

NS-315 - NAMA of the Efficient Cooking Program in Ecuador

Ecuador

NAMA Seeking Support for Implementation

A Overview		
A.1 Party	Ecuador	
A.2 Title of Mitigation Action	NAMA of the Efficient Cooking Program in Ecuador	
A.3 Description of mitigation action	The "Efficient Cooking Program for induction cooking and water heating with electricity to replace Liquefied Petroleum Gas (LPG) in the residential sector" (ECP) the increase of renewable energy derived from hydroelectricity until 2017, is estimated to have approximately acumulative GHG reduction of 9.97 million Tt 2014 to 2025. ECP-NAMA is a mitigation action based on the component of cooking efficiency. This action is promoted by the Ecuadorian Govern coordinated by the Ministry of Electricity and Renewable Energy (MEER), whose objective is to make possible that approximately 3 families replace LPG for cooking by electricity. With this mechanism, users with 220V busbars and a functioning internal installator to acquire the induction kitchen in any commercial store and afterwards payment will be collected by the electricity companies throo electric bills.	
A.4 Sector	☒ Energy supply ☒ Residential and Commercial buildings ☐ Agriculture ☐ Waste management ☐ Other	
A.5 Technology	☐ Bioenergy ☒ Energy Efficiency ☐ Hydropower ☐ Wind energy ☐ Carbon Capture and Storage ☐ Land fill gas collection ☐ Other	
A.6 Type of action	☐ National/ Sectoral goal ☐ Strategy ☒ National/Sectoral policy or program ☐ Other	
A.7 Greenhouse gases covered by the action	☒ CO2 ☐ N2O ☐ PFCs ☐ Other	
B National Implementing Entity		
B.1.0	Name	Ministry of Electricity and Renewable Energy
B.1.1	Contact Person 1	Adrian Moreno
B.1.2	Address	José Tamayo 1025 y Lizardo García, Quito-Ecuador.
B.1.3	Phone	593-397-6000 – ext 1510/1511
B.1.4	Email	adrian.moreno@meer.gob.ec
B.1.5	Contact Person 2	Carlos Dávila
B.1.6	Address	José Tamayo 1025 y Lizardo García, Quito-Ecuador
B.1.7	Phone	593-397-6000 – ext 1513/1514
B.1.8	Email	carlos.davila@meer.gob.ec
B.1.9	Contact Person 3	
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 10

C.2 Expected start year of implementation 2014

D Currency

D.1 Used Currency USD 

Conversion to USD: 1

E Cost

E.1.1 Estimated full cost of implementation 1,091,000,255

Conversion to USD: 1,091,000,255

E.1.2 Comments on full cost of implementation

The full cost of implementation calculation is based on technology and distribution costs:

Full implementation cost in USD	
Administration, communication, studies and implementation of project monitoring systems	\$ 185.215.192,00
Payments to Electric Distribution Companies	\$ 30.000.000,00
Alternative for population that cook with biomass	\$ 558.920,00
Cost of induction kits and circuit installation (BDH)	\$ 2.625.695,00
Cost of induction kits and circuit installation (RUD)	\$ 2.895.900,00
Cost of induction kits for sale at preferential price	\$ 32.697.279,00
Payment to stoves supplier companies and sets of pots	\$ 670.997.892,00
Payment to electric water heating equipment companies	\$ 87.000.000,00
Payment for internal installation circuits	\$ 79.009.377,00
TOTAL	\$ 1.091.000.255,00

Source: (MEER, 2015)

On the total cost of implementation, since 2014, Ecuador has invested around USD 285,945,639.35

E.2.1 Estimated incremental cost of implementation 42,339,548

Conversion to USD: 42,339,548

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 42,399,548

Conversion to USD: 42,399,548

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

The amount of financial support required is compounded by:

- Household with electricity coverage and induction stoves installed: the proposed component is expected to provide access to electricity for 5,124 low-income. The project intends to improve: (i) quality of life through the provision of electricity, and (ii) health with the replacement of LPG or other primary source electricity and the use of efficient stoves (USD 17,633,548.55).
- Industrial development of components and pieces: the total demand for induction stoves will be provided by local private industry. The development of local industry also seeks to create more job opportunities for the citizens (USD 19,560,000.00).
- Mass Communication Strategy: a strong marketing strategy through which people will know the main benefits of using efficient stoves (USD 1,500,000.00).
- Capacity building (USD 3,646,000.00)

F.2.1 Amount of Technological support

F.2.2	Comments on Technological support	
F.3.1	Amount of capacity building support	3,646,000 Conversion to USD: 3,646,000
F.3.2	Type of required capacity building support	☐ Individual level ☒ Institutional level ☒ Systemic level ☐ Other
F.3.3	Comments on Capacity Building support	This amount is needed to reinforce the capacities building for different interested actors, including producers of components and p include mid-term studies and impact assessment which enables reduce risks and ensure the implementation of the ECP. This incl designing strategies to overcome obstacles and reduce gaps of knowledge.

G Estimated emission reductions

G.1	Amount	0.997
G.2	Unit	MtCO2e/yr
G.3	Additional information (e.g. if available, information on the methodological approach followed)	The mitigation scenario of the NAMA was modelled with LEAP^[1] software using information provided by MEER. Population and GDP projections were information in order to generate de business as usual scenario. For the purposes of this NAMA, the following scenarios were considered: • Base Scenario: or "Business As Usual" scenario (BAU), which does not consider policies or emission reduction measures. This scenario is based on the gro demand for LPG in the residential sector. • Mitigation scenario: is the one that contains the mitigation measures. This scenario is based on the progressive penetration of induction stoves and conse decrease of LPG stoves. Through the implementation of the ECP, it is estimated an average reduction of 0.83 million TCO2-eq per year and a cumulative to of 9,97 million TCO2-eq from 2014 to 2025. Such reduction is equivalent to 2.6% of total emissions of Ecuadorian energy sector. T estimation considers LPG reduction and the use of hydroelectricity. ^[1] LEAP, the Long range Energy Alternatives Planning System, is a widely-used software tool for energy policy analysis and climate change mitigation assessment developed at t Environment Institute.

H Other indicators

H.1	Other indicators of implementation
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I Other relevant information

I.1	Other relevant information including co-benefits for local sustainable development	• Social co-benefits: the side effects of the implementation of mitigation measures may be related to the creation of new employment opportunities, the devel capacities, and the improvement of quality of life. • Economic co-benefits: these co-benefits are related to the savings and economic flow that mitigation plans can bring to society. The development of new bi result of climate change plans, can be taken as a positive side effect. • Technological co-benefits: in order to implement mitigation plans, it is important to build new technological capacity that should drive innovative proce technologies. • Environmental co-benefits: these co-benefits refer to the protection and conservation of natural resources. Waste management, use of recycled materials, and the development of renewable energy sources are examples of the co-benefits that contribute to environmental protection.
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J Relevant National Policies strategies, plans and programmes and/or other mitigation action

J.1	Relevant National Policies	Ecuador's Constitution explicitly addresses climate change policies in its article 414. The ECP program is a strategic national flagship program that will allow the reduction or elimination of is integrated into national and sectoral strategies. In the National Plan for Good Living, Ecuador has defined several priority actions for climate change adaptation and mitigation (Policy energy efficiency and greater participation of sustainable renewable energies as a measure to prevent environmental pollution; 7.10. Implementing Climate Change mitigation and adapt to reduce economic and environmental vulnerability with emphasis on priority groups and the transformation of the energy matrix by developing a wide variety of non-conventional renewa energy efficiency; and 11.1). Furthermore, the National Climate Change Strategy (2012 -2025) states the following: "To take conservation and efficient use of energy actions, as well as research technology transfer mechanisms in order to achieve efficient use of energy in the residential and industrial sub-sectors". Through the LECB project, the Ministry of Environment of Ecuador (MAE) has been working in coordination with the MEER, in the development of studies and documents to present National Mitigation Action Plan. The ECP is a national wide initiative that is being implemented and aims to contribute directly to reducing emissions of GHG, Carbon Dioxide (CO2) through this initiative, Ecuador seeks to reduce the use of fossil fuels and associated subsidies in the residential sector.
J.2	Link to other NAMAs	(none)

K Attachments

K	Attachments	<table> <tr> <th>Title</th> <th>Description</th> </tr> <tr> <td colspan="2">No records to display.</td> </tr> </table>	Title	Description	No records to display.	
Title	Description					
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K.1	Attachment description				
K.2	File	Choose File No file chosen			

L Support received

L.1	Outside the Registry	Technical Cooperation from: Low Emission Capacity Building Programme (LECB), the Interamerican Development Bank (IADB), the World Bank Partners Development Bank of Latin America (CAF).				
L.2	Within the Registry	Support provided	SupportType	Amount	Comment	Date
No records to display.						