

# Solar Shines on Apartment Retrofits

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Is it possible to improve the environmental sustainability of decades-old apartment properties while also keeping rents affordable and generating an attractive rate of return? A Fort Worth project intends to prove just that through the use of solar power retrofits.

Built in 1969, the Woods of Ridgmar will be California-based ZNE Capital's first sustainable apartment project in Texas. The 235-unit garden-style complex, designated Class C by CoStar, is just the type of property ZNE looks for.

"We focus on Class B or C multifamily properties with 50 or more units in landlord-friendly states," said Owen Barrett, ZNE founder and president. "We also prefer Sunbelt cities with solid economic growth potential like those in the DFW region. At the end of the day, we are a real estate company doing sustainability initiatives, not the other way around."

## Takeaway

Old apartments can still contribute to environmental sustainability. Owners just have to leave their comfort zone and embrace new technology.

Properties like the Woods of Ridgmar are usually energy inefficient, but that actually works in ZNE's favor. Barrett said apartments with high electricity consumption in areas where energy cost is also high are the most suited for solar retrofits.

Residential and commercial buildings together are responsible for about 40 percent of U.S. carbon dioxide emissions according to the Environmental and Energy Study Institute.

"Most of the energy efficiency focus has been on new construction," said Barrett. "But about two-thirds of

buildings that exist today will still be around in 2050. I believe our model of retrofitting older, inefficient buildings can have more environmental impact.”

## Locating the Next Investment Property

ZNE finds properties through both internal company searches and referrals from brokers.

“Right now, we need to make sure we are growing responsibly even though the potential is massive,” said Barrett. “We could go find a billion dollars’ worth of real estate to buy in the next month. But if we start telling brokers we need properties before we have the equity behind us to take down all those acquisitions, we burn a lot of bridges in the brokerage community. We want to be sensitive to everybody’s time.”

Barrett thinks there are probably \$3 billion worth of older apartments in the DFW area that are well suited for solar installations. As a result, ZNE is constantly on the lookout for other equity partners.

“Securing debt financing is no problem,” Barrett said. “Scaling up is limited by the amount of equity money we can raise. So we have partnered with crowdfunder Realty Mogul on the Woods of Ridgmar project.”

Christopher Fraley is chief investment officer for Realty Mogul, overseeing underwriting, closing, and asset management for the firm’s debt and equity investments.

“We underwrite deals and, if they qualify, we put them up on our website,” Fraley said. “We then send a notice out to our database where we have about 200,000 registrants signed up online. If people like the transaction, they can invest directly.”

Although they have invested in more than 18,000 apartment units, the Woods of Ridgmar is Realty Mogul’s first apartment project that includes an element of sustainability. They now have a chief sustainability officer out in the market looking for deals that might qualify for a sustainability program.

“The solar installation is actually going to increase the overall project return,” said Fraley. Realty Mogul is expecting about a 16 percent internal rate of return for the overall project. The annual return on cost of the solar retrofit is expected to be about 20 percent.

ZNE submitted an engineering report to Realty Mogul estimating how much energy would be saved and how much the solar implementation would cost.

“In this case, we thought the returns were quite good, so we decided to move forward with the transaction,” Fraley said.

## Advantages of Being the Property Owner

ZNE will own and operate the Woods of Ridgmar, helping eliminate traditional barriers to implementing solar and resulting in a faster adoption of clean technology.

After working in the industry for about ten years, Barrett, whose background is in clean technology, concluded that more new technology isn’t necessary to seriously address climate change.

“We already have the technology to get out of this predicament. The problem is we can’t figure out how to scale it fast enough,” Barrett said. “After I sold my first company, it dawned on me that the way to quickly scale solar and other clean technology strategies is to become the owner of the real estate. Once we are the owner, we’re in the driver’s seat.”

ZNE’s choice to retrofit apartments with solar isn’t just a financial decision.

“We are making better returns, and we’re also doing the right thing for the tenants and the environment,” said Barrett. “But we had to start acquiring properties to do it because it’s really hard to convince other property owners to take the plunge.”

Solar implementation actually works best when there is only one meter, a “master meter,” to the property. Fraley said it’s much harder to pass on the savings associated with solar if tenant utilities are individually metered. Most apartment developments built after the ‘70s are individually metered, where each tenant is billed directly by the utility provider.

## The Solar Advantage

According to the Solar Energy Industries Association, the cost to install solar has dropped by more than 70 percent over the last decade. As a result, solar usage has grown an average of 42 percent per year since 2011.

Unlike in some states, ZNE doesn’t intend to scale its solar PV systems in Texas to produce more power than a property is using.

“Maybe four of the many retail providers in Texas provide some type of ‘net metering’ compensation for any excess power that’s generated and pushed back into the grid,” Barrett said. “Even then, the rate at which they

compensate you is only about three cents per kilowatt-hour.” Texas’ retail rate is generally between eight and ten cents.

“We will design the solar systems in Texas so they export little to nothing,” said Barrett. “All that means is our system size in Texas is going to be about half as big as those for an identical property in California or Phoenix.” California and Arizona compensate property owners at the retail rate of electricity for any exported power.

“I do think solar can work in any market,” Barrett said. “It just works better in some markets than others, but it still works in Texas.” ZNE will offset about 40 to 50 percent of the Woods of Ridgmar’s power usage.

ZNE is currently altering who does the actual solar installation.

“There are a few bad contractors out there,” said Barrett, “so we are in the process of moving that function in-house. However, we still have a network of trustworthy contractors that we have worked with before, and one of them will be doing the installation on this Fort Worth project.”

ZNE typically doesn’t conduct any type of prepurchase energy audit on the properties.

“We don’t really need to,” Barrett said. “Most of the properties we are buying are built in the late ‘60s and early ‘70s, so we know they are near the bottom of the barrel in terms of energy performance. We just look at the last 12 months of utility bills to help us size the solar system.”

ZNE concedes that many other energy-efficient improvements could be done to this class of multifamily properties. The problem with further upgrades goes back to cost versus benefits.

“If every dollar we put into a property is not making it perform substantially better, then it just hurts the overall return of the property,” Barrett said. “None of the other energy upgrades really pencil out as well as solar does.”

As far as energy-efficiency incentives in the Fort Worth area, Barrett believes Oncor is one of the few utilities that actually offers a solar incentive.

“The problem is it’s first-come, first-served for the funds they have available, so they’re really hard to get,” said Barrett. “We don’t factor any incentives into the proformas because utility incentive programs are generally not guaranteed until you get the check in your hand. We

make sure our projects hit their return targets without considering incentives or tax credits. If we do get them, they are just icing on the cake.”

Although five years is generally the expected payback period for the solar systems, ZNE doesn’t look at the retrofit from that standpoint.

“We look at it more from how much value are we adding to the property relative to how much it costs us,” Barrett said. “We think about how it can positively impact our refinancing of the property around year three or four. If we are creating more value than we are paying for and it’s going to help us refinance at a higher valuation than it would without it, then it makes sense from a business model perspective.”

## Keeping Apartments Affordable

ZNE structures rents based on “workforce housing” parameters. The Urban Land Institute defines workforce housing as shelter affordable to households earning between 60 and 120 percent of the area median income (AMI). The Department of Housing and Urban Development assumes that if households spend 30 percent of that income or less on shelter, they should have enough money to pay for all other nondiscretionary expenses.

ZNE doesn’t check to see whether tenants meet affordable housing criteria, but they do verify tenant incomes.

“What we look at is whether our post-renovated rental rate is at or below 80 percent of AMI,” said Barrett. “If it is, then we feel good about the initial rent level. We may not have to increase them at all.”

Since properties are all master-metered, ZNE generally charges rent on an all-bills-paid basis where ZNE pays for all the utilities and charges the tenant a flat monthly rent that covers them.

Barrett has had discussions with equity groups that wanted some type of covenant where rents can’t increase above 80 percent of AMI.

“We don’t guarantee that future rents won’t increase more than increases in the AMI,” Barrett said. “However, we would consider it for the right equity partner. We are a mission-driven company, so we know that we aren’t going to increase rents beyond what tenants can afford.”

## Taking a Longer View

Barrett believes that longer holding periods can benefit both the tenants and the equity investors.

“The average length of time investors hold apartment communities is about three years in the top metropolitan areas like DFW, Phoenix, Tampa, or Atlanta,” said Barrett. “What that means from the tenant perspective is their rents are often getting pushed at an unsustainable pace. That’s not a stable living environment for tenants.”

ZNE has implemented holding periods of ten years or longer instead of the typical three years.

“The only way we could get investors interested in that model was by returning their capital quickly,” Barrett said. “The solution was to increase net operating income fast enough to return 75 to 100 percent of their invested capital in 24 to 36 months, which is usually the point where we transition the property to longer-term financing.”

After ZNE returns all of their initial capital, investors remain in the deal and continue to earn passive income until the property is sold.

## Striving for Better Communities

Barret said part of the reason he became interested in multifamily syndication was the tremendous possibilities for improving communities.

“People in this industry can lose sight of the fact that they are buying and selling communities,” he said. “Operators, syndicators, and sponsors working in this space should be doing something beyond maximizing returns to investors.

“If they aren’t making communities a better place to live, I think they are really missing a huge opportunity.” 🍀

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