

STATUS OF MALAYSIA NUCLEAR PROGRAM & SAFETY REGULATION FOR THE USE OF ATOMIC ENERGY

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NUKLEAR
MALAYSIA

CONTENT

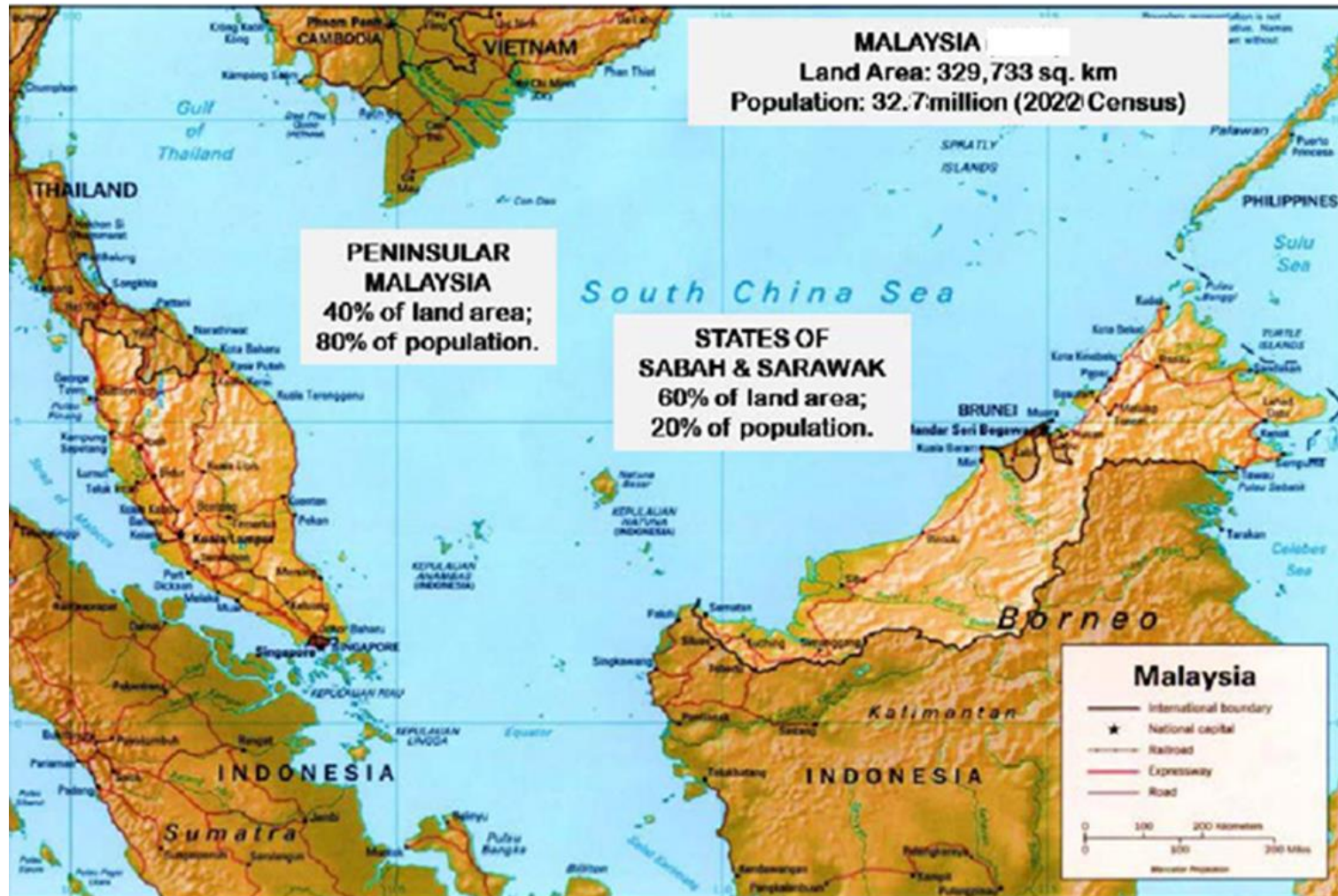
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Overview



NUKLEAR
RESEARCH



Malaysian Nuclear Agency

19 September 1972:

Establishment of the Tun Ismail Atomic Research Centre (PUSPATI), which later renamed to **Malaysian Nuclear Agency**.



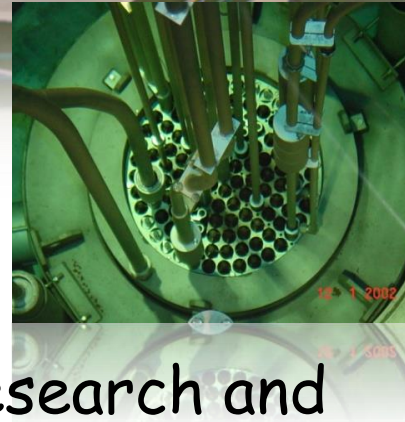
Vision

Nuclear science and technology for knowledge generation, wealth creation, and societal and national well-being.

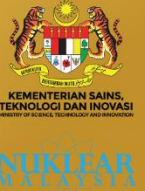


Mission

Excellence in research and applications of nuclear technology for sustainable development.



Nuclear Energy: Past and Future Challenges



- Established in 1972 (PUSPATI) to spearhead R&D in Nuclear Technology and Nuclear Energy (NE) in the anticipation of Nuclear Power Deployment for Electricity Generation
- In the past - Oil and gas found in the East Coast of Peninsular push NE to the last option
- Renewed Interest in NE for last decade (from 2008)
 - Price of oil > 100 USD/b, Climate change issue, Energy Security (18-24 months refueling cycle)

New challenge in 2018 : No go NE policy stated by the government because this technology will left behind dangerous radioactive waste and make the people fear.



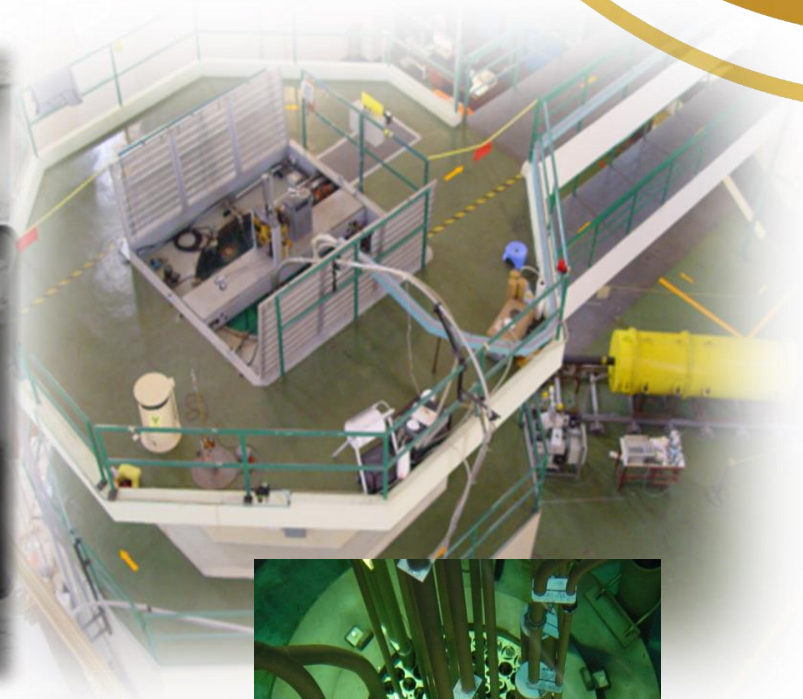
Reactor TRIGA PUSPATI (Mark II)

New Reactor Digital Instrumentation & Control System (ReDICS)-KAERI

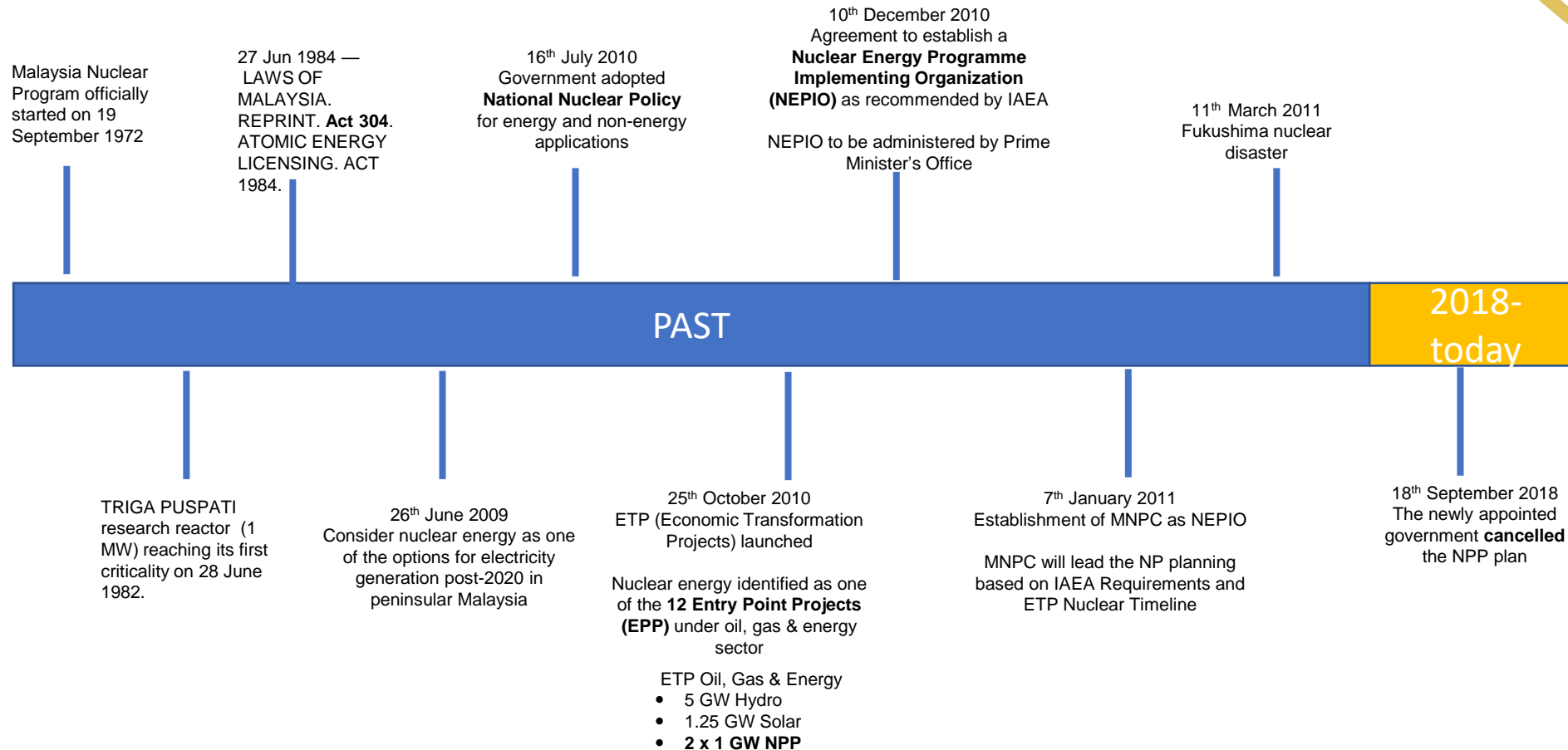
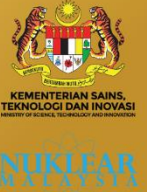


1982 - 2015

2015 ~ present



Chain of Events Regarding Nuclear Technology History in Malaysia



Rationale

- Although NP program had been stop, Education and Training Program still been developed to enhance national capability and capacity to support nuclear power programme (in the future) i.e. sustain the operation and utilize Research Reactor Triga Puspatti (RTP) in the safe manner with future focuses at nuclear energy with "less" waste left behind.



Rationale

- Existing Nuclear Research Reactor has to be maintained therefore training of staff are required for ensuring comply with the license requirement.
- Basic idea about the radiation safety of research reactor and power reactor are almost the same. Therefore, activities related to safety conducted for research reactor also useful to understand safety of power reactor. Therefore, this activities should not be affected by current NO GO policy on NUCLEAR POWER.



Facilities



Latex irradiator



**PUSPATI TRIGA
Reactor**



**Food irradiation &
Sterilisation plant**



**Medical
radioisotope**



**Non destructive
evaluation**



**Waste Management
Plant**



**Crosslinking of wire &
cable**



**Gamma Green
House**



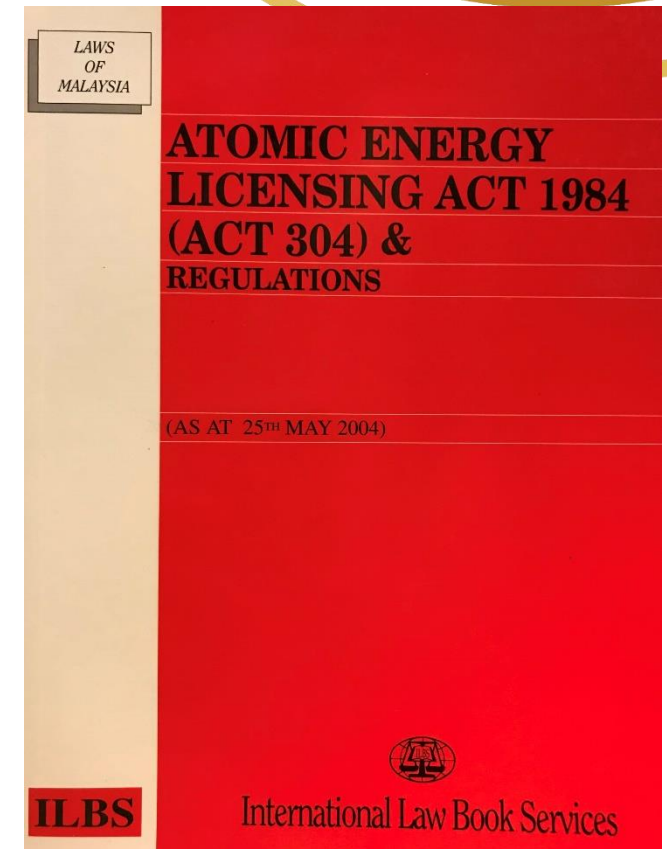
Nuclear Safety Regulation



Atomic Energy Licensing Act 1984 (Act 304)

An Act enacted to provide for the regulation and control of atomic energy, for establishment of standards on liability for nuclear damage and for matters connected therewith or related thereto

[1 Feb 1985, P.U. (B)44/ 1985]



Nuclear Safety Regulation



1. LPTA/A/724 –code of conduct of safety & security of radioactive sources

BAHAGIAN IV – KAWALAN SEKURITI

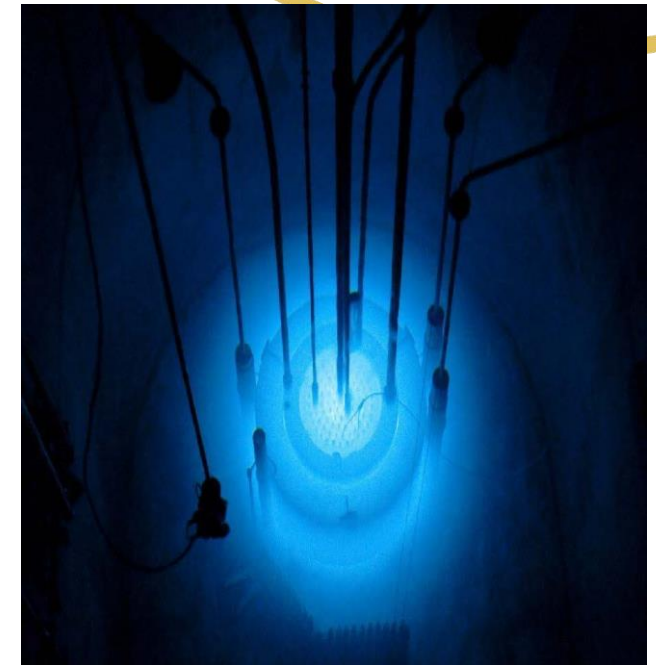
24. Kawalan Sekuriti Kemudahan Penyinaran

Pemegang lesen hendaklah memastikan bahawa bahan radioaktif dikawal dengan lebih k teljaga untuk mengelakkan kecurian, kehilangan atau sabotaj dengan mengadakan:

24.1 Rancangan Sekuriti (Security Plan)

- a) Pemegang lesen hendaklah mengadakan Rancangan Sekuriti yang menerangkan bagaimana langkah-langkah sekuriti dipenuhi ke atas bahan radioaktif yang diluluskan oleh pihak berkuasa keselamatan dan perlu dikaji semula sekurang-kurangnya setahun sekali atau apabila berlaku sebarang perubahan bagi memastikan ianya sesuai dengan keadaan semasa.
- b) Pemegang lesen hendaklah melaksana dan menguji sepenuhnya Rancangan Sekuriti yang diluluskan oleh AELB serta mendokumenkan laporan pelaksanaan dan dimaklumkan kepada AELB.

MANDATORY TO DEVELOP
AND MAINTAIN SECURITY
PLAN



2. LPTA/A/1026 –Research Reactor

In 2004, the RTP was issued a license, LPTA/A/1026. This license was valid for three years and only covered the provision for Class A, that is, nuclear materials. Subsequent license issued by AELB was more comprehensive, that is, for Class A, B and F, and covers radioactive material, nuclear material and nuclear facility.

Summary



- **The fact that nuclear science and engineering are important parts of the knowledge that can provide betterment to the civilization of the people in term of energy option as well as research tools and many applications**
- **Increasing nuclear technology usage and the need have ensured adequate safety and security awareness.**

- Thank You -
- Terima Kasih -



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