

NS-209 - Promoting the use of Renewable Energy Solution for Households and Buildings

Rwanda

NAMA Seeking Support for Preparation

A Overview

A.1 Party

Rwanda

A.2 Title of Mitigation Action

Promoting the use of Renewable Energy Solution for Households and Buildings

A.3 Description of mitigation action

This Nationally Appropriate Mitigation Action (NAMA) targets mitigation in the Housing sector in Rwanda and focuses on promoting the use of renewable energy technologies in rural and urban households and buildings across Rwanda. More specifically, the NAMA will promote the use solar water heaters (SWH) in urban households and buildings (e.g. hotels, hospitals, hostels) and the use of standalone solar powered lighting kits in rural households, housing classified as 'social' and/or 'affordable' and small commercial establishments (e.g. shops, micro-enterprises etc.) The NAMA will be transformational as it will support the development of a local renewable energy industry in Rwanda, build employment and capacity for local service providers and increase awareness and acceptance for renewable energy technologies in general.

Emission reductions:

For the projected NAMA period of 2016 – 2030, the direct estimated net GHG emission reductions are approximately 643,000 tCO₂e assuming the baseline as grid electricity.

Sustainable Development benefits:

These mitigation actions result in significant, meaningful and measureable reductions in GHG emissions while concurrently supporting Rwanda's national development and poverty reduction policies and strategic visions and goals. It is envisioned that significant sustainable co-benefits of the NAMA include:

- Increased access to energy via renewable resources
- The use of domestic resources for energy will reduce dependence on imported fuels and electricity.
- Reduced the use of kerosene lamps and wood based fuels, thus improve indoor air quality and health from less exposure to soot and other harmful particulate matters.
- Clean, practical and convenient way to meet their daily hot water demand via SWH
- The potential for creating job opportunities in the manufacturing, supply, installation, operation and maintenance fields as well, and stimulating the interest of new investors in the

solar energy sector in Rwanda.

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Private Sector involvement:

The NAMA will encourage the development of a local businesses and industry by creating a market for solar lighting kits and SWH which are currently imported into Rwanda. This will allow the private sector to play a positive and central role in the success of the NAMA, as the private sector will be the hardware and service provider. As a consequence this will create employment and income generating opportunities within the private sector in Rwanda. It is expected that households and businesses will contribute to the investment component of the NAMA.

A.4 Sector

| | |
|--|---|
| <input type="checkbox"/> Energy supply | <input type="checkbox"/> Transport and its Infrastructure |
| <input checked="" type="checkbox"/> Residential and Commercial buildings | <input type="checkbox"/> Industry |
| <input type="checkbox"/> Agriculture | <input type="checkbox"/> Forestry |
| <input type="checkbox"/> Waste management | |

Other

A.5 Technology

| | |
|---|--|
| <input type="checkbox"/> Bioenergy | <input type="checkbox"/> Cleaner fuels |
| <input type="checkbox"/> Energy Efficiency | <input type="checkbox"/> Geothermal Energy |
| <input type="checkbox"/> Hydropower | <input checked="" type="checkbox"/> Solar Energy |
| <input type="checkbox"/> Wind Energy | <input type="checkbox"/> Ocean Energy |
| <input type="checkbox"/> Carbon Capture and Storage | <input type="checkbox"/> Low till / No till |
| <input type="checkbox"/> Land fill gas collection | |

Other

A.6 Type of action

| | |
|---|--|
| <input type="checkbox"/> National/ Sectoral goal | <input type="checkbox"/> Project: Investment in machinery |
| <input type="checkbox"/> Strategy | <input type="checkbox"/> Project: Investment in infrastructure |
| <input checked="" type="checkbox"/> National/Sectoral policy or program | <input type="checkbox"/> Project : other |

Other

A.7 Greenhouse gases covered by the action

| | |
|---|-------------------------------|
| <input checked="" type="checkbox"/> CO2 | <input type="checkbox"/> CH4 |
| <input type="checkbox"/> N2O | <input type="checkbox"/> HFCs |
| <input type="checkbox"/> PFCs | <input type="checkbox"/> SF6 |

Other

B National Implementing Entity

| | | |
|-------|------------------|--|
| B.1.0 | Name | Rwanda – Ministry of Infrastructure (MININFRA) |
| B.1.1 | Contact Person 1 | Mrs Mireille UWERA |
| B.1.2 | Address | KG 7 Ave., P.O. BOX 24, Kigali, Rwanda |
| B.1.3 | Phone | +250788509527 |
| B.1.4 | Email | mireille.uwera@mininfra.gov.rw |
| B.1.5 | Contact Person 2 | Mr. Jean Claude MUTABAZI |
| B.1.6 | Address | |
| B.1.7 | Phone | +250786111181 |
| B.1.8 | Email | jclaud.mutabazi@mininfra.gov.rw |

- B.1.9 Contact Person 3
- B.1.10 Address
- B.1.11 Phone
- B.1.12 Email
- B.1.13 Comments

C Expected timeframe for the preparation of the mitigation action

C.1 Number of months for completion 18

D Currency

D.1 Used Currency

AED

Conversion to USD: 1

E Cost

E.1.1 Estimated full cost of preparation 235000

E.1.2 Comments on full cost of preparation
 The full cost of preparation covers the cost of preparation for the NAMA Design and Document, and a Comprehensive Survey. As well as institutional level Capacity Development Support for NAMA finance and MRV.
 Note that the Climate Change Focal Point (Rwanda Environmental Management Authority) and the National Implementing Entities will provide in-kind programme management, institutional coordination, and procurement services during the preparation phase of the NAMA. This in-kind contribution is not included in the estimated full cost of preparation.

F Support required to prepare the mitigation action

F.1.1 Amount of Financial support 145000

F.1.2 Type of required Financial support

- Grant
- Loan (sovereign)
- Loan (Private)
- Concessional loan
- Other
- Guarantee
- Equity
- Carbon finance

F.1.3 Comments on Financial support

Preparation of NAMA Design and Document:
 This consists of the activities and cost of full NAMA design and its documentation, including the institutional framework, implementation planning, financial structuring, support required, and MRV system design and management. (USD 110,000)
 Comprehensive Survey:
 The comprehensive survey will focus on two key components of the NAMA, which are the technical feasibility and financial structure for the choice of appropriate technology (e.g. specification, minimum quality standard, demand based on end-user classification etc.) and the appropriate financial mechanism based on end-user type to ensure that any international finance requested is used efficiently and in a sustainable manner. (USD 35,000)

F.2.1 Amount of Technical support

F.2.2 Comments on Technical support

F.3.1 Amount of capacity building support 90000

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|--|--|
| F.3.2 Type of required capacity building support | <input type="checkbox"/> Individual level <input checked="" type="checkbox"/> Institutional level <input type="checkbox"/> Systemic level <input type="checkbox"/> Other <input type="text"/> |
| F.3.3 Comments on Capacity Building support | <p>Workshop for institutional capacity building for climate finance and financial structuring in priority sectors of NAMAs seeking support for implementation. Focus is on meeting general international requirements, and specific requirements of selected support facilities. (USD 45,000)</p> <p>Workshop for institutional capacity building for MRV systems and their structuring in priority sectors of NAMAs seeking support for implementation. Focus is on the institutional framework for MRV and the tracking of mitigation actions, finance and sustainable benefits in a performance based methodology. (USD 45,000)</p> |
| F.4 Financial support required | <input type="checkbox"/> |
| F.5 Technological support required | <input type="checkbox"/> |
| F.6 Capacity support required | <input type="checkbox"/> |

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

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|--------------------------------|--|
| G.1 Relevant National Policies | <p>The planned NAMA is in line with all relevant national and sectoral policies, which are as follows:</p> <p>A) Key policy linkage to the National Green Growth and Climate Resilience strategy with a focus on low carbon development to 2020 and a vision for 2050. The key linking programmes are: - Programme 10: Low Carbon Urban Systems; Action 1: Low energy buildings and services (key indicator = Per Capita Energy Use).</p> <p>B) Urbanisation and Rural Settlement Sector Strategic Plan 2012/13-17/18. The NAMA will meet 2 key objectives of the strategy, i.e. support the development for good urban and rural settlements cross-cutting all development sectors and the co-benefits arising from improved access to energy will provide services and attract economic activities countrywide.</p> <p>C) National Energy Policy: The NAMA will contribute to solar energy objectives particularly ‘solar water heating, substituting biomass and electricity water heating, with significant environmental and recurrent cost savings’.</p> <p>D) Specific City Development Plans: The NAMA will support the implementation of specific city development plans including the development of Kigali and six secondary cities by promoting the development and access to infrastructure services.</p> |
| G.2 Link to other NAMAs | . |

H Attachments

| H Attachments | <table border="1"> <tr> <th data-bbox="766 1926 1005 1982">Title Description</th> </tr> </table> | Title Description |
|----------------------------|--|-------------------|
| Title Description | | |
| H.1 Attachment description | | |
| H.2 File | <input type="text"/> <input type="button" value="Browse..."/> | |

I Support received

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| I.1 Outside the Registry |
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