

IAEA Nuclear Energy Series

No. NG-T-3.14

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BUILDING A NATIONAL
POSITION FOR A
NEW NUCLEAR POWER
PROGRAMME

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INTERNATIONAL ATOMIC ENERGY AGENCY
VIENNA, 2016

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Marketing and Sales Unit, Publishing Section
International Atomic Energy Agency
Vienna International Centre
PO Box 100
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fax: +43 1 2600 29302
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FOREWORD

One of the IAEA's statutory objectives is to "seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world." One way this objective is achieved is through the publication of a range of technical series. Two of these are the IAEA Nuclear Energy Series and the IAEA Safety Standards Series.

According to Article III.A.6 of the IAEA Statute, the safety standards establish "standards of safety for protection of health and minimization of danger to life and property". The safety standards include the Safety Fundamentals, Safety Requirements and Safety Guides. These standards are written primarily in a regulatory style, and are binding on the IAEA for its own programmes. The principal users are the regulatory bodies in Member States and other national authorities.

The IAEA Nuclear Energy Series comprises reports designed to encourage and assist R&D on, and application of, nuclear energy for peaceful uses. This includes practical examples to be used by owners and operators of utilities in Member States, implementing organizations, academia, and government officials, among others. This information is presented in guides, reports on technology status and advances, and best practices for peaceful uses of nuclear energy based on inputs from international experts. The IAEA Nuclear Energy Series complements the IAEA Safety Standards Series.

The guides in the Nuclear Energy Series provide guidance on the development of nuclear power infrastructure; the most notable of them is Milestones in the Development of a National Infrastructure for Nuclear Power, IAEA Nuclear Energy Series No. NG-G-3.1, Revision 1 of which was published in 2015.

National position is the first infrastructure issue identified in the Milestones approach and this publication will provide further information on the definition and process for establishing a national position for a new nuclear power programme. The audience of this publication is individuals who are involved in the decision on whether to embark on a nuclear power programme, such as energy planners, policy makers and political decision makers. The IAEA officer responsible for this publication was M. Van Sickle of the Division of Nuclear Power.

EDITORIAL NOTE

Guidance provided here, describing good practices, represents expert opinion but does not constitute recommendations made on the basis of a consensus of Member States.

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1. INTRODUCTION

1.1. BACKGROUND

Launching a nuclear power programme is a major undertaking that requires careful planning, preparation and investment. A decision to embark on a nuclear power programme should be based upon a well defined and knowledgeable national position, founded, among other considerations, on sound energy planning [1, 2].

A nuclear power programme also requires a major investment in time and in human and financial resources. While nuclear power is not unique in this respect, it is considered to be different because of the nuclear safety, security and safeguards issues associated with the possession and handling of nuclear material and the long term commitment required by a nuclear power programme [3].

Given these key differences between a nuclear power plant and a conventional power plant, a State should be prepared to answer key questions regarding the development of a nuclear power programme, and to communicate that information in a clear and transparent manner. Questions concerning nuclear and radiation safety, nuclear security, spent fuel and nuclear waste management, human resources, siting, funding, financing, nuclear liability, environmental considerations, public acceptance and emergency preparedness, among others, will likely be raised during these initial discussions.

Throughout the process of establishing the national position, States may consider these issues as well as the infrastructure required to safely, securely and sustainably proceed with nuclear power development.

During the development of a national position for a new nuclear power programme, it is important for the government to consult with a State's energy organizations, nuclear institutes and utilities, as well as with other technical organizations, to ensure that all necessary information is available to make a knowledgeable decision. This process involves politicians, policy makers, energy experts, economists, nuclear experts, legal experts, utilities, members of industry, academics and other stakeholders, especially the general public and media.

The establishment of the national position provides the foundation for the future development and implementation of the nuclear power programme. Most importantly, a national position provides a credible answer to the question of why nuclear power is being chosen, while taking into account the results of long term energy planning and national priorities, such as energy security, pollution mitigation including the mitigation of greenhouse gases, and industrial and economic development. While recognizing that the decision making mechanisms of government systems differ greatly between States, this publication offers a high level overview of the national decision process, including the role of the various stakeholders.

As described further in Section 4, the development of the national position is the result of a deliberative technical and political process, in consultation with the public, and may take various forms depending on a State's specific governmental structure.

This publication complements the IAEA publication Milestones in the Development of a National Infrastructure for Nuclear Power [2] by elaborating on the issue of establishing a national position for a new nuclear power programme.

1.2. OBJECTIVE

This publication provides guidance to States seeking to establish a national position on the introduction or re-establishment of nuclear power and supports the achievement of 'Milestone 1 – Ready to make a knowledgeable commitment to a nuclear programme' as described in Ref. [2]. It provides direction to political decision makers, energy experts, and other relevant institutions and stakeholders about the process for establishing a national position as States prepare national nuclear energy policies. It also helps embarking States build a consistent and durable national position for nuclear energy on the basis of sound energy planning and greater public involvement, in order to maintain the State's long term commitment, regardless of possible political changes in a State.

1.3. SCOPE

This publication addresses the rationale for the development of a national position related to the introduction or re-establishment of a national nuclear power programme. In this publication, the word ‘new’ is used to describe both newly developed nuclear power programmes and those that are being re-established or restarted.

Guidance provided here, describing good practices, represents expert opinion but does not constitute recommendations made on the basis of a consensus of Member States.

1.4. STRUCTURE

The publication includes the following sections. Section 2 defines the concept of a national position, including its key components, as well as the role of the national position in view of the long term commitment of a State to nuclear power. Section 3 defines the roles of the individuals and institutions involved in the development of a national position and national decision, and the importance of encouraging dialogue during this process. Section 4 describes the development of the national position, highlighting the role of a prefeasibility study and continued government commitment. Section 5 contains key considerations for maintaining the national position through sustained coordination of the national nuclear policy. Section 6 discusses the importance of revisiting a national decision when programme implementation has been delayed. Section 7 considers maintaining and advancing a government’s commitment throughout the lifetime of a nuclear power programme.

2. THE ISSUE OF NATIONAL POSITION AND ITS SIGNIFICANCE

2.1. DEFINITION OF NATIONAL POSITION

The national position is the outcome of a process that establishes the governmental strategy and commitment to develop, implement and maintain a safe, secure and sustainable nuclear power programme. This process will result in a national decision that clearly communicates the State’s national policy, as well as the State’s commitment to proceed according to the international obligations of the State and international norms and standards. The national position may consider:

- The political, economic, social, environmental and development objectives of the State;
- The national energy policy, including the potential role of nuclear power in the energy mix;
- The need for national stakeholder involvement, communicated at the local, regional and international levels;
- The required national nuclear infrastructure, including relevant international legal treaties and conventions.

2.2. RELEVANCE TO THE IAEA’S MILESTONES APPROACH

The Milestones Approach developed by the IAEA [2] provides criteria to support the development of the infrastructure necessary for introducing nuclear power. As strong and sustained government support is critical to the successful implementation of a nuclear power programme, the issue of national position is identified in the Milestones Approach as Infrastructure Issue 1 and contributes to the development of nuclear infrastructure and fulfilment of the respective milestones.

The three phases in developing the infrastructure necessary to support a nuclear power programme, as described in Ref. [2], are:

- “Phase 1: Considerations before a decision to launch a nuclear power programme is taken;
- Phase 2: Preparatory work for the contracting and construction of a nuclear power plant after a policy decision has been taken;
- Phase 3: Activities to implement a first nuclear power plant.

“The completion of each phase is marked by a specific milestone at which the progress of the development effort can be assessed and a decision made to move on to the next phase. These milestones are:

- “Milestone 1: Ready to make a knowledgeable commitment to a nuclear power programme;
- Milestone 2: Ready to invite bids/negotiate a contract for the first nuclear power plant;
- Milestone 3: Ready to commission and operate the first nuclear power plant.”

The issue of national position is particularly important to achieving Milestone 1, as the establishment of strong, high level government support, including the relevant public consultations, is a critical first step to embarking on a nuclear power programme.

States may wish to evaluate the status of the national position infrastructure issue using guidance provided in Evaluation of the Status of National Nuclear Infrastructure (Addendum 1) [4]. This methodology, developed by the IAEA, assists Member States in identifying infrastructure gaps that exist regarding the establishment of a national position. States are also encouraged to review the Nuclear Energy Basic Principles [5], which describes the rationale and vision for the peaceful use of nuclear energy, Establishing the Safety Infrastructure for a Nuclear Power Programme [3], which provides guidance on the establishment of a national nuclear safety infrastructure, and Establishing the Nuclear Security Infrastructure for a Nuclear Power Programme [6], which provides guidance on the establishment of a national nuclear security infrastructure.

2.3. COMPONENTS OF A NATIONAL POSITION

A national position is formed of four distinct elements:

National policy development: The decision to embark on a nuclear power programme is normally made at the political level during the creation of a State’s national energy strategy, is informed by energy planning and includes its potential role in accomplishing social and economic developmental goals. Government officials who formulate national policy will initiate the discussion regarding the introduction of a nuclear power programme in relation to these goals, and the role of nuclear power as a potential source of energy.

Energy analysis and planning: This is the performance of comprehensive qualitative and quantitative assessments of future demands for energy services and supply options in a manner that is consistent with the State’s long term socioeconomic development objectives. Here, its main purpose is to objectively and comprehensively evaluate the potential role of nuclear energy in the State’s future energy mix as well as to gather information about the economic, security and environmental implications and trade-offs of different energy demand and supply futures.

Prefeasibility study: The results of the energy analysis and planning must be complemented by further social, economic, financial and technical evaluation regarding the introduction of a new nuclear power programme. It may be performed by various entities and will provide political decision makers with an informed perspective on the infrastructure and institutions that are necessary to support a nuclear power programme.

Engaging the public and relevant stakeholders: It is recommended that countries embarking on new nuclear power programmes actively engage the public and other stakeholders during the development and implementation of the national position. Effective communication strategies and stakeholder involvement will lead to a more sustainable national position, while ensuring broader support for the development of a new nuclear power programme.

2.4. NATIONAL INFRASTRUCTURE AND COMMITMENT TO NUCLEAR SAFETY, NUCLEAR SECURITY AND NON-PROLIFERATION

The decision to embark on a nuclear power programme should be based upon a national commitment to the safe, secure and peaceful use of nuclear energy. The establishment of the necessary infrastructure requires sustained governmental support to ensure that the essential legal, regulatory, managerial, technological, human and industrial capacity exist and will continue to exist throughout the entire lifetime of the nuclear power programme — including site selection, construction, operation and maintenance, spent fuel and radioactive waste management, decommissioning, and environmental remediation. Consistent with this, the State needs to be in a position to demonstrate its compliance with international legal instruments, nuclear safety standards, nuclear security guidelines and non-proliferation requirements necessary for the implementation of the nuclear power programme.

During the development of a new nuclear power programme, obtaining long term governmental policy support is essential. A nuclear power programme is a commitment of at least 100 years, with an initial implementation period of at least 10 to 15 years. Therefore, a State's national policy needs to remain consistent with such a commitment and to be communicated in a clear and transparent manner. A stable political, economic and social environment may foster greater support from international institutions and reactor suppliers, and lead to a greater chance of success.

3. IDENTIFYING AND INVOLVING STAKEHOLDERS

Establishing a national position requires effective communication with various individuals and institutions both within and outside of government. Given the broad range of stakeholders involved in the development of a new nuclear power programme, the establishment of the national position is normally initiated at the political level. While the exact composition of the groups involved in this process may differ between countries, there are three general sets of stakeholders that are usually consulted during this process, which are described below.

3.1. POLITICAL DECISION MAKERS AND ELECTED OFFICIALS

Political decision makers and other elected officials formulate a State's national policies, including its domestic energy strategy. These policies are developed as a result of strategic national priorities, often in consultation with the relevant professional and technical community, as well as with the general public. Owing to the long term commitment required by nuclear power, political decision makers may desire to build a broad base of support for the programme in order to sustain it through any political changes in a State.

3.2. THE PROFESSIONAL AND TECHNICAL COMMUNITY

The professional and technical community possesses a wide range of technical skills necessary to inform political decision makers about the risks and benefits associated with the development of nuclear power in their State. This group may include civil servants, energy experts, economists, nuclear experts, legal experts, utilities, members of industry, academics, potential technology suppliers and national or international consultants hired to advise the government.

3.3. THE PUBLIC AND OTHER STAKEHOLDERS

Public acceptance is a very important issue for nuclear power. Therefore, it is recommended that the government develop a policy and process to inform the general public and other stakeholders, such as non-governmental organizations and neighbouring countries, about the risks and benefits of nuclear power, and

to provide them with information regarding decisions on the implementation of a nuclear power programme. This exchange will help provide informed answers to questions that arise during this process and will also foster the cooperation necessary to build a national position. It may communicate not only the risks and benefits of nuclear power and its alternatives, but also the social, economic, industrial, environmental and safety implications that were considered by the government.

This process may differ according to the State, but it may include the local (site related), national, regional and international communities. The basic idea is to provide stakeholders with a formal opportunity to express their opinion through a consultative process that is both accessible and transparent. Experience has indicated that the only way to inform public opinion is through a carefully designed long term education programme, based on correct, neutral information. Such a programme requires a major effort and is critical to the success of a new nuclear power programme.

4. DEVELOPMENT OF THE NATIONAL POSITION PROCESS

4.1. THE NATIONAL ENERGY POLICY AND ENERGY PLANNING

The development of a national position for a new nuclear power programme often begins with the evaluation of a State's long term energy needs and supply options, consistent with its social and economic development goals. Energy planning is the systematic analysis of all the factors that influence the evolution of a national energy system and will assess the types, quantities and quality of future energy service needs. Following this assessment, it will then analyse the supply options, including: (a) a State's indigenous energy resources; (b) links to external energy markets; (c) the vintage and performance of the existing energy infrastructure; (d) electricity generation and fuel production; and (e) transmission and distribution systems to end use and service technologies. This analysis explores system linkages and interdependencies and compares the risks and benefits of alternative energy supply options. It particularly considers trade-offs between energy security, least-cost energy supply, welfare (e.g. access to, and affordability of, energy services), public health and environmental protection.

These studies may help determine and communicate whether the introduction of nuclear power 'makes sense' with respect to the State's energy resource endowment, existing energy infrastructure, projected energy demand and supply alternatives. National priorities play a role in the development of a national energy policy and may include, among others, the following issues [7]:

- (a) Improved energy security:
 - (i) Overly high dependence on foreign fuel supplies potentially subjects a State to supply disruptions and, at times, volatile fluctuations in energy prices. Fluctuations in fossil fuel prices, as well as geopolitical uncertainty in several major exporting regions, have motivated many countries to pursue supply diversification strategies.
 - (ii) High dependence on one primary energy source for electricity generation can result in power shortages if problems arise with that energy source, e.g. hydropower in times of extreme drought.
- (b) Development of indigenous energy resources:
 - (i) In addition to security, many countries tend to give priority to the development of their national resources of coal, oil, gas, hydropower and other renewables, with a view to maximizing domestic value added and local industrialization. Energy planning can help in determining the extent to which this can be accomplished in an economically and environmentally viable manner.
- (c) Reliability of electricity supply and grid:
 - (i) A reliable and affordable electricity supply is of crucial importance for socioeconomic and industrial development. A stable, sufficient, well managed and appropriately sized grid is an indispensable prerequisite for the introduction of a nuclear power plant.

- (d) Access to affordable energy services:
 - (i) Access to affordable electricity plays an important role in the national energy policy debate. Policy decisions in this area normally consider other costs as well, such as environmental, health and infrastructure development costs.
- (e) Environmental protection, including climate change mitigation:
 - (i) It is becoming increasingly important for countries to consider the environment when developing national energy strategies. Local air pollution and regional acidification undermine the gains of industrial development. Curbing greenhouse gas emissions has become an issue for all nations and nuclear power may play a role in this context, as harmful emissions from normal operations are very small.
 - (ii) Comprehensive and technologically neutral energy planning informs decision makers about the potential role of nuclear power under a variety of future development scenarios. It quantifies trade-offs and implications of different supply mixes and serves as a communication tool in the debate of the comparative risks and benefits of different supply options. It also provides the rationale for the extent of the consideration of the development of a nuclear energy programme as an integral part of national energy policy. A schematic representation of this process is shown in Fig. 1. Ideally, a national energy policy is the result of an extensive national debate and will enjoy broad public support to ensure long term sustainability.

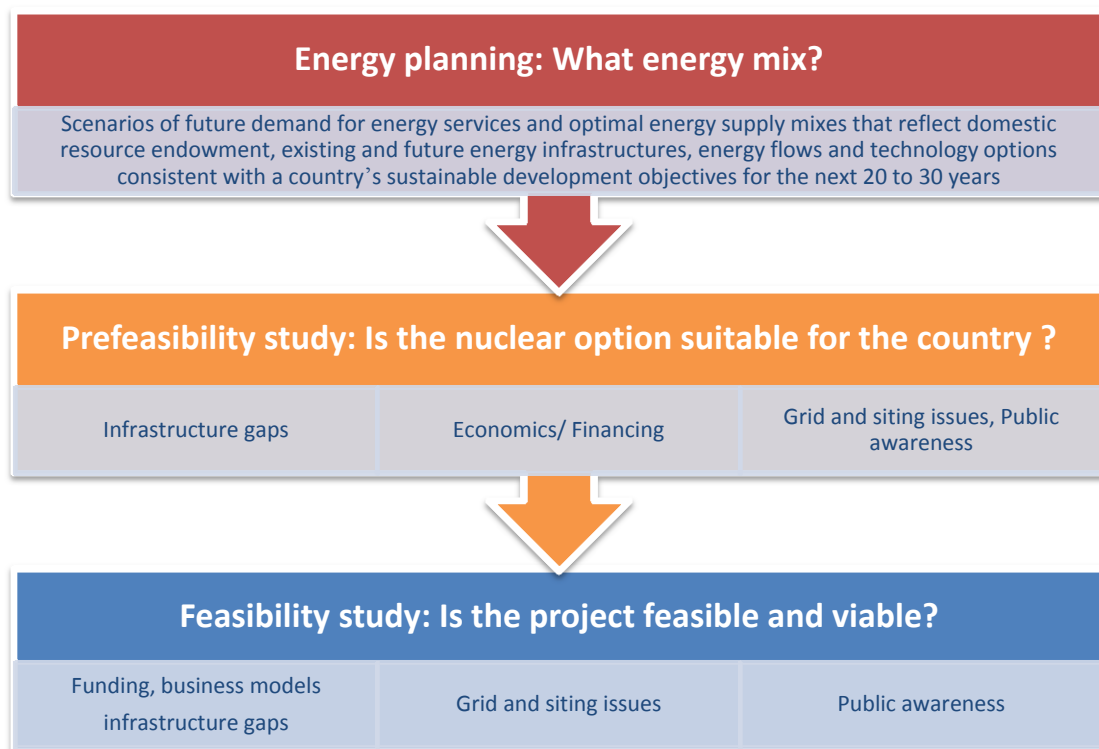


FIG. 1. Energy planning diagram.

4.2. NUCLEAR ENERGY PROGRAMME IMPLEMENTING ORGANIZATION

In order to properly evaluate the introduction of nuclear power to a national energy policy, a State may wish to designate a governmental body, such as a nuclear energy programme implementing organization (NEPIO), to conduct and complete the studies necessary to make a knowledgeable decision about whether to proceed with the development of nuclear power [8]. The NEPIO leads and manages the technical evaluation and performs an evaluation of the national infrastructure and capacity. As noted in the Milestones publication [2], it is recommended that the NEPIO or other government designated entity undertake the development of a comprehensive report that is submitted to the government in preparation for a knowledgeable decision regarding the introduction of a nuclear power programme.

The NEPIO may include designated government officials, as well as members of the professional and technical community. It is recommended that the appointment of the NEPIO be made at a high level in the government and that the NEPIO be empowered with the necessary authority needed to carry out its functions. Experience has demonstrated that countries with effective NEPIOs are better positioned to prepare the information necessary to make a knowledgeable decision owing to the need for coordination with various government agencies and organizations.

4.3. THE PREFEASIBILITY STUDY

Considering the results of the energy analysis and planning, as well as the political, social and economic development goals of a State, the NEPIO should initiate a prefeasibility study to evaluate the introduction of nuclear power into the State's energy mix. The preparation of a prefeasibility study provides valuable insights into the benefits, risks and barriers of a nuclear power programme as well as some of the information needed to complete the NEPIO's comprehensive report. The prefeasibility study does not evaluate the option of a specific nuclear power plant *project* (this is the role of the feasibility study) but rather analyses the role of a new nuclear power *programme* in a State's overall energy system and economy. Generally, the prefeasibility study assesses the need for and viability of the introduction of nuclear power, determines a potential schedule for the introduction of a nuclear power programme, identifies potential infrastructure gaps, including safety and security infrastructure, and provides recommendations to address those gaps should the State decide to proceed.

Countries may choose to rely on internal or external expertise to develop the prefeasibility study. While not always the case, it is recommended that this prefeasibility study prepare government officials to make a knowledgeable decision regarding nuclear power rather than reaffirming a predetermined conclusion to proceed. In cases where countries have made a political decision to embark on a nuclear power programme, it is still advisable to perform a prefeasibility study to identify gaps and determine the infrastructure and capacity that is necessary to introduce nuclear power.

This prefeasibility study may consider all 19 infrastructure issues or a subset, depending on the specific priorities and interests of a State. The study may include:

- Results of the relevant energy planning studies;
- A macroeconomic study on the impact of introducing a nuclear power programme;
- Considerations of nuclear safety, including the recognition of the non-zero possibility of a severe accident;
- An initial analysis of the domestic and international legal requirements and agreements required to proceed;
- A preliminary evaluation of the suitable sites capable of hosting a nuclear power plant;
- Initial analysis of the electrical grid requirements;
- An estimation of the government funding necessary to support the development of the appropriate infrastructure, especially regulatory oversight;
- An initial analysis of human resource needs and a strategy for their development;
- A review of existing nuclear reactor technologies;
- An acknowledgement of the responsibilities related to decommissioning, management of spent fuel and nuclear waste and environmental remediation;
- An evaluation of public opinion and considerations related to stakeholder involvement.

Following the completion of the prefeasibility study, it may be necessary for the NEPIO or other designated entity to conduct more detailed studies on specific infrastructure issues prior to the completion of the comprehensive report. These studies may address, among others, some of the following issues:

- Siting;
- Legal and regulatory requirements;
- Electrical grid;
- Financing;
- National industrial involvement;
- General environmental considerations;
- Nuclear power technology assessment;
- Spent fuel and nuclear waste management;
- Public acceptance;
- Risk analysis;
- Human resource development.

While initial studies covering these areas are likely to be included in the prefeasibility study, some countries may find that additional information on a specific issue might be requested by the government prior to the national decision. These subsequent detailed studies may be added to the existing prefeasibility study or be completed separately. Countries may again rely on internal or external expertise, as well as on support from the IAEA and other international organizations, during this process.

4.4. THE COMPREHENSIVE REPORT AND THE NATIONAL DECISION

Following the completion of the prefeasibility study and any other requested technical evaluation, the NEPIO should prepare a comprehensive report, that, should it recommend a positive national decision, defines and justifies a national strategy for nuclear power. The comprehensive report may draw on the results of any prefeasibility study or other relevant study, but it should thoroughly address all 19 infrastructure issues. At this stage, the government should be well informed about the obligations and long term commitment of a nuclear power programme and should have completed the following activities:

- Analysed the economic, social and political implications of embarking on a nuclear power programme;
- Assessed the national capacity related to the 19 infrastructure issues;
- Consulted with the relevant agencies and with the general public;
- Finalized a plan to guide the implementation of the programme for Phase 2.

If the outcome of this deliberative process indicates that the State intends to implement a nuclear power programme, the government should communicate this decision in an unambiguous and transparent manner. Depending on the State, this statement may take a variety of forms. Ideally, it will communicate the process that led to the decision to embark on a nuclear power programme with a particular emphasis on stakeholder participation. It also clearly demonstrates that the State understands the obligations, risks and benefits associated with nuclear power and its alternatives, and outlines the steps it will take to mitigate these risks. Experience indicates that this can take different forms; some examples include:

- A national policy paper or white paper, published by the government and endorsed at the highest level;
- An executive or presidential decree;
- An act of a parliament or similar body;
- Publication of a government gazette indicating the decision to embark on a nuclear power programme.

Regardless of the form, it is recommended that this declaration contain several key elements, including:

- A summary of the State’s future energy options, including the potential role of nuclear power in the State’s economic, social, industrial and environmental development goals;
- An acknowledgement of the long term commitment of the State to the safe, secure and peaceful development of a nuclear power programme;
- A recognition of the necessary international and national legal arrangements, including the establishment of an independent regulatory body;
- A commitment to cooperate with the international community, including the IAEA, to ensure a safe, secure, transparent and peaceful nuclear power programme;
- A pledge to communicate the status of the programme to the public and to other relevant stakeholders throughout its lifetime.

In some countries, this process may require a consultative process with institutions such as a legislature or parliament to ensure that the decision to move forward with the programme is endorsed in manner that is sustainable during political changes. If this is necessary, it may be useful for the State to identify an appropriate government sponsor or leader to guide this process. A schematic representation of the national position process is given in Fig. 2.

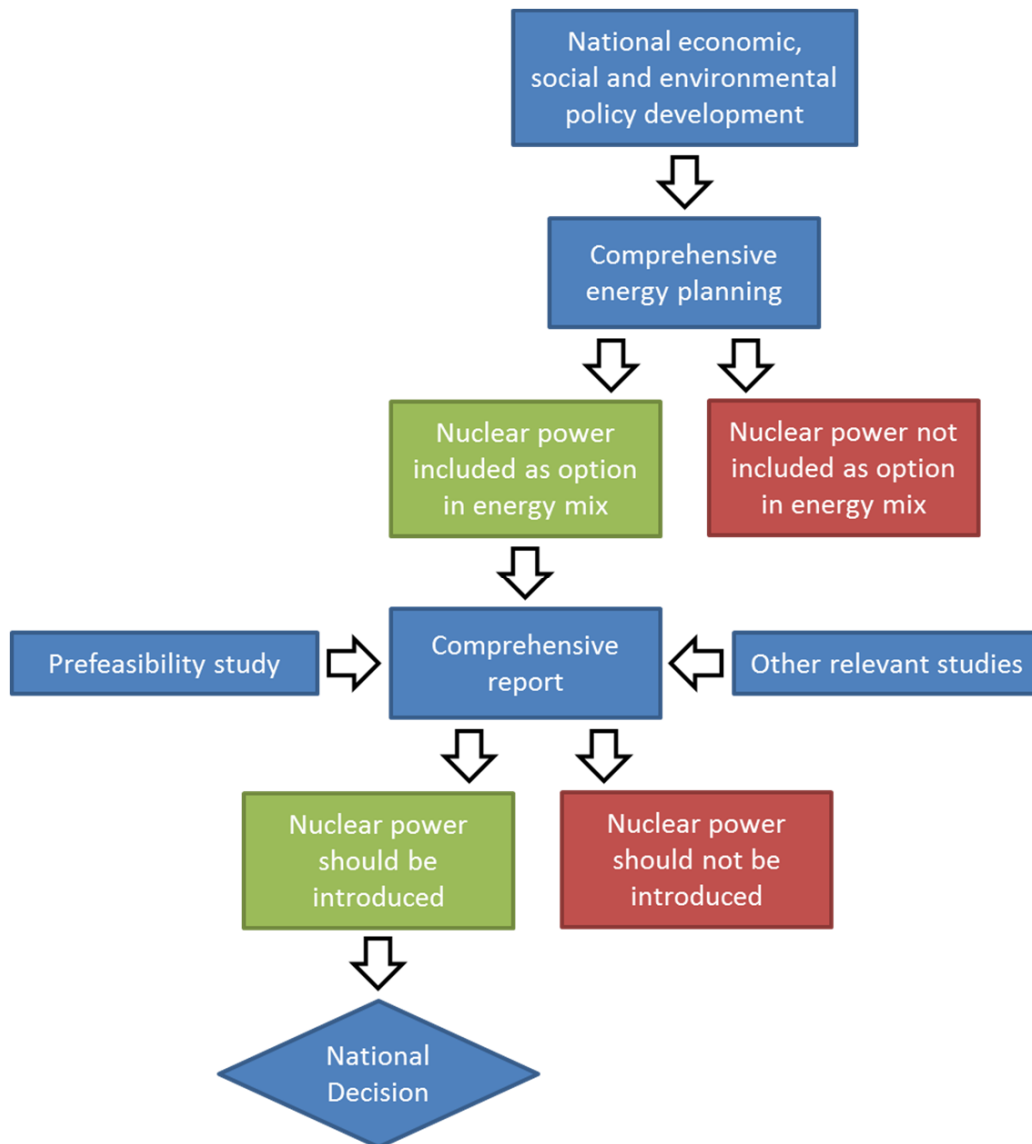


FIG. 2. National position process.

5. IMPLEMENTING THE NATIONAL DECISION

5.1. IMPLEMENTING THE NATIONAL DECISION: PHASE 2

If a national decision to move forward is reached, a State would demonstrate its commitment by initiating the creation of the necessary infrastructure and institutions as well as finalizing a roadmap, with a corresponding timeline, for the implementation of its nuclear power programme. If no formal NEPIO has been established, it is recommended that the State establishes it at this point to ensure effective coordination of the programme as it moves forwards. The Milestones approach and continued consideration of the 19 infrastructure issues may guide this process.

At this stage, the State must also begin to establish an independent and competent regulatory body and initiate steps to establish the future owner/operator with the required expertise and resources, while also designating specific roles and responsibilities for other new or existing institutions, such as technical support organizations, involved in the process. This process helps ensure that each organization is able to achieve its individual objectives, while also ensuring that the State is developing its nuclear infrastructure in an efficient, effective and coordinated manner.

After the necessary institutions and corresponding infrastructure are established, the State will be moving towards ‘Milestone 2 — Ready to invite bids/negotiate a contract for the first nuclear power plant’. At this point, governmental support for the nuclear power programme should be clearly evident and the overall strategic approach to contracting with the vendor should be established. Additionally, the NEPIO should ensure that the issues and recommendations from the comprehensive report are translated into firm action plans, and assigned to the relevant responsible organizations.

5.2. IMPLEMENTING THE NATIONAL DECISION: PHASE 3

As a State enters Phase 3 and prepares to commission and operate a nuclear power plant, it should have in place the infrastructure necessary to regulate and safely operate the plant in compliance with national laws, national regulations and international commitments. In addition to having an independent and competent regulatory body and a competent owner/operator, the government is still expected to maintain an important coordination role. This coordination function should ensure the overall development of the infrastructure to meet the national strategy. As mentioned in the Milestones publication, areas requiring particular coordination across organizations include [2]:

- Ensuring that relevant legislation is maintained and amended, as appropriate;
- Ensuring that the owner/operator and the regulatory body are fully funded, staffed with competent personnel, provided with the necessary resources and have assumed their responsibilities with full authority;
- Ensuring all organizations give appropriate attention to safety, security and safeguards;
- Ensuring funding and implementation of grid developments;
- Ensuring that emergency response plans are established and demonstrated;
- Ensuring that stakeholder involvement remains an important priority;
- Ensuring that the financing is sufficient to sustain safe and secure operations, and that mechanisms are available for compensation for nuclear damage;
- Ensuring that the human resource development programmes are sufficient to support continuing safe operation;
- Ensuring that responsibilities have been assigned and an appropriate funding plan has been implemented for waste, long term spent fuel management and decommissioning;
- Ensuring that mechanisms are in place for exchanging information with other nuclear power countries and providing mutual support.

6. REVISITING OR UPDATING THE NATIONAL POSITION PROCESS

6.1. REVISITING THE NATIONAL DECISION WHEN PROGRAMME IMPLEMENTATION HAS BEEN SUBSTANTIALLY DELAYED

Countries that made a national decision in principle many years ago but have not advanced with the development of their nuclear infrastructure for a variety of reasons, such as unforeseen political, economic and/or technological challenges, may find it necessary to revisit the issue of national position. In these cases, it is important for countries to provide the government with a renewed consideration of the nuclear power option by reviewing the status of the State's infrastructure and updating any relevant studies, including the comprehensive report, in order to determine whether a nuclear power programme still 'makes sense' given the altered national and international landscape.

6.2. UPDATING THE NATIONAL POSITION AFTER A NEGATIVE DECISION

Some countries may consider updating their national positions even after a negative decision has been taken regarding the development of a nuclear power programme. In these cases, countries should review political, social, economic and development objectives and update the energy planning and other relevant studies, such as the prefeasibility study. This information, as well as other considerations, may form the basis for a government to reconsider the nuclear power option at a future date.

7. MAINTAINING GOVERNMENT COMMITMENT

7.1. MAINTAINING THE COMMITMENT THROUGHOUT THE LIFETIME OF THE PROGRAMME

Countries who have successfully developed a nuclear power programme may consider maintaining and advancing the government's role throughout the lifetime of the programme in several ways, including, among others:

- Maintaining a strong commitment to nuclear safety, nuclear security and non-proliferation;
- Continuing public engagement;
- Publicly reaffirming the State's commitment to the nuclear power programme;
- Updating emergency preparedness and response arrangements;
- Performing periodic safety reviews of their nuclear facilities;
- Developing strategies for spent fuel, nuclear waste management and decommissioning;
- Maintaining and updating relevant energy studies;
- Promoting protection of the environment and human health;
- Maintaining appropriate human resources;
- Facilitating increased international cooperation.

Significant nuclear incidents such as Three Mile Island, Chernobyl and the accident at the Fukushima Daiichi nuclear power plant may also cause a State to revisit its national decision, owing to a number of issues, including changes in public opinion, lessons learned, the resources necessary to ensure the safe operation of a nuclear power plant, environmental considerations and possible economic effects.

Additionally, countries are advised to update their nuclear laws, regulations and policies, as appropriate, and to adhere to the new international legal instruments aimed at the safe, secure and peaceful uses of nuclear energy.

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CONTRIBUTORS TO DRAFTING AND REVIEW

Abang Othman, A.	Ministry of Science, Technology and Innovation, Malaysia
Abdel Rahman, F.	Nuclear and Radiological Regulatory Authority, Egypt
Ahmed, W.	Karachi Nuclear Power Project-2, Pakistan
Alamsayh, R.	Nuclear Energy Regulatory Agency, Indonesia
Al Bakhit, Y.	Jordan Atomic Energy Commission, Jordan
Arabidze, M.	Ministry of Energy, Georgia
Baguma, S.	Ministry of Energy and Mineral Development, Uganda
Bastos, J.	International Atomic Energy Agency
Bouzidi, L.	Ministry of Energy and Mining, Algeria
Budihardjo, S.	Polytechnic Institute of Nuclear Technology, Indonesia
Busurin, Y.	Rosenergoatom Concern, Russian Federation
Caoui, A.	National Committee on the Evaluation of the Nuclear Power Infrastructure, Morocco
Carmona, R.	Ministry of Energy, Mexico
Chaparzadeh Fasghandis, R.	Bureau of Energy Planning, Islamic Republic of Iran
Cherf, A.	International Atomic Energy Agency
El Gamah, A.	Ministry of Energy and Mines, Morocco
Evans, R.	International Atomic Energy Agency
Farag, H.	Nuclear Power Plants Authority, Egypt
Ferrari, M.	International Atomic Energy Agency
Ibrahim, J.	Malaysia Nuclear Power Corporation, Malaysia
Jaafar, M.	Malaysia Nuclear Power Corporation, Malaysia
Jalal, A.	International Atomic Energy Agency
Jewell, J.	International Institute for Applied Systems Analysis, Austria
Jordanov, I.	Ministry of Economy and Energy, Bulgaria
Jovanovic, S.	University of Montenegro Centre for Nuclear Competence and Knowledge Management, Montenegro
Karasev, A.	Rusatom Overseas, Russian Federation
Kim, C.	Korea Nuclear Association for International Cooperation, Republic of Korea
Kobetz, T.	International Atomic Energy Agency
Kuznairski, L.	Ministry of Economy, Poland
Lee, J.	Korea Nuclear Association for International Cooperation, Republic of Korea

Long, M.	Nuclear Energy Association, China
Matajikojouri, N.	Nuclear Regulatory Authority, Islamic Republic of Iran
Mishevskaja, A.	Radiation Safety Directorate, The Former Yugoslav Republic of Macedonia
Molloy, B.	International Atomic Energy Agency
Muinde, M.	Kenya Nuclear Electricity Board, Kenya
Nagel, B.	Chilean Nuclear Energy Commission, Chile
Petrosyan, A.	Ministry of Energy and Natural Resources, Armenia
Rogner, H.	International Institute for Applied Systems Analysis, Austria
Starz, A.	International Atomic Energy Agency
Tamang, J.	Philippine Department of Energy, Philippines
Tomsic, Z.	University of Zagreb, Croatia
Török, S.	Centre for Energy Research, Hungary
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Vera Ruiz, H.	Bolivian Institute for Nuclear Science and Technology, Plurinational State of Bolivia

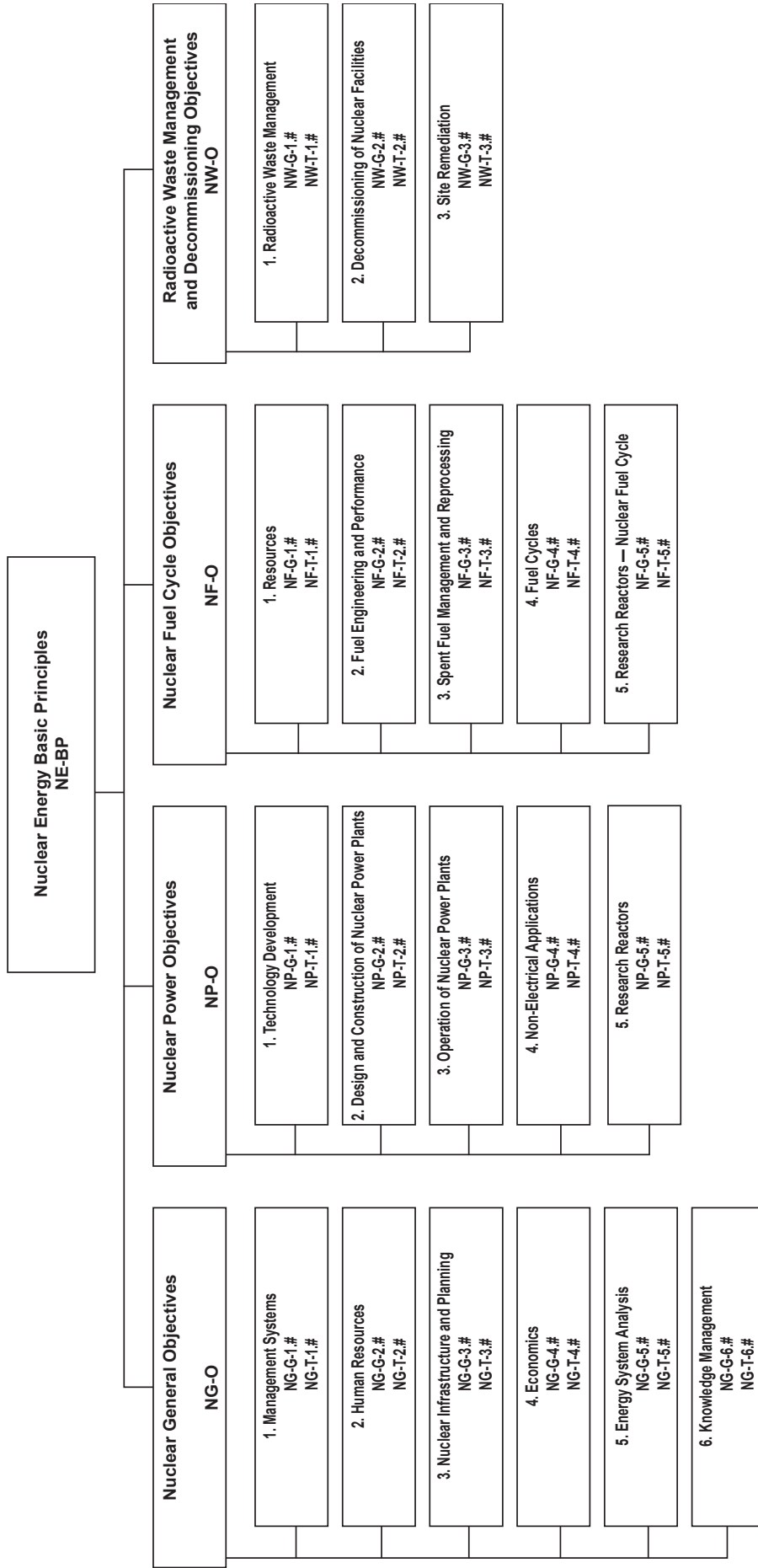
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