

“Cleaner” Cities

Environmental Pollution is a great challenge for local governments and the private sector. We must boost the use of clean energy, as well as electric mobility and natural gas vehicles.

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Grupo Energía Bogotá's President

Fighting environmental pollution has become one of major cities' main challenges because of the harmful effects it has on inhabitants' health. The main pollutant in Bogotá is particulate matter. According to records from the District Department of the Environment, industries are responsible for 44% of polluting gas emissions, and transportation for the other 56%.

The situation will get worse, taking into account that the capital and its neighboring towns will reach 13 million inhabitants by 2050. That is 38% more than the current 9.4 million, according to forecasts by the District Department of Planning.

It is worth noting that in Colombia, as in most Latin American countries, more than 70% of the population lives in urban zones. The impacts of this elevated concentration are being felt. According to the National Planning Department (DNP in Spanish), public health costs Bogotá up to COP 4.2 trillion every year. Around 10.5% of deaths in the city are caused by environmental pollution.

The challenges for local administrations and the private sector are immense, since they must begin implementing efficient measures that will allow decreasing pollution levels and complying with the commitments from the United Nations Climate Change Conference (COP 21).

Grupo Energía Bogotá (GEB) is a part of the companies that are committed to this goal and, to meet it, has been boosting new, non-polluting technology to improve its inhabitants' quality of life.

In terms of mobility, it is focusing on mass transit solutions, helping reduce emissions with a bet on the massification of Natural Gas Vehicles (NGV) and electric mobility.

Regarding the massification of NGVs, one success story is Lima, the capital of Peru. Through our company, Cálidda, leader in its sector in this Incan nation, we have been able to connect a fleet of more than 600 public buses that now use this fuel. In addition, it currently has 240,000 private vehicles converted to natural gas, with a penetration of up to 12%, which will reach 25% in the next five years.

Implementing this policy in Peru's capital has allowed decreasing carbon monoxide generation by more than 90% compared to that of traditional fuels. It is worth noting that Lima is one of the cities in Latin America with the highest environmental pollution and is currently carrying out a campaign to promote NGVs as a cleaner form of energy.

GEB also encourages using this fuel in Colombia through the Transportadora de Gas Internacional (TGI) and Gas Natural, in partnership with Ecopetrol. Bogotá's mass transit system currently has some vehicles that use natural gas. It is expected that low-emission vehicles and the latest technology will be used to renovate the fleet, making it more environmentally friendly in time, improving air quality in the capital and achieving substantial savings on operating and maintaining the public transportation that uses traditional fuels.

75% of the energy consumed by Bogotá's transportation is projected to be low-emission by 2050 in order to be able to reduce emissions by one fifth (metro, commuter train, electric buses).

Additionally, the company seeks to promote electric mobility and improve infrastructure to allow fast and safe recharges. In this sense, Bogotá's Mayor's Office recently commissioned the first 100% electric Transmilenio articulated bus. The vehicle, with the capacity to transport 160 passengers, will avoid emitting 135 tons of CO₂ every year.

The articulated bus is part of the Mayor's Office pilot project, which is aimed at collecting information relevant to the renovation process of the Transmilenio fleet. Codensa, one of our companies, participated two years in carrying out this project.

But we do not only have to work on cleaner technology and mobility, but also on other fronts that promote more sustainable, innovative cities. Such is the case for intelligent street lighting, which would include sensors and LED technology. Implementing district heating (air conditioning and air and water heating networks) is also being studied, which will allow attending to the needs of expansive population areas.

It is also important to highlight that the GEB has focused its new strategy on renewable energy, taking into account that 33% of electricity consumption will occur through non-conventional renewable energy sources (solar panels, wind energy) by 2050. With its new Corporate Strategic Plan, GEB is aiming at low-emission distributed generation, which is to say, energy is generated very close to the consumption points, consolidating eco-efficient, self-sustainable buildings.

To achieve this transformation, correct coordination with regulatory state and district institutions, which are ultimately the base for bolstering these initiatives' massification, is fundamental.

Energy is vital for major cities to grow and develop. We are working on better access to sustainable, safe energy, not just to respect the environment, but also in accordance with the transformation of cities and their inhabitants' demands.