

**PILGRIM WATCH TESTIMONY IN FAVOR OF S.1797:  
AN ACT ESTABLISHING A FEE ON THE STORAGE OF  
SPENT NUCLEAR FUEL IN POOLS (2015)**

August 2015

Pilgrim Watch (“PW”) is a non-profit citizens’ organization that serves the public interest on issues regarding the Pilgrim Nuclear Power Station specifically and on nuclear power in general. The organization is located at 148 Washington Street, Duxbury, Massachusetts, 02332. Its membership extends throughout the Commonwealth.

We ask your support for An Act establishing a fee on the storage of spent nuclear fuel in pools put forward by Senator Daniel A. Wolf. (Attachment A).

The Act provides significant economic benefits to the Commonwealth, and the Commonwealth state has the authority to enact it.

**I. Why the Act is Needed - Economic Considerations**

The purpose of the Act is simply to protect the economic interests of the Commonwealth. It does so by giving nuclear power plant owners a strong incentive to reduce the number of spent nuclear fuel assemblies in their spent fuel pool(s), and thus concomitantly reduce what the Massachusetts Attorney General estimated to be the consequences of a spent fuel pool fire at Pilgrim.

- In the course of the proceedings that extended Pilgrim’s operating license from 2012 to 2032, the Massachusetts Attorney General estimated that a spent fuel pool fire at Pilgrim could cause up to \$488 billion dollars in damages and cause up to 24,000 latent cancers. Cancers have economic impacts on the larger community such as medical expenditures for treatment and losses of worker’s economic productivity.
- A 2013 NRC Study found that a spent pool fire at a Pennsylvania reactor similar to Pilgrim could make an area of 9,400 square miles (more than the entire area of Massachusetts) uninhabitable for decades, and displace as many as 4.1 million people (more than half the total population of

Massachusetts. Plymouth, where Pilgrim is located, itself has a population of about 500,000, a land areas of about 660 square miles, and real estate with a current assessed value of slightly more than 9 billion dollars

- The Price-Anderson Act, the nuclear industry's liability insurance, does not cover the costs of cleaning-up after a nuclear accident. Therefore the state and taxpayers will pay, and have every reason to reduce potential risks and costs of doing so.
- Waste disposal responsibility and costs after a nuclear reactor accident also are the responsibility of the state and local community.
- So long as nuclear fuel remains on-site at Pilgrim, the State and local communities will have on-going security and emergency planning costs.
- The spent nuclear fuel at Pilgrim, like any other hazardous waste facility, will continue to adversely affect the value of surrounding real estate, and tax revenues.
- The risk of a spent fuel accident, and the potential consequences, are far less if the spent fuel is moved from the spent fuel pool into dry storage casks.
- Whether there will be a spent fuel pool accident at Pilgrim Station is obviously uncertain, but not zero. And it is undeniable that the fewer number of assemblies in the pool means there is a smaller potential radioactive release and smaller economic consequences for the Commonwealth.

Giving Pilgrim's owner, for example, an incentive to reduce the number of radioactive spent nuclear fuel assemblies in the pool is within the state's authority to protect its economic interests.

## **II. The Fee Provided by the Act is Not Unfair to Nuclear Power Plant Owners**

- Entergy and other nuclear power plant owners receive hundreds of millions of dollars every year by generating and selling electric power. They have known from the outset, that nuclear power generates spent fuel, that spent fuel is highly radioactive, and that a spent fuel accident would have disastrous economic consequences.
- To ensure their ability to make money, nuclear power plant operations have been willing to pay hundreds of millions of dollars to Indian tribes to store spent fuel on their lands. The Mescalero

Apache Tribe in New Mexico was offered \$250 million; the Skull Valley Band of Goshutes and Toole Country, Utah were offered combined payments of \$90-\$300 million; the offer to the Mdewakanton Dakota Tribe and the Minnesota Renewable Energy Development Fund was \$135 million. Likewise the Commonwealth deserves compensation.

- Do not feel sorry for Entergy. Pilgrim’s owner likely will recover the cost of any fee from DOE to recoup costs and exact damages for being forced to continue storing highly radioactive spent fuel and not fulfilling the government’s promise to open a federal repository no later than 1998. Licensees have successfully sued DOE, and recovered other spent fuel management costs. Entergy filed two suits against the federal government for spent fuel management costs. The first related to costs incurred by Entergy between 1999 and December 2008, netting the company \$4.1 million for costs incurred and \$27,000 for legal expenses. The latest suit filed December 2014 seeks to recover money spent between December 2008 and September 2014, and Entergy's attorney said the company will be looking for considerably more money because they built a dry storage area.

### **III. The Commonwealth Has the Authority to Assess a Spent Fuel Fee**

Entergy and other nuclear power plant owners can be expected to say that the ACT is pre-empted by Federal Law. It is not.

The Atomic Energy Act (“AEA”) is explicit: states are allowed to regulate activities for purposes *other* than the protection against radiation hazards. The NRC has the sole authority to establish nuclear safety regulations, but a state may regulate activities *for purposes other than protection against radiation hazards*, e.g., a state may decide how nuclear generation fits into the state’s overall energy and land use plan, and may regulate a nuclear power plant to address its own economic concerns. See Attachment B, Section A.

The Supreme Court has also been clear: A state or local law whose rationale is grounded in economic purposes “lies outside the occupied field of nuclear safety regulation.” *Pacific Gas & Electric v. State Energy Res. Cons. & Develop. Commission*, 461 US 190, 216 (1983).

Under existing Supreme Court precedent, an analysis of whether a state law is pre-empted requires a consideration of both the purpose and effect of the state law in question. Any state law grounded in radiological safety concerns, that has a “direct and substantial” effect on the safety of nuclear plant “construction and operation,” or that actually conflicts with federal law and thus makes it impossible for a party to comply with both the federal and the state law, falls within the field is likely preempted. But a state law such as the Act that is focused on protecting the state’s economic interests is not. See Attachment B, Sections B and C.

We expect opponents of this bill to say that an opinion that the Massachusetts Department of Revenue issued in 2001 has already decided that federal law preempts this Act. They would be wrong. That decision says only that the Commonwealth could not force a nuclear power plant operator to pay sales tax on dry casks that it purchased for spent fuel storage, because it did so as an agent of the U.S. Government and that the cases were in reality owned by the Government.

The Act has nothing to do with dry casks. It deals only with nuclear fuel itself – fuel that Pilgrim and other nuclear power plant operators bought so that they could generate and sell electric power. This nuclear fuel - even after it can no longer be used to generate power is owned by Pilgrim and other plant operators; it is not owned by the federal government. (See the Nuclear Waste Policy Act and Nuclear Waste Acceptance Issues, 60 Fed. Reg. 21,793 (Dep't Energy May 3, 1995), pg., 1276. Pilgrim bought the fuel in the first place. We asked both the NRC and the Department of Energy (DOE) who owns this fuel; and both responded that Pilgrim will continue to own the fuel until such time as it leaves the site and DOE takes title (ownership) for transportation to some off-site storage facility. (See Attachment C)

Needless to say, DOE has not accepted ownership of any Pilgrim nuclear fuel, and is unlikely to do for the indefinite future. All the fuel in Pilgrim’s reactor, and all of its spent fuel, is now owned by Pilgrim. Pilgrim recently sued DOE, and had done so previously, to recover the costs of spent fuel storage because it failed to provide a repository by 1998, as promised. But that suit is only about who has to pay for onsite spent fuel management; and does not change the fact that Pilgrim owns the stored

fuel. Just as you own a car when you take title to it, DOE will own the spent fuel when it takes title to it<sup>1</sup>.

The bottom line is clear. The Act is in the economic interest of the Commonwealth and its citizens, and this Legislature has every right to enact it.

Respectfully,

Mary and James Lampert  
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Duxbury, MA 02332  
Tel. 781.934.0389  
Email: [mary.lampert@comcast.net](mailto:mary.lampert@comcast.net)  
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<sup>1</sup> Note also that the expressed interest in Texas and South Carolina to host interim high level waste management sites has raised some hopes of finding an off-site solution for storing spent nuclear fuel. What is not widely discussed, however, that under the NWPA, DOE does not “take title” to spent fuel until it accepts the fuel for transportation to a permanent geological repository. Simply moving the spent fuel to an interim site leaves licensee as the owner of the spent fuel. For that reason, licensees, like Entergy, are not willing to take on the liability if anything happens in transportation to the interim site or mishaps at the interim site. This can only be corrected if Congress amends the act. Therefore, what effective steps can the Commonwealth take to reduce the very real risk that spent fuel will be stored in Pilgrim’s over-crowded pool for a very long time? Supporting Senator Wolf’s assessment on assemblies in the pool is the only game in town.

## ATTACHMENT A

SENATE DOCKET, NO. 46 FILED ON: 1/12/2015

The Commonwealth of Massachusetts

In the One Hundred and Eighty-Ninth General Court

(2015-2016)

Presented by: Daniel A. Wolf

### **An Act establishing a fee on the storage of spent nuclear fuel in pools.**

*Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:*

SECTION 1. Chapter 10 of the General Laws, as appearing in the 2012 Official Edition, is hereby amended by inserting after section 74 the following new section:-

Section 75. Spent Nuclear Fuel Storage Fee

(a) Definitions. For the purposes of this section the following words shall have the following meanings:-

“Decommissioning”, shall mean closing and and decontaminating a nuclear power station and nuclear power site, including dismantling the facility, removing all nuclear fuel, coolant and nuclear waste from the site, releasing the site for unrestricted use, and terminating the license. Safstor is not decommissioning for the purposes of this act.

“Nuclear fuel assembly”, shall mean a structured group of metal tubes containing pellets of fissionable material which provide fuel for nuclear reactors.

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

“Spent nuclear fuel”, shall mean nuclear fuel assemblies that have been removed from the reactor core of a nuclear power station.

“Spent fuel pool”, shall mean any structure in which spent nuclear fuel is kept under water following removal from a reactor.

(b) There is hereby established an annual fee of \$10,000 for each nuclear fuel assembly that is or was stored within a spent fuel pool during any part of a calendar year. All fees due under this section shall be payable by March 1 of the following calendar year to the state treasurer. This fee shall be assessed on the direct or indirect owner(s) of each nuclear power station in the Commonwealth.

(c) Commercial nuclear power stations that have been completely decommissioned as of January 1, 2016 are exempt from the fee established under subsection (b).

(d) Annually, the state treasurer shall allocate fees collected under this section as follows:

1. Thirty percent of the total revenue from each nuclear power station shall be allocated to the general operations budget of the town or city in which the nuclear power station is located.

2. Fifty percent of the total revenue from each nuclear power station shall be evenly divided and allocated to the general operations budgets of town and cities of the Commonwealth wholly or partially within a 20-mile radius of the nuclear power station other than the town or city in which the nuclear power station is located; provided however, that in the case of Pilgrim Nuclear Power Station, fifty percent of revenue shall be evenly divided and allocated among the following towns: Town of Bridgewater, Town of Carver, Town of Duxbury, Town of Halifax, Town of Hanover, Town of Hanson, Town of Kingston, Town of Lakeville, Town of Marion, Town of Marshfield, Town of Middleboro, Town of Norwell, Town of Pembroke, Town of Plympton, Town of Rochester, Town of Scituate, Town of Wareham, Town of Whitman, Town of Barnstable, Town of Bourne, Town of Brewster, Town of Chatham, Town of Dennis, Town of Eastham, Town of Falmouth, Town of Harwich, Town of Mashpee, Town of Orleans, Town of Provincetown, Town of Sandwich, Town of Truro, Town of Wellfleet, and Town of Yarmouth;

3. Twenty percent of the total revenue shall be allocated to the division of green communities in the department of energy resources to fund the green communities program established under section 10 of chapter 25A. If any portion of the allocation under this subsection causes the funding for the green communities program to exceed \$10 million in any single fiscal year, then that portion shall be reallocated to the general operations budgets of the towns and cities identified in paragraphs 1 and 2 of this subsection in the percentages specified in said paragraphs.

SECTION 2. Subsection (d) of section 10 of chapter 25A, as so appearing, is hereby amended by striking out paragraph (4) in its entirety and inserting in place thereof the following paragraphs:-

(4) amounts from spent nuclear fuel storage fee payments under section 75 of chapter 10; and

(5) other funds as the governing board of the Massachusetts Renewable Energy Trust Fund established under section 9 of chapter 23J, may provide.

SECTION 3. This act shall take effect on January 1, 2016.

## **ATTACHMENT B (PRE-EMPTION)**

### **STATE REGULATION OF NUCLEAR POWER PLANTS**

#### **A. The Nuclear Regulatory Commission and the Atomic Energy Act (AEA)**

The AEA was first enacted in 1946 to govern the development and regulation of atomic energy in the United States. (42 U.S.C. §§ 2011 et seq.). It was amended in 1959 to add section 42 U.S.C. § 2021, which addresses cooperation between the federal and state governments over the regulation of nuclear materials: all states are expressly permitted to regulate activities for purposes *other* than the protection against radiation hazards. (42 U.S.C. § 2021(k)).

The NRC has the sole authority to establish nuclear safety regulations, but a state may regulate activities *for purposes other than protection against radiation hazards*, e.g., a state may decide how nuclear generation fits into the state's overall energy and land use plan, and may regulate a nuclear power plant to address its own economic concerns.

#### Relevant Provisions of the AEA:

1. Section 271, 42 U.S.C. § 2018 – “Nothing in this chapter shall be construed to affect the authority or regulations of any Federal, State or local agency with respect to the *generation, sale, or transmission of electric power ...*”
2. Section 274, 42 U.S.C. § 2021, part of 1959 amendments to the AEA – “Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities *for purposes other than protection against radiation hazards*”

#### **B. What is preemption?**

The legal doctrine of preemption is grounded in the constitutional principle that federal law takes precedence over inconsistent state law. The “Supremacy Clause” of the Constitution provides that a federal law may, under certain circumstances, render a state law unenforceable.

The AEA has explicit language dividing federal and state responsibility regarding nuclear power regulation and has been interpreted by the Supreme Court to preempt the entire field of “nuclear safety.” The federal government's areas of regulatory concern are national security, public health, and nuclear safety, in which no significant role is contemplated for state regulation.



Under existing Supreme Court precedent, an analysis of whether a state law is pre-empted requires a consideration of both the purpose and effect of the state law in question. Any state law grounded in radiological safety concerns, that has a “direct and substantial” effect on the safety of nuclear plant “construction and operation,” or that actually conflicts with federal law and thus makes it impossible for a party to comply with both the federal and the state law, falls within the field exclusively occupied by the NRC and is therefore preempted. See *Pacific Gas & Electric v. State Energy Res. Cons. & Develop. Commission*, 461 US 190, 216 (1983); and *English v. Gen. Electric Co.*, 496 U.S. 72, 78-79 (1990).

Supreme Court precedent is also clear that a state or local law whose rationale is grounded in economic purposes “lies outside the occupied field of nuclear safety regulation.” *Pacific Gas & Electric*, 461 U.S. at 216.

### **C. Supreme Court Rulings.**

#### *1. Pacific Gas & Electric v. State Energy Res. Cons. & Develop. Commission*, 461 US 190 (1983):

In *PG&E*, a 1976 California law imposed a moratorium on the certification of new nuclear plants until “there has been developed and... approved ... a demonstrated technology or means for the disposal of high-level nuclear waste.” This moratorium was justified by the state based on the economic impacts of the failure to find a “solution” to spent nuclear fuel storage and disposal.

The Supreme Court stated, “The federal government maintains complete control of the safety and “nuclear” aspects of energy generation; the states exercise their traditional authority over the need for additional generating capacity, the type of generating facilities to be licensed, land use, ratemaking, and the like.” (461 U.S. at 211-12). “There are both safety and economic aspects to the nuclear waste issue.” (461 U.S. at 197). “The [NRC]...does not purport to exercise its authority based on economic considerations... Congress intended the States to continue to make these judgments.” (461 U.S. at 207-208).

#### *2. Silkwood v. Kerr-McGee*, 464 U.S. 238 (1984):

The Supreme Court determined that Congress, in enacting both the Atomic Energy Act and the Price-Anderson Act, a statute which provided a scheme for liability in the case of a nuclear disaster, did not intend to prohibit the states from awarding otherwise available state remedies to individuals injured by radiological contamination. The Court recognized that “there is a tension between the conclusion that safety regulation is the exclusive concern of the federal law and the conclusion that a state may nonetheless award damages based on its own law of liability” (464 U.S. at 256) and resolved this “tension” in favor of state law.

#### *3. English v. General Elec. Co.*, 496 U.S. 72 (1990):

In *English*, a whistleblower laboratory technician complained to GE's management and to the Federal Government about several perceived violations of nuclear-safety standards at the facility, including the failure of her co-workers to clean up radioactive spills in the laboratory, and sued at the state level for the intentional infliction of emotional distress. The Supreme Court found that English's

was not preempted, since the state tort law at issue was not motivated by safety concerns and since the claim's actual effect on the nuclear safety decisions made by those who build and run nuclear facilities is not sufficiently direct and substantial. (at 78-90).

#### **D. Other decisions relating to state and local laws regulating nuclear power:**

1. *Pennsylvania v. Lockheed Martin*, 684 F. Supp. 2d 564 (M.D. Penn. 2010):

“If state statute was enacted with the purpose of protecting against radiation hazards, or if state regulation directly affected radiological safety regardless of the regulation’s purposes, it is preempted by the AEA. However, where nuclear safety is not directly affected by the state statute, it is preempted only if there is an irreconcilable conflict between the federal and state standards or where the imposition of a state standard in a damages action would frustrate the objectives of the federal law, or where there is some direct and substantial affect on the decisions made by those who build or operate nuclear facilities concerning radiological safety levels.”

2. *Kerr-McGee Chemical Corp v. City of West Chicago*, 914 F. 2d 820 (7th Cir. 1990)

The city required Kerr-McGee to comply with municipal ordinances, including dust control and erosion regulations, in constructing a disposal cell for radioactive material. The court held that the City Code was completely “radiation neutral,” and not preempted.

3. *Illinois v. Kerr-McGee Chem. Corp.*, 677 F.2d 571 (7th Cir. 1982).

The city argued that these certain conditions at a nuclear facility (open pits filled with refuse; broken glass; sagging roofing; fallen walls; animal refuse) constituted a public nuisance and rendered the buildings “unsafe structures” in violation of city ordinances. The court upheld the city ordinances as radiation-neutral and not preempted.

4. *Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 43 ELR 20201 (2<sup>nd</sup> Cir. 2013)

The U.S. Court of Appeals recently ruled that the Vermont Legislature is federally preempted from shutting down the plant. The judges agreed that the Legislature was chiefly motivated by concerns of radiological safety when it created two laws aimed at regulating Vermont Yankee. The Vermont Attorney General is currently deciding whether to appeal this decision to the Supreme Court.

5. *Conn. Coal. Against Millstone v. Conn. Siting Council (Conn. Coalition)*, 942 A.2d 345 (Conn. 2008).

The Connecticut Supreme Court found preemption because Connecticut’s Siting Counsel sought to regulate dry cask storage of spent fuel in a way that could directly conflict with federal requirements (942 A.2d at 350). The court also found, based on *Silkwood* and *English*, found that nuclear safety was *not* a field that Congress intended the federal government to occupy exclusively.

**ATTACHMENT C: OWNERSHIP SPENT FUEL**

**(Electronic Correspondence NRC & DOE with Pilgrim Watch)**

**NRC Ownership Spent Fuel (Original provided on request)**

**From:** McKinley, Raymond [mailto:Raymond.McKinley@nrc.gov]  
**Sent:** Monday, March 02, 2015 8:24 AM  
**To:** Mary Lampert  
**Subject:** RE: ownership spent fuel

Mary,  
Please see attached response to your questions.  
Ray McKinley  
Chief, Division of Reactor Projects Branch 5  
U.S. NRC Region I

*NRC response provided in red text.*

**Introduction**

Commercial spent nuclear fuel currently stored on site at nuclear power plants is owned by the utility that produced it. The utility is responsible for the safe and secure storage of the spent fuel, under licensee control and oversight by the NRC. At most sites, this involves both wet and dry storage. The U.S. Department of Energy (DOE) has previously engaged in contracts with utilities for the ultimate disposition of spent fuel. Under these controls, DOE would take possession of the spent fuel when it leaves the utility's site. Because of delays in DOE taking possession of the spent fuel, some

utilities have received payment from the Federal government for costs incurred for the continued on-site storage. The utilities have recouped these costs through litigation against the Federal government.

#### Questions

1. Does the licensee own the spent fuel assemblies while they are stored inside the licensee's spent fuel pool? **YES**
2. Does the licensee continue to own the spent fuel when the assemblies are moved from the spent fuel and placed inside dry casks on the licensee's site? **YES**
3. When, and under what circumstances does DOE take ownership of the spent fuel? **SEE ABOVE.**

Will a licensee continue to own the spent fuel until some off-site storage site, either permanent or interim, is available and ready to take the particular licensee's spent fuel? **YES**

4. Our understanding is that the licensee owns the fuel until DOE accepts ownership and moves the spent fuel to a permanent off-site storage facility. Is this understanding correct? **NO. Licensees will continue to own the fuel until DOE accepts ownership and possession either in a permanent or temporary storage facility or a repository.**

### **DOE OWNERSHIP SPENT FUEL (Original provided on request)**

**From:** Barton, Connie [mailto:Connie.Barton@Hq.Doe.Gov]

**Sent:** Tuesday, March 17, 2015 4:24 PM

**To:** 'mary.lampert@comcast.net'

**Subject:** Response to 2/15/15 email regarding ownership of commercial spent nuclear fuel

Dear Ms. Lampert,

This email is in response to your email to Secretary Moniz dated February 15, 2015, inquiring as to when the Department of Energy (DOE) takes title to spent nuclear fuel (SNF) from commercial nuclear reactors. The licensee owns the nuclear fuel while it is in the reactor and the SNF is stored by the licensee in a spent fuel pool or in dry storage. Under 10 CFR 961, Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste (Standard Contract), DOE is obligated to take title to the SNF at the licensee's site boundary when DOE accepts the SNF for disposal. Under the Standard Contract, that transfer takes place when DOE shows up at the licensee's site to transport the SNF to a DOE site. Specifically, Article VII of the Standard Contract provides that "Title to all SNF and /or HLW accepted by DOE for disposal shall pass to DOE at the Purchaser's site as provided for in Article VI hereof."

Sincerely,  
Connie Barton

Acting Director, Office of Standard Contract Management