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Human Resource Development for Nuclear Power Program in Vietnam

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Outline

1. Current Status of Nuclear Power Program in Vietnam
2. Human Resource Development (HRD) for Nuclear Power
3. Education and Training Systems
4. Tasks and Challenges for HRD
5. Concluding Remarks

Current Status of Nuclear Power Program

1. Study on introduction of nuclear power into Vietnam was started about 30 years ago
2. From 1996, various studies were carried out on the possibility of Nuclear Power Plant (NPP) introduction
3. During the last decade, Master Plans (MP) of power development have shown that Vietnam needs to develop the nuclear power
4. Pre-Feasibility Study (Pre-FS) was carried out during 2002-2009
5. November 25, 2009, The Vietnam National Assembly has approved two NPP projects in Ninh Thuan province
6. Vietnam invited Russia to build the first NPP (**NT1**), and Japan to build the second NPP (**NT2**), both in Ninh Thuan province

Current Status of Nuclear Power Program



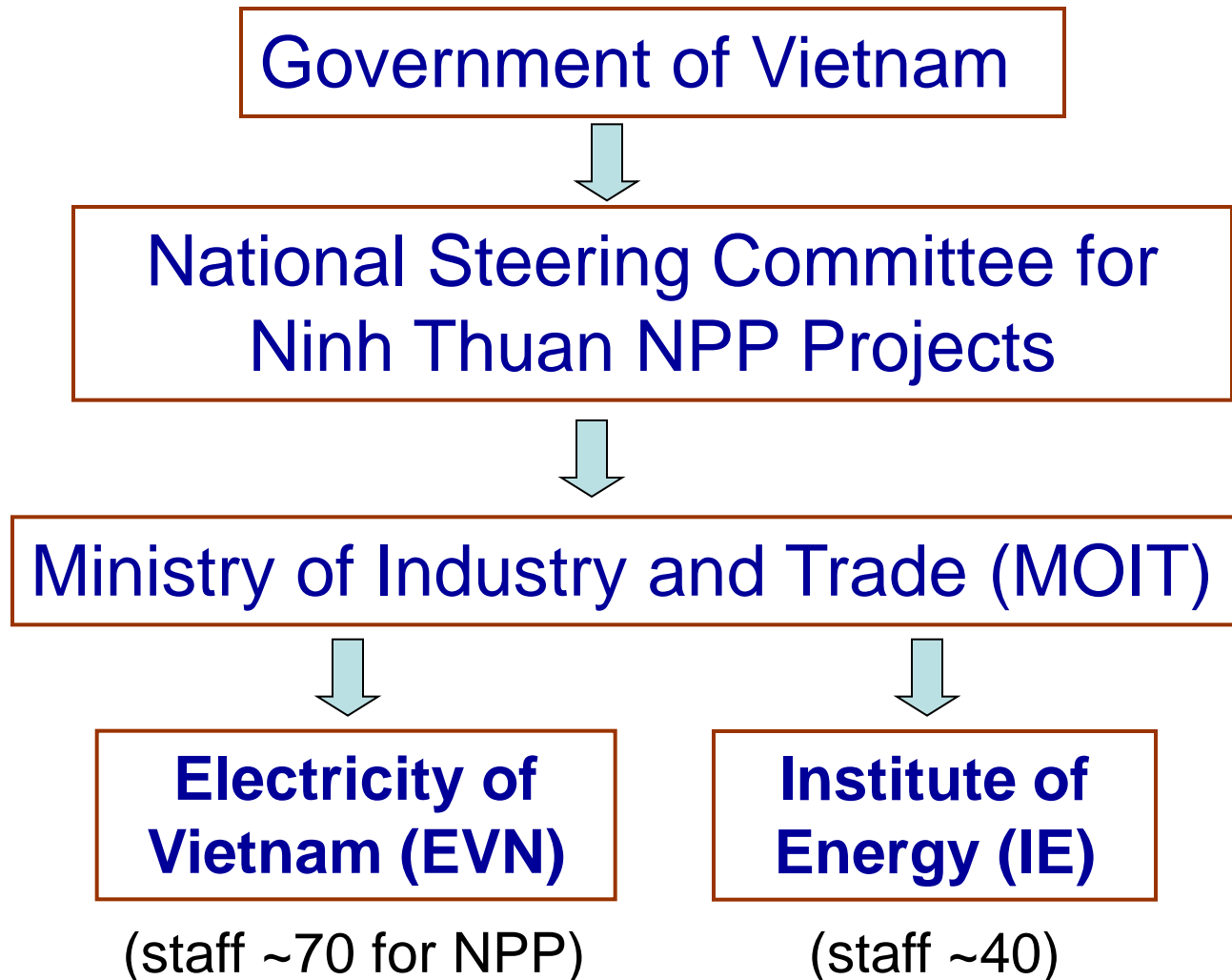
1. NT1: Construction – 2014
Operation - 2020
 2. NT2: Construction – after 2015
Operation – 2021
- Feasibility Studies (FS) are carried out

NT2: Vinh Hai (Japan)

NT1: Phuoc Dinh (Russia)

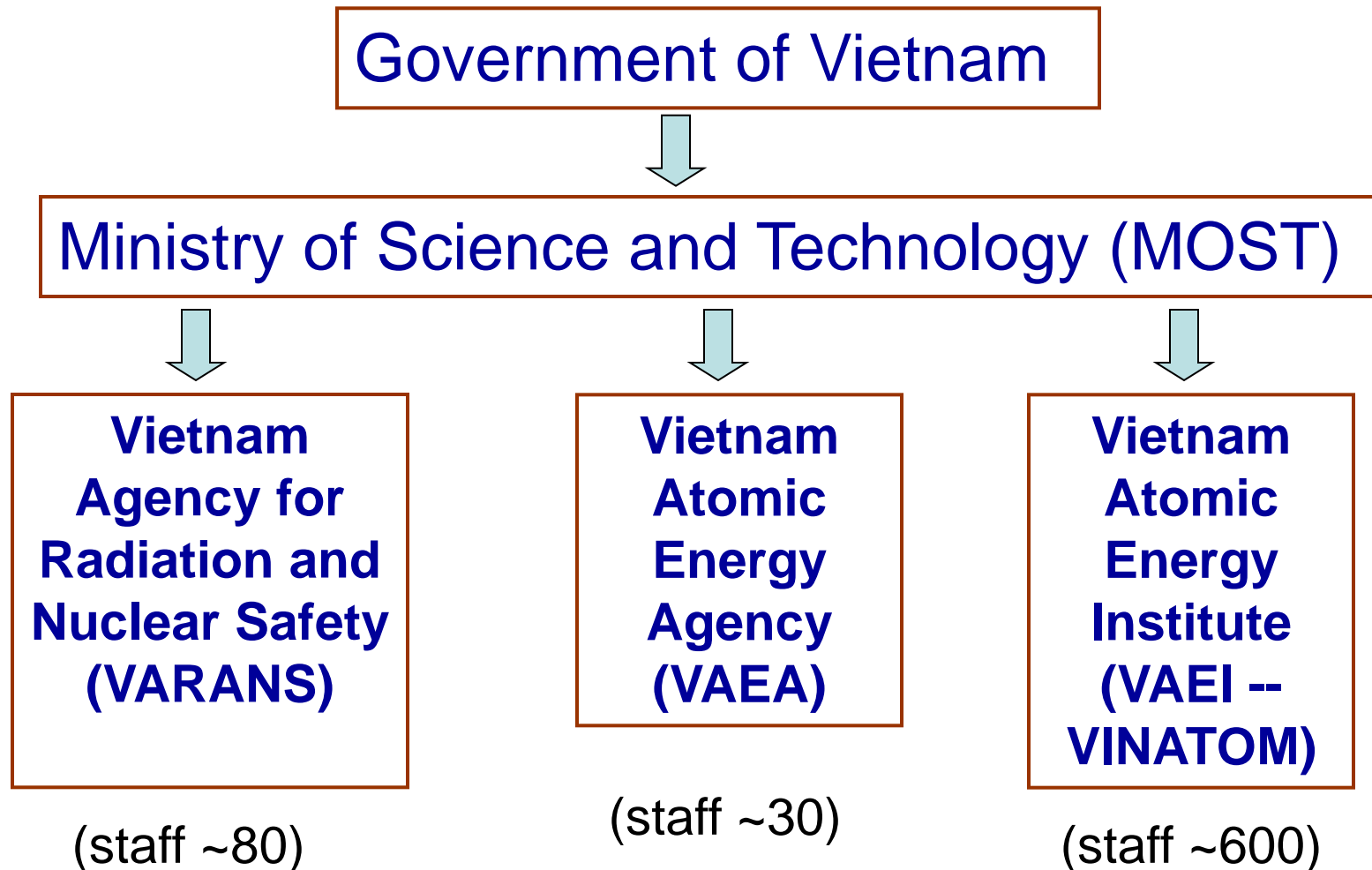
Human Resource Development

Involved organizations in NPP program (1)



Human Resource Development

Involved organizations in NPP program (2)



Education and Training Systems

Universities:

- △ Hanoi University of Science and Technology (HUST): Nuclear engineering background, thermal hydraulics
- △ National University (NU): Nuclear physics, Nuclear technique ...
- △ Electricity Power University (EPU): Electrical technicians
- △ Ho Chi Minh City University (HCMU): Nuclear physics, Nuclear technique ...
- △ Dalat University (DU): Nuclear physics, Nuclear technique ...

No training facility for nuclear engineering is available in Vietnam

Tasks and Challenges for HRD

Tasks:

- △ Education and training of man power for NPP projects (siting, consulting work, project management, operation and maintenance etc.)
- △ Education and training of man power for long term nuclear program (regulatory body, staff for universities, scientists for Research and Development – R&D)

Challenges:

- △ Inadequate infrastructure for HRD
- △ Insufficient level of R&D supporting HRD
- △ Lack of long term strategy for HRD (-- current status)
- △ Implementation of different reactor technologies
- △ Language (e.g. Russian for the 1st NPP project)
- △ Financial problem (lack of funding)

Concluding Remarks

1. Nuclear power is needed for Vietnam in the long term development strategy
2. Vietnam is lack of man power for both the NPP projects and the long term nuclear power program
3. A long term HRD program (strategy) is needed to be established, in cooperation with Russia and Japan, and other countries
4. Education and training abroad is essential for the next 10 years
5. Establishment of adequate infrastructure supporting HRD (nuclear engineering faculties, research groups, technical support centers) is indispensable for Vietnam

Thank you!

