



**MINISTRY OF ENERGY AND MINERAL RESOURCES OF THE REPUBLIC OF INDONESIA
DIRECTORATE GENERAL OF NEW RENEWABLE ENERGY AND ENERGY CONSERVATION**

Bioenergy Development in Indonesia

Delivered by:
EDI WIBOWO

Head for Engineering and Environment of Bioenergy Division

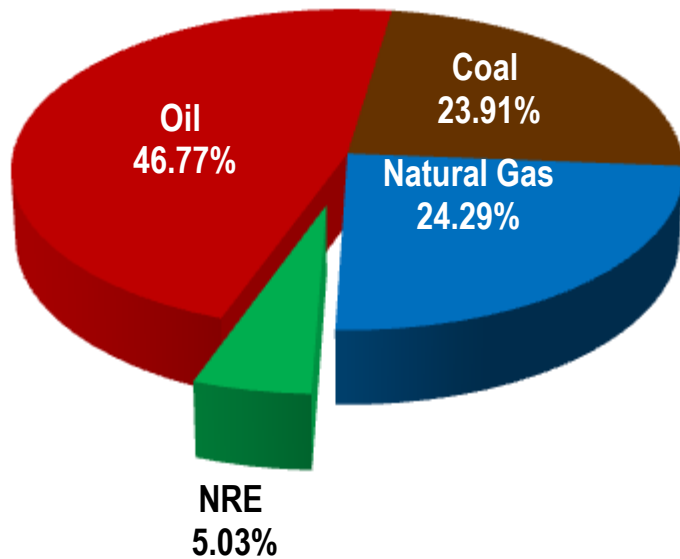
Presented by:
Indonesian Delegation

**Expert Workshop for the
How2Guide for Bioenergy
Bangkok, 23rd July 2014**

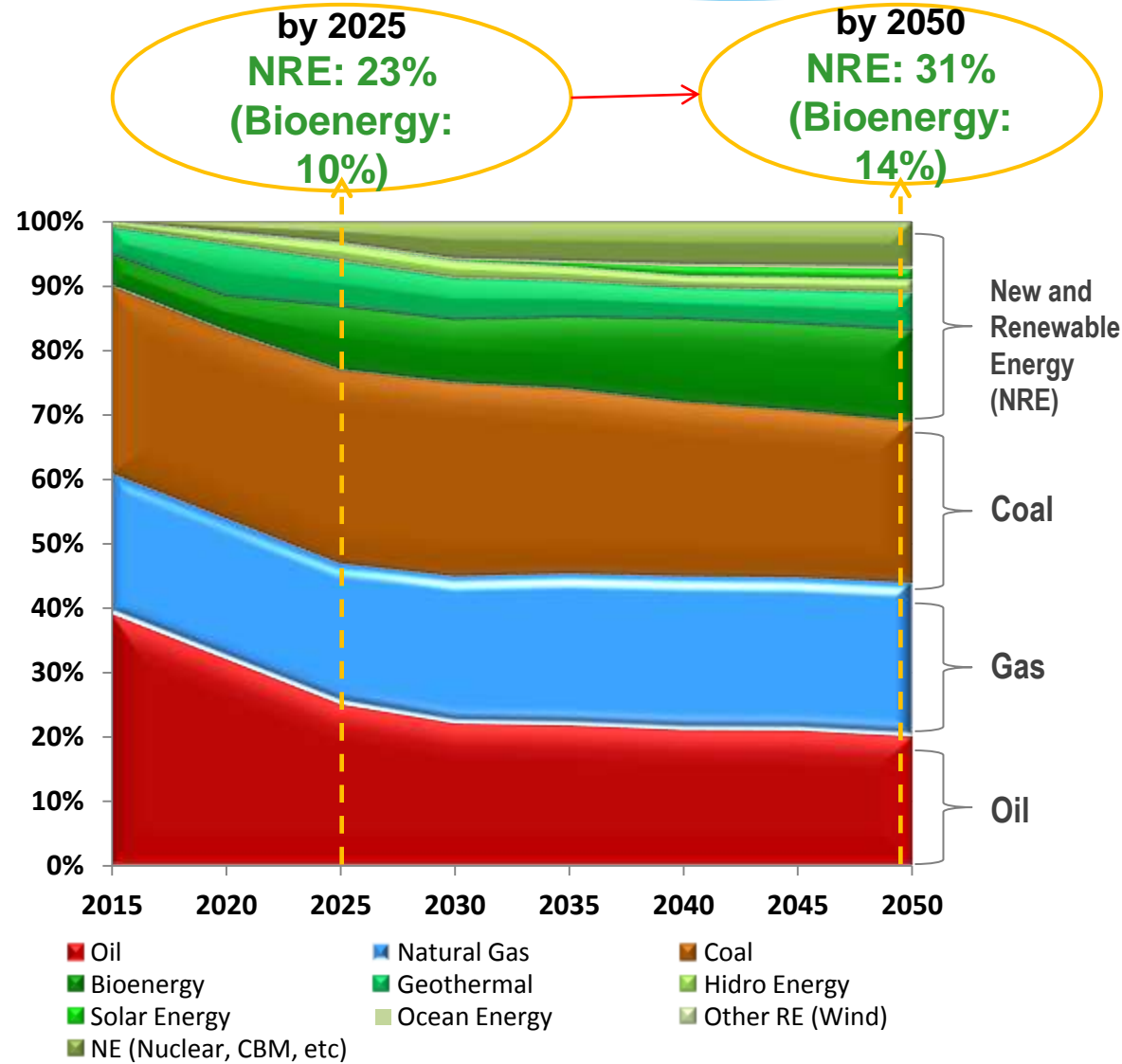


National Energy Policy

CURRENT
CONDITION -
2012

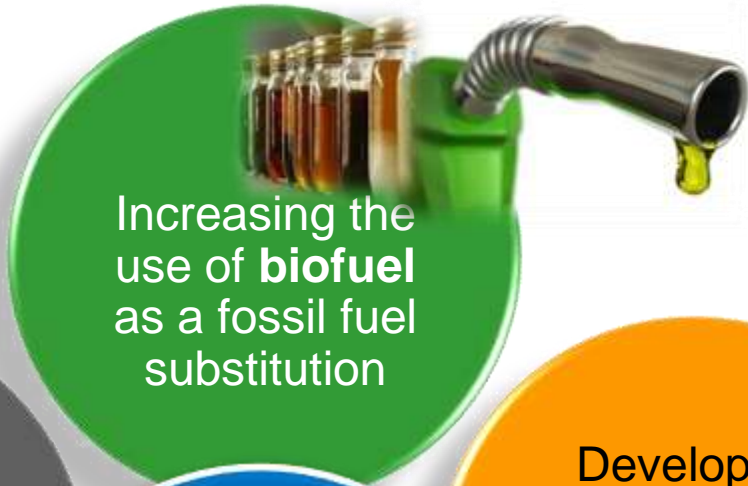


ENERGY ELASTICITY= 1,65
NON FOSSIL ENERGY SHARE ≈ 5%



Note:

Based on draft of Government Regulation on National Energy Policy that has been approved by Parliament and being processed to signed by the President for substitute Presidential Regulation No.5 /2006



Increasing the use of **biofuel** as a fossil fuel substitution

Increasing contribution to national economy through development of **bioenergy industries**

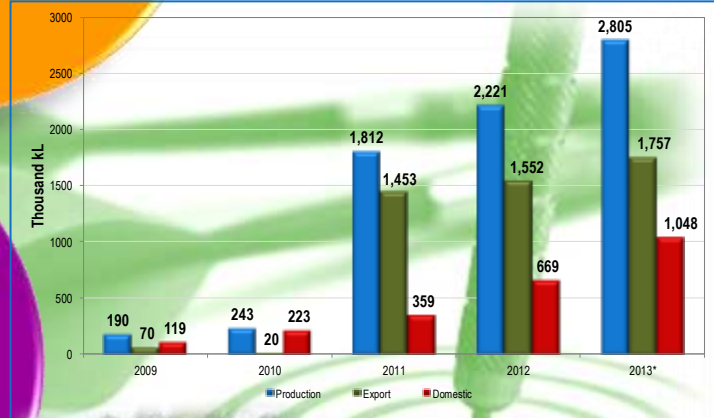
MAIN VISION FOR BIOENERGY DEVELOPMENT

Developing bioenergy based **power plant** (as based load)



Utilization of **organic waste** as source of **energy**

Increasing the sustainability supply of bioenergy feedstock through development of **energy farms/forest**



BIOENERGY ISSUE CORRELATION WITH AGRICULTURE

Issue :

- Provision of the sustainable bioenergy feedstock.
- Increasing trend of the export of biomass wastes.

Strategies :

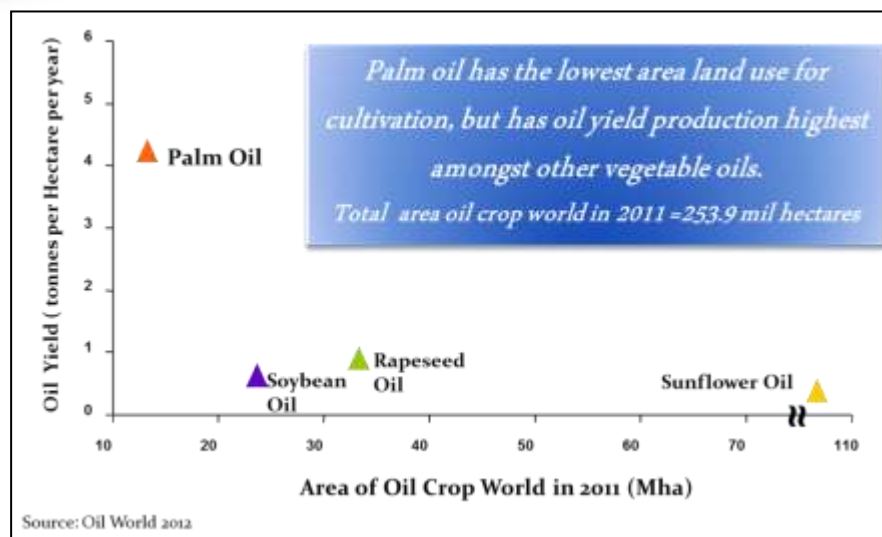
- Regulating waste/ biomassa for export purposes
- Development of integrated bioenergy production facility with dedicated feedstocks

Opportunity :

- There are huge potential resources for biofuels
- High potential of biomass waste from agricultural waste and municipal solid waste as a fuel stock for biomass based power generation.



2012	Palm
Area (million ha)	9
Total National Production (million tonne)	23.50



Bioenergy Development In Indonesia – Main Policies

Law No. 30 Year 2007
concerning on Energy



Priority supply and use of renewable energy, one of them is bioenergy.

Presidential Regulation No. 5 Year 2006
concerning on National Energy Policy



Biofuel target 5% by 2025 from the national energy mix.

Presidential Instruction No. 1 Year 2006
concerning on Provision and Utilization, of Biofuel



Instructions related to the Minister, Governor and Mayor to take action in order to accelerate the provision and utilization of biofuel;

Ministry of Energy And Mineral Resources Regulation No. 4 Year 2012 and No. 19 Year 2013



Electricity Price (Feed-in Tariff) for Bioenergi Based Power Plant (Biomass, Biogas, and Municipal Solid Waste)

Implementation of bioenergy based power plant has increase significantly since the issued of new feed-in tariff for electricity generation based on biogas, biomass, and municipal solid waste.

Current capacity of bioenergy based on-grid power plant in year 2013 was 90.5 MW (palm waste 76 MW ;municipal solid waste 14.5 MW) and based off-grid power plant was 1,626 MW.

Ministry of Energy And Mineral Resources Regulation No. 25 Year 2013



Biofuel usage mandatory for fossil fuel substitutions on transportation, industry, and electricity generation as a percentage to fossil fuel consumption (domestic market creation for biofuel)

Since 1 September 2013, Indonesia has implemented biodiesel blending B-10 on transportation and industry sector and up to B-30 on electricity.

Now the Government are preparing preparation stages to implement B-20 on 2016

Role of Bioenergy Development In Indonesia

- To support deploy of bioenergy, governments adopt policies by act and regulation for mandate, target and tax-incentives or feed in tariff.
- Bioenergy can provide fuel diversity, reduce dependence on foreign energy sources from fossil for increases national energy security and its instrumental in safeguarding the environment, generation of new job opportunities, sustainable development and health improvements in rural areas.
- Bioenergy should be developed based on domestic wisdom that is suitable land, climate and biodiversity. Indonesia such as Malaysia (South East Asia) has a role for biofuel deployment base on palm oil.
- For sustainable of bioenergy Government has been developing standar for certified such as Indonesian Sustainable Palm Oil (ISPO), SNI – Biodiesel etc.
- Indonesia also conduct as Pilot Testing of GBEP Indicators for Sustainable Bioenergy in Targeted Developing Countries sponsored by FAO.

Strategic for Further Implementation of Bioenergy in Indonesia

1. Increasing the mandatory implementation of biofuel in all sector (transportation, Industry and Power Generation), has be done by Ministry of Energy and Mineral Resources Regulation No. 25 Year 2013.
2. Utilisation of biomass on existing power generation.
3. Regulating waste/biomass for export purposes.
4. Utilisation of biomass wastes in agroindustry, for example regulation on palm oil mill effluent in palm oil industry,
5. Allocating special fund for implementation by local government as energy access program.

NEXT STEPS FOR DEVELOPING BIOENERGY

1. Develop non-edible and dedicated feedstock for biofuel (candle nut, jatropha).
2. Improve productivity of main feedstocks such as palm oil, cassava and sugar cane;
3. Implement integrated energy farming for bioenergy industries;
4. Develop second generation of biofuel that will create sustainable and low cost biofuel industry;
5. Seek cooperation on R&D on lignocellulosic based or woody-biomass bioethanol.
6. Indonesia will continue to work with other countries and international community to develop sustainable biofuel industry and also global environmental issues.



MINISTRY OF ENERGY AND MINERAL RESOURCES

DIRECTORATE GENERAL OF NEW RENEWABLE ENERGY AND ENERGY CONSERVATION

Energi & Sumber daya Mineral

Untuk Kesejahteraan Rakyat



JALAN PEGANGSAAN TIMUR NO. 1, MENTENG,
JAKARTA 10320. INDONESIA.

Phone: +62 21 39830077 Fax: +62 21 31924585

www.esdm.go.id - www.ebtke.esdm.go.id

Email: edbowo@Gmail.com; sarrie_mdy@yahoo.com

