



Indonesia

Infrastructure review

Presented by

Tumiran

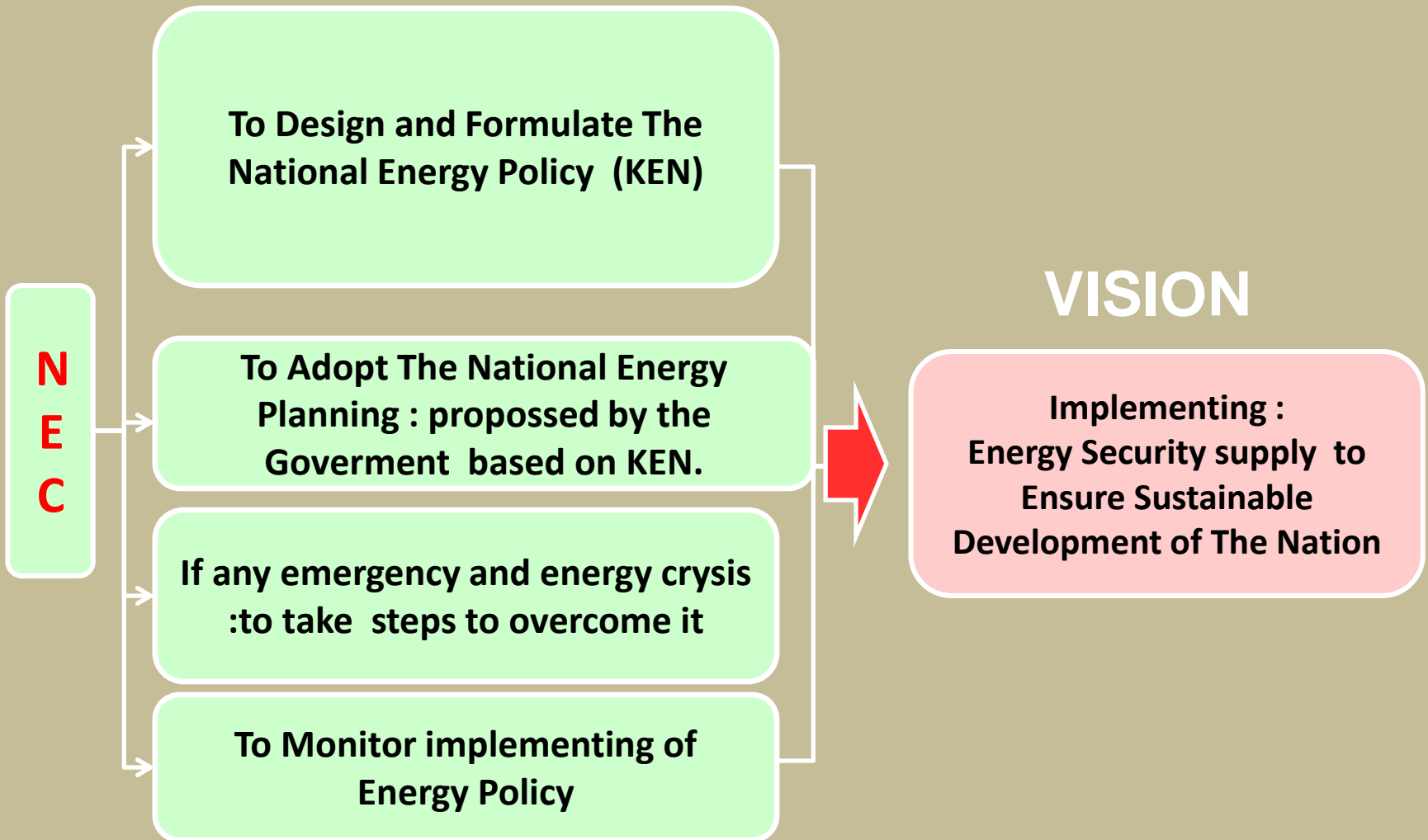
**The Board Member of The national
Energy Council**

Viena August 2014

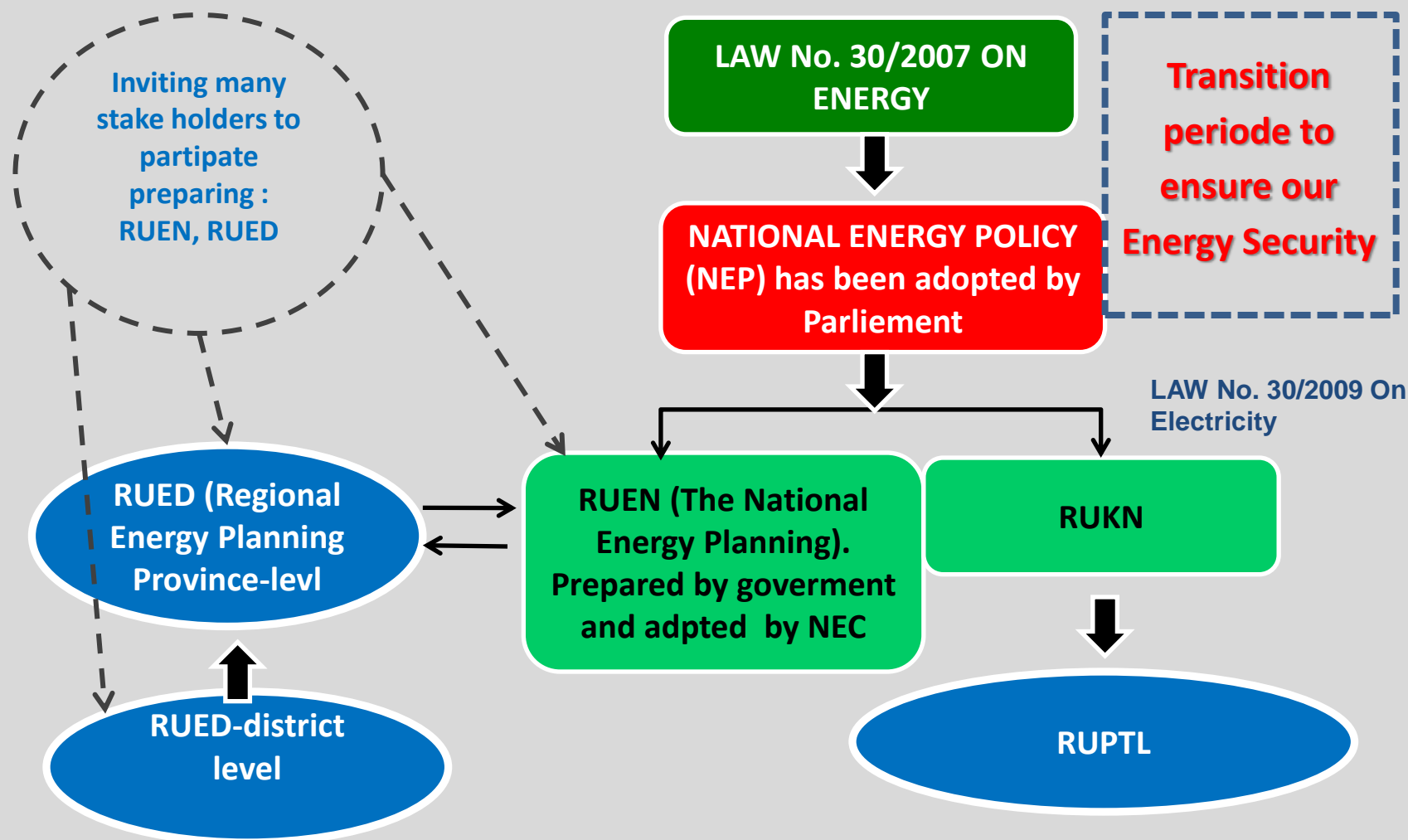
ENERGY POLICY

- The Presidential Decree No.5 year 2006 indicates the target of energy mix until 2025 and the share of nuclear energy is about 2% of primary energy or 4% of electricity (4000 MWe).
- The first two units of NPP is expected to be operated before 2020 as stated in Act No. 17 year 2007 on National Long Term Development Planning 2005-2025.
- The Energy Law No. 30 of August 2007 creates a National Energy Council (NEC) chaired by the President with the authority to design and formulate energy policy on behalf of the GOI. The policy then must be endorsed by Parliament.
- NEC consists of stakeholders of energy that includes seven ministers and high-rank government officials, and eight stakeholder members from industry, academia, technology experts, representative of environmental concerns, and consumers.

THE FUNCTION OF THE NATIONAL ENERGY COUNCIL



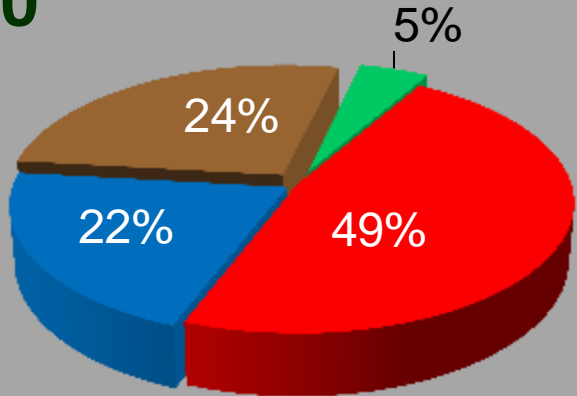
THE STRUCTURE OF KEN-RUEN (THE NATIONAL ENERGY PLANNING) AND RUED (THE REGIONAL ENERGY PLANNING) AND RUKN (THE NATIONAL ELECTRIC POWER PLANNING)



ENERGY MIX to 2050

(%)

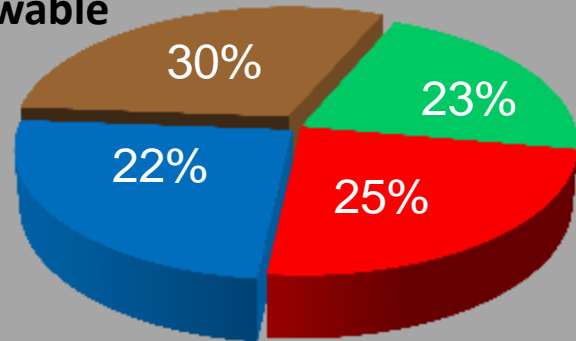
2010



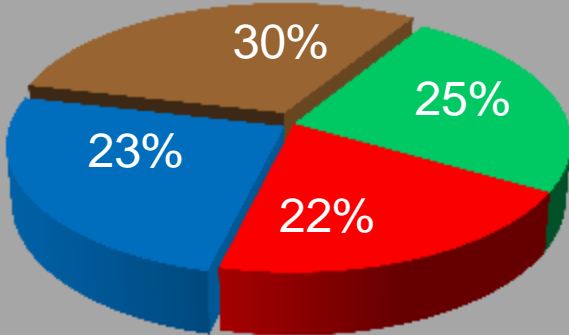
Oil ●
Gas ●

Coal ●
Renewable ●

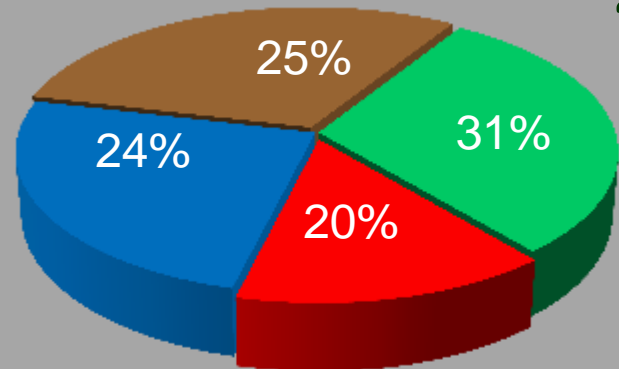
2025



2030

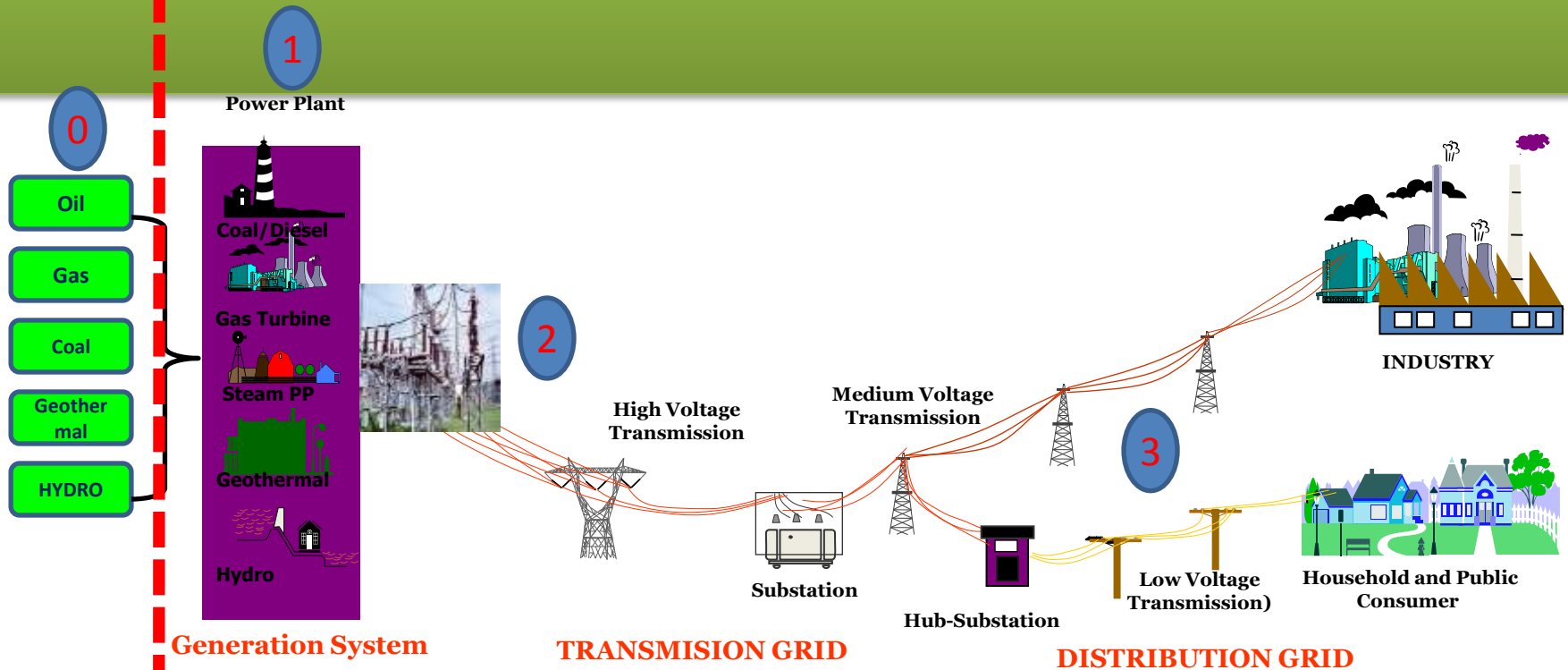


2050



Note: ● new and renewable energy

ELECTRICITY SECTOR



	2013	2025	2050
Capacity (GW)	45	115	430
Investment	1 G equiv to 20 B U\$	= 160 B U\$	= 600 BU\$
Technology/R&D			
Human Resources	47.976 (PT PLN- 2012).	120.000 people	600.000 people

INFRASTRUCTURE AREA

- Legal and Institutional Infrastructure :
- Industrial and Economic Infrastructure
- Political Support and Public Acceptance
- Human Resources

Legal and Institutional Infrastructure

- State organizations (Regulatory Body – BAPETEN) have been established and will be developed for necessary regulation, in accordance with international standards.
- The establishment of the Nuclear Regulatory Body was fostered by the Presidential Decree No. 103 Year 2001 on the Status, Main Task, Function, Authority, Organizational Structure, and Working Orders of Non-Department Government Institutions.
- The tasks and functions are nationally strategic in supervising the use of nuclear energy in Indonesia. The basic policies consist of six main components: ***licensing, regulation, inspection, assessment, engineering, and nuclear emergency preparedness.***

Industrial and Economic Infrastructure

- **Financing:** The financing provided by the government and the industry would be available, and would be greater commitment whenever there is a clear and knowledgeable decision from the government about the NPP project.
- **Energy Market:** Demand on nuclear energy has been studied and the price of energy product, i.e. electricity, has been determined.
- **Size of installation:** Size of installations has been determined accordingly (by means of adequate studies)
- **Support Structure:** Adequate surveys have been performed, and adequate participation plan have been established. Sharing support structure and also fuel cycle facilities with other countries could be performed mainly for the first NPP project

Industrial and Economic Infrastructure

Cost benefits study performed by national industry:

- Cost benefits study has been conducted by the national industry (State Utility, PT.PLN) in cooperation with BATAN and by MEDCO in cooperation with KHNP in 2007.

Study to define benefits of nuclear program to society

- BATAN in cooperation with some university conducted national and local economic impacts studies of NPP construction base on candidate site:
 - Muria Peninsula (large NPP – Korean Type)
 - Madura Island (Small NPP with desalination plant – SMART)
 - Bangka Belitung Province (large NPP)
- Social impact study also o conducted in Bangka Belitung Province, and Muria Peninsula candidate site
- **Conclusion: the NPP project will give positive impact.**

Political Support and Public Acceptance

- Political Support:
 - Government has already made efforts to involve public in providing input, advice and recommendations with respect to the use of nuclear science and technology, especially a plan to build NPPs. However, it is not optimal yet and all should be involved
- Public Acceptance
 - Indonesia has been conducting activities in public information on NPP by involving stakeholders

The result of the pooling are:

- Before Fukushima (on November 2010): (3,000 respondents): 59.7% agree, 26.1% not agree and 14.2% abstain.
- After Fukushima (2011): (3000 respondents): 49.5% agree, 35.5% not agree and 15% abstain
- Recent pooling (2013): (400 respondents): 60.4% agree, 28.5% not agree

Human Resources

- **NPP HRD PROGRAM**

1. Preparation and implementation of education and training model on NPP operation.
2. Preparation of education program and fundamental training for NPP program.
3. Preparation of education and training program on NPP operation.
4. Preparation and implementation personnel certification and institution accreditation for NPP operation.
5. Education and training cooperation on NPP operation.
6. Preparation of education and training facilities on NPP operation.
7. Budget allocation for HRD development on NPP.



Thank You for Your Kind Attention

