



Green Earth Project

Preface

Throughout history, human advancement has been intrinsically linked to the management of solid waste due to its effect on both public and environmental health. Poor management of solid waste is a burning topic of the day.

Several methods have been developed so far to combat this multidimensional problem; however, they lack operative efficiency and include every waste fraction, each one spreads specific contaminants into the environment.

To come to real solutions to the problem of solid waste management, particularly in developing countries, will require embracing new systems for waste management that are participatory, contextually integrated, complex, and adaptive.

Major Constraints of Waste Management

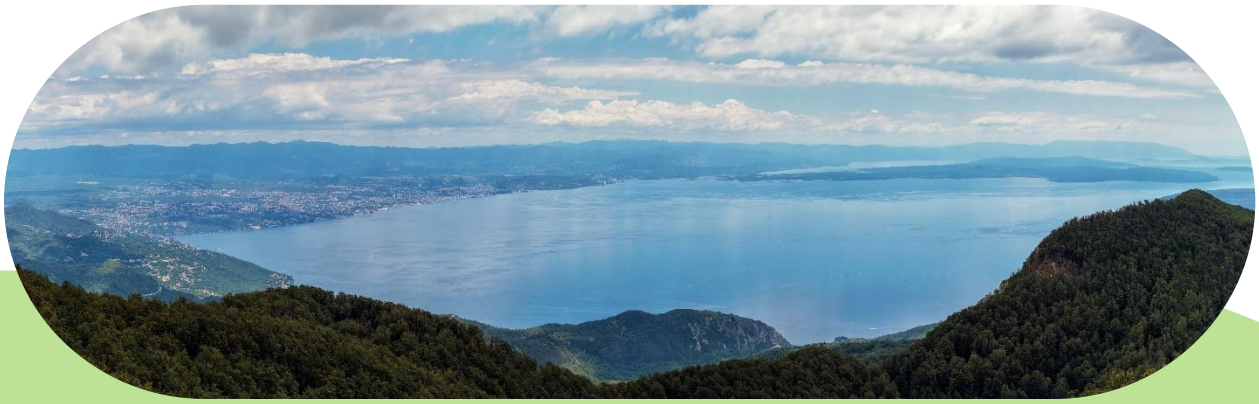
Waste disposal concern has recently taken massive proportions due to rapid population growth and urbanization, as annual waste generation is expected to increase by 70% from 2016 to 3.40 billion tons in 2050. As the waste problem intensifies, so does the importance of having an efficient solid waste management system in place. The impact of inadequate waste management practices on climate change, air pollution, and many ecosystems and species are now being entirely acknowledged, hence requiring integrated assessments and holistic approaches for its solution.

The common methods used in waste disposal pose several shortcomings. For instance, leachate percolation from landfill sites generates heavy metal pollution of groundwater and surface, and constitutes a plethora of bio-metal poisoning-related symptoms and diseases; uncontrolled open-air burning of wastes, predominately practiced in rural and agricultural areas, may result in emissions of air pollutants, including dioxins, furans, black carbon, heavy metals, and particulate matter of particular environmental concerns and immediate adverse health effect; incineration generates highly toxic and carcinogenic pollutants; waste emissions to water bodies exacerbate global marine litter problem; recycling and composting are so far only possible on a small scale, only certain items can be recycled, and processing plants are expensive to operate and maintain as well. Consequently, as the waste problem intensifies, having an effective solid waste management system in place is important.

A Promising Solution to Waste Mismanagement: “Green Earth” Project

In response to the requirement of more effective and sustainable waste management, the “Green Earth” project is paving the way for a cleaner future by offering a Waste-to-Energy (WtE) conversion technology with proven environmental advantages over incineration, pyrolysis, and other traditional reformation processes. This cost-effective process not only offers solutions for both biodegradable and non-biodegradable waste disposal processing but also provides clean energy production and a means of sustainable product regeneration sourced from a variety of wastes and renewable sources.

The success of waste conversion technology applications depends on the underlying scientific technology used in the waste conversion process. This overall process and viability of a given processing plant depend on waste feedstock preparation, effective cleaning and scrubbing systems, adequate processing, and many other key factors.



Green Earth's overall process uses current technologies and off-the-shelf commercially-proven equipment, which significantly lowers the initial capital and operating costs for processing facilities compared to other WtE technologies. Through adopting this technology, various heterogeneous feedstocks can be converted into different forms of clean energy products, such as electricity, high-quality hydrogen, liquid synthetic fuels, and green chemicals.

Green Earth's proprietary steam-reforming process unlocks the energy in carbon. This process is supported by multiple independent validations and a Canadian five-year demonstration plant in association with companies and organizations such as BATTELLE, the largest independent testing lab in the United States specializing in alternative energy, LEHDER, a world-class quality standards testing lab, the University of Toronto Department of Chemical Engineering, and CATERPILLAR and TOROMONT.

They have endorsed using the produced syngas in their gas turbines to generate electricity. Green Earth's proprietary technology indirectly heats waste to 900 degrees centigrade, which creates a unique thermal, chemical reaction that unleashes energy bound in the waste feedstock. No oxygen is introduced into the kiln, and the water contained in the waste is heated to create hydrogen and syngas with no outside pollutants.

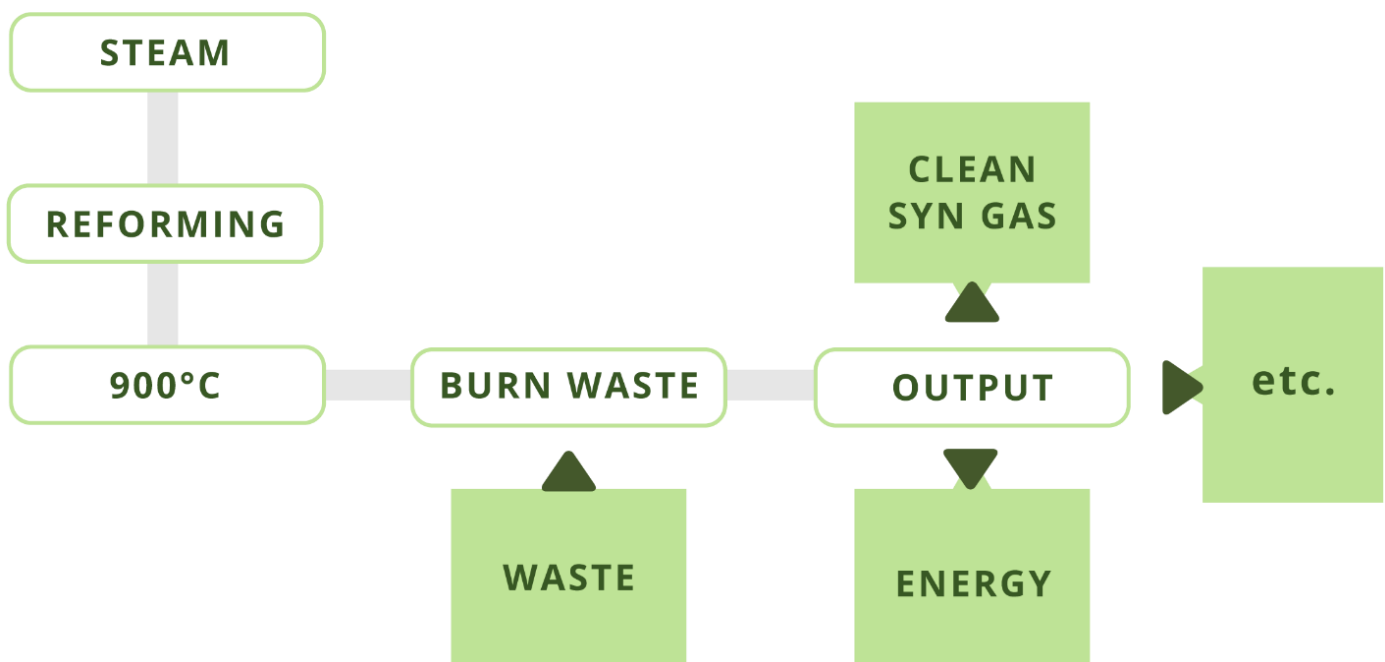
Advantages

- Cost-effective
- Production of clean electricity, hydrogen, liquid fuels, and green chemicals
- Sustainable product regeneration
- No need for an additional oxygen source
- No need to sort waste

Conclusion

In conclusion, Green Earth's steam reclamation process eliminates the need for landfills or incineration by turning waste into a resource and not a liability. Existing landfills can be mined for energy recovery, land reclamation, and a reduction of air and water pollutants. The technology converts 100% of all carbonaceous waste to clean green energy and other usable biofuels and products. This includes 99.99% pure hydrogen, which, when used as a fuel, combined with oxygen, creates zero emissions and can be used for transportation as a fuel cell or with internal combustion engines. In addition, hydrogen can be used as an additive to natural gas with no detrimental effects on the pipelines and appliances and significantly reduce CO₂ emissions. The process also eliminates methane produced by municipal solid waste, which is over 20 times more damaging to the atmosphere than CO₂.

Diagram of The Technology Used in Project



Bottom Line

With understanding the urgent need for mitigating the waste issue, the “Green Earth” project promotes environmentally sound waste disposal using a robust process operation that can offset or replace a significant portion of currently used fossil fuels.

We need collaborating individuals to expand the project, and report our advances in the project’s roadmap. So, to democratize the “Green Earth” project, we developed a cryptocurrency token for organizing individuals named GBC (abbreviation for Green – Blue – Coin). To help make a difference, start to take proactive steps towards a healthier, more sustainable tomorrow by joining this project on GBCtoken.co and improving your environmental footprint.

