

Indonesia Clean Energy Initiative



Global Low Carbon Workshop
Washington DC | March 2011





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More Energy Less Carbon

Global Low Carbon Workshop
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Condition

Indonesia

- Energy mix
- Electricity mix
- Emission

Potentials

- RE
- EE&C

Policy and Regulation

- Direction
- Target
- Paradigm Shift
- Initiative
- Instruments
- Programs

ASSESSMENT



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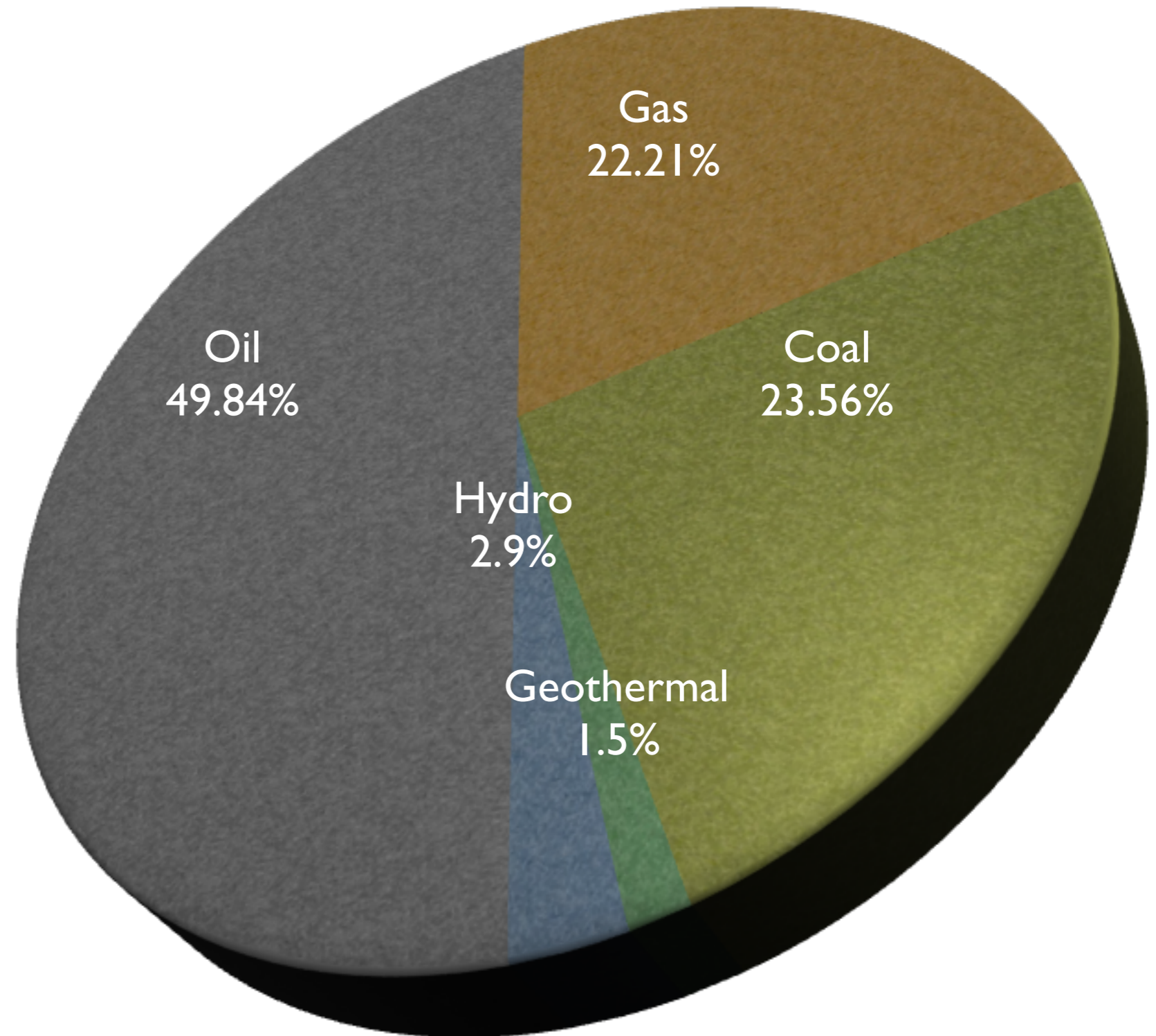
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A S S E S S M E N T

National Energy Mix



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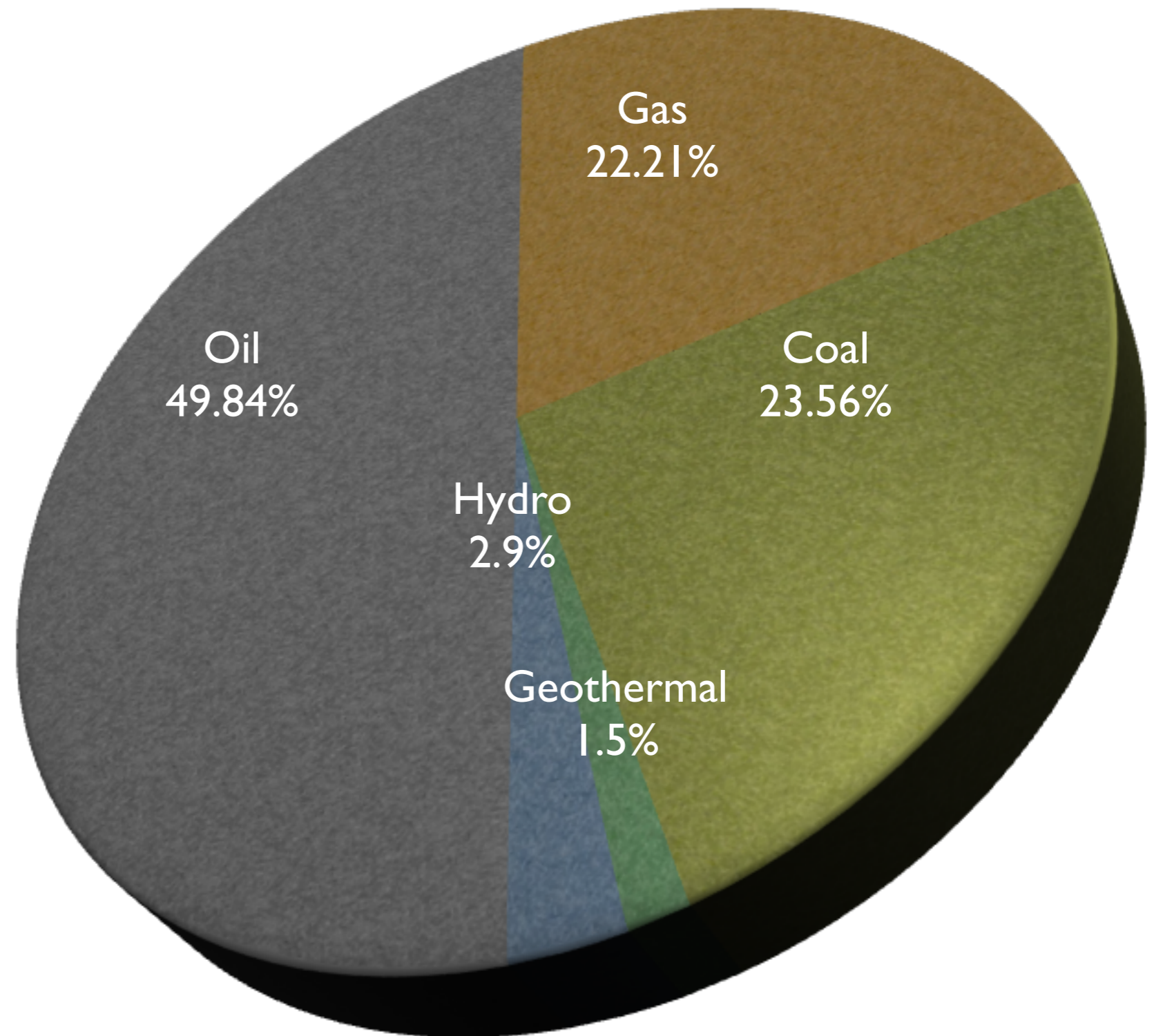
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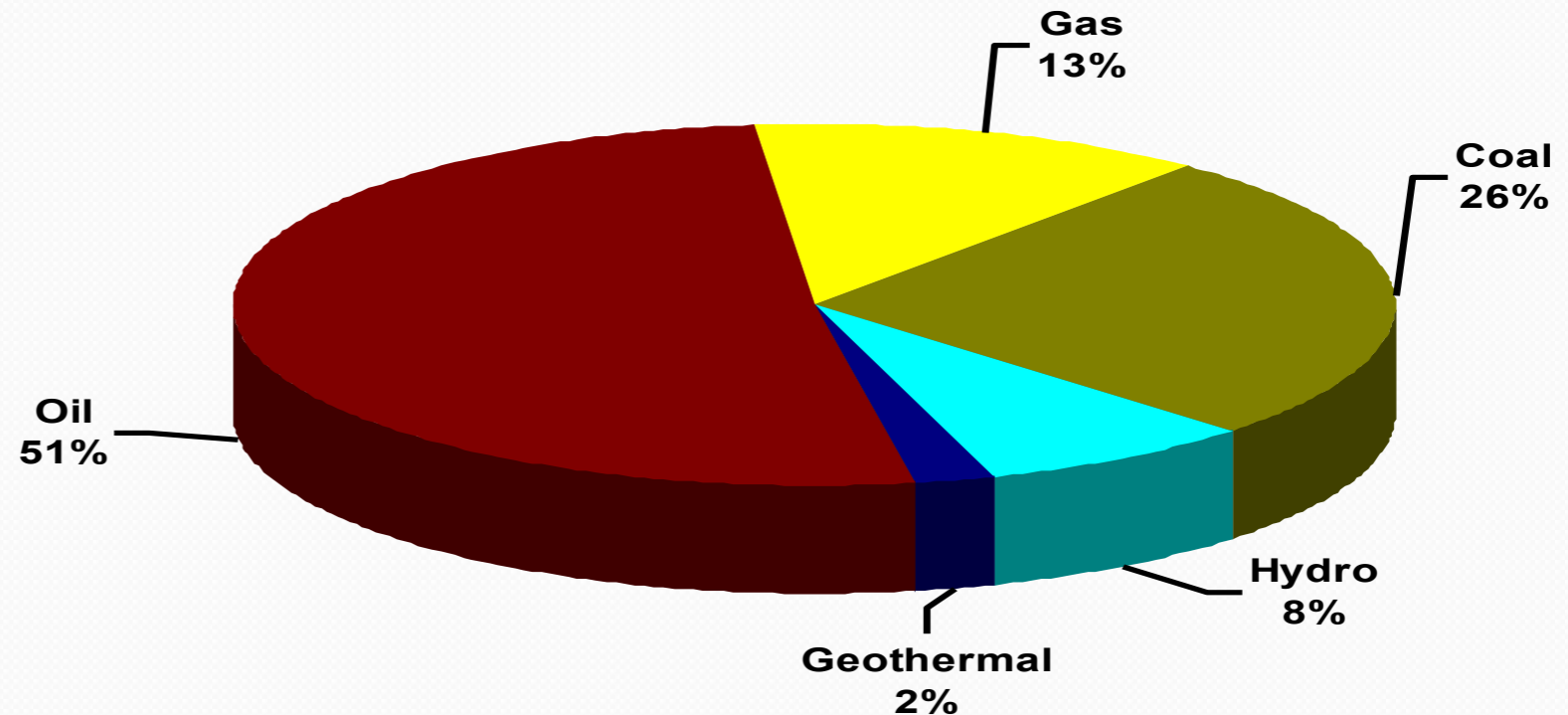
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A S S E S S M E N T

SHARE OF ELECTRICITY PRODUCTION BY TYPE OF ENERGY (2006)



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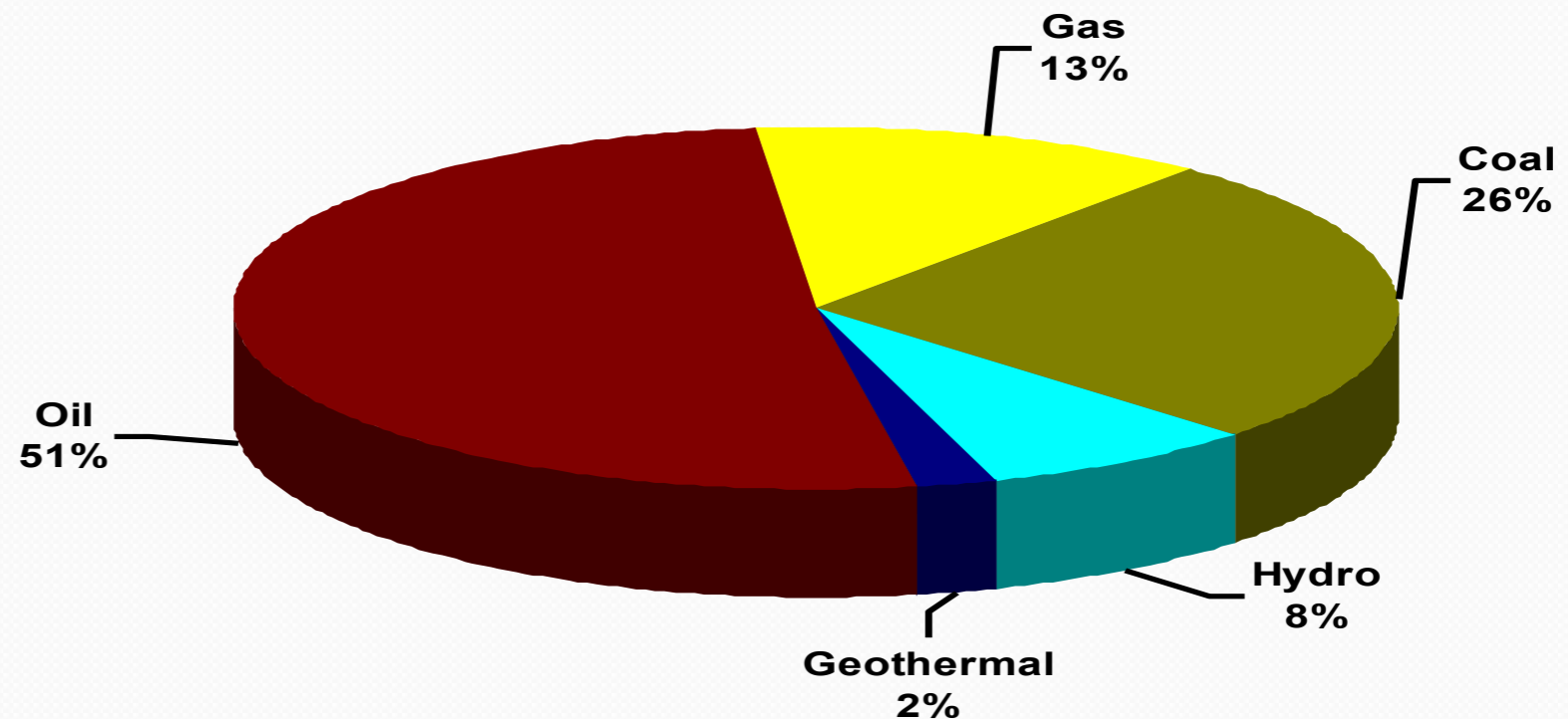
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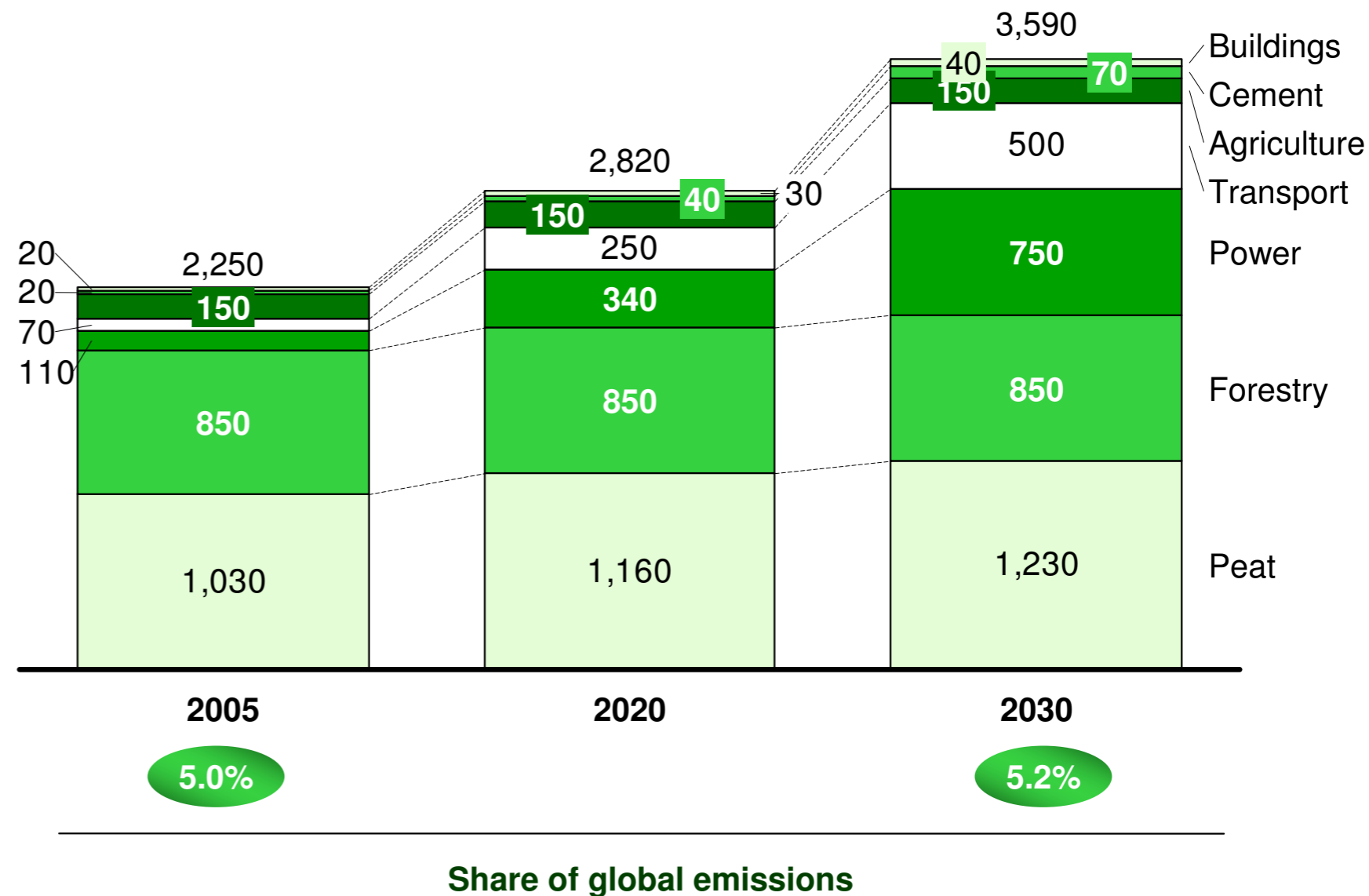
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Indonesian emissions are estimated to grow from 2.3 to 3.6 GtCO₂e between 2005 and 2030

Projected emissions¹, Million tons CO₂e



¹ Includes only direct emissions from each sector

SOURCE: Indonesia GHG Abatement Cost Curve

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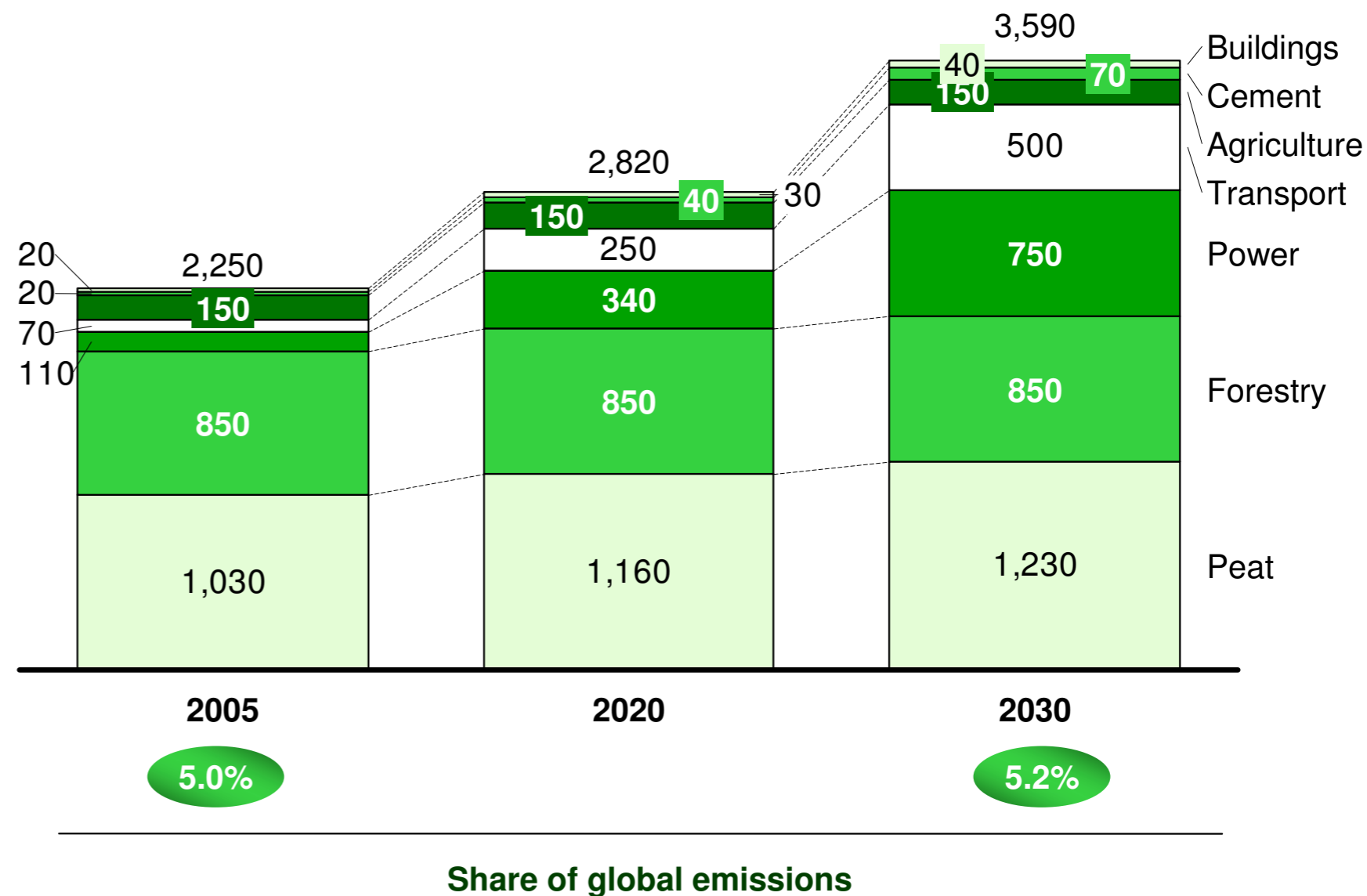
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A S S E S S M E N T

NATIONAL COMMITMENT ON REDUCING GHG

President Commitment in G-20 Pittsburgh and COP15 to reduce greenhouse gasses emission by 2020

Domestic efforts

26%
(767 juta Ton)

41%

Domestic efforts and international support

Forestry, Peat, Agriculture	680 million Ton
Energy Sector	30 milion Ton
Wastes	48 million Ton
Industry and Transport	9 Juta Ton

Through new renewable energy development and energy conservation implementation in all sector



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Energy Resources 2009

Fossil Energy

Energy Type	Resource	Reserve (Proven + Possible)	Production (per annum)	Ratio Reserve/Production (without new exploration, years)
OIL	86.9 billion barrel	8.2 billion barrel	356.6 million barrel	23
GAS	384.7 TSCF	170.1 TSCF	2.89 TSCF	59
COAL	57 billion ton	19.3 billion ton	132 million ton	146

Renewable Energy

New Renewable Energy	Potential	Installed Capacity
Hydro Power	75.67 GW	5,923.18 MW
Geothermal	27 GW	1,189 MW
Mini/Micro-hydro	500 MW	217.89 MW
Biomass	49.81 GW	1,618.4 MW
Solar Energy	4.8 kWh/m ² /day	13.58 MW
Wind Energy	3-6 m/sec	1.94 MW



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A S S E S S M E N T

- Energy conservation potential in all sector is high

Sector	Total Consumption 2008 (Million BOE)	Energy Conservation Potential	
		(%)	(Million BOE)
Industry	316	15 – 30	47 - 95
Household & Commercial	191	10 – 30	11 - 33
Transportation	111	25	48



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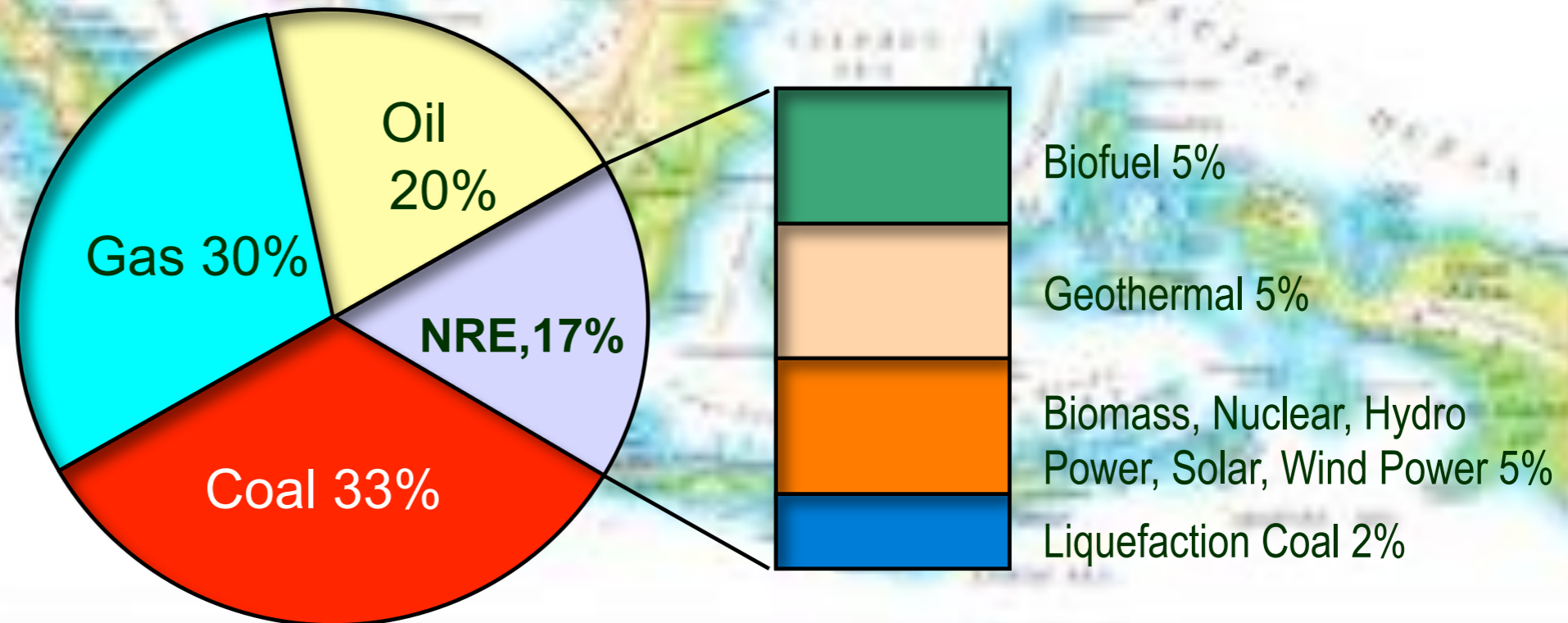
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National Energy Mix Target

(Presidential Regulation No. 5 Year 2006)



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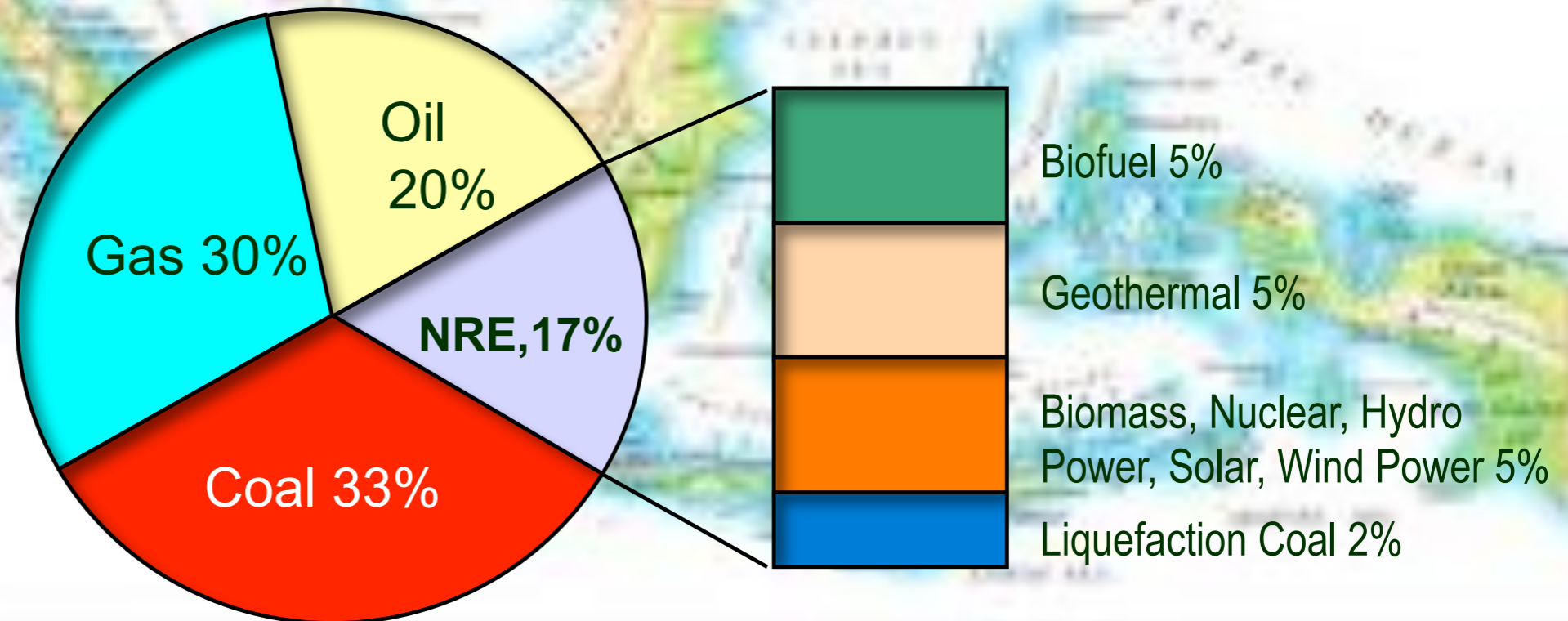
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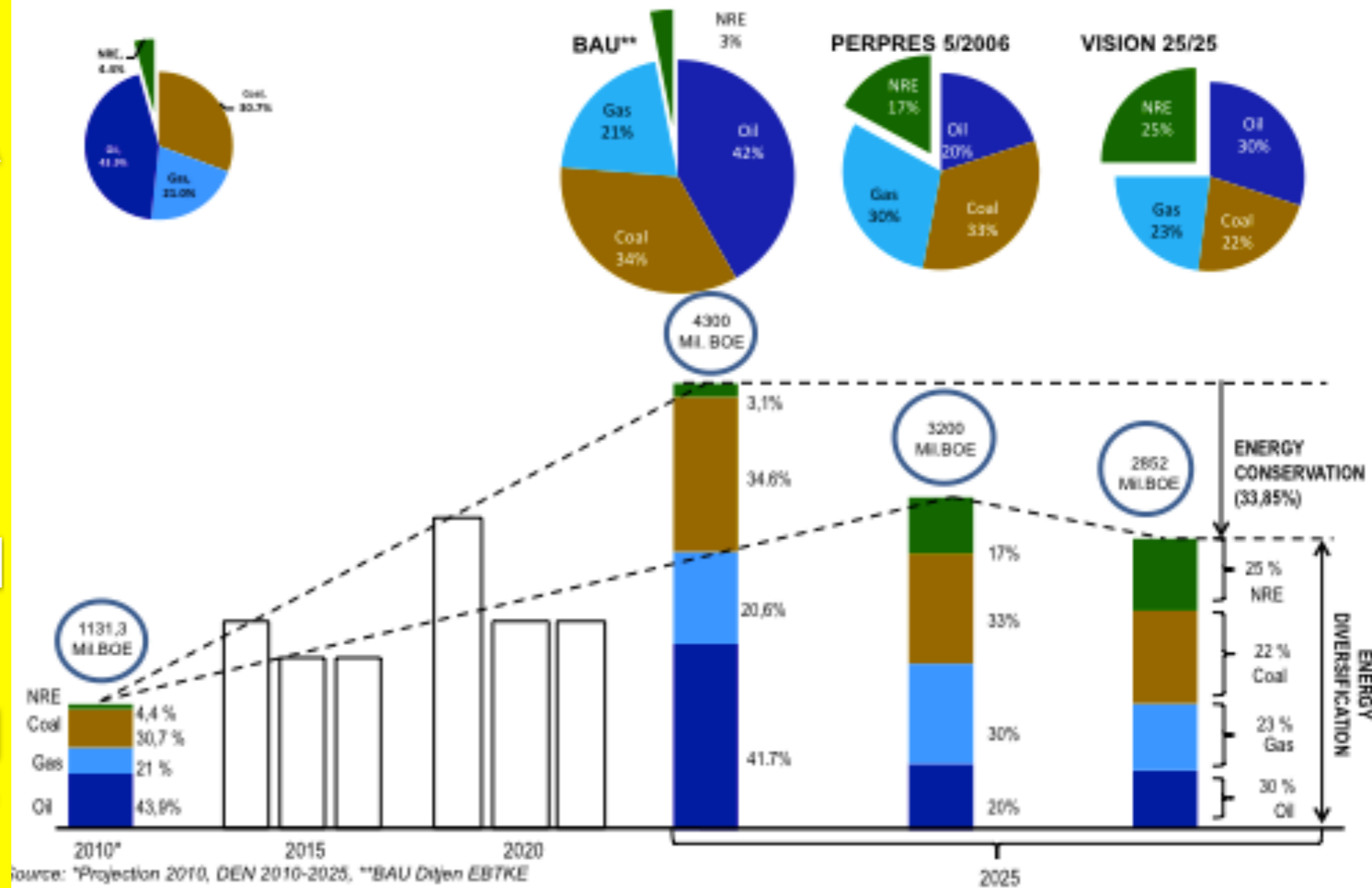
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A S S E S S M E N T

CONTRIBUTION TO 26% EMISSION REDUCTION TARGET



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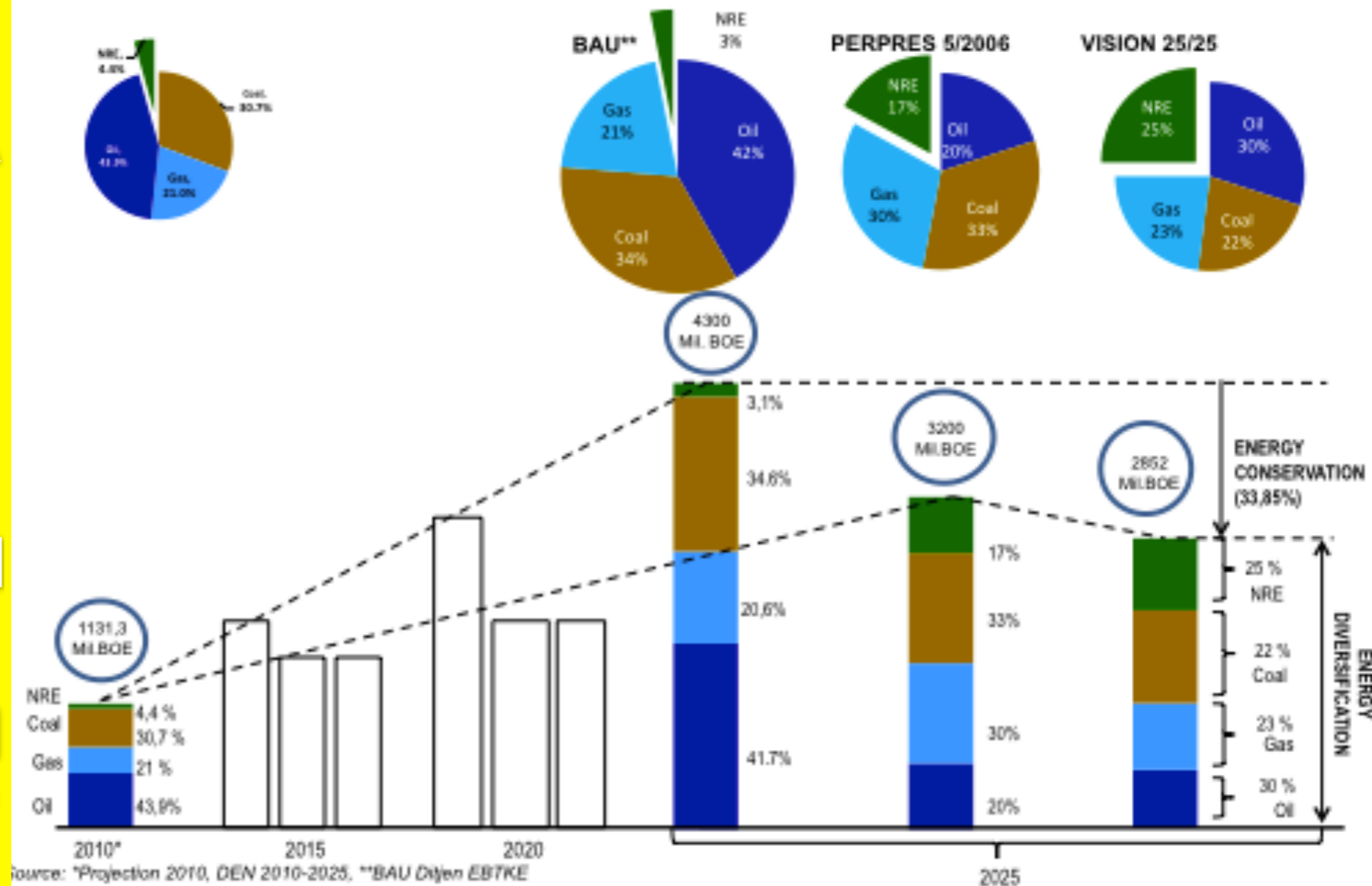
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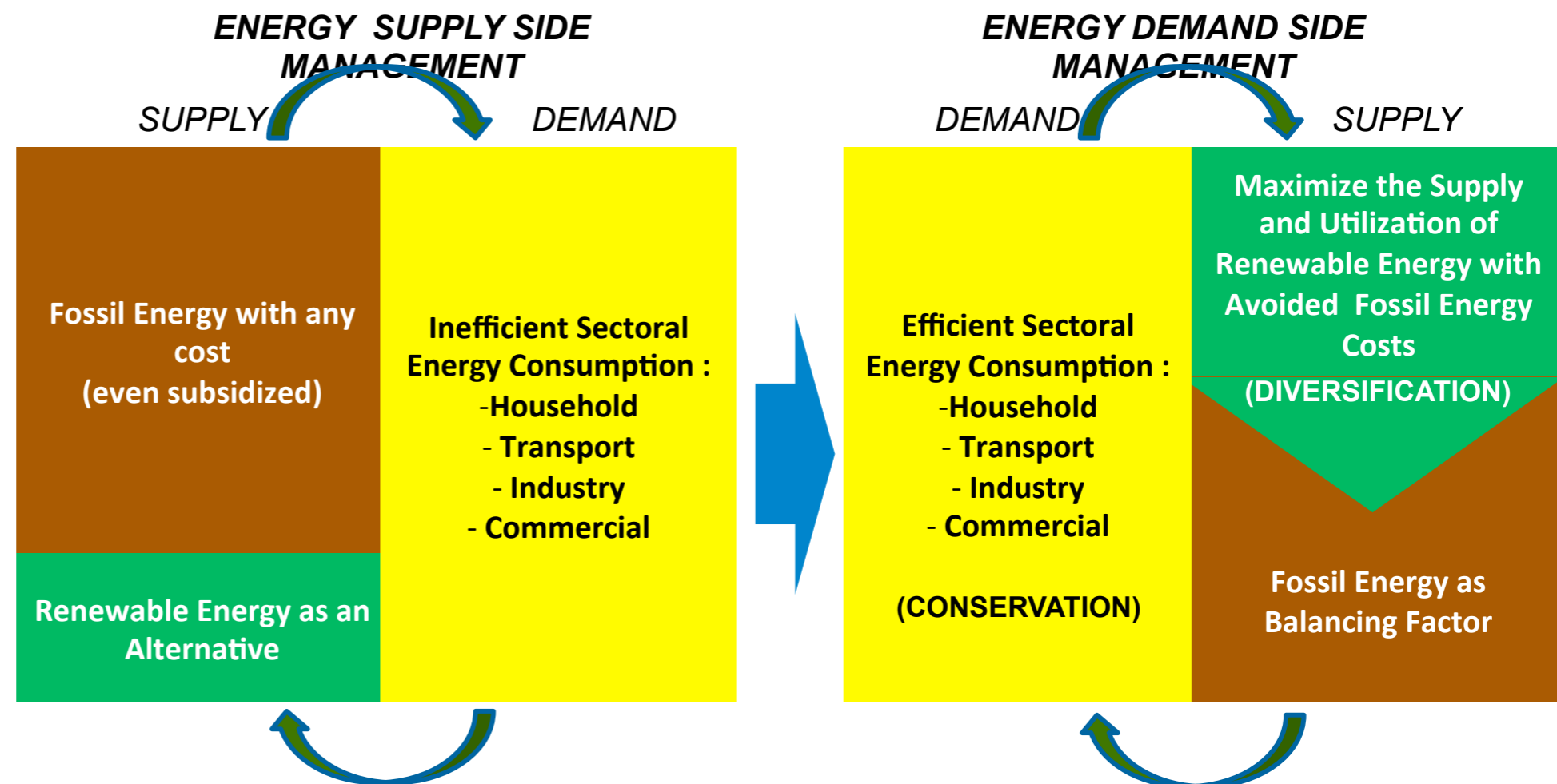
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A S S E S S M E N T

PARADIGM SHIFT OF ENERGY MANAGEMENT



CHANGE

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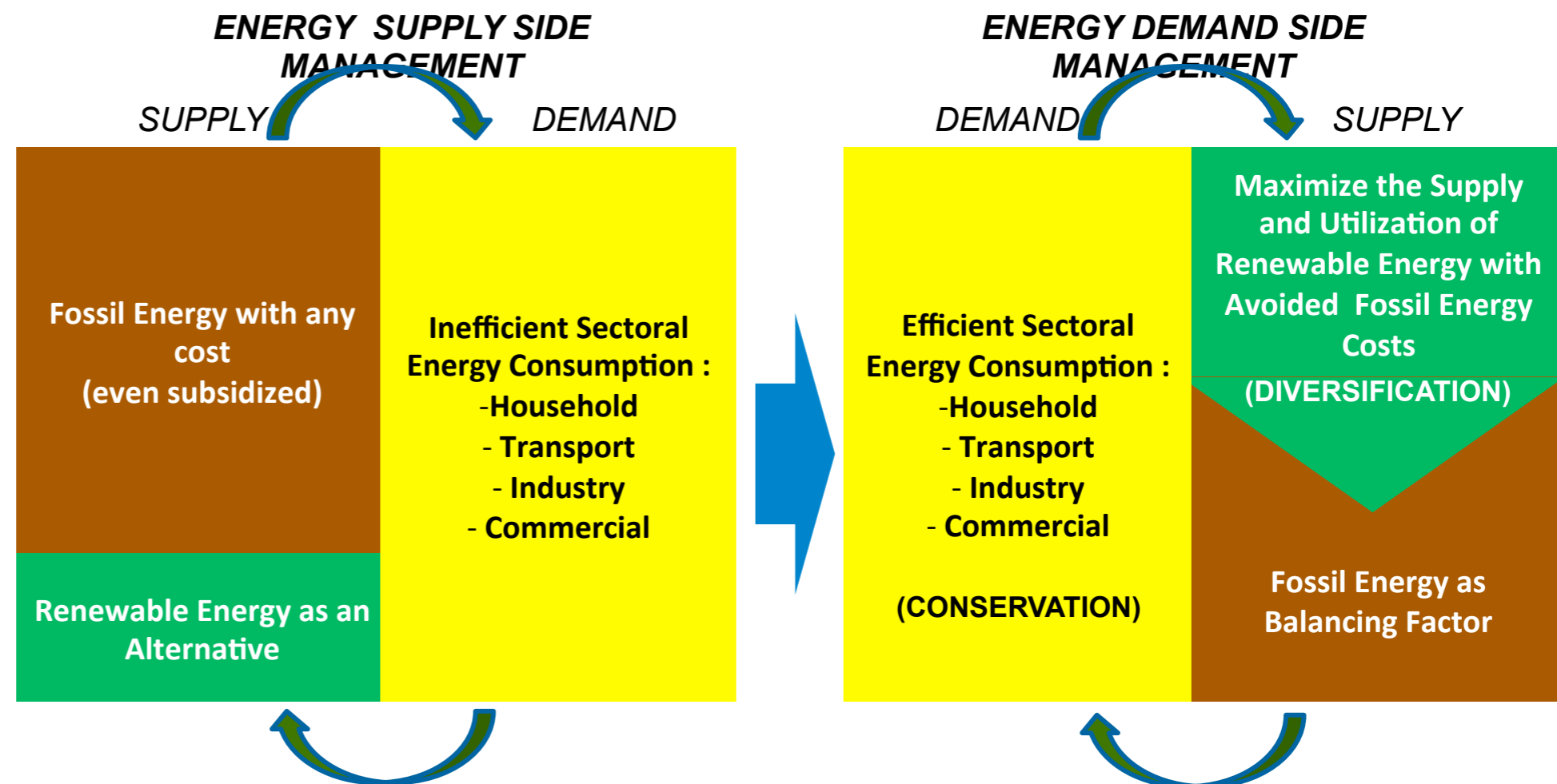
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A S S E S S M E N T



Clean Energy Initiative

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Clean Energy Initiative

Introducing REFF-Burn

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Clean Energy Initiative

Introducing REFF-Burn
REFF-Burn as NAMAs

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Introducing REFF-Burn
REFF-Burn as NAMAs
Umbrella for policy harmony

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A. Legal Instruments:

- Law No. 32 year 2009 on Environmental Protection and Management
- Law No. 30 year 2007 on Energy
- National Action Plan on GHGs Emission Reduction (Draft of Presidential Regulation on RAN-GRK), Nationally Appropriate Mitigation Actions (NAMAs) of Energy Sector

B Fiscal Instruments :

- Incentive for implementation of energy conservation program (Government Regulation No. 70/2009 on Energy Conservation
- Exemption of import tax, set-up price and subsidy allocation from fossil energy to new renewable energy (based on “Green Paper” developed by Ministry of Economy)

C. Institutional Instrument :

- MEMR as Energy Authority
- Ministry of Environment as Environment Authority (including climate change mitigation)
- Related institutions
- Carbon Market Authority

D. Financial Instruments:

- Unilateral (National/regional government budget, Private sector's CSR)
- Donor Countries' support (Bilateral/Multilateral)
- Carbon Market (such as. CDM)



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A. Technical Regulation

- Implementation of National Standard on Clean Energy
- Enforcement of National Standard on Clean Energy by the MEMR
- Accreditation
- Certification
- MRV (*Measureable, Reportable, Verifiable*)

B. Carbon Market Regulation

- Carbon Market Regulatory Body
- Carbon market player
- Feed-in Tariff
- Carbon Commodity (Price and quantity of marketable carbon)



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- A. Program on Clean Energy Resources Survey
- B. Program of Avoiding Fossil Fuel Utilization (*Pre Fossil Combustion*)
 - a. Increasing Renewable Energy utilization
 - b. Promoting Energy Efficiency
 - c. Reducing Fugitive Emission
- C. Program of Reducing Carbon Emission (*During Fossil Combustion*)
 - a. *Clean Coal Tecnology*
 - b. *Clean Fuel Technology*
 - c. *Flared Gas Reduction*
 - d. *Clean Energy Utilization (Household, Commercial, Transportation, Industry)*
- D. Program of Carbon Emission Remediation (*Post Fossil Combustion*)
 - a. *Carbon Capture and Storage*
 - b. *Algae*
 - c. *Post Mining Reclamation*
 - d. *Utilization of CO₂*

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E. New Initiative for Clean Energy Program

F. Carbon Market Management

G. Clean Energy Partnership

H. Iconic Role Models of Clean Energy Development

a. Clean Factory

b. Clean Industrial Park

c. Smart Grid

d. Clean City

e. Clean Island

f. Clean Province(s)

g. Green Building

h. Integrated Strategic Project on Clean Energy Development

i. Low Carbon Tourism

I. Program on R&D in Clean Energy Technology

J. Program on Capacity Building in Clean Energy Initiative

K. Social Engineering of Clean Energy

Programs



Clean Energy Initiative

Indonesia

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