

## W2E - Project Deliverables

Go Green! We are synonymous to green! We have been continuously increasing the pace of Green Energy production effectively with optimum efficiency. **Green Energy**

Green energy is a generic term that means production of energy without compromising with nature and future generations. Green energy However there are many other relevant definitions given by various scholars and brand from past: "Effectively, the provision of energy such that it meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable Energy has two key components: renewable energy and energy efficiency." – **Renewable Energy and Efficiency Partnership** "Dynamic harmony between equitable availability of energy-intensive goods and services to all people and the preservation of the earth for future generations and the solution will lie in finding sustainable energy sources and more efficient means of converting and utilizing energy." – **Sustainable energy by J. W. Tester, et al., from MIT Press.** "Any energy generation, efficiency & conservation source where: Resources are available to enable massive scaling to become a significant portion of energy generation, long term, preferably 100 years." – **Invest - a green technology non-profit organization.** "Energy which is replenishable within a human lifetime and causes no long-term damage to the environment" – **Jamaica Sustainable Development**

waste-to-energy plant



green energy



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### Network

The transformation of W2E process to Green energy has many phases involved like Waste Receiving, Lifting of waste, feeding it to the W2E plant, Combustion, Steam generation and finally Power generation and transmission to its destination. Green Energy is the final outcome of Waste to Energy - Integrated MSW Management([Hyperlink to the landing page of W2E](#)).

#### **Usage of Ash - Zero Waste Concept**



Ash is converted to bricks and other building materials which is obtained with the help of incineration process, it's a process that reduces the volume of the solid waste by eliminating the organic contents, the leftovers after the incineration process are the nutrients and inorganic

nic materials. The main components that remains are silicate and aluminum and iron oxide depending on whether aluminum or iron salt is used while precipitating. Of the nutrients in ash phosphate is the most important to recover, which can be leached and recovered by acid. Incinerated sludge and ash from co-incineration with solid

waste and bio-fuel is leached with hydrochloric acid at different concentrations and contact time. Leaching with 1 M HCl or higher concentrations and during 8 hours gave more than 75 % dissolution of phosphorus. The remaining ash has got multiple benefits, it can be mixed with cement or concrete, brick or some other object can be



made  
of ash  
or the  
ash  
can be  
melted  
and so  
solidified  
as a c  
eramic  
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