



## **Redwood Energy**

### Benefits of Rooftop Solar for Low-income Seniors

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## The Cottages at Cypress - Fort Bragg, CA

“Barefoot and tanned, they are pleased as punch to be living affordably and ecologically. Their low-income rent at The Cottages is comparable to what they would pay elsewhere in Fort Bragg for affordable housing, but nowhere else could they show off their less-than-zero electricity bill with such evident glee. They don’t pay a thing—not one single cent”<sup>2</sup>

- Residents Sandy and Dan Zaffrano (pictured below)

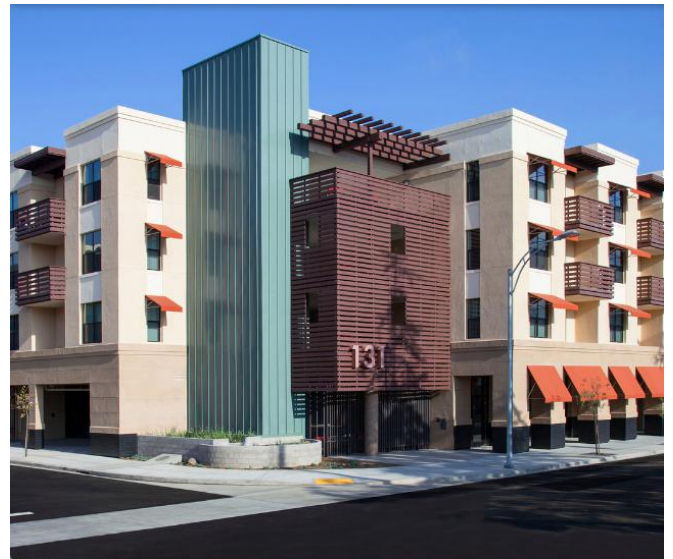


Cottages at Cypress - Photo credit: Kathleen Marshall

The Cottages at Cypress is a twenty-five-unit, single-story affordable housing project for seniors earning 50% or less of the Area Median Income.<sup>1</sup> These wheelchair-accessible homes are located in the beautiful coastal town of Fort Bragg and have achieved multiple green building certifications, including LEED for Homes - Platinum.<sup>2</sup> The design focuses on encouraging outdoor use and activity by creating an openness to the surrounding area. The Cottages are equipped with solar arrays on their roofs, allowing tenants to utilize Net Energy Metering (NEM). This means that all of the power that they produce is credited to and used by that particular household. The solar models prepared by Redwood Energy predicted the residents’ electrical needs, including the allowance for an electric vehicle to be charged, to be \$20.74/month for a 1-bedroom and \$26.24/month for a 2-bedroom. After the first year of production, each resident received \$160-200 for excess energy produced.<sup>2</sup> Residents proudly show off their electricity bills and remain astonished by how much living in a net-zero development has reduced their cost of living and improved their quality of life.<sup>2</sup> Emphasizing what it means to be warm without having to balance their physical comfort against their finances.<sup>2</sup>

## Solterra - El Cajon, CA

“Residents have reported that the free electric check-out vehicle provided has been a life-saving amenity that allows them free-access to necessary doctor visits”<sup>4</sup>



Solterra

Solterra is a 49 unit, senior affordable community offering 1 and 2 bedroom apartments to seniors ages 55 and up who earn 30-60% AMI.<sup>3</sup> Solterra offers an electric vehicle for tenant use as well as 2 electric car charging stations.<sup>4</sup> Solterra has solar photovoltaic panels and solar hot water panels that create the heat and energy to power the onsite community room and heat the onsite water boiler. The complex also provides a free electric vehicle check-out service to the seniors. This allows these low-income residents to reap the benefits of having a car without the financial burden of owning one. The project is 80% solar-powered and includes Energy Star rated appliances and low flow plumbing fixtures throughout the units, as well as a drought-tolerant landscape.<sup>3</sup> Keeping the property’s energy and water usage low. Redwood Energy’s utility calculation predicted these units to be \$29.00/month for 1-bedroom units & \$37.18/month for 2-bedroom units. These low energy bills are all a result of Solterra’s solar power and energy efficiency design. Providing these low-income senior residents with solar power allows them to utilize Net Energy Metering rates which means big monthly savings over the life of the solar system. Utility bills this low provide a lower cost of living and energy security for these seniors.

## Vermont Villas - Los Angeles, CA

“Homeless Veteran Housing wins PCBC Gold Nugget Award”



*Vermont Villa*

The Gold Nugget Awards are the oldest and most prestigious design awards in the nation and a centerpiece of PCBC. Recognizing those who improve our communities through exceptional concepts in design, planning, and development” Vermont Villas offers permanent supportive housing for 78 special needs and Veteran seniors who are formerly homeless and who may also be disabled.<sup>5</sup> These Villas serve the extremely low-income population, households earning just 20% and 30% Area Median Income (AMI).<sup>5</sup> They provide resident services including housing preservation counselors to mentor these formerly homeless, chronically homeless, and at-risk of homelessness seniors.<sup>5</sup> These coordinators and case managers support residents in identifying barriers to holistic health, connecting them to resources in the community, and building skills to live independently.<sup>5</sup> On top of housing preservation services the villas are equipped with solar so residents can receive the benefits NEM can provide for low energy usage. “Gold Nugget Awards winners share one common denominator: excellence and innovation in addressing complex design/build issues.” This award winning design resulted in the predicted energy bills to be \$24.70/month for these 1-bedroom units. Providing a lower cost of living and energy security for this vulnerable veteran community.

## Bella Vista - Lakeport, CA

Bella Vista Apartments were the first Zero Net Energy apartment complex in rural Lake County



*Bella Vista*

Bella Vista Apartments have achieved the U.S. Green Building Council’s LEED Platinum certification, which is the highest and most stringent level of certification available to developments.<sup>6</sup> The LEED Program is a certification program that is designed to deliver healthy, environmentally-friendly homes and communities that maximize fresh air indoors, minimize exposure to toxins and pollutants, are energy and water efficient, and use sustainable and durable materials throughout. The apartments include energy-efficient appliances, a patio or balcony, extra storage, and much more. This property also provides a Resident Rewards Program in which residents accumulate points for a variety of actions, including paying rent on time, making referrals, etc. Participants of The Pacific Companies Residents Rewards may redeem points for a wide variety of goods and services including merchandise, ticketed events, airline and hotel accommodations, etc.<sup>6</sup> Redwood Energy’s utility calculation predicted these units to be \$20.57/month for 1-bedroom units & \$25.21/month for 2-bedroom units. This is due to the energy-efficient design that includes Photo-voltaic (PV) solar panels that offset energy costs for residents through Net Energy Metering (NEM). Under NEM tariffs, participating customers receive a bill credit for excess generation that is exported to the electric grid during times when it is not serving onsite load, offsetting energy costs.<sup>10</sup>



## Plaza Point - Arcata, CA

“Designed 90% Net Zero Energy and Performing 103% Net Positive”



*Plaza Point*

Plaza Point is a three-story, mixed-use development that provides an attractive and dignified living opportunity for seniors.<sup>7</sup> It is designed to create a welcoming and vibrant community where neighborhood charm, urban connections, and sustainability are celebrated.<sup>7</sup> As well, there are market-rate commercial spaces on the first floor. The project has achieved multiple green building certifications, including LEED for Homes - Platinum.<sup>7</sup> The design is equipped a photo-voltaic (PV) system, allowing residents access to the benefits of generating their own electricity with a renewable generator and without the initial capital investment of installing a system. Giving these low-income folks peace of mind knowing their energy bills will be low and generated clean, without having the stress and sacrifice of not using energy to cut down costs. Redwood Energy’s utility calculation predicted these units to be \$16.05/month for 1-bedroom units & \$19.00/month for 2-bedroom units. The town of Arcata is located in Northern California and resides on a portion of the Humboldt Bay surrounded by towering Cascade mountain range and redwood forests. Arcata is ripe with opportunities for outdoor recreation, from hiking to boating and everything in between. Arcata hosts a range of cultural events for the community, including a weekly Farmers Market, the annual Oyster Festival, Kinetic Grand Championship, Holiday Craft Market, Arts! Arcata, and more.

## Bayview Heights - Eureka, CA

The project is a 50-unit permanent supportive housing project for formerly homeless and formerly homeless veterans.<sup>8</sup>



*Bayview Heights*

Bayview Heights offers 50 one-bedroom apartments located near a bus stop, shopping, the Humboldt Bay waterfront, and other services. Bayview Heights was developed in partnership with Danco, Veteran Housing Development Corporation, and Raymond James, to provide quality affordable housing for the Humboldt County residents with low and very low incomes.<sup>8</sup> “Funding comes from California’s Veteran Housing and Homelessness Prevention Program, 9% tax credits, and rent supports from the Veterans Affairs Supportive Housing program and Humboldt County”. Bayview Heights has excellent amenities including a community room & kitchen, an onsite fitness center, and a coin-op laundry facility. Along with access to special services, including case management, behavioral health treatment, employment training, and job placement. “Amenities include a rooftop community garden and patio, Energy Star appliances, and wiring for internet and cable television”. Redwood Energy’s utility calculation predicted these units to be \$5.10/month for 1-bedroom units & \$25.57/month for 2-bedroom units. Utility bills this low are a result of the PV panels residents are provided. The panels combined with net energy metering allow them to receive credit on their utility bill for power generated by their system that is fed back into the electric grid during times when the system’s generation is greater than the customer’s usage.<sup>13</sup>

## Yarrow Village - Fortuna, CA

Yarrow Village is a twenty-five-unit affordable housing project for low-income seniors.<sup>9</sup> Designed at 80% Zero Net Energy. These adorable homes are equipped with solar PV to offset much of the energy costs for residents through Net Energy Metering (NEM). NEM allows customers who generate their own energy to serve their own energy needs and receive financial credit for surplus energy generated.<sup>10</sup> Redwood Energy's utility calculation predicted these units to be \$16.70/month for 1-bedroom units & \$21.05/month for 2-bedroom units. Having low energy bills gives security and a lower cost of living for fixed-income seniors.



*Yarrow Village*

## References

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