

NS-287 - Greening Thailand's Low and Middle Income Housing

Thailand

NAMA Seeking Support for Implementation

A Overview		
A.1 Party	Thailand	
A.2 Title of Mitigation Action	Greening Thailand's Low and Middle Income Housing	
A.3 Description of mitigation action	The building sector is a significant contributor to Thailand's greenhouse emissions. The housing sector, in particular, consumed 24% of the electricity used in Th With 5% rate of growth of residential buildings due to urbanizatiion and increased demand for housing due to shifting demographics. This NAMA involves a collaboration between the National Housing Authority (NHA) and Electricity Generating Authority of Thailand (EGAT) to apply "Ecovillage" standards for new low income housing projects in Thailand. The NAMA will address the design aspects of new residential buildings, including materials, energy efficient appliances, research and market stimulation to lower the costs of green residential construction. The NAMA will include a demonstration site, capacity-t and dissemination design standards. NAMA objective : NHA built greener houses for low and middle income buyers and drive the housing market to green standard. To meet above objective, following activities are envisioned in five years : ■ Reduce Green house cost by research and market activities ■ Standard setting and labeling scheme ■ Marketing and capacity building ■ Financial supports in form of low interest loan The actions proposed in this NAMA will support Thailand's INDC of 20% emission reductions from BAU by 2030. It is also in line with Thailand's national goal of energy intensity by 30% by 2036, compared to 2010 level.	
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	☒ CO2 ☐ CH4 ☐ N2O ☐ HFCs ☐ PFCs ☐ SF6 ☐ Other	
B National Implementing Entity		
B.1.0	Name	1.National Housing Authority 2.Electricity Generating Authority of Thailand
B.1.1	Contact Person 1	Ms. Sureeporn Suwannaworn
B.1.2	Address	National Housing Authority, 908 Nawamin Road, Klongchan, Bangkok, Bangkok 10240, Thailand.
B.1.3	Phone	+66 2351 6859, +6686 069 6786
B.1.4	Email	ws55_5@hotmail.com
B.1.5	Contact Person 2	Ms. Pornuma Harabutra
B.1.6	Address	
B.1.7	Phone	+66 24368133, +6685 910 0713

B.1.8	Email	pornuma.h@egat.co.th
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	5
C.2	Expected start year of implementation	2018

D Currency

D.1	Used Currency	USD
-----	---------------	-----

Conversion to USD: 1

E Cost

E.1.1	Estimated full cost of implementation	912,460,000
	Conversion to USD: 912,460,000	
E.1.2	Comments on full cost of implementation	The details shown in cost and potential worksheet file.
E.2.1	Estimated incremental cost of implementation	14,700,000
	Conversion to USD: 14,700,000	
E.2.2	Comments on estimated incremental cost of implementation	The incremental cost of implementation includes additional cost to become "green". The incremental cost will come from local funds such as Energy Conservation Fund.

F Support required for the implementation the mitigation action

F.1.1	Amount of Financial support	7,360,000
	Conversion to USD: 7,360,000	
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 financial support will combine with other Government fundings to raise a Green Climate Fund which lend money to home buyers. The interest payments will continue the funding.
F.2.1	Amount of Technological support	3,180,000
F.2.2	Comments on Technological support	The support is needed for developing Green building criteria for house units and implementation plans and financial mechanism to support green housing market activities include : - Criteria development for energy efficient household labelling - MRV design and baseline data collection - Enhancement of eco-village criteria - Scale up strategic and implementation plans for eco-village criteria - Financial mechanism development - Study of eco-friendly materials, construction and intervention plans
F.3.1	Amount of capacity building support	2,500,000
	Conversion to USD: 2,500,000	
F.3.2	Type of required capacity building support	☒ Individual level ☒ Institutional level ☐ Systemic level ☐ Other
F.3.3	Comments on Capacity Building support	The support is needed for capacity building of all stakeholders and awareness raising such as : - Training for green building architects, engineers and contractors, including the usage of Standards and certification system - Training for certified green building auditors - Training MRV tools - Media and campaign for Greenhouse label to market

G Estimated emission reductions

G.1	Amount	0.304
G.2	Unit	MtCO2e
G.3	Additional information (e.g. if available, information on the methodological approach followed)	The estimated emission reduction is based on savings from Building Energy Code Software Programme comparing energy use of typical design of low-income certified green houses with 5 energy efficiency measures. The energy savings and total emissions reductions are calculated from actual survey data and the number of NHA plan during next 5 years.

H Other indicators											
H.1 Other indicators of implementation	1. Develop a green building labelling scheme in line with Ecovillage, to be accredited and launched by EGAT and market this scheme 2. Number of new low and middle income houses developed by NHA achieve green label accreditation 3. Develop MRV framework for collection and reporting of operational energy use in buildings 4. Cost of Green houses compared to those of standard houses 5. Number of houses and amount of money supported by the programme 6. Number of personnel trained for the green building industry										
I Other relevant information											
I.1 Other relevant information including co-benefits for local sustainable development	Economic : 1. Reduced electricity bill for low-income families 2. Increased energy security from demand-side reductions 3. Increase green material and technology demand 4. Lower market cost of green houses 5. Promote green house market demand Environmental : 1. Reduced GHG emissions from reduced electricity generation 2. Reduced use of water and other natural resources 3. Better quality of life Social : 1. Welfare gains from reduced electricity bills, especially for the lower income populations 2. Positive health effects from better air quality 3. Job creation and economic development 4. Capacity building and skills development										
J Relevant National Policies strategies, plans and programmes and/or other mitigation action											
J.1 Relevant	Energy Efficiency Plan (2015-2036)										
National	Thailand Climate Change Masterplan (2011-2050)										
Policies											
J.2 Link to	(none)										
other											
NAMAs											
K Attachments											
K Attachments	<table border="1"> <thead> <tr> <th>Title</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>02-nama-seeking-support-for-implementation_housing_230118.pdf</td> <td>NAMA description</td> </tr> <tr> <td>project_cost_and_potentials.pdf</td> <td></td> </tr> <tr> <td>project_budget.pdf</td> <td></td> </tr> <tr> <td>project_plan.pdf</td> <td></td> </tr> </tbody> </table>	Title	Description	02-nama-seeking-support-for-implementation_housing_230118.pdf	NAMA description	project_cost_and_potentials.pdf		project_budget.pdf		project_plan.pdf	
Title	Description										
02-nama-seeking-support-for-implementation_housing_230118.pdf	NAMA description										
project_cost_and_potentials.pdf											
project_budget.pdf											
project_plan.pdf											
K.1 Attachment description											
K.2 File	Choose File No file chosen										
L Support received											
L.1 Outside the Registry	the construction budget from NHA and government the incremental cost from government fund										
L.2 Within the Registry	<table border="1"> <thead> <tr> <th>Support provided</th> <th>SupportType</th> <th>Amount</th> <th>Comment</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td colspan="5">No records to display.</td> </tr> </tbody> </table>	Support provided	SupportType	Amount	Comment	Date	No records to display.				
Support provided	SupportType	Amount	Comment	Date							
No records to display.											