



Hub of Talents for Nuclear Energy Technology

ศูนย์รวมผู้เชี่ยวชาญด้านเทคโนโลยีพลังงานนิวเคลียร์

The 26th INPRO Dialogue Forum on Deployment of Nuclear Energy Systems
for Applications Beyond Electricity
24 August – 28 August 2026, Bangkok, Thailand



Keynote presentation: Thailand
Hub of Talents for Nuclear
Energy Technology (HOTNET)

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Hub of Talents for
Nuclear Energy Technology

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Thailand Institute of Nuclear Technology (TINT)

SMR: Important Role for Clean Energy

Role of New Technologies in Clean Energy & Net Zero 2050

- SMR: High safety, small footprint, and can be installed close to electricity demand centers.
- Gen III/III+/IV: Enhanced efficiency and safety standards.

PDP2024 Draft Plan

- 2 Light Water Reactor SMR power plants
- Capacity: 300 MW per plant

PDP2026 Draft Plan

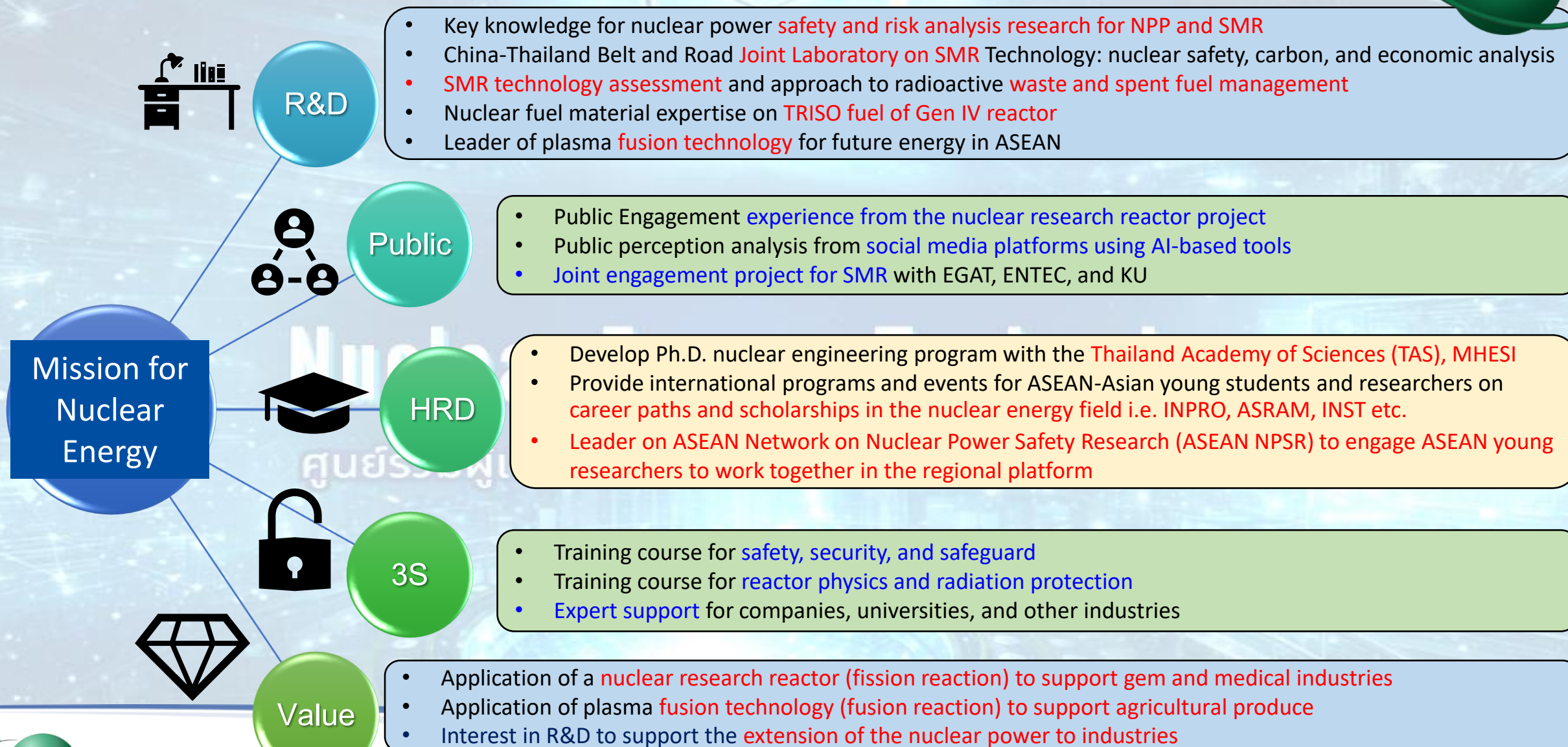
- Prepares to incorporate Small Modular Reactors (SMRs) into the power grid with a total capacity target of 2,400 MW (up from the previous plan of 600 MW).
- Designed to serve as baseload power plants and support the growth of the Data Center industry.

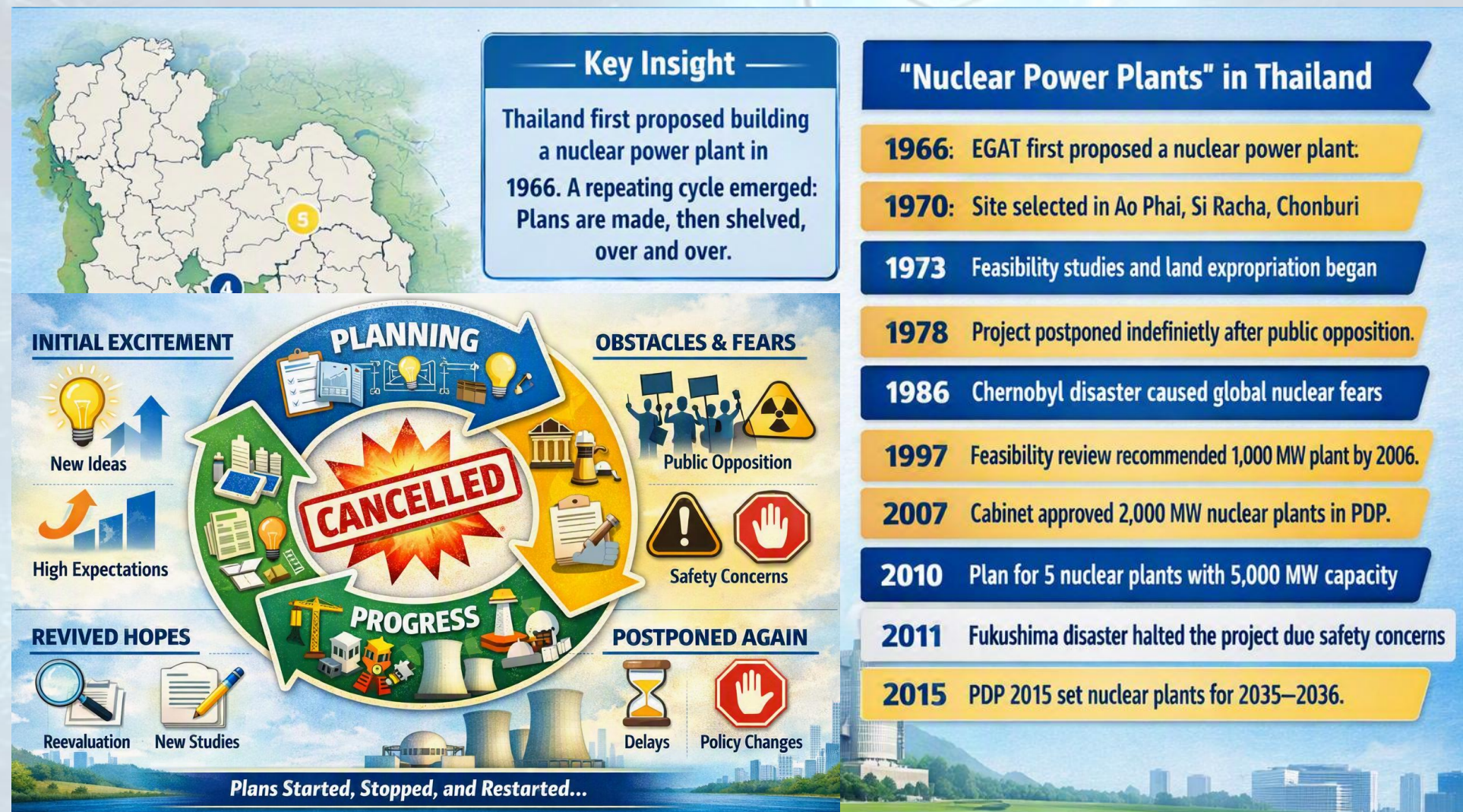
<https://seekingalpha.com/article/4828142-data-centers-embracing-nuclear-smr-ai-needs>

<https://www.youtube.com/watch?v=oucR65LEM-U>

<https://www.thansettakij.com/economy/energy/662296>







- Thailand's concept of building a nuclear power plant began in 1966 (B.E. 2509).
- However, a distinct and repeating pattern has emerged.
- Plans are formulated and then shelved, cycling in an endless loop.

Hub of Talents for Nuclear Energy Technology (HOTNET)



Kick-off Meeting of Hub of Talents for Nuclear Energy Technology, 22 April 2026, Bangkok, Thailand

- Thailand Institute of Nuclear Technology (TINT)
- National Research Council of Thailand (NRCT)
- King Mongkut's University of Technology Thonburi (KMUTT)
- Chulalongkorn University
- Kasetsart University
- King Mongkut's Institute of Technology Ladkrabang (KMITL)
- National Energy Technology Center (ENTEC), NSTDA
- Office of the Permanent Secretary, Ministry of Energy
- Department of Alternative Energy Development and Efficiency (DEDE)
- Electricity Generating Authority of Thailand (EGAT)
- Provincial Electricity Authority (PEA)
- Industrial Estate Authority of Thailand (IEAT)
- Ministry of Commerce
- Office of the Vocational Education Commission (OVEC)
- Office of Atoms for Peace (OAP)
- Other Private Sectors i.e. GPSC, Banpu, Evolt Technology, WHA Utilities & Power, PTT, True Internet Data Center, Global Power Synergy Public Company Limited (GPSC), Banpu Public Company Limited, Evolt Technology, WHA Utilities & Power, PTT Public Company Limited, True Internet Data Center (True IDC), etc.



Thailand Institute of Nuclear Technology (TINT)

ADVISORY & EXECUTIVE STRUCTURE



CORE ROLES & STRATEGIC PRIORITIES



RESEARCH & TECHNOLOGY

- Microscope/ Technology
- Test-acroement
- Research &a technology



PRACTICAL APPLICATIONS

- Practical applications
- Engaging in transparency



HUMAN CAPITAL

- School and professionting
- School & professional training



COMMUNICATIONS

- Domestic Communications
- Communications



- School and professional professional training



INTERNATIONAL COOPERATION

- Global hondships
- International Cooperation

IAEA MANDATE FOR SUSTAINABLE OPERATION



The IAEA requires transparent public engagement, knowledge building, and stakeholder participation as essential conditions for a sustainable nuclear project within the community.

KEY STAKEHOLDER GROUPS



Community Leaders
& Local Government



Mass Media &
Science Communicators



Industrial Sector
& Entrepreneurs



Youth & Educational
Institutions



General Public
(Local & Society)

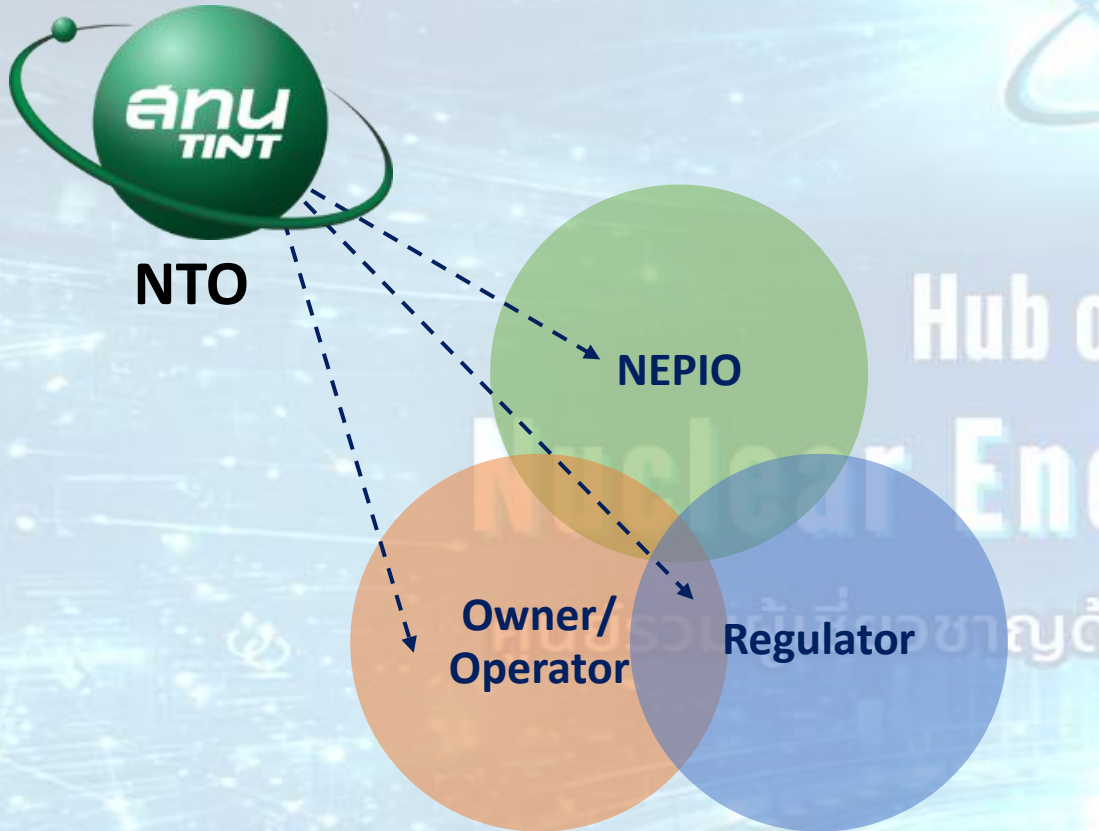
The Ultimate Goal of HOTNET

- Building High-Skilled Human Capital
 - **Developing Next-Gen Experts:** Training new researchers, academics, and nuclear engineers to **bridge the talent gap from retiring experts** and keep pace with technological advancements.
 - **Supporting Energy Transition:** Equipping personnel with the **expertise to evaluate, select, and deploy modern nuclear technologies—specifically Small Modular Reactors (SMRs).**
- Integrating and Elevating National R&D
 - **Unifying experts** across more than 30 public agencies, academic institutions, and industrial partners to eliminate research fragmentation, align efforts, and directly support national energy security and carbon reduction goals.
- Establishing Thailand as a Regional Hub
 - Elevating Thailand's scientific and **technological capacity to serve as ASEAN's primary center** for clean nuclear energy knowledge, workforce development, and innovation.



TINT: Nuclear Technical Organization (NTO)

Mission 0: Support to Make the 1st NPP Program in Thailand Happen *Safe and Sound*



Three Key Organizations



19 Nuclear Infrastructure Issues of IAEA

5 Dimensions for HRD in HOTNET

5 HRD Dimensions for Nuclear Workforce Development



Professional

- Project Management
- Supply Chain, Finance & Investment



Technician / Engineer

- Specialized Engineering
- Safety & Operations



Academic

- Curriculum & Research
- Innovation & Knowledge Transfer



Policy / Regulatory

- Nuclear Policy,
- Safety & Regulations



Public

- Public Communication
- Community Engagement
- Social Trust

Professional: Focuses on project management, supply chain management, risk management, finance/investment, and energy economics.

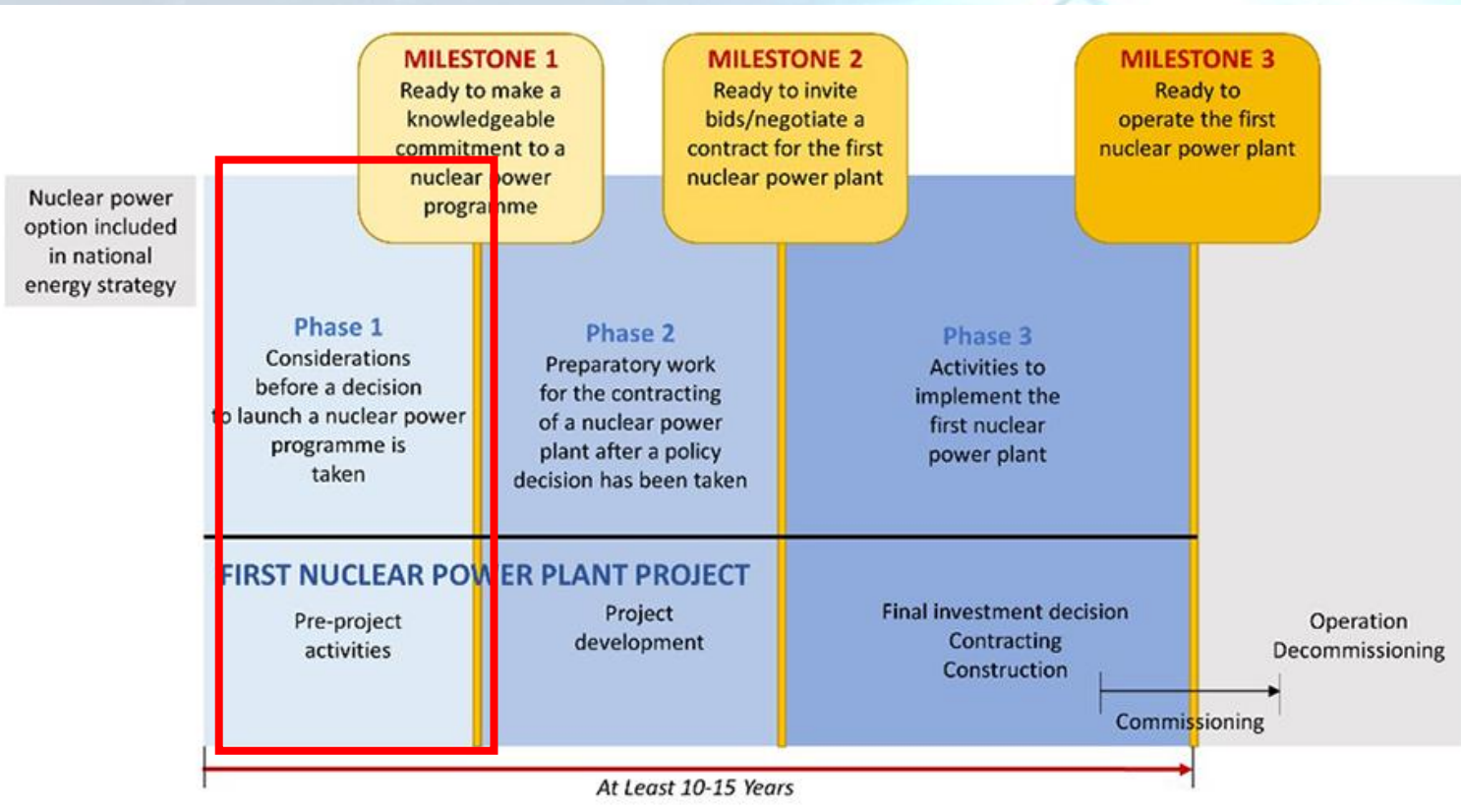
Technician/Engineer: Focuses on specialized engineering, simulators, safety standards, operation & maintenance, and digital/cybersecurity.

Academic: Focuses on curriculum development, research networks, modern R&D, innovation/technology, and knowledge transfer.

Policy/Regulatory: Focuses on policy design, safety regulation, nuclear laws, international standards (IAEA), and independent assessment/oversight.

Public: Focuses on nuclear communicators, building public understanding, risk communication, community engagement, and creating social trust.

Group 1: Professional



- Professional group serves as the "captains and quality controllers" of the SMR project. Because nuclear power projects are **highly complex**, **require massive investment**, and involve long implementation timelines, even a minor mistake can impact safety, financial returns, and public trust.
- Having highly competent professional personnel is therefore an initial essential requirement (prerequisite) established by the IAEA that must be prepared starting in **Phase 1 (prior to making an investment decision)**.

- Project Manager
- Nuclear Safety Expert
- Quality Assurance / Quality Control (QA/QC) Expert
- Nuclear Fuel and Radioactive Waste Expert
- Asset Management and Risk Management Expert

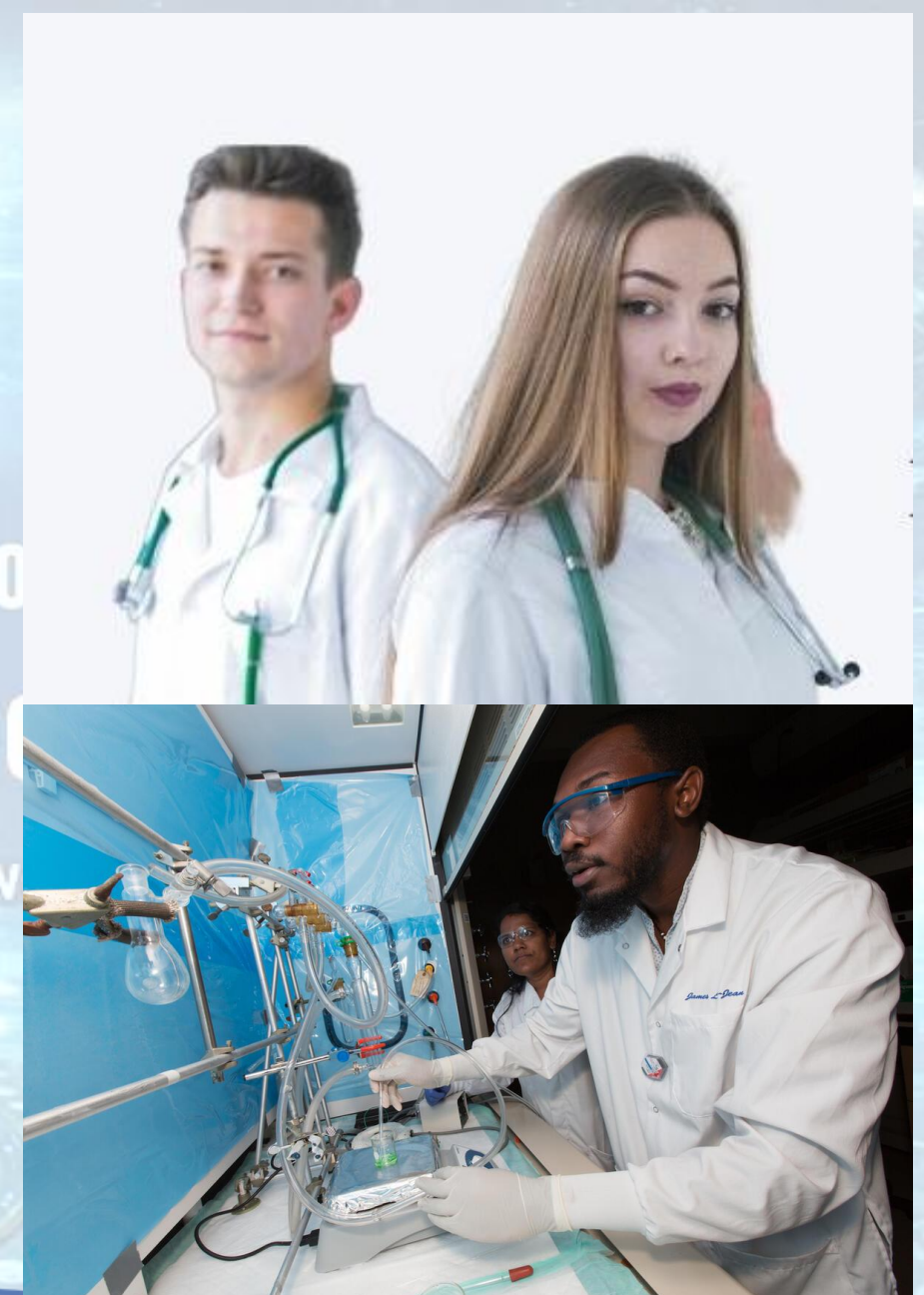
Group 2: Technician / Engineer

- Technician / Engineer group serves as the "operational backbone" responsible for **designing, constructing, installing, operating, and maintaining SMR** power plants to ensure maximum safety.
- Nuclear technology demands a level of precision and safety that allows zero tolerance for errors, having highly skilled technical personnel who are trained using simulators and grounded in a strong safety culture is essential to **preventing accidents and ensuring continuous, cost-effective plant operations.**
 - Nuclear Engineer
 - Mechanical, Electrical, and Instrumentation & Control (I&C) Engineer
 - Construction and System Installation Engineer
 - Operations and Maintenance Technician
 - Reactor Operator



Group 3: Academic

- Academic group acts as the "intellectual foundation and knowledge engine" driving national sustainability. SMR technology is an emerging and rapidly advancing field; relying solely on imported technology without a strong domestic knowledge base cannot secure long-term stability or public confidence.
- Developing robust education and research personnel is crucial for facilitating technology transfer, feeding new generations of talent into the industry, and solving complex technical challenges throughout the power plant's operational lifecycle.
 - University Professor / Lecturer
 - SMR and Nuclear Technology Researcher
 - Nuclear Scientist
 - Innovation and Technology Developer
 - Graduate Student and Early-Career Researcher



Group 4: Policy / Regulatory

- Policy / Regulatory group serves as the "**governance and regulatory foundation**" ensuring credibility, rules, and governance for national nuclear projects.
- Nuclear technology directly involves **national security, safety, and international obligations**, any country launching an SMR project must establish independent policy and regulatory bodies with highly specialized expertise.
- These **professionals design regulations, handle licensing, and enforce strict oversight** in accordance with the IAEA Milestone Approach framework. Without this group, the project cannot proceed legally or achieve international acceptance.
 - Energy and Nuclear Policy Maker
 - Policy Analyst
 - Nuclear Safety Regulator / Regulatory Officer
 - Nuclear Lawyer / Legal Expert
 - International Cooperation and Nuclear Obligations Expert



Group 5: Public

- Public group serves as the "foundation of consent and the decisive factor for success (Social License to Operate)" for nuclear energy projects.
- Nation needs to mandates public and stakeholder engagement via education, transparent risk communication, and active participation for sustainable project operation.
 - Community Leaders and Local Government
 - OrganizationsMass Media and Science
 - CommunicatorsIndustrial Sector and Entrepreneurs
 - Youth and Educational Institutions
 - General Public in the Local Area and Society at Large



Workshop Project for Developing Communication Strategies and Public
Acceptance of Small Modular Reactor (SMR) Nuclear Technology
6-7 July 2026, Hua Hin, Thailand



TINT-SMR Team

Thailand SMR Training Program: SMR Safety Analysis Simulation Training for TINT

Date: July 19–25, 2026

Location: Chengdu, People's Republic of
China

Participants / Attendees:

- Dr. Wasin Vechgama
- Dr. Klitsadee Yubonmhat
- Dr. Nart Noodee
- Ms. Kunthida Waree
- Mr. Weerawat Pornroongruengchok



SMR HRD Brainstorming Forum: Joining Forces to Drive Thailand's Nuclear Human Resource Development Plan

13 Aug 2026, Bangkok, Thailand



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Thank you for your kind
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