

# NS-175 - Federal Road Freight Transport NAMA for owner operators and smaller fleet carriers

## Mexico

### NAMA Seeking Support for Implementation

#### A Overview

A.1 Party

Mexico

A.2 Title of Mitigation Action

Federal Road Freight Transport NAMA for owner operators and smaller fleet carriers

A.3 Description of mitigation action

The main objective of the NAMA is to Improve energy efficiency in the federal road freight transport sector through the modernization of the fleet, the inclusion of technologies and training programs for drivers which reduce fuel consumption of trucks and thereby reduce greenhouse gas (GHG) and criteria pollutants emissions.

The interventions of the NAMA are the following ones:

1. Include «Eco-driving» courses for truck drivers as a part of the mandatory courses of the Ministry of Communication and Transportation (SCT) taken by road hauliers every two years.
2. Technological improvement: Improve aerodynamics, automatic inflating systems (AIS), among others.

These technological improvements are not exclusive but can be applied simultaneously. This increases the fuel saving potential.

3. Modernization of the vehicle fleet, via the scrapping and renovation of road transport fleet and the NOM-044-SEMARNAT.

Combining the three interventions can increase the fuel-saving potential.

A.4 Sector

- |   |  |
|---|--|
| <input type="checkbox"/> Energy supply                        | <input checked="" type="checkbox"/> Transport and its Infrastructure |
| <input 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 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 checked="" type="checkbox"/> National/ Sectoral goal	<input type="checkbox"/> Project: Investment in machinery
	<input type="checkbox"/> Strategy	<input type="checkbox"/> Project: Investment in infrastructure
	<input type="checkbox"/> National/Sectoral policy or program	<input type="checkbox"/> Project: Other
	<input type="checkbox"/> Other <input type="text"/>	
A.7 Greenhouse gases covered by the action	<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	Ministry of the Environment and Natural Resources (Secretaría de Medio Ambiente y Recursos Naturales)
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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 implementation of the mitigation action

C.1	Number of years for completion	
C.2	Expected start year of implementation	2015

### 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	70000
E.1.2	Comments on full cost of implementation	
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	70000	
F.1.2 Type of required Financial support	<input checked="" type="checkbox"/> Grant	<input type="checkbox"/> Guarantee
	<input checked="" type="checkbox"/> Loan (sovereign)	<input type="checkbox"/> Equity
	<input checked="" type="checkbox"/> Loan (Private)	<input type="checkbox"/> Carbon finance
	<input type="checkbox"/> Concessional loan	

Other

F.1.3 Comments on Financial support

Required external financing refers to intervention 1 of eco-driving courses.

For intervention 2 funding is contemplated from the national development bank NAFIN or commercial banks.

Furthermore, additional support from the finance ministry SHCP will be required in order to broaden the scope of intervention 3.

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

Individual level  
 Institutional level  
 Systemic level

Other

F.3.3 Comments on Capacity Building support

A) A) Foster the Transporte Limpio Program (0.8 Million USD): It includes technology assessment, new model of evaluation of emissions, scheme of certification and communication strategy.

B) Professionalize owner operating “Man Truck” and small truck operators “Small Fleet Carriers” (2 Million USD): It includes training of trainers, online platform training, development of material and software tracking and face-to-face training of 30,000 operators.

C) Develop financing programs and incentives for cleaner vehicles and technologies (4.2 Million USD): Includes three pilots (1,000 technology packages – aerodynamics and automatic inflation of tires, Retrofit systems and 650 units that comply with the new NOM-044.

F.4 Financial support for implementation required

F.5 Technological support for implementation required

F.6 Capacity Building support for implementation required

G Estimated emission reductions

G.1 Amount

G.2 Unit

G.3 Additional information (e.g. if available, information on the methodological approach followed)

The mitigation potential is being estimated for each intervention:

1. Eco-driving courses: Between 2 and 3.5MtCO<sub>2</sub>e/year.
2. Technological improvement: Between 0.3 and 1MtCO<sub>2</sub>e/year
3. Modernization of the fleet: average of 2 MtCO<sub>2</sub>e/year.

Total mitigation cannot be calculated through the accumulated sum of the three interventions.

Due to the fact that the sector is highly dynamic, the calculation of the baseline CO<sub>2</sub> emissions were calculated via a bottom-up approach since it gives a higher certainty.

The input data used for this methodology are:

- Vehicle fleet
- Intensity of use
- Eficiencia Bruta
- Fuel information

These parameters, defined in the next section, are being used to calculate the following variables:

- Mileage per vehicle type
- Net emissions
- Total emissions
- Fuel consumption

The following section describes the calculation of these variables in broad terms:

1. The vehicle fleet (number of vehicles), is being multiplied by the intensity of use (km/year) to obtain mileage per vehicle type (km/year). Vehicles are then being classified into four different types: C2, C3, T2 and T3. This variable allows calculating fuel consumption and total emissions.

2. By multiplying gross efficiency (km/lt) with a loss factor “on road”, one calculates net efficiency (km/lt). Dividing mileage by net efficiency, we obtain total fuel consumption per year (lts/year).

3. Finally, dividing the emission factor (kgCO<sub>2</sub>/lt) by the net efficiency, one obtains net emissions of the vehicles (kgCO<sub>2</sub>/km). The product resulting of the multiplication of the latter by mileage equals total emissions per year (MtCO<sub>2</sub>/year).

## 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

Positive impact on the environment and public health through the reduction of criteria pollutant emissions (particulate matter, black carbon, carbon monoxide and nitrogen dioxide, among others).

Rise the sector’s competitiveness by increasing job opportunities for owner operators and smaller fleet carriers.

The improvement of road safety through the professionalization of drivers and the improvement of the conditions of the road transport vehicles.

J.1 Relevant National Policies

On June 6<sup>th</sup> 2012 the General Law for Climate Change was published and included rules to accomplish several objectives such as reducing GHG emissions and promoting the transition towards a competitive, sustainable and low carbon emission economy. The law also makes a regulatory framework in order to develop ways to mitigate and adapt to climate change. It also encourages the transport sector to foster different strategies and programs to reduce GHG emissions and achieve the modernization of the national fleet. The National Strategy of Climate Change of 2013 integrates several rules to meet the objectives of mitigation and adaption to climate change established in the law. It has two different objectives of public policy: adaptation to climate change and development of low emissions economy. One of the objectives is to reduce the energy intensity with options of efficiency and responsible consumption.

The NAMA is based on the following two existing government programs which are aimed at modernizing the fleet and improving fuel efficiency:

1. “Transporte Limpio” (SEMARNAT): A voluntary market-driven partnership program which promotes eco-driving courses and fleet upgrades with various fuel saving technologies and by reducing idling time.
2. Scrapping Scheme and Financial Scheme (SCT): These schemes promote the renewal of old trucks with modern ones.

The Special Program of Climate Change (PECC) in 2014 promoted the Transport NAMA as one of the National Strategies for the reduction of GHG-emissions and short-lived pollutants. It also pointed out “Transporte Limpio” and Modernization Program as two of the actions to develop schemes of sustainable transport in Mexico.

J.2 Link to other NAMAs

K Attachments

- K Attachments
- K.1 Attachment description
- K.2 File

**Title Description**

Browse...

L Support received

L.1 Outside the Registry

The Freight NAMA is part of the Mexican – German NAMA Program (ProNAMA). The total project costs are 7 million Euros. For the freight transport NAMA about 2 million Euros have been spent. The technical support started in March 2012 and will end in November 2015. The support consisted mainly of technical

advisory, including the design of the NAMA, the MRV system and a finance scheme for the NAMA. Additionally, transference of knowledge has been promoted on a national, regional and international level.

L.2 Within the Registry

<b>Support provided</b>	<b>SupportType</b>	<b>Amount</b>	<b>Comment</b>	<b>Date</b>
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