

TWIN PINES HOUSING TRUST – TRACY COMMUNITY HOUSING

CASE STUDY



TRACY STREET PROJECT SUMMARY

Tracy Community Housing will be the first Net-Zero multi-family building of any significant size in all of northern New England, measuring 29,000 square feet. It will also be **Passive House Institute US** certified.

Tracy Community Housing's twenty-nine units are restricted to households earning up to 60% of the Area Median Income. In Grafton County, where Tracy Community Housing is located, this equates to a single individual making roughly \$37K a year or a family of four making no more than about \$53K annually.

Twin Pines Housing Executive Director Andrew Winter says that, in addition to providing an affordable housing option, Tracy Community Housing will help "reinforce the residential nature of Tracy Street and improve the overall quality of the housing stock in the neighborhood."

Although Tracy Community Housing is not the first multi-family building on Tracy Street, its infrastructure and design are one-of-a-kind. Designed by energy-efficient design leader Bill Maclay and Teal Usher of **Maclay Architects** and project managed by Tim Estes and Jason Spaulding of **Estes & Gallup**, Tracy Community Housing reaches Net-Zero through a combination of impeccable insulation and extensive and creative use of solar paneling by **Norwich Solar Technologies**.

15 Railroad Row, White River Junction, VT 05001
(802) 281-3213 www.norwichsolar.com info@norwichsolar.com



SYSTEM CAPACITY

- 185 kW-DC/123 kW-AC

TYPE OF SYSTEM

- Ballasted Roof & Wall Mounted + Solar Canopy

PRODUCTS

- 384 Canadian Solar, Suniva & QCells solar panels
- SolarEdge optimizers and three-phase inverters
- PanelClaw ballasted racking

COMMISSIONING DATE

- November 2019

LOCATION

- Lebanon, NH
- Phone: 802.291.7000
- Email: info@tphtrust.org
- tphtrust.org





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ENVIRONMENTAL & COST SAVINGS AT-A-GLANCE



Solar Electricity Production
193,000 KWH PER YEAR



Year 1 Value of Energy
\$22,740



Estimated CO₂ Offset
683 TONS



Equivalent Trees Planted
15,000

Offset estimates based on 50K lbs. of carbon offset or 579 trees planted and 52,000 miles driven per kW over the Solar Photovoltaic system's 25-year life.

ABOUT TWIN PINES HOUSING TRUST

Twin Pines Housing was formed in 1990 through the merger of two housing organizations having similar visions: to develop and provide affordable housing for low- and moderate-income families in the Upper Valley.

ABOUT NORWICH SOLAR TECHNOLOGIES

We specialize in end-to-end solar services including Development, Design, Engineering, Procurement, and Construction, and Power Purchase Agreements. Our clean energy partners include Commercial & Industrial Clients, Schools, Municipalities, Farms, Communities, Industry, Health Care Facilities, and Small Businesses.

CHALLENGES ADDRESSED

In order to ensure maximum coverage, Norwich Solar Technologies installed solar panels on four different surfaces including the roof and cornice of Tracy Community Housing as well as on wall of the building's south side façade. To complete the array, Norwich Solar Technologies built a freestanding solar arbor, providing residents with a shaded area to park bicycles or relax at a picnic table. The yield of this solar array will cover all the energy needs of the building, including heating and cooling, thanks to a series of Air Source Heat Pumps.

**LEARN MORE AT
NORWICHSOLAR.COM**



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