

# Branding an energy contender

Atomic Energy of Canada has successfully sold its CANDU reactors overseas for years. Now, management's hoping that a streamlined and branded approach to its product and development will attract new business here at home

By Robert Colman

**I**n its first extensive report in two years, the International Energy Agency (IEA) in November stated that the world is facing an energy future that's "dirty, insecure and expensive" if governments don't pursue alternatives such as nuclear power and renewable sources.

Many governments appear to be trying to change their energy source mix. China, well aware of its potential future energy challenges, announced in December that it would buy four Westinghouse nuclear reactors, a deal worth an estimated \$5-8 billion. Atomic Energy of Canada Ltd. (AECL), in addition, recently completed a project at Qinshan in China, where two of its CANDU reactors have been installed in the past few years.

As utilities and governments explore all options for new energy supply, the economic benefits of reactor life extension are becoming clear as well. Many jurisdictions in North America and around the world are actively planning to refurbish existing reactors to capitalize on their original investment in nuclear. This option gives them a more cost-effective solution that will provide many more years of electrical production.

Canada is currently leading the way with CANDU life extension projects, with Point Lepreau in New Brunswick and Bruce Units 1 and 2 in Ontario.

Meanwhile, a consortium including the research arm of the Alberta government was expecting proposals by the end of January that will look into the feasibility of using nuclear power and other alternate energy sources to develop the

booming oilsands.

Apart from AECL, there are few players in the nuclear business — including France's Areva, GE and Westinghouse — so the competition is fierce. As countries like the U.S., France, U.K. and Canada prepare to replace or add to their existing nuclear generators, and countries in Asia and South America search for reliable power alternatives, finding a competitive edge can be a challenge.

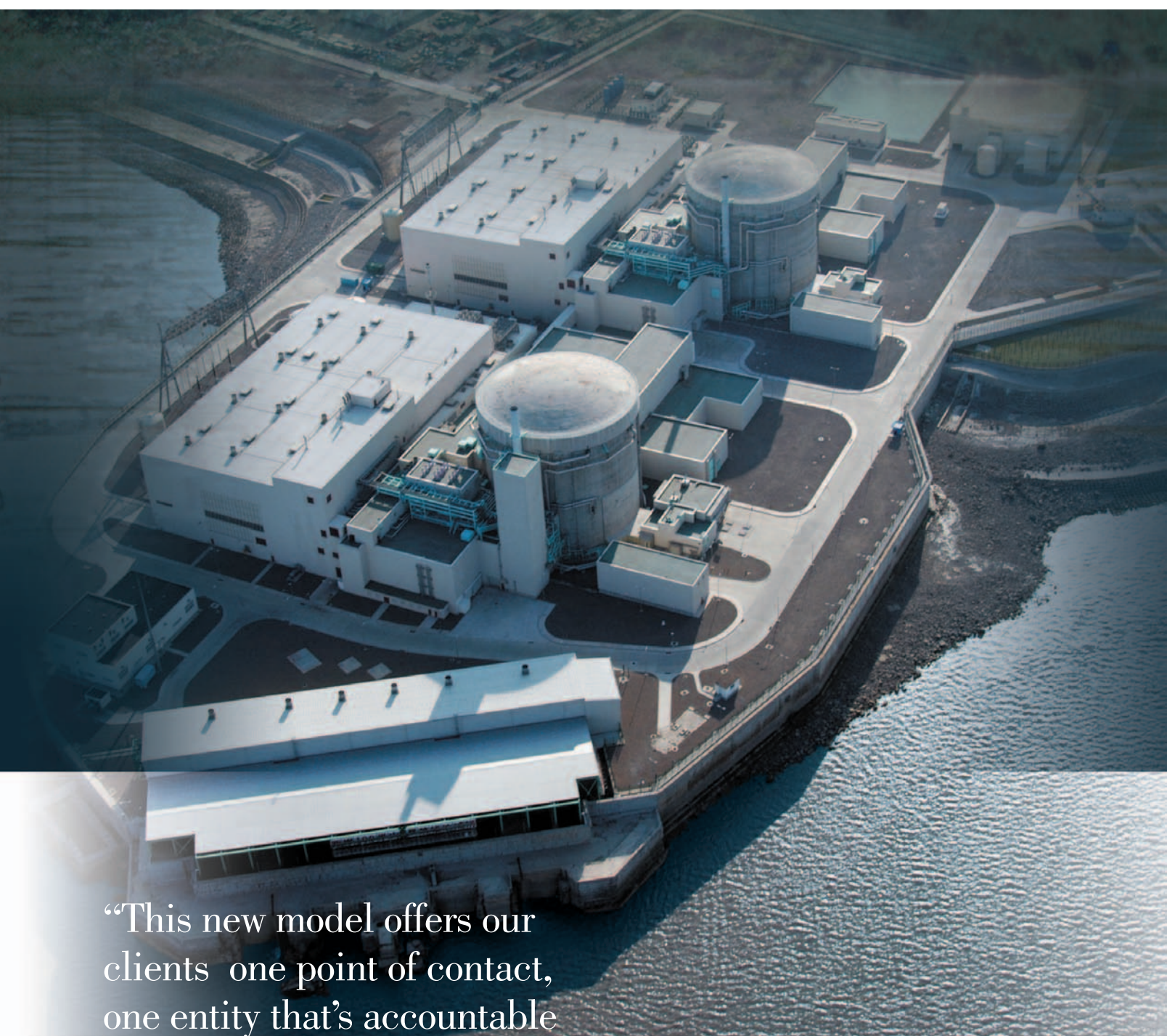
For AECL, the answer was branding — creating an effective umbrella under which to sell, not just a product, but the integrated intellectual capital of its business partners.

## Team CANDU

AECL and its partners have done very well over the past 10 years internationally while the nuclear industry at home in Canada has essentially remained static. During that time away, the company and its partners built and delivered six CANDU plants on time and on budget.

In the process, AECL and its partners developed a new delivery model, and also assumed the project risk in the delivery of new CANDU power plants. By transferring the traditional project risk from the owner/utility to the project team members, AECL and its partners aim to ensure delivery on time, on budget. They now have the track record to prove that it works and, since March 2006, have been marketing this "Team CANDU" approach here in Canada as a viable approach to the coming energy squeeze.

Team CANDU is a joint initiative of five nuclear technology



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and engineering companies — AECL, Babcock & Wilcox Canada, General Electric Canada, Hitachi Canada Ltd., and SNC-Lavalin Nuclear Inc. Together, the Team is an integrated source of expertise, resources and experience positioned to deliver a fixed-price solution for building new nuclear power plants in Ontario — the main focus of the Team’s current marketing drive.

“We’ve all worked together since the 1960s,” notes Jack Scott, program director for Team CANDU. “But by creating

an actual vehicle called Team CANDU, we are recognizing the relationships formally, and showing that we work together, rather than as independent contractors on the projects.”

Scott notes that the branding of the group effort and current life extension work on in-service CANDU plants has also helped to mobilize the CANDU supply chain.

#### Homegrown talent

“This new model offers our clients one point of contact, one entity that’s accountable for everything, that takes responsibility for the whole contract and assumes all risks,” stresses Patrick Lamarre, president of SNC-Lavalin Nuclear Inc.

“Working within these parameters, we keep building on the black box and further improving the model that we have,” he continues. “Although there are only five members of Team CANDU, through our supply chain we create a second tier

among industries in Ontario, and a continuous transfer of technology from universities such as Waterloo and the University of Ontario Institute of Technology (UOIT).

“It’s an interesting situation — we’ve got a completely made-in-Canada solution that we’ve made work overseas, and we’re now bringing it home. There’s no other energy technology that is so thoroughly Canadian — particularly one that reduces greenhouse gas (GHG) emissions. Considering the financial model, the economic return and the intellectual property that’s being developed in the process, it’s hard not to see this as an ideal solution, for Ontario in particular. This is the concept we’re selling to new clients.”

### Standard agreements

“The government of Ontario is already moving forward with new build and refurbishment,” notes Scott. “Fundamentally, further adoption of the Team CANDU model could mean 4,000 jobs in construction in the near term. If any consideration is given to the positive response we’ve received overseas for the technology — in Korea, particularly, and with new agreements in Argentina — it should spur some interest.”

Putting aside the industry-leading technical performance of the CANDU 6 product — an 87% lifetime capacity, on average — what is most intriguing about the Team CANDU model is the standardization of its contractual work and the dedication to continuous improvement.

As Scott notes, “the whole suite of project execution and design materials — document management tools, etc. — have been implemented across the different organizations so that we are integrated together in more than just name. This way, we share broad improvements in technology.”

“Of course, we have institutionalized expertise as well,” notes Lamarre. “We are always building on better ways to deliver the product. For instance, we use modularization — pre-assembling some pieces in advance on the ground, which saves a lot of time in the process of final construction.

“We are also able to generate 3D simulations of the projects ahead of construction,” continues Lamarre. “We simulate work processes from the computer model to make sure that all of the pieces of the construction can be shifted through the site and put in place efficiently.”

Because the process is basically fairly repetitious, Team CANDU sells itself by cutting costs and construction time substantially.

### Client support

Jeff Brayne, CMA, is the strategic planning director for Team CANDU. Having worked with AECL for 16 years, he understands both AECL and its several partners. Working in finance, he has been involved in contracts for 5-6 years as the projects business unit finance director.

“I’m involved with projects from inception to close out, working with the project team to create and execute the work,” he notes. “As part of the negotiating and proposal team, I’ve been connected to legal, commercial finance, and the technical

experts. This is why I was chosen to take on the role of strategic planning director. I’m now involved in process improvement initiatives in support of AECL’s continuous improvement strategy.”

Brayne has been integral in determining cost estimates and pricing, as well as supporting the internal risk review process.

Even in this challenging area, the Team CANDU attitude toward client care and group effort is taken into account. “Negotiations can take anywhere from two months to a year to figure out,” explains Brayne. “Not only do we have to make sure that all partners are clear on the parameters of the work, and the contractual obligations of all parties, but we may be involved in supporting the client in determining their financing.”

### Aligning objectives

Although the formalization of Team CANDU’s continuous improvement efforts has a ways to go yet, Brayne says that they’ve certainly been learning from their international experiences.

“We’re able to take what we’ve learned from those projects and include it in our policy and processes on new business,” he insists. “What we have done well is we’ve gone out to customers to identify what they think we’ve done well, and we’ve carried out SWOT analyses internally, identifying areas we can improve.”

Brayne’s currently working on improving the reporting methods within the group, developing a strategic plan and identifying the best performance measures to report back on.

“We still need to align every individual’s objectives with the overall Team CANDU objectives — establishing overall company objectives, team objectives and individual objectives,” says Brayne. “The Balanced Scorecard is well established in parts of the business but we plan to standardize it across the company. With that alignment, it will be easier to cascade the brand objectives of Team CANDU throughout the business.”

Throughout his time at AECL, Brayne has been using his CMA knowledge set successfully. “I rely on an in depth knowledge of finance, cost accounting, information systems and good communications skills — all things I learned through my CMA education. I’ve been required to forecast for budgets, institute cost control and performance monitoring, oversee project re-estimation processes, make sure we’re following generally accepted accounting principles (GAAP) and counsel senior management on financial processes.

“As my career has developed, I’ve also been called upon to review taxation issues, the structuring of contracts, as well as dealing with offices overseas. The CMA knowledge set has always come in handy.”

Although the Team CANDU concept is still really in its infancy, with a CMA newly introduced at the helm of strategic planning, more of the pieces to a truly powerful business model should begin to fall into place. ■

Robert Colman is editor of CMA Management.