

Bates and Vanderheyden: Heading up new projects at NINA, UniStar

In this new era of nuclear power projects in the United States, a number of organizations have emerged that differ significantly from the traditional service-area electric utilities that spurred the construction of the power reactors now in service. Laws now on the books in several states allow for differing types of utility regulation and the emergence of new kinds of electricity providers. Also, the trend toward the standardization of reactor designs and the desire to prevent the kind of uncontrolled project costs that piled up on so many of the currently op-

erating reactors have encouraged the formation of new entities intended to minimize risks and uncertainties. These include joint ventures by electricity providers and reactor vendors to license, build, and operate new power reactors.

Nuclear News Senior Associate Editor E. Michael Blake had the opportunity in early August to interview two of these ventures' leading figures: John Bates, of Nuclear Innovations North America, and George Vanderheyden, of UniStar Nuclear Energy.

Bates: Focusing on South Texas Project



Bates

John Bates is the chief operating officer of Nuclear Innovations North America (NINA), a partnership between NRG Energy and Toshiba that is focused on marketing, siting, developing, financing, and investing in new ABWR projects across North America. Bates previously was senior vice president of NRG's procurement operation, responsible for all third-

party material, services, and equipment contracts associated with NRG's repowering program.

Bates spoke with Blake by phone about plans for new reactors at the South Texas Project site and about NINA's role there and elsewhere.

Has NINA been in contact with any organizations in the United States that have already submitted or are actively planning to submit combined construction and operating license (COL) applications and are considering Toshiba's ABWR?

Yes, we've talked to most industry participants that are
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Vanderheyden: Looking at project status



Vanderheyden

George Vanderheyden is president of UniStar Nuclear, a partnership of Constellation Energy and the French reactor vendor Areva; president and chief executive officer of UniStar Nuclear Energy, a partnership of Constellation Energy and France-based EDF; and senior vice president of Constellation Energy Nuclear Group. He was previously the site vice president for the Calvert

Cliffs nuclear power plant.

Vanderheyden spoke with Blake during the Utility Working Conference, held August 2–5 at Amelia Island, Fla., on the licensing of U.S. EPRs, the financing of the projects, and the importance of loan guarantees. There have been some subsequent developments since the original interview was conducted—such as the expected resumption of Nine Mile Point-3 licensing work next year—and Vanderheyden updated his responses to reflect those new developments.

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contemplating new nuclear, whether in the first wave or the second wave, and who are going through technology selection. As a de-

rectly focused on those milestones, as well as on the loan guarantee and making progress with that. But it fluctuates over time. I would imagine that in the first quarter of 2010, to the extent that we're able to create the certainty and build the momentum, a transaction or an opportunity could quickly shift that percentage of time to a higher percentage. But at this point, we're focused on the critical milestones of STP-3 and -4. If an opportunity presented itself, the percentage of time could change within a week.

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veloper of the ABWR, and, quite frankly, wanting to see an ABWR fleet in the United States, such that we can benefit from fleet size, we've talked to a number of participants who are already exploring the ABWR with Toshiba, and to others to whom we're actually trying to promote it to some extent.

Is NINA specifically intended to operate in the United States?

At this time we don't have any plans, nor are we talking to anyone, outside the United States. NINA's charter puts our focus first and foremost on the execution of South Texas Project-3 and -4, and then most likely on a strategy to develop or participate in other ABWR projects in the United States.

What percentage of NINA's work is on STP -3 and -4?

I think it's probably 95 percent of our effort—creating the right level of certainty around the STP expansion. Whether that's an effort around the oversight of our engineering, procurement, and construction (EPC) contractor and our agent, STP Nuclear Operating Company, or working with the Department of Energy to continue to pursue loan guarantees, or working on lobbying activities, or working on potential Japanese loan guarantees, that's really our primary focus right now.

At the end of this year, we should achieve a number of critical contractual milestones: a detailed estimate, a definitive agreement on the pricing methodology, a guaranteed schedule, and a guaranteed output. Those are all contractual requirements of Toshiba. So when I say 95 percent, it's really absolutely critical that we're successful in the next four or five months, so that all NINA resources in some way or another are di-

On the subject of loan guarantees, are you still in what the DOE has referred to as the due diligence process?

Yes. I don't know what the DOE has publicly announced, but the first phase is due diligence, followed by negotiations. We're still in the very early phases of working with the DOE around preparing for due diligence.

At what point would you like to be able to say that you have a loan guarantee from the DOE in hand?

I think for us to have a commitment letter from the DOE, it's really the sooner the better, recognizing that we wouldn't reach financial closure for the project until we had the permit in hand and had our fixed price in place, which would be late in 2011 or early 2012. But having said that, one of our clear mandates as a development company is to try to create as much certainty as possible in the project, and the loan guarantee certainly is a critical part of that.

Looking at the 5 percent of NINA's effort that's outside STP-3 and -4, are you targeting COL applicants that have decided against their original choice of reactor model?

That's probably a fair characterization. I think any company that's revisiting its technology selection is a company we're interested in talking to. NRG, the majority interest holder of NINA, is focused on unregulated markets, and we think those markets lend themselves to the ABWR because of the level of certainty that the

ABWR brings, from its 12-year operating history to its successfully being built four times in 37 to 42 months, and the level of experience of Toshiba and the contractors. So those would typically be our target areas.

For prospects other than STP-3 and -4, does NINA prefer to make all of the contractor decisions, such as architect-engineer, or are you receptive to a customer's preferences?

We have a preference, obviously, for Toshiba for our prime contractor for STP -3 and -4. As part of our deal when entering into our EPC project, as well as Toshiba's investment of \$300 million in NINA, we've secured not just the EPC contract for STP-3 and -4, but also an agreement that the terms and conditions for that project will be substantively the same for two additional two-unit projects. So our strategy has always been to have an interest in more than just STP-3 and -4. And we actively support and promote our partner, Toshiba, and where it makes sense for us and potential partners, we would certainly like to explore having an interest in other projects.

Follow-on projects will get the benefit of the engineering and planning that Toshiba is going through right now to “Americanize” the ABWR. The first ABWR unit built in the United States will not be the lowest-cost unit, just because there's a substantial amount of engineering that needs to be done. So I think there's a significant amount of work that won't have to be repli-

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cated to the extent that a customer goes with Toshiba.

Could these be NRG-initiated projects?

I don't think you'd find NRG as the sole owner or developer of a nuclear project. We'd always look to be a partner.

Did Exelon's bid to take over NRG interfere with any of the work that you were doing?

Whether I can point to a specific thing as to the impact it had on us, nothing immediately comes to mind. But just having that uncertainty out there, whether for the numerous stakeholders, contractors in the project, or our partner CPS [the municipal utility in San Antonio, Texas], it wasn't helpful. **■**

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A few months ago, UniStar decided to hold back progress on Nine Mile Point-3 for a while. At what point will you be far enough along on Calvert Cliffs to be able to ask that the Nuclear Regulatory Commission resume work on Nine Mile Point-3?

UniStar asked the NRC to slow down the work on Nine Mile Point-3 to optimize the company's resources and to aid the NRC in the dedication of its resources because of the number of applicants that were moving forward. Now, resources are becoming less of an issue for the NRC. Also, there really is an advantage to getting the reference COL [R-COL] application far enough along that when the subsequent COL [S-COL] applications come up, they really do look the same. We're seeing that advantage now. We've already submitted our request to the NRC to begin its review of the Nine Mile Point-3 license application in the fall of 2010. In the next year, we'll focus on the required state regulatory reviews for the project in New York.

In our business model, Calvert Cliffs was the first facility. Nine Mile Point was second. Callaway was third, and Bell Bend was fourth. We've been very public about that. What we're starting to see is some shifting in that order. We still think that Nine Mile Point is second. As for the other two, I'm not exactly sure what order they're going to fall in, and we're actively working with the NRC to adjust the resources to what the owners of those projects want. At the same time, we've received positive feedback from the NRC on how we've been able to achieve over 90 percent standardization on the COL applications. So by waiting a little while and allowing the Calvert Cliffs R-COL application to progress farther along in the review process, we're able to standardize the S-COL applications, which ultimately reduces time and cost. In the end we may be able to get subsequent projects through the S-COL application process in about the same time frame, just by slowing down those applications and better coordinating our resources with the NRC's resources.

AmerenUE has suspended work on Callaway-2, and at the company's request, the NRC has suspended work on it as well. Are you in a position to perhaps be a broker for some of the materials they've made commitments for, to try to get somebody else involved?

To be clear where we are on that, UniStar is in effect the licensing vendor for Callaway, overseeing its COL application. We always said we were interested in taking an equity position in any of these projects as they move forward. UniStar is committed to doing whatever Ameren needs to make Callaway-2 a successful project, and we're actually in active discussions with them on

how this will work going forward. Those are fully their decisions to make, but I believe that you will see the Callaway project move forward, just on a different time line. But that still has to be worked out.

What is the importance of a loan guarantee at this point? Obviously it's good to have one. Is it a deal breaker not to have one for Calvert Cliffs?

We're actively out trying to syndicate the financing we need with the various large banks in the United States and Europe that may be interested. Since we haven't built nuclear capacity for over 30 years in the United States, there is no track record. The industry has come a long way, however, and we have figured out how to fix the cost and schedule issues that occurred last time. That doesn't mean that moving forward with these projects is completely risk-free, and, understandably, most of the financial institutions don't know how to value that risk. Financial institutions equate value with interest rates, and so they don't even know what interest rate to put on a loan that they may give us.

What the federal loan guarantee program actually gives anybody pursuing the first wave of these projects is the backing of the federal government to say, "We're behind this." That ultimately helps to secure lower interest rates. By the way, we still have to pay the interest; that's why we always say it's not a subsidy. We have to pay the federal government for the right to use its balance sheet. So, quite simply, the federal loan guarantee looks to us like the most efficient way to get the financing process started. I believe that once the industry establishes a track record, we'll actually be able to go to financial institutions that will be willing to underwrite these projects and assess the associated risks, just like any other industry. But we absolutely have to have the federal government's backing to get this kicked off.

The proposed EDF buy-in to Constellation Nuclear has raised some eyebrows in Maryland, and it's one of the items that the intervenors have cited as something to consider in the COL application. The way the Atomic Energy Act is written now, is there a foreign ownership issue that would get in the way of licensing?

I do not see it as a long-term or insurmountable issue. The Atomic Safety and Licensing Board admitted a contention through the NRC hearing process because the reviewing NRC staff had not performed an in-depth review of the matter. UniStar's partnership with EDF is based on the precedent within the nuclear industry that allows for a 50-50 foreign ownership structure, as long as safety decisions are made by the U.S. entity. Given this, and that we have additional controls in place regarding foreign ownership, we're confident that the issue will be resolved.

Is the alternative site issue still being reviewed by the NRC staff?

Remember, we were the first to submit a COL application to the NRC. And back when we did that, the NRC's guidelines were somewhat subject to interpretation on how to look at alternative site analysis. We made our decisions as to what we thought was best. Now we're working through how the NRC wants to see the information presented. So, we have all of the information, just presented slightly differently. Ultimately it won't hold up our COL, progress, or schedule.

We had a recent issue on backfill for the project, where we actually had provided the NRC all of the technical specifications for the engineered backfill—the gravel that you put into the project—for all three of our S-COL applications, for Nine Mile Point, Bell Bend, and Callaway. It was accepted by the NRC, but then one of our vendors had a problem with the calculation for Calvert Cliffs, our R-COL application. That's going to have a slight schedule impact because we weren't able to provide information in the time frame and format we'd promised to the NRC. The schedule goes through various phases, however, and in phase four, if we've done everything we've said we're going to do, we think we'll get back to the same project schedule we've been working to.

The NRC is no longer referring to the Alternate Energy Holdings Inc. project as being an EPR.

We were working with Alternate Energy Holdings Inc. and supporting its efforts in Idaho. The company made some different site selections, and it is reopening its vendor technology selection. That doesn't mean that AEHI might not come back, but right now I don't believe that it has made any technology decision whatsoever.

Are you still involved with Amarillo Power?
 Yes, extensively.

Do you expect that a COL application for Amarillo-1 and -2 will be submitted at the end of the year?

The big issue with Amarillo Power is that its proposed plant location will be a greenfield site. We just completed our initial evaluation of the water for the power plant. We actually believe that it could be a fantastic opportunity for both of us, and we intend to be equity owners of a portion of the project. But it is on a much longer time schedule, and I would guess that depending on the economy and the progress with DOE loan guarantees, we're probably at least a year or so away from requesting a formal COL. I think the project is moving out a little farther in time, but we're quite confident that it will be a successful project down the road. **■**