

October 23, 2004 - Ensuring a 'healthy building'

by Pat Stephens, PR Coordinator, North Bay General Hospital

We've had some questions regarding the energy efficiency of the new North Bay Regional Health Centre and its co-generation power plant. Following is an article that ran earlier in the year discussing these important aspects of the new health centre.

The Joint Executive Committee (JEC), responsible for overseeing the building of the new health centre, has ensured that measures have been taken to optimize the energy efficiency and 'health' of the building. This new health centre is being created with increased efficiency, minimized waste, longer life cycles, greater comfort and better value to ensure the facility becomes a valuable asset for future generations.

In an effort to minimize long term operating costs, the JEC is proposing to follow a leading-edge system called LEED, which stands for Leadership in Energy and Environmental Design. LEED is a system for designing, constructing, operating and certifying the world's greenest buildings and has become widely used to ensure buildings are meeting established targets for reduced environmental impact. In Canada, the use of LEED certification has grown by 26% in 2003. For example, all of the City of Vancouver's newly constructed buildings will be required to be LEED certified; Calgary has set LEED certification as a target for its new buildings and the Federal Government is now making LEED certification a requirement on all federal building projects.

The North Bay Regional Health Centre planning team has decided to pursue LEED certification because it believes that hospitals should minimize their impact on the environment and reduce energy consumption and costs, which will in turn maximize the dollars being spent on direct patient care. As well, it is expected that the LEED program will help extend the life of the building and improve patient and employee satisfaction by minimizing air quality issues.

LEED is known to provide a very strict yet holistic approach to the design process and has several categories, each with points that can be used to achieve the different certification levels. Five credit categories including indoor environmental quality, sustainable sites, water efficiency, energy and atmosphere, and materials and resources make up the LEED program.

To date, by following the guidelines set by LEED in the design of the new health centre it is estimated that energy savings, which include heat and hydro, will be \$434,000 per year. As well, costs in the construction of the mechanical and electrical areas of the building are being reduced by \$825,000 due to the incorporation of LEED principles. And, by following the LEED program the new health centre will also avoid 1,890 tons of emissions per year. These are significant savings financially, environmentally and to our community and will positively impact patient care.

It may cost more to implement the LEED program in the new North Bay Regional Health

Centre during the design and construction phases, but the annual operating cost-savings achieved over the life of the building will far outweigh the additional expense to implement. The JEC and the planning team are hoping to manage these additional implementation costs within the project budget and are also applying for any and all federal and provincial ministries that might provide grants to 'green' the new health centre. To date, the federal government's Kyoto commitments are still not clear but money has been committed and may also be available through an application process.

As part of the planning to ensure optimum building function, the JEC is also investigating the use of a co-generation plant, which put simply means using a heating/cooling operating system or systems that will allow for capturing and storing energy created by the system. The preliminary report on co-generation indicates the hospital could see further energy savings of approximately \$500,000 per year. By using a co-generation plant the health centre will also be capable of functioning on its own power source, especially during peak power usage, and with minimal disruption to service should a hydro power-failure occur.