



**Kraft of Asia
Paperboard & Packaging Co., Ltd.**

January 2024

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A. KOA's Overview

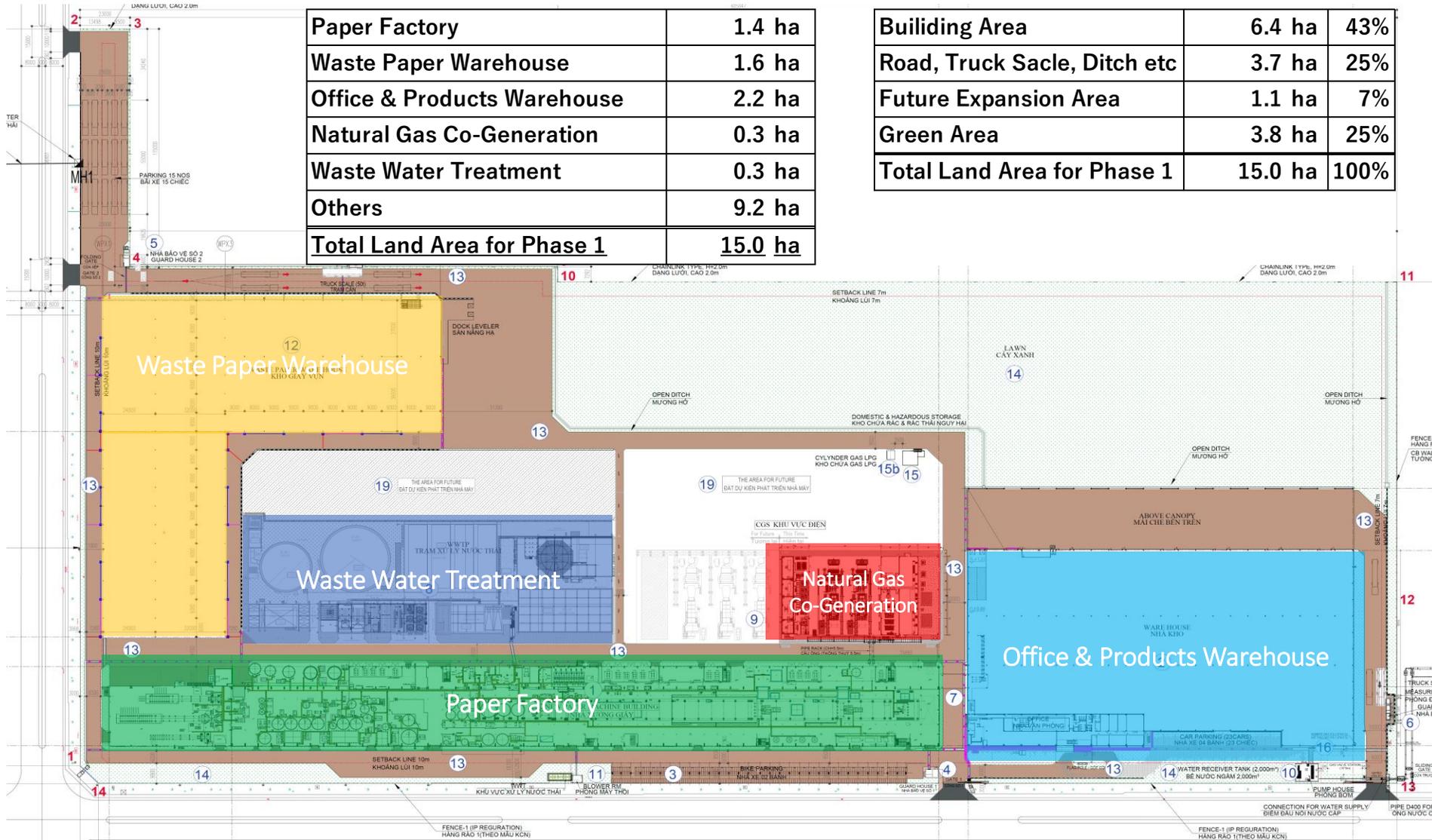
1. General information

| | |
|----------------|---|
| Name | Kraft of Asia Paperboard & Packaging Co., Ltd. |
| Share holder | Marubeni Corporation 100% |
| Established | On June 22nd, 2018 |
| Representative | Takahiro Shimada |
| Location | Phu My 3 Specialized Industrial Park |
| Products | Linerboard, Medium (90gsm-225gsm) |
| Production | 400,000MT per year (phase 1) |
| Sales items | Linerboard, Medium, Paper bags, Envelopes, Carton box, Notebook |



A. KOA's Overview

2. Layout



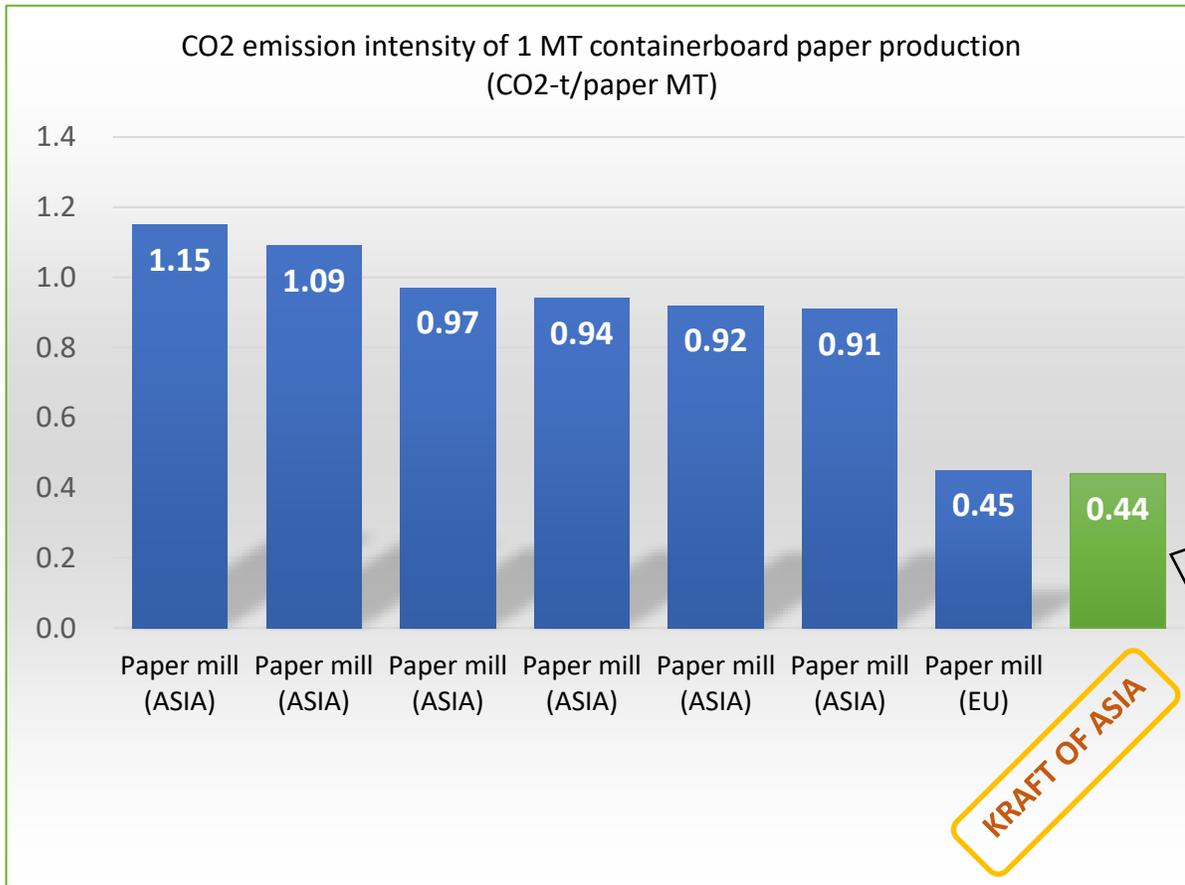
| | |
|------------------------------------|----------------|
| Paper Factory | 1.4 ha |
| Waste Paper Warehouse | 1.6 ha |
| Office & Products Warehouse | 2.2 ha |
| Natural Gas Co-Generation | 0.3 ha |
| Waste Water Treatment | 0.3 ha |
| Others | 9.2 ha |
| Total Land Area for Phase 1 | 15.0 ha |

| | | |
|------------------------------------|----------------|-------------|
| Building Area | 6.4 ha | 43% |
| Road, Truck Sacle, Ditch etc | 3.7 ha | 25% |
| Future Expansion Area | 1.1 ha | 7% |
| Green Area | 3.8 ha | 25% |
| Total Land Area for Phase 1 | 15.0 ha | 100% |

B. Advanced technology towards environmental protection

1. 60% less CO2 emissions than competitors

- We can produce containerboard paper with **60% less CO2 emissions than competitors.**
⇒ CO2 emissions **equivalent to the lowest level of European paper mill.**



【How we achieve】

① No size press and no after dryer

→ **30% less steam consumption**
5% less electricity consumption

② Natural Gas Co-Generation System

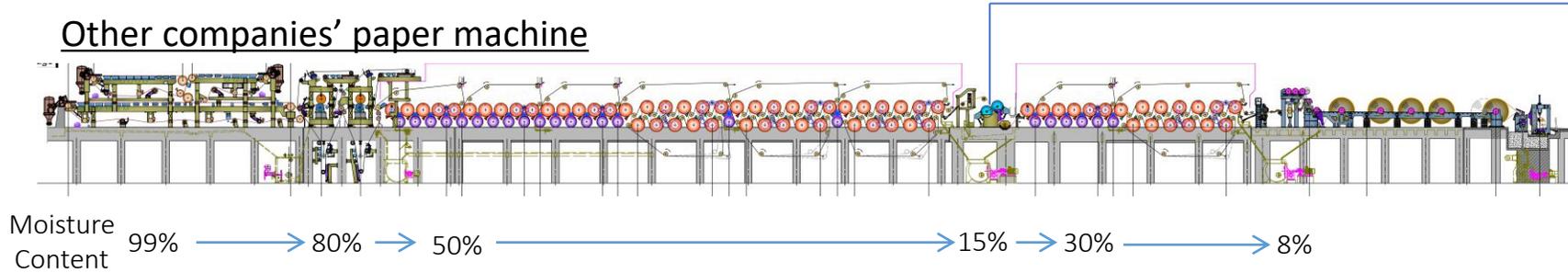
→ **50% less CO2 emission (*)**

(*) comparison with Coal Co-Generation System

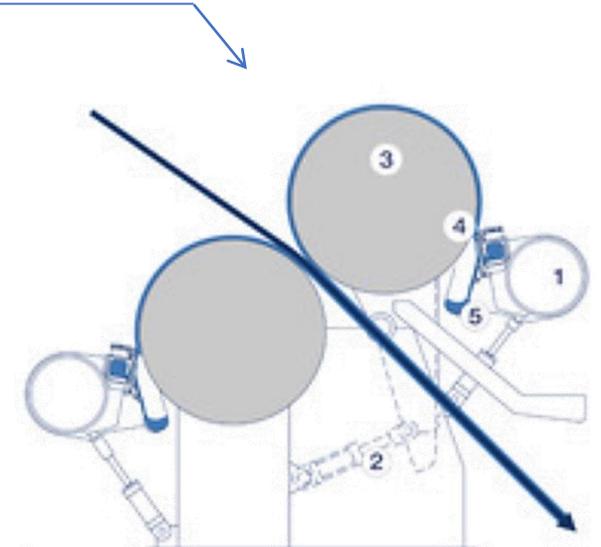
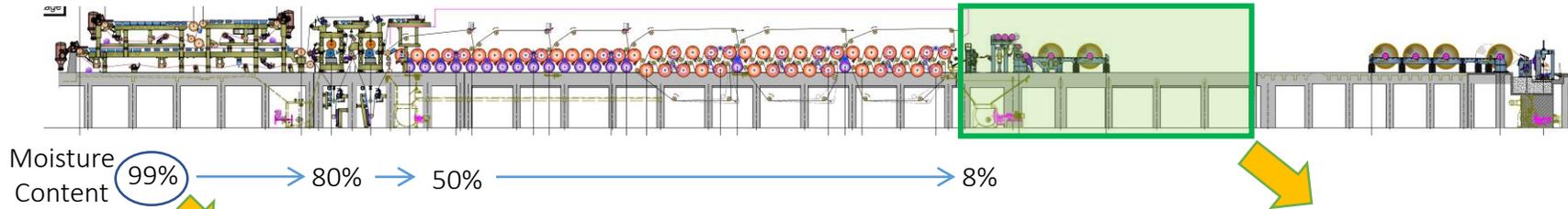
B. Advanced technology towards environmental protection

2. No size press and no after dry

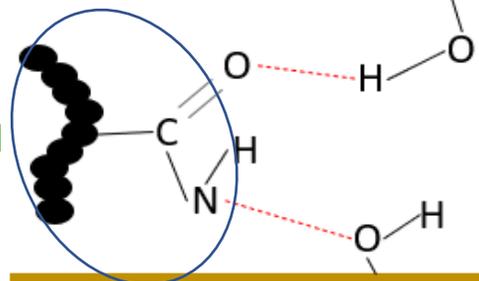
Other companies' paper machine



KOA's paper machine



Size press



Raw Material Fibers

Using chemical for making fiber-to-fiber connections strong → leading to making paper strong

- 30% less steam consumption
- 5% less electricity consumption

10% less CO₂ emission contributing to environmental protection (*)

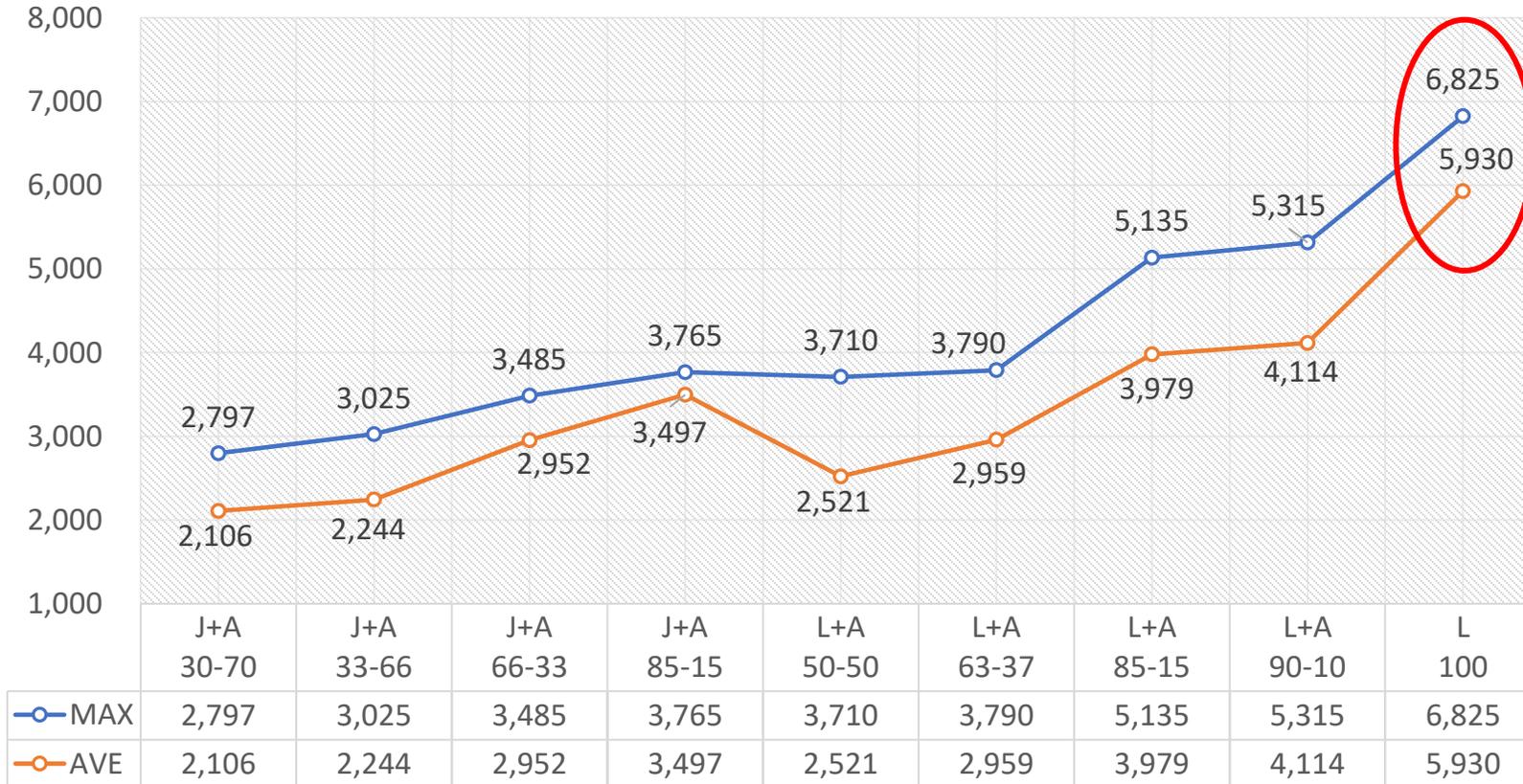
(*) comparison with other paper producers in VN



B. Advanced technology towards environmental protection

2. No size press and no after dry

COD index (PPM)



Size press paper increases the burden on wastewater treatment.

| COD(PPM)/1 kg containerboard paper production | | |
|---|--------------------|--------------|
| Competitor | Starch | 9,900-29,700 |
| KOA | Dry strength resin | 315-945 |

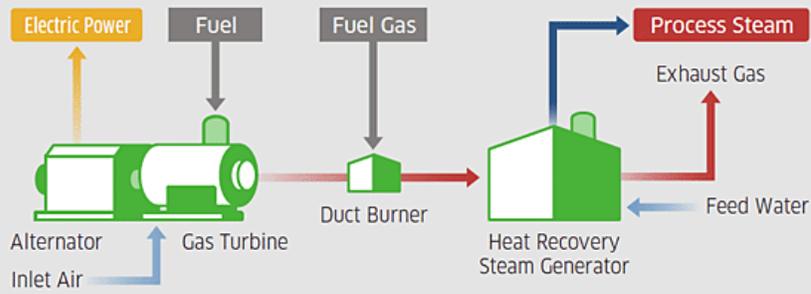
Reduces COD by 30 times in wastewater

Ghi chú: J: OCC imported from Japan A: OCC imported from US L: Domestic OCC

Chart of the influence of waste paper sources on COD index in wastewater

B. Advanced technology towards environmental protection

3. Natural Gas Co-Generation System



(Nguồn: Kawasaki Heavy Industries, Ltd.)

KOA



Coal-fired cogeneration system

50% less CO₂ emission ()**

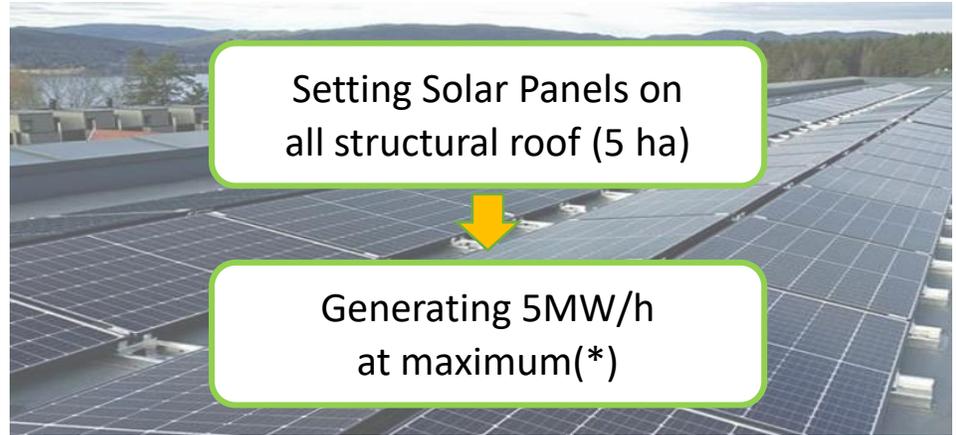
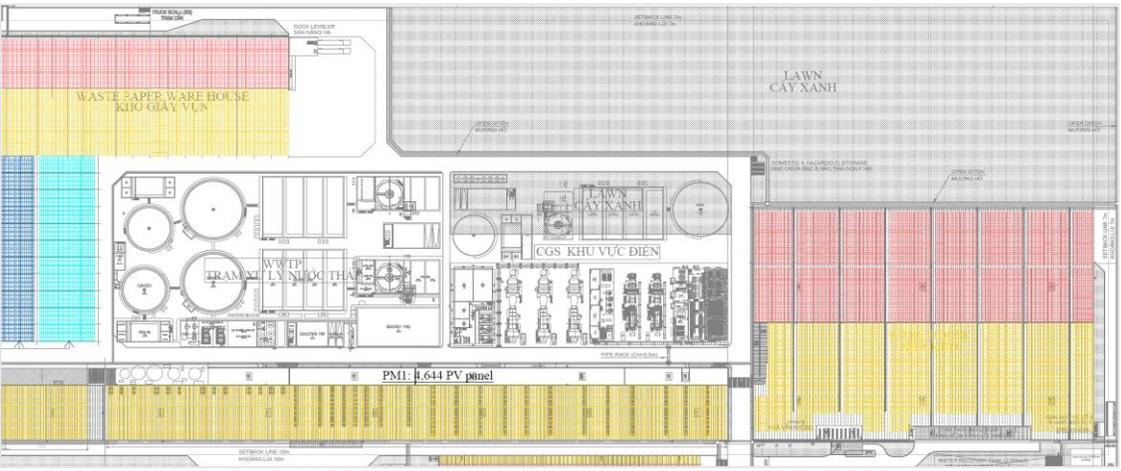
(**) comparison with Coal Co-Generation System



B. Advanced technology towards environmental protection

4. Earth-Friendly Plan for the Future

- Solar Power Generation (2024)

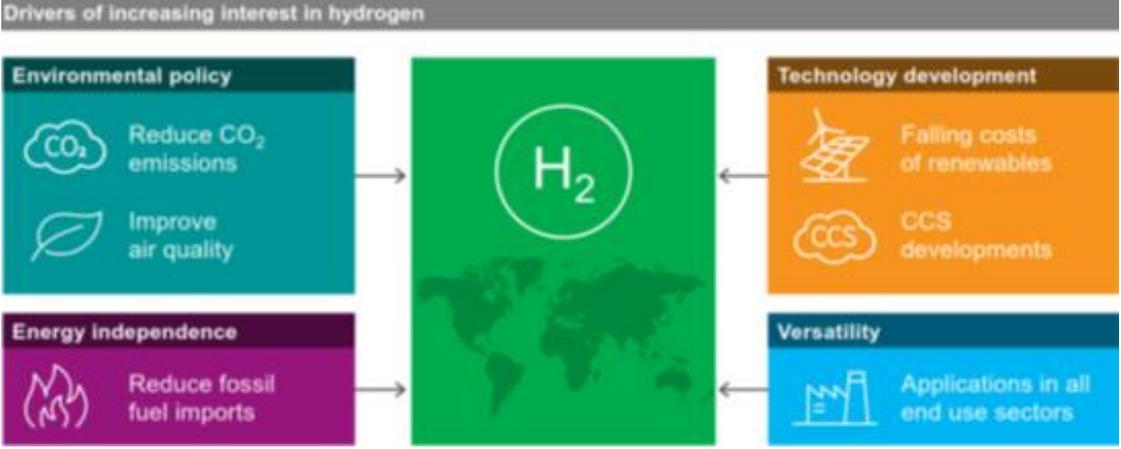


Setting Solar Panels on all structural roof (5 ha)

Generating 5MW/h at maximum(*)

(*) KOA consumes 20MW/h electricity at normal operation.

- H2 Gas Co-generation System (2025-2030)



(source : HIS Markit)

2025 : 20% H2 Gas (**)
combustion with Natural Gas

2030 : 100% H2 Gas (**)
combustion

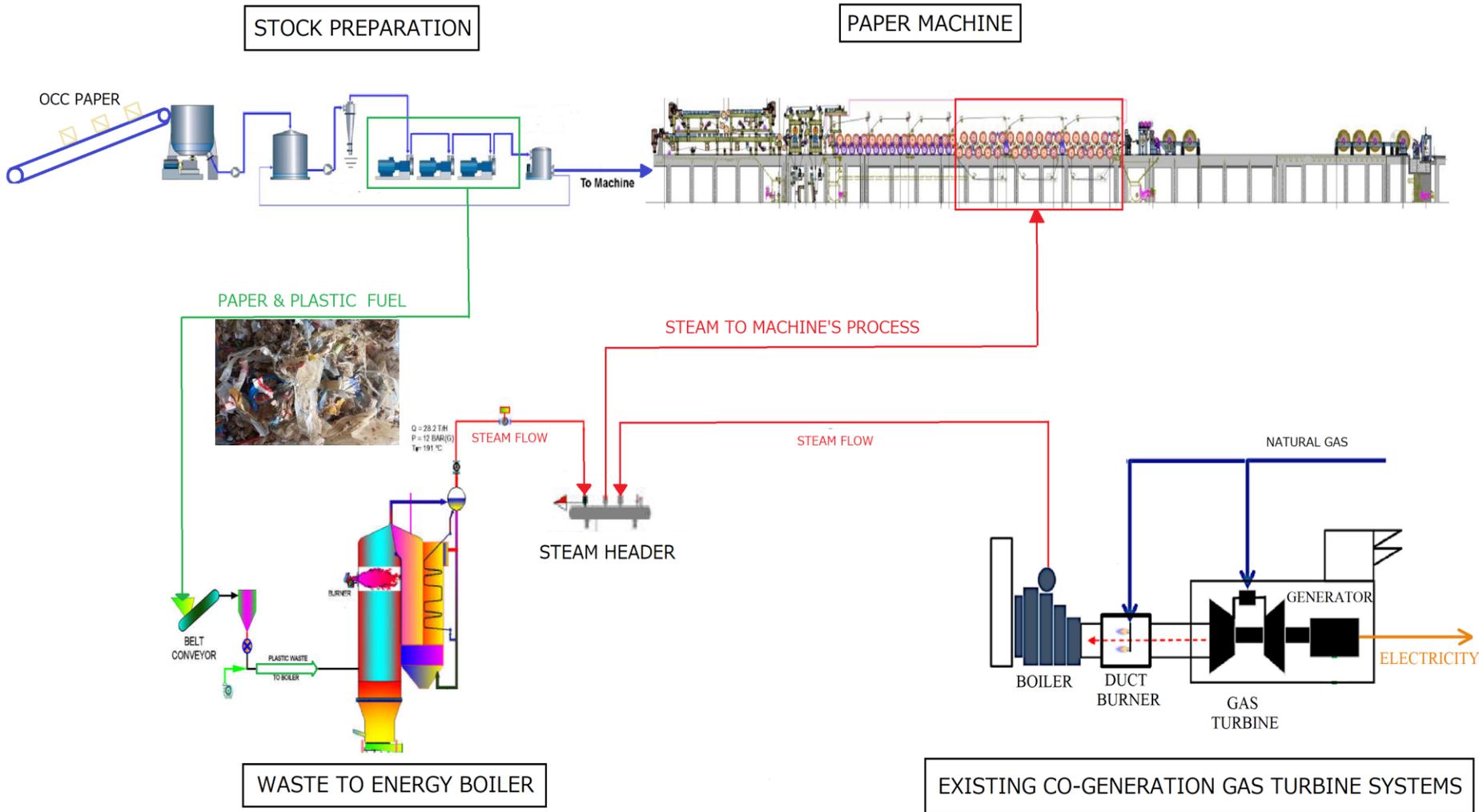


(**) H2 Gas will be generated/supplied by companies in BaRia-VungTau Province

B. Advanced technology towards environmental protection

4. Earth-Friendly Plan for the Future

- Waste to energy Boiler (2024)



Energy recovery from estimated **38,000** tons of pulp-plastic waste per year

↓

Reducing operating costs and increasing production efficiency

↓

Reducing solid waste emissions

↓

Reducing fossil fuels (CNG) consumption, results in reduction of CO2 emissions: **24,500** tons per year

↓

Towards a circular economy and sustainable development

C. KOA's decarbonization efforts

1. Efforts to reduce CO2 emissions on each product

KOA
Kraft of Asia Paperboard & Packaging

eL

| | |
|------------------------------------|----------------------------------|
| GSM: 175 gsm | Width: 2450 mm |
| Length: 6378 m | Weight: 2750 Kg |
| Lot No: 23411838C | Splice: 0 |

Remark:
All of KOA brands' name starts from "e", symbolizing *"earth-friendly"*

CO₂ Emission on production of this paper
0.359 CO₂-ton/ton 62.8 CO₂-g/m²

FSC
RECYCLED
Paper made from recycled material
FSC® C161494



- ✓ Sharing CO₂ emission data with customers.
- ✓ To lead the paper industry in Vietnam toward decarbonized society.

C. KOA's decarbonization efforts

1. Efforts to reduce CO2 emissions on each product



KOA's purpose is "Try ecological production for bright future! " Attaching the poster on paper roll to introduce our purpose.

C. KOA's decarbonization efforts

2. Net Zero road map

KOA'S NET ZERO ROAD MAP To open the way to a sustainable future

