

In Seattle, work starts on 'greenest' office building

September 1 2011, By Kim Murphy

These days, there are plenty of "green" buildings, with solar heating, insulated windows, self-generated electricity. But what would it take to construct an office building at competitive leasing rates that generated its own energy and processed its own waste - for 250 years?

That's what they're trying to find out in Seattle, where groundbreaking began Monday on a six-story building billed as the greenest commercial building on earth. The Bullitt Center - which eventually will live off its own rainwater, generate its own power and [compost](#) its own sewage - is the first big office building designed to carry its own environmental weight.

Green construction has become a mantra in cities all over the world, but nowhere has it been embraced more enthusiastically than in the Pacific Northwest, where mayors ride bikes to work, the Sierra Club dominates local politics and [green energy](#) is seen as a potential new job engine, as jet airplanes, coffee and software once were.

Both Portland and Vancouver have been in the running to construct some of the first buildings to meet "living building" standards, generating as much power as they consume, processing their own wastewater, constructing with toxin-free materials, obtaining lumber from sustainably harvested forests and sourcing products locally to minimize fuel use during shipping.

Seattle has 12 such buildings in the works, and the Bullitt Center is the

first. The 10,000-square-foot building will serve as headquarters for the conservation-minded Bullitt Foundation and include several commercial tenants. Developers want to build the largest net-zero energy and net-zero water building ever.

"We started thinking, why not build the kind of building we've been encouraging everybody else to do?" foundation director Denis Hayes said in an interview.

"Instead of moving the bar a little bit, we decided, OK, probably we're not going to build more than one building, let's try to do it right. Let's try to do everything at once. I'm not sure we knew how big a bite we were taking."

At Monday's groundbreaking, Hayes compared the architectural and technological design features to those of the pueblo cliff dwellings, the massive Byzantine dome of the Hagia Sophia in Istanbul, the flying buttresses of Gothic cathedrals and the first steel skyscrapers.

"We believe that this building rising up on this lot next door will ultimately find a place in that pantheon," said Hayes, one of the originators of Earth Day in 1970.

The building features a latticed overstory of solar panels that will generate enough excess power to the grid in the sunny summer to make up for the traditional electricity it uses in the city's gloomy winter.

The building is expected to use less than half as much energy per square foot as those designed under LEED platinum "green" standards set by the U.S. Green Building Council.

Although the health department has not yet approved the permits, the plan calls for collecting [rainwater](#) (this is Seattle, after all) in a giant

cistern and treating it for drinking fountains and showers. Regular sewage will be composted and transported offsite for fertilizer.

Nearly all of the light will be daylight, via a height variance that allows for higher ceilings and taller windows.

Architects Brian Court and Craig Curtis of Miller/Hull Partnership LLP said measures encouraging conservation - including thermostats that will be allowed to fluctuate to 70 degrees in summer because windows will be open to let in breezes - were a big part of meeting the net-zero energy standard.

Tenants will be required to use office equipment that shuts down automatically when not in use.

Financing has been a challenge. The Bullitt Foundation needed a bank that would agree with its concept of appraising a building designed to last 250 years, rather than using a standard appraisal calculation that discounts estimated rents over time and renders a building worthless after 40 years. The foundation says its building could become more attractive as electricity and water become scarce.

The calculation difference was crucial to justify the relatively high cost of the building, Hayes said.

The solution: U.S. Bank will finance only half the \$30 million cost of construction, rather than the standard 75 percent, and the Bullitt Foundation will pay half. Overall design and construction will cost about a third more than a conventional building, Hayes said.

Chris Rogers of the development firm Point32 said tenants have been committed for four of the six floors, including the University of Washington's integrated design laboratory and Northwest headquarters

of the green building council.

Seattle mayor Mike McGinn said the building will generate 94 direct construction jobs and 141 direct permanent jobs. The city recently revised its building code to clear the way for such projects.

McGinn said he sees it as a way of [building](#) and selling expertise in green construction and design after no one can afford expensive coffee anymore

"We're going to start exporting expertise in a low-carbon future," he said.

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