

Progress Energy Warned Itself not to Self Manage Crystal River Nuclear Plant Project

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By Ivan Penn

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Progress Energy's disastrous do-it-yourself upgrade to the Crystal River nuclear plant was such a risky idea that the company's own internal report warned against it.

The company's lack of expertise and experience "outweigh strengths and opportunities," the report said. "Those weaknesses cannot be changed to strengths in sufficient time to plan and implement" the project.

The report's conclusion: Although the opportunity to save money self-managing the replacement of steam generators inside the nuclear containment building "is huge, the risk is just as large."

Progress subsequently took steps to address the risks and decided to self-manage the project anyway. But its plan failed. The concrete containment building cracked. Two more major cracks followed.

Progress' attempt to save \$28 million will end up costing someone almost 100 times that.

The big question now is, who?

Progress wants its customers to pay at least \$670 million of a \$2.5 billion repair bill.

That can't happen without agreement from the Florida Public Service Commission, which has scheduled hearings for June where the word "prudent" will be a main focus.

The *St. Petersburg Times* has detailed how Progress conducted the Crystal River job differently from other utilities and how subcontractors on site raised warnings about the unique approach.

Given that, and in light of its internal report, did Progress act prudently?

No one, Progress officials maintain, could have predicted or prevented the problems at Crystal River.

But the internal report undermines that argument, said several utility, nuclear and legal experts including Mark Cooper, senior fellow at the Institute for Energy and the Environment at Vermont Law School.

In fact, he said, it "is a smoking gun."

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Progress Energy began looking into options for replacing the aging steam generators at the plant in Citrus County in the early 2000s. The Crystal River project would eventually include cutting a 25- by 27-foot hole in the 42-inch thick concrete containment wall, the final barrier keeping deadly radiation from reaching the atmosphere.

Only two engineering firms had been the prime contractor on all the other similar projects in the country. Progress wanted to see if it could oversee the project itself and save money.

The internal report completed by the summer of 2004, titled "Proposal for Self Managed Steam Generator Replacement," outlined the pros and cons.

Self-managing the project scheduled to begin in 2009 would reduce redundancies between Progress Energy and a prime contractor, the report concluded. The number of engineers could be reduced, cutting the cost by almost \$7 million. Construction and other costs could be decreased by at least \$11 million. And eliminating the standard 10 percent fee paid to a prime contractor would save \$10 million on a \$100 million portion of the project. Total potential savings: \$27.9 million. (Later, once all contracts had been negotiated, Progress believed actual savings would be about \$15 million.)

Still, the report went on to say that "large scale engineering and construction management is not our core business." Delays related to the utility's lack of expertise could wipe out any savings.

The report concluded that Progress should hire a prime contractor.

Progress negotiated with SGT, one of the two engineering firms that have successfully managed all 34 other steam generator replacement projects in the country.

The self-management option, however, remained very much in play.

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Progress Energy major projects manager James Terry saw a potential benefit from self-managing, even as he helped negotiate with SGT.

In a memo dated Aug. 6, 2004, William J. Flanagan, a Progress Energy manager, reiterated to Terry that the company's own internal report found that self-management was risky.

"It was concluded," Flanagan noted in the memo, "that Progress Energy was an electric utility company and not an engineering and construction company. . . . There is a high risk that any savings realized by elimination of oversight positions and contractor fees would be offset by even higher delay costs."

Parts of Progress Energy's management ranks were abuzz about the prospect, and risks, of self-managing.

"We will need to make sure our decisions are well documented," one memo stated.

"The pain is ours . . . no matter who manages it," another memo pointed out.

Meanwhile, company officials addressed concerns raised by their self-management study.

To deal with its lack of expertise, for instance, the company got some subcontractors that had worked for SGT to agree to work directly for Progress.

By November, a project update included a new analysis of the self-management issue. It identified 25 threats and weaknesses. One of them: "Without SGT input, there is a greater opportunity to miss 'lessons learned' " from SGT's previous experience. **(See box at right.)**

But the new analysis came to the opposite conclusion of the initial report.

"The threats can be neutralized and the weaknesses corrected," the new analysis stated. "The opportunity for cost savings far outweighs the risk of failure in quality, cost and schedule performance."

In an email the next month, Terry laid out a strategy for negotiating with SGT, while keeping self-management on the table.

"Even if they meet all of our requirements, there are no guarantees that we won't self-manage," he wrote.

Terry's stated goal was to get a better deal from SGT or convince Progress management to give up on SGT and "pursue other options."

"Other options is the self management approach," he wrote.

Progress decided to self-manage in early 2005.

"I was aware that there were risks involved with us self-managing," Clayton Scott Hinnant, Progress' former chief nuclear officer, said during a recent deposition about the cracked containment wall. Progress did it knowing "we're the owner and we're going to share in whatever downside or upside occurs."

The utility became the first in the nation to self-manage this type of project.

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When the work began in 2009, Progress had hired two contractors for critical jobs that had no experience performing the specific tasks they were asked to do.

One of the contractors performed the exacting analysis for preparing the containment building for cutting, as the *St. Petersburg Times* has detailed in previous stories. Progress pressed that contractor for a cheaper procedure, which ended up being different from what was employed at other nuclear plants.

The second contractor was the demolition company that was cutting the building when workers found a large crack on Oct. 2, 2009.

The plant has been out of service since then and won't be back on line until at least 2014.

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Cooper, the senior fellow at Vermont Law School, said Progress should have heeded its own warning in the 2004 report.

"It was a self-interested, shortsighted decision that no prudent person would have made," Cooper said. "They clearly did not do the prudent thing."

It could also cost Progress a lot of money.

The Public Service Commission has scheduled a meeting for June to hear testimony from consumer advocates and Progress Energy. Based on the findings, the commission will determine whether Progress' actions were prudent.

If Progress wins, customers will be on the hook for part of the \$2.5 billion. Otherwise, Progress and its investors will have to find a way to pay for the repairs. Progress has said insurance will pay for most of the cost.

Progress spokesman Tim Lejedal said in an email that the utility will address the issues raised by the internal report as it files arguments in the PSC case.

Cooper said Progress should not be entitled to collect any repair costs from customers going forward. He said in a capitalist society, companies should not get rewarded for making a gamble and failing.

"If they had pulled it off, they would have made a lot of money," Cooper said. "You can't let them make the same amount of money if they got it wrong. This is not the way prudence is supposed to work."

Arnie Gundersen put it another way.

"Prudence says you can be dumb, but you can't be stupid," said Gundersen, a nuclear expert who has testified in front of public service commissions nationwide, including Florida. "It's okay to be dumb, if it appears you went through a process that was logical. From my standpoint, this memo shows they weren't prudent. They knew it was wrong and they did it anyway. That wasn't prudent."

Mark J. Roe, a Harvard law professor specializing in corporate governance, said not only does Progress' decision to ignore its own report raise questions about its case before the state Public Service Commission, but it could subject the company to lawsuits from customers or investors.

Progress made a "really weighty decision" to disregard the internal report, Roe said. If the company did not get a third-party to independently assess the merits of self-managing, the decision could be tough to defend in court.

"In a corporate lawsuit, the (court) would say this was not a reasonable judgment in this case," he concluded.

J.R. Kelly, the Florida public counsel who represents customers on utility matters before the state, said his office is trying to understand why Progress chose to ignore its own warnings.

"You have to ask the question, Why?" Kelly said. "Why did you self-manage? It does not seem to follow rationally nor reasonably that you would self-manage when everything seems to point the other way."