

Document Preparation Profile (DPP) revised after the Committees review

1. IDENTIFICATION

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SS Committee(s): **NUSSC, RASSC, WASSC, TRANSSC**

Technical Officer(s): **Luis Lederman**

2. OBJECTIVE

This safety guide will provide guidance on the establishment of a national nuclear safety infrastructure as a key component of the overall preparations required for emerging nuclear power programmes. For the purposes of this document nuclear safety infrastructure is understood as, “The set of institutional, organizational and technical elements and conditions established in a Member State to provide a sound foundation for assurance of a sustainable high level of nuclear safety.” This document is intended to be used by Member States considering launching a nuclear power programme. It may also be useful for those Member States considering the expansion of their existing programme. It provides a roadmap for Member States to apply the IAEA safety standards and other elements of the Global Nuclear Safety Regime progressively during the early phases of the implementation of a nuclear power programme. Safety is a national responsibility that cannot be outsourced with the prime responsibility resting with the operators. Therefore, it is important for member states to establish at an early stage a dedicated project management organization with a strong commitment to nuclear safety including appropriate staffing, funding and other necessary resources. This guide focuses in particular on the early phases when the country is still considering a decision to launch a nuclear power programme and preparing for the construction of the nuclear power plant after the policy decision has been taken.

This safety guide is also intended to contribute to the early building of a strong leadership for safety and safety culture and for use as a tool for the national self-assessment by member states developing their national nuclear safety infrastructure.

3. BACKGROUND

Over the last number of years, the General Conference has encouraged the Secretariat to develop approaches to support nuclear power infrastructure in Member States considering launching or expanding a nuclear power programme. In this regard, numerous Member States have expressed the desire for clearer and more practical guidance on how to establish and develop, a sound nuclear safety infrastructure that will assist them in

applying the current IAEA Safety Standards in the most effective, efficient and sustainable manner.

In anticipation of a nuclear renaissance which will affect both emerging nuclear Member States as well as those with mature nuclear programmes wishing to expand their fleet, in association with the 2006 IAEA General conference, the International Nuclear Safety Group (INSAG) conducted a Forum exploring “nuclear safety infrastructure.” As a result of the growing demand by Member States for assistance on the subject expressed at the Forum and at the request of the DG, INSAG is developing a report providing high-level recommendations for the development of a nuclear safety infrastructure, relating each of the five phases¹ of infrastructure development to the IAEA Fundamental Safety Principles (SF-1).

Countries embarking on nuclear power programmes need to take into account a wide range of factors and commitments and their implementation over time. The IAEA has published in 2007 a brochure titled Considerations to launch a nuclear power programme and a report on Milestones (NG-G-3.1) in the development of a national infrastructure for nuclear power.

At its last meeting in November 2007 the Committee on Safety Standards (CSS) considered the importance of this topic and requested the Secretariat to consider the most appropriate guidance for Member States embarking on nuclear power to establish or enhance a sound and sustainable nuclear safety infrastructure.

4. INTERFACES

The entire Safety Standards Series

The publication on “Considerations to launch a Nuclear Power Programme”

The Nuclear Energy publication on “Milestones in the Development of a National Infrastructure for Nuclear Power”, NG-G-3.1

INSAG publications

Legally binding international safety conventions

Legal series

5. OVERVIEW

The safety guide will provide guidance on the establishment of a nuclear safety infrastructure as a key component of the overall preparations for emerging nuclear programmes. This safety guide is also intended to identify gaps between an emerging member state’s present capability and its ability to apply the current standards and actions required to fill these gaps.

The approach to be used for the preparation of this document is the following:

- Considering that the fundamental safety principles are all implemented through the set of Safety Requirements, a systematic review of all the requirements relevant for a nuclear power programme (starting with the draft revision of GS-R-1) should be

¹ - phase 1: before deciding to launch a nuclear power programme

- phase 2: before implementing a nuclear power programme

- phase3: implementation of the first nuclear power plant

- phase 4: operational phase of the nuclear power plant

- phase 5: decommissioning and waste management

carried out with a view to identifying the specific nuclear safety infrastructure elements.

- The safety guide will indicate important considerations and what actions need to be taken to progressively apply all the safety requirements for the establishment of a nuclear safety infrastructure. It will clearly identify what should be realized in terms of safety when a country is considering a decision to launch a nuclear power programme (phase I) and what should be implemented as preparatory work for the construction of a nuclear power plant (phase II) after the decision has been taken, such that the whole set of relevant safety requirements can be applied at the end of the phase II.
- The infrastructure elements identified in the milestones document (NG-G-3.1) will also provide an input for this approach.

The safety guide content would be structured according to the three main following aspects (see the attached table of content):

- National Safety Policy and Strategy,
- Institutional Elements,
- Organizational and Technical Elements

6. PRODUCTION:

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