High rise and high value from the new eco-condo

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The Solaire ticks all the boxes for a luxury apartment building in Manhattan. Soaring over reclaimed land in New York's Financial District, it offers spectacular views of the Hudson River. Plush carpets speckled in hazel and peach line the corridors leading to the elevators. Textured beige wallpaper covers the walls. Each apartment comes with shiny parquet floors and granite kitchen countertops.

But the 27-storey building has one important additional feature: it's one of America's first green residential towers, and almost every part of it was designed to be ecologically sensible.

The corridor floors, for example, are made of old carpet shreds and the wallpaper is made of honeysuckle. The maple parquet in the 293 rental apartments is glued with adhesive free of toxic gases and the wood came from forests that promote regrowth. The walls are coated with low-toxin paint.

It doesn't stop there. Solar panels generate about 5 per cent of the building's electricity, or enough to supply 15 apartments for a year. Water from the building's bathtubs and kitchen sinks is recycled and used to flush the toilets. On the roof, which is covered with gardens that insulate against heat and cold, water-efficient plants are irrigated with collected rain.

As a result, the Solaire uses 35 per cent less electricity and 50 per cent less water than the average New York apartment building, says developer Albanese Organization.

Todd Mitty, an investment banker, and his wife Jung Min Lee, a former brand strategy consultant, say they chose the Solaire in part because of the health benefits they expected from living in a less toxic environment. "We feel the difference on a day-to-day-basis," says Lee. Her seasonal allergies, for example, disappear when she walks in the door, thanks to a ventilation system that filters fresh air twice before blowing it into each apartment. "The environmental bits have become more of an important element for us as we've stayed here," says Mitty, adding that they will make sure their next home is green too.

The Solaire caused quite a stir when it was completed two years ago. Now, it has joined the ranks of countless similar buildings sprouting across America and Europe. Of course, multi-family residences tend to be inherently eco-friendly since resources are shared. But these developments are taking green living to a new level.

In Manchester, UK, tenants recently moved into the Green Building conceived by architects at Terry Farrell Partners. Like the Solaire, the 32-apartment complex was built with eco-friendly materials and

designed to conserve energy and water. The round façade minimises the surface area and thereby also heat loss, and the slanting roof faces south to maximize solar energy gains. The frame was made of concrete simply because steel would have had to come from further away and therefore consumed more fuel to transport.

In other countries such as Germany and the Netherlands, existing apartment buildings have been refitted with green amenities for decades. In the Vauban district in the German city of Freiburg in 1999, old military barracks became the first multi-family "passive house" – a dwelling that requires no active heating in the winter and instead relies on sunshine and insulation. The 20-apartment complex is also designed to dispense with sewage creatively: toilet flushings are supposed to end up in a biological reactor, which turns them into gas, which is then used to power the stoves, (although the system hasn't been put to use yet due to technical problems).

"There's a general trend in trying to find ways to reduce the ecological footprints and energy consumption in cities, and to live more sustainably," says Timothy Beatley, an architecture professor at the University of Virginia and author of *Green Urbanism*. The new developments "reflect a mainstreaming of green building ideas, as more and more developers recognise that this is something that consumers want". He predicts energy efficiency will become even more important to consumers as fuel prices rise.

Experts point out that green living isn't just about outfitting homes with the latest technologies, but about creating self-sufficient urban communities. The Green Building, for example, is located in a formerly industrial district near the centre of Manchester, in order to reduce the need for cars. The building contains a nursery and doctors' offices so residents don't have to travel far for basic services.

In Dallas, the developer of a 49-apartment complex is pushing sustainability one step further. In a city surrounded by classic American suburban sprawl made possible by cheap Texas oil, Zad Roumaya wants to get rid of cars out altogether: he plans to give each household a free eGo electric moped. "Americans overbuild and live in places that are too large," Roumaya says. "We're trying to softly lead people to the thought of dense urban living and the idea of optimising it all on three- quarters of an acre of land."

Many believe that dense urban communities are the most ecologically sustainable form of settlement, because they force people to share land, water and other natural resources. In the same vein, large apartment buildings also make green technologies more affordable by allowing residents to split the cost.

But green living isn't hassle-free. At the Solaire, for example, the maple floors creak because eco-friendly adhesive doesn't stick as well. Energy-efficient fluorescent bulbs, even though they've improved greatly over the years, still have a blue hue and take almost a minute to light up.

Green living can also be expensive. It costs up to 20 per cent more to outfit a building with all the necessary amenities: water treatment plants, solar panels and energy efficient ventilation systems. The Solaire cost about $120m to build, or about 17 per cent more than a regular building, although it recouped most of the added expense in energy savings and tax breaks.

And costs are declining. In Portland, Oregon, the 123-unit Henry Condominiums was recently completed for $37m, only 1-2 per cent more than a traditional building. When developers Gerding/Edlen first began the project, they weren't even sure whether it would make financial sense, says senior project manager Dennis Wilde. It did, he adds, because "there's much more awareness in the industry now so

there is a broader availability of materials as well as systems that are more efficient."

Reduced spending on water and energy helps make up for the added expense. Some residents at the Henry have cut their electric bill by up to 40 per cent, says Wilde. When apartments are for sale, the promise of such savings helps attract buyers; if they're for rent, developers can save on operational expenses because energy and water consumption is typically lower.

These savings notwithstanding, city-dwellers who want to live green still have to pay up. In the US, that's usually because eco-friendliness is seen as a luxury, and tends to be wrapped in an amenity-heavy package.

Apartments at the Solaire rent for anywhere from $3,000 for a one bedroom to $8,500 for a three bedroom, which is up to 25 per cent more than the Battery Park City average, according to Corcoran broker Harriet Klepel, but comparable to other full-service waterfront towers in the area. At the newly constructed Helena in Manhattan, rents range from $1,900 for a studio to $5,200 for a two-bedroom.

Still, residents don't seem to mind paying a little extra for a healthier life. Lee says she spends more on organic milk and natural dishwashing soap anyway.

"It's part of our lifestyle," she says. Her husband adds: "That's all that matters when you have a child."
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