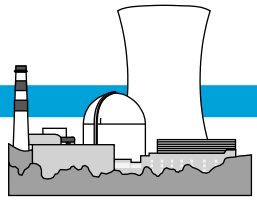

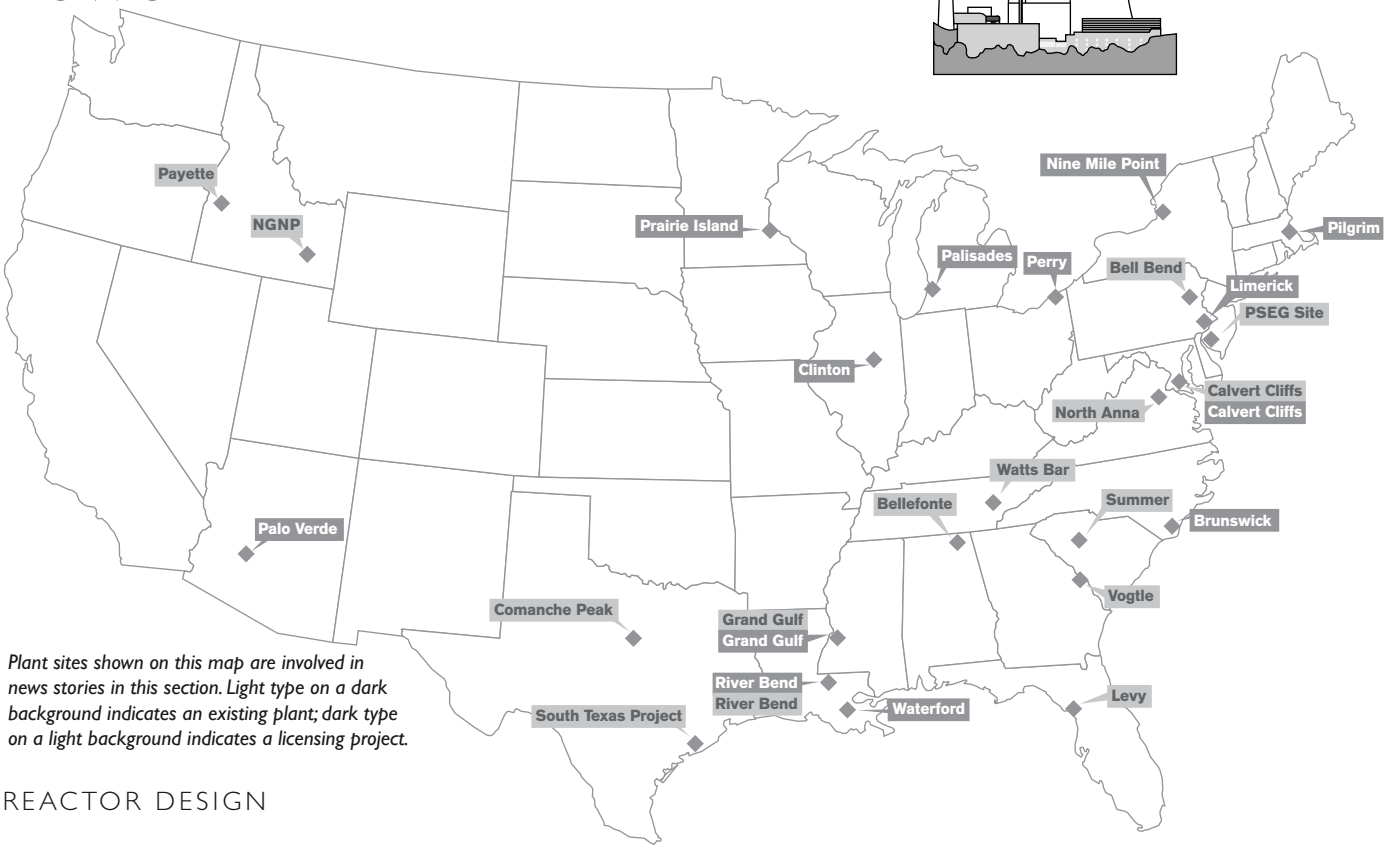

Plant sites shown on this map are involved in news stories in this section. Light type on a dark background indicates an existing plant; dark type on a light background indicates a licensing project.

REACTOR DESIGN

AP1000 certified, COL applicants still waiting

The final rule for Westinghouse's AP1000 pressurized water reactor design was published on December 30 and went into effect at once, clearing the way for reactor licensing.

THE FINAL RULE certifying the amended design of Westinghouse Electric Company's AP1000 pressurized water reactor was published in the Federal Register on December 30 and went into effect immediately. This removed an obstacle to the issuance of combined construction and operating licenses (COL) for any project based on the AP1000. As 2012 began, therefore, Southern Nuclear Operating Company and SCANA/Santee Cooper were waiting only for the commissioners' votes (and perhaps the resolution of issues from their mandatory hearings in the fall of 2011) on their COL applications for Vogtle -3 and -4 in Georgia and Summer-2 and -3 in South Carolina, respectively, in order to begin safety-related construction of the four AP1000 reactors.

An earlier version of the AP1000 design—Revision 15 of the design control document (DCD)—was certified by the Nuclear Regulatory Commission in 2006, but soon afterward Westinghouse sought to amend the design in response to preferences expressed by potential customers. Westinghouse may have expected a fairly brief review and approval process, but the NRC's review of the amended design took roughly as long as a review for an entirely new design, in part because of the emergence of a new issue on the structural strength of the shield building. Westinghouse conducted more tests and provided more details, and the DCD had to be taken to Revision 19 to reach the version that was finally approved. In one sense, however, amending the design was worthwhile for Westinghouse, because the AP1000 has been used in seven COL applications—more than any other reactor model—and is the reactor design on which six of the 12 applications that are currently under active review by the NRC are based.

Although 10 CFR Part 52 allows for a design certification to be in effect for 15 years, Revision 19 is certified only until February 27, 2021. This is pegged to 15 years after the certification of Revision 15, because Revision 19 is an amendment and not an entirely new design. Even with its being in effect for just over 10 years, however, the AP1000 certification should remain in force both for the active licensing projects now under way and for any new applications that might be submitted in the next few years. Westinghouse can also apply later for renewal of the certification.

The closure of the AP1000 certification process was revealed to the public piecemeal. On December 9, NRC Chairman Gregory Jaczko's favorable vote and appended comments (dated December 6) were posted in the NRC's ADAMS document system. There were two sets of comments, one strictly on the merits of the AP1000 (entirely favorable) and the other on whether the final rule should go into effect upon publication rather than 30 days later, as is the usual practice with rule changes (*NN,* Jan. 2012, p. 26).

During the mandatory hearing for Vogtle -3 and -4, Southern Nuclear representatives urged more than once that the NRC make the certification effective immediately, allowing for the Vogtle COLs to be issued without further delay. Jaczko wrote that while he did not think there was good cause for immediate effectiveness, he was willing to let Southern make a case for it. He said that he had two concerns about foregoing the 30-day waiting period between publication of the final rule and its effective date. The first, he said, was that "the commis-

sion's deliberation on [Southern's] request has not been transacted publicly and candidly," and the second, that Southern has not been required to make a case for good cause. "At the direction of the commission, the staff has crafted an argument to promote [Southern's] interests," he said.

Later on December 9, Commissioner George Apostolakis's vote and comments (dated November 29) regarding the AP1000 design certification were posted in ADAMS. His comments included proposed revisions to the *FR* notice to make immediate effectiveness possible. He stated that the 30-day delay in effectiveness is intended to allow regulated entities to adjust to new rules, and that this does not apply in the case of a design certification. Commissioner William D. Magwood's vote and comments, dated December 6, were posted on December 13, putting a majority of the commission on record as favoring the final rule. Magwood's comments were only on the merits of the AP1000 and did not address the immediate effectiveness of the final rule.

Also during this time, the friction between Jaczko and the other commissioners that has existed for months became a public issue with the release of an October letter by Apostolakis, Magwood, Commissioner William Ostendorff, and Commissioner Kristine Svinicki to White House Chief of Staff William Daley. The letter cited numerous complaints about Jaczko's actions and attitude that were brought up again during a December 14 meeting of the House Committee on Oversight and Government Reform (*NN,* Jan. 2012, p. 17).

Jaczko has defended his chairmanship, but he did relent somewhat on the immediate effectiveness issue. His AP1000 comments were reposted in ADAMS without the paragraph criticizing the other commissioners, and in the affirmation session on December 22 and the resulting staff requirements memorandum, the vote of the commissioners was for immediate effectiveness. (Ostendorff and Svinicki, who chose not to publish their votes in advance of the affirmation session, voted in favor of the final rule and its immediate effectiveness.)

The final rule certifying the amended design of Toshiba's ABWR was published on December 16 (*NN,* Jan. 2012, p. 18), before the publication of the AP1000 rule, but the AP1000 went into effect first. Because at least several months of technical reviews still lie ahead for the only COL application for the Toshiba ABWR (Nuclear Innovation North America's South Texas-3 and -4), there was no need to make the ABWR rule immediately effective. As a result, it was published with the usual 30-day waiting period and went into effect on January 17. Exactly which design counts as having been certified first is therefore open to interpretation.

What remained to be seen at this writing (January 11) is whether the immediate effectiveness of the AP1000 certification's final rule would have any practical effect. The NRC had given no advance indication as to when the commissioners might vote on the Vogtle (or Summer) COL applications or when the results would be made public, and thus when COLs would be issued. In the case of Vogtle, it was possible that the scope of site work could be broadened without COL issuance, because Southern has also applied for second-stage limited work authorizations (LWA) for Vogtle-3 and -4. Issuance of the LWAs would also depend on the certification of the AP1000. With two and a half weeks left before the AP1000 would have been fully certified without the rule's immediate effectiveness, it was not clear when Southern would receive either the COLs or the LWAs.—*E. Michael Blake*