

## “Nationally Appropriate Mitigation Actions (NAMA) in the Construction Sector in Mongolia”

### Brief Information

**Programme period:** 2017-2020

**Executing entity:**

Ministry of Construction and  
Urban Development  
Government of Mongolia

**Implementing/responsible partners:**

Ministry of Environment and  
Tourism, Ministry of Energy and  
UNDP

### Project Finance

Total budget: (required) \$8,169,863

Total allocated resources:

- GEF \$1,269,863
- Government \$3,350,000
- Private sector \$3,450,000
- UNDP \$100,000

### Global Benefits

- Direct cumulative emission reduction by EOP: 10,709 tCO<sub>2</sub>e
- Direct emission reduction over project lifetime: 64,219 tCO<sub>2</sub>e

### SDGs:



### Project Brief Description and Outputs

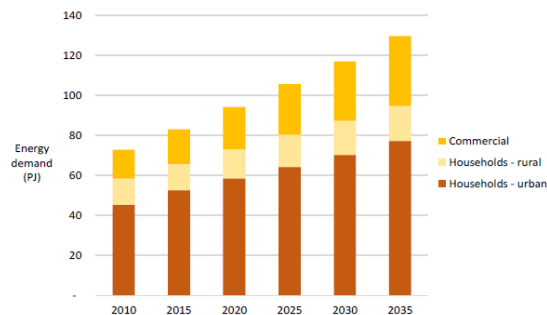
The objective of the project is to facilitate market transformation for energy efficiency in the construction sector through the development and implementation of Nationally Appropriate Mitigation Actions (NAMA) in Mongolia. This objective will be achieved by removing barriers to increased adoption of energy efficiency technology in construction sector through three components:



### Increasing Energy Demand in the Construction Sector

With an increase in housing demand from economic growth and a surging rural to urban migration, the construction sector had been thriving reciprocally over the past decade. The projection of housing demand based on the population growth rate indicates approx. 140,000 apartment units will be constructed between 2020 and 2030, which translates to around 14,000 new units annually. As the building stock continues to grow, energy demand simultaneously escalates.

Figure 1. Energy demand in the buildings sector, reference scenario, PJ (10<sup>15</sup> joules)



Source: Strategies for Development of Green Energy Systems in Mongolia (2013-2035), GGGI, 2015

Urban household energy use dominates energy demand in the buildings sector, which is projected to nearly double between 2010 and 2035, despite the combination of energy efficiency improvements and ongoing shift away from less-efficient biomass heating fuels (GGGI, 2015).

## National Benefits

- ❖ Long term reduction of energy cost to households help lessen household expenditure and improve their financial conditions;
- ❖ Reduced energy usage contributes to lower demand from coal fired heat-only boilers and power plants, hence, significantly reducing air pollution. This leads to improvements in health benefits for the entire population;
- ❖ Improved living comfort and quality of life of building occupants;
- ❖ Reduced GHG emissions thereby reducing the long term risk of climate change;
- ❖ Increased demand of EE construction materials/technologies which will support local manufacturers and businesses leading to better employment prospects and eventually improved local economy;
- ❖ Improved access to energy efficiency financing in the construction sector leading to EE investments;
- ❖ Enhanced capacities and skills of people, specifically women, employed in the construction sector

## Contact details:

### Project Management Unit

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## Energy Consumption and GHG Emission by the Construction Sector

The energy sector is by far the largest contributor with almost 52% of total GHG emissions in 2012 (MEGD, MARCC-2014). At current rates, Mongolia's GHG emissions is expected to increase four times the 2006 levels by 2030 and account for approx. 82% of the total to 51.2 Mt CO<sub>2</sub>-eq.

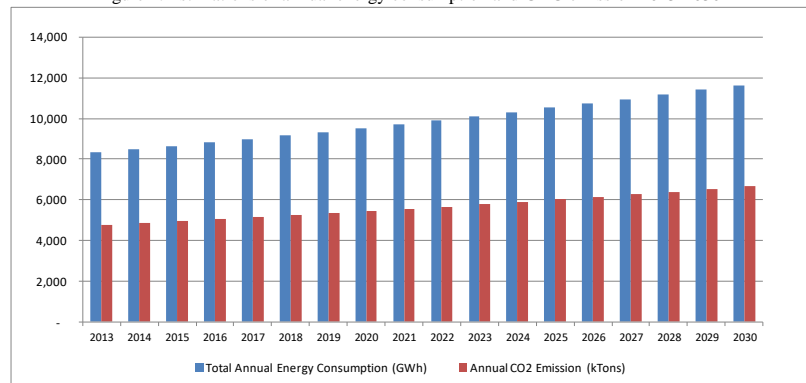
Table 1. Construction sector's energy consumption and GHG emissions

	2015	2020	2030
Energy consumption by the construction sector (GWh/yr)	8,641	9,526	11,636
Baseline GHG emission (million tCO <sub>2</sub> eq)	4.94	5.45	6.66

Source: NAMA project document, UNDP, 2016

Construction sector consumed 8,641 GWh of energy that resulted in 4.94 million tCO<sub>2</sub>eq greenhouse gases in 2015. If this BAU outcome continues, projection shows that GHG emissions in Mongolia construction sector will increase to approximately 5.45 million tonnes CO<sub>2</sub>eq in 2020 and 6.66 million tonnes CO<sub>2</sub>eq in 2030. This is based on growth of energy consumption in construction sector to meet the expected demands from 9,526 GWh in 2020 and 11,636 GWh in 2030.

Figure 2. Estimations of annual energy consumption and GHG emission 2013-2030



Source: NAMA project document, UNDP, 2016

## What is Nationally Appropriate Mitigation Actions (NAMA)?

NAMA, firstly used in the Bali Action Plan, under the UNFCCC, Dec 2007, refers to a set of policies and actions that countries undertake as part of a commitment to reduce GHG emissions. NAMA recognizes that:

- ❖ Different countries, different NAMAs on the basis of equity and in accordance with common but differentiated responsibilities and respective capabilities
- ❖ Developing countries will effectively implement national action depends on the effective implementation of the commitments by developed countries in provision of financial resources and transfer of technology
- ❖ NAMAs shall be based on MRV framework

## EXPECTED RESULTS AND INDICATORS

10,709 tCO<sub>2</sub>e cumulative emissions reduced by EOP

Energy consumption and GHG emission inventory system became operational and adopted for the construction sector NAMA by Year 3

6 individual EE interventions that constitute construction sector NAMA by Year 4

MRV system for construction sector emissions set up and operational by Year 2

18,722 MWh cumulative heat and electrical energy savings by EOP

100% of new buildings fully or beyond in-compliance with BCNS by EOP

50 people gainfully employed on EE in the construction sector

4 public and private sector entities supporting the sustainable operation of GHG inventory system by EOP

3 identified fully capable and qualified private/public entities that are interested in funding prioritized NAMA projects by Year 4

2 institutions adopting and operationalizing MRV systems of the Pilot NAMA, by Year 3

3 construction sector NAMA case studies using the approved MRV framework and incorporated in policy document by EOP