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NAMA – Colombian domestic refrigeration sector

Conserving the climate and the ozone layer

Where and how we work...

Colombia plays an important role in global efforts to protect the climate and the environment. In its Nationally Determined Contributions (NDCs), Colombia has pledged to reduce its greenhouse gas (GHG) emissions by 20%. To achieve this, the government has presented a Nationally Appropriate Mitigation Action (NAMA) plan that includes concrete measures to reduce the GHG emissions of domestic refrigerators, or fridges as they are commonly known.

A large proportion of the fridges in use in Colombia are energy-inefficient. Among poorer households, fridge power consumption accounts for about half of the electricity bill, and a significant percentage of fridges still employ fluorinated and chlorinated hydrocarbons as refrigerants. The inadequate disposal and decay of old fridges results in these gases being released into the atmosphere, damaging the environment and the ozone layer. In 2015, domestic refrigerators emitted around 3.5 million tonnes of carbon dioxide equivalent (Mt CO_2 eq.), which is approximately equivalent to the annual emissions of 2.2 million Volkswagen Tiguan SUVs (10,000 km/year, 159 g/km).

In order to achieve a sustainable transformation in the domestic refrigeration sector in Colombia, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is working with the Ozone Technical Unit (UTO) of the Colombian Ministry of Environment and Sustainable Development (MINAMBIENTE) in the following areas of action:

- providing technical and financial support for the three national refrigerator manufacturers to facilitate the introduction of climate-friendly and energy-efficient fridges into the Colombian market;
- developing a replacement programme to substitute old fridges with green fridges;
- providing advice to the government on the national policy framework (minimum energy performance standards for fridges and regulations that prohibit the commercialization of hydrofluorocarbons (HFCs), a refrigerant which harms the environment);
- facilitating training for technicians in the domestic refrigeration sector, technicians in companies in the electrical and electronic equipment waste management sector and representatives of environmental authorities.

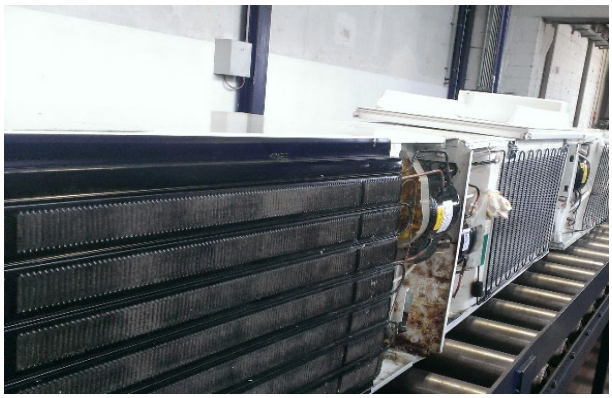
Colombian NAMA logo

On behalf of	The NAMA Facility donors: United Kingdom, Denmark, European Union and Germany.
Financial contribution	EUR 9,006,000
Political partners	Colombian Ministry of Environment and Sustainable Development (MINAMBIENTE) and Ministry of Mines and Energy (MINENERGIA)
Implementing partners	Colombian Ozone Technical Unit (UTO) and National Mining and Energy Planning Unit (UPME), the National Business Association of Colombia (ANDI) and Red Verde
Intervention area	All of Colombia
Term of commission	October 2017 to October 2022
Term of implementation	January 2019 to October 2022

What we want to achieve in facts and figures...

- The three national refrigerator manufacturers produce energy-efficient and climate-friendly fridges.
- 300,000 old fridges in use in the country are replaced with more climate-friendly and energy-efficient ones.
- 300,000 households take part in the replacement programme, making savings of around 50% on their electricity bill.
- More than 200 people (40% women) are trained and qualified under the project. The beneficiaries include technicians and engineers from the refrigerator manufacturers, technical support technicians, technicians in the electrical and electronic equipment waste management sector and representatives of environmental authorities.
- An estimated 2.2 Mt CO_2 eq. emissions are prevented through the activities carried out during the project's lifetime. This reduction will be achieved by introducing green fridges into the market and replacing and recycling old fridges. In the long term, the project's activities will generate savings of 13.1 Mt CO_2 eq.
- The production, importation and commercialization of domestic fridges with HFC refrigerants is prohibited by law.
- The electrical and electronic equipment waste management companies implement at least one new business model for the appropriate environmental disposal of fridges.
- The project contributes to the achievement of the following Sustainable Development Goals of the 2030 Agenda: 7 (affordable and clean energy), 8 (decent work and economic growth), 9 (industry, innovation and infrastructure), 11 (sustainable cities and communities) and 13 (climate action).

Workshop with private and public sector actors © GIZ



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