

NUCLEAR POWER INFRASTRUCTURE DEVELOPMENT IN VIETNAM AND HUMAN RESOURCE DEVELOPMENT FOR NUCLEAR POWER

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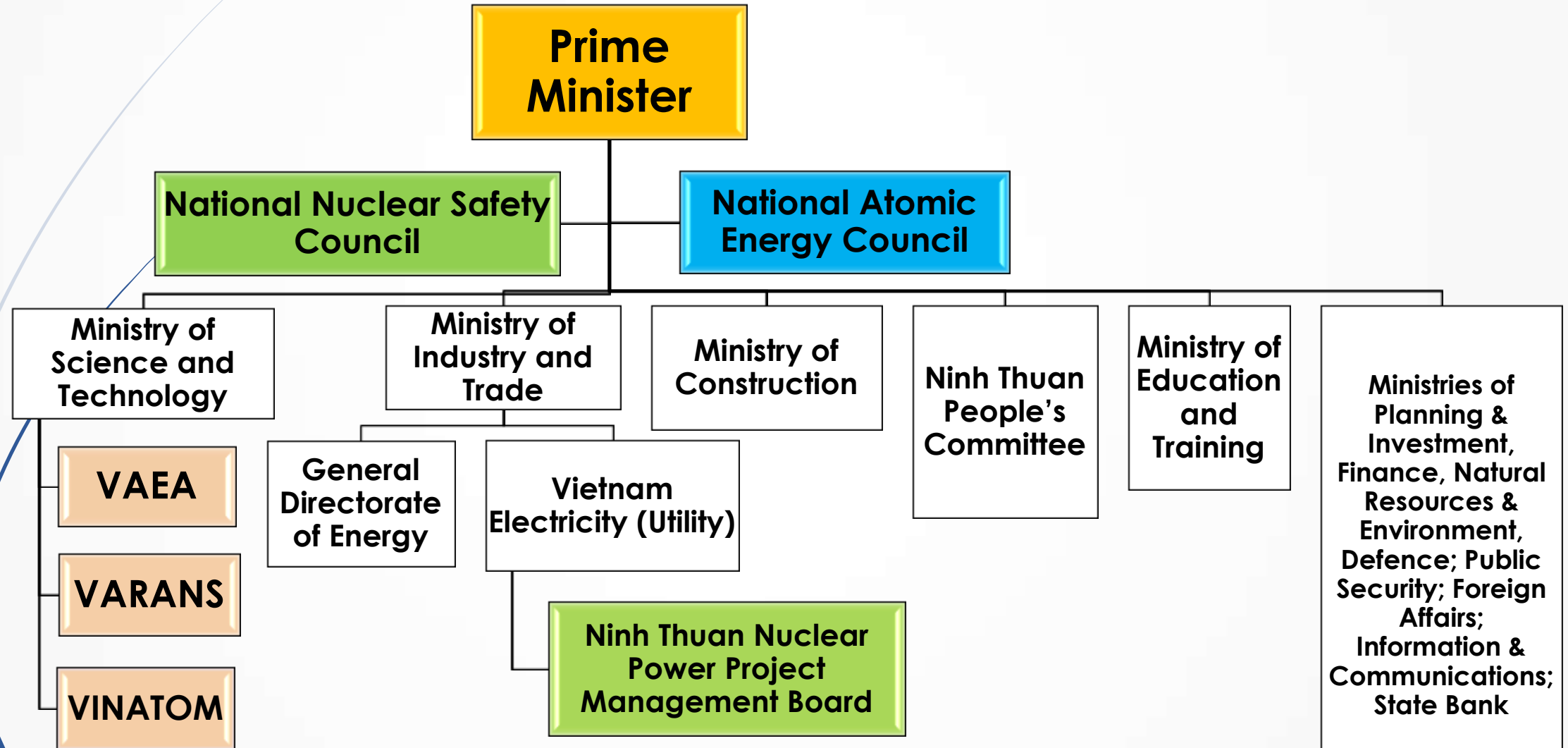
Ninh Thuan Nuclear Power Project

- **Ninh Thuan 1:** Phuoc Dinh, Ninh Thuan
 - Capacity: 2 units x 1,000 MWe
- **Ninh Thuan 2:** Vinh Hai, Ninh Thuan
 - Capacity: 2 units x 1,000 Mwe

FSs and SADs for Ninh Thuan 1 and Ninh Thuan 2 NPPs were basically completed and are being appraised by the competent authorities before being submitted to the Prime Minister for approval.

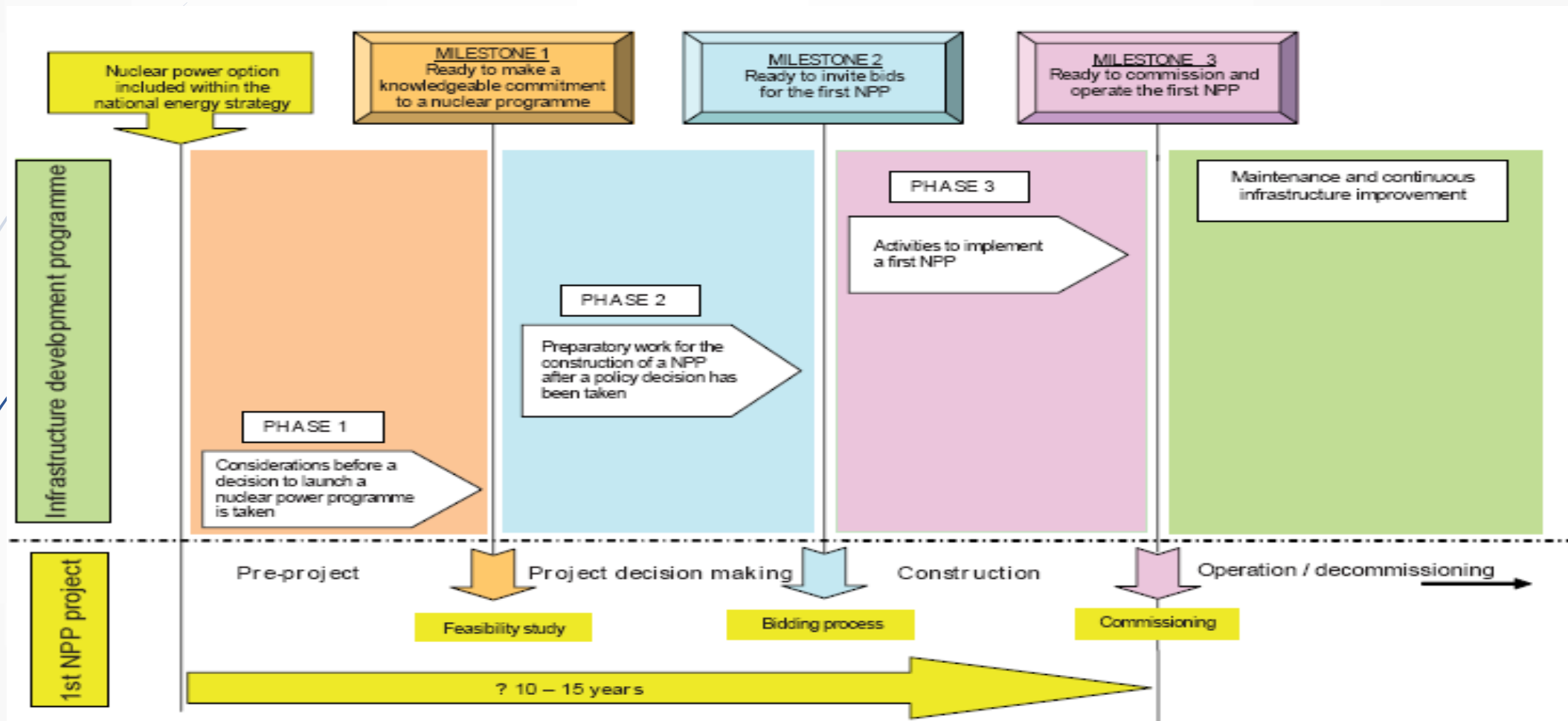


Key Agencies/Organizations in Vietnam Nuclear Power Programme



- Cooperation with vendor countries to implement Ninh Thuan 1 and Ninh Thuan 2 NPPs
 - Inter-governmental agreement between Vietnam and Russia on the construction of the Ninh Thuan 1 NPP Project (10/2010)
 - Inter-governmental arrangement between Vietnam and Japan on the construction of the Ninh Thuan 2 NPP Project (1/2011)
 - Inter-governmental agreement between Vietnam and Russia on the credit loan for the construction of nuclear power plant in Vietnam (11/2011)
- Cooperation with the IAEA and advanced nuclear power countries,... to develop nuclear power infrastructure.

Vietnam has been actively preparing necessary nuclear infrastructure and currently in the Phase 2.



7 Key areas recommended by the IAEA INIR Mission 2012 *(Hanoi, December 2012)*

1. The relevant legislation, in particular the Law on Atomic Energy (2008) should be revised and promulgated as soon as possible.
2. The regulatory framework should be strengthened.
3. The human resource development plans should be strengthened and integrated.
4. The Management Systems should be improved.
5. Financing and funding issues need to be addressed.
6. A policy and strategies for the management of spent fuel and radioactive waste should be developed.
7. The National Nuclear and Radiological Emergency Plan (NNREP) should be completed and approved.

Master Plan for the development of the nuclear power infrastructure in Vietnam up to 2020 was approved by the Prime Minister in 12/2014, which includes:

12 approved projects/tasks and 19 additional projects have been assigned to ministries, EVN and Ninh Thuan Province to be carry out out up to 2020.

Overall objective:

Developing comprehensively the national nuclear power infrastructure in accordance with IAEA's guidance and Vietnam's conditions, meeting requirements for implementing the Ninh Thuan NPP Project safely, secured and effectively.

Specific Objectives of the Master Plan

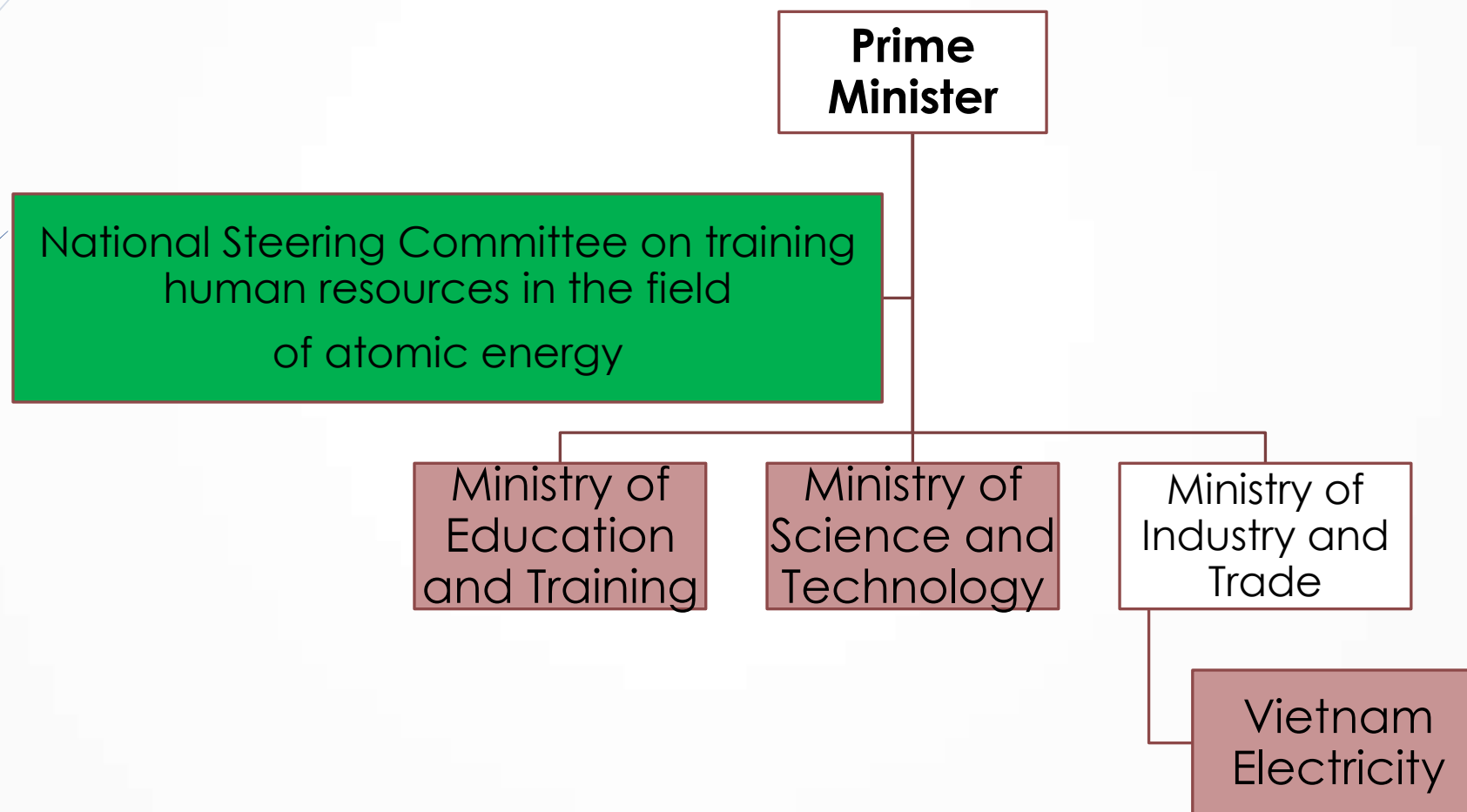
- Developing legislative and regulatory framework, mechanism, policy for nuclear power .
- Training and developing human resource in terms of structure, quantity, quality for state management, technical support, research and training, construction and operation of the NPPs.
- Ensuring physical infrastructure for state management, technical support, research and education&training, environmental radiation monitoring and warning, nuclear and radiological preparedness and response.
- Meeting requirements on approval of site and FS for Ninh Thuan NPP Project; ensuring necessary infrastructure for the construction of NPP.

HUMAN RESOURCES DEVELOPMENT FOR NUCLEAR POWER PROGRAMME

Human resources development for nuclear power programme

- ▶ National Scheme on Training and Human resource development in the field of atomic energy (Decision No. 1558/QD-TTg by PM dated 18/8/2010).
- ▶ National Steering Committee on training human resources in the field of Atomic Energy (established by Decision No. 940/QD-TTg dated 17/6/2011) led by Deputy Prime Minister.
- ▶ State Committee on Ninh Thuan NPP Project led by Deputy Prime Minister (Sub-Committee on Training and Public Communication under the State Committee).

Key organizations in charge of HRD for nuclear power



Ministry of Science and Technology

MOST is in charge of planning and implementing domestic/overseas training activities for staff of government agencies, regulatory body, TSO, R&D institutions.

MOST has submitted **the Draft Plan for training staff of government agencies, R&D and TSO for nuclear power development up to 2020** to the Prime Minister for approval.

Objective of the Training Plan:

- Developing competencies of groups of profession in government management for nuclear power development (around 200 people).
- Developing competencies of groups of profession in R&D and technical support for nuclear power development (around 800 people).

Vietnam Electricity

- ▶ EVN's Project on Training Human Resources for Nuclear Power Plants Project at Ninh Thuan Province (approved by the Prime Minister's Decision No. 584/QD-TTg dated 11/4/2013):
 - ▶ Implementation of domestic/oversea training for staff after recruitment for NPP Project management, NPP operation and maintenance
 - ▶ Implementation of non-degree education and training for NPPs

Key Tasks for HRD for nuclear power in the coming time

- ▶ Domestic education:
 - ▶ Designing appropriate curricular for nuclear engineering at Universities
 - ▶ Nuclear education facility installation
 - ▶ Building capacity of lecturers at Universities, Colleges
- ▶ Training implemented by MOST:
 - ▶ Developing job description for each position
 - ▶ Designing and implementing training programme for specialists of government agencies, TSO and R&D institutions

THANK YOU FOR YOUR ATTENTION!