

Currently under construction, the Markham Stouffville Hospital (redeveloped through a Build-Finance model) is targeting LEED Silver certification.

## TRADITIONAL HEALTH CARE, ALTERNATIVE ENERGY

How a hospital CEO chose district energy to power the redeveloped space.

By Glenn Miller

In today's difficult economic climate, a hospital CEO who successfully wins provincial funding approval to double the size and capacity of her institution could be forgiven for not wanting to put a multi-million-dollar commitment at risk. But this is precisely the risk Bruce Ander asked Janet Beed to take when he approached her in 2008 with a proposition to change her plans to power the expansion of Markham Stouffville Hospital (MSH) the traditional way.

Ander's alternative was to contract with Markham District Energy (MDE) to heat, cool, and deliver standby power to the hospital for a cost that was more competitive than a traditional HVAC and diesel back-up power plant, but with significantly higher reliability.

What convinced Beed to say yes? "The answer lies in part with believing in your

community, but also with good business sense and timing," she explains.

In fact, the chain of events that prompted Beed to recommend to her board that the hospital should switch to district energy (DE) is rooted in a bequest made some five

decades ago by a local war veteran turned real estate entrepreneur. He donated 50 acres to the community on condition the land be used to build a health care facility. Fast forward to the present day and a decision by Markham's district energy utility to build a second DE system in Cornell, the New

Urbanist community located just east of the original system in Markham Centre.

"There was ultimately a strong business case to be made for contracting with MDE," Beed says. "But our hospital was the logical anchor for MDE's second DE system.

*"The reality is that choices about infrastructure and design have a bearing on our ability to successfully fundraise."* —Janet Beed

Choosing to go that route was a win-win-win. If we didn't take this opportunity, MDE would have had to wait, perhaps for a prolonged period of time, for another anchor for DE as well suited as our hospital."

Another key factor, prevalent in many key infrastructure decisions today, is recognition

that health care providers are focusing on their core business—not on how their power is delivered. “Making sure that back-up diesel generators are routinely tested is definitely not what my staff should be focussing on,” Beed says. “There is no room for compromise on the delivery of essential services in a large community/teaching hospital like MSH, so offloading that responsibility to specialists is highly desirable.”

Beed’s analysis of the DE option gave high marks to future flexibility. “I knew that we would need to start thinking about expansion the day we opened the new facility, so the potential to expand in a cost-effective manner was attractive. It also helped that Zeidler Partnership’s original spine and pod design was well suited to expansion and integration with the DE system.”

But it was also important to Beed and her board that the hospital be able to achieve LEED-Silver status for the expanded hospital wing, an additional medical office building and a physical connection to a large community centre. “The reality is that choices about infrastructure and design have a bearing on our ability to successfully fundraise,” notes Beed. “The LEED designation is important, but so too is sending a message that MSH is a community player committed to environmental sustainability. Supporting Cornell’s future ability to grow sustainably by going the DE route is about positive city building as much as it is about the functional and economic benefits to the hospital.”

Other factors that rated well in the comparative analysis included lower ongoing variable costs, lower operating and maintenance costs, and the mitigation of risk for future heating and cooling replacement costs for components nearing their end of life.

Beed offers this advice to other executives considering major expansion projects. “Supporting a \$400-million capital expansion is definitely not for the inexperienced,” she says. “I’ve had the opportunity to be involved in several major projects in the past. This experience proved beneficial when the issues became complicated.”

She also suggests that it is important that the parties are able to communicate clearly and have confidence their respective messages will be heard and absorbed. “I would also recommend a common contractor because it is critical to be able to

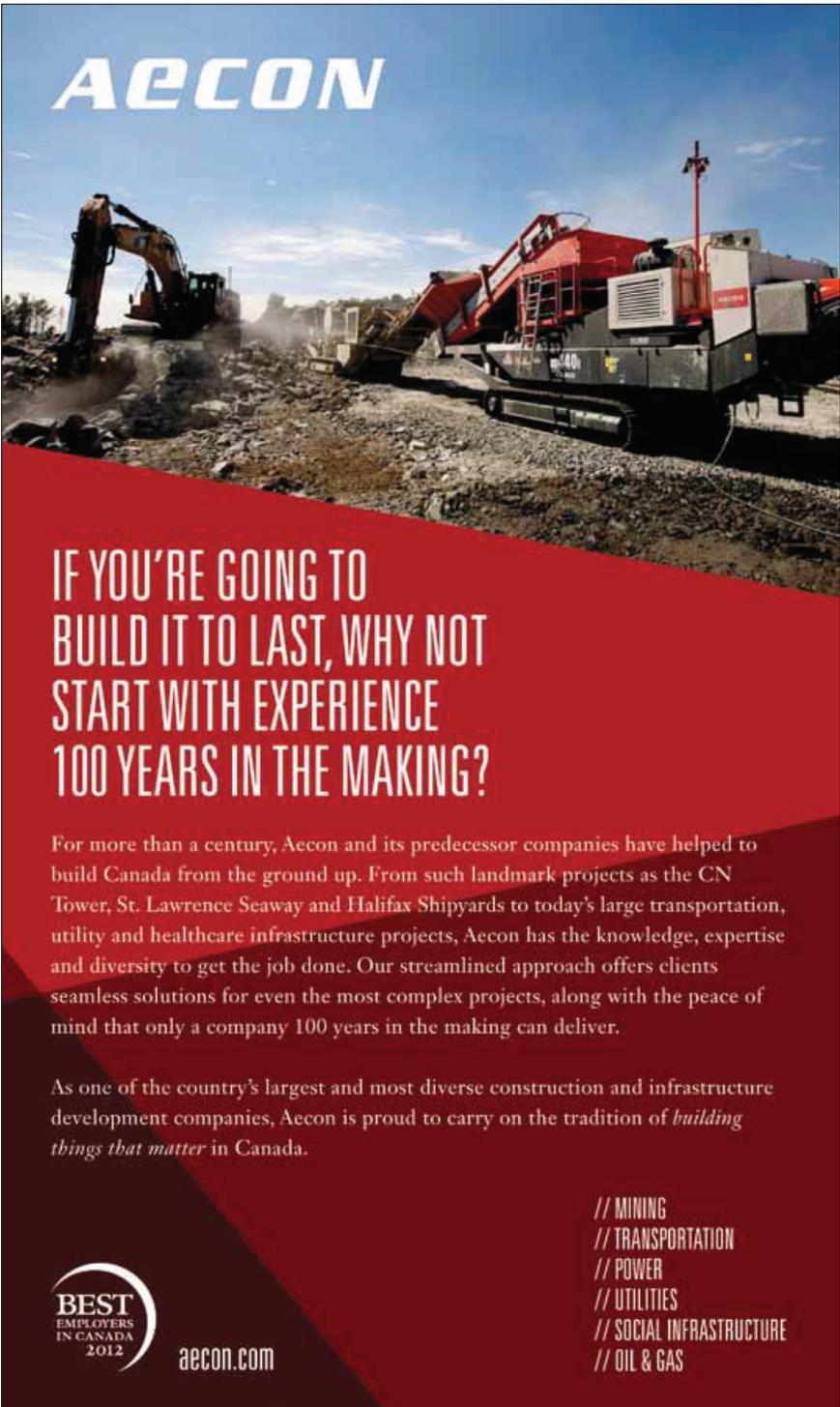
maintain focus and avoid distractions linked to coordination.”

“I will also give credit to the [provincial] Ministry of Health and Long-Term Care,” Beed adds. “The staff was ready to be innovative when it came to working out solutions for the fixed and variable cost structures.”

Finally, Beed notes, “The value-added benefit of MDE installing a combined heat and power plant, a feature MSH would not

have pursued, bodes well for our energy profile going forward as well as adding a measure of resiliency in the face of weather events and other challenges.” ♣

**Glenn Miller is vice president, education and research with the Canadian Urban Institute, which provided research support to the CDEA for more than a decade. The CDEA recently merged with the International District Energy Association.**



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