

NS-278 - Promoting Energy Efficient Lighting in the Republic of Moldova

Republic of Moldova

NAMA Seeking Support for Implementation

A Overview		
A.1 Party	Republic of Moldova	
A.2 Title of Mitigation Action	Promoting Energy Efficient Lighting in the Republic of Moldova	
A.3 Description of mitigation action	The overall objective of the NAMA on Promoting Energy Efficient Lighting in the Republic of Moldova is to convert all non-LED lighting systems to LED-based street lighting, public buildings and residential buildings sectors by 2030 and significantly reduce national GHG emissions. At present, the dominant lighting tech are currently in use in the country include: different high-pressure mercury lamps in the street lighting sector, as well as incandescent light bulbs, fluorescent and fluorescent lamps in the public buildings and residential building sectors. Most of the Moldovan lighting infrastructure is outdated and will have to be replaced in Therefore a transition to LED lighting is considered as the best option since LEDs are currently the most energy-efficient and durable lighting technology available market. Preliminary estimates indicate that the full conversion to energy efficient lighting will reduce annual national electricity consumption by 502,680 MWh, resulting in savings of up to 64 million €. Moreover, national GHG emissions would be reduced by 327,314 tCO₂ per year. To reach its target, the NAMA will use a phased approach consisting of three phases to extend the national policy and regulatory framework on energy efficient lighting, gradually enhance national capacities to finance and scale up lighting projects in the country: Preparation Phase (2017-2018); Scale-up Phase (2019-2022) and Transformation Phase (2023-2030).	
A.4 Sector	☒ Energy supply ☐ Transport and its Infrastructure ☒ Residential and Commercial buildings ☐ Industry ☐ Agriculture ☐ Forestry ☐ Waste management ☐ Other	
A.5 Technology	☐ Bioenergy ☐ Cleaner Fuels ☒ Energy Efficiency ☐ Geothermal energy ☐ Hydropower ☐ Solar energy ☐ Wind energy ☐ Ocean energy ☐ Carbon Capture and Storage ☐ Low till / No till ☐ Land fill gas collection ☐ Other	
A.6 Type of action	☐ National/ Sectoral goal ☐ Project: Investment in machinery ☐ Strategy ☐ Project: Investment in infrastructure ☒ National/Sectoral policy or program ☐ Project: Other ☐ Other	
A.7 Greenhouse gases covered by the action	☒ CO ₂ ☐ CH ₄ ☐ N ₂ O ☐ HFCs ☐ PFCs ☐ SF ₆ ☐ Other	
B National Implementing Entity		
B.1.0	Name	Ministry of Agriculture, Regional Development and Environment
B.1.1	Contact Person 1	Vasile Scorpan
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B.1.10	Address	
B.1.11	Phone	

B.1.12	Email	
B.1.13	Comments	
Add Additional Entity		
C Expected timeframe for the implementation of the mitigation action		
C.1	Number of years for completion	13
C.2	Expected start year of implementation	2018
D Currency		
D.1	Used Currency	EUR v
Conversion to USD: 1		
E Cost		
E.1.1	Estimated full cost of implementation	192,000,000 Conversion to USD: 248,382,924
E.1.2	Comments on full cost of implementation	The investments will be allocated in three phases: Phase I, 2018-2019 - EUR 2.65 mln; Phase II, 2019-2023 - EUR 20 mln and, I 2023-2031 - EUR 169 mln. The investment portfolio is the following: International grant - 10%; Moldova Energy Efficiency Fund – Central Government Budget – 20%; Local Government Budget – 10%, International loan (zero% interest rate) – 50%.
E.2.1	Estimated incremental cost of implementation	 Conversion to USD: 0
E.2.2	Comments on estimated incremental cost of implementation	
F Support required for the implementation the mitigation action		
F.1.1	Amount of Financial support	90,470,000 Conversion to USD: 117,037,516
F.1.2	Type of required Financial support	☒ Grant ☐ Guarantee ☐ Loan (sovereign) ☐ Equity ☐ Loan (Private) ☐ Carbon finance ☒ Concessional loan ☐ Other
F.1.3	Comments on Financial support	Grant and Concessional loan are planned be attracted for NAMA implementation, including International grant - EUR 10.6 mln and International loan (zero % interest rate) – EUR 79.87 mln.
F.2.1	Amount of Technological support	
F.2.2	Comments on Technological support	
F.3.1	Amount of capacity building support	100,000 Conversion to USD: 129,366
F.3.2	Type of required capacity building support	☒ Individual level ☒ Institutional level ☐ Systemic level ☐ Other
F.3.3	Comments on Capacity Building support	To inform a range of different stakeholders about their financial and environmental benefits and to enhance local and national skills that are needed f scale up efficient lighting activities. The building capacity activities are planned for the first six years of project implementation.
G Estimated emission reductions		
G.1	Amount	4.58
G.2	Unit	MtCO2e v
G.3	Additional information (e.g. if available, information on the methodological approach followed)	To estimate the emission reductions, data from national statistics, energy audit reports and data provided by country Energy Efficiency Fund are used for the calculation. In addition, the CDM methodology AMS-II.L Demand side activities for efficient outdoor and street lighting technologies is used as guidance for the selection of technical parameters for the development of baseline and NAMA scenarios (UNFCCC, 2011). Ex-ante estimates indicate that GHG emissions of rural and urban street lighting and lighting in public buildings and residential buildings will be reduced by 327,314 CO2 annually by 2030 by switching from conventional to LED-based lighting systems.
H Other indicators		
H.1	Other indicators of implementation	Electricity savings, Number of jobs created and Quantity of mercury eliminated will be used as indicator as well to evaluate NAMA implementation impact
I Other relevant information		
I.1	Other relevant information including co-benefits for local	The replacement of conventional lighting systems by LED luminaires will result in a significant reduction of electricity consumption in the target lighting sectors: b the street lighting sector, by about 59% in the public buildings sector and by about 65% in the residential building sectors. At the 2016 country electricity price of 4

sustainable development

per kWh, annual savings in the street lighting sector would amount to € 25,169,670 (based on a reduction in electricity consumption of 197,100 MWh/yr), and to € 20,446,902 (based on a reduction of 151,400 MWh/yr) and € 20,446,902 (based on a reduction of 151,180 MWh/yr) in the public buildings and residential buildings sectors, respectively.

Social benefits:

The replacement of conventional lighting systems by energy efficient lighting technologies will promote the creation of new jobs that are relevant for planning, firm implementation and monitoring of efficient lighting projects. To retrofit and maintain street lighting 4000 new jobs will be created.

Under the project framework, adequate disposal and waste handling will be promoted and Mercury waste will be progressively decreased due to the phase-out of mercury-containing light bulbs. Mercury will be collected and properly treated under the new waste-handling scheme prepared under the project. Future mercury waste will be due to the use of LEDs.

The traffic and people safety will be increased due to quality of new street light system.

J Relevant National Policies strategies, plans and programmes and/or other mitigation action

J.1 Relevant National Policies
In 2010, the Republic of Moldova joined the Copenhagen Accord and submitted an emission reduction target to the UNFCCC Secretariat, which states that “a reduction of no less than 25% level total national GHG emissions has to be achieved by 2020 through implementation of global economic mechanisms focused on climate change mitigation, in accordance with the Convention principles and provisions (MoEN, 2010).

The GHG emission reduction target as well as the energy efficiency targets are also included in the Energy Strategy of the Republic of Moldova until 2030, Energy Efficiency Law, The Law on Performance of Buildings, Law on labelling energy-related goods impacting energy consumption, Law on ecodesign requirements applicable to energy-related products. The National Energy Efficiency Programme 2011–2020 defines energy efficiency indicators and benchmarks, including for lighting appliances, and aligns them with definitions of the European Union

J.2 Link to other NAMAs
(none)

K Attachments

K	Attachments	TitleDescription
		No records to display.
K.1	Attachment description	
K.2	File	Choose FileNo file chosen

L Support received

L.1	Outside the Registry					
L.2	Within the Registry	Support provided	SupportType	Amount	Comment	Date
No records to display.						