

# Introduction to Infectious Waste Incineration



*Energy & Cost Efficient*  
*Environmental-Friendly*

June 27, 2019



# INDEX

**1**

**Project Overview**

**2**

**Basic Concept Flow**

**3**

**Project Construction**

**4**

**Main Facility Plan**

**5**

**Time Schedule**

**6**

**7**

**8**



# 1. Project Overview

- Project Name

Infectious Waste Incineration

- Capacity

40 ton / day (Infectious Waste Incineration)

- Gross Amount of Cost

USD 5.73M (Infectious Waste Incineration)

- Construction

12 months



# 1. Project Overview

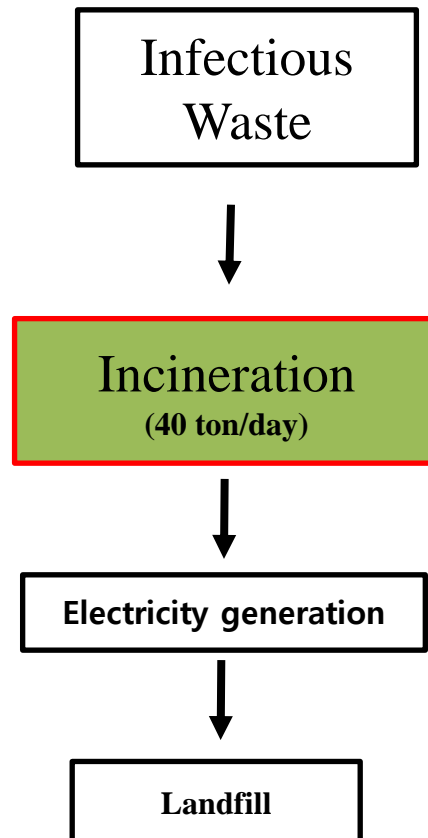
- Infectious Waste

General Medical Wastes

Hazardous Medical Wastes

Quarantine Waste

## BASIC CONCEPT FLOW



### 3. Project Construction

- Infection Waste Incineration

Kind of Waste Material : Infection Waste

Waste Treatment : 40ton / day

Incineration Capacity : 40 ton / day

20 ton x 2 set

Operating System : Back up Type

Operation Time : 24 hours / day

### 3. Project Construction

- Infectious Waste Incineration

Incinerator : Stocker Type (Back up System)

Waste Heat Boiler

Anti-Pollution System

Electrical & Monitoring System

Turbine & Generator & ACC System

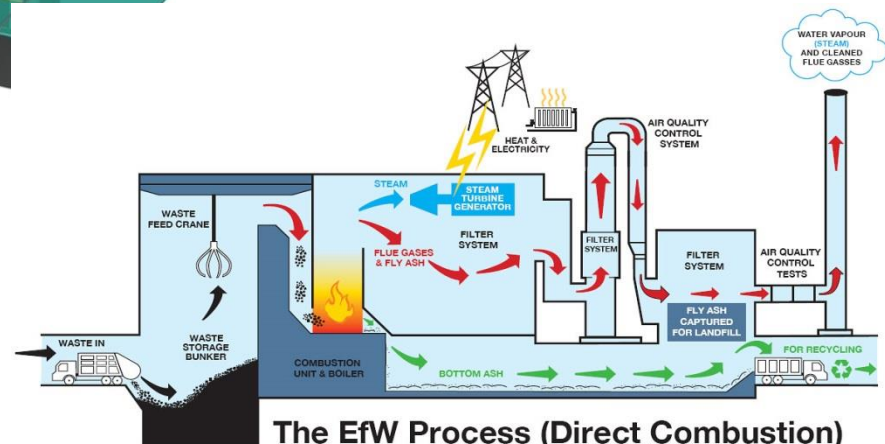
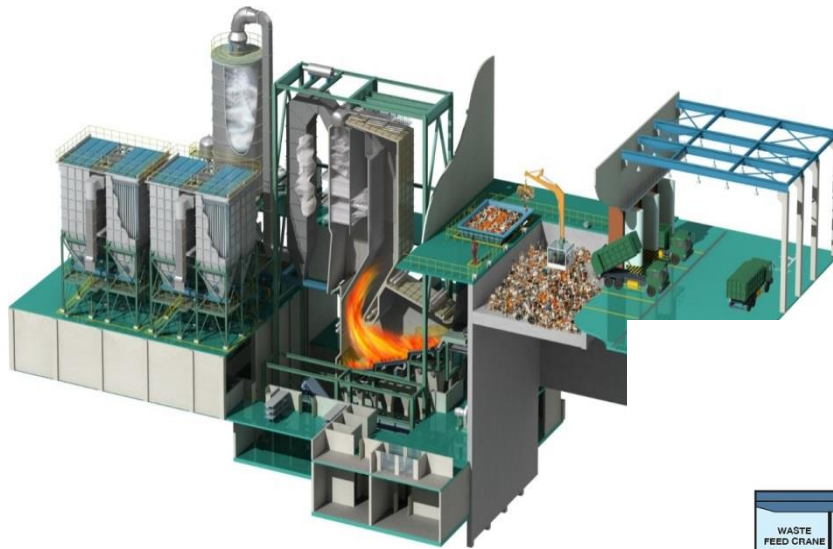
I . D Fan

Stack

## 4. Main Facility Plan

### Energy from Infectious Waste

Infectious Waste-to-Energy plants , to produce steam in a boiler that is used to generate electricity



The EfW Process (Direct Combustion)

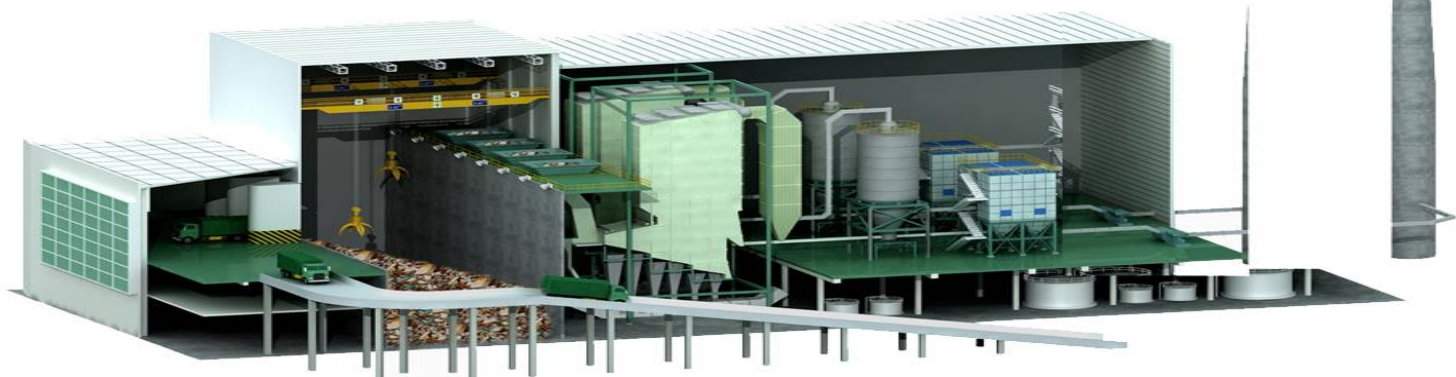
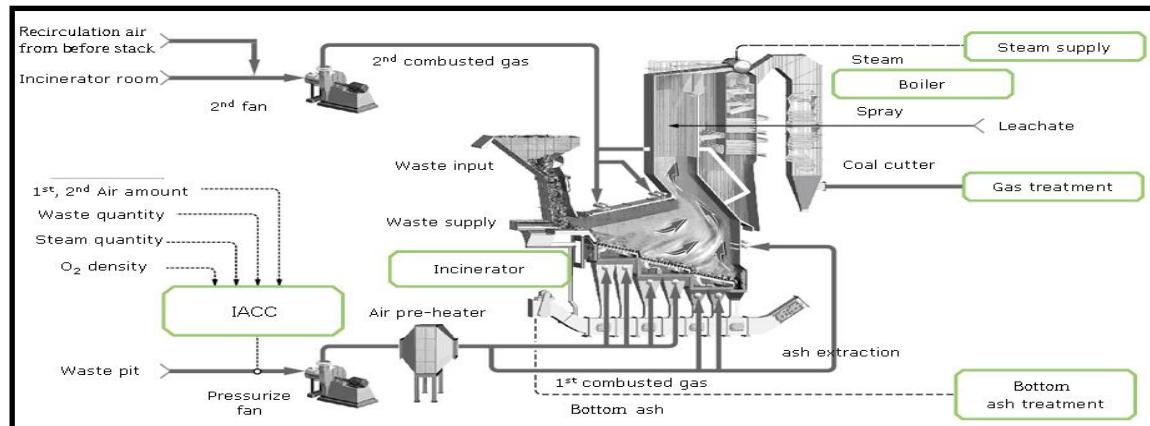


# Infectious Waste to Energy Process



# 4. Main Facility Plan

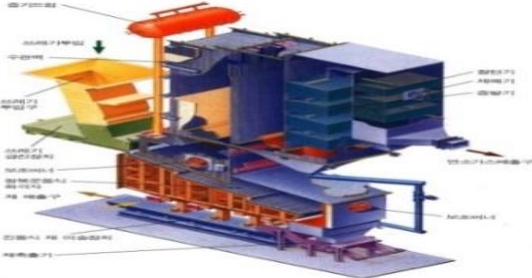
## Lay-Out Plan & 3D View



# 4. Main Facility Plan

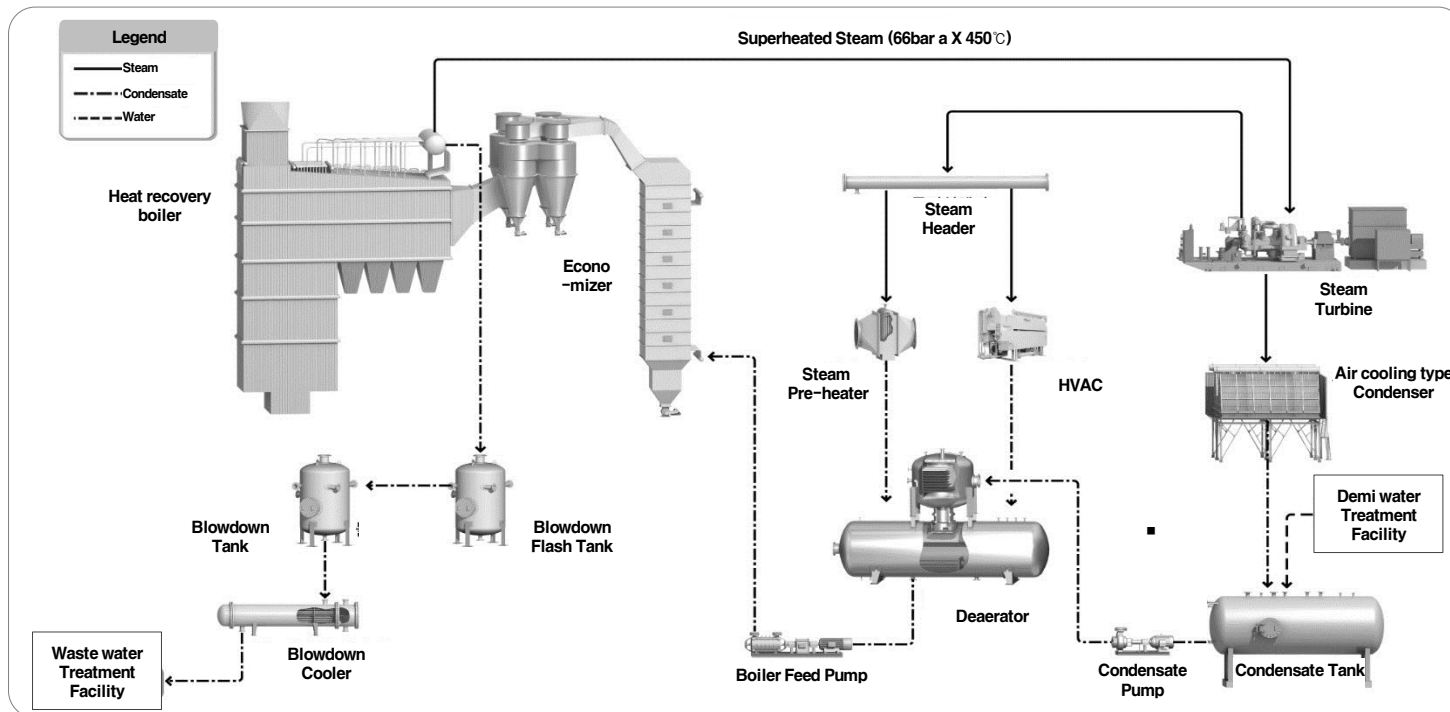
## Proposed Project Plan

### ◆ Selection of Incinerator

Part	Stocker type
Picture	
Advantage	<ul style="list-style-type: none"><li>• Stable operation</li><li>• Easy maintenance</li><li>• Low construction cost</li></ul>
Experience	<ul style="list-style-type: none"><li>• 95% of Korea WTE market are stocker type</li></ul>

## 4. Main Facility Plan

# Steam turbine Generator Diagram & Procedure

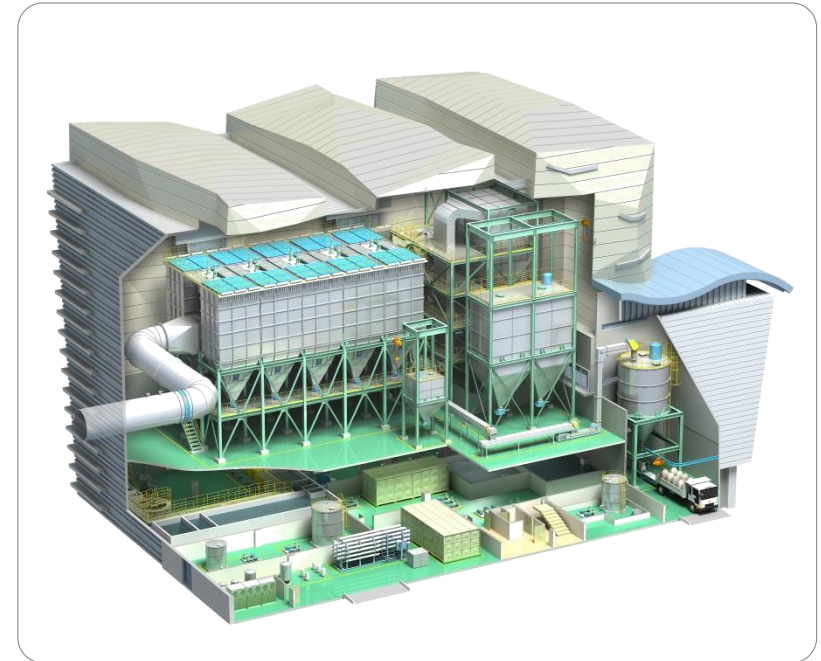


## 4. Main Facility Plan

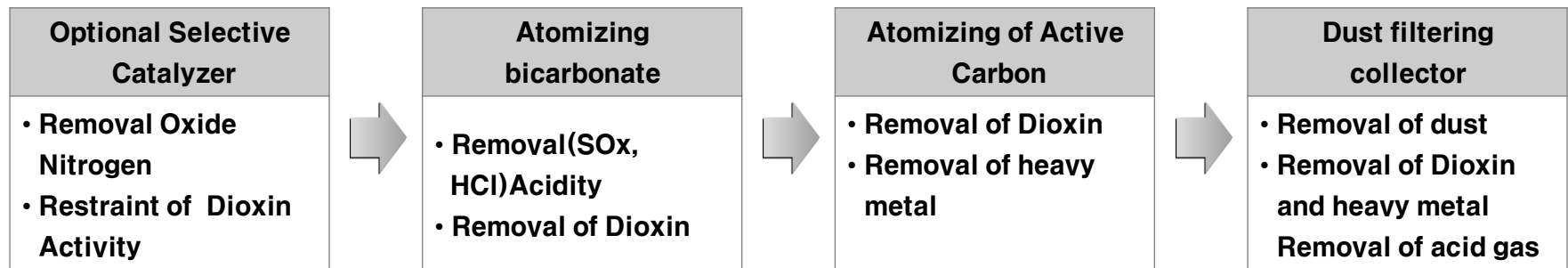
# Combustion Gas treatment Facility

### Design Criteria(Sample)

Air pollution material	Legal criteria	Design Criteria
SOx (ppm)	30 below	10 below
NOx (ppm)	70 below	70below
HCl (ppm)	15 below	10 below
Dust (mg/Sm <sup>3</sup> )	20 below	10 below
Dioxin (ng-TEQ/N <sub>m</sub> <sup>3</sup> )	0.1below	0.01 below



### Combustion Gas Treatment Schedule

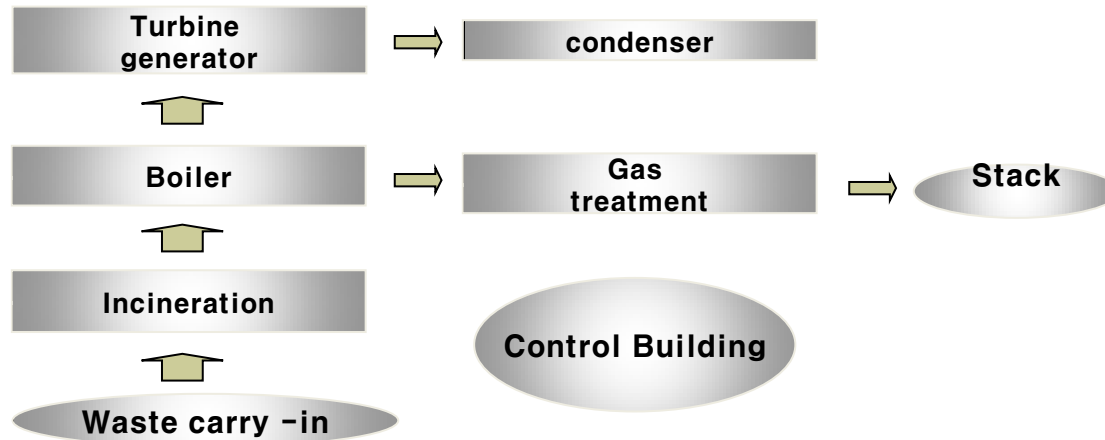


## 4. Main Facility Plan

### Facility Flow & required Area

- Area : 2,310m<sup>2</sup>



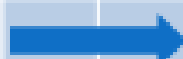
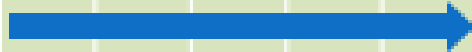

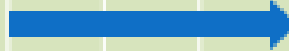




- Flow-Chart



- Easy Control
- Minimize of Environmental destruction
- Separating flow line between Facility Vehicle and Control Vehicle

## 5. Incineration Project Time Schedule

### Sri Lanka Incineration Project Time Schedule (Draft :June'19)

Item	Year Month		2019					2020						Remark
		7	8	9	10	11	12	1	2	3	4	5	6	12M
1. Site survey			0.5M											
2. Execution plan			1M											
3. Engineering (Approval)				2M										
4. Automation													5M	
5. Manufacture (Inci, Boil, Gene, Elec, Anti-)										6M				
6. Construction (Inci, Boil, Gene, Elec, Anti-)													3M	
7. Commissioning														2M
8. Pre-use Inspection														2M
9. Registered														2M
10. Commercial Operation														2M



***Thank You !!!***




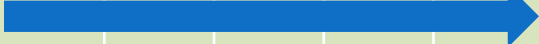

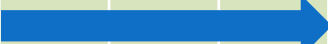






# **Sri Lanka Incineration Project**

## **Time Schedule ( Draft )**

**June 27, 2019**

# Sri Lanka Incineration Project Time Schedule (Draft :June'19)

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# **Infectious Waste Incineration**

## **Sri Lanka**

**June 27, 2019**

## **1. WARRANTY**

WE WARRANT THE PRODUCTS (MACHINERY, EQUIPMENT, MATERIAL & ENGINEERING) WE SUPPLY.

AND ALSO WE WARRANT THE PRODUCTS FOR THE PERIOD OF TWENTY FOUR MONTHS(24)

FROM THE DATE OF COMMISSIONING TEST.

AFTER 2 YEARS, WE WILL BE CHECKING EVERYTHING IN INCINERATOR PERIODICALLY

ACCORDING TO " MAINTENANCE CONTRACTS" BETWEEN YOU AND OURS.

## **2. TRAINING EDUCATION**

BASICALLY, TWO PEOPLE ARE NEEDED TO RUN THE WASTE PROCESS.

(ONE -EQUIPMENT PART, ANOTHER- AUTOMATIC CONTROL PART.)

IF YOU WANT MORE PEOPLE TO TRAIN, WE'LL BE GLAD TO.

AND WE THINK 2 MONTHS FROM COMMISSIONING TEST WILL BE APPROPRIATE.

## **3. PAYMENT SCHEDULE**

1st PAYMENT: 20% TOTAL PROJECT COST EFFECTIVE DATE OF THIS AGREEMENT

2nd PAYMENT: 40% TOTAL PROJECT COST DESIGN DOCUMENT APPROVAL

3rd PAYMENT: 30% TOTAL PROJECT COST LAST SHIPMENT OF EQUIPMENT

4th PAYMENT: 10% TOTAL PROJECT COST COMPLETION OF COMMISSIONING