

DISCUSSION PURPOSE ONLY

8TH EAST ASIA SUMMIT HIGH-LEVEL SEMINAR ON SUSTAINABLE CITIES

Concept for Solid Waste Management Project

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JFE Smart Infrastructure

Water Purification	Sewage Treatment	Biogas / Biomass	Gas Engine	Waste to Energy
Water & Gas Pipeline	Ballast Water Treatment	Oilfield Water Recycle	Smart Agriculture	Solar Power
LNG Tank	Bridge	City Landmark	Gantry Crane	

JFE can offer the world leading technology

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Traditional Waste Dumping

- CH₄ Emission
- Pest, Odor, Fire, Water & Air Contamination
- Global Warming
- Pollution
- Hazardous situations for the communities and local economies**
- Land Availability
- Difficult to secure new Landfill space

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"Waste to Energy" Failure Case

Source: Internet

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Environmental Harmony in Japan

Nerima Waste Incineration Plant (Tokyo)

- Emission level is lower than environmental standard
- Waste Heat Reuse for Local Community
- Close to waste generator and short transportation distance

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Why WTE ? ⇒ Benefit !

Waste → WTE Plant → Power Generation, Heat Utilization

Direct Disposal (crossed out) → CH₄ Greenhouse Effect (1/21), Odor

WTE Plant → To Landfill (1/30 in volume), Ash

Benefits of WTE: 7 AFFORDABLE AND CLEAN ENERGY, 12 RESPONSIBLE CONSUMPTION AND PRODUCTION, 11 SUSTAINABLE CITIES AND COMMUNITIES

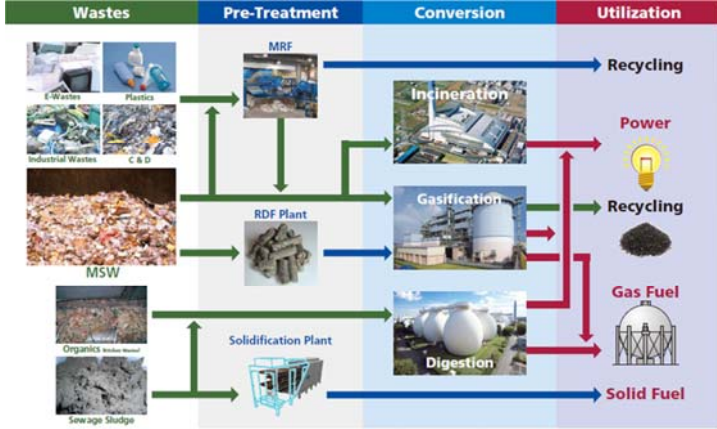
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Integrated Approach for Waste



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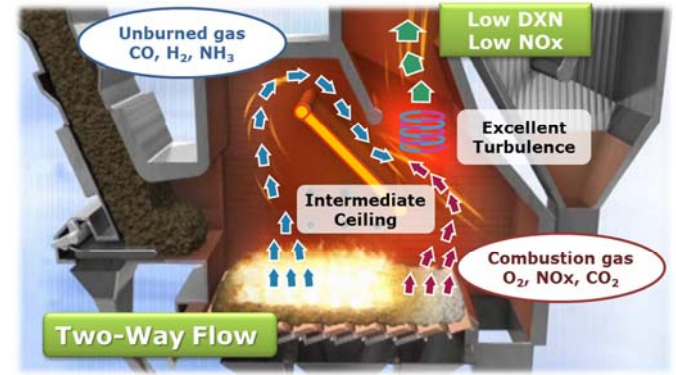
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JFE's Stoker Furnace

Proven Track Record Minimization of environmental impact



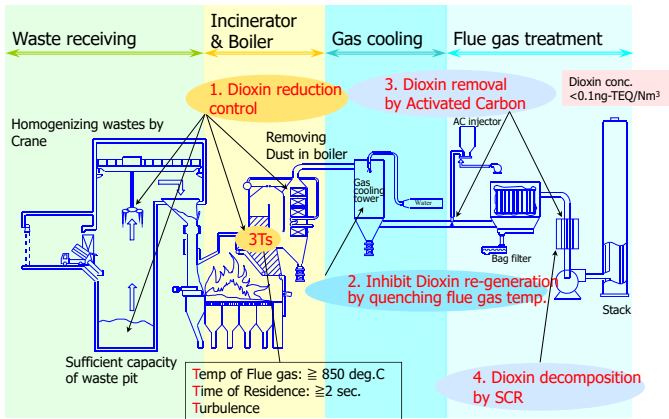
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Anti-DIOXINs Technology



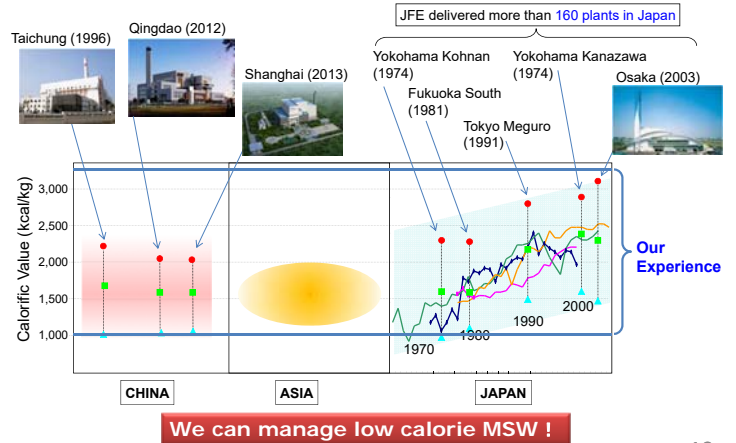
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Low Calorific Value Waste Experience



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Reference ; Stoker Furnace (Nerima, TOKYO)



Completion	Nov 2015
Capacity	500 tpd (250tpd×2 lines)
Power Gen.	18.7 MW
Site Area	Approx. 15,000m ²
Flue gas treat.	dry-type flue gas treatment system, bag filter, wet scrubber, deNO _x reactor
Ignition Loss of Bottom Ash	≤5%

	Emission Performance	Regulatory Standards
Dust & Fly Ash	0.01 g/Nm ³	0.04 g/Nm ³
SO _x	10 ppm	91 ppm
NO _x	50 ppm	85 ppm
HCl	10 ppm	430 ppm
DXN	0.1 ng-TEQ/Nm ³	0.1 ng-TEQ/Nm ³
Hg	0.05 g/Nm ³	Unregulated

Design Calorific Value of Waste		
Min. LHV	Ave. LHV	Max. LHV
7,100 kJ/kg	10,200 kJ/kg	14,300 kJ/kg
1,700 kcal/kg	2,400kcal/kg	3,400 kcal/kg

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JFE's JCM Project ; WTE in Yangon City

Image: First WTE Project with JCM, First WTE Project in Myanmar.

Counterpart	Yangon City Development Committee
Site	Mingalardon area, Yangon City, MYANMAR
Technology	Waste to Energy (WTE) Incinerator : 60ton/day Generator : 0.7MW
GHG Emission Reduction	4,700t-CO ₂ /year

Ground Breaking Ceremony

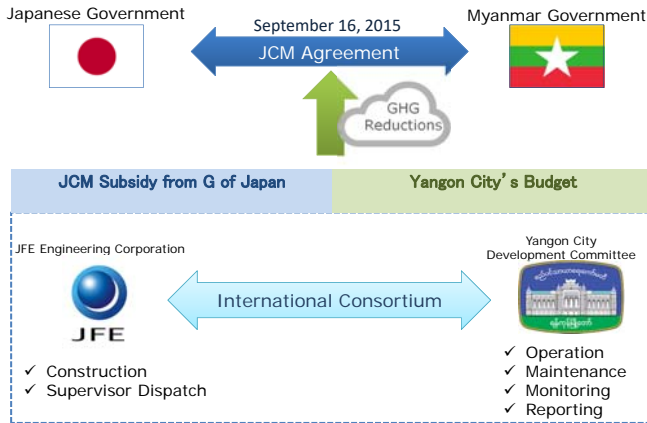
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JCM Project Scheme ; WTE in Yangon City



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SUSTAINABLE DEVELOPMENT GOALS



Thank you

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