Floating Nuclear Power Plants: Waves of Uncertainty: (Part II)

Offshore Power Systems, apparently, did not appreciate that putting land-based reactors out to sea was bound to raise new safety, environmental and regulatory questions. Concerns about ship collisions, off-shore fishing grounds, barge sinking and the challenge of creating a new regulatory process for floating reactors were just some of the unique issues facing regulators.

Even the trade press raised concerns. Nuclear News worried about the "incredibly tangled mass of overlapping jurisdictions, state, national, and international law, inter-agency authority" that included new players such as the U.S. Coast Guard.

Events conspired to worsen OPS's prospects. The oil crisis that began in 1973 made construction financing expensive and slowed electricity consumption. Facing slack demand, PSEG postponed delivery of the first floating plant from 1981 to 1985 and later to 1988. Tenneco backed out of the OPS partnership in 1975. With the entire enterprise threatened, Westinghouse and the Florida Congressional delegation asked the federal government to purchase four plants. But, the prospect of "bailing out" OPS did not appeal to officials in the Ford Administration. The purchase proposal died.

Floating reactors did not solve regulatory or political problems. The production facility in Jacksonville needed an NRC manufacturing license. There were so many technical and regulatory uncertainties that the licensing review ran three years behind schedule. A 1978 report from the U.S. General Accounting Office criticized the NRC for what it believed was an incomplete safety review, particularly for not accounting for impacts on the ocean ecosystem during an accident where a melting reactor core broke through the bottom of the barge.

Local and state opposition to the plant was intense. Nearby counties voted in non-binding referendums 2 to 1 against the Atlantic Generating Station, and the New Jersey legislature refused to introduce a bill to turn the offshore site over to PSEG.

Westinghouse held out hope for a brighter future; PSEG didn't. In late 1978, the utility announced it canceled its orders for all four of its floating plants. Slack demand, it noted, was "the only reason" for the cancellations. "We simply will not need these units" in the foreseeable future, a utility official admitted.

Others blamed excessive regulation. In March 1979, John O'Leary, a Department of Energy deputy secretary, provided to the White House a "grim—even alarming report," as one staffer said, that the NRC delays with the OPS license were symptomatic of a larger problem. "It has become impossible to build energy plants in America" O'Leary said, due to excessive environmental regulations and an indecisive bureaucracy. Environmental laws, O'Leary complained, had created "a chain of hurdles which effectively kill energy projects" and damage to the nation's economy. He wanted presidential action.

Events rendered O'Leary's plea for action moot. Two and a half weeks later the Three Mile Island accident occurred, ending any hope of an imminent industry rebound. The accident raised anew questions about a core melt accident and further delayed the manufacturing license. The NRC did not issue a license until 1982. In 1984, Westinghouse formally abandoned the OPS enterprise, dismantled the Jacksonville facility, and sold its huge crane to China.

Going to sea, OPS discovered, did not allow it to escape the problems that beset nuclear power. A novel technological solution could not overcome public distrust and economic, technical and regulatory uncertainty. We shall see how Russia handles the challenges.

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