

Colombia's Solid Waste NAMA Proposal

Strengthening the Solid Waste Sector while Reducing Emissions

October 10, 2013

Colombia has achieved a high standard of solid waste disposal with about 94 percent of urban solid waste being disposed of in sanitary landfills. Despite this success, Colombia faces challenges in the future due to an increase in waste generation resulting from high economic growth and increased urbanization. In addition to more waste generated, Colombia must work to improve the working and living conditions of its vast network of informal recyclers, who currently collect 50 percent of recycled waste, working in difficult conditions. In the coming years, Colombia seeks to move into the next generation of waste management which incorporates the goals of waste reduction, reuse and recycling ahead of disposal. In doing so, Colombia can achieve multiple objectives of reducing greenhouse gas (GHG) emissions, achieving sustainable economic growth, ensuring environmental protection, improving urban life, and uplifting socially and economically vulnerable citizens.

Colombia could achieve carbon neutrality of solid waste sector emissions (which comprise 5.7 percent of total GHG emissions, 6.18 million tons/yr) by undertaking integrated solid waste management programs and creating incentives for the private sector that could catalyze actions to: divert organics from landfills (thereby reducing methane emissions as part of landfill gas), increase recycling (thereby reducing indirect emissions by avoided production of virgin materials), generate refuse-derived fuel (thereby displacing conventional fossil fuel use), and promote alternative uses of landfill gas.

Overcoming Barriers and Promoting Alternative Treatment Technologies

A nationally appropriate mitigation action (NAMA) will support the Colombian government in reducing the carbon footprint of its solid waste sector, by overcoming existing policy, financial, market and social barriers. The cornerstones of the NAMA are regulatory changes, the promotion of new technologies, creation of appropriate financial mechanisms, and the integration of informal recyclers into the formal sector.

The Colombian government (through the Ministry of Housing and the Ministry of Environment and Sustainable Development) is in the process of reforming solid waste management regulation that currently favors landfill disposal over treatment alternatives such as recycling, composting and refuse-derived fuel. The most important of these changes concerns the method by which the solid waste tariff is calculated. The tariff sets the price that waste companies can charge to collect, transport and dispose of waste in landfills. Under the current tariff structure, it is much more profitable for waste companies to dispose of waste in landfills instead of diverting waste to recycling or composting plants. CCAP is assisting the national regulatory agency with determining the true economic cost of alternative waste treatment methods in order to devise a new tariff structure.

As part of the NAMA, Colombia is also proposing the promotion of new technologies that divert waste away from landfills to produce commodities such as recyclables, compost and refuse derived fuel, which can be reincorporated back into the economy and/or generate energy. For example, a combination material recovery and mechanical-biological treatment facilities can receive mixed waste to sort out recyclables and produce compost and/or refuse-derived fuel. Compost made from mixed waste can be used in public parks or for land reclamation while refuse-derived fuel can be sold to cement kilns or other industrial consumers to replace fossil fuels. The above technology can be adapted to receive source-separated waste which produces compost and refuse-derived fuel of higher quality which can be sold for a better price. Thus, the NAMA could provide incentives for better upstream waste management practices like source separation and selective routes.

Another important element of the solid waste NAMA is the creation of appropriate financial mechanisms that leverage internal public resources of Colombia and NAMA finance from donor countries to maximize private sector investment in order to achieve the goals of the NAMA.

As the final aspect of the solid waste NAMA, policies and business models are being designed in order to include informal workers in the modernization of the sector, allowing them opportunities to work in the formal economy and increase the standard of their working and living conditions.

Equity Fund as Financial Mechanism

In order to implement material recovery or mechanical-biological treatment facilities at the municipal level, the NAMA proposes creating public-private partnerships. At the municipal level, the partnerships will be designed as special purpose entities that could engage the private sector for construction and/or the operation of alternative waste treatment infrastructure.

NAMA funds will be used to capitalize an Equity Fund that would provide concessional equity financing support to the various projects being implemented as part of the NAMA. NAMA projects will be able to leverage this equity support to attract the required private sector equity investments and commercial bank loans. The proposed NAMA Equity Fund will be revolving in nature which implies that returns from project investments will be used to fund future projects that form part of the NAMA.

In addition to equity financing, the NAMA could include additional financial support for capacity building programs for municipalities/plant operators, strengthening institutional capacity for relevant regulatory and rule-making agencies, and providing benefits and training to informal recyclers entering the formal economy.

Support Requested

The design of the Colombian Solid Waste NAMA incorporates international donor support to partially finance the investments described above. National and sub-national contributions would also be required to fund the balance of the equity requirements for early projects, provide in-kind contributions such as land, provide project development support and conduct awareness programs in municipalities to encourage source separation of waste. The finance provided will be designed to maximize the involvement of private sector investments in next-generation waste management infrastructure and processes.

A number of technical and economic studies supporting the design of the NAMA and quantification of the support requested have been completed, and estimates indicate a need for approximately 15 million Euros from international donors. These funds could be matched by national ministries, local municipalities, and private sector investors. If 50 percent of Colombia's municipal solid waste is treated using the processes and technologies promoted by this NAMA, this could create a deal flow of approximately 230 million Euros in infrastructure investments. The proposed regulatory reforms, coupled with financial mechanisms and early pilot projects, would facilitate an enabling environment that would help transform the Colombian solid waste sector and meet NAMA goals.

Since 1985, CCAP has been a recognized world leader in climate and air quality policy and is the only independent, nonprofit think tank working exclusively on those issues at the local, national and international levels. Headquartered in Washington, D.C., CCAP helps policymakers around the world to develop, promote and implement innovative, market-based solutions to major climate, air quality and energy problems that balance both environmental and economic interests.

For more information about Colombia's solid waste NAMA, please contact Program Coordinator Michael LaGiglia at mlagiglia@ccap.org. For more information about CCAP, please visit www.ccap.org.