



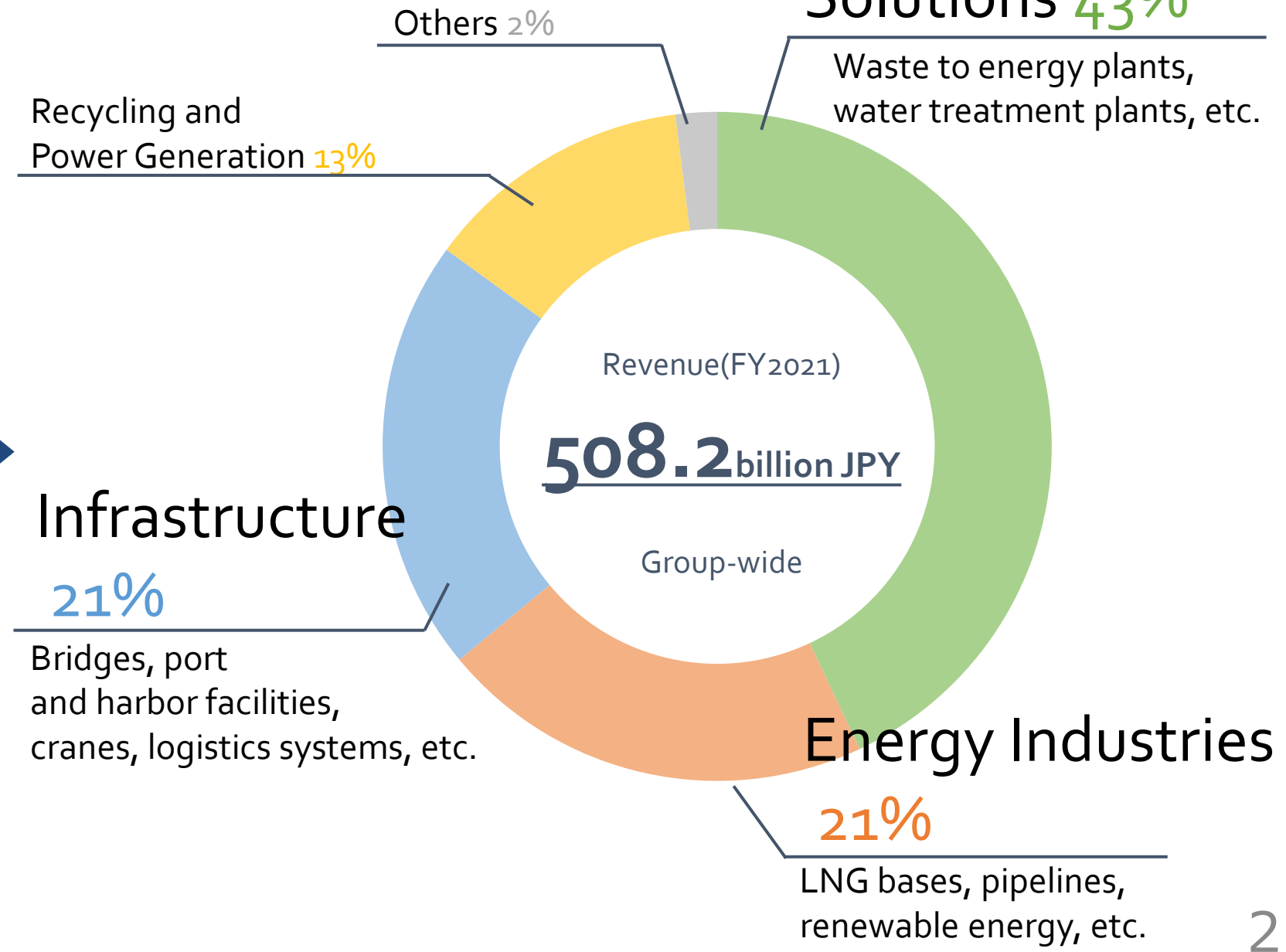
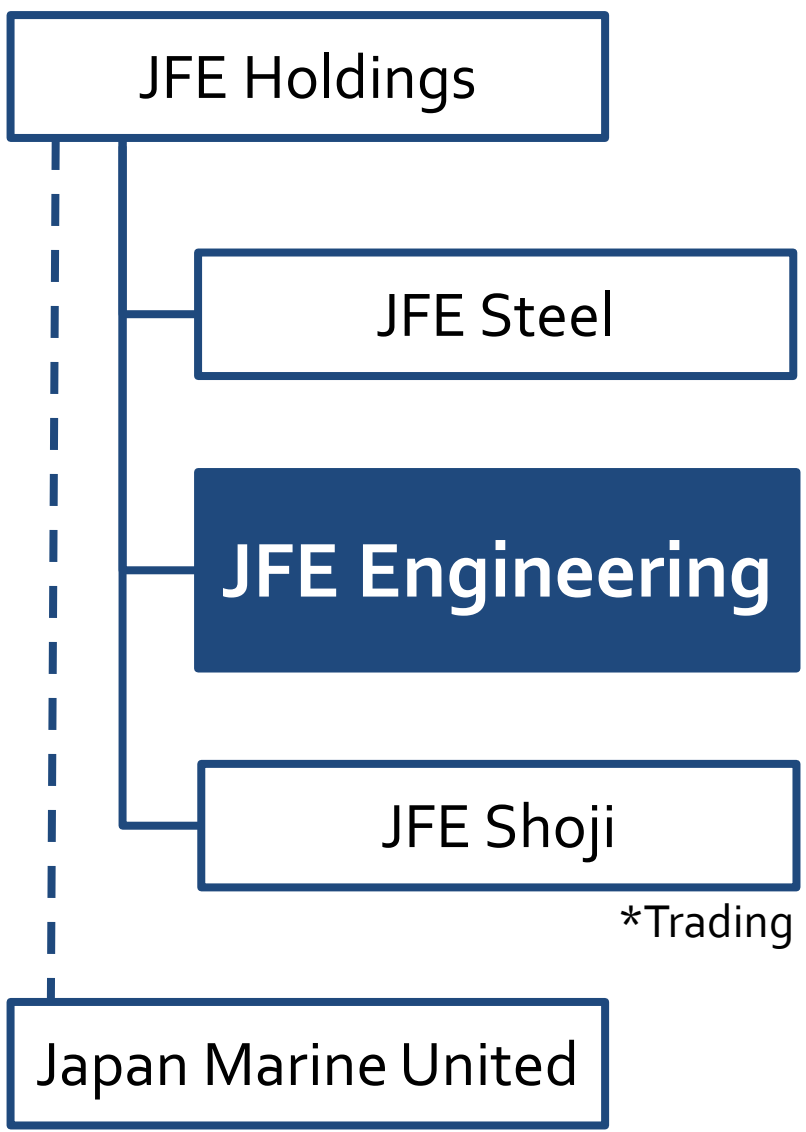
November, 2022

GHG emission reduction in waste sector



JFE Engineering Corporation

JFE for sustainable cities and communities





Egyptian-Japanese Friendship Bridge (Suez Canal Bridge), 2001



Our Contribution of GHG Emission Reduction

10,560,000 t-CO₂/y

■ Asia, Europe, etc.*¹

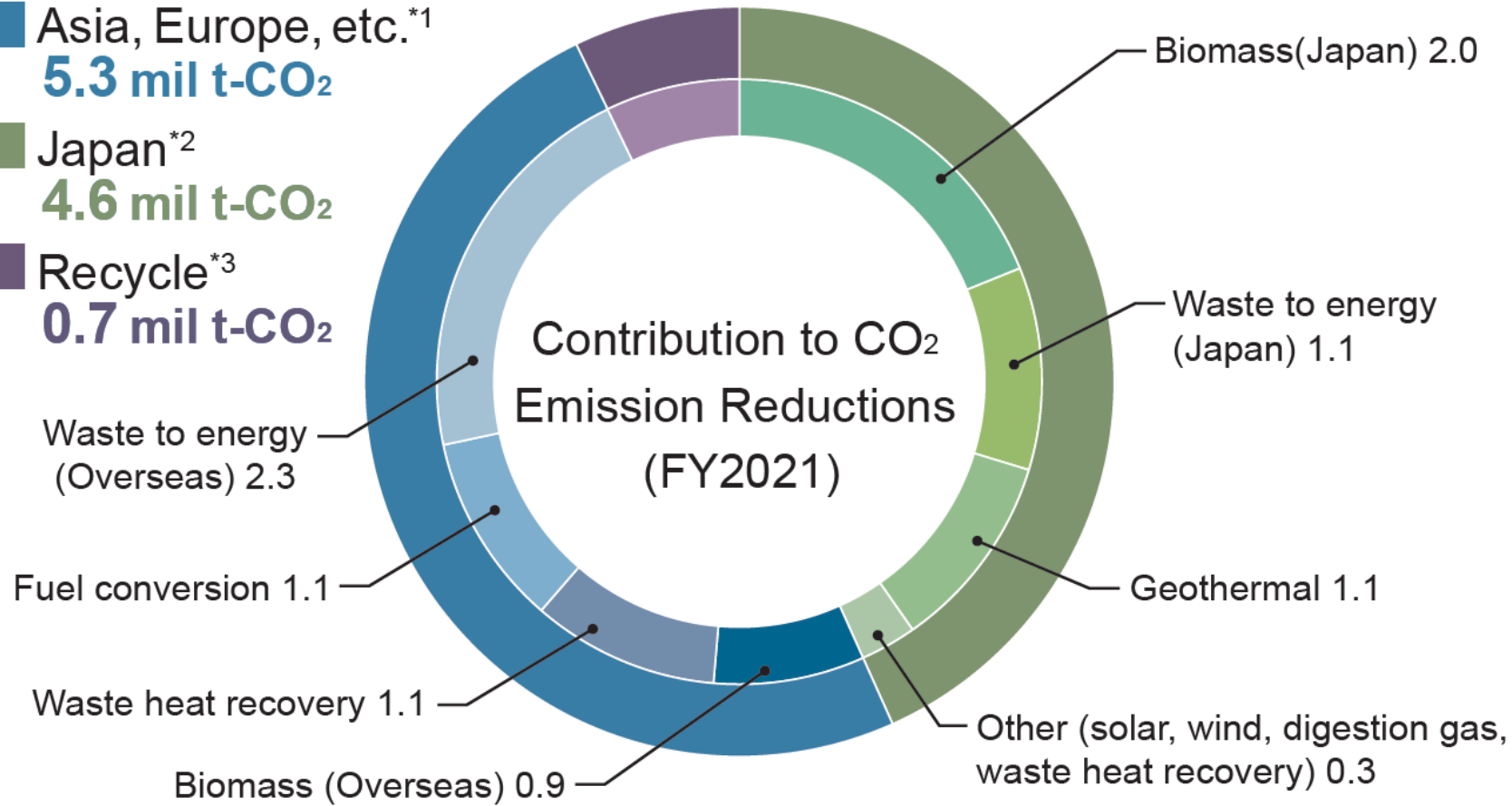
5.3 mil t-CO₂

■ Japan*²

4.6 mil t-CO₂

■ Recycle*³

0.7 mil t-CO₂



*1 Covered JFE Engineering Corporation and Standardkessel Baumgarte GmbH

*2 Covered JFE Engineering Corporation

*3 Covered J&T Recycling Corporation including subsidiary company





CH4 Emission

**Pest, Odor, Fire, Water &
Air Contamination**

Global Warming

Pollution

**Hazardous situations
for the communities
and local economies**

Land Availability

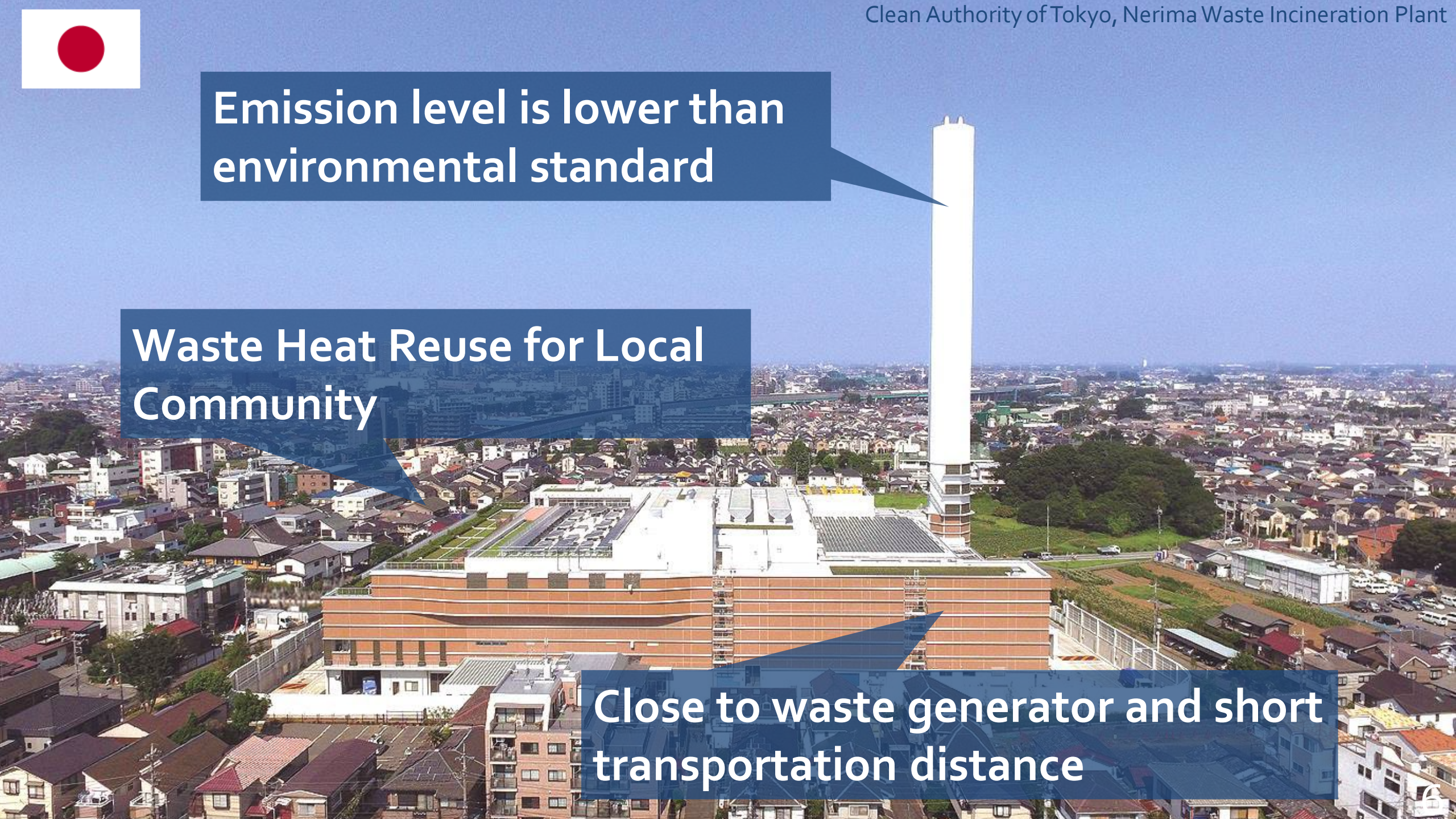
**Difficult to secure new
Landfill space**



Emission level is lower than environmental standard

Waste Heat Reuse for Local Community

Close to waste generator and short transportation distance





[Expected GHG Emission Reductions]
41,805 tCO₂/year (average)



Waste to Energy project in Bac Ninh Province

[Location] Bac Ninh province, Vietnam

[Project participant (Vietnam)] T&J Green Energy Company Limited

[Project participant (Japan)] JFE Engineering Corporation

[Capacity] 500 ton/day (MSW+ISW), 11.6 MW

Multi-collaboration for the Global environment



Ministry of the Environment

JCM subsidy



Equity(55%)



Equity(45%)



IFC Loan
+ Finland-IFC Blended
Finance for Climate Program



JCM THE JOINT CREDITING
MECHANISM

[Expected GHG Emission Reductions]

4,067 tCO₂/year (average)

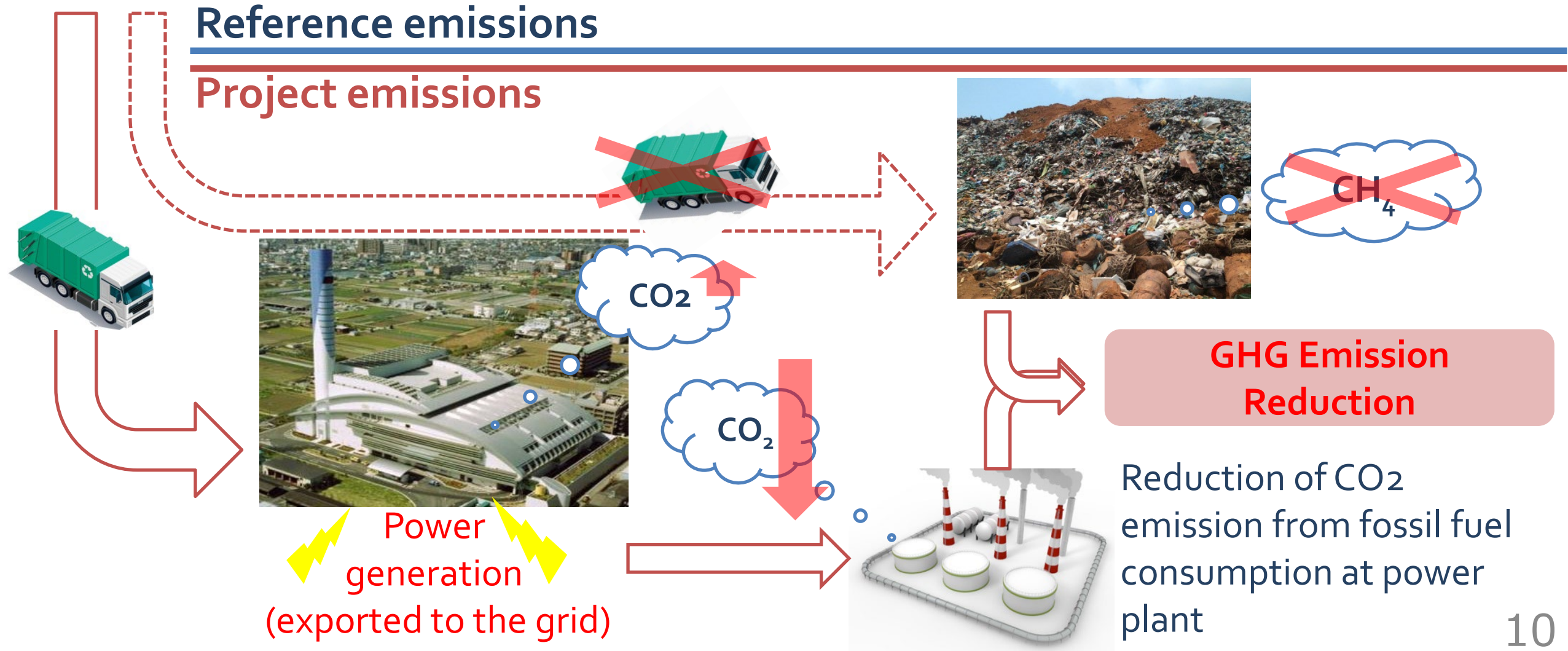
Waste to Energy Plant in Yangon City

[Location] Shwe Pyi Thar Township, Yangon City

[Project participant (Myanmar)] Yangon City Development Committee

[Project participant (Japan)] JFE Engineering Corporation





01 Jun. 2017 Starting date of project operation

16 Jan. 2020 Registration of the project

Estimated emission reductions in each year

-1,933 (in 2017)

-1,853 (in 2018)

262 (in 2019)

1,833 (in 2020)

3,030 (in 2021)

3,970 (in 2022)

4,728 (in 2023)

5,359 (in 2024)

5,897 (in 2025)

6,367 (in 2026)

6,785 (in 2027)

7,163 (in 2028)

7,509 (in 2029)

7,829 (in 2030)

Expected operational lifetime of project: 15 years

* solid waste disposal site

Reference emissions

Decomposition of waste at a SWDS*	CH ₄
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Electricity generation	CO ₂
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Project emissions

Combustion of fossil carbon contained in waste	CO ₂
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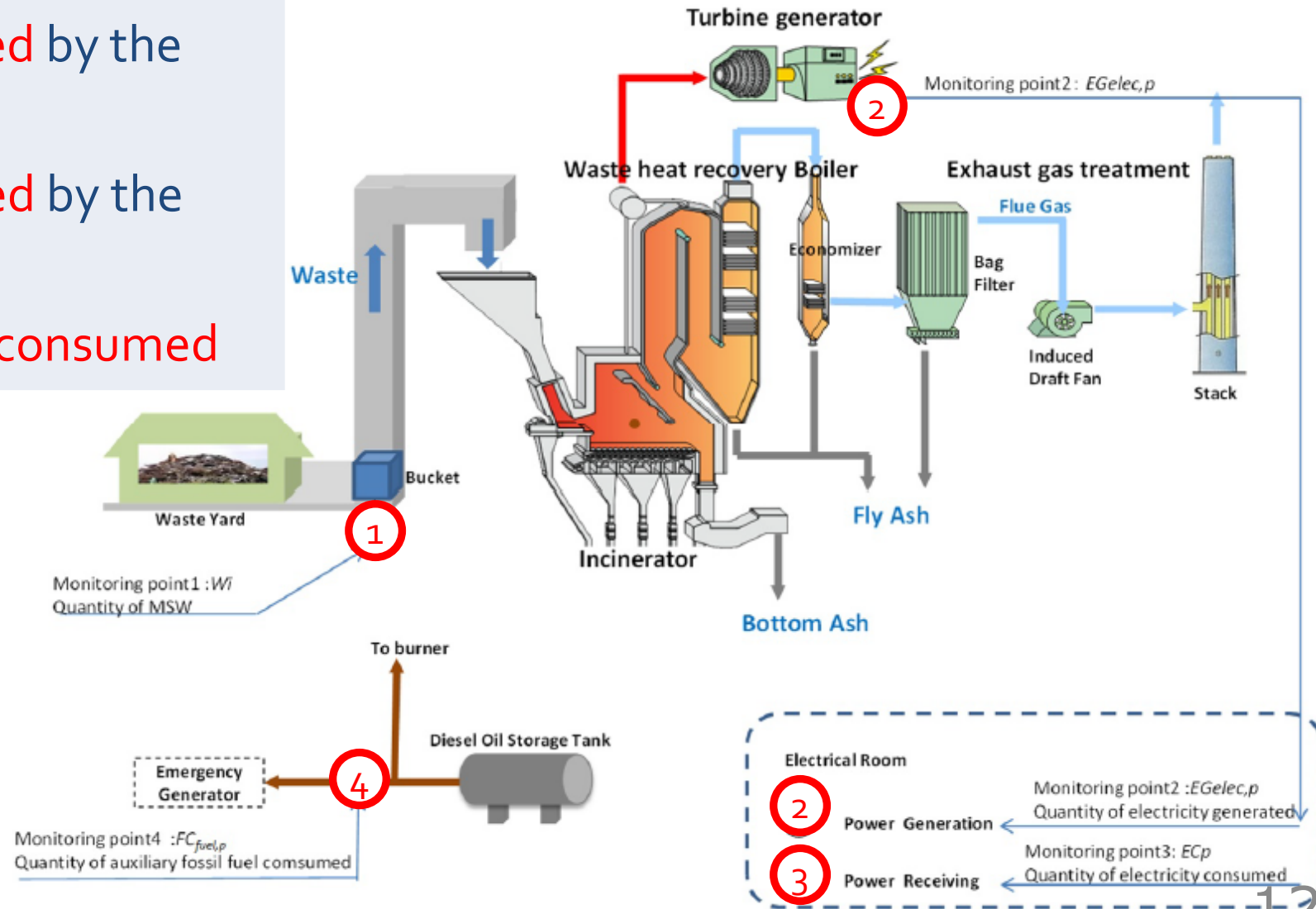
Incineration of waste	N ₂ O
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Electricity use by the project facility	CO ₂
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Consumption of auxiliary fossil fuels needed to be added into incinerator	CO ₂
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Monitoring parameters

- ① Quantity of **MSW fed into incinerator** (wet basis)
- ② Quantity of **electricity generated** by the project facility
- ③ Quantity of **electricity consumed** by the project facility
- ④ Quantity of auxiliary **fossil fuel consumed**





Just For the Earth