

NS-247 - Fostering Use of Natural Gas in the Transport Sector

Kazakhstan

NAMA Seeking Support for Implementation

A Overview

A.1 Party

Kazakhstan

A.2 Title of Mitigation Action

Fostering Use of Natural Gas in the Transport Sector

A.3 Description of mitigation action

The goal of this NAMA is to reduce GHG emissions by switching from gasoline and diesel to natural gas as a fuel. The NAMA will support the government's goal of increasing Kazakhstan's cheap and clean natural gas for transport by developing the infrastructure to supply compressed natural gas (CNG) throughout the country and later also developing the infrastructure for Liquefied Natural Gas (LNG). The national gas operator JSC KazTransGas will implement the NAMA through: (i) constructing a network of 35 to 100 CNG fueling stations; (ii) creating other infrastructure to enable a natural gas market (e.g., workshops for converting existing vehicles to CNG, test centers, training facilities); and (iii) extending natural gas use to transport areas. In addition to investment in specific infrastructure, the NAMA will enable development and implementation of a comprehensive natural gas fuel promotion, including a package of government support measures, formulation of technical and regulatory norms, protocol development of the necessary institutional and human resources, and access to natural gas. The NAMA envisages 34 distinct activities across four main phases:

- (i) Phase 1 (2014-2015): Pilot market infiltration in selected areas;
- (ii) Phase 2 (2016-2018): Extending use of natural gas to include small commercial players;
- (iii) Phase 3 (2019-2020): Fuel switching in agriculture and specialty vehicles; and
- (iv) Phase 4 (2021-2025): Comprehensive market penetration.

Work on the NAMA has already begun, mainly focusing on removing regulatory barriers, including technical norms and standards that do not reflect current CNG refueling equipment, conversion to

A.4 Sector

Energy supply Transport
 Residential and Commercial buildings Industry
 Forestry

A.5 Technology	<input type="checkbox"/> Agriculture	
	<input type="checkbox"/> Waste management	
	<input type="checkbox"/> Other	<input type="text"/>
A.6 Type of action	<input type="checkbox"/> Bioenergy	<input checked="" type="checkbox"/> Cleaner I
	<input type="checkbox"/> Energy Efficiency	<input type="checkbox"/> Geotherm
	<input type="checkbox"/> Hydropower	<input type="checkbox"/> Solar ene
	<input type="checkbox"/> Wind energy	<input type="checkbox"/> Ocean en
	<input type="checkbox"/> Carbon Capture and Storage	<input type="checkbox"/> Low till /
	<input type="checkbox"/> Land fill gas collection	
	<input type="checkbox"/> Other	<input type="text"/>
A.7 Greenhouse gases covered by the action	<input type="checkbox"/> National/ Sectoral goal	<input type="checkbox"/> Project: I
	<input type="checkbox"/> Strategy	<input checked="" type="checkbox"/> Project: I
	<input type="checkbox"/> National/Sectoral policy or program	<input type="checkbox"/> Project: C
	<input type="checkbox"/> Other	<input type="text"/>
	<input checked="" type="checkbox"/> CO2	<input type="checkbox"/> CH4
	<input checked="" type="checkbox"/> N2O	<input type="checkbox"/> HFCs
	<input type="checkbox"/> PFCs	<input type="checkbox"/> SF6
	<input type="checkbox"/> Other	<input type="text"/>

B National Implementing Entity

B.1.0 Name	JSC KazTransGas Onimderly
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B.1.9 Contact Person 3	
B.1.10 Address	
B.1.11 Phone	
B.1.12 Email	reception@ktgo.kz
B.1.13 Comments	

C Expected timeframe for the implementation of the mitigation action

C.1	Number of years for completion	12
C.2	Expected start year of implementation	2014

D Currency

D.1	Used Currency	<input type="text" value="AED"/>
		Conversion to USD: 1

E Cost

E.1.1	Estimated full cost of implementation	74125000
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E.1.2 Comments on full cost of implementation Table 1 outlines expected funding sources, including the amount of support JSC KazTransGas (implementation from international sources.

Table 1: Requested Funding for NAMA Implementation (USD)

Including					
Phase	Years	Description	Total cost	State Budget	Own
1	2014-2015	Pilot market infiltration	10,325,000	180,000	6,89
2	2016-2018	Extending CNG to medium and small commercial players	30,500,000	250,000	7,93
3	2019-2020	Fuel switching in agriculture, construction and other specialty vehicles	16,700,000	620,000	4,28

4	2021-2025	Comprehensive market penetration	16,600,000	630,000	4,00
Total		74,125,000	1,680,000		23,100,000

E.2.1 Estimated incremental cost of implementation

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	49345000
F.1.2	Type of required Financial support	<input checked="" type="checkbox"/> Grant <input type="checkbox"/> Loan (sovereign) <input type="checkbox"/> Loan (Private) <input type="checkbox"/> Concessional loan <input type="checkbox"/> Other <input type="text"/>
F.1.3	Comments on Financial support	
F.2.1	Amount of Technological support	
F.2.2	Comments on Technological support	
F.3.1	Amount of capacity building support	
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	
F.4	Financial support for implementation required	<input type="checkbox"/>
F.5	Technological support for implementation required	<input type="checkbox"/>
F.6	Capacity Building support for implementation required	<input type="checkbox"/>

G Estimated emission reductions

G.1	Amount	7.8
G.2	Unit	MtCO2e/yr
G.3	Additional information (e.g. if available, information on the methodological approach followed)	The potential GHG emission reductions are calculated Alternatives (LEAP) system and include both upstream resulting from the baseline and converted vehicles. Th

that can be achieved by this NAMA depend on the amount of infrastructure to be constructed and the number and type of vehicles converted to natural gas. Since JSC KazTransGas is still conducting market analyses to clarify these amounts, the estimate presented is based on two different scenarios:

Scenario 1: All vehicle fleets under the control of JSC KazTransGas are converted to CNG by 2025; and

Scenario 2: Optimistic scenario where 8% of cars, buses and trucks are converted to natural gas by 2025. The estimated cumulative emissions reduction by 2025.

H Other indicators

H.1

Other indicators of implementation

I Other relevant information

I.1 Other relevant information including co-benefits for local sustainable development

The NAMA is expected to create the following co-benefits:

- (i) reduced local air pollution;
- (ii) health co-benefits from reduced local air pollution;
- (iii) increased energy security;
- (iv) income and job generation;
- (v) increased disposable income due to reduced fuel costs;
- (vi) increased private enterprise in fields related to fuel conversions;
- (vii) accelerated turnover of outdated vehicle stock (e.g. equipment manufacturer CNG vehicles); and
- (viii) development of domestic CNG vehicle production and potential for exports.

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

J.1 Relevant National Policies

The government of Kazakhstan has adopted a voluntary quantitative target to reduce GHG emissions by 15% by 2020 and 25% by 2050 (relative to a 1990 base year). Kazakhstan further revised this goal and declared its readiness to reduce emissions by 27% to 2020. The goal of limiting growth in emissions is codified in various national documents, most importantly in the 2013 Concept of Transition of Kazakhstan to a Green Economy. Among the key areas addressed in this concept are the development of a modern transport system and the plan to bring natural gas infrastructure to Karaganda Oblasts by 2020, and to North and East Kazakhstan by 2025. Increasing the use of natural gas in transport are also included in the draft government strategies:

(i) National Program of Development and Integration of Transport Republic of Kazakhstan until 2020 (2014):

(ii) Plan of Action for Switching Transport Vehicles to Environmentally Friendly Fuel and Creation of Relevant Infrastructure (under consideration)

(iii) General Scheme of Gasification of the Republic of Kazakhstan

(iv) National Program on Energy Saving—2020 (2013)

For example, the General Scheme of Gasification specifies that by 2030 the share of natural gas in fuel for public transport and public vehicles must be at least 30% in Astana and 10% in other cities. By 2030 the share of natural gas must be at least 10% in Astana and 30% in other regional cities. Other priorities put forth include:

(i) creating incentives for mechanisms to accelerate vehicle stock turnover and the introduction of fuel-efficient vehicles with the goal of reducing fuel consumption;

(ii) using energy-efficient buses;

(iii) engaging in fleet renewal and modernizing railway locomotives;

(iv) designing measures to develop energy-efficient transport infrastructure and national development programs;

(v) introducing Euro standards for road transport (Euro 4-2014; Euro 6-2020); and

(vi) adopting international standards for vehicle efficiency.

J.2 Link to other NAMAs

Nationally Appropriate Mitigation Actions for Low-carbon Urban

K Attachments

K Attachments

Title

TA 8119 Final Report September 29 2015 ENG.pdf
TA 8119 NAMA Report September 29 2015 ENG.pdf

K.1 Attachment description

K.2 File

Browse...

L Support received

L.1 Outside the Registry

L.2 Within the Registry

Support provided Support Type Amount Comment