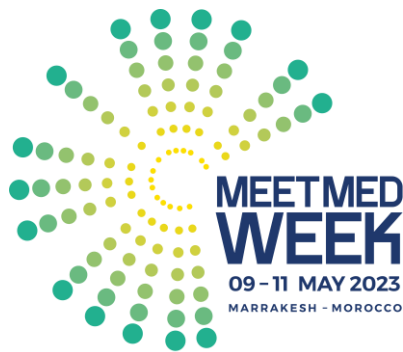




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Mitigation Enabling Energy Transition in the MEDiterranean region

Financial Mechanisms for Energy Efficiency in the MED region: An extract of the GIZ Compendium and Guidebook for EE Practitioners

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Overview of Financing Types

One entity (lender) lends money to another (borrower). Repayment is done on an agreed schedule and consists of borrowed money as well as interest. Collateral is often necessary as a reassurance for the lender. Examples include credits, mortgages, commercial loans, concessional loans, blended loans.

Non repayable fund contributions by a grantor for specific purposes; sometimes it will require contributions by the recipient (conditional grant).

Debt

Grant

Equity

Risk Mitigation
Instruments

Investing in shares of a company representing partial ownership; receiving funding from investors via equity (shares); sharing the profit with investors.

Financial instruments that are available in the market to mitigate the risks of investing. Examples include guarantees, insurances.

More Information: [2019 BASE-U4E: Manual of EE FinMechs](#), EU Interrreg [Financing models for energy efficiency](#), GIZ DIAPOL's [Innovative EE instruments for the MENA region](#); EFIG's [Financing Energy Efficiency](#); Clean Energy Ministerial [Finance](#)

Barriers to Energy Efficiency

Energy Efficiency Financial Investments are critical in achieving sustainable development goals. Unfortunately, often they are facing barriers to their implementation, such as:

1. **High upfront cost:** EE investments in equipment and technologies are expensive and the return on investment resulting from cost savings occur over several years.
2. **Lack of availability/access:** limited access to appropriate or affordable financing mechanisms, high performing technologies, proper installation, post-sales and maintenance services, etc.
3. **Competing investment priorities:** investment options and resources are limited. Often other business investments are considered with higher priority and EE investments are overlooked, delayed or discarded.
4. **Limited understanding:** Lack of knowledge of the benefits of EE (e.g., scale and importance of recurring savings, energy bill savings) and high perception of risk (financial lenders, commercial industrial and public entities often perceive EE investments as very risky, preventing them from investing).
5. **Split incentives:** Often in EE, the entity incurring the cost/investment (i.e., paying for new EE equipment) and the one receiving the benefits (i.e., saving money on electricity bills) are different. This leads to misalignment of priority, divergent interests and difficulties to unlock the EE potential of investments.

Support Mechanisms for EE

To remove barriers to EE, several support mechanisms to accompany EE FinMechs can be put in place to make EE investments more approachable and realisable.

- **Standards and regulations** such as Minimum Energy Performance Standards (MEPS) and labelling will encourage investments in EE technologies.
- Supporting **policies** and **command & control/enforcement** mechanisms (sample testing to verify the implementation of standards, improved enforcing, carrot & stick regulatory and fiscal approaches, etc.)
- Strong **monitoring and evaluation** (M&E) as well as **monitoring, reporting and verification** (MRV) to improve enforcement and compliance as well as to have better, more reliable data to support communication
- **Technical Assistance** to public and private stakeholders (GIZ can help with this!)
- Increased public **awareness** and acceptance through education, information and **communication** campaigns and behavioral change programmes with the support of EE ambassadors.
- **Circularity and sustainable development**: for example, programs incentivizing the use of new, high-EE appliances need to be coupled with adequate disposal and waste management strategies for the collection and environmental dismantlement of old,

Overview of instruments, sector and sources

Public Sector	Commercial Sector	Residential Sector	EE FinMech Instruments	Banking institutions	NDB (National development banks)	Bi/Multilateral development banks	Microfinance institutions (MFI)	Non-banking financial institutions	Private equity funds	ESCO (Energy Service Companies)	Pension funds	Insurance companies	Guarantee institutions	Crowd funding platforms	On-bill financing and rebates	Governments (national, subnational, municipal)
X	X	X	<u>Green Direct Loans</u>	X	X	X	X	X	X	X	X				X	
X	X	X	<u>Green credit lines</u>	X	X	X	X	X								
X	X	X	<u>Revolving loan funds</u>	X	X	X	X				(X)					X
X	(X)	X	<u>Dealer (and Trade) financing</u>	X												
X	X	X	<u>Leasing</u>	X				X								
		X	<u>Micro finance</u>	X			X				X	X				
X	X	X	<u>Positive lists</u>	X	X	X				X					X	
		X	<u>Saving groups</u>			X										
X		X	<u>On bill financing</u>	X											X	(X)
X	X		<u>Green/Bulk EE procurement</u>		X											X
		X	<u>Mortgage Financing</u>	X	X	X										X
X	X	X	<u>Rebate/Subsidy programmes</u>	X	X	X										X
	X	X	<u>Accelerated depreciation</u>													X

Overview of instruments, sector and sources (cont.)

Public Sector	Commercial Sector	Residential Sector	EE FinMech Instruments	Banking institutions	NDB (National development banks)	Bi/Multilateral development banks	Microfinance institutions (MFI)	Non-banking financial institutions	Private equity funds	ESCO (Energy Service Companies)	Pension funds	Insurance companies	Guarantee institutions	Crowd funding platforms	On-bill financing and rebates	Governments (national, subnational, municipal)
		X	<u>Remittance</u>			X	(X)	X								X
	X	X	<u>Tax incentives (VAT, tax credits, tax rebates)</u>													X
X	X	X	<u>Guarantees</u>	X	X	X		X			X	X	X			X
X	X	X	<u>Pay per service models: Equipment as a service and district service</u>	X						X						
X	X		<u>Energy performance contracts and Energy Saving Companies (ESCOs)</u>	X				X		X		X	X			
X	X		<u>Crowd funding</u>											X		
X	X		<u>White certificates</u>	X	X	X				X		X	X			X
X	X	X	<u>Insurance</u>	X	X	X		X			X	X	X			
	X		<u>Energy savings insurance model</u>							X		X				
X	X		<u>Public Private Partnerships</u>	X	X	X		X								X
X			<u>Municipal financing models</u>	X	X	X										X
X	X		<u>Voluntary/Mandatory targets</u>													X

Note: other instruments not listed here but that are also used for EE financing include (but are not limited to): direct equity financing, project finance (as a specific type of debt financing), fintech solutions, etc.

Extract of the GLZ Compendium and Guidebook for EE Practitioners:

Selected Financial Mechanisms for Energy Efficiency most relevant in the MED region

Note: there are many other FinMech4EE that are relevant in the region.

Please reach out if you want to have access to the full Compendium or you want additional information of any of the other instruments described in the matrix.

Green Credit Lines

Description: special type of loan to foster green lending e.g., energy efficiency. LFI access concessional financing from MDBs/PFI (i.e., below market interest rates or longer-term tenor, provided is used for EE/RE investments) and can subsequently provide such financing to borrowers.

Examples: [Green credit lines for business in Bogota](#); [Green credit lines for SMEs in Panama](#); [EBRD's Green Economy Financing Facility \(GEFF\)](#) in several countries, [XacBank Mongolia](#), KfW's [EcoCasa Mexico](#), AFD [Green Energy Fund](#), etc.

Requirements/Viability:

- T: mid - technical assistance required for successful implementation (this can be often provided by PFIs/MDBs).
- F: mid – collateral, guarantees, concessional financing from MDBs or other external sources often needed.
- I: mid - institutional capacities to operate with financing schemes; legal framework for credit lines.

Applicability/Use Cases: focus on specific green purposes only in particular on Energy Efficiency

- R: low - limited applicability for households: EE equipment and -upgrades
- C: high - applicability for big and Micro, Small and Medium sized enterprises (MSME)
- P: mid-high applicability for public buildings such as universities, schools etc.

Support Mechanisms

Concessional financing from MDBs/multilateral funds/institutions (i.e., GCF, EBRD, KfW, AFD, etc.).

Guarantees; Positive lists, Technical Assistance.

Key Partner/actors:

MDBs & national development agencies to support and set up processes for LFI to access loans.

Local governments to improve investment climate.

Further information: [2019 BASE-U4E: Manual of EE FinMechs](#) : pg: 16/40/61; WB ESMAP's Financing Energy Efficiency, [Part 2: Credit Lines](#), 2018 KfW's Green Credit Lines Evaluation, [IDB/AFD/I4CE Green Lending report](#)

Summary

advantages

Longer tenors become more viable

Reduced interest rates are possible

Flexible and can be coupled with many support mechanisms

disadvantages

High collateral requirements, decreasing the availability for low income households and MSMEs

Engagement necessary to raise awareness

LFI account necessary

Accelerated depreciation (link with bulk procurement, leasing & EE rebates)

Description: fiscal measure to incentivise the replacement/upgrade of energy consuming appliances (particularly industrial or commercial equipment) by providing a fiscal benefit for high-EE equipment that allows to account for an accelerated depreciation compared to standard equipment. This will result in apparent higher operating costs and therefore lower revenues which will reduce taxable corporate income and thus a fiscal benefit. An adequate design of the accounting mechanism, the inclusion of eligible equipment, the design of penalties for inaccurate accounting and a strategy for environmental retrieval and disposal of used equipment are critical success factors. Strong regulatory involvement is required to set up the accounting structure, design, manage and supervise (including M&E/MRV) the program.

Examples: [Simpler depreciation/asset write-off for SMEs](#) (Australia), [Decree #1058](#) (Peru), [EPACT](#), [179D](#) (USA)

Requirements/Viability:

- T: low – a great deal of technical assistance is required to establish the mechanism
- F: mid – fiscal benefits will result in lower corporate tax income so requires funding
- I: low – strong involvement from fiscal agency, regulatory framework and testing required

Applicability/Use Cases:

- R: low – limited applicability to buildings insulation, HVAC centralized equipment
- C: high – applicable to industrial and commercial appliances; HVAC; insulation.
- P: low - limited applicability to buildings insulation, HVAC centralized equipment

Support Mechanisms

Support mandatory agreements as well as standards and labelling; subsidies.

Key Partner/actors:

- Governments: provide the regulatory framework;
- Utilities: set up EE programmes and operate them,
- Development agencies: support in setting up the implementation structure, regulatory framework and funding schemes;

Further information: GIZ DIAPOL's [Innovative EE instruments for the MENA region](#) pages 13-14 (Mechanism for Accelerating Replacement of the Stock of Energy-using Equipment and Appliances), Clean Energy Ministerial's SEAD 2013 [report](#)

Summary

advantages

Accelerates market penetration of high EE equipment/processes

High energy savings potential, but depends on the market situation

profits for the government from resulted energy savings of EE equipment

disadvantages

High regulatory and technical prerequisites for the program to be developed.

If not implemented correctly, incentives can lead to unfair distributions

High efforts by regulation and institutional capacities required

Guarantees for EE

Description: agreement that guarantees a debt will be repaid to a lender by another party (guarantor) if the borrower defaults. Guarantees help investors to reduce the risk of EE investments. They usually have a set of eligibility criteria (e.g., % of loan amount etc.) and have a cost (a small fees needs to be paid to provide for a guarantee). It usually can serve as a collateral. A specific type of guarantee usually done for loan portfolios and big credit lines & facilities are a risk sharing schemes across multiple lenders that result in shared, and thus reduced, risk.

Examples: [Multilateral Investment Guarantee Agency](#) – MIGA (WB Group), [World Bank's Guarantees Program](#), [African Guarantee Fund](#), [Green Guarantee Company](#), Crédit Agricole's [Green Guarantee](#) for RE, Tamwilcom's [Intelaka](#) (Morocco)

Requirements/Viability:

- T: low - not difficult to develop; requires a concept to be submitted to guarantors (LFI account needed); but TA is advised
- F: mid - serve as securities/collateral and has a small fee cost to be paid. Sometimes additional collateral is required
- I: mid - issued by LFI/IFI/PFI, insurer, government or utility; a well-developed banking system is highly beneficial

Applicability/Use Cases:

- R: high - residential EE equipment & building retrofit
- C: high –businesses (incl. MSMEs) & intermediaries (ESCOs, build. owners, managers)
- P: high - public sector also able to access guarantees; often part of PPPs

Support Mechanisms

Technical Assistance; Grants/Concessional Finance; Positive lists.

Key Partner/actors:

- Insurance companies – to cover risks and support credit evaluation
- International financial institutions (IFI); LFI - set up/manage guarantee programmes for EE
- Governments – set up guarantee programmes for EE
- Utilities /ESCOs: project developers

Further information: [2019 BASE-U4E: Manual of EE FinMechs](#) : pg: 37/54/75, CEM: [Loan guarantees](#)

Summary	
advantages	disadvantages
Help raise EE finance at more favourable terms for borrowers	Requires well-developed banking system
Cover real AND perceived risk of EE investments	Often requires additional collateral
Provide incentives to lend money as risk decreases	

Energy performance contracts (EPC) and Energy Saving Companies (ESCOs)

Description: an Energy Service Company (ESCO) implements an EE project and uses income from cost savings to repay the investment. This way the EE risk is transferred to the service provider. Two main models: 1) shared savings model (ESCO invests in the project; cost savings are quantified and refund the ESCO and some part, like 20% shared with the client); and 2) guaranteed savings model (ESCO guarantees specific amount of energy savings; if target is not met, the difference in monetary value is covered).

Note: Super ESCOs are public or private entities that can facilitate the upscaling and development of ESCO markets via large scale implementation of EE projects, directly financing or providing technical assistance to ESCOs

Examples: ESCO can work either locally or internationally. Can be equipment affiliated (NORESKO – Carrier, Honeywell Building Solutions SES, Johnson Controls Government Systems, Schneider Electric, Siemens Government Services, Inc., etc.), utility affiliated or independent.

Requirements/Viability:

- T: low – develop ESCO market is complex and requires a lot of in-country expertise
- F: mid - loan applicability and affordability required;
- I: low – regulatory & institutional framework a lot of implication from companies required for the instrument to succeed

Applicability/Use Cases:

- R: low applicability
- C: CPEs & ESCOs in C buildings: HVAC equipment, insulations, pumping, retrofitting;
- P: CPEs & ESCOs in P buildings (same as above), public lighting projects, etc.

Support Mechanisms

Overall: guarantees; positive lists, Energy Savings Insurance; EPCs.

Shared savings EPC: Sale and leaseback

Guaranteed Savings EPC: Regulatory framework, Standardised contracts; Insurances

Key Partner/actors:

- ESCOs/Super ESCOs: service providers, financing, technical assistance
- Governments: legal framework providers; market creator; mobilise capital
- Financial Institutions: provide support with loans & guarantees

Summary	
advantages	disadvantages
No more performance risk and necessity for technical knowledge of customers	High dept of ESCOs if not well managed
Promote state of the art equipment, as ESCO want to increase savings as much as possible	Misinformation may occur, as savings translate to more cost for customers, then less.
No need for investments beforehand	Uncertainties about performance

Further information: [2019 BASE-U4E: Manual of EE FinMechs](#) pg 48/62; GIZ DIAPOL's [Innovative EE instruments for the MENA region](#) pages 19-21 (Super ESCOs); [2021 EU ESCO quick start guide](#); [2020 ECONOLER Super ESCO guide](#); ; EFIG's [Financing Energy Efficiency](#); CEM's [Performance contracting and ESCOs](#); [IEA ESCOs](#)

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