



The Licensing Process for New Nuclear Power Plants in Canada – Synopsis

The mission of the Canadian Nuclear Safety Commission (CNSC) is to regulate nuclear energy and materials to protect health, safety, security and the environment, and to respect Canada's international commitments on the peaceful use of nuclear energy. Before any person or company can prepare a site for, construct, operate, decommission or abandon a nuclear facility, or possess, use, transport or store nuclear substances, they must obtain a licence issued by the CNSC. The *Licensing Process for New Nuclear Power Plants in Canada* information document provides an overview of the process for licensing new nuclear power plants in Canada. It is based on the requirements of the *Nuclear Safety and Control Act* (NSCA) and associated regulations.

There have been no new nuclear power plants built in Canada in the last 25 years, and new legislation (the NSCA) now guides the CNSC's actions. Additionally, there has been much discussion over the last 12 months on the need for new nuclear power plants in Canada, particularly in Ontario, to meet the growing demand for electricity. Governments, CNSC licensees and other stakeholders have requested information from the CNSC on the regulatory requirements and process for licensing new nuclear power plants. As a result, the CNSC has prepared an information document in response to requests for guidance, and in order to facilitate open communication with stakeholders.

The CNSC has not yet received any applications to start the licensing process for any new nuclear power plants. The *Licensing Process for New Nuclear Power Plants in Canada* information document has been prepared as part of the CNSC's due diligence and as such, ensures stakeholders have a well-informed understanding of the licensing process.

The CNSC is currently updating its regulatory framework for nuclear power plants; this updated framework will draw upon international standards and best practices, including the International Atomic Energy Agency's (IAEA) nuclear safety standards, to the extent possible. The IAEA's standards set out high-level safety goals that apply to **all** reactor designs; that is, they are technology-neutral. Aligning the CNSC's regulatory framework for new nuclear power plants with international standards and best practices allows the CNSC to build on advances in safety and on the experiences of the international regulatory community. Canadians, therefore, can be assured that any new nuclear power plants built in Canada will meet the highest standards for health, safety, security and environmental protection.

There are five phases in the life-cycle of a nuclear power plant, and each phase requires a separate licence. Before any licensing decision can be made with respect to the new nuclear power plant, however, an environmental assessment (EA) must be completed with a decision that the project is not likely to cause significant adverse environmental effects with the available mitigation measures. If the decision on the EA is negative, the project will not proceed. By considering environmental effects and mitigation early in project planning, potential delays and unnecessary costs can be avoided or reduced.

An EA is initiated by an application for a licence to prepare the site under the NSCA, and are carried out under the *Canadian Environmental Assessment Act*.

EAs are conducted before any further work is carried out on the required five licences for each life-cycle phase of a new power plant. The five phases in the life-cycle of a nuclear power plant are:

- (1) a licence to prepare a site;
- (2) a licence to construct;
- (3) a licence to operate;
- (4) a licence to decommission; and
- (5) a licence to abandon (not discussed in the document).

It is the responsibility of licence applicants to provide comprehensive and complete information with each application, so that the CNSC's assessment of each licence application can be as effective and efficient as possible, and so that any design concerns can be identified at the earliest possible time.

Separate licences must be granted for each phase, and they would be issued in sequence taking place over a 10-year period, at a minimum. However, applications to prepare a site, to construct and to operate a new nuclear power plant can be assessed in parallel.

More information on the CNSC and the *Licensing Process for New Nuclear Power Plants in Canada* information document is available on the CNSC Web site at www.nuclearsafety.gc.ca.