



Biodiesel Utilization in Indonesia

Webinar “Biodiesel Around the World”
World Biofuel Day
August 10th, 2020

F.X. SUTIJASTOTO

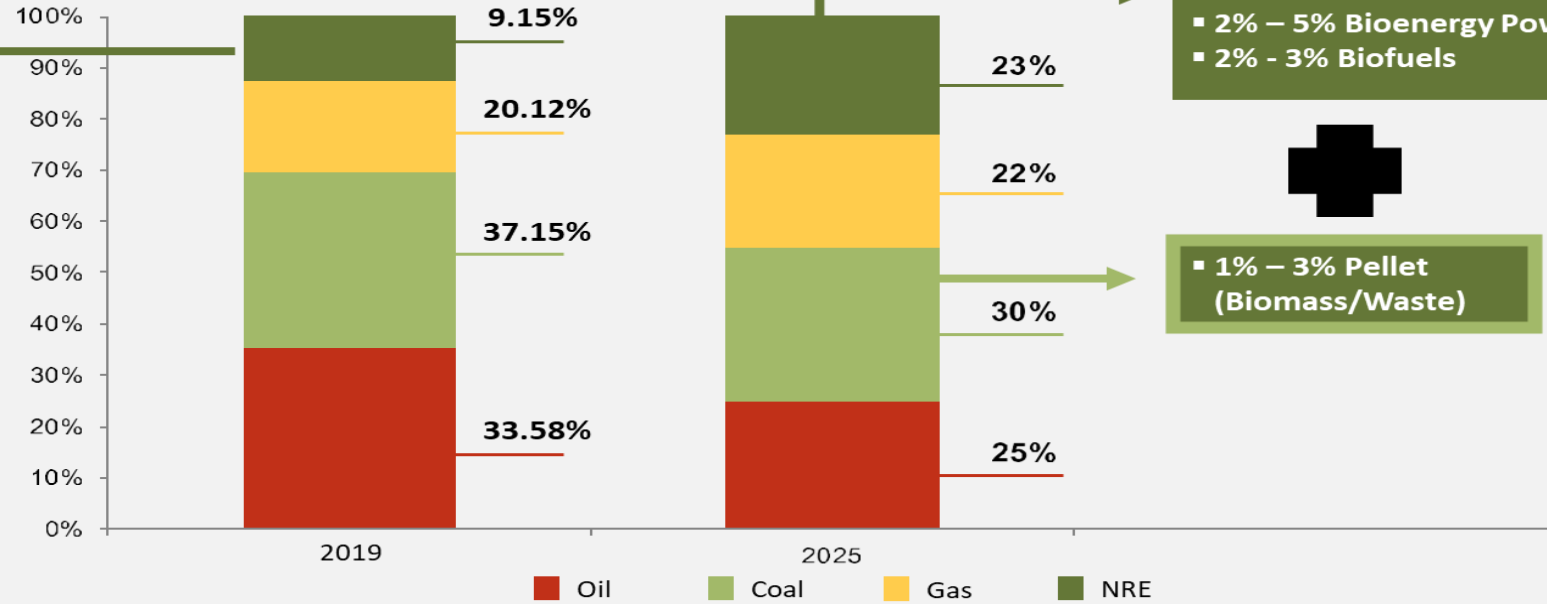
Director General of New Renewable Energy and
Energy Conservation



THE REALIZATION AND TARGET OF NATIONAL ENERGY MIX

ENERGY MIX TARGET

- 6.2% from NRE Power Plant
- 2.95% from Biodiesel

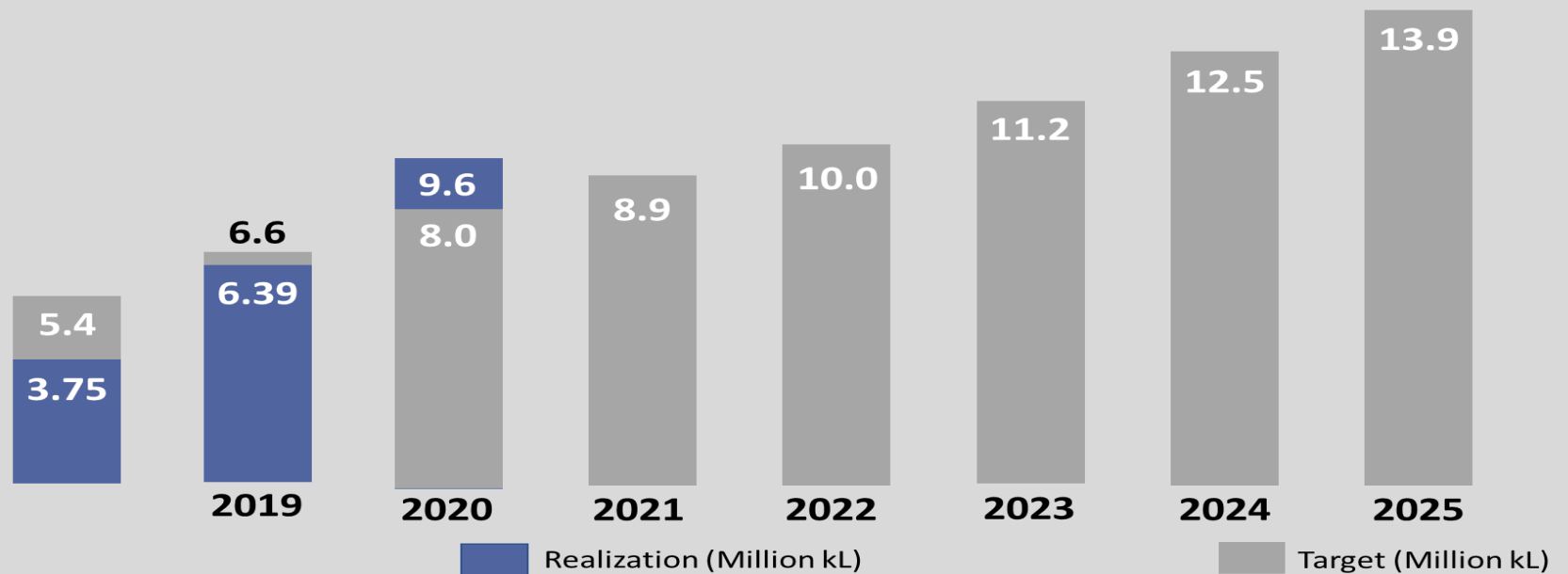


- 13% – 15% NRE Power Plant
- 2% – 5% Bioenergy Power Plant
- 2% - 3% Biofuels



- 1% – 3% Pellet (Biomass/Waste)

BIOFUEL TARGET



Background of CPO-Based Biofuels Utilization

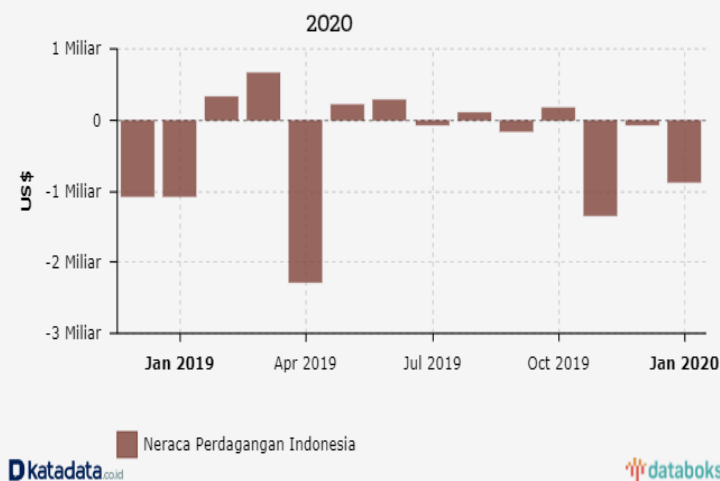
Indonesia has a huge CPO potential



CPO Production in 2019: 42.8 million tons

The large current account deficit due to high import of fossil fuel

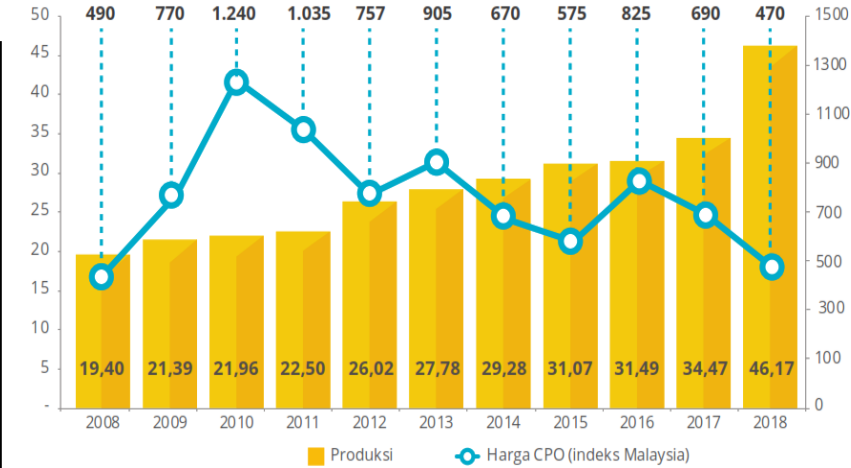
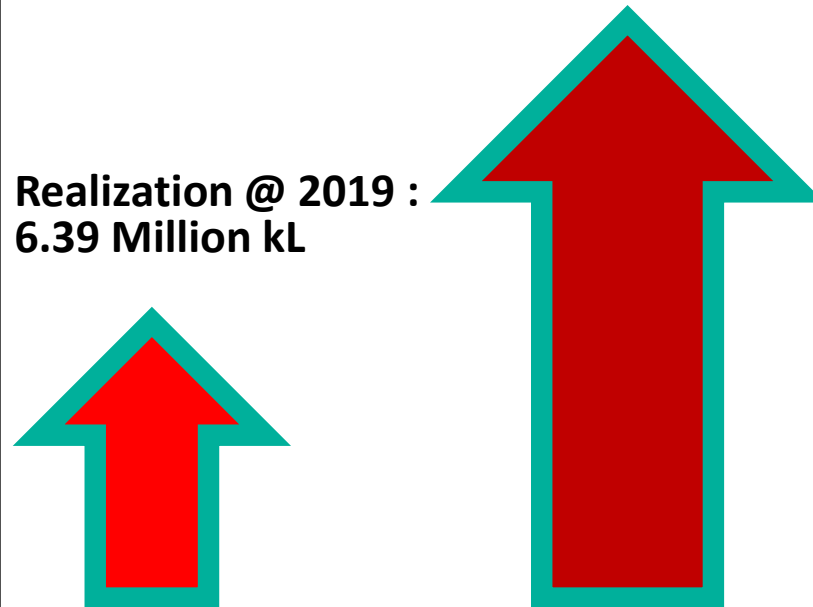
Defisit Neraca Perdagangan Indonesia Desember 2018-Januari 2020



There is a large GAP between the target of biofuel utilization in the National Energy General Plan (RUEN) and its realization

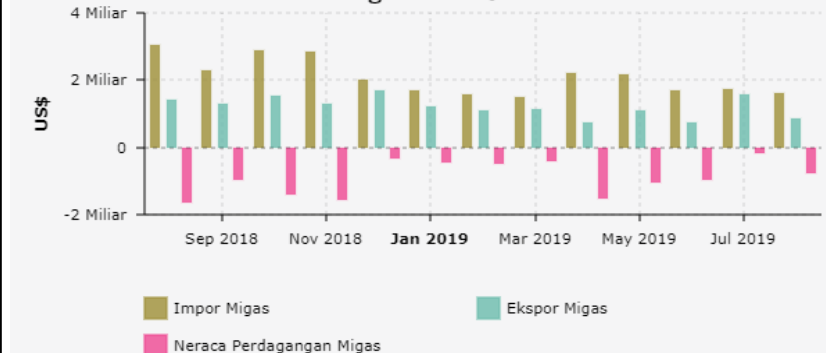
RUEN Target @ 2025: 13.8 Million kL

Realization @ 2019 : 6.39 Million kL



CPO price trends continue to fall

Ekspor, Impor, dan Neraca Perdagangan Migas Agustus 2018-Agustus 2019























Reducing dependence on imported Fossil Fuels



BIODIESEL MANDATORY IMPLEMENTATION STAGES

Mandatory Biodiesel Blending Stages (Based on MEMR Regulation No. 12 tahun 2015)

SECTOR	APRIL 2015	JANUARY 2016	JANUARY 2020	JANUARY 2025
 Micro Business, Fishery, Agriculture, Transportation, and Public Service (PSO)	15% 	20% 	30% 	30% 
 TRANSPORTATION NON-PSO	15% 	20% 	30% 	30% 
 POWER GENERATION	25% 	30% 	30% 	30% 
 INDUSTRY AND COMMERCIAL	15% 	20% 	30% 	30% 

- MEMR Regulation No. 12/2015 3rd Amandement of MEMR Regulation No. 32/2008. Set the stages of biodiesel blending.

- Socialization & Roadshow B20, Route: Sumatera-Jawa-Bali).

- Expansion of Biodiesel incentives to Non PSOs as of 1st September 2018.
- Rail test for locomotives.
- Prepare B100 specification for B30 road test.



MEMR Regulation No. 32/2008 on Biofuel Supply, Utilization and Trade as An Alternative Fuel

Roadtest B20 Diesel endurance test, using B20, up to 40,000 km

B20 Implementation

- For PSO sector, government provide incentives from CPO Fund.
- For Non-PSO sector, incentives were not applied.

- B30 road test.
- Followed with rail test, heavy equipment test, defense equipment, etc.
- Issuance of Biodiesel national standards, as revised of the 2015 national standards.

2020



B30

Key Factors in Biodiesel Mandatory Program

Sufficient Production Capacity

Installed production capacity of National Biodiesel Producers are sufficient to cover B30 implementation. In addition, an increase of production is in progress, makes it possible to increase to a higher biodiesel blending.



Incentive from CPO Fund

Government provides incentive from CPO Fund to cover the gap between CPO Price and Diesel Fuel Price.



Performance Test

Prior to the implementation of B30, government together with related stakeholder undertook a comprehensive study and performance test.



Quality/Quantity Monitoring



- Government with related stakeholder undertake intensive and periodic monitoring and evaluation of the biodiesel blending mandatory.
- The government sets up administrative sanctions and fines for Biodiesel Distributors and Diesel Fuel Distributors who fail to comply with the stipulated regulations/contract.

National Standard

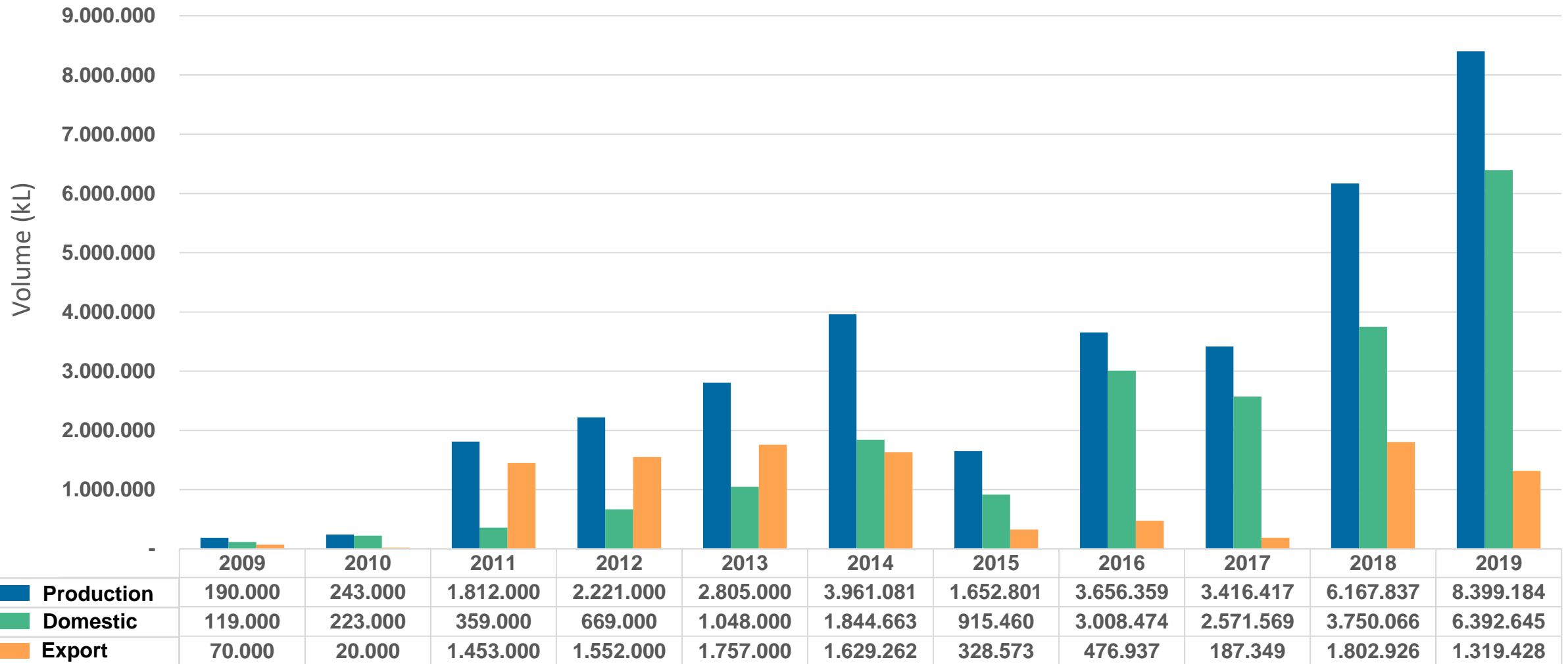


To maintain quality and protect domestic market consumers, government provides:

- Diesel Fuel Criteria.
- National Standard of Biodiesel Specification.
- General Guideline for Handling and Storage of B100 and Bxx.
- Technical Guidelines for B20 Handling and Storage for Heavy Equipment Applications in Mineral and Coal Mining



Biodiesel Production and Consumption



Strategic Plan for Biofuels Development

1

B30 Program



Ensure that the B30 Program runs as targeted

- Conducting tight and monitoring and evaluation.
- Facilitating debottlenecking activities that might occur during the implementation.
- Enhancing supporting infrastructure.
- Ensuring sustainability of incentives.

2

Study for B40 and B50



Development Plan Review of B40 and B50 Programs

- Conducting technical studies on blending composition for B40 and B50
- Conducting economic studies, readiness, feedstock and supporting infrastructure.
- Carrying out a road test for the B40 / B50.
- Conducting a study/trial on the use of B40 - B50 on the existing diesel power plants

3

Greenfuels Program



Greenfuels Development Program.

- Development of green refineries to produce green diesel, green gasoline and green avtur.
- Conducting studies on regulatory support, efficient and affordable technology, feedstock, incentives and supporting infrastructure
- Development of supporting industries (methanol, catalysts, etc.)

4

Hydrogenated CPO



Encouraging Cooperation between PT Pertamina (Persero) & PT Pupuk Indonesia to develop CPO Hydrogenation.

- The Research and Development Agency of MEMR, PT Pertamina, PT Pusri, ITB, BPDPKS, and other related parties will develop a Green Diesel Stand Alone Plant Demo.
- Pilot & Product Testing will be carried out by December 2021.

5

Utilization of Reclamation / Post-mining Land

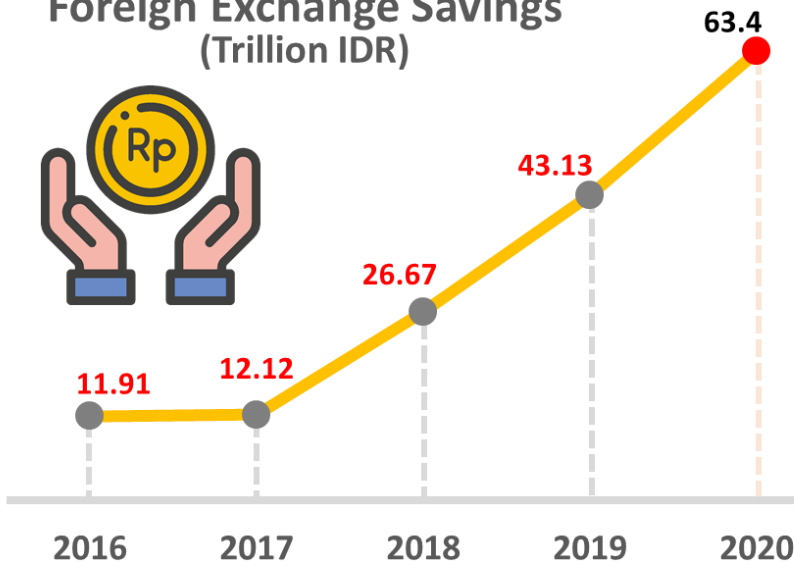


To Use of Reclamation/Post-mining Land (Biofuel/Oil Palm).

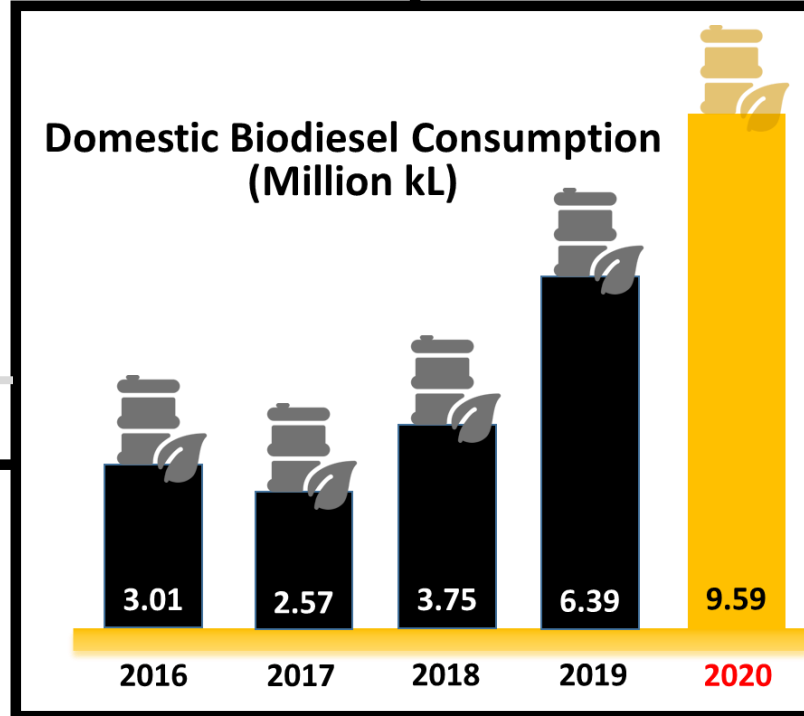
- Collaborating with the Directorate General of Mineral and Coal and the Regional Government to identify the post-mining land that can be utilized for energy crops.
- Collaborating with Ministry of Agriculture to determine the most suitable crops for the land condition and climate as well as potential off-takers.

BENEFITS OF BIODIESEL MANDATORY PROGRAMS

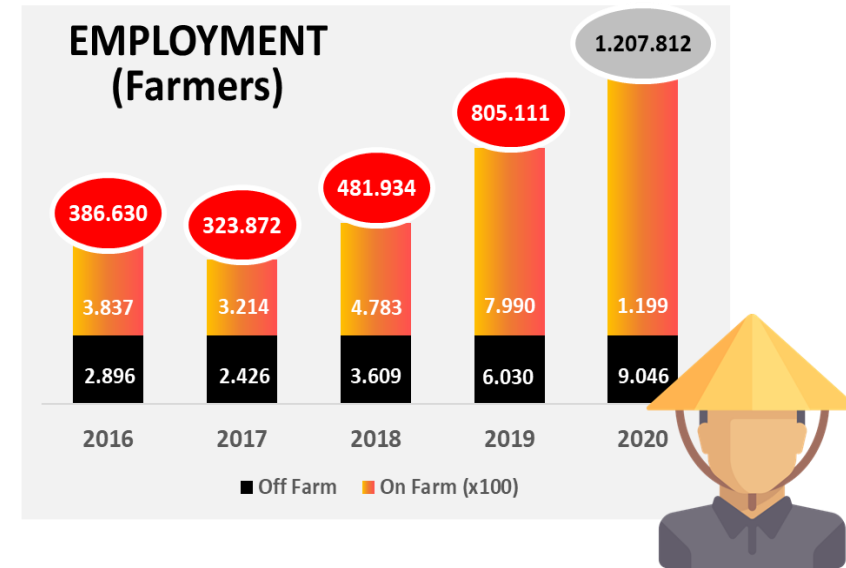
Foreign Exchange Savings
(Trillion IDR)



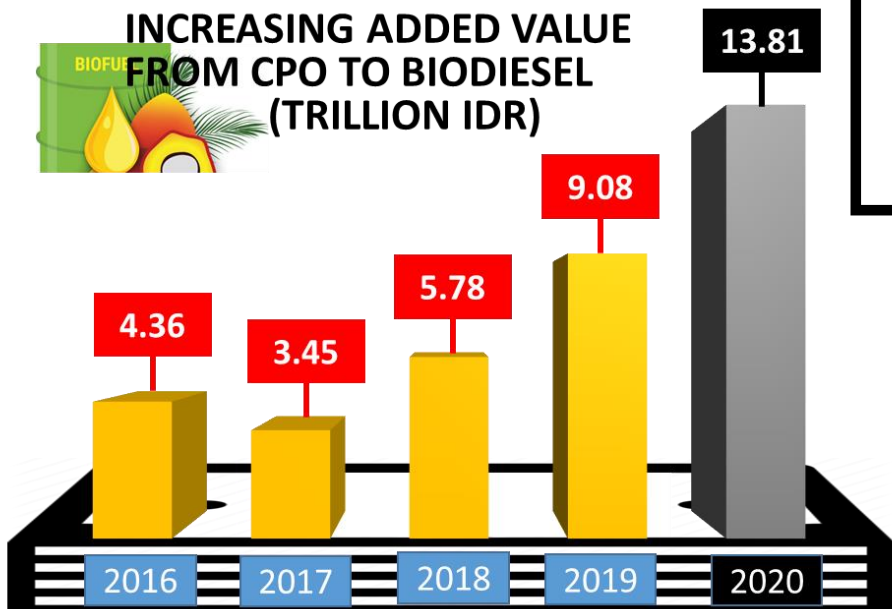
Domestic Biodiesel Consumption
(Million kL)



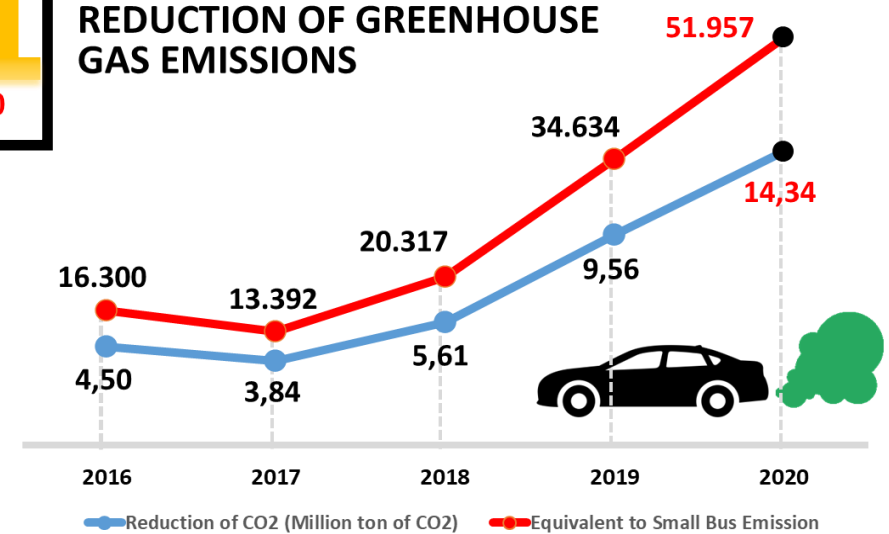
EMPLOYMENT
(Farmers)



INCREASING ADDED VALUE
FROM CPO TO BIODIESEL
(TRILLION IDR)



REDUCTION OF GREENHOUSE
GAS EMISSIONS



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DISTRIBUTION OF BIODIESEL PRODUCERS

North Sumatera

①	PT Sintong Abadi	35,000 kL	USD 2,444,000
②	PT Musim Mas (Medan)	459,770 kL	USD 203,703,704
③	PT Permata Hijau Palm Oleo	417,214 kL	USD 56,165,185

Riau

④	PT Dabi Biofuels	413,793 kL	USD 31,770,370
⑤	PT Intibenua Perkasatama	442,529 kL	USD 55,555,556
⑥	PT Ciliandra Perkasa	287,356 kL	USD 46,581,449
⑦	PT Pelita Agung Agrindustri	229,885 kL	USD 32,135,257
⑧	PT Cemerlang Energi Perkasa	689,655 kL	USD 22,933,333
⑨	PT Wilmar Bioenergi Indonesia	1,603,448 kL	USD 53,472,377
⑩	PT Bayas Biofuels	862,069 kL	USD 85,000,000

Riau Islands

⑪	PT Musim Mas (Batam)	896,552 kL	USD 203,703,704
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Lampung

⑫	PT LDC Indonesia	482,759 kL	USD 78,518,519
⑬	PT Tunas Baru Lampung	402,299 kL	USD 26,962,963



Banten

⑭	PT Alpha Global Cynergy	12,000 kL	USD 3,000,000
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West Java

⑮	PT Sinar Mas Bio Energy	455,400 kL	USD 111,678,349
⑯	PT Sumiasih	114,943 kL	USD 26,666,667
⑰	PT Darmex Biofuel	287,356 kL	USD 57,629,630

East Java

⑱	PT Anugerahinti Gemanusa	160,920 kL	USD 48,984,354
⑲	PT Batara Elek Semesta Terpadu	287,356 kL	USD 38,000,000
⑳	PT Wilmar Nabati Indonesia	1,665,517 kL	USD 67,859,188
㉑	PT Energi Baharu Lestari	114,943 kL	USD 6,370,370

Bali

㉒	PT Bali Hijau Biodiesel	360 kL	
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South Kalimantan

㉓	PT SMART	440,520 kL	USD 59,677,951
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East Kalimantan

㉔	PT Kutai Refinery Nusantara	419,540 kL	USD 32,310,000
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Central Kalimantan

㉕	PT Sukajadi Sawit Mekar	402,299 kL	USD 52,222,222
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North Sulawesi

㉖	PT Multi Nabati Sulawesi	475,862 kL	USD 32,620,407
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REGION	CAPACITY (kL)	INVESTMENT (USD)
Sumatera	7,337,299	721,909,824
Java	2,983,852	353,818,187
Kalimantan	1,262,356	91,987,951
Sulawesi	475,862	32,620,407
TOTAL	12,059,369	1,200,336,369



PREPARATION FOR IMPLEMENTATION OF B30 MANDATORY PROGRAM

