

Residential Solutions Green Living

Solara
Rotterdam, NY



Cutting-Edge Technology and Forward Thinking Takes Green Living to the Next Level

Some developers envision homes of the future; David Bruns, owner of Bruns Realty Group LLC, in Rotterdam, NY, makes them happen. With a passion for engineering and energy conservation, Bruns challenged himself to marry the two disciplines and create sustainable MDU living of the future, today.

An engineer by profession, Bruns has been spearheading MDU development for 28 years, starting with two-family homes and gradually moving up in scale to his recently completed 156-unit netZero Village complex in Rotterdam, NY. In a nutshell, a netZero community is a development that, on an annual basis, produces as much energy as it consumes from renewable sources. In the case of netZero Village, this energy is produced from the free power provided by the sun.

Bruns freely admits that when first considering netZero construction, he had no idea how it would be done. "MDUs are cost sensitive, and the Green element made the challenge harder," said Bruns. "I worked with experts, including my General Contractor, and we created a value-engineering matrix where each component



Solar panels on top of the carport help power the community

like windows, walls, and HVAC systems were categorized 'Good, Better, Best' in terms of expense. We then used the Passive House computer energy model to determine where the biggest bang for our buck was for energy-efficiency. Without this process, netZero Village never would have been built."

He is now building his second netZero community, Solara, a 248-unit development also located in Rotterdam.

A Balancing Act

For over three years, Bruns' team of engineers and experts worked on the design and planning of netZero community living with two goals in mind: the first was to effectively utilize the latest in renewable and energy-efficiency technologies to meet or exceed all of the energy needs of the community; and the second was to make netZero living affordable for residents, without sacrificing luxury or comfort. Bruns explained, "We wanted to make it affordable to live there. We didn't want residents to have

to sacrifice anything. Our apartments have all the amenities, like any other... there is no difference. Except perhaps the benefit of hassle-free living, because all utilities are included in the rent so there are no extra bills to worry about...and there is no limit on how much electricity, heat or water residents can use per month."

Although there is no limit to energy use, Bruns uses sub-metering to remotely monitor energy use for each apartment. Doing so allows him to see comparisons in HVAC and energy usage, unit by unit, and detect variances which can sometimes point to malfunctioning equipment and contribute to excess energy consumption. Bruns commented, "99.9% of residents are reasonable in their energy use. We do get some outliers that stick out, using an enormous amount of energy, who we contact. We also have some who use very little."

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Fundamental to successful energy conservation is the construction of the buildings. Building methods don't deviate much from traditional construction, in part because unfamiliar work would drive up trade costs. But, attention to details that can be controlled are scrutinized. By using passive solar design, the rays of the sun heat the interior of the apartments during the winter months. Large windows are installed to face South to take maximum advantage of natural light, and solar thermal panels use the sun's energy to heat water for the domestic hot water system. Inspections are frequent during all stages of construction and various benchmarks are used to ensure optimal energy-efficiency. For instance, the Blower Door test is used to measure the airtightness of the unit's so any leaks can be detected early and remedied. The more airtight the space, the more energy-efficient it is.

Solara - The Next Step

Building upon his experience with netZero Village, Bruns is currently building his next netZero complex, Solara. Solara, with 248 units, will have a few more "bells and whistles", like elevators, more 2-bedroom units and enhanced air quality control by means of sensors to monitor humidity levels from tenant activities such as cooking or showering. It will also incorporate the latest in green electrical technology, which has continuously evolved since the original netZero Village construction.

"Leviton is a trusted name that has been around for a long time," said



Conveniently located USB Charger Device



Decora Smart with Wi-Fi Dimmer



The attractive Leviton Load Center



Meters used to monitor resident energy use

Bruns. "We were introduced to their products by our electrician and will use their NY State approved S8000 series meters and the EMH hub to monitor energy usage." The new Leviton Load Center is also on tap for Solara. Bruns pointed out, "the load center is right in the middle of the apartment in plain view. The Leviton Load Center is a great improvement over the old and stodgy load centers we are used to. They look and work great and add value to the project."

Home automation will also be featured in the Solara development. This includes locks and Leviton Decora Smart™ with Wi-Fi® technology switches and dimmers, so residents can control their lighting using voice command - with Alexa or Google Home - or from a smart phone or tablet when at home or while away. Electric Vehicle Charging Stations will be installed

throughout the community to round-out the green living experience.

The Way of the Future

Nearly 50 percent of all energy consumed in the United States is used in residences. Bruns is pleased to say that his current netZero tenants brag about where they live and feel good about the choice they made to live in an environmentally sound community. He welcomes conducting tours for potential residents as well as other builders to showcase all the advantages of netZero living and prove that it is economically viable, and the way things should be done.

"We successfully developed netZero living in the Northeast and for MDU living. If we can do that, anyone can do it!" concluded Bruns.