

FINANCIAL ASPECT

INVESTMENT VALUE ANALYSIS

Capital Expenditure (CAPEX)

Area	Total (IDR)
Main Building	
Property/Land	78.276.300.000,00
Zone 1: Reception and Initial Sorting	8.045.000.000,00
Zone 2: Shredding & Pre-Treatment	3.761.250.000,00
Zone 3: Fermentation Reactor	42.000.000.000,00
Zone 4: Purification & Distillation	11.300.000.000,00
Zone 5: Product & Waste Storage	21.592.500.000,00
Supporting Facilities	
Wastewater Treatment Unit (WWTU)	5.494.500.000,00
Utility Unit	5.413.798.000,00
Construction of Office & Laboratory Facilities	2.500.000.000,00
Total Construction	178.383.348.000,00
Tax and insurance	
Plant Design Consultant Fee	16.054.501.320,00
Contingency Cost	4.459.583.700,00
Tax	17.974.928.565,00
Working Capital	420.780.937.500,00
insurance	14.979.107.138,00
IDC	130.934.889.430,00
CAPEX (Construction + Working Capital)	599.164.285.500,00

The total CAPEX of the Central Kalimantan Waste Processing Project reaches **IDR 599.164.285.500**

Operational Expenditure (OPEX)

Components	Cost (IDR)
1. Cost of Goods Sold	356.378.962.500
2. General and Administrative Expenses	24.518.854.595
3. Selling and Promotion Expenses	39.883.078.125
Total OPEX	420.780.937.500

TOTAL INVESTMENT VALUE
IDR 783.567.295.652

INVESTMENT FEASIBILITY ANALYSIS

WEIGHTED AVERAGE COST OF CAPITAL (WACC)	10,78%
INTERNAL RATE OF RETURN (IRR)	14,51%
NET PRESENT VALUE (NPV)	IDR 352.356.558.243
PAYBACK PERIOD (PP)	8 Year 12 Month

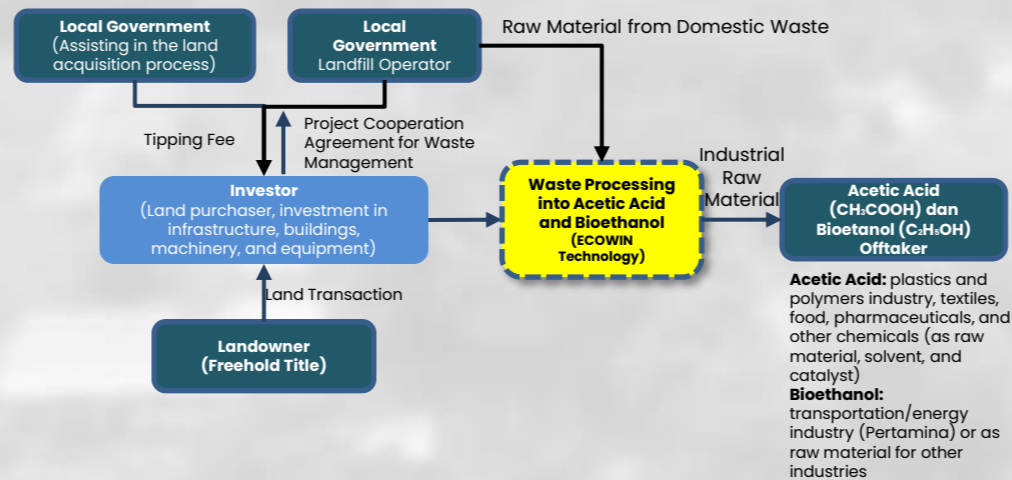
The results of the financial feasibility analysis for the development of the **Waste-to-Acetic Acid and Bioethanol Project in Central Kalimantan Province** are considered

FEASIBLE



GOVERNMENT SUPPORT

Cooperation Scheme



Insentif

A. FORMS OF FISCAL INCENTIVES

Tax Holiday (TH)

Minister of Finance Regulation (PMK) No. 130/PMK.010/2020 and BKPM Regulation No. 7/2020

Corporate Income Tax Reduction Percentage 100% with Investment Value > IDR 500 billion
5 year: IDR 500 billion < Investment Value < IDR 1 trillion
7 year: IDR 1 trillion < Investment Value < IDR 5 trillion
10 year: IDR 5 trillion < Investment Value < IDR 15 trillion
15 year: IDR 15 trillion < Investment Value < IDR 30 trillion
20 year: Investment Value > IDR 30 trillion

50% additional Corporate Income Tax reduction for **2 years**

Tax Allowance (TA)

Government Regulation (PP) No. 78/2019, Minister of Finance Regulation (PMK) No. 96/PMK.010/2020, and BKPM Regulation No. 5/2020

- Deduction of net income by 30 percent** of the total value of investment in fixed assets **over 6 years**, at 5 percent per year
- Accelerated depreciation** of tangible fixed assets and **accelerated amortization** of intangible assets
- Imposition of Final Income Tax on Dividends** at 10% (or lower based on Tax Treaty)
- Loss carry forward period** longer than 5 years but not exceeding 10 years

Import Duty Exemption

Minister of Finance Regulation (PMK) No. 176/PMK.011/2019 in conjunction with No. 188/PMK.010/2015

TARGETED SECTOR



Super Tax Deduction

Gross income tax deduction incentive of 300% for industry players conducting apprenticeship/training for Indonesian workers and/or domestic research.

B. FORMS OF NON-FISCAL INCENTIVES

LICENSING FACILITATION

The commitment of the local government in developing waste processing into acetic acid and bioethanol by providing licensing facilitation through a one-stop integrated service to ease investment and the Public-Private Partnership (PPP) scheme.

OTHER INCENTIVE

- Human resource development through the provision of school facilities
- Acceleration of accessibility network development by the government
- Distribution network support by the local government



DPMPTSP
Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu
Provinsi Kalimantan Tengah

2025



IPRO (INVESTMENT PROJECT READY TO OFFER)
WASTE MANAGEMENT
IN CENTRAL KALIMANTAN PROVINCE

Ethanol & Acetate Co-Production from Organic Waste



PROJECT PROFILE

The **Km 14 Palangka Raya Landfill** is no longer just a dumping site, but a golden opportunity for green investment. Through **ECOWIN technology**, waste is transformed into high-value acetic acid and bioethanol, positioning this area as a hub of modern waste management innovation and a strategic investment destination in Central Kalimantan.



Location Name:
Waste Processing Facility at Km 14 Palangka Raya Landfill

Total Area:
Waste Processing Facility at Km 14 Palangka Raya Landfill, with an area of approximately 2 Ha

Location Address:
Tjilik Riwut Road Km 14, Bukit Tunggal Subdistrict, Jekan Raya District, Palangka Raya City

Land Status:
Clean and Clear, Certified as Freehold (Hak Milik) and in accordance with the spatial plan for plantation allocation

Commodity Type	Quantity
Acetic Acid	115.500 ton/year
Bioethanol	49.500 ton/year

KBLI 38211
Treatment and Disposal of Non-Hazardous Waste and Garbage

Project Prospects

Development Readiness

The waste processing project at Km 14 Landfill is ready for development due to its strategic location, infrastructure support, multi-stakeholder benefits, and financial feasibility, with an IRR above 14% and a payback period of approximately 8 years.

Infrastructure Readiness

The landfill location at Km 14 is connected to Tjilik Riwut Road, which has a carriageway width of approximately 6 meters, and is accessible via a paved secondary road.

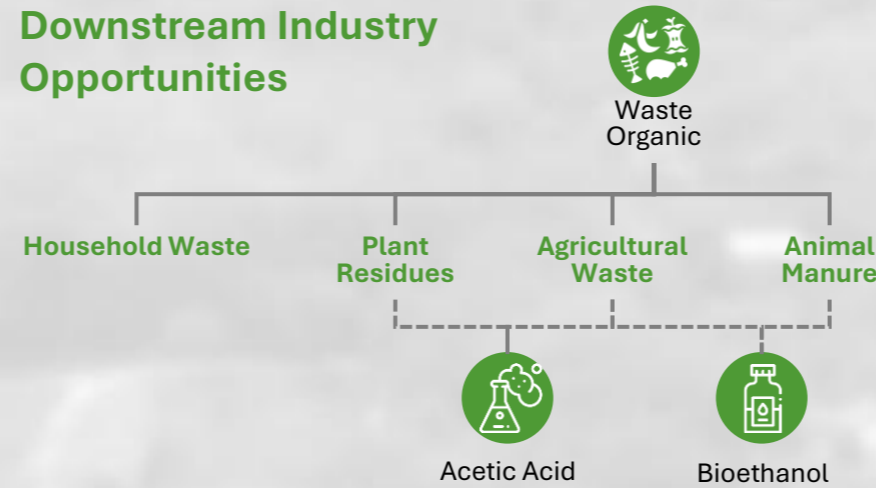
The clean water demand can be met through bore wells around the site, with additional potential supply support from the local water utility (PDAM). The PDAM water treatment plant has a distribution capacity of **191.32 l/s** (2022).

Served by the New Palangka Raya Substation with an electricity capacity of **150 kV**.

Within a 3 km radius, there are **6 BTS towers**, and the main Tjilik Riwut Road is covered by a fiber optic cable network.

MARKET ASPECT

Downstream Industry Opportunities



Supply - Demand Acetic Acid and Bioethanol

Market	Commodity	Supply	Demand
Local Market	Acetic Acid	The growth of the food and beverage industry, etc.	Acetic Acid Fertilizer (PTA), textile, and food processing industries.
	Bioethanol	Abundant raw material availability	Bioethanol Target of 1.2 million KL of bioethanol by 2030
Global Market	Acetic Acid	Capacity of 22-27 million tons, dominated by the Asia-Pacific region	Acetic Acid 17-27 million tons (2023-2035)
	Bioethanol	Exports to the Philippines, Japan, and Thailand	Bioethanol Increase of 56% (2022-2027)

Raw Material Waste Management

Regency/City	Daily Waste Generation (tons)	Organic (tons/day)	Inorganic (tons/day)
Kotawaringin Timur Regency	237,97	142,78	95,19
Kapuas Regency	213,72	128,23	85,49
Katingan Regency	65,60	39,36	26,24
Pulang Pisau Regency	68,11	40,87	27,24
Palangka Raya City	156,01	93,61	62,40

The total potential daily waste from five regions exceeds 740 tons per day, with approximately **500 tons/day** of organic waste and 240 tons/day of inorganic waste (2023 data).

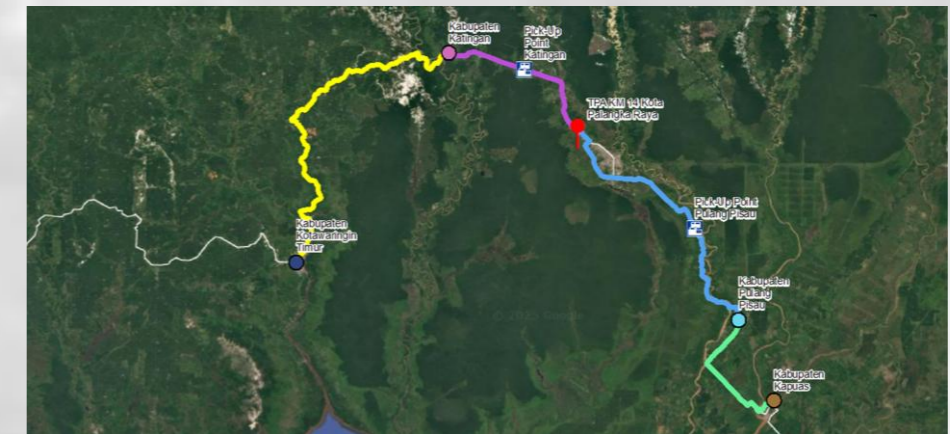
TECHNICAL ASPECT

Spatial Planning Compatibility

The waste processing location around TPA Km 14 is designated within the Plantation Area **Spatial Pattern** and meets the technical and environmental criteria required for the development of waste processing facilities.



Technical Design of Raw Material Distribution Network



2 Pickup Point

Katingan Regency 113,6456, -1,9395	Distance to TPA km 14 32,47 km
Pulang Pisau Regency 114,1709, -2,4331	Distance to TPA km 14 59,43 km

Infrastructure and Operational Design of Waste Processing

The project infrastructure design uses **ECOWIN technology**, which is modular and efficient, covering processing zones from sorting, pre-treatment, bioconversion into bioethanol, further conversion into acetic acid, to storage and distribution. The process runs inline with **automatic control** (SCADA/PLC), enclosed conveyors, quality monitoring, and a double-leak protection system. The facility is equipped with integrated waste handling, utility areas, electricity supply, as well as an integrated clean water circulation and wastewater treatment system.

Zone	Land (m ²)	Building (m ²)
Sorting Area	1.500	800
Pre-treatment	1.000	600
Integrated Fermentation	2.500	2.000
Integrated Purification	1.500	1.000
Product Storage	1.500	1.000
WWTP	800	500
Utilities	1.000	400
Office and Laboratory	700	500

