

# *INDONESIA*

## **COUNTRY REPORT**

**Presented by:**

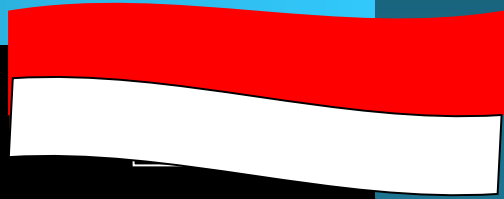
Tri Murni Soedyartomo Soentono

*President WiN Indonesia*

*Researcher/ Nuclear Engineer*

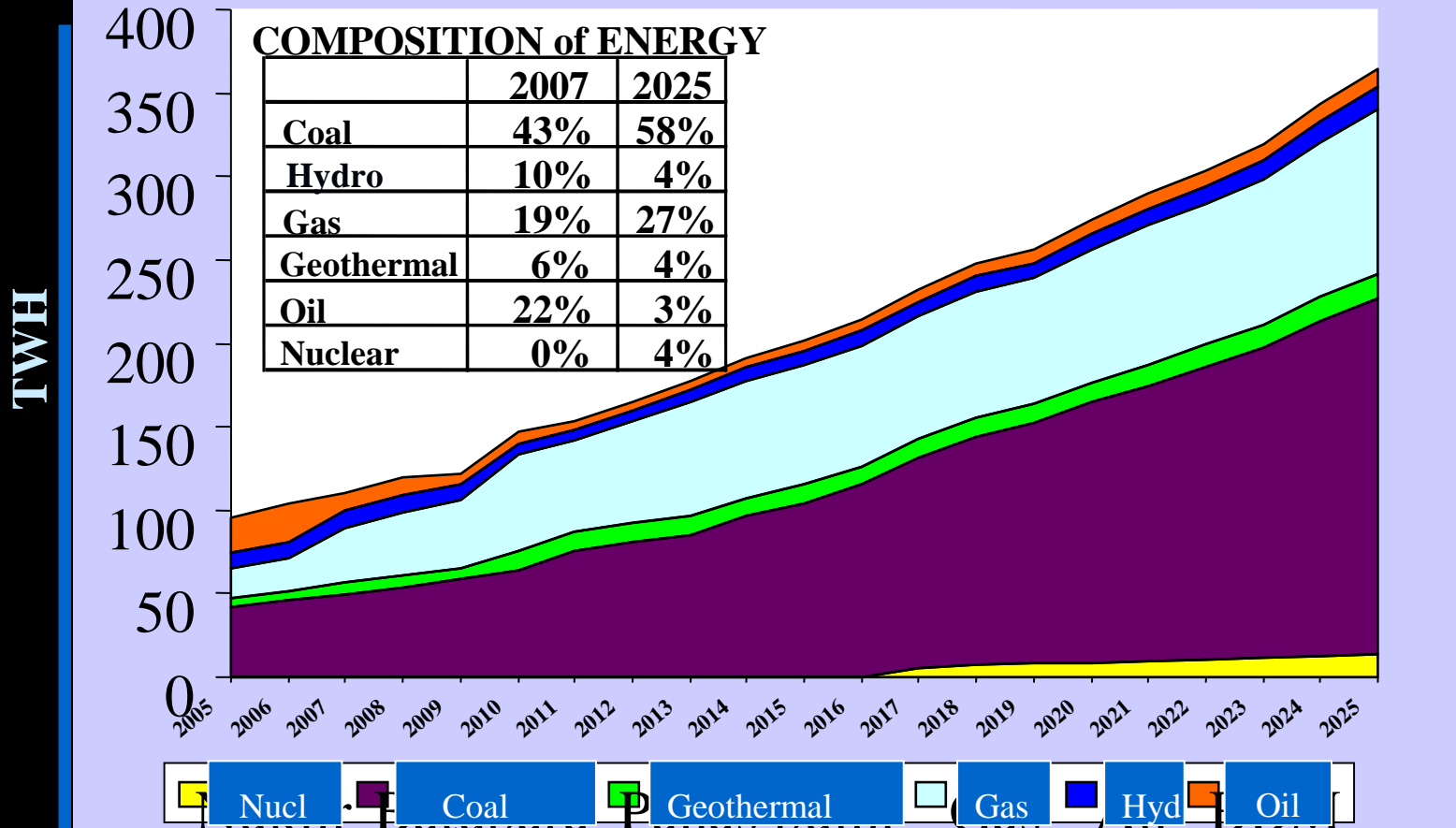
**National Nuclear Energy Agency  
of Indonesia**



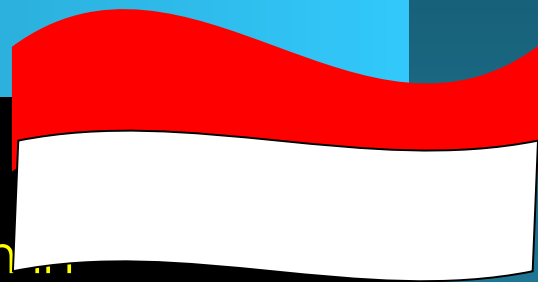


# ELECTRICITY SHARE

## ELECTRIC POWER PRODUCTION PLANNING



Jawa-Madura-Bali Grid



for NPP (0)

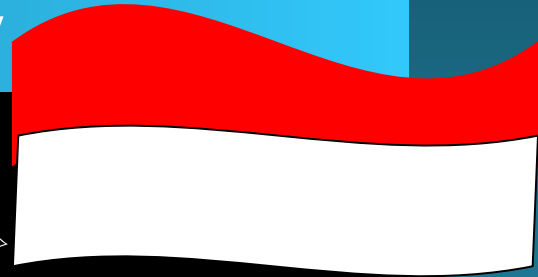
Several nuclear research are currently operation in Serpong, Jakarta , Bandung and Yogyakarta ; these facilities has been in operation step wisely and having strong link with various universities and laboratories within the country.

- 5.30 MW in Serpong
- 6. 2 MW in Bandung
- 7.100 W in Yogyakarta
- 8.Cyclotron CS-30 Serpong
- 9.Accelerator Yogyakarta
- Irradiator Co-60

## Public Acceptance

Further more the routine activities of the public information by WiN regarding the peaceful uses of nuclear energy, especially to the immediate environment of the NPP candidate site are indeed of important steps.

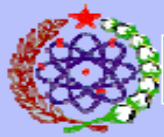
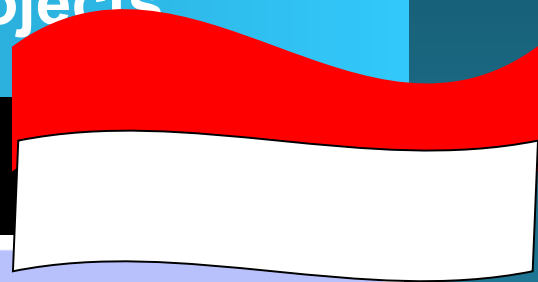
## FUTURE OF NUCLEAR POWER



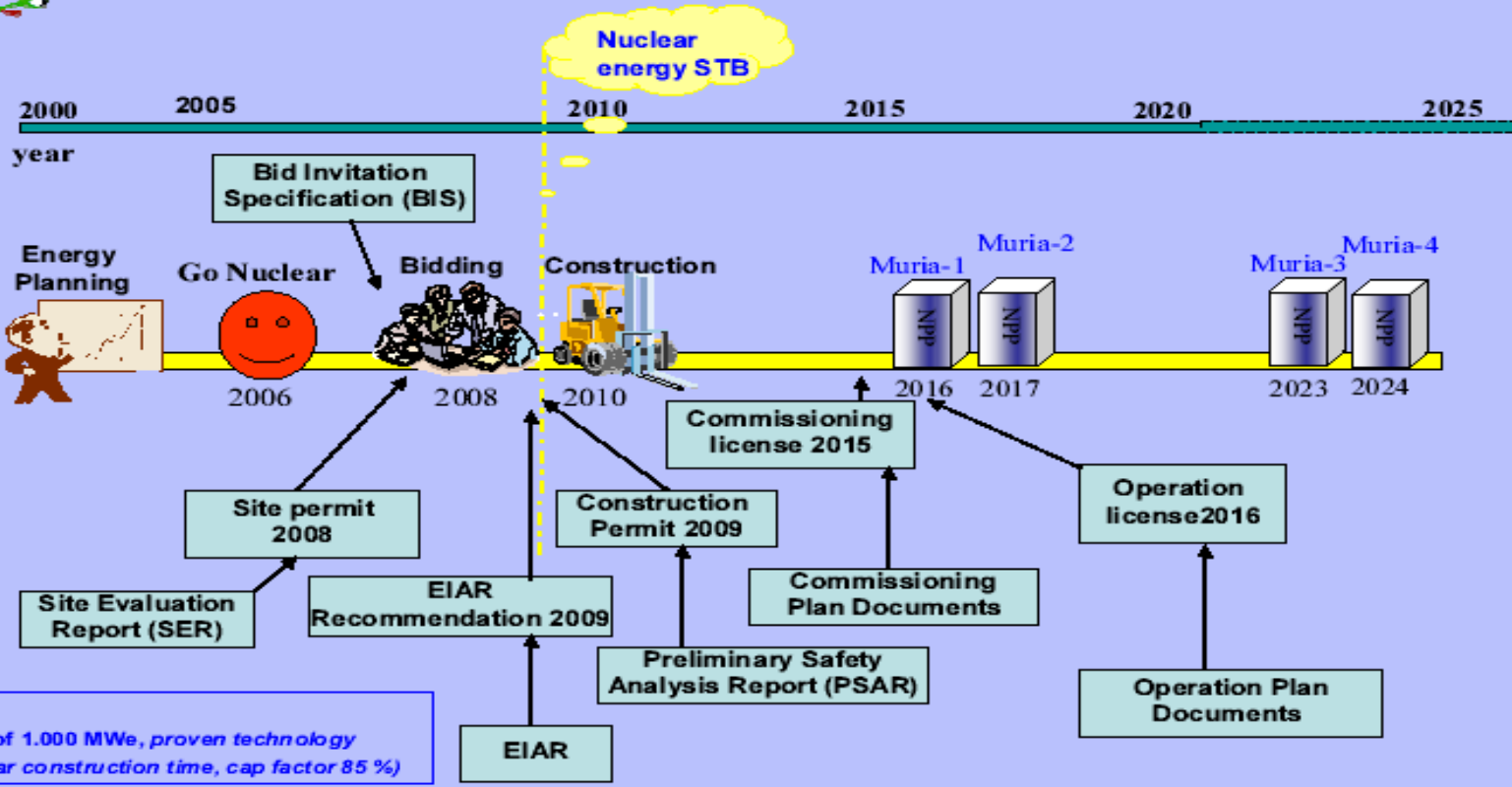
- Since 1990s, Indonesia planned to build NPP station in Jepara to anticipate future energy crisis.

### Indonesia National Energy Policy has four main objectives

5. Securing the continuity of energy supply for domestic use at price affordable to the public
6. Enhancing the life quality of the people
7. Stimulating economic growth, and
8. Reserving an adequate supply of oil and gas for export to provide source of foreign exchange to fund the national development program



## NPP ROAD MAP AND MILESTONE 2000-2025

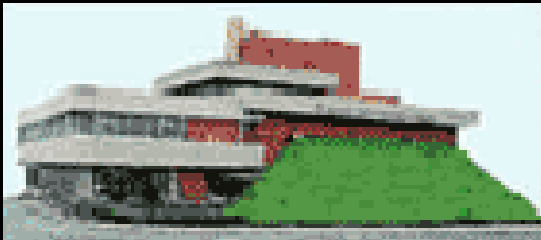


Note:  
Unit of 1.000 MWe, proven technology  
(5 year construction time, cap factor 85 %)

April 11, 2007  
Aomori, Japan

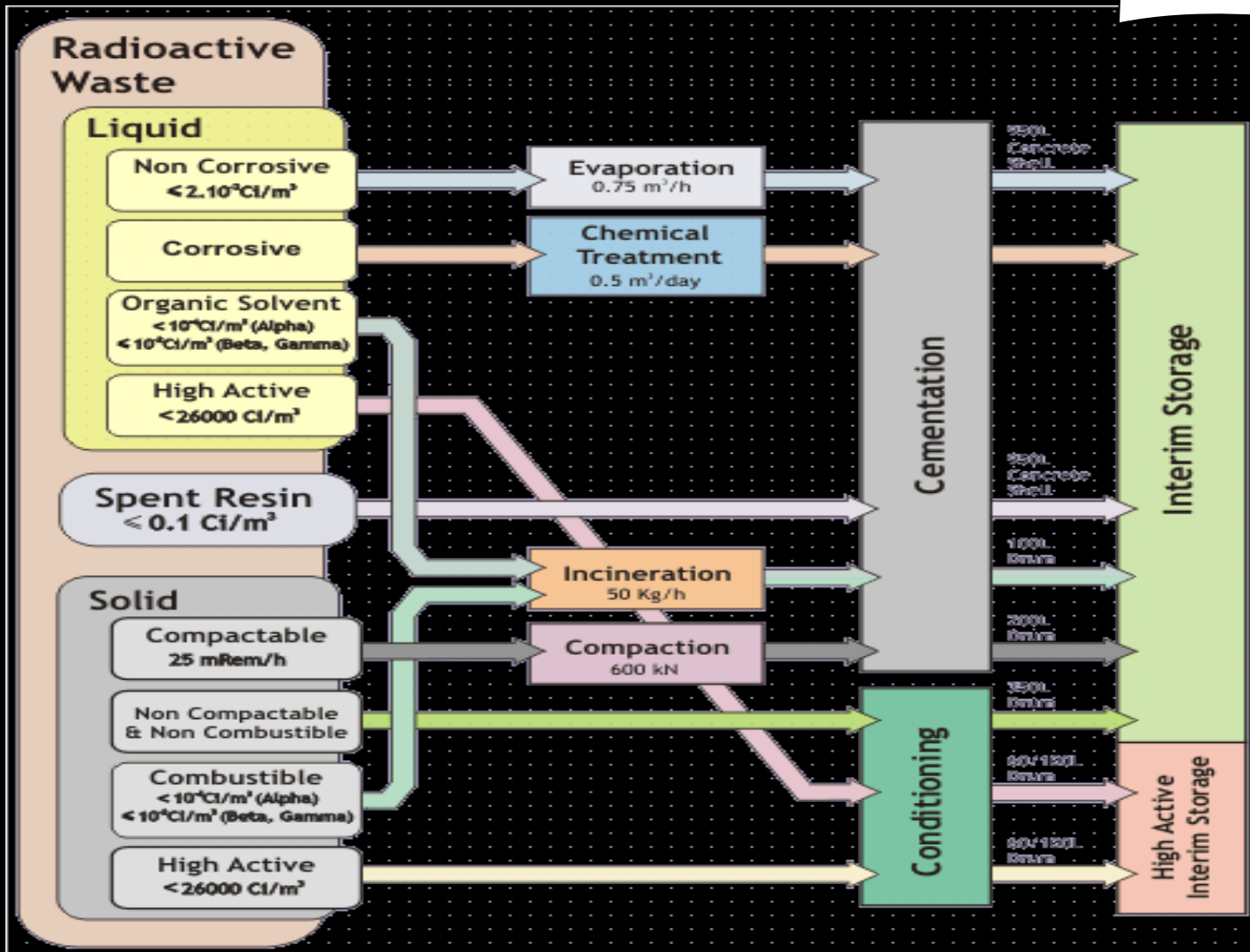


Law no 10/1997 on nuclear power became the basic policy in management of radioactive waste. The only national agency dealing with radioactive substances, BATAN possesses all data and information concerning the use of nuclear power.



Radioactive waste management is particularly earmarked for maximum protection of living creatures, the environment and its ecosystems.

In order to guarantee maximum safety and protection, all parties involved in the acquisition of radioactive materials should abide by the ALARA (As Low As Reasonably Achievable) principle. In order to achieve radioactive waste management that complies with the principle of sustainable development, technological applications should be technically and economically viable for maximum protection of the environment and safety from any potential nuclear hazards, now and in future. The application must also be accepted by the community.



- **Food:**  
Reducing import toward self-reliant by carrying out nuclear technology, i.e.  
Irradiation induced mutation breeding for new varieties of crops, radioisotope tracer technique for fertilizer, bio-fertilizer, irradiation for SIT, and post harvest treatments.

**Carbohydrate:**

- **Rice, mung-bean, sorghum, and wheat**

**Protein:**

- **Soybean, Feed supplements for rumen animal, radio-vaccines for poultry health, RIA for Artificial Insemination**

**Horticultural plants**

- **Energy:**

Symbiotic and synergistic to fossil, new and renewable energy sources to suffice conservation, diversification, and intensification, i.e.

**Application of Nuclear Technology for Fossil:**

- EOR, SO<sub>x</sub> and NO<sub>x</sub> treatment using Electron Beam Machine

**Application of Nuclear Technology for Renewable Energy:**

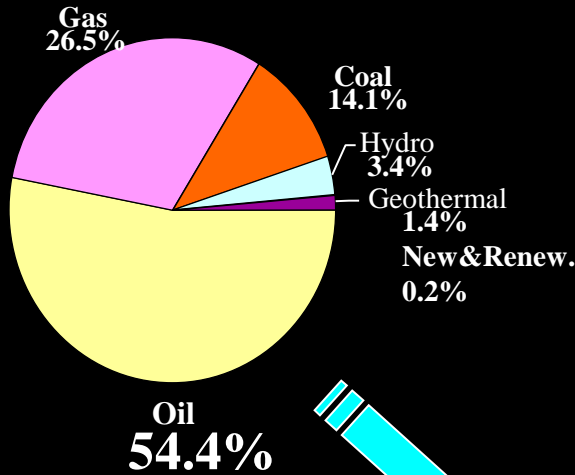
- Hydro, micro-hydro, geothermal, bio-fuel (*Yatropha Curcas* sp, sweet sorghum), etc.

**Application of Nuclear Technology for New Energy:**

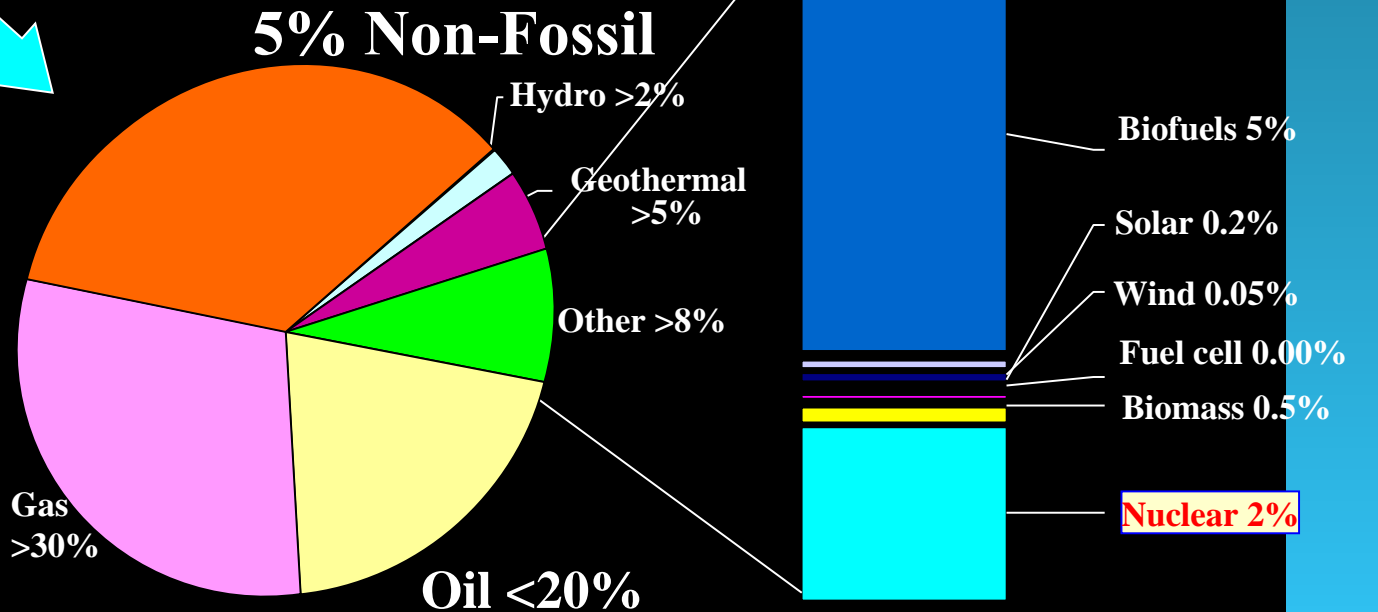
- Planning of NPP introduction, pre-project activities, project implementation, construction, commissioning, operation, maintenance and decommissioning, and continuous socialization.

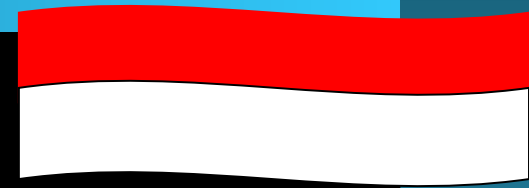
**Preparation of Nuclear Fuel Supply, DUPIC, ADS**

**Study on Future NPP for Co-generation, ADS, other INPRO**



## TARGET of NATIONAL ENERGY MIX 2025 NATIONAL ENERGY MIX YEAR 2025 (OPTIMUM SCENARIO) Presidential Decree No.5 - 2006 for National Energy Policy

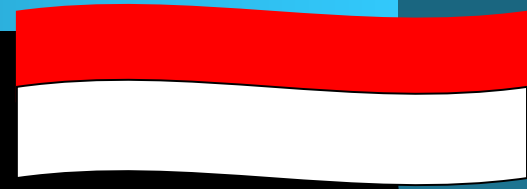




## Competences (Needs, education and training), in relation with the general topic of WIN Global 2008

To anticipate development in the management of Nuclear Power Station (NPS) and radioactive waste at present and future needs, BATAN has established collaboration with the IAEA, France, Canada, Japan.

The activities implemented by national nuclear energy has been done through the scientific technical base with the aim to master designing, manufacturing, building and safe, reliable and economical operation of NPP.



Thank you for your attention !