

**TOWN OF DUXBURY NUCLEAR ADVISORY COMMITTEE & PILGRIM WATCH
COMMENTS REGARDING NDCAP JUNE 21, 2017 MEETING**

**Draft List of Possible Nuclear Decommissioning Citizens Advisory Panel (NDCAP)
Subcommittees and Topics for Future Meetings**

The Duxbury Nuclear Advisory Committee (DNAC) and Pilgrim Watch (PW) have reviewed the agenda for the next NDCAP meeting (June 21, 2017) and the draft lists of potential subcommittees and future meeting topics. We offer the following comments and suggestions.

In General

We believe, as Chapter 188 of the Acts of 2016, § 14 and the Agenda recognize, that that NDCAP's work pursuant to the enabling legislation will necessarily evolve and change over the next several years. As provided in the enabling legislation, the issues related to *decommissioning planning activities* with which the Panel will be concerned from now until Pilgrim Nuclear Power Station (PNPS) shuts down will be different from issues relating to the *progress of decommissioning the PNPS* that are to be the subject of its later work.¹

We suggest that the Panel's first task will be to acquire and understand the necessary background information; identify key issues that will impact public safety, the environment, and the economy; and then recommend to responsible parties to enact requirements and guidance to better protect the region and Commonwealth. Where there is not state authority, the state can nevertheless use the prestige of its office to lobby federal authorities for measures to protect the Commonwealth.

Second, we suggest that now is the time to get ahead of the curve and formulate needed regulations and policies. If NorthStar purchases Pilgrim, then we can expect a rapid decommissioning and not have forty or so years during a Safstor period to get organized.

SUBCOMMITTEES

The recent draft suggested eight (8) possible subcommittees:

- | | |
|------------------------------|-------------------------|
| 1. Continued PNPS Operations | 5. Decon / Safstor |
| 2. Emergency Preparedness | 6. PSDAR |
| 3. Safety | 7. Economic |
| 4. Community Involvement | 8. Government Relations |

¹ As said in Section 14 of Chapter 188 of the Acts of 2016, the "duties of the panel shall be: (1) to commence public meetings beginning on or about June 1, 2017, at a frequency of quarterly until the shutdown of the Pilgrim Nuclear Power Station (PNPS) for the purpose of discussing issues related to decommissioning planning activities; (2) to hold a minimum of four public meetings each year for the purpose of discussing issues relating to the progress of decommissioning of the PNPS beginning on or about June 1, 2019, or when the PNPS permanently ceases power operations; provided that the panel may hold additional meetings...."

DNAC and Pilgrim Watch suggest a slightly different subcommittee structure:

1. Continued PNPS Operations, including decommissioning planning activities and the progress of decommissioning.
2. Economics and Finances
3. Waste- radioactive and hazardous
4. Site Restoration
5. Public Safety, including emergency preparedness & environmental monitoring
6. Federal, State, and Local government authority and possible roles
7. Administration, including community involvement, documents, and annual reports

1. **Continued PNPS Operations Sub-Committee**

The NDCAP's first proposed subcommittee was named "Continued PNPS Operations, and the fifth proposed subcommittee was named "Decon/Safstor." We suggest that this subcommittee includes Decon/Safstor since NRC clearly defines the terms and they are important to understanding Pilgrim's decommissioning planning activities.

- Reviewing and reporting on issues related to *decommissioning planning activities* from now until Pilgrim Nuclear Power Station (PNPS) shuts down, including a review of DECON and SAFSTOR decommissioning as they relate to PNPS plans. (The Panel needs to understand these two options, but we do not believe that this requires a separate subcommittee)
- Thereafter, reviewing and reporting on issues relating to the *progress of decommissioning* PNPS until decommissioning (including site restoration) is complete. In conducting these reviews, DCAP would consider updates from Entergy, the state and federal government; any plans to transfer Pilgrim's license to another entity; and lessons learned from decommissioning of other nuclear power stations including Yankee Rowe, Maine Yankee, Vermont Yankee, Zion, and San Onofre.

2. **Finances and Economics Sub-Committee**

The DCAP's seventh proposed subcommittee was named "Economic." We suggest that this subcommittee be broadened to include not only the economic effects of decommissioning on the Commonwealth, including Plymouth and the region, but also the costs of decommissioning and the financial viability of whoever is responsible for decommissioning.

A. **Finances – The costs and expenses of decommissioning**

- DCAP Statute – One duty of the NDCAP is to "[R]eceive reports on the Decommissioning Trust Fund and other funds associated with decommissioning of the PNPS, including fund balances, expenditures made, and reimbursements received."

- Review the financial aspects of PSDARs, particularly those dealing with what is usually referred to as license termination costs. We expect that the Waste Subcommittee and Site Restoration Subcommittee will be responsible for finances dealing with spent fuel and site restoration. We expect that the entire Panel will review PSDARs and that these subcommittees will make a presentation to the Panel, but we do not see the need for a separate PSDAR subcommittee.
- Review NRC DTF Reports.
- Review DTF Expenditures - Are DTF expenditures limited to reducing radioactivity, as they should be, or are they using portions of the fund, like Vermont Yankee, for spent fuel management, property taxes, emergency planning etc.
- Review Entergy's plan to continue reimbursements to State and local Agencies for offsite emergency planning expenses, radiological environmental monitoring, and any other expense.
- Review economic impact on workers and finances available for measures to assist workers let go.
- Review cost estimates for PNPS Decommissioning - how much allocated for each task; how much spent annually; how the actual cost of work already accomplished compared to earlier estimates; on-going review of future work and likely costs; the adequacy of how much is left to complete the job.

For example,

- Entergy's 2008 estimated cost to decommission Vermont Yankee was between \$728 Million and \$893 Million (depending on the date Vermont Yankee stopped operations and what decommissioning option was used) in 2008. That estimated cost increased to **\$1.243 Billion** in 2014.
- NRC has estimated that the DTF will grow 3.5% to 5% above inflation, but that decommissioning costs will increase faster - 5% to 9% annually
- The approximately one billion dollars in Pilgrim's DTF is several hundred million less than Entergy's 2014 estimate to decommission smaller, but otherwise essentially identical, Vermont Yankee.
- In 2008, TLG estimated that the cost to decommission Pilgrim if Pilgrim ceased operations in 2012 would be \$914,419,000. At an industry meeting in 2016, Callan Associates reported that decommissioning costs have risen more than 60% since 2008 (Callan Associates 2015 Decommissioning Funding Study)

B. Economics

- Review the economic viability of the entities that are responsible for decommissioning. Also review the effects that the time required for decommissioning, its status, and the final condition of the site will have on the Commonwealth, Plymouth, and other communities and citizens.

- Pilgrim is owned by Entergy Nuclear Generation Company, a limited liability corporation that will have no known revenues after Pilgrim shuts down and has no known assets other than PNPS.

According to the AP:

An Entergy Corp. official said Wednesday the company is offering no guarantees it will pay to decommission its retired Vermont Yankee nuclear power plant if the job's still not done by the end of a 60-year period.

Entergy Vice President Michael Twomey told members of two Vermont legislative committees that if decommissioning isn't done by the end of the period, known in the nuclear industry as "SAFSTOR," he expects there would be litigation, with the state and Entergy taking different positions³.

- Entergy may sell Pilgrim to NorthStar. If that should occur, the responsible subcommittee(s) will have to investigate license transfer process, and analyze & prepare comments sale (economic viability, liability issues) and any new PSDAR

3. Waste Sub-Committee

What waste is on the Pilgrim site and what will be done with it is one of the major issues/questions in decommissioning. We believe that waste is an issue that requires a subcommittee directed to it. The subcommittee will have to deal with not only radioactive waste (spent fuel; greater-than-class-C waste and low-level radioactive waste) but also hazardous waste

RADIOACTIVE ACTIVE WASTE

Pilgrim's spent fuel is likely to remain in the spent fuel pool for several years after Pilgrim shuts down (NRC rules allow it to remain for 60 years, and in any event fuel removed from the core must remain in the pool for approximately 5 years before transfer to dry casks). The dry casks will remain on-site for a long time. Entergy claims that spent fuel will leave Vermont in 2052, but there is no evidence that this is so and the Panel cannot safely make that assumption. Greater-than-class-C radioactive waste is to be treated as spent fuel.

A. Spent Fuel²

² To learn more about spent fuel storage see: <https://sanonofresafety.org/>; <http://www.capecodtimes.com/news/20170601/fire-danger-in-nuclear-pools-underestimated-scientists-say>

Pilgrim's spent fuel pool is in the upper floor of the reactor, outside primary containment with a thin and vulnerable roof overhead. The pool was designed to hold 880 used fuel assemblies; it now holds 2,822 (November 2016). When Pilgrim shuts-down, 580 more fuel assemblies will be moved from the reactor into the pool.

Boraflex panels are positioned between the spent fuel assemblies in Pilgrim's pool to prevent criticality. Entergy says about 900 are degrading (April 2017)

With respect to the spent fuel pool, the Waste Subcommittee will have to consider:

- The schedule to unload assemblies from the pool and moving them into dry casks.
- The safety impact of the degrading Boraflex panels, particularly with respect to unloading the core and adding 580 relatively new highly radioactive assemblies to the pool.
- Financing the cost of moving assemblies

With respect to the Spent Fuel Dry Cask Pad – the ISFSI – the subcommittee should consider

- Location, including the potential effect of a significant rise in sea level before the dry casks are moved off-site.
- Security over perhaps hundreds of years, including the size of the protected security zone, number of guards, and equipment to detect and deter intrusion.
- The location. of a second pad
- The cost of maintaining the ISFSI until there is an off-site repository that is ready and willing to take Pilgrim's spent nuclear fuel.
- Risks associated with the casks (Holtec Hi Storm Casks - monitoring, leaks, available technology to repair or replace, mitigation)- See San Onofre Safety link below.
- Any warranty of Holtec (a limited liability company) for Pilgrim's canisters and casks
- The ISFSI's owner's ability to pay the costs of maintaining the ISFSI.

B. Greater-Than-Class-C Waste

GTC is a type of radioactive waste that is not spent fuel but due to its toxicity must be stored with spent fuel in a deep repository. Currently (2017) Pilgrim has one barrel of GTC; it is stored in a container outside, in close proximity to Cape Cod Bay. It is slated to go to a deep geological repository with the spent fuel. Like spent fuel, it is stranded.

C. Low-Level Radioactive Waste (LLRW)

Nuclear wastes are classified, not so much according to the threat they pose to human health or the environment, but according to the process which produced the waste. High-level radioactive waste includes both commercial spent fuel and military reprocessing wastes. Low-level radioactive waste includes everything from slightly radioactive trash (such as mops and gloves) to highly radioactive activated metals from inside nuclear reactors. It includes short-lived and long-lived radionuclides such as plutonium. It is divided into four categories based on the types of radionuclides and their concentrations. Class A, B, C and Greater -than-Class C. Class A is

the least radioactive and Great-Than-Class C is the most radioactive and generally considered unsuited for near-surface disposal.

Pilgrim used to send its low-level waste to Barnwell, South Carolina. Massachusetts lost that option. Massachusetts is not part of a storage compact. Now Pilgrim sends its A, B, and C LLRWs to storage in Clive, Utah after it is blended at the Irwin Resin Processing Facility in Irwin TN. Waste Control Specialist (a partner of NorthStar) has a LLRW site in Andrews Texas for the Texas Compact, that includes Vermont and Maine. If NorthStar purchased Pilgrim, will Pilgrim gain access to WCS' LLRW storage site?

Hazardous Waste

Examples: PCBs, lead paint, standard industrial contaminants, asbestos, storm water, wastewater permitting, petroleum spills & storage permitting. The subcommittee and Panel will have to ensure that the hazardous waste on the Pilgrim site has been identified and dealt with.

4. Site Restoration Sub-Committee

Restoration of the Pilgrim site is another major part of decommissioning; and we believe that it also requires a separate committee. Issues to study include, for example:

End use of the site- restricted or unrestricted use. We believe that ensuring that the site is restored in such a way that it is suitable for unrestricted use; and that this level of clean-up is needed even if the site is slated for restricted use. Unless the site is restored to a suitable unrestricted use radiation level, contaminants may leach offsite into Cape Cod Bay whether the site ends up being used for only for “restricted” commercial purposes.

Cleanup Standard: The Panel is likely aware that the NRC standard for unrestricted use of a site is a per year total effective dose equivalent of 25 millirem, that its dose equivalent standard for unrestricted use is 100 or 500 millirem. It should also be aware that NRC radiation level “standards” create lifetime risks that are much greater than the risks allowed by the EPA in areas it has authority.

Massachusetts now has no standard that applies to decommissioning a commercial reactor site; but, the Commonwealth does have a 10 millirem standard for other radioactive sites under its authority. MDPH has the authority to establish a more restrictive standard than the NRC's and we ask you to consider that such a standard will be consistent with the National Academies BEIR VII report on the health impacts of ionizing radiation³ and protects the most vulnerable population not simply, as now, an average healthy young man⁴.

³ The National Academy's Report is available on the Web at <http://books.nap.edu/>

⁴ <https://ieer.org/article/science-for-democratic-action/volume-16-number-1/>;
<http://ieer.org/wp/wp-content/uploads/2012/02/congressman-ed-markey-to-lisa-jackson.pdf>

Rubblization is a process where all equipment is removed from buildings slated for removal; the surfaces are decontaminated to the cleanup standard; the above-grade structures are demolished to rubble and buried in the foundations of the structures that are left below ground. The site surface is then covered, regraded, and landscaped. Rubblization is thought to save licensees money but that assumption is questioned.

We believe what is not questioned is that:

- Contaminated rubble is likely to leach radioactivity into soil, impacting groundwater and runoff to other locations both onsite and offsite.
- Water intrusion into the rubble is likely at Pilgrim due to proximity to the water table (the groundwater table is typically at about 1' below mean sea level) and flooding.
- Potential excavation of contaminated building rubble and soil following decontamination of site for use later in new construction material or as fill can cause radiation exposures.
- Rubblization provides a less stable surface than soil/sand due to inevitable spaces between rubble
- Rubblization constitutes a new low level radioactive waste facility at Pilgrim, but without NRC requirements to provide protections equivalent to off-site disposal facilities for low-level radioactive waste. It also runs counter to existing national policy of encouraging states to manage disposal on a regional basis. Pilgrim currently lacks access to a low level radioactive waste compact.

The subcommittee should make a recommendation whether the Commonwealth should oppose or support rubblization.

Site Characterization Report: In Pilgrim's PSDAR, Entergy is likely to conclude that environmental impacts associated with the site-specific decommissioning activities have already been addressed in previous environmental analyses conducted during license renewal. If it has not, Entergy must request a license amendment for approval of the activities and submit to the NRC details on the additional impacts of decommissioning on the environment. The subcommittee should analyze whether the previous supplemental environmental impact statement remains valid or does new information require a new assessment.

If Entergy can rely on the old site assessment, current practice is for a licensee to submit a site characterization report late in the decommissioning process, typically about 2 years before license termination, and to base that report almost entirely on licensee representations, largely without supporting data. There is no independent program of in situ-exploration or testing of the entire site – to realistic depths, to determine the location and extent of both radioactive and non-radioactive contamination. Delaying site characterization to the end of the decommissioning process allows contamination to migrate; it also risks that most or all decommission funds needed properly to decontaminate the site will already have been spent.

Consistent with NDCAP's enabling legislation, we expect that a principal focus of a Site Restoration subcommittee will be reviewing site restoration plans, methods, and progress; and reporting potential problems and needed improvement to involved governments and the public.

DNAC and Pilgrim Watch also recommend that this subcommittee, likely in concert with the Government Relations subcommittee, take the lead in overseeing recommending what the clean-up standard should be, and in urging Massachusetts to take the legislative or regulatory steps required to insure the proper standard is met. , our view is that the Waste subcommittee should:

- Radiological
 - Recommend Site Restricted or Unrestricted Use – our position is the site should be released for unrestricted use, at a safer radiation level than the NRC’s.
 - Recommend that Massachusetts, by statute or regulation, establish a proper level of allowed radiation, and support the Commonwealth’s efforts to do so.
 - Recommend and support Cleanup Standard and review assessment/ compliance- Report MDPH action
 - Recommend that rubbleization not be allowed
- Chemical
 - Review existing EPA and Massachusetts standards- Review Assessment/ Compliance

5. **Public Safety Sub-Committee, including emergency preparedness and environmental monitoring**

The draft list includes both an Emergency Preparedness subcommittee and a Safety subcommittee. We suggest that a single subcommittee deal with emergency preparedness and safety issues - other than waste and site restoration.

Our view is that this subcommittee should deal with the need for emergency planning – maintained at essentially the current level until all spent fuel has been moved into dry casks, and at an appropriate lower level until all spent fuel and other radioactive materials have been moved off-site.

The subcommittee also needs deal with the fact that radioactive monitoring will continue to be needed after Pilgrim stops generating electricity.

Thus, we suggest that the subcommittee should:

- Recommend and support offsite emergency planning paid for by Pilgrim’s owner/ licensee. See Pending Legislation Appendix

Recommend and support continued air monitoring to be paid for by Pilgrim’s owner/licensee. See Pending Legislation Appendix

- Recommend and support groundwater monitoring to be paid for by Pilgrim’s owner.
- Review, recommend and support Clean Water Management practices and standards.

- Evaluate and make recommendations with respect to potential impacts on Cape Cod Bay and marine life
- In conjunction with the Government Relations subcommittee, draft and support legislation and regulations to ensure that Pilgrim's owner pays the costs of ongoing emergency planning and monitoring. Examples pending legislation currently before the Joint Committee of Public Health.

6. Government Relations-Sub-Committee

Three levels of government - Federal, State, and Local – will be involved in decommissioning.

One major responsibility of the Government Relations subcommittee will be to establish a good long-term working relationship with each of the three.

Another, not only of the subcommittee but of the entire Panel, should be to lobby the NRC and the Great and General Court to take the steps necessary to ensure that Pilgrim be decommissioned as quickly as reasonably possible, that Pilgrim's owner(s) - not Massachusetts taxpayers - pay all decommissioning costs (See Pending Legislation Appendix - Senate Bill S. 1837, Sen deMacedo), and that Pilgrim's site be returned to a condition in which it can be safely used in any way.

Each of the three levels will has its own role, and concerns, and authority.

- Federal-Authority/Role
 - NRC
 - EPA-Resource Conservation & Recovery Act
 - Federal agencies with oversight over Cape Cod Bay and endangered species
 - NOAA-impact sea level rise
- State Agencies-Authority/Role
 - Clean Air Act
 - Clean Water Act
 - Governor
 - Legislature- pending legislation (S.1837, H.1147, H.1133)
 - Attorney General
 - Health & Human Services (MDPH) – health impacts, monitoring (Environmental surveillance by the state should continue, funded by licensee, until the site is released), emergency planning (see below)

- Emergency Management/Homeland Security (MEMA)- emergency planning (offsite should continue funded by licensee until spent fuel pool emptied and then scaled back until fuel leaves site)
 - Energy & Environment (DEP) - hazardous waste
 - Housing & Economic Development - no specific role in decommissioning but is focused on the economic recovery of the area
- Local – Authority/Roles

The Government Relations subcommittee will need to consider how so-called “preemption” might affect its review, reports, and recommendations. Our view is that the Commonwealth has a great deal more power to take actions relative to decommissioning that at least some members of the Panel appear to assume, and that the Commonwealth, with the Panel’s support, should be able to exert considerable political pressure and influence on the NRC in those limited areas in which the NRC has exclusive authority.

Although the Atomic Energy Act (AEA) gives the NRC authority and responsibility with respect to regulation of “the construction and operation of any production or utilization facility or any uranium enrichment facility,” the NRC’s exclusive authority is limited to the “occupied field of nuclear safety regulation.” (*Pacific Gas & Electric*, 461 U.S. at 216).” Massachusetts and other states have the right to “regulate activities for purposes other than protection against radiation hazard.”

, a state or local law grounded in economic purposes “lies outside the occupied field of nuclear safety regulation.” (*Pacific Gas & Electric*, 461 U.S. at 216; 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).

In addition to protecting its economic concerns, and Massachusetts also can exercise rights delegated to it by Congress in the Clean Air Act and Clean Water Act.

7. NDCAP Administration Sub-Committee

- We envision this subcommittee being responsible for ensuring community involvement, and for initially reviewing and summarizing what we expect will be a large number of documents submitted to the Panel (e.g., by us, other interested members of the public, Entergy, or the NRC), or generated by the various

subcommittees, including PSDARs and other decommissioning plans and financials, site assessments, and NRC Decommissioning Advanced Notice of Proposed Rulemaking (ANPR) and comments, and preparing drafts of the numerous reports required by the Panel's enabling legislation..

Our view is that the Administration Sub-Committee should:

- Provide the subcommittees with summaries of all submitted documents
- Create and maintain a public website that includes all such summaries and copies of all documents submitted to the Panel by the public, Entergy, or anyone else, or generated or considered by any subcommittee. Such a website is essential if there is to be any community or public involvement
- Publish the agenda of any future Panel meetings - at least two weeks before the meeting date to give any interested parties a time to provide written comment in advance of the meeting.
- Remote Access (via GoToWebinar or other service): Provide remote access so that panel members, the public and press can participate in the meeting from offsite- a practice at the Vermont Citizens Advisory Panel⁵.
- Prepare, post on the public website, and provide to the entire Panel for review, the reports and comments required by subsections (3), (4) and (6) of Section 14 of Chapter 118; and post public comments emailed to the Committee or provided during public comment.

TOPICS FOR FUTURE MEETINGS

We recommend that DCAP, at minimum, hold six meetings a year; sub-committees may require additional working meetings. We also suggest that the meetings should be scheduled for three hours, rather than only 2 hours.

The June 2 draft list of possible topics for future meetings included:

1. Monthly Entergy Update Specific Progress to Address Improvements Required in NRC Phase C IP95003 On-Site Inspection
2. Expert Presentation on Environmental Issues Regarding Current and Future Dry Cask Storage Locations on PNPS site
3. Support Resources Required and to be Requested from EEA
4. Presentation by Vermont Yankee Decommissioning Panel Representative(s)
5. Expert Presentation on Holtec Dry Cask Storage System
6. Expert Presentation on Socio-Economic Impact

⁵ <http://publicservice.vermont.gov/electric/ndcap>

7. Expert Presentation on Site Assessment
8. Expert from NRC Representative on Decommissioning
9. Expert from Department of Energy Representative(s)
10. Expert Regarding Pending State Legislation
11. Panel Tour of PNPS⁶

Other Expert presentations that DNAC/PW suggests should be added to the draft list are:

- A. Spent Fuel Pool Storage and Transfer to Cask Storage - (Potential expert: David Lochbaum, UCS- <http://www.ucsusa.org/about/staff/staff/dave-lochbaum.html#.WTlICGjyu70>)
- B. Cask Storage (Potential experts: Dr. Singh - Holtec, Donna Gilmore - San Onofre Safety <https://sanonofresafety.org/>), Mark Lombard -NRC, Gordon Thompson-IRSS)
- C. Offsite Storage-permanent & interim and transportation issues (Potential experts: Secretary Ernest Moniz, now at MIT and/or DOE representative)
- D. Site Assessment (Potential experts: Dr. Marvin Resnikoff <http://www.rwma.com/mr.htm>)- Arnold Gundersen- Fairewinds <https://www.nrc.gov/docs/ML1312/ML13126A407.pdf>, State agency expert)
- E. Radioactive Cleanup Standard (Potential experts: Arjun Makhijani- IEER <https://ieer.org/about-ieer/staff/>; Dr. Richard Clapp, founder and former Director Massachusetts Cancer Registry, BU School Public Health, Research health impacts radiation from Pilgrim Station.
- F. Economic Impact

We also note that, in addition to the presentation that will be a major subject, there are many other items that will likely have to be included in the agenda for each meeting. In addition to the monthly update that is the first topic on the June 2 list, these would include:

- An update by Pilgrim's owner/licensee on decommissioning planning activities (before Pilgrim shuts down) or the progress of decommissioning (after June 1, 2019)
- An update of State activities relevant to decommissioning
- An update on the status of work done, and to be done, by the sub-committees
- Opportunities for public questions and comments.

The agendas found on Vermont's Nuclear Decommissioning Citizen Advisory Panel provide a model. <http://publicservice.vermont.gov/electric/ndcap>. Here is an example:

⁶ The enabling legislation and Public Meeting Law seem both to precluding limiting this tour to panel members. The tour of PNPS in connection with the recently concluded litigation was required to be open to the public.

Vermont Nuclear Decommissioning Citizen Advisory Panel
 Meeting Agenda – Final
 Brattleboro Area Middle School, Multi Purpose Room, 109 Sunny Acres Drive, Brattleboro, VT
 Thursday, June 25, 2015; 6:00 p.m. – 9:00 p.m.

Time	Topic	Speaker
6:00 p.m.	Welcome, Brief intro of Panelists Overview of the Agenda	Kate O'Connor
6:05 p.m.	Review & Approval of May Meeting Minutes	Panel
6:10 p.m. (10 minutes)	Entergy Update on Decommissioning Activities	Joe Lynch, Entergy
6:20 p.m. (10 minutes)	State of Vermont Update on Decommissioning Activities	TBD
6:30 p.m. (10 minutes)	Q & A	Panel
6:40 p.m. (40 minutes)	Holtec International Presentation HI-STORM 100 Dry Cask Storage System and Wet to Dry Fuel Transfer Services	Dr. Kris Singh, Pres/CEO Holtec International and Pierre Oneid, Senior VP and Chief Nuclear Officer Holtec International
7:20 p.m. (25 minutes)	Q & A	Panel
7:45 p.m. (15 minutes)	Q & A	Public
8:00 p.m. (30 minutes)	Discussion on Panel Advisory Opinion Process and Topics	Panel
8:30 p.m. (25 minutes)	Public Comments and Questions	Public
8:55 p.m.	Wrap Up	Kate O'Connor

Thank you for your consideration.

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June 12, 2017

APPENDICES

- **Appendix A - Pending Legislation**

- **Appendix B - Vermont Citizen Advisory Committee Structure**

Appendix A
Pending Legislation

H. 1147 (Rep. Josh Cutler):

Section 5K of Chapter 111 of the General Laws as appearing in the 2012 Official Edition is hereby amended by adding the following paragraph:

The licensee of each existing and proposed nuclear power plant in the Commonwealth, shall fully fund offsite radiological emergency response expenses incurred by the Commonwealth or a municipality post closure until all the reactor's spent fuel is removed from the spent fuel pool and placed in dry casks. No monies from any Decommissioning Trust Fund shall be used to satisfy this obligation.

H.1133 (Rep. James Cantwell):

SECTION 4: Said section 5K(E) of said chapter 111, as appearing in the 2014 official edition, is hereby amended by adding the following paragraph:

The department is hereby authorized to make assessments against (i) the operator of each existing and proposed nuclear power plant in the commonwealth, that is in operation and during post-closure until NRC terminates the operating license and (ii) electric companies in the commonwealth which own, in whole or in part, or purchase power from the Seabrook nuclear power plant and/or Vermont Yankee nuclear power plant to defray costs incurred by the department's radiation control program in the performance of its duties under this section. With respect to the fiscal year in which this section becomes effective, the department is authorized to make assessments in the amount of not less than \$500,000 with respect to each of such nuclear power plants. With respect to subsequent fiscal years, the department is authorized to make assessments in amounts that, in the aggregate, are equal to the costs incurred in the prior fiscal year by the department's radiation control program in the performance of its duties under this section. The department is hereby further authorized to make a collection, based on such assessments, of monies from said operators of nuclear power plants to defray the cost of such activities. The decommissioning trust fund shall not be used to pay all or any portion of the annual fee. The department shall send notice of its assessment to the individual company against which an assessment is made, and said company shall pay such assessment within 30 days of the notice of the assessment; provided, however, that such company shall have a reasonable opportunity to submit objections concerning said assessment to the department for review. If, after completion of such review, the department determines the assessment is valid, the department shall issue a demand for such assessment, and the company against which such assessment is made shall pay such assessment immediately. If a company subject to assessment under this section fails to pay the assessment within 30 days of the notice of the assessment, or fails to pay the demand for assessment upon completion of the final review, whichever occurs later, the department may refer such matter to the department of revenue for the collection of the assessment in accordance with applicable enforcement provisions pursuant to chapter 62C. The amount

so collected shall be deposited into the General Fund and credited to the department.

Senate Bill S. 1837, Sen deMacedo)

An Act relative to the prompt decommissioning of nuclear power stations.

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 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.”

Appendix B

Vermont Citizen Advisory Committee Structure

VCAP has five subcommittees - one is standing the others were formed and meet/met as needed.

Issues Committee: The standing committee that meets on a regular basis is called the Issues Committee. That committee meets to figure out what topics VCAP should discuss. The committee meets about every two or three months. The Chair ultimately sets the agenda but relies on the input from the rest of the panel as possible. The Issues Committee has been very helpful with that.

“As needed” committees” have been:

- The Charter Committee put together VCAP’s charter. The legislation here sets the rules on how the panel is going to operate.
- The Resources Committee that deals with what monetary assistance VCAP needs as a panel.
- A Public Access Committee met to set a policy regarding use by the public and press of the call-in system panel members use to access the meetings remotely if they can't be there in person.
- Advisory Opinion committees: It is the most substantive committee. It drafts the VCAP advisory opinions for the panel to issue opinions on public participation in the decommissioning process and two differing opinions on the construction of the second ISFSI.
- Site restoration and Reuse: If Entergy ultimately sells to NorthStar site restoration and reuse will happen sooner than later and it's easy for the host community to get behind the curve. The state will be negotiating the restoration standards, so it's important for the local community to make its voice heard not only by Entergy, but by the state as well. I understand that the town of Vernon never thought the plant would close and now not only has it closed, but the decommissioning is about to begin and they have no idea how they'd like to see the site used in the future. They are putting all their faith in NorthStar doing the right thing and the VT Public Service Board agreeing to the standards that NorthStar wants. Some Vernon officials have just realized that there could be consequences to NorthStar's plan to bury some of the concrete onsite. Discussing the future use of the site sooner rather than later is something to think about.