



Role of IPRs in the Diffusion and Transfer of Technologies, including Lesson from Work in the Trips Council

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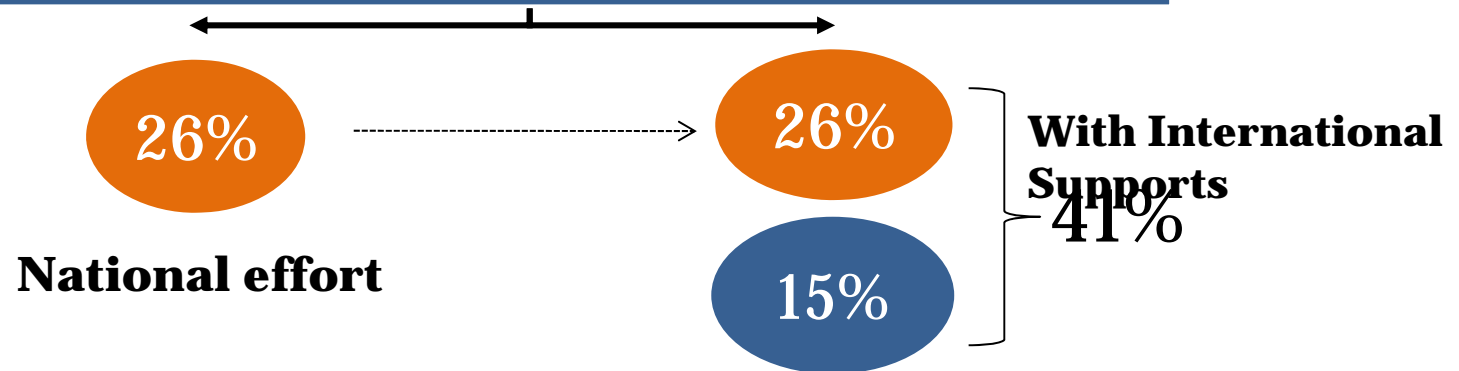
Secretary of Transfer Technology Working Group
National Council on Climate Change of Indonesia (NCCC)

Hongkong, 12 November 2014

Promoting Green Technology in Indonesia

SCENARIO of 2020 GHG Emission Reduction: Accelerate the implementation of Green technology in Indonesia

**President Commitment
G-20 Pittsburgh and COP15
To reduce te GHG Emission in 2020**



**National Action Plan to reduce GHG Emission (RAN-GRK)
Indonesia President Decree No. 61/ 2011**

Promoting Green Technology in Indonesia

PAPDENAS

• SCENARIO of GHG Emission Reduction Target in 2020

Sector	Emission Reduction (Gton CO2e)		Action Plan	Institutions
	26%	+15%		
Forestry and Peatland	0,672	0.367	Forest and land fire control, water and hydrology management on peat land, forest and land rehabilitation, illegal logging control, avoiding deforestation, community development	MoFr, MoPW, MoA, MoE
Waste	0,048	0,030	Sanitary landfill development, 3 R and sewerage system in urban areas	MoPW, MoE, MoA,
Agriculture	0,008	0,003	Introduction of low carbon rice variety, irrigation efficiency, organic fertilizer utilization	MoPW, MoE, MoI
Industry	0,001	0,004	Energy efficiency, renewable energy development	MoT, MoE,
Energy and Transportation	0,038	0,018	Biofuel development and utilization, fuel efficiency improvement, mass transportation, demand side management, renewable energy, energy efficiency	MoPW, MoF
	0.767	0.422		

Green Technology in Energy Sector

GHG EMISSION REDUCTION TARGET IN ENERGY SECTOR

- Mandatory of Energy Management in energy-intensive industry (10.16 mill ton CO₂)
- Partnership in Energy Conservation - 1303 buildings & industry (2.11 mill ton CO₂)
- Energy Efficient Appliances 21,43 GWh (10.02 Million ton CO₂)
- PLTMH 130,4 MW (0.61 Million ton CO₂)
- PLTM 692 MW (3.25 Million ton CO₂)
- PLTS 326.78 MW (0.29 Million ton CO₂)
- PLTB 59.2 MW (0.06 Million ton CO₂)
- PLT Biomass 16.9 MW (0.01 Million ton CO₂)
- DME 700 villages (0.18 Million ton CO₂)
- Biogas 31,400 unit (0.13 Million ton CO₂)

NRE&EC

26.82 million
ton CO₂

TOTAL
32.8
Million ton
CO₂

- 657.83 MMSCFD gas for public transport in 9 cities & 21.16 ton LGV/day in 2 cities (3.07 Million ton CO₂)
- City Gas for 94,500 household in 24 locations (0.15 Million ton CO₂)
- Mini LPG Plant 2.2 MMSCFD (0.03 million ton CO₂)

3.25 Million ton CO₂

OIL & GAS

Post-mining reclamation 72,500 ha (2.73 Million ton CO₂)

2.73 Million ton CO₂

MINERAL & COAL



Energy and Mineral Resources for People's Welfare

9

Exp: PLTMH: Mycro Hydro Power Plant; PLTM : Mini Hydro Power Plant; PLTS: Solar Power Plant (PLTS); PLTB: Wind Power Plant ; PLT Biomass: Biomass Power Plant; DME: Self-resilience Village in Energy

Potency of Green Technology in Indonesia

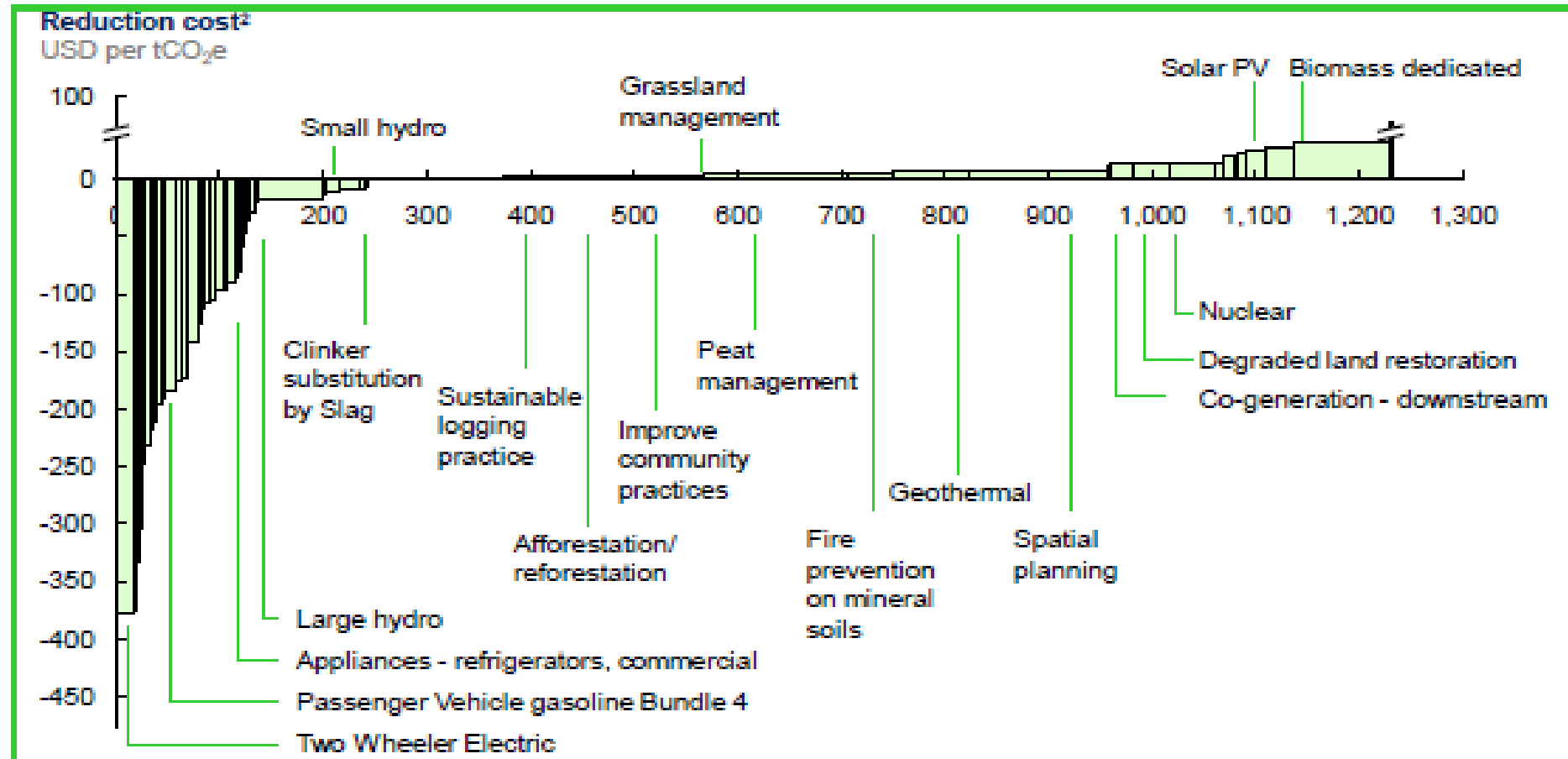
Sources	Potential Resources/ Potential	Installed Capacity
Renewable Energy		
Hydro Power	75,000 MW	4,200 MW
Micro and Mini Hydro	450 MW	229 MW
Geothermal	28,617 MW	1,341 MW
Biomass (Sumatra & Kalimantan)	30,000 MW (total) 6,784 MW (techno-economy)	75 MW
Solar Power	4.8 kWh/m ² /day (0.0006 MW/m ²)	13.92 MW
Wind Power	9,280 MW	1.96 MW
Biodiesel	36,050,842 kL	5,632,210 kL
Biofuel	3,112,163 kL	339,333 kL
Ocean Energy		
New Energy	Clean Coal technology, Coal Bed methane, Hydrogen,	
Energy Conservation	Electrical consumption reduction: 2,042 GWh per year Reducing the electricity peak load: 466 MW	
Green Industries, green transportation, green building, green forestry, etc.		

Sources: MEMR, 2012; Mol, TNA

Green Technology in reducing GHG emission

Indonesia has the potential to reduce CO₂ emissions by up to 1.2 Gt per year by 2030

Societal perspective¹, 2030

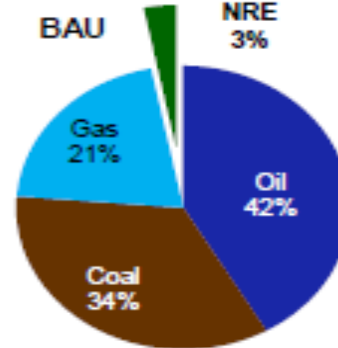
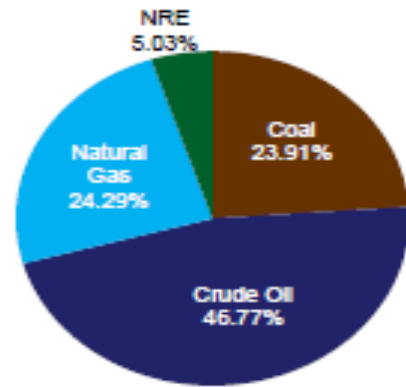


1 Societal perspective implies utilizing a 4% discount rate

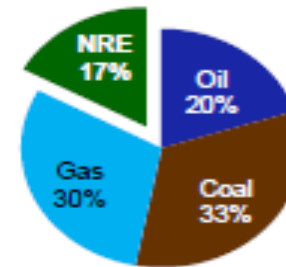
2. The width of each bar represents the volume of potential reduction. The height of each bar represents the cost to capture each reduction initiative

SOURCE: Indonesia GHG Abatement Cost Curve

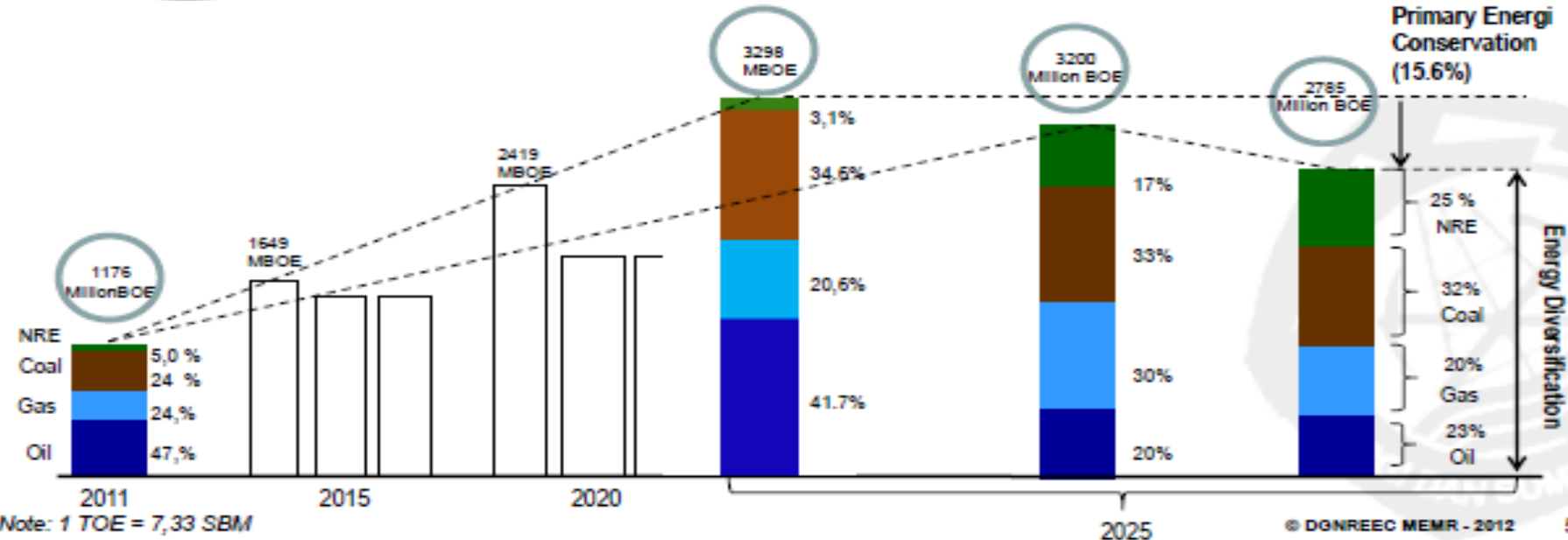
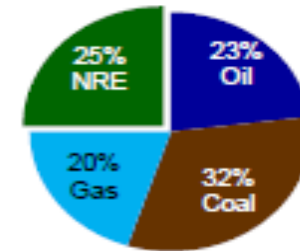
National Energy Policy Supports



PRESIDENTIAL REGULATION 5/2006



VISION 25/25



Government incentives:

- Obligation to purchase power from biomass and biogas
- Feed in Tariff for Geothermal, Solar PV, Biomass, Biogas



MINISTRY OF FINANCE REGULATION NUMBER 21/PMK.011/2010

Regulation of tax and customs facility for renewable energy resources utilization activities

FINANCIAL INSTRUMENTS SUPPORT

Income Tax

- Reduced net income for 30% of total investment
- accelerated depreciation
- Imposition of Income Tax on dividend paid to Foreign Taxable at 10%
- compensation for losses in certain circumstances

Value Added Tax

Exemptions of VAT for Taxable Goods, machinery and equipment for RE utilization (not included spare parts)

Import Duty

- Exemptions for Import Duty of
- Goods and Machinery for development and capital investment
 - Capital Goods Imports for construction and development of electricity industry

Tax Borne by Government

Regulated in State Annual Budget Law and its implementing regulations

➤ Obligation to National Electricity Company to purchase power from renewable energy (hydro, biomass and biogas, wind)

➤ Feed in Tariff:

- Geothermal
- Solar PV
- Biomass, Biogas
- Hydro
- Municipal Solid waste

Challenges of Green Technology Implementation

1. High Investment
2. Higher Production cost
3. **Technology**
 - Some technologies has been developed by domestic manufactures, such as small to medium-scale power plan and biogas technology
 - **Most of green technologies are still provided and dominated by foreign countries**
 - **Lack of capacity in technology**
4. Human Resources
 - Quantity and quality of human resources are still limited and need to be improved
 - Lack of coordination among stakeholders as well as between research institution and industries
5. Lack of financial supports for early deployment/commercial R&D

Transfer of Green Technology to Indonesia

Current situation

- Limited of transfer of technology of green technology
- Mostly only transfer of asset/equipment, with limited transfer of knowledge
- Mostly only on Capacity building for operation, assembling
- For large manufacture:
 - buy the patent
 - Detail engineering design, installation, construction, commissioning, done by the local engineering company
 - The main component still import

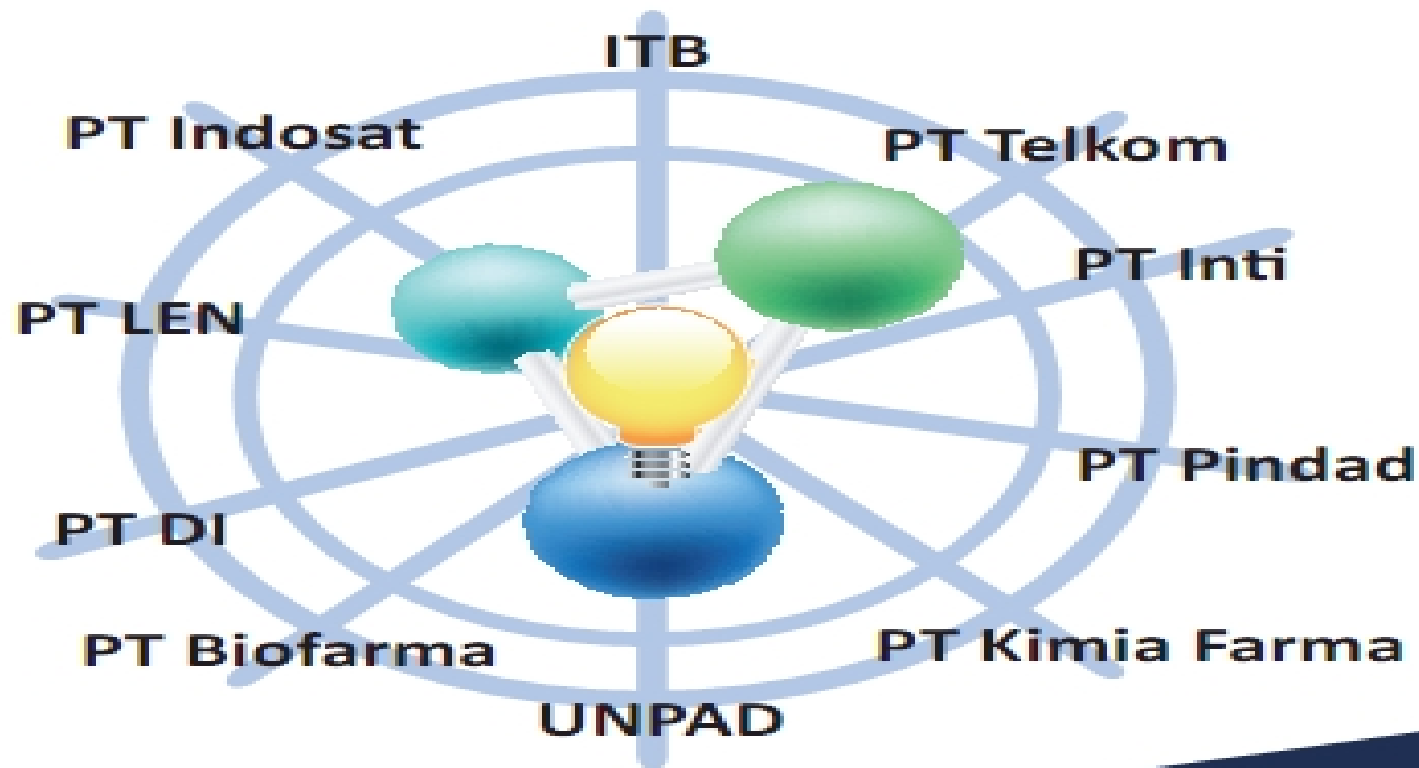
IPR for Green Technology in Indonesia

- Very limited IPR compare to regional and Global
- Lack connection between innovators and industries
- Government effort to encourage of increasing innovation IPR on Green Technology
 - Increase the budget for R&D and innovation
 - Encourage the synergy of innovation between government, business and academia
 - Develop the policy and regulation to R&D and innovation
 - Develop the “innovation valley” in several region in Indonesia

One of Innovation Valley in Indonesia

KAWASAN INDUSTRI INOVASI : BANDUNG RAYA INNOVATION VALLEY (BRIV)

Ekosistem BRIV



Develop the Prioritized of Strategic Research

Prioritized of Strategic Research

Food Security

Seed breeding, Agriculture technology, Integrated Agro-technology

Energy Security

Bio-diesel, bio-ethanol, etc; New and Renewable energy: solar, wind, hydro, biomass, ocean, geothermal, fuel cell; Energy conservation

Industrial biotechnology

Bio pharmaceutical production; Bio cosmetics; Herbal medicine; Product from tropical fruits

Transportation and Defense Technology

Sea, land and aviation to support the transportation of maritime continent

Deep sea and fish processing

Ocean technology survey; Deep sea fisheries; Fish processing; Packaging and marketing fish production

Earthquake, Tsunami, Climate & weather

Natural disaster management; Building code; Weather modification

Knowledge based product

Hardware, software, networks, storage; Micro and nano electronic product

Partnership on Green Technology Transfer and innovation in Indonesia

Indonesia is a big market of Green technology

- Expensive of Green Technology Investment
- Limited market

Partnership on transfer technology and innovation

- Transfer of knowledge
- Localized the green technology
- Involve private sector
- Relax the IPR

Higher local capacity

- Create cheaper green technology investment
- Create bigger market of green technology

Thank you
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