

Nuclear Winter and Nuclear Summer

One of my favorite quotes from the Shakespearean canon comes from the opening lines of *Richard III*: “Now is the winter of our discontent made glorious summer by this sun of York.” What a wonderful metaphor for a change of fortune.

I have been thinking about the nuclear industry’s winter of discontent (dare I call it a “nuclear winter”?), which took place in the late 1980s and early 1990s. It was a time when we could see the definite end of the commercial nuclear industry—which was going to happen when the last-commissioned power reactor reached the end of its 40-year licensed period (if not sooner). Indeed, predictions were that fully 25 percent of all U.S. nuclear power plants would be shut down well before the end of their licensing period. Early shutdowns at Trojan and several of the Yankee plants were seen as precursors of this movement. And university professors felt guilty for encouraging a student to study nuclear science and engineering, equating a nuclear engineering degree with a history or philosophy degree, in that it could not possibly lead to a job prospect. It was a bleak time for all of us.

Oh, there were a hardy few who refused to believe that the industry was near death—those who continued to promote next-generation plants, those who still talked about the need for breeder reactors, those who still supported reprocessing, those who dared to even mention plant life extension. (Even the American Nuclear Society sponsored the Committee on New Construction through the less than promising years.) The rest of us pitied these poor, confused individuals. Didn’t

they *know* any better? Didn’t they *read*? Weren’t they *listening*?

However, some time in the late 1990s, the sun came out and behold, soon there was a glorious summer. It began modestly, as the early shutdowns dwindled. With all post-Three Mile Island upgrades in place, nuclear plant operations became economical again. An economical plant becomes an asset to its owner, not a liability, and nuclear plants ceased being a drain on company finances.

After that, the turnaround came quickly. Plant life extension, relabeled “license renewal,” became not only a favorable prospect, but an economic necessity. Fuel reprocessing, relabeled “recycling” to minimize the proliferation concerns, was again a subject for open discussion. Then, reflecting the improved regulatory climate, the industry began talking about building *new* plants. Add to that the dramatic price increases in alternate fuels, and in a mere decade, the industry went from near death to a vibrant future.

I bring this up to strike a parallel. Right now, you might say we are in a commercial nuclear waste “winter” in the United States. The high-level waste/spent fuel disposal program is decades behind schedule, and the U.S. Department of Energy, which runs the program, has committed to submitting the license application for the Yucca Mountain repository in less than a year. There are some who seriously doubt that the DOE is capable of meeting this important milestone. Similarly, the low-level waste situation is only a year away from crisis, if you define crisis as lack of disposal capacity for all classes of LLW for a majority of LLW generators.



Will our “winter of discontent” be ending soon?

The question is, will this waste winter of discontent turn into summer, or even spring, anytime soon? Are we gloomers and doomers failing to see new sunlight on the horizon?

I don’t know the answers to these questions. I was one of those who pitied the optimists of the early 1990s. I don’t want to fall into that role again. I only know that we are in some dark days now. I’m hoping that somewhere, the sun is shining, and that light and warmth will turn our waste winter into glorious summer soon.—Nancy J. Zacha, Editor