



Macawber Beekay

# Waste To Green Coal Technology

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# The Challenge

## Rising Level Of **CO2 Emissions** Is A Huge Concern Globally.

Macawber Beekay is striving to provide a world class solution for clean & green energy and reducing carbon footprints.

Excessive Mining Leading To Deforestation



Water Contamination Due To Industrial/Sewage Discharge



Large Amount Of Toxic Emission & Pollutants

# The Solution

## A Carbon **Neutral & Eco-Friendly** Way To Coal Energy Management

By applying a variety of cleaning & emission-controlling technologies, Green Coal technology seeks to decrease negative effects on the environment.



Garbage  
**Collection**



Waste  
**Treatment**



Byproducts  
**Refinement**

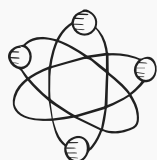


Separate  
**Useable Coal**

### Municipal Solid Waste



**Green Coal +**



**Other Inerts**

## Waste to **Coal**

“Efficient and eco-friendly process of converting municipal solid waste to **Green Coal** which is the need of hour as the world struggles to cope up with climatic changes.”

Waste-to-Coal plants turn municipal solid waste (MSW), often called garbage or trash, into high calorific value of charcoal by means of “Torrefaction”.

# The Concept

Concept of **Waste to Coal** plant is basically a waste conversion process that converts municipal solid waste into charcoal



## Segregated Materials

In Waste-to-Coal plant, the municipal solid waste is brought to the facility for segregation of Inert material. Segregated combustible fraction (SCF) fed into the reactor as & when required.



## Torrefaction Technology

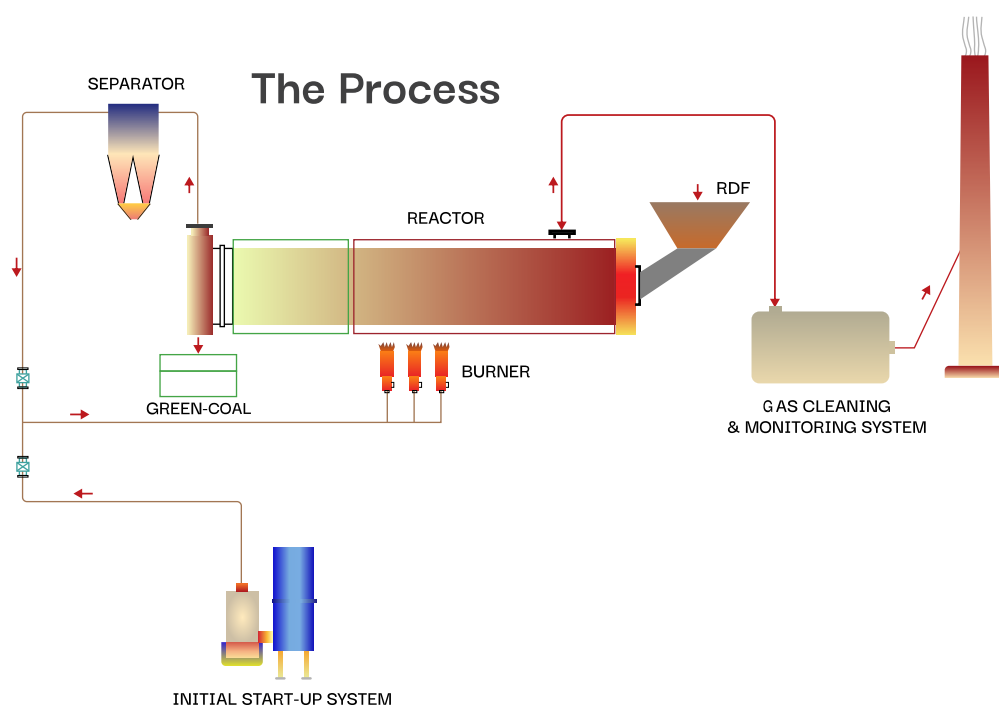
Waste to Coal facility is based on Torrefaction technology, which is a thermal treatment of SCF within preset range as required for the process. It is carried out in an Oxygen Deficient Condition.



## The Charcoal

The Charcoal that is discharged is further cleaned using a sieve. The pure char is mixed with exacting proportions of binder & water in a mixer. The mixture is fed into a pelletizing machine.

## The Process



# The Impact

## Municipal Solid Waste (MSW)

Green coal is carbon neutral as it is derived from Municipal Solid Waste (MSW) without any mining of fossil fuel. Using 1 kg of green coal as solid fuel, by replacing fossil coal brings to reduction of approx.. 2 kgs CO<sub>2</sub> produced per kg of fossil coal. Green coal can offer sustainable and fossil free alternative for industries such as power, metallurgy, etc.. Though a small step in the direction of achieving COP26's agenda i.e., aiming to turn the 2020s into a decade of climate action and support, so that the rise in the global average temperature can be limited to 1.5 degrees, we are focused on research and development alongside implementation of "waste to coal" project so that dependency upon fossil coal reduces. In our own way, the organization has taken the initiative to produce Green Coal from municipal solid waste.



### Significant Reduction in Co2 Emission

Our reliance on natural gas and resource extraction is reduced through the use of sources of energy with a higher level of sustainability, such as solar panels, wind turbines, and geothermal energy.



### Reduced Global Emission & Pollutants

By generating electricity on-site using renewables and other environmental friendly energy sources, green coal aids in decreasing CO<sub>2</sub> emission.



### Minimise Water Pollution & Contamination

Mountains of solid waste in various stages of decomposition that are dispersed across the city could be used as an eco-friendly source of fuel for industries.



### Sustainable & Economical Alternative

Economic sustainability refers to actions that promote long-term economic growth without having a negative effect on the community's social, environmental, and cultural facets.





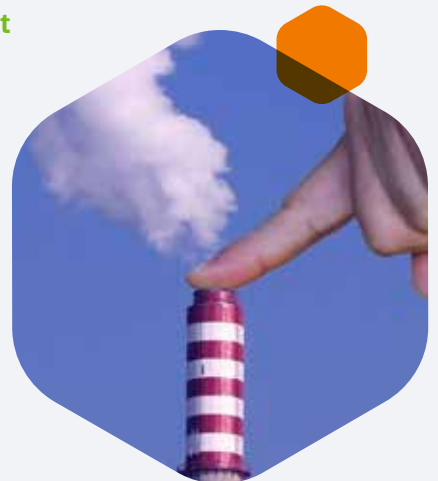
# The Aim

India is Committed to reduce the total projected carbon emissions by one billion tonnes from now till **2030**.

Macawber Beekay introduces conversion of municipal solid waste to green coal. With a daily capacity of 600T, a carbon neutral and environmentally sustainable waste conversion process by applying a variety of clean and emission-controlled technologies- the green coal technology, seeks to substantially decrease the adverse effects on the environment.



**Net zero, or becoming carbon neutral, means not adding to the amount of greenhouse gases in the atmosphere.**



Our aim is to help create a sustainable environment wherein communities and natural habitats are protected and live in harmony with the modern world.

India has promised to cut its emissions to net zero by 2070 in the recently held COP26 Glasgow summit. This requires adoption of innovative technologies for industries that aims at "De-carbonization". Macawber Beekay is conscious about reducing carbon footprints alongside ushering technological innovations that helps communities, Nation & eventually the world. We have taken a step by launching "Waste to Coal" project and firmly believe that it will pave way for many such projects in future.

Macawber Beekay takes pride in the initiative of "**Make in India**". Our thought process is aligned with **Vocal for Local – Atmanirbhar Bharat** and we have ensured that we provide employment to Natives and manufacture in India.

# COP-26

## Together for Our Planet

The 26th Conference of the Parties (COP) to UNFCCC held in Glasgow, UK in 2021. Macawber Beekay understands the importance of clean & green energy & therefore has taken a conscious effort to contribute to the eco system so that CO2 emission reduces, and the world has an alternate to fossil coal in the form of "Green Coal". Though the waste to coal initiative is at nascent stage, & we are confident that our efforts are in the right direction & in line with the spirit of COP26 to take concerted action on climate change.



## Highlights

01

### Carbon Emissions

Reduction of total projected carbon emissions by 45% to reach net zero around mid century

02

### Zero Emissions

Secure global net zero by mid century & keep global warming below 1.5 degrees

03

### Moving Away From Fossil Fuels

Phase-down of coal power and phase-out of "inefficient" fossil fuel subsidies.

04

### Protecting Eco-system

Adapt to protect communities and natural habitats.

# About Us

## Macawber Beekay, Established In 1986

The first company to bring technology of dense phase pneumatic conveying for transfer of bulk materials, especially dry fly ash to India. Macawber Beekay is a part of well know BSBK Group, which started its activities way back in 1918 in the field of Civil Engineering & Construction and later gradually diversified into other areas. Today Macawber Beekay provides customised turnkey solutions for Ash and Coal Handling systems for the Power industry across the globe.



75

Worldwide  
Clients



1600

Working  
Installations



2000+

Experienced  
Workforce

Corporate Office



Reactor Manufactured  
At Keshwana Works



Keshwana Works Equipped  
With CNC Machines



The Corporate Office is in Noida (Uttar Pradesh), near New Delhi, capital of the Country. Manufacturing Unit is in Keshwana (Rajasthan), fully equipped with the worldclass manufacturing, testing & painting facilities.





# MACAWBER BEEKAY

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Macawber Beekay – Provides Engineered Turnkey  
Solutions for a Green Future.

Vocal for Local – Atmanirbhar Bharat

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