



# Indonesian Aviation Biofuels and Renewable Energy Initiatives



Presented by :  
**Saptandri Widiyanto**  
Alternate Representative Indonesia to ICAO ,  
Transport Attache of Indonesian Embassy in Canada



## INTERNATIONAL POLICY BACKGROUND Indonesia responds to UNFCCC and ICAO





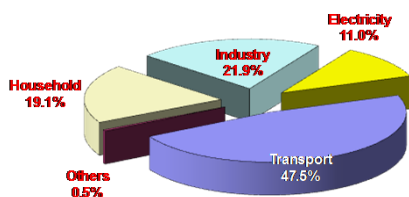
## Indonesia NDC - Emission Reduction Scenario (in Million Ton CO<sub>2</sub>e)

No	Sector	2010	2030 (BAU Scenario)	Un-Conditional Reduction Target
1	Energy (Including Transport)	453	1,830	1,357 (16%)
2	Waste	88	296	278 (0.6%)
3	Industry	36	70	67 (0.09%)
4	Agriculture	66	70	65 (0.17%)
5	Forestry	647	714	344 (12.4%)
Total		1,290	2,980	2,111 (29.15%)

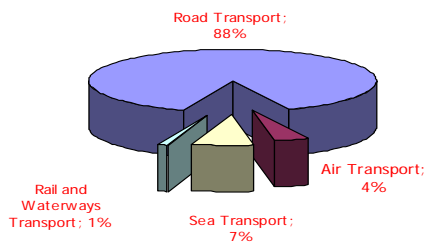
Note : Indonesia Emission Reduction Target by 2030  
 - 29% from BAU as Un-conditional Target (Based on Domestic Effort)  
 - 41% from BAU as Conditional target (With International Support)



## PROPORTION OF FUEL CONSUMPTION

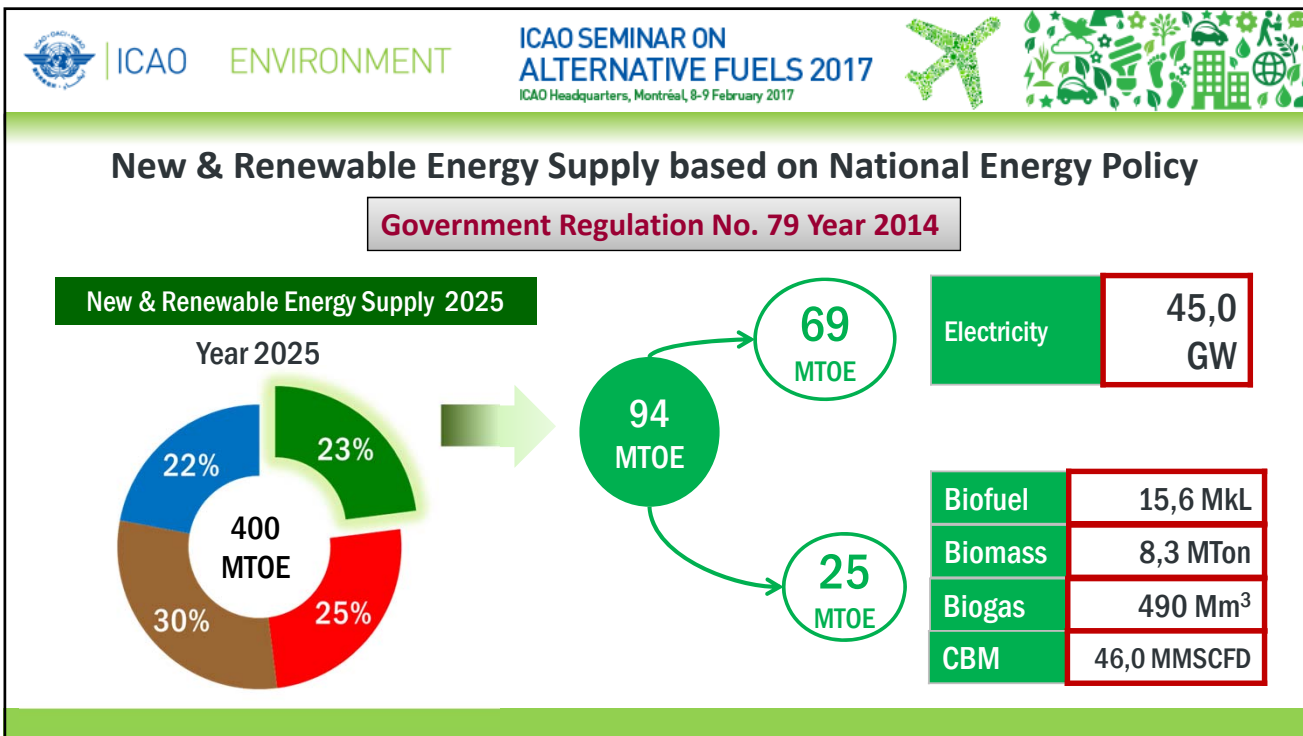
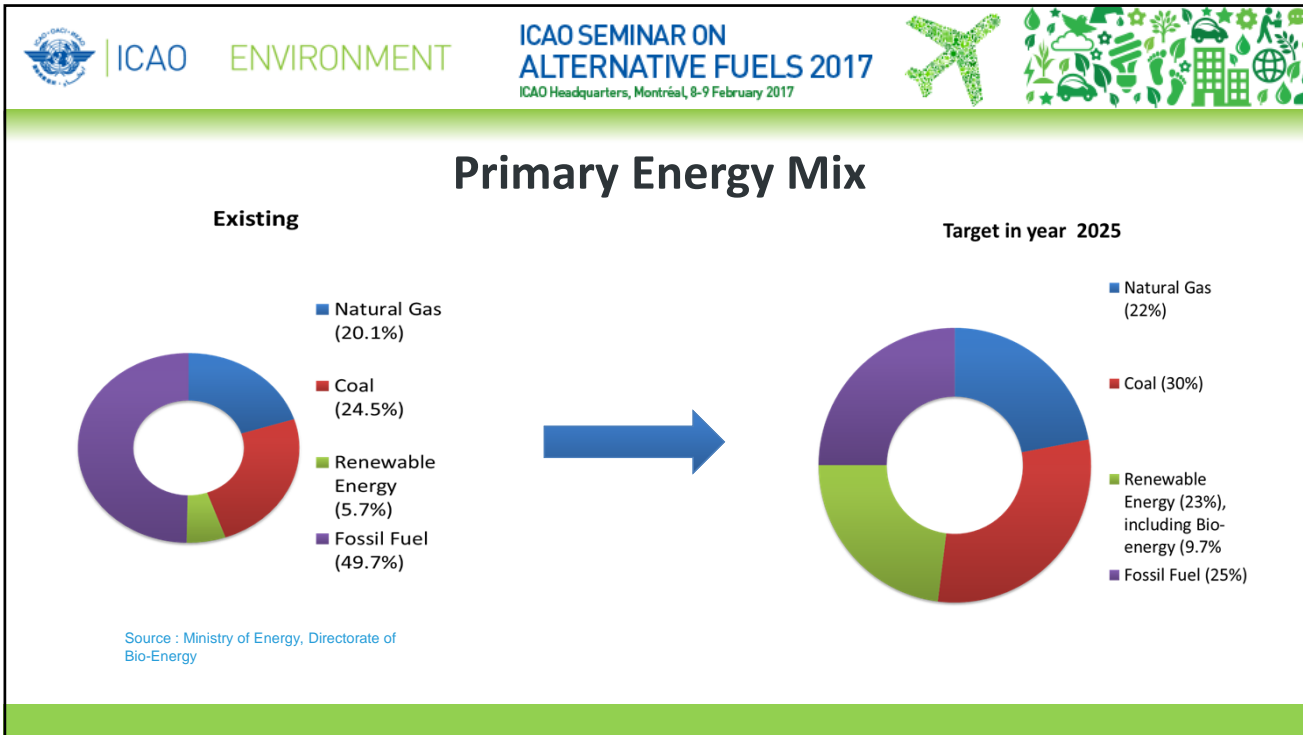


**Transport sector consumed  
47.5% of national fuel**



**88% of it are consumed by  
Road Transport**

**TOTAL FUEL CONSUMPTION IN 2015 : 70 MILLION KILO LITRE**





## MINISTRY OF ENERGY DIRECTION ON BIO-FUEL Mix

(NO.12 YEAR 2015, AS REVISION OF PREVIOUS NO 12 YEAR 2008)

	2015	2016	2020	2025
Land Transport (Bio-diesel)	15%	20%	30%	30%
Land Transport (Bio-ethanol)	2%	5%	10%	20%
Sea Transport (Bio-diesel)	10%	20%	20%	20%
<b>Air Transport (Aviation Bio-fuel)</b>		<b>2%</b>	<b>3%</b>	<b>5%</b>

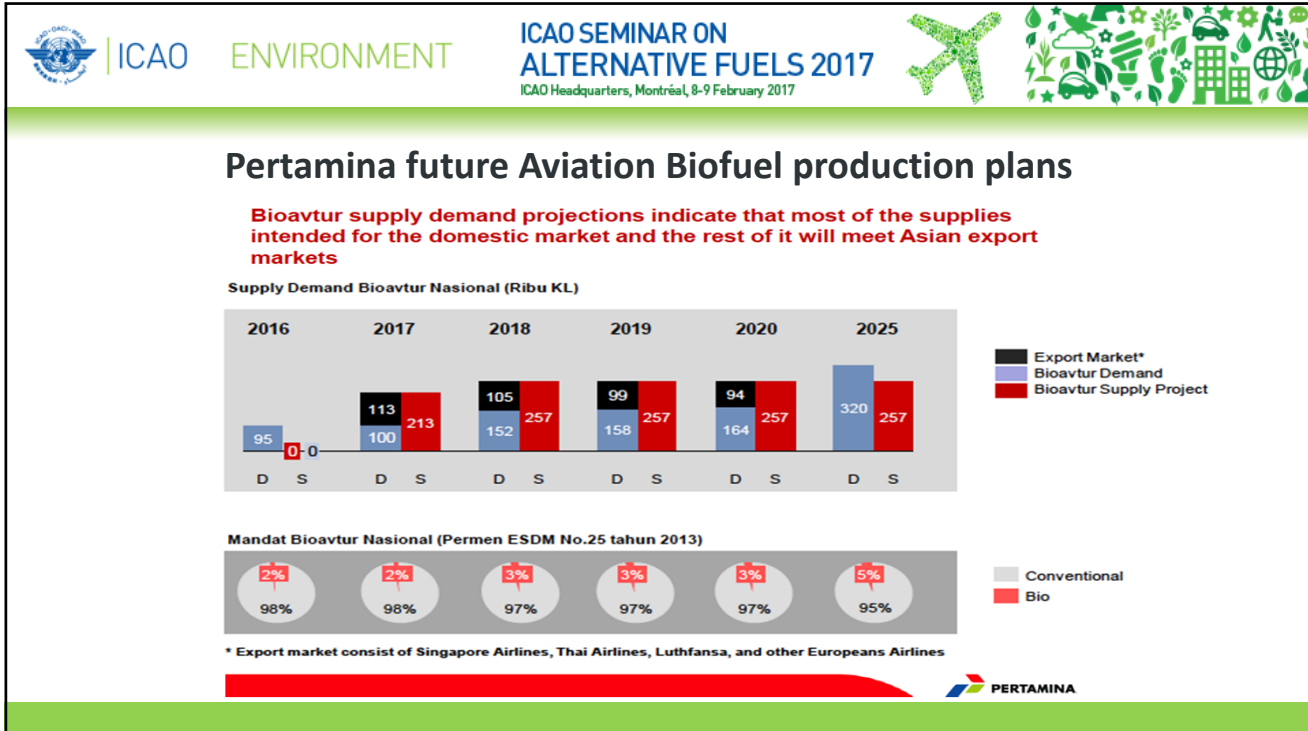


## In 2013 it was launched the Indonesia Aviation Biofuels and Renewable Energy Task Force



INDONESIA AVIATION BIOFUEL AND RENEWABLE ENERGY TASK FORCE (INDONESIA ABRETF)  
DG DECREE NO.: 517 K/73/DJE/2014 & KP. 429 YEAR 2014





ICAO ENVIRONMENT ICAO SEMINAR ON ALTERNATIVE FUELS 2017 ICAO Headquarters, Montréal, 8-9 February 2017

## Indonesia Policy Toward Sustainable Bio-fuel feed-stock

- **No more Land Conversion :**
  - ✓ The Government has issued a President Decree no 10 Year 2011 : **MORATORIUM** for new Plantation / Land Conversion from Primary Forest and Peat Land
- **ISPO : Indonesia Sustainable Palm Oil**
  - ✓ In March 2011 Government of Indonesia issued **ISPO** as a **mandatory Standard for Palm Oil Plantation in Indonesia**. The Mandate has been improved and re-issued in March 2015 as a Certification system for Indonesia Sustainable Palm Oil .
  - ✓ The standard is extracted from more than 137 regulations from different Ministry such as Ministry of Environment and Forestry, Ministry of Agriculture, Ministry of Trade, Ministry of Labour, Ministry of Cooperative, National Standard Agency, and National Land Agency.



## Way Forward for Bioavtur Implementation

- Optimize the use of biodiesel and bioethanol for airport operational vehicles (Ground Transportation and equipment) based on Biofuel Mandatory.
- Conduct a technical study for bioavtur specification standard which involve stakeholders from government, end user, producer and association.
- Develop product of Bioavtur. → encourage Bioavtur production by PT. Wilmar Group and PT. Pertamina
- Formulate an attractive biofuels pricing mechanism to create a positive impact for national economy.



## International Cooperation on Alternative fuel

### 1. FAA :



Federal Aviation Administration

✓ Alternative Fuel , with CAAFI (US) and ABRETF (Indonesia)

✓ Aviation bio-fuel from Municipal Waste



### 2. Airbus :



✓ Aviation bio-fuel from Forest Waste *Center of Excellence on Biomass Valorization for Aviation*







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## INTERNATIONAL COOPERATION



Indonesia is willing to promote further regional and global cooperation with the support of ICAO

**Thank You**