

THE PROCESS OF LEGAL DRAFTING REGULATION IN THE DEVELOPMENT OF THE NUCLEAR POWER PLANT IN INDONESIA

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ABSTRACT

THE PROCESS OF LEGAL DRAFTING REGULATION IN THE DEVELOPMENT OF THE NUCLEAR POWER PLANT IN INDONESIA. *In Indonesia, the process of legal drafting to establish the regulation is based on the Act No. 10 Year 2004 on the Establishment of Legislation. The process shall comply with the constitutional and institutional requirements of national political and legal system. In drafting the development of the regulation of nuclear energy, BAPETEN has been involving some other agencies or other related government agencies, and stakeholders such as utility, academic institutions, and publics. In general, in the process of legal drafting, international publications or other country regulations can be a reference and adopted. In the establishment of the regulations of nuclear energy, BAPETEN has issued some Government Regulations and Chairman Regulations of BAPETEN. For nuclear safety of NPP, the regulations have not been completed yet, but some regulations related in the area of siting of NPP have been already available. In this paper, it is discussed the process of the establishment of legislation and of the legal drafting nuclear regulation of NPP, and the current status of NPP regulations.*

Keywords: *regulation, legislation, establishment, legal drafting*

ABSTRAK

PROSES PENYUSUNAN PERATURAN DALAM PEMBANGUNAN PLTN DI INDONESIA. *Proses penyusunan pembentukan peraturan perundang-undangan di Indonesia mengacu pada Undang-Undang Nomor 10 Tahun 2004 tentang Pembentukan Peraturan Perundang-undangan dan dalam penyusunannya selain mengikuti UU pembentukan peraturan perundang-undangan juga harus memperhatikan persyaratan-persyaratan konstitusi dan institusi lainnya secara sistem legal dan politis. Dalam menyusun pengembangan peraturan ketenaganukliran, BAPETEN tidak bekerja sendiri namun melibatkan beberapa lembaga/badan pemerintah/swasta dan pemangku kepentingan seperti pengguna, universitas/lembaga akademik dan lembaga lainnya yang relevan/terkait. Pada umumnya, proses pembentukan peraturan perundangan ketenaganukliran dilakukan dengan pendekatan mengadopsi peraturan internasional atau peraturan negara-negara lain yang pantas untuk diacu. BAPETEN telah menerbitkan beberapa peraturan pemerintah dan peraturan kepala BAPETEN mengenai keselamatan ketenaganukliran. Untuk peraturan keselamatan PLTN, memang belum lengkap, namun peraturan PLTN yang terkait dengan tapak telah banyak diundangkan oleh BAPETEN.*

Kata kunci: *peraturan, perundang-undangan, pembentukan, penyusunan peraturan*

1. INTRODUCTION

In the year 2006, the government has issued the Presidential Regulation Number 5 Year 2006 on The National Energy Policy (NEP) on the period of 2025. This President Regulation is directed to ensure the security of energy supply, which is essential to support the national sustainable development programmes. Nuclear and renewable energy are included in Indonesia's plans to fulfil security supply in electricity. The President Regulation stipulated that the national energy planning in 2025, it is expected that 4 percent of the total electricity for Java-Bali grid will be generated from nuclear energy^[1]. Nuclear Power Plant (NPP) is preparing through the nuclear energy program to be constructed four units NPP with each capacity 1000 MWe. The first NPP would hopefully be started in commercial operation by year 2017^[2].

There are various infrastructure aspects to support the commitment of Indonesia nuclear energy program such as human resources development (HRD), industrial and technological aspect, management aspects, and regulatory aspects.

One of the implementation of the nuclear energy program is the establishment of independent nuclear energy regulatory authority, namely Nuclear Energy Regulatory Agency (BAPETEN). There are three pillars in controlling the use of nuclear energy in Indonesia are making regulation, processing license and performing inspection. In the establishment of the regulations of nuclear energy, BAPETEN has issued some Government Regulations and Chairman Regulations of BAPETEN. Nowadays, the regulations of the NPP have not been completed yet, but some regulations related in the area of siting of NPP have been already available.

2. LEGAL BASIS OF THE DEVELOPMENT OF NPP

In principle, the utilization of nuclear energy can be divided into 2 parts, i.e the energy and non energy. Utilization of nuclear energy for electricity product is the activities using the nuclear reactor namely NPP. Up to now, Indonesia has not developed NPP. Indonesia has established in the research and development activities, and the application of nuclear energy in the field of agriculture, industry, medical, pharmacology and others. The utilization of nuclear energy includes the utilization of research reactor for research and radioisotop production.

The Act No. 10 Year 1997 on Nuclear Energy, classifies the type of nuclear reactor into non-commercial and commercial reactor. Meanwhile, in the Government Regulation No. 43/2006 on the licensing of nuclear reactor, nuclear reactor is defined into the power reactor and the non-power reactor. The non-power reactor utilizes neutrons for research or production some isotope, and the power reactor utilizes heat energy to generate electricity. The commercial reactor power is usually called NPP. The Act No. 10 Year 1997 and Government Regulation No. 43/2006 have been making the business opportunity for the private companies to build a commercial reactor power/NPP in Indonesia. It is stated in the Article 13, paragraph (4) of the Act No.10/1997: **"The commercial construction of nuclear power plants, shall be established by the government after consultation with the House of Representatives of the Republic of Indonesia."**

Then, there is detail regulation on the rules of NPP development, in the Government Regulation No.43/2006 on the Licensing of Nuclear Reactor. The government giving the consultation on the NPP is the minister respons for energy and mineral resources and that is stipulated in the National Plan of Public Electricity. In the Article 5 paragraph (4) Government Regulation No.43/2006, states that: **"the Construction of the aforementioned commercial power reactor as a nuclear power plant is established by Ministry who has**

responsibility in the field of electric power after consulting with The House of Representative of The Republic of Indonesia."

One of the most important of provision in the Article 13 paragraph (3) of the Act on Nuclear Energy is that **"the construction, operation, and decommissioning of the commercial nuclear reactor shall be performed by State-Company, cooperatives and/or private company.**

3. DISCUSSION

3.1. THE PROCESS OF THE ESTABLISHMENT OF LEGISLATION

The process of the establishment of national legislation is based on the Act, namely Act Number 10 Year 2004 on the establishment of legislation. Basically, the process divided into several phases, including planning, preparation, technical preparation, formulation, discussion, approval, enactment and dissemination. The legal system hierarchy of the Republic of Indonesia according to the Act Number.10 Year 2004 is as follow:

- a. The 1945 Constitution of the Republic of Indonesia and its amendments thereto (*UUD-45*);
- b. Act, is formulated with the agreement between the House of Representative and the Government of the Republic of Indonesia, signed by the President (*UU No.10/1997*);
- c. Government Regulation as a substitutes act, which is made by the President when the state is under specific or uncertain conditon (*PERPU*);
- d. Government Regulation, as an implementation of the Act, initiated and drawn up by the Executive Bodys. It prepared by the relevant minister, department, or non-department, and signed by the President (*Peraturan Pemerintah/PP*);
- e. Presidential Regulation, issued by the President as the Head of Executive Bodies (*PerPres*);
- f. District Regulation, is formulated with the agreement between the Province or District' House of Representative and Head of Province (Governor) (*PerDa*).

Act is the primary regulation that constitutes the generic and basic principles of certain fields. Government and Parliament of Republic Indonesia altogether are responsible in establishing an Act.

The Government Regulation as a substitutes Act usually enacted by Government when the situation or condition in country is in emergency, unsettled or chaos. In order to implement the Act comprehensively requires more detailed, technical, practicable and explainable regulations that become its secondary and derivatives regulations, which include Government Regulations, Presidential Regulations and Ministry Regulation, or Departmental Ministry Regulation, or the Chairman of Non Department Government Bodies Regulations as the lowest level of regulations. Those regulations are applicable law and legally binding to all entities within national jurisdiction.

Although the Ministry Regulation, or Departmental Ministry Regulation, or the Chairman of Non Department Government Bodies Regulation are not literally written in the Act, those Regulations are recognized by the Act, and actually laid down between the Presidential Regulation and Local Regulations, since the Ministers, or Departmental Ministers, or Chairman of Non-Department Government Bodies are president assistant. Those technical regulations are intended to regulate the national matters as well.

The lower regulation shall not be contrary with the higher regulation. For example Government Regulation shall be in line with the Act, or it can be said that Government Regulation is intended to enlighten any principles of the Act. Of course the Local Regulation shall not be contrary with Minister Regulation or BAPETEN's Chairman Regulation. Higher regulation *i.e* an Act usually contains any government policy principles, and lower

regulation contains any technical provisions to implement any provisions of higher regulations.

3.2. THE PROCESS OF THE ESTABLISHMENT OF NUCLEAR REGULATION

3.2.1. Strategic Plan

BAPETEN is the Non-Departement Government Agency, which has been established based on Act No. 10 Year 1997 on Nuclear Energy. And, the implementation Regulation of the Act for establishing BAPETEN is the Presidential Decree Number 76 year 1998. The control of the use of nuclear energy is performed through regulation, licensing and inspection from the point of view of safety, security, and safeguards. Therefore, it is expected in the implementation of their tasks, BAPETEN can ensure the security and peaceful for the public and the environment in the national and international level.

To perform their tasks and functions, BAPETEN has policy for controlling the use of nuclear energy, namely Strategic Plan. This strategic Plan is the strategic policy direction of BAPETEN management during five years working period. The strategic plan must be described in each department or division in the form of five year program of Medium Term Performance Plan. The details of their plan will be annually performed by considering the strengthness, weakness, opportunities and challenges. In the period of five years, there are 3 challenges that must be faced:

- a. introduction of NPP;
- b. improvement of radiation safety and radiological protection; and
- c. strengthening of nuclear safety and security.

To apply the five-yearly of RKJM, each department/division/directorate establishes a annual performance plan clearly and consistently.

3.2.2. The Process in Legal Drafting Regulation

The process of legal drafting to establish or to revise a regulation for controlling of the use of nuclear energy shall comply with the constitutional and institutional requirements of national political and legal system. In drafting the regulation of nuclear energy, BAPETEN is not working alone but involving other agencies or other related government agencies, and also stakeholders such as utility, academic institutions, and publics. In general, in the process of legal drafting, international publications or other country regulations can be a reference.

As the implementation of the Act No.10 Year 2004, the Presidential Regulation No.68 Year 2005 on the general mechanism of establishing national legal framework has been issued. This Presidential Regulation describe how mechanism of establishing and drafting of the Act, the Government Regulation as substitutes Act, Government Regulation, Presidential Regulation, and Minister/Head of Non-Departement Government Agency Regulation.

The following description of this general process of legal drafting a Government Regulation (GR) initiated by BAPETEN. The steps of legal drafting process are:

1. The BAPETEN Chairman as an initiate establishes an internal team to make an academic concepts and a draft of the Government Regulation.
2. The BAPETEN Chairman sends a letter to the relevant Ministers and Institutions, together with an academic concepts and a draft of the Government Regulation, to ask for the member of interdepartment team.
3. After the name of interdepartment team have been received from the relevant ministries and institutions, the BAPETEN Chairman establishes interdepartmental team to discuss and review the draft of the Government Regulation.

4. After several the interdepartmental team discuss and review the draft, BAPETEN issues the final draft of the Government Regulation. Then BAPETEN Chairman sends the draft to the relevant ministries and institutions for their approval of the draft.
5. The final draft and the approval letter are sent to the President of the Republic of Indonesia through the State Secretary for his signature.
6. The Government Regulation is enacted in the State Gazette of the Republic of Indonesia.

The steps of legal drafting process for an Act are similar, except that an Act needs the approval of the House of Representative. Therefore, in the above description, a draft Act will be sent to the House of Representative in step 5. After the House of Representative has approved the draft with a long discussion in the various committees, the Act will be submitted to the President for the enactment.

3.3. HIERARCHY OF NUCLEAR SAFETY REGULATION

According to the national legislation system, BAPETEN establishes the nuclear safety regulations levels in the hierarchy of some regulations to implement the ideal nuclear program in Indonesia, namely:

1. Acts,
2. Government Regulations (GR),
3. Presidential Regulation (Pres Reg),
4. BAPETEN Chairman Regulation (BCR),
5. Guidelines / operational guidelines / technical guidelines / work instruction.

Hierarchy of nuclear safety regulations referred to above can be illustrated on Figure 1:

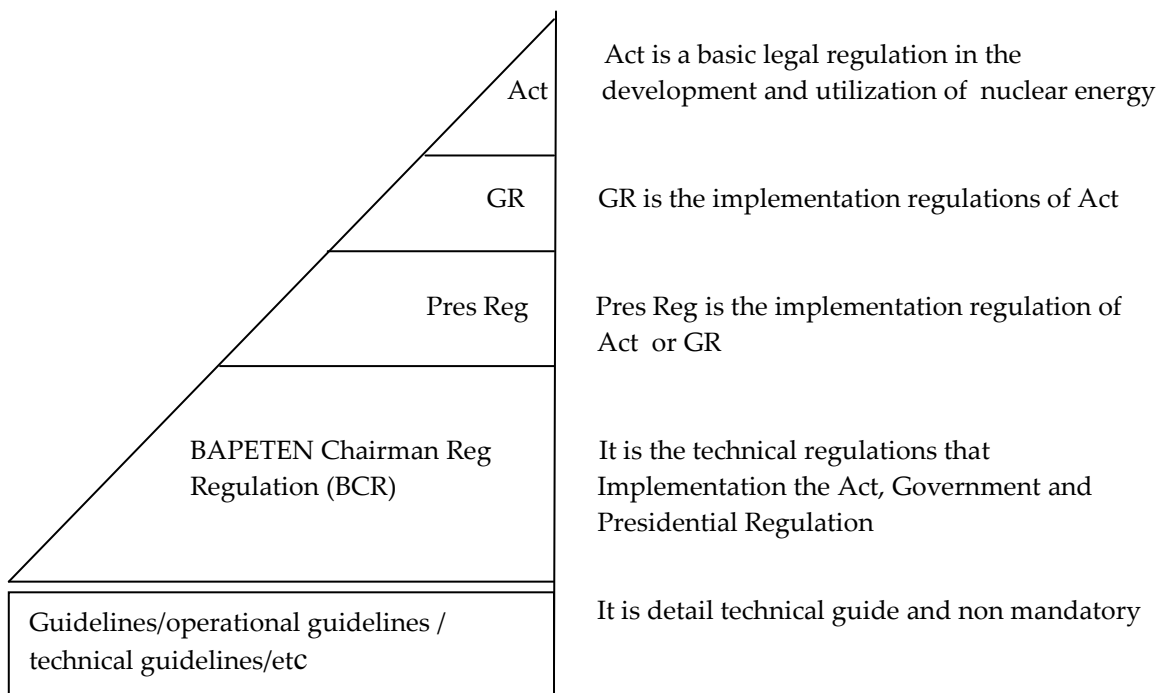


Figure. 1. Hierarchy of Nuclear Safety Regulations

3.4. CURRENT STATUS OF NUCLEAR LEGISLATION AND REGULATION

The Act No.10/1997 on nuclear energy contains the necessary provisions for the execution of all the regulatory function, i.e. licensing, review and assessment, inspection, and issuing regulations and guides. It also includes the liability for nuclear damage (Art. 28-40) and enforcement penalties (Art. 41-44).

As the result of the implementation of the Act No.10/1997 on Nuclear Energy, some Government Regulations related to the NPP has been enacted, there are:

1. GR Number 43 Year 2006 on The Licensing of Nuclear Reactor;
2. GR Number 33 Year 2007 on Safety of Ionizing Radiation and Security of Rad. Source;
3. GR Number 27 Year 2009 on Tariff for Nuclear Licensing;
4. GR Number 46 Year 2009 on The limit of Nuclear Liability;
5. GR Number 26 Year 2002 on Transport Safety of Radioactive Material;
6. GR Number 27 Year 2002 on Management of Radioactive Waste.

To provide these Government Regulation operationally, BAPETEN establishes several implemented regulations in the form of BAPETEN Chairman Regulations. The BAPETEN Chairman Regulation contains of more technical provisions stipulating the safety criteria on siting, design, construction, commissioning, operation and decommissioning of NPP.

The establishment of regulation of nuclear power plant is based on the licensing stages of the nuclear reactor, i.e. siting, construction/design, commissioning, operation stages and decommissioning stages. The BAPETEN Chairman Regulations related to the construction and operation of the NPP are shown in the Table 1 and Table 2^[3].

Some regulations of the NPP are still in drafting or in planning to be formulated. At the end of the year 2011 all the regulations required for the construction/operation of the NPP will be finished in discussion. Beside of the preparation of several NPP of regulations, BAPETEN also prepares the other regulation infrastructures, such as licensing procedures, inspection procedures, human resources development (HRD), etc. Therefore, the availability of NPP regulations and the other regulation infrastructures for NPP are expected supporting national program on construction and operation of NPP in Indonesia.

Bilateral and multilateral links and cooperation at national and international levels, in particular with the International Atomic Energy Agency (IAEA) and technologically advanced countries, have played a significant role in the development of nuclear energy, technology and nuclear energy control in Indonesia and in promoting its applications in the country. Ratification of any treaties or conventions have strongly assure those bilateral and multilateral links and cooperation at the international levels, The Table 3 is the list of ratification of Treaty and Convention.

Table 1. The List of BAPETEN Chairman Regulations Related to Nuclear Power Plant^[3].

No	No/Year	Title
1.	BCR No. 5/2007	Safety of Site Evaluation of Nuclear Reactor
2.	BCR No. 1/2008	NPP Site Evaluation: Aspects of Seismology
3.	BCR No. 2/2008	NPP Site Evaluation: Aspects of Volcanology
4.	BCR No. 3/2008	NPP Site Evaluation: Aspects of Radioactive Material Dispersion
5.	BCR No. 4/2008	NPP Site Evaluation: Aspects of Geotechnics and Foundation
6.	BCR No. 5/2008	NPP Site Evaluation: Aspects of Meteorology
7.	BCR No. 6/2008	NPP Site Evaluation: Aspects of Human Induced External Events
8.	BCR No. 3/2009	Operational Limits and Conditions and Operating Procedures for Nuclear Power Plants

**Table 2. The list of BAPETEN Chairman Regulations related to Nuclear Power Plant ^[3].
(*continue*)**

No	No/Year	Title	Status
1.	-	Design Safety for NPP	Final draft
2.	-	Operation Safety for NPP	Final draft
3.	-	Safety Design of Reactor Core for NPP	Final draft
4.	-	Safety Design of Reactor Containment for NPP	Final draft
5.	-	Seismic Design and Qualification for NPP	Final draft
6.	-	Design Aspects of Radiation Protection for NPP	Final draft
7.	-	Design of the Reactor Coolant System and Associated Systems in NPP	Final draft
8.	-	Safety Assessment and Verification for Nuclear Power Plants	Final draft
9.	-	Commissioning for NPP	Final draft
10.	-	Instrumentation and Control Systems Important to Safety in NPP	Final draft
11.	-	Core Management and Fuel Handling for Nuclear Power Plants	On discussion
12.	-	Format and content of Safety Analysis Report for NPP	Planning 2011

Tabel 3. List of Ratification of Treaty/ Convention

Act No. 8/1978	Ratification of Non Proliferation Treaty
Act No. 9/1997	Ratification of Treaty on The Southeast Asia Nuclear Weapon Free Zone
Presidential Decree No 49/1986	Ratification of Convention on The Physical Protection of Nuclear Materials
Presidential Decree No. 80/1993	Ratification of Amendment of Article VI of The Statute of The International Atomic Energy Agency
Presidential Decree No. 81/1993	Ratification of Convention on Early Notification of a Nuclear Accident
Presidential Decree No. 82/1993	Ratification of Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency
Presidential Decree No. 106/2001	Ratification of Convention On Nuclear Safety

4. CONCLUSION

As conclusions, the following points may be derived from the above discussion:

1. To conduct regulatory controls towards the construction and operation of the NPP, BAPETEN is empowered by the Act Number 10 Year 1997 on Nuclear Energy as a basic law in nuclear energy usage and control.
2. To establish or to revise a regulation for controlling of the use of nuclear energy shall comply with the national constitutional and legal system, namely Act No.10 Year 2004 on the establishment of legislation and the Presidential Regulation No.68 Year 2005 on the general mechanism of establishing national legal framework.
3. The establishment of regulation of NPP is based on the licensing stages of the nuclear reactor, i.e. siting, construction/design, commissioning, operation stages and decommissioning stages. Nowadays, the regulations of the NPP have not been completed yet, but some regulations related in the area of siting of NPP have been already available.

REFERENCES

- [1] Presidential Regulation Number 5 Year 2006 on The National Energy Policy.
- [2] HUDA, K. "National Regulation for Supporting the First NPP in Indonesia", presented at International Seminar on Legal Framework for Safe and Peaceful Uses of Nuclear Energy, Denpasar, June 6, 2007.
- [3] LASMAN, A.N. HUDA, K., MARDHA, A., "The Status of Nuclear Safety Regulation to Face the NPP Introduction", Proceedings of National Seminar on Technology and Safety of NPP and Nuclear Facility, pp.54-59, Bandung, November 5, 2008.