

S. 1837 (Senator deMacedo) & H.1765 (Representative Muratore)

SECTION 1. Chapter 10 of the General Laws is hereby amended by adding the following section:-

Section 76. (a) For the purposes of this section the following words shall have the following meanings unless the context clearly requires otherwise:

“Affiliate”, a business that directly or indirectly controls or is controlled by or is under direct or indirect common control with another business including, but not limited to, a business with whom a business is merged or consolidated, or which purchases all or substantially all of the assets of a business.

“Decommissioning”, closing and decontaminating a nuclear power station and nuclear power site including dismantling the facility, removing the nuclear fuel, coolant and nuclear waste from the site, releasing the site for unrestricted use and terminating the license; provided however, that, for the purposes of this section, SAFSTOR is not decommissioning.

“Nuclear power station”, a commercial facility that uses or used nuclear fuel to generate electric power.

“Post-closure”, the period beginning when a nuclear power station has ceased generating electric power and ending when the nuclear power station and station site have been completely decommissioned.

“Post-closure activities”, the activities at or in connection with a nuclear power station and station site during post-closure including, but not limited to, moving spent nuclear fuel into dry casks, job training, site and environmental cleanup, off-site emergency planning, SAFSTOR and decommissioning.

(b) Each nuclear power station shall pay an annual post-closure funding fee of \$25,000,000 if the station is not fully decommissioned within 5 years of the time the power station ceases generating electric power. The fee shall be assessed by the executive office of energy and environmental affairs annually on the owner or affiliate of each nuclear power station on March 1 and shall be paid to the state treasurer for deposit into the Nuclear Power Station Decommissioning Trust Fund established in subsection (c). The Nuclear Power Station Decommissioning Trust Fund shall not be used to pay the full amount or any portion of the fee. The fee shall be paid until: (i) the nuclear power station is fully decommissioned as required under regulations promulgated by the United States Nuclear Regulatory Commission; and (ii) the executive office of energy and environmental affairs issues, after notice and an opportunity to be heard, an order finding that post-closure activities have been completed.

(c) There shall be a Nuclear Power Station Post-closure Trust Fund. The state treasurer shall serve as trustee of the fund and shall make expenditures from the fund to support decommissioning measures including: (i) payments for not less than 1 post-closure activity completed at a nuclear power station site, but only after the money in a federal decommissioning trust fund is exhausted; and (ii) payments to a person or entity named in an issuance of authorization from the executive office of energy and environmental affairs stating the amount to be disbursed and the completed post-closure activities to which the amount applies. The fund shall consist of: (i) the fee collected under subsection (b); and (ii) the interest earned on the money in the fund. Amounts credited to the fund shall not be subject to further appropriation and money remaining in the fund at the close of a fiscal year shall not revert to the General Fund.

(d) The executive office of energy and environmental affairs shall not issue authorization for payment except upon the receipt of: (i) an affidavit or declaration, executed by an entity or person responsible for completing the relevant post-closure activity at a nuclear power station under the pains and penalties of perjury, identifying completed post-closure activity with respect to which a disbursement is requested and setting forth facts establishing that each such activity has been completed and the costs incurred by the nuclear power station owner with respect to each such activity; and (ii) verification of the facts in the affidavit or declaration by the executive office of energy and environmental affairs or another appropriate state agency.

The secretary of energy and environmental affairs shall determine the appropriate form, content and supporting information necessary for the affidavit or declaration. Money disbursed under this section in reliance on a false certification to the secretary of energy and environmental affairs may be recovered from the entity or person receiving the disbursement, with interest, through an action by the attorney general. A false certification shall be subject to section 5B of chapter 12.

(e) The balance of the Nuclear Power Station Post-closure Trust Fund shall be returned to the owner or affiliate of the nuclear power station upon the issuance of an order, after notice and opportunity for hearing, finding that the post-closure activities at the station have been completed by the executive office of energy and environmental affairs.”; and

by inserting after section 18 the following section:-

“SECTION 18A. Section 1 shall take effect three months following the passage of this Act.”

The Pilgrim Legislative Advisory Coalition, a grass roots organization which advocates to protect the economic, environmental, health and safety interests of Massachusetts citizens through responsible public policy on nuclear energy asks your support for S. 1837 (Senator V. deMacedo) and H. 1765

(Representative M. Muratore) relative to the prompt decommissioning of nuclear power station and to insure that, after Pilgrim shuts down, there will be money available for a complete and timely decommissioning of the Pilgrim site, or any commercial reactor in the Commonwealth, to protect the economic interests of the Commonwealth. The Act would require Pilgrim, and any other commercial nuclear reactor in the Commonwealth, to pay an annual \$25,000,000 post-closure funding fee if the station is not fully decommissioned within 5 years of the time the power station ceases generating electric power. The fee will be placed in a trust fund in the office of the State Treasurer. Any excess in the fund will be returned to the plant owner, with interest.

As of December 31, 2016, the latest figures available, Pilgrim had \$960.30 million dollars in its Decommissioning Trust Fund (DTF). In 2014 Entergy told the NRC that the estimated cost to decommission Vermont Yankee, a smaller Entergy-owned nuclear power station, would be more than \$1.243 billion. There is no rational reason that it will cost less to decommission Pilgrim and there is reason to fear that the cost could be half a billion dollars more. In reality the fund probably contains at least half a billion, and perhaps more than a billion, dollars less than will be needed to decommission the Pilgrim site.

The goal of the Act is to insure that Pilgrim will be properly decommissioned, and that money deposited by Entergy into the Commonwealth's trust fund, and not Massachusetts tax-payers, will pay for the decommissioning that the Act requires.

If there is not enough money, what will happen?

- Citizens will be stuck paying the difference. Pilgrim's owner is a limited liability company. There are no other guaranteed assets to pay for cleanup costs if it runs out of money for decommissioning. Connecticut ratepayers had to pay a \$480 million shortfall for cleanup of CT Yankee. A similar shortfall at Vermont Yankee is likely to result from the discovery of strontium and tritium contamination. There are tritium leaks at Pilgrim.
- Entergy may "raid" whatever it has in its decommissioning fund to meet expenses that have nothing to do with cleaning-up Pilgrim. Entergy's Vermont DTF is inadequate to decommission Vermont Yankee. Even so, Entergy will use the Vermont Yankee's DTF to pay \$600,000 in local taxes; to pay security costs to guard the spent fuel on site through 2050's; to pay for the transfer of the spent fuel from the pool to dry casks; and to pay for worker retirement costs. Massachusetts

must assume that Entergy will try to do the same thing with respect to Pilgrim's DTF fund, and to do so will further diminish a fund that is already insufficient.

- If Entergy runs out of money and Massachusetts is left holding the bag, there unavoidably will be a temptation to do less to decommission and cleanup to save taxpayer money.
- Without enough money to decommission, Entergy will put its Pilgrim reactor into "SAFSTOR"-mothball it in place – for 60 years. Decommissioning will not even start until about 2092. During "SAFSTOR," workers with specific knowledge of spills and other specific problems will have retired, the workforce is reduced to a skeleton crew; offsite emergency planning is eliminated; and contributions to the state for environmental monitoring likely are eliminated too.
- Entergy refused to guarantee Vermont that Entergy would be financially responsible for decommissioning after Vermont Yankee's planned SAFSTOR period. Massachusetts should expect that Entergy will similarly refuse to guarantee financial responsibility for cleaning-up Pilgrim.

This testimony relies on publicly available information, principally four Entergy documents: Entergy's Preliminary Decommissioning Cost Analysis For The Pilgrim Nuclear Power Station, 2008; Entergy's 2008 Decommissioning Cost Analysis For the Vermont Yankee Nuclear Power Station; Entergy's December 19, 2014 Vermont Yankee Post Shutdown Decommissioning Activities Report; Entergy's 2014 Decommissioning Funding Status Report for Pilgrim and Vermont Yankee, released by the NRC on March 30, 2015. Note that all of these documents can be accessed through the NRC's website using the NRC's ML number.

An analysis of these reports shows that, as of today, \$348 million dollars short of having the funds that will be required to fully and safely decommission Pilgrim. Even though Entergy expects its decommissioning fund to grow in the future, Entergy's own projections show that the expected growth will not close the gap; and there is no rational basis for the Commonwealth to assume otherwise. Absent the Postclosure Trust Fund this Act would establish, there is an unacceptably high risk, indeed a likelihood - that the Commonwealth will be stuck with hundreds of millions of dollars in decommissioning costs - costs that properly belong to and should be paid by Entergy. Entergy will argue that this Act to establish a decommissioning trust fund is an unnecessary burden. They will point to NRC's 2015 Decommissioning Report on the status of Pilgrim's fund as of December 31, 2014 that found Pilgrim's Decommissioning Trust Fund (DTF) sufficient but it cannot be relied upon.

What Entergy will ignore is that that the NRC, Entergy and S. 1837 define “decommissioning” differently and include different expenses under that term; and that even Entergy admits that the Pilgrim DTF required by the NRC is not enough to accomplish what Entergy calls decommissioning.

The Nuclear Regulatory Commission defines decommissioning narrowly, and its DTF requirements are based on a generic out-of-date decommissioning cost formula and unrealistic assumptions about cost inflation and financial market performance. The NRC formula also ignores both the costs of spent fuel management after a plant stops generating electricity, and those costs of removing subsurface contamination.

According to the NRC’s rule, 10 C.F.R. 50.2, “*Decommission* means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits—

- (1) Release of the property for unrestricted use and termination of the license; or
- (2) Release of the property under restricted conditions and termination of the license.

The NRC’s Glossary says that “Decommissioning” is:

The process of safely closing a [nuclear power plant](#) (or other facility where [nuclear materials](#) are handled) to retire it from service after its useful life has ended. This process primarily involves [decontaminating](#) the facility to reduce residual [radioactivity](#) and then releasing the property for unrestricted or (under certain conditions) restricted use. This often includes dismantling the facility or dedicating it to other purposes. Decommissioning begins after the [nuclear fuel](#), [coolant](#), and [radioactive waste](#) are removed.

The NRC requires nuclear power station owners/operators to establish a “decommissioning fund” that is invested in stocks and bonds, and is supposed to grow sufficiently to cover the costs of decommissioning (as defined by the NRC) at some point in the future after the reactor shuts down. So long as the total amount in the fund is more than the NRC’s formula-based “minimum financial assurance,” the NRC assumes that it will be sufficient. The size of the NRC-required fund is determined using a *pro forma* generic decommissioning formula. The formula is not site-specific; it simply asks the size and type of reactor of the reactor (BWR or PWR) to determine a base amount, and then applies an escalation factor based on the Department of Labor regional data for labor and energy costs. NRC is virtually alone among nuclear regulatory authorities in adhering to pro-forma generic cost estimates. For example, Canada adopted site-specific methodology. Ignoring site-specific costs and conditions is not the only flaw in the NRC’s DTF calculation. Other major flaws include that it ignores site

contamination, and makes unrealistic assumptions about the extent to which the fund and decommissioning costs will grow. Entergy has also said that the taxpayers will be the ones at risk if the Entergy subsidiaries that own or operate Pilgrim are not able to pay decommissioning expenditures. The Post-Closure Trust Fund reduces the otherwise unavoidable and significant risk that taxpayers or ratepayers must pay for claims and costs resulting from a nuclear reactor in the Commonwealth.

For many reasons, for the good of the taxpaying citizens of the Commonwealth, and because S. 1837 and H. 1765 requires Entergy to pay into the fund while Pilgrim has the resources and is still operating, it is up to the Massachusetts legislature to do what is necessary to ensure that Massachusetts taxpayers will not have to pay. The goal of these bills is to protect the public by requiring Entergy to pay into a Post-Closure Trust Fund.

Please support Senator deMacedo's and Representative Muratore's effort and move their bills to conference.

Thank you for the opportunity to comment,

Respectfully,

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