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Newbuild: Blue Castle, Twin Buttes Work on Nuclear Plans

More potential nuclear newbuilds in the US are popping up in the wake of ongoing reactor construction projects in South Carolina, Georgia and Tennessee, although at this stage they are still iffy at best. Blue Castle Holdings (BCH) is lining up its ducks for a two-unit AP1000 nuclear power plant at BCH's Green River site in Utah, while an obscure group called Twin Buttes Enterprises has proposed a reactor site in Idaho near the Idaho National Laboratory (INL). While BCH signed a memorandum of understanding with Westinghouse to build the AP1000s back in August, adding heft to its plans, Twin Buttes' plans are less defined and some doubt there is a project yet.

Westinghouse reported back in August that it will work with BCH to define the "scope of activities" for enabling a project under a definitive agreement, "including marketing, nuclear safety licensing, permitting, design, engineering, procurement, construction, installation, commissioning, start-up, testing, nuclear fuel, refueling, operation and maintenance of the two-unit plant" (NIW Aug.22'14). In an interview with NIW, BCH Chief Executive Aaron Tilton confirmed this, and reported that the two companies are currently in talks with utilities over their needs and longer-term power demand projections.

While he wouldn't disclose which utilities they are in talks with, citing nondisclosure agreements, Tilton said "renewables seem to be the topic that continually comes up" in discussions. "There's a very good sweet spot for nuclear to serve" in the region, especially with the phase-out of coal-fired generation and the shift to renewables, which as intermittent sources need baseload power backup, Tilton said. "Then it becomes a competition between gas and nuclear" to provide that baseload power, he noted.

BCH is halfway through preparing an early site permit application for the project, which would be a first-of-its-kind in the area, and anticipates it could be ready to submit to the US Nuclear Regulatory Commission (NRC) in the next two-and-a-half to three years. It plans to submit a combined license application along with Westinghouse six months after that. The estimated all-in project cost, including financing, is $10 billion-$13 billion, Tilton said, noting that funding is expected to come from a consortium of utilities and that BCH does not intend to own or operate the plant, just to develop it.

It is yet to be seen whether those numbers will hold. The Vogtle AP1000 project in Georgia was originally slated to come online in April 2016, but now faces completion dates of 2017 and 2018, or later, for its respective units. Similarly, VC Summer in South Carolina was originally targeted to reach first commercial operation by 2016, but now faces a target date somewhere between 2018 and 2019. Both projects have experienced vendor delivery delays and equipment problems, multiple design changes and spiking costs (NIW Dec.5'14). Overseas, AP1000 projects in China have been hampered by similar issues (NIW Sep.12'14). The only other reactor construction project in the US involves completing the Tennessee Valley Authority's long-delayed and over-budget Watts Bar-2, which is scheduled for fuel-loading in mid-May.

Tilton acknowledged the issues that have plagued the AP1000 projects in the US and China, but explained that

"fortunately part of our business plan was not to be a first-of-a-kind project." By the time BCH's project is ready to start construction, Tilton projected there will have been seven or eight of these already built. "We believe all those things will be resolved and learned from by the time we're ready to be constructed," he said.

The company is fully privately held, and draws most of its investment capital through another company that the owners held in the oil and gas business and sold off recently. The management includes, among others, Nils Diaz, a former NRC chairman who retired in 2006. Tilton's background includes work negotiating with municipal and investor-owned utilities in the Southwest. He was also a representative in the Utah state legislature serving on the House public utilities and technology committee.

Twin Buttes

Meanwhile, in the neighboring state of Idaho, the local investment group Twin Buttes is looking for a nuclear developer to build a nuclear plant on a 1,840-acre tract of land owned by the Pancheri family. According to a presentation to the Butte County Commission in December, the group, composed of eight people including a former INL executive, has worked on the project for the past three years, and is hoping for a developer to buy it.The property is bordered by INL on two sides.

While there have been reports that Utah Associated Municipal Power Systems (UAMPS) could be a developer for the site, LaVarr Webb, speaking on behalf of UAMPS, said that he hadn't heard of Twin Buttes' proposal. Moreover, UAMPS is part of a regional program supporting NuScale's plans for a small modular reactor in Idaho, possibly at INL (related).

Tilton also was not familiar with Twin Buttes' plans and said there was no connection between BCH's plans and theirs. Twin Buttes did not respond to requests for an interview.

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