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LEED GOLD

*BUNTING COADY ARCHITECTS*

*This image shows the new NRC-IFCI facility at dusk. On-site lighting systems monitor both daylight levels and occupancy use in this LEED Gold targeted facility, with zero light encroachment to adjacent properties and the surrounding atmosphere. Drought tolerant native plants help to enhance both building performance and site ecosystems.*

**Bunting Coady Architects LEEDing with gold standard**

Jean Sorensen

Correspondent

The National Research Council's Institute for Fuel Cell Innovation (NRC-IFCI) at the University of British Columbia is now practicing what it teaches – green energy.

The new centre, opened in September 2006, has been designed by Vancouver's Bunting Coady Architects to facilitate research, collaboration and communication in hydrogen and fuel cell technology.

The NRC-IFCI facility is one of the first of seven nodes to be built in the Hydrogen Highway™, which will run from Vancouver Airport to Whistler during the 2010 Winter Olympics. As such, it will be a demonstration site for many innovative fuel cell systems and technologies being developed in time for the 2010 Vancouver-Whistler Winter Olympics.

In keeping with its focus on green energy, this innovative centre is targeted LEED gold certification. It contains a suite of sustainable green building technologies including a ground source heat pump to provide natural source heating and cooling, a 5KW solid oxide fuel cell system to be fuelled by natural gas and biomass and a photovoltaic array to capture energy from sunlight.

INSTITUTE FOR FUEL CELL INNOVATION (NRC-IFCI) AT THE UNIVERSITY OF BRITISH COLUMBIA, VANCOUVER.



*BUNTING COADY ARCHITECTS*

*The stairway at the centre of this innovative facility embraces the concept of 'vertical streets', permitting open and informal communication between multiple levels. In addition the photovoltaic ceiling incorporates daylighting, shading and renewable energy.*

The mechanical systems within the building will only use 30 per cent of the energy found in conventional buildings without using solar panels or fuel cells. It optimizes daylight, natural heat and ventilation.

Teresa Coady, principal of Bunting Coady Architects, believes that an over-reliance on mechanical systems in building design has eroded our confidence to work in harmony with nature. "In the past it was believed that artificial air was purer than outside air, that artificial light was more even than daylight and that a perfect temperature for a building was 72 degrees. It was a false paradigm and we are coming out of it. Society is now moving toward the living, breathing building."

While that may sound touchy-feely, imagine how it sounded in the Eighties when Coady decided she wanted to present her architectural thesis on the living, breathing building. It was rejected at first until she was able to explain how she would combine some of her engineering background to develop a structure that would work in harmony with nature.

It is perhaps a mark of Coady's forward thinking that the U.S. Green Building Council which oversees the Leadership in Energy and Environmental Design (LEED) certification, today regularly advocates a sustainability concept of building design.

Indeed at the annual Greenbuild International Conference & Expo held in November 2006, the Council launched the "Living Building Challenge". The Challenge advocates a level of sustainability that would see buildings mimic organic entities, able to generate and store their own energy, recycle resources and capture and treat their own water.

The fact that her thesis concept should have taken more than two decades to become a practiced standard is not lost on Coady, who maintains that when

there is an architectural shift in design, it reflects a philosophical shift in societal thinking as well.

Coady, in addresses to various groups, has pointed out that if the world consumed resources at the same level as North America, seven planets would be needed to sustain us.

The need to design sustainable buildings has been one that Coady brought into her firm at its start-up in 1992 and this remains as the philosophy of the company today. "A lot of the clients felt that if I did not expose them to too much of a risk with the design, they were in," she says, adding that she researched and developed standards along the way that were really "common sense".

Bunting Coady Architects now begins designing from a high conservation standard while others may design up to achieve it.

"Our practice is to achieve a high standard of sustainability in our design. The LEED certification program provides the verification. We didn't have to ramp up to achieve it in our client's designs," says Coady.

Recent Bunting Coady projects which have achieved LEED gold include the Vancouver Port Authority head office and the UBC Life Sciences Centre.

Bunting Coady Architects has more square footage of LEED gold certified projects than any other architectural firm in Canada.

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