Reducing Greenhouse Gas Emissions through Improved Energy Efficiency in the Industrial Sector in Moldova

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Presentation outline

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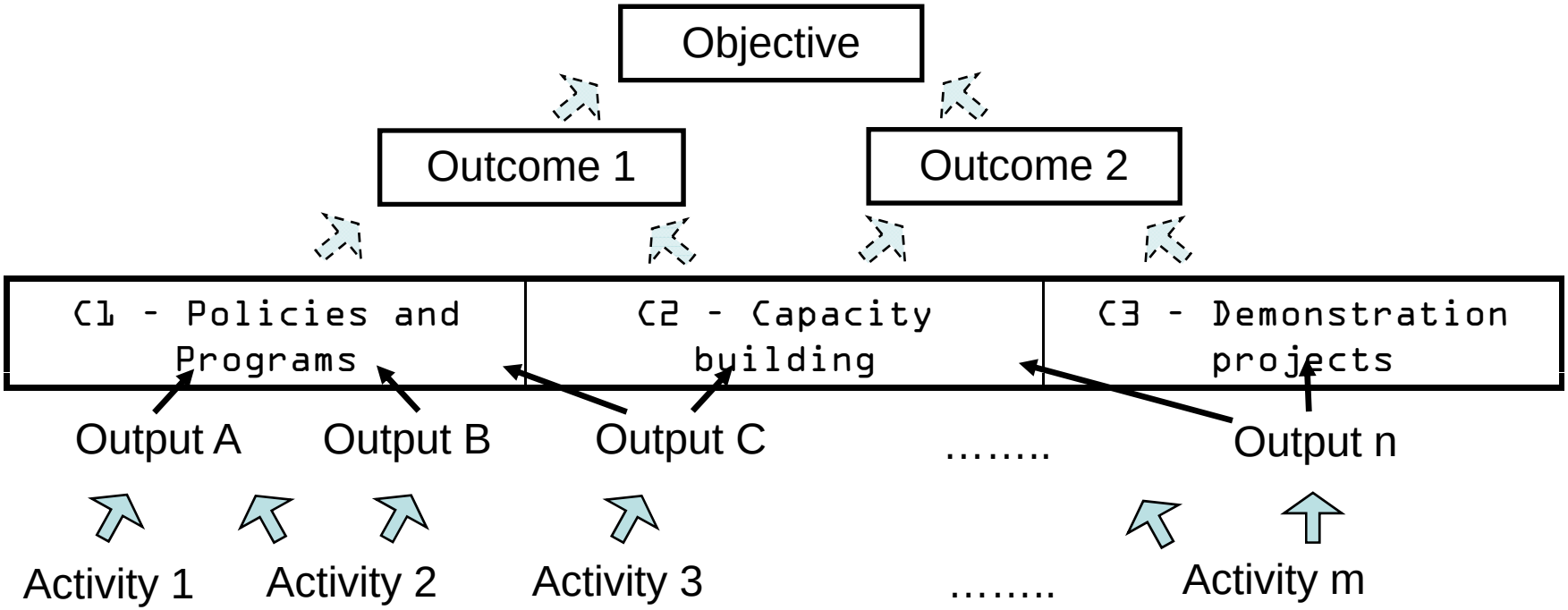
1. Project framework



1. Project framework – Project Objective

Improved Energy Efficiency of Moldovan Industrial Sector leading to reduced global environmental impact and enhanced competitiveness

The project objective is perfectly in line with objectives of

- National Program of Energy Conservation 2003-2010
- National Energy Strategy of the Republic of Moldova to the year 2020
- EC Green Paper and Directives on Energy Efficiency

1. Project framework – Project Expected Outcomes

1. Establishment of policy, legal and regulatory frameworks that promote and support sustainable industrial energy efficiency and stimulate the creation of a national market for IEE products and services.
2. Increased adoption by Moldovan industry of energy efficient technologies, including system optimization, and energy management systems as integral part of their business practices.

1. Project framework – Project Components

1. Development, formulation and implementation of policies, regulation and programs to promote and support sustainable industrial energy efficiency
2. Capacity building and development of tools for industrial energy systems optimization and energy management
3. Industrial energy efficiency pilot projects, including system optimization and energy management system

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1. Project framework – Project Outputs

Component 1: Development, formulation and implementation of policies, regulation and programs to promote and support sustainable industrial energy efficiency
A. National Monitoring, Tracking and Benchmarking (MTB) Program is established
B. National IEE Best Practices Information and Dissemination (BPID) Program is established
C. National IEE Best Practice Recognition Program is established
D. Mandatory/voluntary Industrial Energy Manager Certification Program is established

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1. Project framework - Project Outputs

Component 2: Capacity building and development of tools for industrial systems optimization and energy management
A. 35-40 Moldovan professionals are trained at an expert level and equipped with the technical tools required to: i) develop and implement energy system optimization and energy management in industry; ii) provide training to other industry and energy professionals and offer IEE services.
B. 350-400 factory personnel receive training on system optimization and energy management
C. Energy Management System Guide EN16001/ ISO50001 compatible
D. At least 50 IEE projects for cumulative 20,000 MWh of potential economic energy savings are identified by

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1. Project framework – Project Outputs

Component 3: Industrial energy efficiency pilot projects
A. At least 8 pilot IEE projects for cumulative 15,000 MWh of energy savings over the projects duration are implemented by enterprises, from key industrial sectors, partnering in the project

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1. Project framework – Example of Project Activities

Component 1: Development, formulation and implementation of policies, regulation, etc.
Output A: National Monitoring, Tracking and Benchmarking (MTB) Program is established
Activities: • Development of national reporting structure for energy consumption and savings in industry (reporting templates, database, website, etc.) • Development of benchmarking methodology(ies) tailored to the Moldova manufacturing sector • Testing of methodology developed in a pilot benchmarking study in one manufacturing sub-sector

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1. Project framework – Example of Project Activities

Component 1: Development, formulation and implementation of policies, regulation, etc.
Output A: National Monitoring, Tracking and Benchmarking (MTB) Program is established
Project inputs required: • International experts in tracking and benchmarking industrial energy efficiency provided through GEF funds • National experts/staff time (mainly) provided by relevant Moldova public or private institution (i.e. National Energy Efficiency Agency) and through GEF funds

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1. Project framework – Example of Project Activities

Component 2: Capacity building and development of tools for industrial systems optimization and energy management .
Output A: 35-40 Moldovan professionals are trained at an expert level in energy system optimization and energy management
Activities: • Selection of trainees • Procurement of necessary measuring equipment • Classroom training and on-industrial-site exercises • Application of acquired knowledge, skills and tools to develop and implement real EE projects under the supervision of international experts

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1. Project framework – Example of Project Activities

Component 2: Capacity building and development of tools for industrial systems optimization and energy management .

Output A: 35-40 Moldovan professionals are trained at an expert level in energy system optimization and energy management

Project inputs required:

- International experts/trainers in system optimization and energy management provided through GEF funds
- Portable measuring equipment provided through GEF funds
- Trainees time made available by Govt. agencies, local experts, public/private institutions and enterprises
- Industrial facilities made available by enterprises for on-site EE assessments and exercises

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1. Project framework – Example of Project Activities

Component 2: Capacity building and development of tools for industrial systems optimization and energy management .

Output B: 350-400 factory personnel receive training on system optimization and energy management

Activities:

- Organization of group trainings and seminars for manufacturing industry personnel
- Promotion of trainings and seminars between manufacturing enterprises
- Training and seminars are delivered by national system optimization and energy management experts trained by the project

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1. Project framework – Example of Project Activities

Component 2: Capacity building and development of tools for industrial systems optimization and energy management .

Output B: 350-400 factory personnel receive training on system optimization and energy management

Project inputs required:

- National system optimization and energy management experts trained by the project deliver trainings/seminars through GEF funds and Govt. funds
- Promotion and organization of the trainings and seminars is provided by industry associations and Govt. agencies (staff time, seminar venues, etc.)
- Trainees/ seminar participants time made available by manufacturing enterprises

2. Partners, beneficiaries and stakeholders

Partner: Entity that formally agrees to collaborate with the project, that receives direct benefits from the project and makes available either in-kind or cash contributions

Beneficiary: Entity that directly/indirectly benefits from project activities

Stakeholder: Entity that has an active involvement in the areas to be addressed by the project and which could/would affect and be affected by the project outputs and outcomes

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2. Partners, beneficiaries and stakeholders

Partner = P **Beneficiary= B** **Stakeholder = S**

Entities	PC1 - Policy	PC2- Training	PC3 – IEE Pilots
Manufacturing enterprises	B, S	P, B	P
Govt. institutions	P, B, S	P, B	P
National EE Agency	P	P, B	P
Industrial associations	P, S	P, B	B, S
EE and IEE experts	P, B	P, B	B, S
Ind. equipment vendors	B, S	P, B	B, S
Financing institutions	S	P, B	P, B
Power utilities	S	S	S

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3. Funding and indicative co-financing plan

GEF-MENR-UNIDO Tentative Funding Plan (USD)

Source of funds	Preparation	Project	**Total**
GEF	40,000	960,000	1,000,000
Co-financing	80,000	2,040,000	2,120,000
Total	120,000	3,000,000	3,120,000

The planned duration of the GEF-MENR-UNIDO project **is 4 years**

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3. Funding and indicative co-financing plan

GEF-MENR-UNIDO Indicative Co-Financing Plan (USD)

Source and type of co-financing		Preparation	Project	**Total (USD)**
Govt. contribution	In-kind	10,000	350,000	400,000
	Cash	-	50,000	
UNIDO	In-kind	-	200,000	250,000
	Cash	70,000	50,000	
Private sector	In-kind	-	200,000	700,000
	Cash	-	500,000	
Bilateral/ Multilateral Agencies and NGOs	In-kind	-	90,000	690,000
	Cash	-	600,000	
Total (USD)		80,000	2,040,000	2,120,000

3. Funding and indicative co-financing plan

Examples of in-kind and cash co-financing contribution

Govt.	In-kind	Working time of National EE Agency staff dedicated to implement the National Monitoring, Tracking and Benchmarking Program
	Cash	Payment of some local IEE experts, trained by the Project, to train manufacturing enterprise engineers and managers
Private sector	In-kind	Working time of enterprise engineers/ managers participating in the Project expert trainings Use of partner facilities for training and information dissemination
	Cash	Funds invested by enterprises in the implementation of IEE projects developed through or co-funded by the Project
B/M Agencies & NGOs	In-kind	Staff time dedicated to Project activities implementation
	Cash	Funds contributed to cover costs of Project activities execution, i.e. local staff/ experts time, measuring equipment, logistics, etc.

4. Project success factors

Relevance. High potential for energy conservation. Full compliance with Moldova's promulgated energy efficiency policy and strategy.

Design. Well-structured & highly synergetic with other EE initiatives (i.e. MoSEFF). International best practices. Complementary inputs from industry & government. Verifiable indicators, monitoring and evaluation.

Ownership. Recognition & support by national authorities & targeted beneficiaries. Commitment from industry, Govt. and IEE market players is critical.

Measurable results. Reductions in energy use and greenhouse gas emissions.

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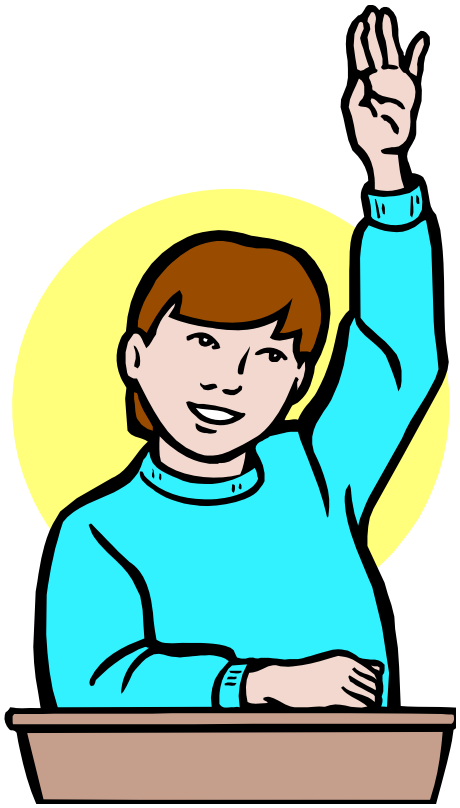
Questions and Answers



Thank you for your attention!

For more information

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