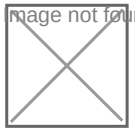

From Policy to Power: Indonesia's Roadmap to Nuclear Energy

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Indonesia is entering a new phase in its energy transition, as part of its commitment to achieve net zero emissions by 2060. In light of this, the government is intensifying its efforts to establish a regulatory framework for nuclear power plants ("**NPPs**"). According to several news outlets, a draft regulation governing NPP development has been submitted by the Minister of Energy and Mineral Resources ("**MEMR**") to the president. This draft regulation primarily serves as an umbrella regulation governing the development of NPPs, including the establishment of a national nuclear power agency to oversee the entire development of a civil nuclear program.

While Indonesia does not yet operate a commercial NPP, recent policy developments and regulations from the MEMR signal that nuclear energy is being considered as part of the country's future energy supply.

This article highlights the important developments and key legal issues that investors and Independent Power Producers (IPPs) should watch closely.

Nuclear Energy is Now Formally Included in the National Energy Planning

MEMR Decree No. 85.K/TL.01/MEM.L/2025, which governs the National Electricity General Plan (*Rencana Umum Kelistrikan Nasional* – **RUKN**) highlights the following issues pertaining to the development of NPPs:

1. Nuclear energy is formally included as a primary energy source.
2. For electricity supply diversification, the first NPP is targeted to begin commercial operations (COD) in 2032.
3. The development and operation of NPPs must include guarantees for nuclear fuel supply and radioactive waste management. To ensure this supply, national nuclear mining resources need to be reserved.

4. Regarding the safety and security of the development and operation of NPPs, approval from the nuclear regulatory body must be obtained.

Inclusion of NPP in PLN Electricity Supply Business Plan (RUPTL)

PLN’s Electricity Supply Business Plan (*Rencana Usaha Penyediaan Tenaga Listrik* – **RUPTL**) sets out the development of the electricity system within PLN's service areas, prepared to achieve specific goals based on certain policies and planning criteria. The long-term electricity system development plan in the RUPTL is designed to optimally accommodate the long lead times of electricity projects.

Following the issuance of MEMR Decree No. 188.K/TL.03/MEM.L/2025 on the ratification of PLN’s RUPTL for 2025–2034, another NPP is also slated to begin operations in 2033. This reinforces the notion that NPP development in Indonesia is no longer merely a policy concept but is being actively pursued by the Indonesian Government.

Below are the important points to consider in the RUPTL:

1. The RUPTL envisages both large reactors and small modular reactors.
2. The development and operation of NPPs must include guarantees for the supply of nuclear fuel, radioactive waste management, safety and security measures, and compliance with applicable laws and regulations, as well as recommendations from the IAEA (International Atomic Energy Agency), including 19 readiness requirements for infrastructure.
3. According to the detailed plan (rincian rencana pembangunan pembangki*t*) for the NPP development, it is planned that a 250 MW NPP will operate in Sumatra in 2032 (planned commencement of Commercial Operation Date / COD), with an Independent Power Producer (IPP) as the developer. The specific location may be in Bangka Belitung or another province, pending a government decree.
4. Another NPP is planned to operate in West Kalimantan province, with a 250 MW capacity. The commercial operation date is expected to be in 2033, with an Independent Power Producer (IPP) as the developer.
5. The potential nuclear energy would be obtained from the enrichment of uranium, which would be sourced from Melawi Regency, West Kalimantan. Deposits there are estimated at approximately 24,112 tons.

However, currently there is no regulation regarding the determination of electric power tariffs sold to PLN by IPPs.

General Regulatory Framework of Nuclear Energy

The general regulation that governs the foundation for nuclear law governance is Law No. 10 of 1997 on Nuclear Energy ("**Nuclear Law**"). Under Article 13 of the Nuclear Law, the generation of commercial nuclear reactors in the form of NPPs is determined by the government after consulting with the People's Representative Council ("**DPR**"). According to the explanation of the relevant provision, the consultation is related to the site where one or more nuclear reactors will be constructed.

Article 13 clarifies that consultations must be conducted for each site where one or more Nuclear Power Plants will be built. In these consultations, the government must consider the suggestions and opinions of the DPR.

However, as the Nuclear Law sets out only the general framework for the use of nuclear energy and does not specifically address its utilization for power generation, more specific implementing regulations are required to regulate this area.

The development of nuclear reactors and nuclear installations must also comply with business licensing requirements from the central government, which are now governed by Government Regulation No. 28 of 2025 on the Implementation of Risk-Based Business Licensing ("**GR 28/2025**").

Required Business Licensing for NPPs in Indonesia

The development of NPPs in Indonesia is subject to both general and specific licensing frameworks, which require specific approvals from the relevant authorities. Given the high-risk nature of nuclear activities, compliance obligations are both extensive and capacity dependent.

General Business Licensing Requirements

All business sectors in Indonesia are classified under the KBLI (Indonesian Standard Industrial Classification) system, which determines risk level and applicable licensing requirements. The relevant KBLI must be reflected in the company's Business Identification Number (NIB), which is mandatory for all businesses.

Under the newly issued KBLI 2025, a specific classification for nuclear power generation has been introduced: KBLI 35112 – Electricity Generation from Non-Renewable Energy Sources That Do Not Produce Emissions.

While this marks a significant regulatory development, the Online Single Submission (OSS) system has not fully aligned with KBLI 2025, and KBLI 35112 is not yet reflected in the OSS platform or annex of GR 28/2025. Therefore, the alignment between the KBLI numbers and the required business licenses remain to be seen in the future.

Nuclear Specific Licensing Requirements

Under Government Regulation No. 2 of 2014 on Licensing of Nuclear Installation and Utilization of Nuclear Materials, nuclear installations are subject to a structured and stage-based licensing framework:

Construction Stage

- Site License (valid until decommissioning Statement of Release)
- Construction License (valid up to eight years, extendable)

Operation Stage

- Commissioning License (valid up to two years)
- Operating License (valid up to 40 years; extension application required at least three years before expiry)

Decommissioning Stage

- Decommissioning License (mandatory if operations cease or operating license expires without renewal)

The type of license required also depends on reactor capacity, classified as:

- Large power reactors (D > 1,000 MWt or D > 300 MWe),
- Small power reactors (30 MWt < D ? 1,000 MWt or 10 MWe < D ? 300 MWe), or
- Micro power reactors (D ? 30 MWt or D ? 10 MWe)

Capacity classification determines whether construction, operation, and decommissioning licenses are required.

However, new regulations which govern nuclear installations specifically for electricity generation, including the required licenses may be issued by the Indonesian government.

Indonesia has moved beyond preliminary discussions and has formally incorporated, and is continuing to develop, nuclear energy within its national electricity planning through the RUKN

and RUPTL. These instruments set concrete targets for NPP commercial operations in 2032–2033 and indicate that IPPs may act as project developers.

While the regulatory framework is evolving, including the introduction of new KBLI classifications and a staged nuclear licensing regime, several key areas remain outstanding, including the determination of tariffs, alignment of the OSS system, and the issuance of more specific implementing regulations governing nuclear power generation for electricity supply purposes.

For investors and IPPs, this presents both significant opportunity and regulatory transition risk. Early engagement with stakeholders and government officials, close monitoring of forthcoming regulations, and proactive structuring of licensing and project development strategies will be critical as Indonesia advances toward operational nuclear power.

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