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NRC discusses nuclear plant closing costs

[By BOB AUDETTE](#)

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BRATTLEBORO -- How nuclear power plant operators plan to use decommissioning funds was discussed during a meeting hosted by the Nuclear Regulatory Commission last week.

Also under discussion was whether the NRC's formula for cost escalation is adequate to determine the true costs of clean up.

One of the concerns of the NRC was whether licensees were inflating their decommissioning trust fund totals by commingling the costs of radiological and non-radiological site clean up.

Radiological decommissioning entails removing all radioactive structures and components of a nuclear power plant.

But states such as New York and Vermont have clean-up standards that are higher than those required by the NRC.

In New York, restoration, which is considered non-radiological, means returning the site to the condition it was in prior to power plant construction, whether that was a brownfield or a greenfield.

In Vermont, the state has required that the site of Vermont Yankee nuclear power plant in Vernon be returned to greenfield status once decommissioning is complete.

John Stewart, the director of utility rates and services for the New York State Department of Public Works, participated in the NRC meeting because he helped negotiate the sale of several nuclear power plants in New York between publicly owned utilities and Entergy and Constellation.

"At the time of the transactions, there were separate funds for radiological

When the plants were sold, he said, the funds were commingled.

The money in the trust funds needs to go to both aspects of clean up, he said, but the NRC doesn't want to be in the situation that it has to separate the funds for the two different activities, said Stewart.

"The NRC is only responsible for radiological decommissioning activities," he said.

The NRC requires that licensees present a fund analysis every two years that proves it will eventually be sufficient to pay for clean up.

Because having commingled funds can be "somewhat misleading" when the NRC determines if the trust is sufficient to meet its standards, Stewart suggested the NRC require a financial accounting of the costs for radiological and non-radiological clean up

There have been some instances in which companies were reporting inflated totals for the decommissioning trust funds because of commingling, said Neil Sheehan, spokesman for the NRC.

"We do not prohibit such commingling as long as the owners keep careful records of the various monies," he said. "We conduct audits and perform spot checks to ensure that is the case."

The commingling of funds should be "an alarm bell," considering the shortfalls experienced in the past two years by many operators, including Entergy, which owns and operates Vermont Yankee, said Paul Gunter, of Beyond Nuclear.

"The blind trust is not such a bright red line as they portray it," he said.

The solution is to demand that licensees fund upfront the total costs of radiological and non-radiological clean up, said Gunter.

In addition, the funds should be independently assessed, he said, and not by the licensees themselves.

Licensees also need to address how leaks of radioactive materials, such as the one at Yankee, will affect decommissioning, said Gunter.

In the case of Connecticut Yankee in Haddam Neck, \$400 million was allocated for clean up, but the costs skyrocketed to \$1.2 billion after strontium contamination of water and soil was discovered. Ratepayers were stuck with footing the additional clean-up costs.

The meeting was also called to discuss funding shortfalls as a result of the economic crisis that struck Wall Street.

"During the economic downturn, we have seen that licensees have experienced some challenges in maintaining sufficient decommissioning funds," said Gregory Jaczko, chairman of the NRC. "Most of our licensees maintained adequate funds, and most of those who experienced shortfalls already have addressed them."

An economist from IHS Global Insights, an economic consulting and forecasting firm, concluded the NRC's formula "does a pretty good job" of capturing all the variables necessary to predict whether a fund is adequate.

"The method behind the formula is sound and the measurements selected to represent the expenditure categories are appropriate," said John Mothersole.

Just the same, determining decommissioning costs can be problematic, he said.

"As an economist, one of the things you like to have is a time series and a good piece of history to define trends," said Mothersole. "That's not possible with decommissioning costs because there is not that timeline of experience."

What needs to be done is to collect information on nuclear power plant construction costs and how inflation affects them. That's because decommissioning is really nothing more than a fancy term for deconstruction, said Mothersole.

The costs of building a nuclear power plant have increased by 1 percent over the rate of inflation for the past 45 years, he said.

The reason for the increase in costs is not necessarily inflation, Mothersole, but rather the safety requirements of nuclear power and the costs of labor and the equipment to meet those requirements.

And technical advancements in the construction trades don't happen as quickly as they do in fields such as information technology, where productivity has exploded thereby reducing total labor costs.

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