FajarPaper

PT Fajar Surya Wisesa Tbk.

21 October 2019

Company Profile

One of the Indonesia consumer packaging paper producer

Established in **1988**, more than **30** years in the industry

1.3 million tonnes production capacity with Location in Cikarang Barat, Bekasi

100% Use of recycled waste paper.

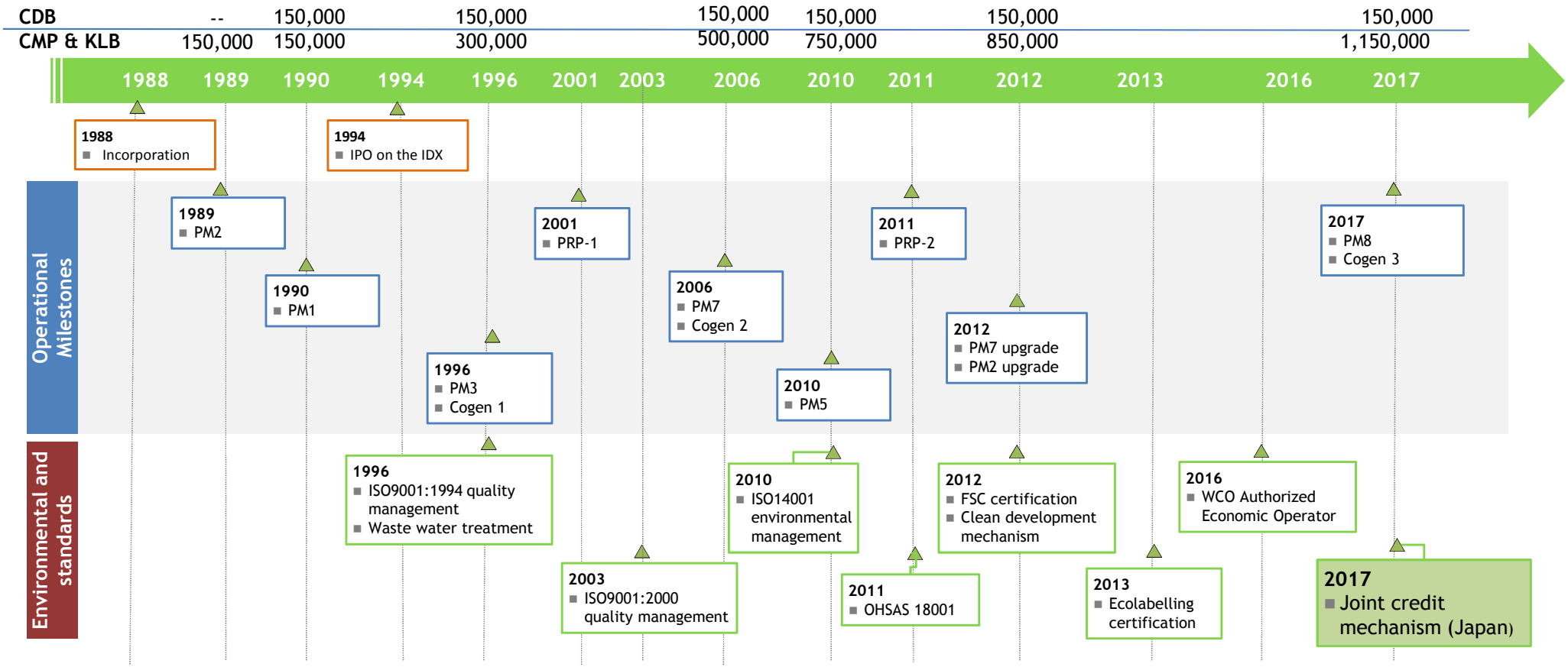
Focus on Indonesia domestic market

FajarPaper is a company of the future in terms of its forward-thinking approach to business, energy conservation and the environment.

Green Company with environmental related certification, i.e. FSC, ISO 14001, and carbon credit, registered since 2012

JCM Project collaborate work with Kanematsu Corporation in energy consumption reduction of paper manufacturing process

Key Milestones



Note: CDB (Coated Duplex Board), CMP (Corrugated Medium Paper), KLB (Kraft Liner Board)

Sustainable Business Model

Production Process

3. Screening & cleaning

- All the contaminants, such as plastics, wires, sands, etc. in the paper pulp are removed based on the size (Screening) and based on the density (Cleaning)

2. Re pulping

- Waste papers are dumped in pulper using conveyors, to be dissolved with water and become paper pulp

4. Headbox

- The formation of paper sheet from paper pulp starts here, where the paper pulp distribution and moisture reduction are controlled to get a good formation of paper sheet

1. Collection

- Waste papers are collected mostly by scavengers, and sold to collection agents
- Collection agents then will sell and transport the pooled waste papers to Fajar Paper

5. Press & dryer section

- The water content of the newly-formed paper sheet is further reduced in these sections
- Press section is where paper sheet is pressed in between two rolling rolls before going to dryer section
- Dryer section is where paper sheet is dried using steam-heated rolls

8. Rewinder

- The jumbo is re-winded where the cores are inserted in the middle of the new jumbo roll, and then cut into smaller rolls

6. Pope Reel

- The perfectly formed paper sheet is winded in the pope reel and becomes one jumbo roll

7. QC check

- Various sections of the jumbo roll are checked by QC to determine the paper quality of that jumbo roll

Sustainable Operation

#	Certification	Issuer	Description	Valid	Logo
1	FSC CoC (Forest Stewardship Council - Chain of Custody)	SGS	The only Indonesian company with non-illegal logging source of raw materials certification, since 2012	2022	
2	Clean Development Mechanism (CDM)	United Nation Framework on Climate Change	Carbon credit registered, since 2012	2022	
3	Joint Credit Mechanism (JCM)	Government of Japan	Greenhouse Gas (GHG) emission reductions or removals	2021	
4	Ekolabel & Recyclable	BBPK (Indonesia)	Products are certified recyclable and eco friendly	2020	
5	Authorized Economic Operator (AEO)	Ministry of Finance Indonesia	A party complying with international supply chain security standards	2021	
6	ISO 9001	TUV Sud	Management Quality System	2019	
7	ISO 14001	TUV Sud	Environmental	2022	
8	ISO 45001	TUV Sud	Occupational Health and Safety Management System	2020	
9	OHSAS 18001	TUV Sud	Employee health and safety	2020	

Self-sufficient and Sustainable Energy

2 Gas Turbines Co-generation Power Plant

- Production of approx. 70MW
- Ability to transform waste heat into steams (200 tons/hour)

1 Coal Co-generation Power Plant

- Production of approx. 55MW or 110 ton of steam per hour

Waste Water Treatment Plant

- Existing treatment capacity of 68,000m³ of waste water/day

Pembakar Reject Plastik dan Sludge (PRP) 1 & 2

2 Fluidized-bed PRP Plants

- Transforming approximately 40 tons/hour of steam energy out of the PRP

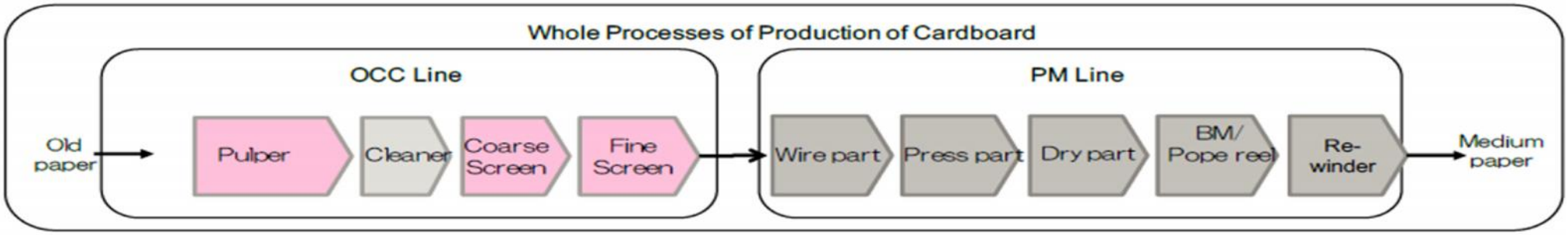
PRP-1

- The first initiative toward emission reduction.
- A grant from Japan & NEDO to Indonesian government
- PRP-1 has been in operated since 2001 .

PRP-2

- PRP-2 was installed using internal fund, the object of CDM/carbon credit.
- Emission reduction through the avoidance of using fuel to produce steam from boiler, instead we got for free through PRP-2.
- PRP-2 has been in operated since 2011

Workflow Process



Function	Old paper is dissolved with water	Removing impurities by difference in specific gravity	Process 1 for removing impurities	Process 2 for removing impurities	Pulp is injected evenly on wire net . A paper layer is formed as pulp is gradually drained .	Basic paper strength is formed while drain.	Dry off fluid to bond fiber and fiber chemically.	Paper reeled after weight, fluid, thickness of paper are measured by BM
Manner of CO_2 reduction	Parts of efficient Pulper consists of a tub, a strainer, a rotor, and a drum. Those parts enable to mix and de-fiber low material strongly and push impurities out of Pulper. It contributes to efficiency of Screen process to lower the load of Screen.	Cleaner use difference in specific gravity, so it doesn't contribute energy efficiency directly.	Efficient Screen has a high quality rotor to reduce rotation speed for rejecting impurities, and it contributes to reduce power.					

In the OCC process, the material of sheet paper is made by removing foreign substances, using multiple machines from ground and then liquefied old paper with water.

Target and Challenge - JCM

Saving tCO2 per year target

Reduced emissions and electricity usage through the introduction of efficiencies in the processing and cleaning of recovered paper (OCC) used in the company's manufacturing process – a saving of over 14,800 tCO2 per year.

Challenge in JCM

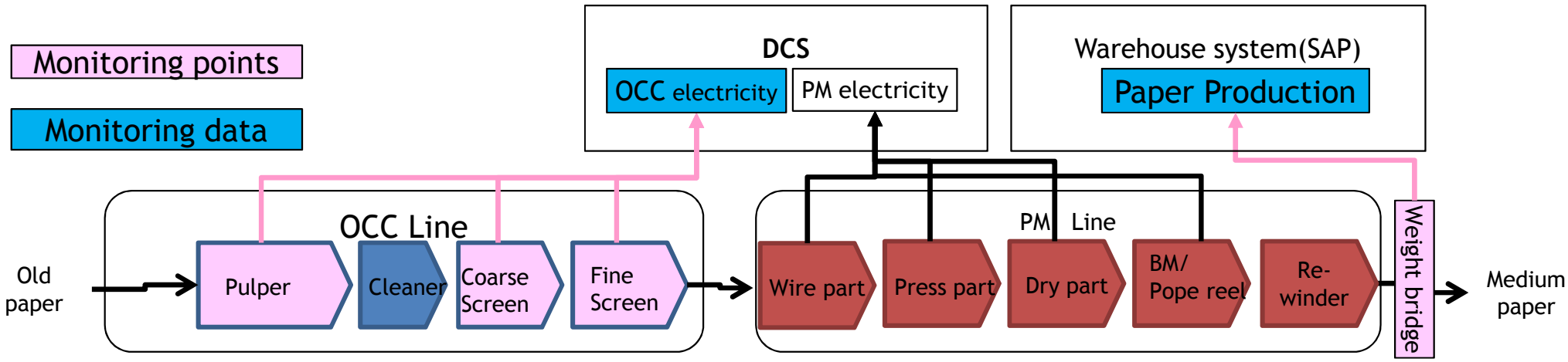
- Financing must come from internal fund.
- Information and Regulation data.

Projected Emission Reduction from 2017 thru 2020 is 71,291 tCO2o

Year	Estimated Reference emissions (tCO_{2e})	Estimated Project Emissions (tCO_{2e})	Estimated Emission Reductions (tCO_{2e})
2017	39,433.5	25,174.8	14,258
2018	52,578.0	33,566.4	19,011
2019	52,578.0	33,566.4	19,011
2020	52,578.0	33,566.4	19,011
Total (tCO_2e)	197,167.5	125,874.0	71,291

[Note] The emission reductions are counted from April 1, 2017.

Monitoring



Parameters

- Paper production measured at the PM line connected to the project OCC line
- Electricity consumption of the project OCC line

JCM Event at FajarPaper

Date : 20 December 2016

Location : Mill Site of PT Fajar Surya Wisesa Tbk. Cikarang Utara Bekasi

Venue : Local Stakeholder Consultation (LSC) gathering In relation to the application process for FajarPaper's JCM project, Introduction of High Efficient Old Corrugated Cartons Process at Paper Factory

Attendee :
1. Indonesia Pulp and Paper Associaton (APKI)
2. JCM Secretariat Indonesia
3. Ministry for Economic Affairs
4. Ministry of Industry
5. Kanematsu
6. Suncosmo Co, Ltd.

JCM Event - 20 December 2016

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