

# Richmond tech company sees bright future in office and highrise lighting

SunCentral's technology harnesses natural light to illuminate multi-storey building interiors

By Eddy Lok

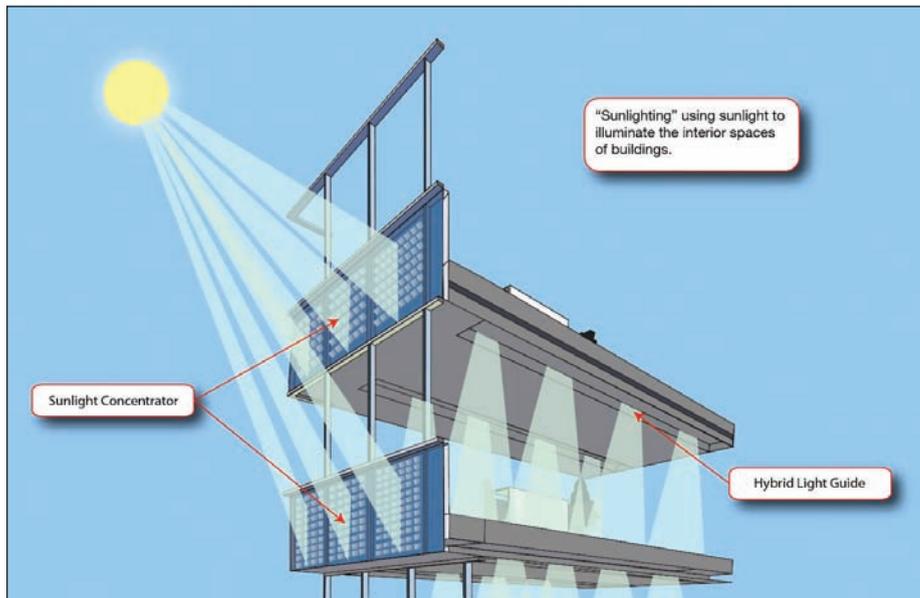
**A** Richmond company is developing technology that funnels sunlight into multi-storey buildings through walls instead of roofs and has the potential to cut energy use and lighting costs.

**SunCentral Inc.**, which was founded in 2008 and has 12 employees, is using \$6.4 million in federal and provincial government funding to bankroll the project.

The **UBC** spinoff's target market includes commercial and government offices such as education and health-care facilities.

**Gary Hamer**, **BC Hydro's** manager for residential sector technology and innovation, said the natural light technology is particularly well-suited for office buildings because work days usually coincide with sunlight hours. He said **Hydro** is determining the effectiveness and energy-saving value of **SunCentral's** technology.

Hamer added that the technology could reduce electrical use in building lighting



Another bright idea: **SunCentral's** technology was developed at **UBC** in 2007 and uses optics to funnel and concentrate sunlight through small wall openings

and help create a more productive workplace and a more pleasant environment.

"There is a major effort underway to build green and sustainable building practices to reduce energy use," said **Tony Formby**, **SunCentral's** president and CEO, "and there is a commercial payback in using our new technology."

**SunCentral's** technology, which is expected to be ready

for commercial release in early 2013, is the brainchild of **UBC** professor **Lorne Whitehead**. It was developed at **UBC** in 2007 and uses optics to funnel and concentrate sunlight through small wall openings.

"It's the only technology that is able to take sunlight and move it into the interior of a building from the side of walls," **Formby** said. "Other technologies are

rooftop-based [and take] sunlight from roofs and skylights on buildings. The technology can address light needs of multi-storey buildings. If it's from the roof, only the floor below can get the sunlight."

He added that the technology is seven times more efficient than solar panels.

"We are not converting sunlight to electricity. We're taking sunlight, concentrating it and using it in its

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natural state to light the interior of buildings deep inside, much further than the windows can provide."

**SunCentral's** technology has thus far been implemented in two demonstration projects: one at **BCIT**, the other at **UBC**. **Formby** said another two are planned for completion this year in **B.C.** and two more will be done next year in the United States.

**SunCentral** is working to

reduce the thickness of its light concentrator units to fit inside a building's outer skins.

**Donald Yen**, an instructor in **BCIT's** sustainable urban development program, said the technology delivers roughly 35% to 40% in annual energy savings.

"At **BCIT**, it is seen as a really born-in-Canada solution that can be exported to anywhere in the world. The export potential is very large if you look where the highest energy usage is around buildings, and lights represent 25% of energy uses in buildings worldwide. In commercial markets buildings are often the largest energy users. This tech can be very relevant globally."

**Formby** added that the global market potential of the technology is huge, especially in sunny regions.

"California is a perfect place. Some areas in China have a lot of sunshine; India is a perfect market with a high economic growth but inefficient power infrastructure."

**Formby** estimated that the annual potential market for the company's technology in the southern U.S. sunbelt states alone would be more than \$3 billion. He pegged the annual global market at closer to \$10 billion. ■

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