for 24 months. Armenia's Loan Guarantees Provision Programme supports Armenian entrepreneurs by guaranteeing up to 70% of the principal of the loan and the interest rates for up to five years.

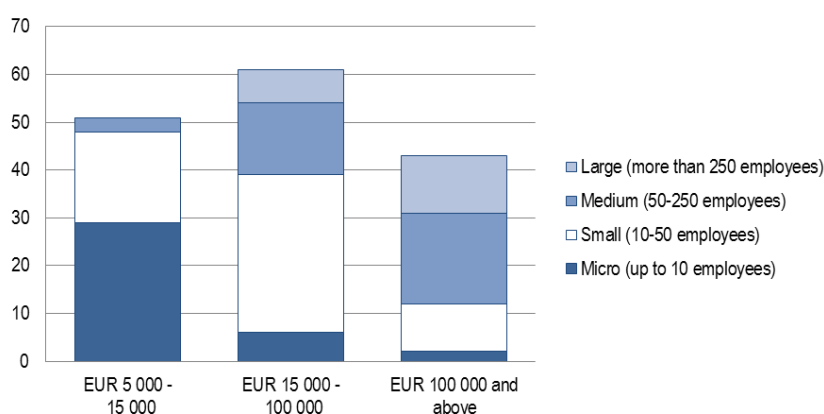
Table 1.1. Examples of programmes that are supported by development financial institutions and can be used for RECP

| Institution/country (in alphabetical order) | ARM | AZE | BLR | GEO | MDA | UKR | Examples |
|--|-----|-----|-----|-----|-----|-----|---|
| Examples of multilateral institutions | | | | | | | |
| European Bank for Reconstruction and Development (EBRD) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Sustainable Energy Finance Facility, Energocredit programmes, FINTECC programmes, IQ Energy, DCFTA SME Facility |
| European Investment Bank | ✓ | | | ✓ | | ✓ | InnovFin programmes |
| Global Climate Partnership Fund | ✓ | | | ✓ | | | Credit line for climate-related projects |
| Global Environment Facility | ✓ | ✓ | | ✓ | ✓ | | Small grant projects (often part of MDBs credit-line programmes) |
| Green Climate Fund | | | | ✓ | | | GCF-EBRD Sustainable Energy Financing Facilities |
| Green for Growth Fund | ✓ | ✓ | | ✓ | ✓ | ✓ | Credit lines for leasing and lending for energy efficiency at SMEs. |
| Nordic Environment Finance Corporation | | | ✓ | ✓ | | ✓ | Cleaner production |
| World Bank (International Bank for Reconstruction and Development and International Development Association) | ✓ | | | | | ✓ | Energy-efficiency programmes |
| Examples of bilateral donors and institutions | | | | | | | |
| Austria | ✓ | | | ✓ | | | Grant components for FINTECC, MDBs credit-line programmes, etc. |
| European Union (other than EIB) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | EU4Business loans, grant components for FINTECC, MDBs credit-line programmes, etc. |
| FMO (Dutch Development Bank) | | | | ✓ | | | Credit lines through microfinance |
| KfW/Germany | ✓ | | | ✓ | ✓ | ✓ | Energy-efficiency programme for SMEs |
| Sweden | | ✓ | | ✓ | ✓ | ✓ | Tillväxtverket Demo Environmental Programme |

Source: Authors' research.

The scale of finance needed for RECP varies widely depending on the size of a company (Figure 1.5), and the technology involved. Extending the financial options could help meet the diverse needs of SMEs for RECP investment with the best (and cheapest) financial solutions available to them. Sub-sections 1.3.1 to 1.3.2 outline how different financial sources have supported, or can potentially support, RECP investments by SMEs in EaP countries. For instance, commercial bank lending, mainly with credit lines extended by DFIs, has already been widely used for RECP in all the EaP countries. Leasing, microfinance and the Energy Service Company (ESCO) model have been used in some countries (Armenia, Belarus, Moldova and Ukraine) to a lesser degree than collateral lending by commercial banks. Green bonds and asset-based financing could potentially play a major role in financing RECP measures by SMEs, but have not yet been used at scale.

Figure 1.5. Scale of finance needed for RECP

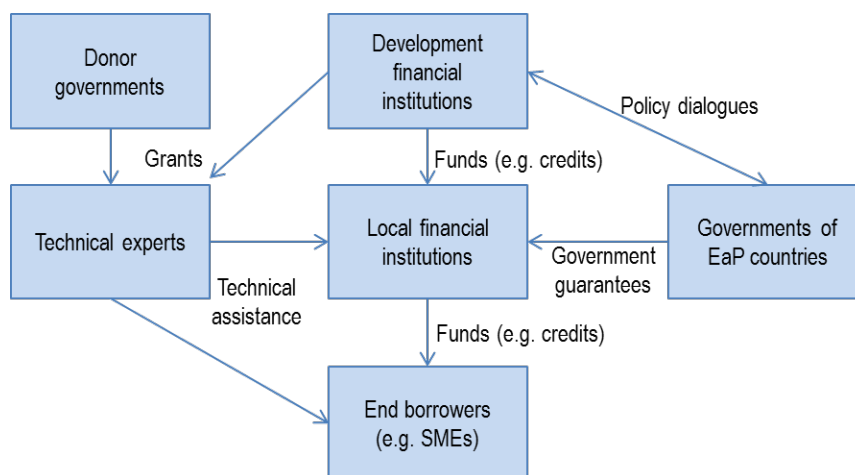


Source: UNIDO survey.

1.3.1. Bank lending

A number of local commercial banks and state-owned banks in EaP countries deliver credit lines to SMEs for RECP investments. As shown in Table 1.1, such credit lines are extended by development financial institutions (DFIs), and have been used extensively to address financing needs of disaggregated groups of stakeholders, such as SMEs and smallholder farmers (Crishna Morgado and Lasfargues, 2017). Figure 1.6 illustrates how a credit-line program typically works, engaging various stakeholders such as DFIs, local financial institutions and local governments.

“Green” credit lines are distinguished from regular credit lines in that they require the financing to support projects that address environmental and climate issues at SMEs, which thus applies to RECP. In the past decade, some DFIs and funds have extended such credit lines to local banks in EaP countries (OECD, 2016b). Green credit lines have also been channelled through other types of financial institutions in the region, such as microfinance institutions and leasing companies. The DFIs include: the European Bank for Reconstruction and Development (EBRD); the European Investment Bank (EIB); the Green for Growth Fund (GGF); the Global Climate Partnership Fund (GCPF); the International Finance Corporation (IFC); KfW; the Nordic Environment Finance Corporation (NEFCO), among others.

Figure 1.6. Schematic illustration of a credit-line programme

Source: Based on Shishlov, I. et al. (2017).

SMEs can also benefit from credit lines not specifically labelled as “green” to purchase equipment and working capital for RECP. For instance, EBRD’s credit-line programmes for export-oriented SMEs (e.g. in the context of the Deep and Comprehensive Free Trade Areas, or DCFTA) were not necessarily designed to support only RECP measures, but some of the end borrowers did purchase equipment for energy efficiency through this programme (OECD, 2018). The European Union’s EU4Business was designed to facilitate SMEs’ access to finance in EaP countries (see Box 1.1). The government-led SME promotion mechanisms that do not have an explicit focus on RECP (e.g. interest and collateral support for lending to SMEs in Georgia) can also potentially help SMEs take out loans to finance their RECP measures. However, potential of these measures to improve material efficiency and reduce negative environmental impact should be carefully monitored.

In many cases, SMEs can obtain detailed information on individual credit-line programmes through their websites in English and a local language(s). Chapter 2. shows some examples of such programmes, and dedicated websites to the programmes or related contact information that can offer SMEs a better understanding of eligibility criteria, partner local financial institutions and the application process.

Credit line programmes usually offer SMEs not only loans but assistance strengthening their knowledge of, for instance, applicable technologies, understanding the current energy use, and assessing the costs and benefits of RECP activities (Figure 1.5). Such technical assistance components are often supported by grants from the development bank itself and from the bilateral donors or international climate funds. They include, for instance, Austria, the European Union (EU), the Global Environment Facility, Korea and Sweden.

Box 1.1. EU4Business

The European Union's EU4Business was established to help tackle barriers to finance, support and training faced by SMEs in EaP countries: that is, Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova and Ukraine. EU4Business can provide:

- direct or indirect financing, such as loans or guarantees, often via third parties such as banks or partner organisations
- training, coaching and mentoring
- networking opportunities at fairs and on trade missions.

SMEs are given better access to finance, quality coaching, often from international experts, and the opportunity to improve their knowledge in such fields as exporting to the EU. Businesses run by women get targeted help, with the aim of boosting female entrepreneurship across the six EaP countries.

SMEs in countries that have signed an Agreement on a Deep and Comprehensive Free Trade Area (DCFTA) with the EU get additional support from the DCFTA Facility for SMEs. These funds help SMEs in Georgia, the Republic of Moldova and Ukraine adapt their processes and procedures to comply with EU rules and so make the most of the new, more open EU export market.

For further information, see: www.eu4business.eu/

or contact

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1.3.2. Non-bank financing

Diversifying financial sources and instruments through reforms of the financial sector has great potential for lowering financial costs and complementing collateral lending. This can help attract various actors, and in the long term, facilitate SMEs' access to financing, including financing for RECP. Making RECP a priority in financial sector development could encourage both the financial sector and governments to shift financial flows from "brown" to "green," including in EaP countries (OECD, 2017 and 2018).

Non-bank intermediated financing, such as leasing, introducing energy service company (ESCO) models and microfinance, is relatively under-developed in EaP countries. However, in Armenia, Belarus and Ukraine, for example, such financial instruments have already been employed for RECP (Table 1.2.). Financial sector reforms, especially the development of capital markets and financial sector infrastructure, are a pressing concern for EaP countries. Their capital markets are still in an early stage of development, and use

of bond and equity finance has been limited; financing for SMEs through these instruments is virtually unknown. The trade finance market for SMEs is also not well developed. Only the largest companies use trade finance instruments, such as export credit guarantees, letters of credit and insurance.

Table 1.2. Non-bank green financial instruments used by SMEs in EaP countries

| Country | Leasing | ESCOs | Microfinance | Examples |
|------------|---------|-------|--------------|----------------------------------|
| Armenia | ✓ | | ✓ | ACBA Leasing, SEF International |
| Azerbaijan | | | | |
| Belarus | ✓ | | | JSC Promagroleasing |
| Georgia | | | ✓ | MFO Cristal |
| Moldova | ✓ | | | ICS Total Leasing & Finance S.A. |
| Ukraine | ✓ | ✓ | ✓ | Ukreximbank, Megabank, UkrESCO |

Notes: 1. The symbol ✓ indicates which categories of financial instruments are used or available in a given country. 2. ESCO stands for Energy Service Companies.

Source: UNIDO analysis.

Leasing

Leasing is a potentially promising financial instrument for SMEs to support their RECP activities (e.g. energy efficiency, renewable energy and cleaner production), including in middle-income countries (IFC, 2009). However, the leasing industry in general is not well developed in the EaP countries, although some have made progress in this respect (OECD, 2016). For example, ACBA Leasing in Armenia, with the support of DFIs such as the Green for Growth Fund, has provided lease financing to more than 150 projects, including solar power plants, solar water heaters and high-efficiency manufacturing plants (ACBA, 2017). The small size of the leasing sector in EaP countries has discouraged international investment in this industry, and funds for leasing companies are scarce. On the demand side, a limited awareness of leasing products among potential users has also inhibited the development of the leasing sectors in the region.

SMEs in particular can benefit from leasing because it normally does not require additional collateral, and its repayment structure is often more flexible than regular collateral lending. Some countries often have policies on tax advantages for leasing. For example, in Georgia, lease payments are fully deductible, which decreases the taxable profit, while in the case of a loan, only interest payments are deducted as cost.

Several local and development financial institutions provide “green” leasing products available to SMEs in some of the EaP countries (e.g. Armenia, Belarus, Moldova and Ukraine). Examples include ACBA Leasing in Armenia, as well as JSC Promagroleasing in Belarus and ICS Total Leasing & Finance S.A in Moldova. The country chapters provide more detailed information on these and other programmes.

Microfinance and microcredit

Microfinance and microcredits could be one way of improving the access of SMEs (especially small enterprises) to finance for smaller projects, including RECP measures. The amount of lending required for RECP investments, especially among SMEs (including small farmers), is often greater than what is available from their internal

sources but less than what traditional commercial banks offer as collateral loans (OECD, forthcoming).

Small and micro-enterprises and farmers in EaP countries could benefit from microfinance institutions' extensive networks, covering both cities and rural villages, as well as on their deep knowledge of their borrowers' circumstances. Microfinance can also serve larger SMEs that have difficulty in accessing credit from banks – due to economic difficulties or for reasons such as lack of security, their current level of bank debt, their difficulties with existing borrowing, high collateral requirements or lack of a track record.

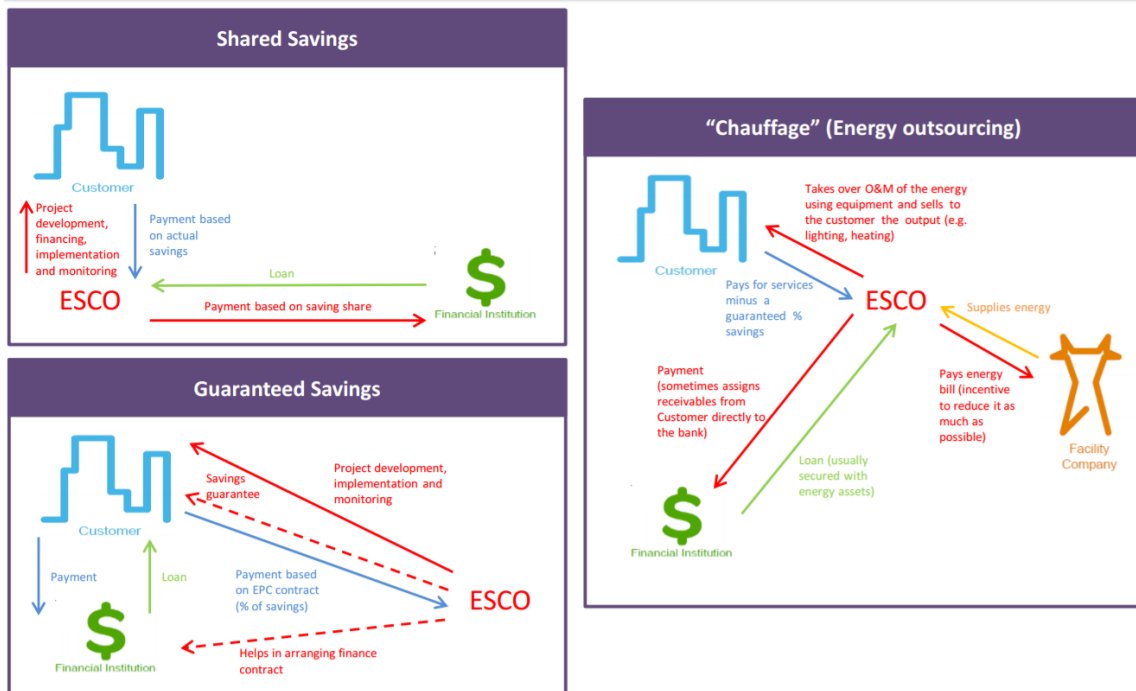
Microfinance can be used for simple RECP measures, such as polyvinyl chloride (PVC) windows, more efficient refrigeration equipment for a food processor, or more energy-efficient heating systems in offices. However, for larger investments, such as more efficient production machinery or rooftop solar installations, the interest rates offered by microfinance institutions may be too high (OECD, forthcoming; 2018). Development financial institutions often provide credit lines to support microfinance institutions, to address the requirements of RECP (e.g. long payback periods and greater levels of technical uncertainty over energy efficiency, or renewable energy investments). For instance, Microfinance Organisation Crystal in Georgia and the Dutch Development Bank, FMO, have reached a USD 10 million loan agreement. They plan to disburse USD 1 million as green finance (OECD, 2018).

Energy Service Companies (ESCOs)

Energy Service Companies (ESCOs) are a type of energy-efficiency service provider “that delivers energy services and/or other energy-efficiency improvement measures in a user's facility or premises, and accepts some degree of financial risk in doing so” (IEA, 2015). The payment for the services delivered is entirely or partly based on how much energy consumption is reduced, and on meeting other agreed performance criteria. Figure 1.7 illustrates typical ESCO models, while more detailed descriptions can be found in, for instance, OECD (2015b).

Ukraine started to use ESCOs a decade ago. UkrESCO enables Ukrainian enterprises and other neighbouring countries to reduce their energy and energy consumption in the production process. The Green for Growth Fund can also provide financing arrangements to ESCOs for projects that aim to save a minimum of 20% energy or CO₂ savings (GGF, n.d.). Some progress has been made and successes achieved, but Ukraine's ESCO market has had varying success in the past two decades (OECD, 2016). This highlights the lack of an adequate framework for a well-functioning and self-sustainable private sector for energy efficiency. A range of barriers to ESCOs remain. The energy tariff is too low to attract investment in RECP, access to finance is difficult, few accounting and tax regulations on energy performance contracts exist, and information and skills are lacking.

Figure 1.7. Typical ESCO models



Source: Adapted from OECD (2015b).

Asset-based financing

In OECD countries and increasingly in emerging economies, asset-based finance is used by SMEs for their working capital needs and to support domestic and international trade (OECD, forthcoming). Through asset-based financing, SMEs could take loans based on the value of specific assets. These assets include accounts receivable, inventory, machinery, equipment and real estate, rather than the firms' own credit standing. In this way, the instrument can serve the needs of young and small firms that have difficulties in accessing traditional lending.

As an example of asset-based financing, warehouse receipts financing (WRF) is used to provide loans to firms by requesting them to collateralise their crop stocks in a warehouse. WRF is typically used for farmers, food processors or exporters. The harvested crop is stored in a licensed warehouse that issues a receipt proving that the commodity is physically in the warehouse. This receipt serves as a security for the loans provided. The EBRD and Ukraine started a pilot project in 2015 that issued the first crop receipts for pre-harvest financing. Experts estimate that in the medium term, crop receipts could provide at least USD 1.5 billion of additional liquidity for producers (Koriakin and Kirchner, 2016). In Georgia, the Swiss Agency for Development and Co-operation (SDC) also helped Georgia establish the country's first warehouse-receipt financing scheme under the Promoting Access to Finance and Agricultural Insurance (PAFAI) project (BFC, 2017).

To support access to RECP finance, institutions could create special funds dedicated to providing asset-based finance specifically to designated green assets (OECD, forthcoming). WRF could also potentially facilitate the development of climate-friendly agribusiness value chains by establishing specific sustainability-related screening criteria, as well as climate-related risks. Enabling factors for WRF include supporting legislation, a responsible regulatory agency, licensed and supervised public warehouses, and banks familiar with warehouse receipts (Hollinger et al., 2015).

Green bonds

Green bonds³ are attracting more interest in some EaP countries (e.g. Georgia, see OECD 2018) and in many other regions of the world. Analysis shows that, globally, bond financing for renewables, energy efficiency and low-carbon vehicles could reach USD 620 billion to USD 720 billion per year by 2035, from USD 95 billion in 2016 (OECD, 2017b). Despite the potential, mobilising bond markets for RECP at SMEs in EaP countries is not an easy task. First, before bonds can be issued, it is necessary to accumulate a critical volume of RECP projects. Even in developed countries, SMEs can rarely access bond markets, given their size and the limited amount of finance they require (van der Schans, 2012). Second, in the EaP countries, green bonds may be difficult to promote given the lack of the appropriate guidelines and eligibility criteria, capital market infrastructure and the relative lack of sophistication of local institutional investors. Nonetheless, green bonds for projects in these countries could potentially be

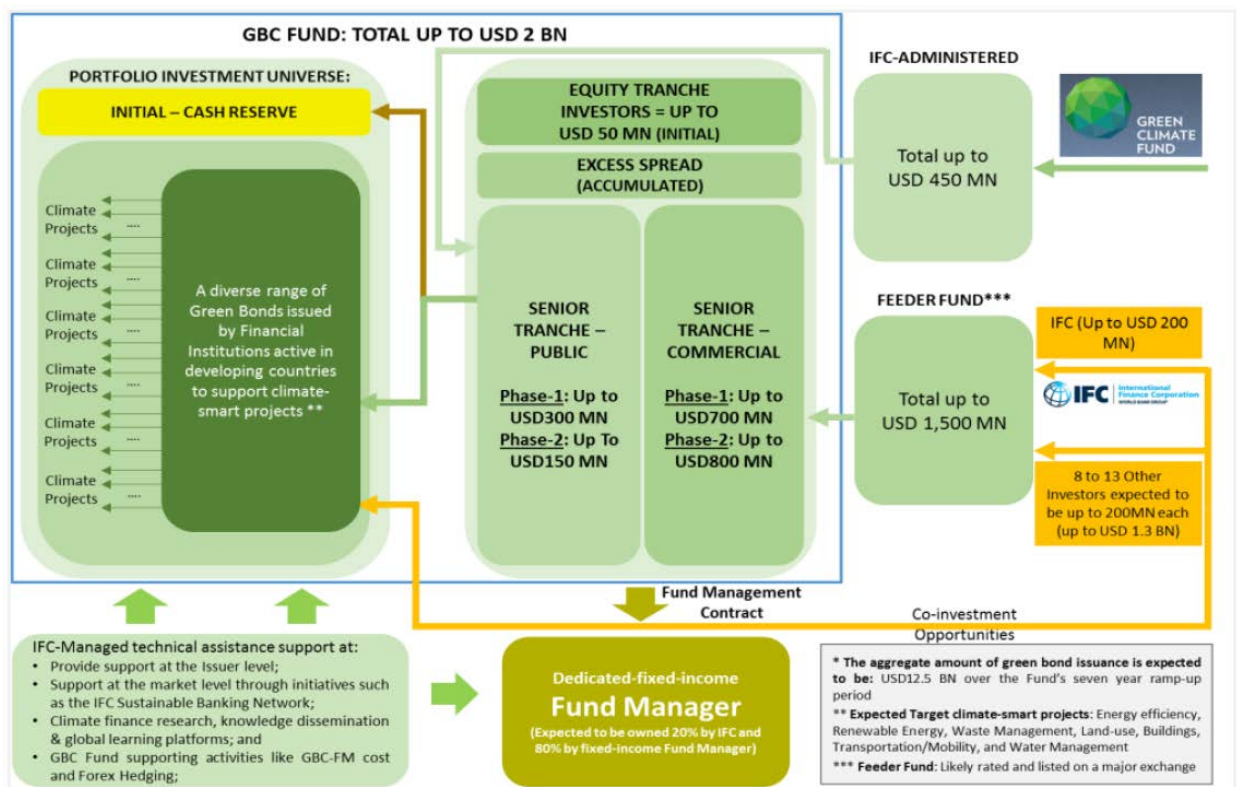
³ A bond, in general, is a debt security under which the issuer owes the holders a debt and, depending on the terms of the bond, is obliged to pay them interest (the coupon) and/or to repay the principal at a later date, known as the maturity date. Interest is usually payable at fixed intervals (semi-annual, annual and sometimes monthly) (CTI Reviews, 2016).

purchased in a capital market abroad, or if development financial institutions are willing to act as underwriters.

In terms of scalability, “bonds typically have to have a size of above USD 200 million to be relevant for institutional investors” (European Commission, 2016). To address this mismatch, development banks have been developing green bonds targeted for SMEs, by aggregating and securitising loans for SMEs, and then issuing the resulting green bonds to investors. One example outside the EaP countries is the Inter-American Development Bank (IDB)’s Regional Green Bond Facility. This aims to address demand-side energy efficiency in Latin America and the Caribbean by aggregating projects to mobilise institutional funds at scale for small and medium-sized energy service companies (IDB, 2015).

Further, development financial institutions, such as the International Finance Corporation (IFC), provide cornerstone investments to purchase green bonds for their “demonstration issuance”. For instance, Azerbaijan and Georgia are among target countries of the IFC’s Green Cornerstone Bond Fund programme (see Figure 1.8). This is a platform to invest in green bonds issued by financial institutions active in developing countries.

Figure 1.8. IFC’s Green Cornerstone Bond Programme



Note: GBC Fund stands for the Green Cornerstone Bond Fund.

Source: Adapted from IFC (2016) Green Cornerstone Bond programme brochure.

1.3.3. Risk-mitigation instruments

Given the high interest rates prevailing in the EaP countries, reducing capital costs and mitigating project-related and corporate credit risks could help SMEs access financing for

RECP measures. Loan (credit) guarantees are risk-mitigation instruments that have already been widely provided by the EaP countries' governments (e.g. Armenia, Moldova, Ukraine). Other public interventions include, but are not limited to: grants and soft or concessional loans (e.g. Belarus, Ukraine), interest subsidies (e.g. Georgia), currency risk hedging (e.g. Armenia) and fund seeding (e.g. Georgia).

Indirect intervention could include, for example, feed-in tariffs for decentralised rooftop solar panels, and biomass, which could also encourage investment (e.g. Belarus and Ukraine). The Central Bank of Armenia bears currency risks for the loans to energy-efficiency projects under the German-Armenian Fund's Energy Efficiency Programme for micro-enterprises and SMEs.

The European Investment Bank's InnovFin, one example of the programmes of multilateral development banks, is a financial mechanism for start-ups, SMEs, mid-caps and large companies that can provide instruments including guarantees, equity financing and debt financing. A number of publicly funded programmes are available in the region to support SMEs. Most are not specifically dedicated to green or RECP measures, but upgrading technologies is often part of the scope of such programmes.

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van der Schans, D. (2012), SME Access to External Finance, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32263/12-539-sme-access-external-finance.pdf.

2. Country-specific stakeholders' guidebooks

The following chapters provide brief overviews of the support programmes for resource efficient, cleaner production (RECP) activities by small and medium-sized enterprises (SMEs) in the EU Eastern Partnership countries (EaP countries: Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine). These chapters are divided by country, and offer such information as:

- fiscal and policy support provided by the national government of the country
- programmes by international development financial institutions and donor governments
- programmes run by local financial institutions.

To help SMEs access further information on individual programmes, the chapters also provide contact details of these programmes and links to dedicated websites. It should be noted that the contact details were obtained through publicly available information as of February 2018.

2.1. Armenia

2.1.1. Government support

Armenia's government does not provide dedicated financial support for RECP, but the Loan Guarantees Provision Programme administered by the Small and Medium Entrepreneurship Development National Centre ([SME DNC](#)) offers Armenian SMEs access to financing for their RECP investments.

This programme provides entrepreneurs with guarantees up to 70% of the loan principal and the interest rates for up to five years. The maximum amount guaranteed is limited to AMD 15 million (about USD 30 900). The programme also enables partner banks to provide loans at interest rates that compare favourably with those typically offered in the market.

The following types of SMEs are prioritised by the Loan Guarantees Provision Programme:

- SMEs operating in manufacturing, services and trade sectors
- SMEs operating in regions with low levels of economic activity (those close to the border and rural settlements, disaster zones and former industrial and scientific sites)
- import-substituting and exporting SMEs, and those with export potential
- SMEs introducing and using new technologies and innovations.

Applications for the SME DNC's loan guarantees are made through the Centre's partner banks in Armenia (listed in Table 2.1). An applicant SME can select the partner bank to which a loan application is submitted.

Table 2.1. List of partner banks for applications to SME DNC's Loan Guarantees Provision Programme

| Bank | Contact information |
|---------------------------|--|
| ACBA-Crédit Agricole Bank | Address: 1 Byron, Yerevan Tel: +374 10 52 51 42, 56 58 58, 56 85 85 acba@arminco.com, URL: www.acba.am |
| Anelik bank | Address: 75 Marshal Baghramyan, Yerevan Tel: +374 10 22 65 26, 22 87 17, 22 87 44 anelik@arminco.com, URL: www.anelik.am |
| Ardshinbank | Address: 13 Grigor Lusavorich, Yerevan Tel: +374 10 58 02 81, 52 85 13 office@ashb.am, URL: www.ashib.am |
| Inecobank | Address: 17 Tumanyan, Yerevan Tel: +374 10 56 37 25 inecobank@inecobank.am, URL: www.inecobank.am |
| Unibank | Address: 2 Amiryan, Yerevan Tel: +374 10 52 13 20, 52 15 32 unibank@unibank.am, URL: www.unibank.am |
| Armbusinessbank | Address: 48 Nalbandyan, Yerevan Tel: +374 10 54 05 02, 54 03 24 info@armbusinessbank.am; URL: www.armbusinessbank.am |
| VTB Bank (Armenia) | Address: 46 Nalbandyan, Yerevan Tel: +374 10 56 58 60, 56 55 78 headoffice@vtb.am; URL: www.vtb.am |
| ArmSwissBank | Address: 10 Vazgen Sargsyan, Yerevan 0010, RA Tel: +374 10 54 07 28, 54 07 36 www.armswissbank.am |

Source: Based on SME DNC (n.d.).

There are five steps that a company interested in the Loan Guarantee Provision Programme, a partner bank and the SME DNC must take together, from the application to the approval of the guarantee. Table 2.2 summarises the key steps, necessary documents, information on relevant timelines, and relevant entities involved.

Table 2.2. Steps for application to the Guarantee Provision Programme by SME DNC

| Step # | Step | Description |
|--------|--|--|
| 1. | Submission of the application for the Loan Guarantee Provision | A company provides the following document to one of the partner banks – application form for guarantee (in the approved form) – a copy of current charter – a copy of the state registration certificate – copies of financial statements for the last accounting period – other information at the applicant's discretion. |
| 2. | Loan application analysis | SME DNC and the bank to which the application is sent visit the applicant enterprise. The bank analyses the application and presents the proposal on loan provision and the necessary guarantee terms to the SME DNC of Armenia. |
| 3. | Qualification Committee | The special Qualification Committee discusses the proposal of the bank within seven workdays and presents its conclusion. |
| 4. | Decision of the Board of Trustees of the SME DNC of Armenia | Loan Guarantee Applications receiving a positive evaluation from the Qualification Committee are presented to the Board of Trustees of the SME DNC of Armenia for its final decision, to be concluded within seven workdays. |
| 5. | Contract signing and Guarantee provision | After making the final decision, the SME DNC of Armenia signs the Guarantee Contract with the applicant SME and provides the Guarantee. |

Source: SME DNC (n.d.) (accessed on 29 January 2018).

In general, SME DNC provides support programmes for start-ups and existing enterprises, to enhance capacity at SMEs. The support is provided through annual SME State Support Programmes, with resources allocated from the state budget. Between 2002 and 2016, more than 6 000 SMEs benefitted from various forms of support from the SME DNC (SME DNC, 2016). The SME DNC's aims include (SME DNC n.d.b):

- ensuring a dialogue between SMEs and the government
- increasing efficiency and competitiveness of SMEs
- ensuring availability of business development services for SMEs
- expanding the financial opportunities for SMEs
- promoting innovations and R&D activities of SMEs
- assistance in setting up new SMEs
- supporting internationalisation of SMEs' activities.

Further information can be found at:

- English: www.smednc.am/en/content/financial_support/
- Armenian: www.smednc.am/am/content/financial_support/

2.1.2. Programmes by international providers of finance

SMEs in Armenia can access a range of loan programmes to finance their RECP measures. Table 2.3 outlines several examples of credit-line programmes available for RECP financing. The table is not intended to provide an exhaustive list of the

programmes available but to suggest where the relevant information and contact persons or institutions can be found. In general, a range of Armenian banks act as partner financial institutions for the respective programmes. Information on these banks can be obtained at the links noted in the table.

The European Bank for Reconstruction and Development (EBRD) runs the Energocredit programme under its Green Economy Financing Facility. The programme also has a grant component funded by the European Union Neighbourhood Investment Facility (NIF) and the EBRD Shareholder's Special Fund. It provides successful projects, based on predetermined criteria on environmental performance, with 10% to 15% cash back on the loan amount.

Another project from EBRD is its FINTECC (Finance and Technology Transfer Centre for Climate Change) programme. This was designed to promote technology transfer of technologies that facilitate low-carbon and climate-resilient businesses in EaP countries and other countries where the EBRD invests. The FINTECC offers incentive grants for introducing eligible technologies, which are available as a complement to EBRD financing. Companies can also benefit from technical support, including energy auditing, provided by the EBRD and international consultants (EBRD FINTECC, n.d.).

KfW and the Central Bank of Armenia have established the German-Armenian Fund (GAF), under which the Energy Efficiency Programme for Armenian Micro-, Small and Medium-sized Entities (MSMEs) has been set up. Through this programme, KfW provides long-term financing to MSMEs in the local currency for energy efficiency and renewable energy projects, for which the Central Bank bears the currency exchange risks.

The Global Environment Facility (GEF) and the United Nations Development Programme (UNDP) offer a small grant programme to, for instance, promote the demonstration, development, transfer and widespread use of renewable energy technologies and sustainable land-use management measures at the community level. The Green Climate Fund (GCF) approved its support for the GCF-EBRD Sustainable Energy Financing Facilities (EBRD, 2016).

Guarantee, equity and loan

InnovFin programme, from the European Investment Bank (EIB), is an EU financial mechanism offering financial solutions for start-ups, SMEs, mid-caps and large companies. The options provided are diverse, including guarantees, equity financing and debt financing. InnovFin SME Guarantee is a guarantee mechanism for debt financing. The European Investment Fund (EIF) provides guarantees to financial intermediaries, to improve access to finance for innovative SMEs and mid-caps. The InnovFin SME Guarantee programme enables financial intermediaries (e.g. local commercial banks) to offer debt financing (loans, bonds and leases) on favourable terms to innovative SMEs and small mid-caps.

Box 2.1. Eligibility criteria for the InnovFin programme

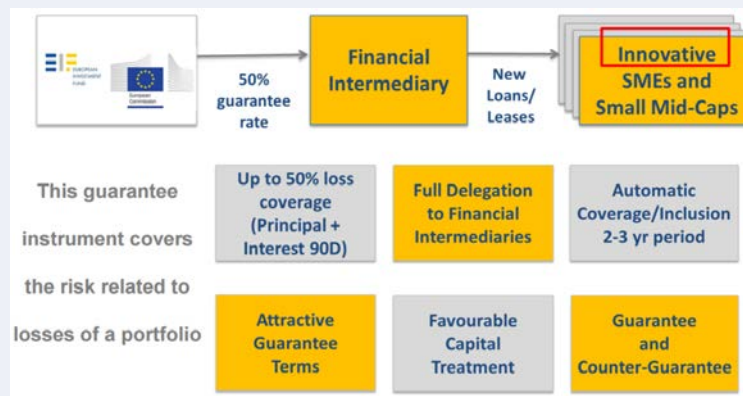
The InnovFin SME Guarantee supports the following types of companies:

- SMEs investing in the production or development of innovative products, processes and/or services that present a risk of technological or industrial failure;
- SMEs and small mid-caps that are “fast-growing enterprises”, i.e. their workforce or turnover has increased by at least 20% annually over the past three years;
- SMEs and small mid-caps that have significant innovation potential (i.e. satisfying at least one “innovation criterion” out of a set of pre-defined eligibility criteria).

Products eligible for the InnovFin are summarised below:

- loans, bonds and lease financing
- investments (in tangible or intangible assets), working capital or business transfers
- term or revolving facilities
- amounts: at least EUR 25 000, up to a maximum of EUR 7.5 million
- maturity: at least 1 year, up to a maximum of 10 years
- EUR or local currency.

How does InnovFin Guarantee program work?



Source: D’Hooge, M. (n.d.).

Microcredit

Another example is loan financing through a microfinance institution, the SEF International, for energy efficiency and renewable energy financing and small and medium enterprises in rural areas. The EBRD and the SEF International agreed in 2016 on a second energy-efficiency loan through its Energocredit facility. The programme offers the equivalent of USD 1 million in local currency to rural customers for energy-efficiency investments. These include energy and cost-efficient heating, cooling, ventilation systems and small business equipment. Loans are in the range of AMD 100 000 to AMD 2.5 million (USD 207 to USD 5 175), with a 10% grant element for eligible projects provided by the EBRD Shareholder Special Fund (EBRD, 2016b).

Leasing

ACBA Leasing Credit Organisation CJSC (ACBA Leasing) is a leading leasing company in Armenia, and also engages in the Green Leasing programme. The Green for Growth

Fund of Southeast Europe (GGF) and the European Fund of Southeast Europe (EFSE) capitalise this leasing programme. The Green Leasing programme provides leasing for energy-efficient equipment to companies in Armenia. The product is designed for large corporate clients, as well as SMEs and clients in the agriculture sector. The Green Leasing programme covers a wide range of objectives, such as:

- energy-efficient equipment and systems (including IT and office equipment designed to promote energy efficiency)
- solar water heaters (both for hot water and for heating)
- greenhouse equipment and drip irrigation systems
- means of transport that save resources and are relatively less polluting (electric vehicles, hybrid vehicles and gas-operated vehicles)
- biogas-producing equipment (from organic waste).

Table 2.3. Examples of programmes for RECP financing (Armenia)

| Name of the programme/mechanism | Provider of the finance | Focus | Dedicated webpage and contact information |
|--|--|---|--|
| Energocredit programme under its Green Economy Financing Facility | EBRD and EU | EE and RECP | Karen Arabyan, Tel: +374 60 440 118, karen.arabyan@energocredit.com www.energocredit.am/ |
| Energocredit facility to SEF International | EBRD, NIF | EE | Karen Arabyan, Tel: +374 60 440 118, karen.arabyan@energocredit.com www.energocredit.am/ sefmicro.org/index/eng/services/3 |
| Energy Efficiency Programme for Armenian Micro and Small and Medium-sized Entities | KfW and the Central Bank of Armenia (under the Germany-Armenia Fund) | EE | https://www.greenfinance.am/en/menu/where-can-i-apply-for-an-ee-re-loan (a list of partner Armenian banks is available on this webpage.) |
| Green for Growth Fund credit lines for leasing and lending for energy efficiency at SMEs | Green for Growth Fund | EE | Finance in Motion GmbH Tel: +374 11 977 900, armenia@finance-in-motion.com www.ggf.lu/project-portfolio/investments/armenia/ |
| Global Climate Partnership Fund (GCPF) credit lines for Ameriabank's green lending | GCPF | EE | Ameriabank: Elmira Adamyanyan Tel: +374 10 561 111, e.adamyanyan@ameriagroup.am https://www.gcpf.lu/renewable-energy-and-energy-efficiency-investments.html |
| Small Grants Programme, UNDP-GEF | UNDP-GEF | EE and sustainable land-use/forest management, etc. | Hovhannes Ghazaryan Tel: +374 60 530 000, hovhannes.ghazaryan@undp.org www.sgp.am/en/Contact_us |
| EBRD – FINTECC | EBRD, GEF | EE, RE and climate resilience | Astrid Motta, Principal, Sustainable Resource Investments FINTECC_ETC-SEMED@ebrd.com fintecc.ebrd.com/region/eitcs |
| InnovFin (under EU's Horizon 2020 programme) | EIB | Multiple | Representation for the South Caucasus Tel: +995 322006284, ibljisi@eib.org www.eib.org/products/blending/innovfin/index.htm |
| Green leasing | GGF and EFSE | EE and RE | ACBA Leasing Tel: +374 10 31 88 88 (80 89), +374 10 56 39 45 www.acbaleasing.am/greenleasing.html |
| EU4Business Loans | EU and partner banks | SME support in general | EU4Business +374 55 10 80 40, www.eu4business.eu/contact www.eu4business.eu/about |
| EBRD Women in Business Programme | EBRD, EU and Sweden | Support for women-led SMEs | EBRD, Tel: +37410 590901, knowhowarmenia@ebrd.com www.ebrdwomeninbusiness.com/?s=home&country=AM&language=hy&language=en&language=hy |

Source: Authors' research.

Note: EBRD = European Bank for Reconstruction and Development; EE = energy efficiency; EFSE = European Fund for Southeast Europe; EIB = European Investment Bank; GEF = Global Environment Facility; GGF = Green for Growth Fund; NIF = EC neighbourhood Investment Facility; RE = renewable energy; UNDP = United Nations Development Programme.

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2.2. Azerbaijan

2.2.1. Government support

Although it does not have any RECP focus, the Azerbaijan Republic National Fund for Entrepreneurship Support (ANFES) provides concessional loans of various sizes from the state budget. As of late 2016, the total credits amounted to more than AZN 1.9 billion (about USD 1.1 billion) (ANFES, 2017). Most of these loans were devoted to the production and processing of agricultural products (Ministry of Economy, 2016). The companies must apply for funding through one of the participating financial institutions. The proposal will be assessed by the participating financial institution and then by the ANFES, which in total should take less than 20 days (ANFES, n.d.).

ANFES has 54 participating financial institutions. The list of authorised financial institutions can be found on the Fund's website.

anfes.gov.az/en/show.page.php?guid=07ed3976-86b6-11e0-9371-001ec9df179b.

For more information, Telephone Information Centre of the Ministry of Economy:

- anfes.gov.az/en/pages/5f1201d9-228a-11e0-b17e-0022190362dd/195-2.html#submenu

The State Service for Agricultural Projects and Credit Management under the Ministry of Agriculture of the Republic of Azerbaijan also provides loans, mainly to small farmers in the agriculture sector. Loans are provided through local financial institutions (the authorised credit agencies) at preferential interest rates of 7% or lower in the local currency (State Service for Agricultural Projects and Credit Management, n.d.). The State Service was established to support start-ups engaged in production and processing of agricultural products, melioration, water economy and other areas of agricultural and related sectors. Box 2.2. outlines further details of the credits from the State Service.

The Azerbaijan Investment Company (AIC) is a sovereign equity fund that can provide equity investment in projects by SMEs in various sectors, with the exception of the oil and gas industry. The AIC's financial instruments also include venture capital from USD 1 million. The AIC's portfolio consists of various industries, such as heavy industry, agriculture, logistics, and food processing. However, AIC's investments are meant to be commercially viable and most of its investment sizes are large, at, on average, USD 11 million per project since its establishment (AIC, n.d.).

Box 2.2. How does the preferential credit mechanism by the State Service for Agricultural Projects and Credit Management work?

Targeted borrowers

- production and processing of agricultural products
- improvement of amelioration of irrigated lands and their provision with amelioration and irrigation equipment
- modernisation and development of the food sector (including warehouses)
- purchase of agricultural machinery and chemicals
- pilot projects of the Ministry of Agriculture
- establishment and development of private pedigree farms, implementation of artificial insemination activities in livestock breeding and other agrarian activities.

Ceiling for releasing credit funds

- under 1 000 AZN – micro-credits
- from 10 00 to 20 000 AZN – small-size credits
- from 20 000 to 50 000 AZN – medium-size credits
- from 50 000 to 200 000 AZN – big-size credits

Maturity period of credit funds

- Micro-credits – up to 2 years
- small and medium-size credits – up to 3 years
- big-size credits – up to 5 years.

Grace period of credit funds

- micro-credits – up to 12 months
- small and medium-size credits – up to 18 months
- big-size credits – up to 24 months
- borrowers pay only interest on credit during the grace period.

Source: State Service for Agricultural Projects and Credit Management (n.d.). agrocredit.gov.az/en/pages/view/183.

2.2.2. Programmes by international providers of finance

Table 2.4 outlines several examples of credit-line programmes available for RECP financing by SMEs in Azerbaijan. The table is not intended to provide an exhaustive list of available programmes but aims to point to the relevant information and contact persons/institutions. In general, a range of Azeri banks act as partner financial institutions for the respective programmes (e.g. Accessbank, Demir Bank, Finca, Muganbank and Unibank). Information on these banks can be obtained at the links mentioned in the table.

The European Bank for Reconstruction and Development (EBRD) has long provided credit lines under the Energocredit Azerbaijan programme to the local banks so they can provide loans for Azeri companies and households for energy-efficiency investments (Energocredit Azerbaijan, 2017). The programme itself was ended in 2017, but similar credit lines may still be available under the Green Economy Financing Facility (EBRD GEFF, n.d.).

The EBRD's FINTECC (Finance and Technology Transfer Centre for Climate Change) supports climate change-related activities, including Auto Azerbaijan's project, which includes several energy-efficiency initiatives. The EBRD provided Auto Azerbaijan with a loan of USD 13 million (EBRD, n.d.). Consultants approved by the EBRD also conducted a review of the energy and water efficiency measures within the project design to make recommendations for the best available technologies. Examples of the measures included in the investment plan are: low-emissions windows and thermal insulation; variable refrigerant flow systems; natural gas boiler and air-handling units; high-efficiency lamps (e.g. LED, TFL, CFL); car-washing recovery system (recovering 90% of the water used); and the automated Building Management System (BMS).

The Green for Growth Fund, Southeast Europe (GGF), also extends credit lines of USD 5 million to Muganbank, a financial institution that offers retail and corporate banking services in Azerbaijan. The credit lines are to be on-lent to finance energy-efficient measures by households, micro-enterprises and SMEs.

Table 2.4. Examples of programmes for RECP financing (Azerbaijan)

| Name of the programme/mechanism | Provider of the finance | Focus | Dedicated webpage and contact information |
|---|-------------------------|-------------------------------|---|
| Eneigo Credit programme under its Green Economy Financing Facility | EBRD and EU | EE and RECP | Nazim Mamedov +994 12 597 30 57: nazim.mamedov@energocredit.com www.energocredit.az/ |
| Green for Growth Fund credit lines for leasing and lending for energy efficiency at SMEs. | Green for Growth Fund | EE | Finance in Motion GmbH Tel: +374 11 977 900; armenia@finance-in-motion.com www.ggf.lu/project-portfolio/investments/azerbaijan/ |
| EBRD – FINTECC | EBRD, GEF | EE, RE and climate resilience | Astrid Motta, Principal, Sustainable Resource Investments Email: FINTECC_ETC-SEMED@ebrd.com finlecc.ebrd.com/region/eics |
| EU4Business Loans | EU and partner banks | SME support in general | EU4Business local numbers +994 124 907 016 www.eu4business.eu/contact www.eu4business.eu/about |
| EBRD Women in Business Programme | EBRD, EU and Sweden | Support for SMEs led by women | EBRD Tel: +994 12 497 1014/15 knowhowazerbaijan@ebrd.com www.ebrdwomeninbusiness.com/?s=home&country=AZ&language=az |

Source: Authors' research.

Note: EBRD = European Bank for Reconstruction and Development; EE = energy efficiency; EIB = European Investment Bank; GEF = Global Environment Facility; RE = renewable energy.

References

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- ANFES (n.d.), “Working mechanism of Azerbaijan Republic National Fund for Entrepreneurship Support”, www.anfes.gov.az/en/pages/e6502210-1f2b-11e0-abe4-2f80f755c2ce/Working%20mechanism%20of%20%20Fund.html#submenu (accessed 31 March 2018).
- EBRD (n.d.), “Auto Azerbaijan to open new high-spec, energy efficient facility”, www.fintecc.ebrd.com/cs/Satellite?c=Content&cid=1395248314077&d=Mobile&pagename=FINTECC%2FContent%2FFINTECC_CaseStudy (accessed 31 March 2018).
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2.3. Belarus

2.3.1. Government support

The Development Bank of the Republic of Belarus (the Development Bank) launched a programme for financial support to small and medium-sized enterprises (SMEs) in 2014. Its main objective is to offer Belarusian SMEs further access to credit and to exploit further possibilities of leasing for SMEs' investment projects at different stages of development. The key financial instrument under the programme is credits at an affordable cost for SMEs.

As shown in Table 2.5, this programme is run in collaboration with multiple partner commercial banks and a leasing company (JSC Promagroleasing) with experience in co-operating with SMEs. Implementation involves two steps:

1. The Development Bank provides financial resources to the selected partner banks and leasing company.
2. The partner banks and leasing company select borrowers under the criteria agreed on with the Development Bank, evaluate their financial condition and proposed projects, and decide whether to grant loans at a specified marginal rate (10% in Belarusian rubles, with a loan repayment period of up to 15 years).

This programme was not specifically designed for resource efficient and cleaner production (RECP), but the main objectives of its financial support, listed below, are well suited to the potential needs of SMEs that wish to invest in RECP measures:

- implementation of new technologies
- expansion of export potential, import-substituting production
- creation and extension of physical infrastructure
- acquisition, reconstruction, modernisation, construction and capital repair of fixed assets.

Table 2.5. Partner Belarusian financial institutions for the Development Bank's SME support programme

| Partner bank and leasing company | Contact information |
|----------------------------------|--|
| JSC Belgazprombank | www.belgazprombank.by/en/ |
| OJSC Bank BelVEB | eng.bveb.by/about/ |
| JSC Belaruskyy Narodny Bank | www.bnb.by |
| JSC Belinvestbank | www.belinvestbank.by/eng/ |
| CJSC MTBank | www.belinvestbank.by/eng/ |
| CJSC Alfa-Bank | www.alfabank.by/ |
| CJSC Bank VTB | www.vtb-bank.by/ |
| OJSC BPS-Sberbank | www.bps-sberbank.by/bank/en.index.html |
| JSC Priorbank | www.priorbank.by/en |
| JSC Bank Moscow-Minsk | www.mmbank.by/en/ |
| JSC Belagroprombank | www.belapb.by/eng/ |
| OJSC Paritetbank | www.paritetbank.by/ |
| JSC Promagroleasing | www.pal.by/ |

Source: Based on Development Bank of Belarus (n.d.).

Contact information

Development Bank of Republic of Belarus:

Tel: 8 (017) 385 96 12

Email: office@brrb.by

The Belarusian Fund for the Financial Support of Entrepreneurs, established in 1992, also provides loans and leasing, as well as guarantees for loans. The Fund has financed more than 1 200 projects of SMEs since its creation. The Fund also provides non-financial instruments to SMEs. These include provision of business-related information, consultations on various business issues, the development of contact and co-operation links between the industrial sector and small enterprises, the evaluation and examination of investment projects, the promotion of export, the production of innovative products and participation in start-up events (Belarusian Fund for the Financial Support of Entrepreneurs, n.d.).

Contact information:

Belarusian Fund for the Financial Support of Entrepreneurs

belarp.by/ru/contact

The government also provides enterprises with fiscal incentives for implementing Environmental Management Systems (e.g. ISO 14001 and STB ISO 14001). Companies with EMSs benefit from reduced rates on environmental taxes on air emissions, wastewater discharges and waste disposal (UNECE, 2016).

2.3.2. Programmes by international providers of finance

Table 2.6 outlines several examples of credit-line programmes available for RECP investments by SMEs in Belarus. The table is not intended to provide an exhaustive list of available programmes but aims to point to the relevant information and contact persons/institutions. In general, there are a range of local banks that act as partner financial institutions for the respective programmes. Information on these banks can be obtained at the links mentioned in the table.

The Belarus Sustainable Energy Finance Facility (BelSEFF) is a credit-line programme extended by the European Bank for Reconstruction and Development (EBRD). BelSEFF provides credit lines to Belarusian participating banks for on-lending to private and public Belarusian companies so that they can finance energy efficiency and small-scale renewable energy projects in eligible sectors. Partner banks for the BelSEFF include Belinvestbank JSC, MTBank CJSC, Belgazprombank JSC, Bank BelVEB OJSC, BPS-Sberbank (BelSEFF, 2017).

Box 2.3 shows the steps of an application to the BelSEFF programme. Further details of the programme, including eligible projects, can be found on its website: <https://www.belseff.by/page/eligibility-criteria>.

Box 2.3. How does the BelSEFF work?

To receive a loan under BelSEFF, the Application Form needs to be filled in and sent via email to: belseff@kpmg.com for assessment.

- Download the Application Form (English)
https://www.belseff.by/assets/files/application/Application_eng.pdf.
- Download the Application Form (Russian)
https://www.belseff.by/assets/files/application/Application_rus.pdf.

The BelSEFF programme works as follows.

1. The applicant sends the application with the project information to BelSEFF.
2. BelSEFF Team and a Belarusian participating bank undertake preliminary screening.
3. The applicant, the BelSEFF team and the participating bank discuss the eligibility and feasibility of the project.
4. If eligibility and feasibility are confirmed, the Belarusian participating bank provides the loan.

The company implements the project, which is monitored by the BelSEFF Team.

EBRD's FINTECC programme (see Section 2.1.2 for programme description) is also available in Belarus. FINTECC recently agreed to provide a grant of USD 0.3 million to PP Polesie LLC (Polesie) for installing a 2.4-megawatt combined cooling, heat and power plant (CCHP). An energy-efficiency audit helped Polesie identify potential energy efficiency-investment opportunities. The EBRD has agreed to extend a EUR 10 million (about USD 12.5 million) loan to Polesie for this CCHP installation (EBRD, 2016).

The Norwegian Environment Finance Corporation (NEFCO) Facility for Cleaner Production is a loan programme to promote the reduction of industrial pollution through efficient resource and energy utilisation. For a project to be approved, it must generate clear and measurable environmental benefits. Typical projects approved for financing by the NEFCO Facility for Cleaner Production include (NEFCO, n.d.):

- investments in renewable energy
- installation of new and more efficient heating boilers
- installation of new pumps and valves
- recirculation and reuse of water
- installation of regulation and monitoring equipment
- recovery of material from waste tailings
- installation of new, more resource efficient equipment.

Table 2.6. Examples of programmes for RECP financing (Belarus)

| Name of the programme/mechanism | Provider of finance | Focus | Dedicated webpage and contact information |
|---|----------------------|--|--|
| EBRD – Sustainable Energy Finance Facility (SEFF) | EBRD | EE and RE | KPMG Belarus Tel. + 375 17 372 72 57 https://www.belseff.by/ |
| Nordic Environment Finance Corporation (NEFCO) – Cleaner Production | NEFCO | EE, RE, industrial pollution abatement, etc. | Vitaly Artyushchenko, Chief Investment Adviser (NEFCO) Tel: + 7 911 6466 872 vitaly.artyushchenko@NEFCO-ru.ru www.bnb.by/en/news/96-2089/article.html |
| EBRD – FINTECC | EBRD, GEF | EE, RE and climate resilience | Asirid Motta, Principal, Sustainable Resource Investments Email: FINTECC_ETC-SEMED@ebrd.com fintecc.ebrd.com/region/etcs |
| EU4Business Loans | EU and partner banks | SME support in general | EU4Business local number Tel: + 375 29 700 86 50 www.eu4business.eu/contact www.eu4business.eu/about |
| EBRD Women in Business Programme | EBRD, EU and Sweden | Support for women-led SMEs | EBRD Tel: +375 (17) 308 3930 knowhowbelarus@ebrd.com www.ebrdwomeninbusiness.com/?s=home&country=BY&language=ru&language=en |

Source : Authors' research

Note: EBRD = European Bank for Reconstruction and Development, EE = energy efficiency, EIB = European Investment Bank, GEF = Global Environment Facility, RE = renewable energy

References

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- EBRD (2016), “EBRD provides EUR 10 million to Belarusian toy manufacturer”, www.fintecc.ebrd.com/cs/Satellite?c=Content&cid=1395252202912&d=Mobile&pagename=FINTECC%2FContent%2FFINTECC_News.
- NEFCO (n.d.), Facility for cleaner production, <https://www.nefco.org/work-us/our-services/loans-and-equity/facility-cleaner-production>.

2.4. Georgia

2.4.1. Government support

The government of Georgia has set up support mechanisms for small and medium-sized enterprises (SMEs) that can be used for equipment for resource efficiency and cleaner production (RECP). While this is not limited to RECP investment, through the state programme “Produce in Georgia”, LEPL Enterprise Georgia provides a 10% co-financing of bank loan interest rates and 12% for the annual interest rate of leasing for 24 months. It also provides a partial collateral guarantee of up to 50% for the first 48 months, among other services (Enterprise Georgia, 2017). Such support is provided only for loans in Georgian lari.

The “Produce in Georgia” programme also contains some other elements of support. For instance, “Infrastructure Support” provides infrastructure (land or building, or both) in state ownership to the beneficiaries, and “Consulting Support” offers opportunities for training in marketing, sales, business planning, export, entrepreneurial skills and quality management. The programme also supports companies with the identification and transfer of contemporary technologies encouraging innovation.

Contact information

Enterprise Georgia:

For international calls: +995 32 2 96 00 10

E-mail: info@enterprise.gov.ge

enterprisegeorgia.gov.ge/en/whatwedo/Access-to-finance?v=75

“Produce in Georgia” Programme website:

qartuli.ge/eng/

2.4.2. Programmes by international providers of finance

Table 2.7 outlines several examples of credit-line programmes available for RECP financing at SMEs in Georgia. The table is not intended to provide an exhaustive list of available programmes but aims to point to the relevant information and contact persons/institutions. In general, a range of local banks act as partner financial institutions for the respective programmes. Information on these banks can be obtained through the links mentioned in the table.

Development financial institutions have extended credit lines to local commercial banks and microfinance institutions for RECP, mainly renewable energy and energy-efficiency activities by households and corporations, including SMEs.

The European Bank for Reconstruction and Development (EBRD) has provided credit lines through its Energocredit mechanism mainly for RECP measures, such as energy-efficiency equipment and small-scale hydropower. The programme also has a grant component funded by the European Union Neighbourhood Investment Facility (NIF), EBRD and OeEB (Austrian Development Bank). Credit lines are on-lent to borrowers through local partner banks such as the Bank of Georgia, TBC Bank, BASIS Bank, CREDO Bank, and VTB. The Green Climate Fund approved its support for the GCF-EBRD Sustainable Energy Financing Facilities (EBRD, 2016).

EBRD’s DCFTA SME Facility, launched in 2017 and denominated in Georgian lari, is a financing package to help Georgian SMEs comply with requirements under the Deep and

Comprehensive Free Trade Area (DCFTA) with the EU. While this facility was not intended to target RECP, the loans extended can be a valuable financial resource for Georgian SMEs investing in RECP measures. EBRD's FINTECC programme (see Section 2.1.2 for programme description) has supported many projects in Georgia, such as incentive grants for the installation of energy-efficient technologies in JSC Aversi's hospitals and clinics, for example for heat recovery from compressors, a high-efficiency geothermal heat pump, LED lighting and an energy management system at JSC Healthy Water (EBRD, n.d.)

Similarly, EIB provides the SME Energy and Environment loans programme and the Loan for SMEs and Mid-caps, which can be used by Georgian SMEs to invest in RECP measures at their facilities.

Microfinance Organisation (MFO) Crystal and the Netherlands Development Finance Company (FMO), have reached a USD 10 million loan agreement, USD 1 million of which is to be disbursed for green finance. The loans are to be provided in Georgian lari. MFO Crystal has identified a list of possible projects invested under its green finance loans. Examples include the following (MFO Crystal, 2017):

- replacing heat supply systems
- insulating outside walls
- replacing outside doors and windows with energy-efficient ones
- adopting thermal solar systems
- replacing mini tractors
- adopting drip irrigation systems
- adopting energy-efficient home appliances such as refrigerators, washing machines, dishwashers, ovens and air-conditioning systems.

Table 2.7. Examples of programmes for RECP financing (Georgia)

| Programme | Provider of finance | Focus | Contact |
|--|-----------------------|--|--|
| Energocredit | EBRD, EU, Austria, | EE and RE | George Zurashvili, Project Manager Tel: +995 32 2 24 49 62; george.zurashvili@energocredit.com www.energocredit.ge/en |
| FMO – MFO Crystal: Local currency microfinance loan (partly for green investment) | FMO | EE and RE | MFO Crystal Tel: +032 2 02 20 20; *2444 info@crystal.ge (www.rystal.ge/en/news/514/) |
| GCF-EBRD Sustainable Energy Financing Facilities | EBRD GCF, KTFC | EE and RE | EBRD Tbilisi Resident Office Tel: +44 20 7338 7168 newbusiness@ebrd.com |
| Green for Growth Fund credit lines for leasing and lending for energy efficiency at SMEs | Green for Growth Fund | EE | Finance in Motion GmbH Tel: + 49 69 271 035 - 376 energy.investments@finance-in-motion.com www.ggf.lv/project-portfolio/investments/georgia/ |
| SME Energy and Environment loans/ Loan for SMEs and Mid-caps | EIB | Supporting SMEs and mid-caps in various fields, including EE and RE | EIB Regional Representation for the South Caucasus Tel: +995 32 2 00 62 84 tbilisi@eib.org www.eib.org/projects/priorities/sme/index.htm |
| DCFTA SME Facility | EBRD, EU | Primary focus is support for SMEs exporting goods to EU markets, and also for EE | EBRD Tbilisi Resident Office Tel: +44 20 7338 7168 ; newbusiness@ebrd.com www.euneighbours.eu/en/east/eu-in-action/projects/eu4business-ebrd-credit-line-part-eu-dcfta-facility |
| EBRD – FINTECC | EBRD, GEF | EE, RE and climate resilience | Astrid Motta, Principal, Sustainable Resource Investments FINTECC_ETC-SEMED@ebrd.com fintecc.ebrd.com/region/etc/s |
| InnovFin (under EU's Horizon 2020 programme) | EIB | Multiple | EIB Regional Representation for the South Caucasus Tel: +995 32 2 00 62 84 tbilisi@eib.org www.eib.org/products/blending/innovfin/index.htm |
| Tillväxtverket Demo Environmental Programme | Sweden (Sida) | RECP | The Swedish Agency for Economic and Regional Growth Tel: 08-681 91 00 tillvaxtverket@tillvaxtverket.se https://tillvaxtverket.se/english/demo-environment-programme.html |
| EU4Business Loans | EU and partner banks | SME support in general | EU4Business local numbers Tel: +995 32 2 22 01 18 www.eu4business.eu/contact www.eu4business.eu/about |
| EBRD Women in Business Programme | EBRD, EU and Sweden | Support for women-led SMEs | EBRD Tel: +995 32 2 44 74 00 knowhowgeorgia@ebrd.com www.ebrdwomeninbusiness.com/?s=home&country=GE&language=ka&language=en |

Source: Authors' research.

Note: DCFTA = Deep and Comprehensive Free Trade Area, EBRD = European Bank for Reconstruction and Development, EE = energy efficiency, EIB = European Investment Bank, FMO = Dutch Development Bank, GCF = Green Climate Fund, GCPF = Global Climate Partnership Fund, GGF = Green for Growth Fund, IFC = International Finance Corporation, KTCF = Korea Technical Assistance and Co-operation Fund, NIF = EC Neighbourhood Investment Facility, OeEB = Austrian Development Bank, RE = renewable energy.

2.4.3. A Georgian commercial bank's own programme

ProCredit Bank Georgia, as a part of the ProCredit group, based in Germany, has a Green Loan Portfolio that accounts for around 12% of the bank's total loan portfolio. ProCredit Bank Georgia focuses mainly on financial services for small and medium-sized enterprises (SMEs) with long-term business plans.

The bank offers three categories of green loans, consisting of investments in energy efficiency, investments in renewable energy, and investments in other areas that have positive impacts on the environment. Loans for energy efficiency account for 79% of the total green loans, followed by other areas (20%) and renewable energy (1%) in 2017 (ProCreditbank Georgia, 2017). Through the Green Loan programme, the ProCredit offers loans for installation of more efficient equipment and processes, for instance, to achieve significant energy savings and install renewable energy technologies, primarily in solar water heaters; photovoltaic installations; small hydropower plants and wind power turbines; and biogas and biomass applications.

ProCredit Bank Georgia also conducts awareness-raising campaigns and regular training sessions for the bank's own staff members, enabling them to improve clients' environmental performance. The ProCredit Academy in Germany offers comprehensive training for staff members at both the bank and the group level.

ProCredit Bank Georgia's "Come and See" project was set up to raise customer awareness. Clients are invited to share their successful experiences, discussing how ProCredit Bank recommendations have helped them develop their business and achieve their business goals (OECD, 2018).

Contact information

ProCredit Bank Georgia
21 Al. Kazbegi Ave. 0160 Tbilisi, Georgia
Tel: +995 32 220 22 22

References

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- ProCredit Bank Georgia (2017), “Green Finance Development”, Presentation at the OECD & MoENRP Workshop on Green Finance in Georgian, Tbilisi 22-23 June, 2017, https://www.slideshare.net/OECD_ENV/session-6-presentation-by-procredit-bank-georgia (accessed 1 April 2018).

2.5. Moldova

2.5.1. Government support

In the Republic of Moldova (Moldova), the Organisation for the Development of the Small and Medium Enterprises Sector of the Republic of Moldova (ODIMM) has offered various programmes to support small and medium-sized enterprises (SMEs) and young entrepreneurs. For instance, *Fondului de Stat de Garantare a Creditelor* (FGC), the state loan guarantee fund, aims to facilitate access of micro enterprises and SMEs to financial resources by providing guarantees for loans from financial institutions if the SMEs do not have sufficient collateral (ODIMM, n.d.). Currently, ODIMM offers five SME guarantee products on the following conditions:

- Enterprises managed by young people: For 60 months, to guarantee loans of up to 500 000 Moldovan lei (MDL) but no more than 50% of the total loan amount.
- Enterprises managed by women: For 60 months, to guarantee loans of up to MDL 700 000 but not more than 70% of the total loan amount.
- Newly registered companies: For 36 months, to guarantee loans of up to MDL 700 000, but not more than 70% of the loan amount.
- Active enterprises: For 60 months to the loan up to MDL 3 million, but not more than 50% of the total loan amount.
- Exporting enterprises: For 60 months, to guarantee the loan up to MDL 5 million, but not more than 50% of the total loan amount.

The FGC does not seem to offer any guarantee product with a specific focus on investment in resource efficiency and cleaner production (RECP), but the existing guarantees products could well help SMEs in Moldova finance their RECP activities. As of February 2018, the FGC has provided more than 290 companies with financial guarantees amounting to about MDL 81 million (about USD 4.9 million). These companies took bank credits in the amount of approximately MDL 241 million (about USD 14.4 million). The FGC is the first and only credit guarantee fund in Moldova that is capitalised by the state budget resources (ODIMM, 2018).

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2.5.2. Programmes by international providers of finance

Table 2.8 outlines several examples of credit-line programmes available for RECP financing at SMEs in Moldova. The table is not intended to provide an exhaustive list of available programmes but aims to point to the relevant information and contact persons/institutions. In general, there are a range of local banks that act as partner financial institutions for the respective programmes. Information on these banks can be obtained at the links mentioned in the table.

For instance, the European Bank for Reconstruction and Development (EBRD)'s Finance and Technology Transfer Centre for Climate Change (FINTECC) programme (see Section 2.1.2 for programme description) supports climate-related projects in Moldova.

Through the programme, the Glass Container Company (GCC), a Moldovan glass producer, received a loan of EUR 7.5 million and an additional grant of EUR 386 000 to finance the modernisation of the GCC factory and help improve the quality of the bottles it produced. At the same time, FINTECC technical support provided significant savings in energy and materials for the company (EBRD, 2017).

The EBRD and the EU extend credit lines to Mobiasbanca under its EU4BUSINESS EBRD Credit Line programme (see also Box 1.1. in Chapter 1.3). This credit-line programme aims to help SMEs in Moldova improve the quality of their products and services to comply with EU standards (Mobiasbanca, 2017a).

The DCFTA Initiative East Guarantee Facility seeks to enhance access of SMEs to finance, supporting economic growth and employment-generating activities in the countries with the Association Agreement with the EU (i.e. Georgia, Moldova and Ukraine). The objective is to help the SME sector in these countries align with EU standards. A total loan volume of around EUR 300 million is expected to be generated for the benefit of SMEs in under-served economic segments (EIF, 2017).

Further, at the end of 2017, Moldova finalised the agreement with the Nordic Environment Finance Corporation (NEFCO) to access its funding for renewable energy and energy-efficiency projects (Realitatea, 2017). The NEFCO plans to finance small projects at sub-national level, using public-private partnership, with a budget of up to EUR 5 000 for each project. Funding is provided in the form of loans, offered under market or preferential terms, which may also involve a grant (Realitatea, 2017).

The Green for Growth Fund, Southeast Europe (GGF) supports a leasing company in promoting energy efficiency at SMEs in Moldova. The GGF signed a EUR 2 million senior loan facility with ICS Total Leasing & Finance S.A. in 2016. The credit facility provided by the GGF along with targeted support through its Technical Assistance Facility aims to enable ICS Total Leasing & Finance to provide financing solutions to its existing and new clients for their energy-efficiency investments. This way local SMEs and individual entrepreneurs could reduce energy consumption and achieve efficiency gains (GGF, 2016).

EU's InnovFin programme enables Mobias Banca and the European Investment Fund, with the financial support of the European Union under Horizon 2020, to provide additional collateral in case of insufficient pledge, up to 50% of the value of the pledge (Mobias Banca, 2017b). The loan guaranteed by InnovFin will be issued in preferential terms and conditions to companies focused on the development of innovative projects, or focused on the launch of new products or services that can substantially improve productivity, as well as companies involved in research and development activities (Mobias Banca, 2017b). A description of the programme can be found in Chapter 2.1.2.

Table 2.8. Examples of programmes for RECP financing (Moldova)

| Name of the programme/mechanism | Provider of the finance | Focus | Dedicated webpage and contact information |
|---|--|----------------------------|--|
| EU4BUSINESS EBRD Credit Line | EBRD and EU | SME support in general | Mobiasbanca 022 256-456, or EBRD Chişinău Resident Office Tel: +373 (22) 21 00 00 https://mobiasbanca.md/files/PJ/Credite/BERD%2BEU4Business_en.pdf |
| DCFTA Initiative East Guarantee Facility | EU | SME support in general | EIB Moldova office +373 22807277 chisinau@eib.org www.eib.org/infocentre/contact/offices/moldova.htm |
| FINTECC | EBRD and GEF | RECP | Astirid Moltă, Principal, Sustainable Resource Investments Email: FINTECC_ETC-SEMED@ebrd.com , or EBRD Chişinău Resident Office Tel: +373 (22) 21 00 00 fintecc.ebrd.com/region/eitcs |
| Green for Growth Fund credit lines for leasing and lending for energy efficiency at SMEs. | Green for Growth Fund | EE | Finance in Motion GmbH Tel: + 49 (0) 69 271 035 - 376 E-Mail: energy.investments@finance-in-motion.com www.ggf.lu/project-portfolio/investments/moldova/ |
| InnovFin (under EU's Horizon 2020 programme) | EIB | Multiple | Representation for the South Caucasus Tel: +995 322006284, Email: tbilisi@eib.org www.eib.org/products/blending/innovfin/index.htm |
| NEFCO | Denmark, Finland, Iceland, Norway and Sweden | RECP | NEFCO Tel: +358 (0)10 618 003; info@nefc.fi https://www.nefco.org/ |
| Tillväxtverket Demo Environmental Programme | Sweden (Sida) | RECP | The Swedish Agency for Economic and Regional Growth (Tillväxtverket) Tel: 08 681 91 00; tillvaxtverket@tillvaxtverket.se https://tillvaxtverket.se/english/demo-environment-programme/grants-for-demonstration-projects.html |
| EU4Business Loans | EU and partner banks | SME support in general | EU4Business local number Tel: +373 68 770 470 www.eu4business.eu/contact www.eu4business.eu/about |
| EBRD Women in Business Programme | EBRD, EU and Sweden | Support for women-led SMEs | EBRD Tel: + 373 22 211614 ; knowhowmoldova@ebrd.com www.ebrdwomeninbusiness.com/?s=home&country=MD&language=ro&language=en |

Source: Authors' research.

Note: DCFTA = Deep and Comprehensive Free Trade Area, EBRD = European Bank for Reconstruction and Development, EE = Energy efficiency, EIB = European Investment Bank, FMO = Dutch Development Bank, GEF = Global Environment Facility, GGF = Green for Growth Fund, IFC = International Finance Corporation, RE = Renewable energy

2.5.3. A Moldovan commercial bank's own programme

ProCredit Bank Moldova, as a part of the ProCredit group based in Germany, launched the EcoCredit programme to provide “green” loans to small and medium enterprises in Moldova. The green loans can be taken to finance the following activities (Procredit Bank Moldova, n.d.):

- Energy-efficiency investments: To use less energy or resources to achieve the same or an increased level of output, where required energy savings are at least 20%.
- Renewable energy investments: To harness natural resources that are inexhaustible within human time scales or those replenished much more quickly than they are depleted.
- Environmentally friendly investments: To have a direct positive effect on the environment, if not always measurable energy savings or reductions in greenhouse gas emissions (e.g. organic agriculture, water and soil protection etc.).

ProCredit Bank Moldova has established a set of guidelines describing eligible measures (Table 2.9). The aim of the guidelines is to help the bank's staff in presenting, identifying and promoting investments in energy efficiency, renewable energy and environmentally friendly measures to the bank's business clients. The following also shows some of the conditions on loans through EcoCredit programme (ProCredit Bank Moldova, n.d.).

- Amount: starting at MDL 100 000 (USD 7 000 or EUR equivalent)
- Currency: MDL, USD, EUR
- Term: up to 12 years
- Collateral requirements:
 - Collateral is not mandatory for a loan up to MDL 150 000.
 - Mortgage is not mandatory for a loan up to MDL 1 800 000 (or USD 150 000).
- Loan reimbursements: individual reimbursement plan (possible grace period up to nine months).

Table 2.9. Eligible project types for EcoCredit programme

| Category | Examples of eligible projects/activities |
|-----------------------------------|---|
| Energy efficiency | <ul style="list-style-type: none"> • purchase of highly efficient production lines, presses, dry-off ovens • installation of highly efficient heating boilers and heaters, biomass boilers, air conditioning systems, cooling and freezing chambers, centralised ventilation systems, LED lighting systems • replacement of windows with energy-saving windows, insulation of walls, roof and attic floors, or office/production facilities • purchase of agricultural equipment and freight or passenger transport |
| Renewable energy | <ul style="list-style-type: none"> • solar water-heating systems • heat pumps and complex solution of geothermal energy usage for cooling and heating • biomass and biogas energy production systems • hydro-electric power plants • solar and wind electricity generators |
| Environmentally friendly measures | <ul style="list-style-type: none"> • measures for protection of air, water and soil such as air filter, water treatment system • waste recycling • organic farming • purchase of equipment for water purification • zero-tillage farming. |

Source: ProCredit Bank Moldova (n.d.).

Contact information

ProCredit Bank Moldova

Tel: 0800 000 10 (Contact Centre) +373 22 27 07 07 for international calls

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- ODIMM (n.d.), National projects implemented by ODIMM (Rumanian) <https://www.odimm.md/en/proiecte/> (accessed 1 April 2018).
- Procredit Bank Moldova (n.d.), “Pillar 3: Green finance”, www.procreditbank.md/en/Pillar_III.
- Realitatea (2017), *Parlamentul a ratificat Acordul dintre țara noastră și Corporația Financiară Nordică de Mediu. Moldova va putea aplica pentru finanțarea proiectelor*, www.realitatea.md/parlamentul-a-ratificat-acordul-dintre-ara-noastra-i-corpora-ia-financiara-nordica-de-mediu-moldova-va-putea-aplica-pentru-finantarea-proiectelor_68458.html (accessed 1 April 2018).

2.6. Ukraine

2.6.1. Government support

Resource efficiency and energy saving is a high priority for the Ukrainian government. The rationale for this policy includes the need to strengthen the country's energy security, to reform energy subsidies and to mitigate the impact of rising energy prices on Ukrainian citizens. The government of Ukraine has also committed to promoting energy-efficiency improvement in line with the EU Association Agreement and the country's participation in the Energy Community⁴.

The "Warm Loan" programme, targeted to households and associations of apartment owners, is one successful state fiscal incentive programme promoting energy efficiency. The Ukrainian government partially reimburses loans taken out to pay for efficiency measures. Since it was established in 2014, the number of participating local banks has risen, which has encouraged competition among banks and a reduction in the cost of loans (Interfax, 2017). In 2017, UAH 400 million (USD 15 million) was allocated from the national budget. Eligible energy-efficiency measures under the Warm Loan Programme include: insulation of buildings, installation of water and heat meters, heaters with thermostatic regulators, replacement of windows and modernisation of lighting. The state government also works closely with local authorities. As of the end of 2017, 157 local programmes associated with the Warm Loans have been developed and funded (SAEE, 2017).

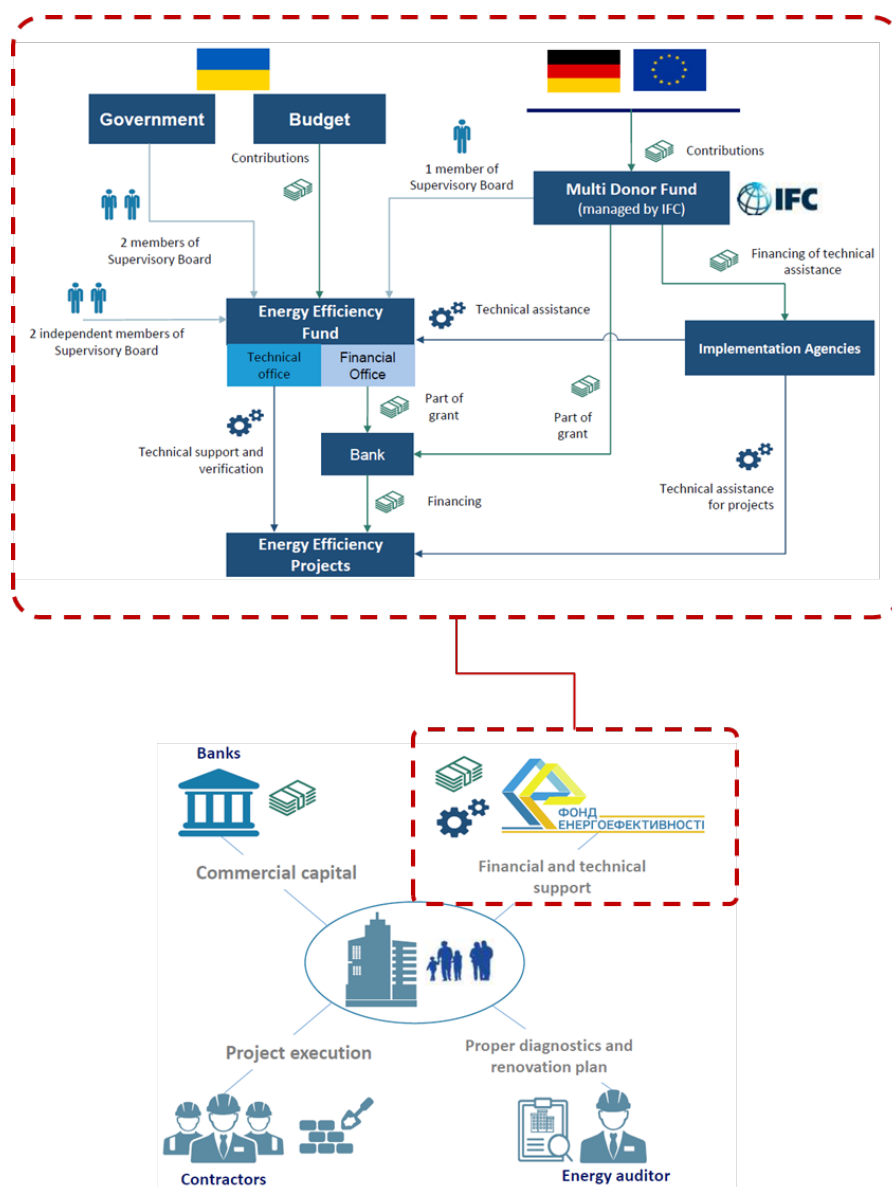
The government of Ukraine established the Energy Efficiency Fund in December 2017, to encourage state-supported energy modernisation projects in both households and businesses (Interfax, 2018). The Warm Loan Programme is to be funded under the Energy Efficiency Fund. For households and businesses, the Fund is expected to yield the following benefits (Kuznetsov, 2017):

- lowering energy consumption and CO₂ emissions
- improving citizens' comfort and quality of life
- reducing utility bills and the state budget allocated to finance energy subsidies
- additional tax revenues for the state budget
- increasing the property value and durability of buildings
- stimulating SMEs and economic development
- contributing to Ukraine's energy independence.

The state government plans to use the Energy Efficiency Fund to provide UAH 2 billion (about USD 72 million) for energy-efficiency programmes, including UAH 400 million (about USD 14.5 million) through the Warm Loans, and UAH 1.6 billion (about USD 58 million) for larger-scale energy modernisation projects. The Energy Efficiency Fund also expects to receive funding from international (public) sources. The EU plans to allocate EUR 50 million (about USD 62 million) as of January 2018. See also Figure 2.1 for the institutional arrangement of the Energy Efficiency Fund and its relationship with other actors, such as commercial banks, contractors and energy auditors.

⁴ Since February 2011, Ukraine has been a contracting party to the European Energy Community, which extends the EU internal energy market to South East Europe and enhances the overall security of supply. (See also <https://www.energy-community.org/implementation/Ukraine.html>).

Figure 2.1. Illustration of the structure and functions of the Energy Efficiency Fund



Source: Kuznetsov, A. (2017)

2.6.2. Programmes by international providers of finance

The European Investment Bank (EIB) provides loans through the Ukraine Export-Import Bank to SMEs for their investment in RECP and climate change adaptation, among other things (Ukreximbank, n.d.). The total amount of finance is about EUR 100 million (USD 123 million). Loans can cover both capital investments and operational expenses (e.g. purchase of raw materials). The programme classifies companies into the following three types, and covers different levels of costs accordingly (Table 2.10):

Table 2.10. Company categories for the EIB’s credit-line programme to Ukreximbank

| | Number of employees | Project amount |
|---|-----------------------------|------------------------------|
| Small and medium-sized enterprises | Up to 250 employees | No more than EUR 25 million |
| Enterprises with an average level of capitalisation | From 250 to 3 000 employees | EUR 25 million to 50 million |
| Private companies | From 3 000 employees | No more than EUR 50 million |

Source: Ukreximbank (n.d.).

The Climate Innovation Voucher programme is run in Ukraine by the European Bank for Reconstruction and Development (EBRD) under the FINTECC programme, to which the EU Neighbourhood Investment Facility (NIF) provides grants (see also Chapter 2.1.2 for the programme description of FINTECC). The programme offers two kinds of “Innovation Vouchers”, outlined below, for projects in the life of the technology developers, innovators and those who seek to use resources more efficiently. The vouchers can be received through the competition process, and also require co-financing. Innovation Vouchers are meant to cover most of the project cost, but the company receiving the voucher is required to provide part of the necessary investment. The nongovernmental organisation (NGO) Greencubator is in charge of running the programme (Figure 2.2.).

- Vouchers of up to EUR 20 000
 - Most of the winning companies will receive Innovation Vouchers of EBRD financial support of up to EUR 20 000.
- “Megavouchers” up to EUR 50 000
 - Companies with potentially breakthrough projects may be eligible for “megawaves” of up to EUR 50 000. Such projects must demonstrate the potential to achieve significant results in introducing climatic innovations.

Figure 2.2. Application process for the Climate Innovation Vouchers



Source: Climate Innovation Vouchers Programme (n.d.).

IQ energy, another EBRD programme, provides loans and grants for energy-efficiency products. Loans will be accessible through several Ukrainian banks participating in the programme. The programme is not specifically designed for SMEs but can be provided to private residential stakeholders, including individual homeowners, groups of homeowners, homeowners' associations and housing co-operatives. In addition to loan financing, the project provides its stakeholders with advisory services on energy-efficient equipment and technology. The instructions for the programme's three-step application process are available at its website (www.iqenergy.org.ua/en/how-to-apply).

The World Bank Group and the Ukreximbank have implemented a loan programme for energy efficiency since 2011. This loan programme for energy efficiency was planned to wrap up in 2017, but the two banks also launched a new project, "Access to Long Term Finance", to improve access to longer-term finance for export-oriented SMEs in Ukraine. The financing could potentially be used for RECP measures at SMEs.

The Swedish Agency for Development Cooperation (Sida) provides grants to various projects in some of the EaP countries (Georgia, Moldova and Ukraine), including ecosystem services, climate change mitigation and adaptation, water sanitation and urban development (Tillväxtverket, 2018). Grants for planning activities are awarded to help entrepreneurs explore new markets and research their technology's impact on the environment and poverty reduction. In demonstration projects, local actors receive financing to help them import technologies that offer solutions to local environmental challenges (Tillväxtverket, 2018). Grants are awarded through applications on a competitive basis.

The Global Climate Partnership Fund (GCPF) also provides credit lines through Ukreximbank, mainly for the replacement of outdated industrial machinery and solar electricity plants. GCPF has committed USD 30 million of earlier loans to the programme with Ukreximbank (GCPF, 2017).

Table 2.11 outlines several examples of credit-line programmes available for RECP financing at SMEs in Ukraine. The table is not intended to provide an exhaustive list of

available programmes but aims to point to the relevant information and contact persons/institutions. In general, a range of local banks act as partner financial institutions for the respective programmes. Information on these banks can be obtained at the links mentioned in the table.

Table 2.11. Examples of programmes for RECP financing (Ukraine)

| Name of the programme/mechanism | Provider of finance | Focus | Dedicated webpage and contact information |
|---|---------------------------------|------------------------------|--|
| IO Energy | EBRD | Heat insulation of buildings | Through partner banks www.ioenergy.org.ua/en/donors-and-partners , or contact the programme at igenergy@ioenergy.org.ua |
| Innovative Voucher Program in Ukraine (FINTECC) | EBRD, EU (NIF) | EE | NGO Greencubator Nadiia Artemieva: nadiia@greencubator.info innovoucher.com.ua/about/?lang=en |
| Credit Programme for SME and mid-caps | EIB, JSC Ukreximbank | EE | Ukreximbank Tel: +380-800-50-44-50, 0-44-247-38-38 : bank@eximb.com |
| WB Access to Long-Term Finance | World Bank, JSC Ukreximbank | EE | Ukreximbank, Department of Energy Efficiency Programmes Tel: 044-247-80-85 |
| Tillväxtverket Demo Environmental Programme | Sweden (Sida) | RECP | The Swedish Agency for Economic and Regional Growth Tel: 08-681 91 0 : tillvaxtverket@tillvaxtverket.se https://tillvaxtverket.se/english/demo-environment-programme/grants-for-demonstration-projects.html |
| Program for lending to Ukrainian MSMEs in priority industry areas | German-Ukrainian Fund | Energy efficiency | German-Ukrainian fund Tel: +380 503 12 45 63, or 380 44 206 59 70 (uf.gov.ua/en) |
| NEFCO energy-efficiency project | NEFCO | EE | Megabank, 0-800-50-44-00 https://www.megabank.ua/en/corporate/credits/nefco_project |
| InnovFin (under EU's Horizon 2020 programme) | EIB | Multiple | ProCredit Bank Ukraine: Olga Kalynovska Tel: +380 50 395 23 11, e-mail: O.Kalynovska@procreditbank.com.ua www.eib.org/products/blending/innovfin/index.htm |
| Lending for energy-efficiency and solar panels (through JSC Ukreximbank) | Global Climate Partnership Fund | EE | Ukreximbank Tel: +380 -800-50-44-50, 0-44-247 38 38 https://www.gcpf.lu/portfolio.html |
| EU4Business Loans | EU and partner banks | SME support in general | EU4Business +380 67 24 54 100 www.eu4business.eu/contact www.eu4business.eu/about |
| EBRD Women in Business Programme | EBRD, EU and Sweden | Support for women-led SMEs | EBRD Tel: +38 044 277 11 45 (Kyiv) Tel: +38 032 232 96 33/34 (Lviv) knowhowukraine@ebrd.com www.ebrdwomeninbusiness.com/?s=home&country=UA&language=uk&language=en |
| Green for Growth Fund credit lines for lending for energy efficiency at SMEs. | Green for Growth Fund | EE | Finance in Motion GmbH Tel: + 49 69 271 035 - 376 energy.investments@finance-in-motion.com www.ggf.lu/project-portfolio/investments/ukraine/ |

Source: Authors' research.

Note: DCFTA = Deep and Comprehensive Free Trade Area, EBRD = European Bank for Reconstruction and Development, EE = energy efficiency, EIB = European Investment Bank, NEFCO = Nordic Environment Finance Corporation, RE = renewable energy.

2.6.3. Ukrainian financial institutions' own programmes

Local commercial banks are potentially a promising channel for financing RECP measures at SMEs in Ukraine, although not many Ukrainian banks have their own financial programmes for RECP. As in other countries in the region, the commercial banks often face such challenges as high interest rates in the market, and a lack of public funding for reimbursement for interest payments. Commercial bank loans often lack the comparative advantage of the credit-line programmes supported by development financial institutions (UNDP Ukraine, 2017).

Nonetheless, JSB Ukragasbank and JSB Megabank respectively offer loan and microcredit programmes to SMEs willing to finance RECP measures in Ukraine. JSB Ukragasbank has the programmes for replacement windows program for SMEs, modernisation of lighting systems and purchase of environmentally friendly equipment by SMEs. JSB Megabank offers microcredits for energy-saving activities and loan financing for energy-efficiency projects at SMEs. Table 2.12 outlines further details of these programmes.

Table 2.12. Ukrainian local banks' programmes

| Bank name | Programme name | Focus | Instru- ment | Period | Currency | Size | Interest rate | Contact | Further details |
|-------------------|--|--|---------------------------------|-------------|---------------|--|--|---------------|---|
| JSB UkrGasbank | Replacement windows programme for SMEs | Installing energy-efficient windows/doors | Credit | 3-12 months | UAH | UAH 5 000-100 000 | 18% | 044 494 09 70 | www.ukrgasbank.com/small-business/credit/okna_msb/ |
| | Lighting systems modernisation programme for SME | Modernisation of the lighting system | Credit | 3-18 months | UAH | UAH 5 000-100 000 | 18% | 044 494 09 70 | www.ukrgasbank.com/small-business/credit/sistema_ms_b/ |
| | Equipment for SME clients | Purchase of new equipment that: reduces use of natural resources by more than 20%; reduces CO ₂ emissions by more than 20%; uses secondary raw material; - is used for renewable energy sources; - is used for drip irrigation systems; - is used for the production of pellets; etc. | Loan, non-revolving credit line | 3-5 years | UAH, USD, EUR | Up to 70% of the market value of production equipment with VAT, Up to 60% of the market value of other equipment with VAT | UAH: from 17.0%, USD: From 7.5% EUR: from 6.0% | 044 494 09 70 | www.ukrgasbank.com/small-business/credit/obl_dlya_biznesu/ |
| PJSC Megabank | Microcredits for energy- saving | Microcredit financing for energy-saving projects at SMEs | Micro-credit | 5 years | UAH, USD, EUR | Up to UAH 3 million | Case by case | 0 800 5044 00 | https://www.megabank.ua/en/corporate/credits/energy_efficiency |
| | Financing energy-efficiency projects | Loan for energy-saving projects at SMEs with less than 250 permanent employees | Loan | 5 years | UAH, USD, EUR | Up to UAH 5 million | Case by case | 0 800 5044 00 | https://www.megabank.ua/en/corporate/credits/energy |

Source: Authors' research.

In addition to commercial banks, there are a range of Energy Service Companies (ESCOs) in Ukraine. Table 2.13 outlines examples. ESCOs can provide energy solutions to SMEs and larger enterprises, as well as public buildings. Measures ESCOs can offer include designs and implementation of energy savings and energy-efficiency projects, power and heat generation and energy supply (Green Energy Portal Ukraine, n.d.). ESCOs can offer their own financing or structure third-party financing.

Some progress has been made, but Ukraine's ESCO market has had varying success in the past two decades (OECD, 2016). This highlights the lack of an adequate framework for a well-functioning and self-sustainable private sector for energy efficiency. A range of barriers to ESCOs remain. The energy tariff is too low to attract investment in RECP, access to finance is difficult, few accounting and tax regulations on energy performance contracts exist, and information and skills are lacking.

Table 2.13. Examples of ESCOs in Ukraine

| Organisation name | Website address | Organisation location |
|---|--|------------------------------------|
| CJSC Ukrainian Energy Service Company (UkrESCO) | www.ukresco.com | Kyiv, Ukraine |
| Communal ESCO | www.esco-rivne.com | Rivne, Ukraine |
| Dnipropetrovska Municipal ESCO | www.esco.dp.ua | Dnipropetrovsk, Ukraine |
| ESCO Artcom | www.artcom.zp.ua | Zaporizhia, Ukraine |
| ESCO Castrade | | Sumy, Ukraine / Vilnius, Lithuania |
| ESCO Center | www.esco-center.com.ua | Kyiv, Ukraine |
| ESCO EcoSys | www.ecosys.com.ua | Zaporizhia, Ukraine |
| ESCO EnCom Group | www.encom.kiev.ua | Kyiv, Ukraine |
| ESCO Energy Consult | www.energoconsalt.com | Kyiv, Ukraine |
| ESCO Kharkiv | | Kharkiv, Ukraine |
| ESCO OptimEnerg | www.kharkov.prom.ua | Kharkiv, Ukraine |
| ESCO PATRIOT-NRG | www.patriot-nrg.ua | Kyiv, Ukraine |

Source: Green Energy Portal Ukraine (n.d.).

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Financing Resource Efficient and Cleaner Production by SMEs in the EU Eastern Partnership Countries

A Stakeholders' Guidebook

This Stakeholders' Guidebook presents a range of financial sources and mechanisms that can be used by Small and Medium-sized Enterprises (SMEs) in the European Union Eastern Partnership countries to support Resource Efficient and Cleaner Production (RECP) measures in their operations. This Stakeholders' Guidebook was developed within the framework of the project "Greening Economies in the Eastern Neighbourhood Project" (EaP GREEN), funded by the European Union.

Contents:

Chapter 1: Regional analysis

Chapter 2: Country-specific stakeholders' guidebooks

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