Department of Legislative Services

Maryland General Assembly
2012 Session

FISCAL AND POLICY NOTE

Senate Bill 637 (Senator Pipkin)
Finance

Nuclear Power Transparency Act of 2012

This bill prohibits a person from operating a nuclear generating facility in the State until the person discloses specified information to the Public Service Commission (PSC). This information includes the short-term and long-term plans for storing spent nuclear waste generated at the facility; the plan to mitigate any increase in the temperature of water flowing through a nuclear generating facility into the Chesapeake Bay or a tributary of the bay; the total projected cost of power generated at the facility (per kilowatt-hour); the details of any federal or State loan guarantee used to finance the nuclear generating facility; and a description of any cost overruns incurred by the builder of the nuclear generating facility in previous projects.

Fiscal Summary

State Effect: The bill does not materially affect State finances or operations.

Local Effect: None.

Small Business Effect: None.

Analysis

Current Law: In order to construct or modify an electric generating station in the State, PSC must grant a certificate of public convenience and necessity (CPCN). Prior to taking final action on a CPCN for construction of a generating station or overhead transmission lines, PSC must consider the stability and reliability of the electric system; economics; esthetics; historic sites; aviation safety; when applicable, air and water pollution; and the

availability of means for the required timely disposal of wastes produced by a generating station.

The regulation of nuclear power generating facilities is the primary responsibility of the U.S. Nuclear Regulatory Commission (NRC). A nuclear power generating station must be granted an operating permit by NRC. The NRC regulatory process involves five main components: (1) developing regulations and guidance for applicants and licensees; (2) licensing or certifying applicants to use nuclear materials or operate nuclear facilities and decommissioning; (3) overseeing licensee operations and facilities to ensure that licensees comply with safety requirements; (4) evaluating operational experience at licensed facilities or involving licensed activities; and (5) conducting research, holding hearings to address the concerns of parties affected by agency decisions, and obtaining independent reviews to support regulatory decisions.

Background:

Nuclear Power Generation in Maryland

Calvert Cliffs, owned by Constellation Energy, is the only nuclear generating facility in the State, and has two nuclear reactors (Unit 1 and Unit 2). Plans for a third reactor (Unit 3), previously a joint venture between Constellation Energy and UniStar Nuclear Energy, a subsidiary of the French corporation Électricité de France, have encountered significant setbacks. These include (1) difficulty in securing a loan guarantee from the federal government, which caused Constellation Energy to withdraw from the project; and (2) the inability of UniStar to secure a license for the proposed third reactor from NRC without an American partner. In 2009, Calvert Cliffs represented approximately 14% of Maryland's total nameplate capacity, and approximately 33% of the State's electricity generation. For context, there are 104 nuclear generating facilities operating in the United States, which account for approximately 20% of U.S. electricity generation.

Licensing and Evaluation in Maryland

The Power Plant Research Advisory Committee is an advisory body to the Department of Natural Resources (DNR), whose main tasks are to review the goals, policy practices, and major directions of the Power Plant Research Program (PPRP) within the department. PPRP was created in 1971 to conduct research on the impacts of existing and proposed power plants in each county. PPRP is required to undertake a continuing research program for electric power plant site evaluation and related environmental and land use considerations. For nuclear plants, evaluation issues include (1) environmental assessment of radioactivity released; (2) operations, licensing, and relicensing issues; (3) radioactive waste disposal; and (4) emergency response.

The licensing of new electric power plants in the State is a comprehensive two-part process involving PSC and several other State agencies, *e.g.*, DNR and the Maryland Department of the Environment. PSC is the lead agency for licensing the siting, construction, and operation of power plants in the State. During the CPCN application process, the agencies hold extensive discussions with interested parties such as local governments, environmental organizations, the company proposing to build the power plant, and individual citizens. Applicants must address environmental, engineering, socioeconomic, planning, and cost issues. Concerns are identified and the State agencies incorporate those concerns into their evaluation.

The Electric Customer Choice and Competition Act of 1999 (Chapters 3 and 4) facilitated the restructuring of the electric utility industry in Maryland. The Act eliminated PSC regulation of generation functions. The Calvert Cliffs generating station is a merchant generating station and its rates are not regulated by PSC; however, electric generating stations are required to submit data to the Federal Energy Regulatory Commission on the sale of wholesale electricity.

Regulation of Spent Nuclear Waste

Uranium fuel used in a nuclear reactor to generate electricity typically stays in a reactor between 12 to 18 months, after which it is no longer efficient in producing electricity and is removed. Spent nuclear fuel is considered high-level nuclear waste and is highly radioactive, and therefore highly dangerous. NRC regulates spent nuclear fuel through a combination of licensing and regulatory requirements and through performance and safety evaluation. Approximately 57,000 tons of commercial spent fuel is already in temporary storage at nuclear power plants across the country.

Federal policies governing the permanent disposal of high-level nuclear waste are defined by the Nuclear Waste Policy Act of 1982, as amended. The Act specifies that high-level waste will be disposed of underground, in a deep geologic repository, and that Yucca Mountain, Nevada, will be the single candidate site for characterization as a potential geologic repository. Under the Act, NRC is one of three federal agencies with a role in the disposal of spent nuclear fuel. Currently, it is unclear if Yucca Mountain will receive a license, or if ultimately another site will be chosen. However, until a national disposal facility is operational, most spent nuclear fuel rods will continue to be stored in specially designed pools or dry cask storage facilities at individual reactor sites around the country. As of 2010, Calvert Cliffs had filled 53% of its storage capacity.

Additional Information

Prior Introductions: SB 460 of 2011 received an unfavorable report from the Senate Finance Committee. SB 993 of 2010 was referred to the Senate Rules Committee, but no further action was taken.

Cross File: None.

Information Source(s): U.S. Nuclear Regulatory Commission, Department of Natural Resources, Public Service Commission, Department of Legislative Services

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