

VOICES OF Energy and Housing Affordability

PROPERTY:

Pablo Davis Elder Living Center, Detroit, Michigan

FINANCING:

Low-Income Housing Tax Credit (LIHTC), Solar Investment Tax Credits and Multifamily Green Initiative grants

PROJECT PARTNERS:

Elevate Energy, Develop Detroit, Housing Partnership Network, Local Initiatives Support Corporation (LISC)

Housing and energy affordability are two intersecting issues that impact many Michiganders' quality of life. By sustainably reducing utility bills and making homes safer and more comfortable, energy efficiency and renewable energy upgrades improve housing stock and make quality housing more pervasive.

Bridging Communities, the nonprofit that runs the Pablo Davis Elder Living Center, is committed to preserving safe, comfortable and affordable housing for Detroit's seniors. Holding true to that commitment,

in February 2020, Bridging Communities completed extensive building renovations at Pablo Davis to increase energy efficiency and leverage solar energy technology.

The project was made possible by Low Income Housing Tax Credits (LIHTC), Solar Investment Tax Credits and Multifamily Green Initiative grants provided by the Detroit office of LISC. The facility upgrades included LED lighting, high efficiency boiler installation, demand-controlled ventilation and a 150 kW solar array on the building's roof.

Before and after the project upgrades, Elevate Energy entered the Pablo Davis Elder Living Center utility data into ENERGY STAR® Portfolio Manager®, an online software that automatically integrates a broad range of utility data for a complete picture of building energy use.

The results were impressive: Pablo Davis decreased its energy use intensity by 30% and qualified as an ENERGY STAR® top performer with a score of 80. A score of 80 means it is more efficient than 80% of similar buildings nationwide (see table 1).

Table 1: Pablo Davis Elder Living Center Building Energy Performance vs. National Median

	Pablo Davis before retrofits (12/2016)	National Median (average building)	Pablo Davis after retrofits (12/2020)
Total Electric Consumption	514,532 kWh	N/A	404,188 kWh
Total Natural Gas Consumption	34,315 therms	N/A	23,685 therms
Energy Star® Score	42	50	80
Site Energy Use Intensity (kBtu/ft.2)	76.6	64.8	51.8
Total GHG Emissions (Metric Tons CO2e)	495.8	473	378

As the table shows, Pablo Davis not only improved its energy use intensity, or the amount of energy consumed per square foot, but made notable gains in reducing greenhouse gas emissions.

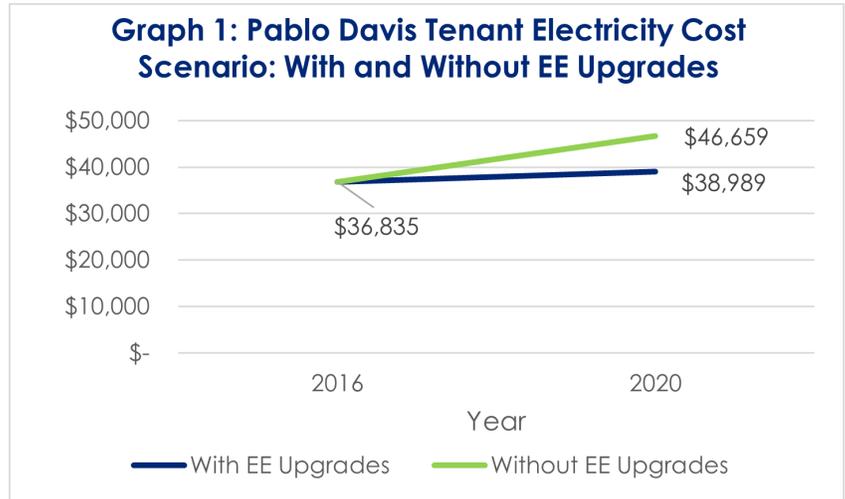
BILL SAVINGS IMPACT

Most of Pablo Davis' residents are seniors on fixed incomes. Saving money on energy bills means more money for other living expenses, such as groceries or medication. These retrofits were especially important in mitigating the impacts of utility rate increases that would have otherwise created affordability challenges.

Tenants now pay around 19 cents per kWh, up from 15 cents in 2015. Because electricity prices increased per kWh, residents collectively would have been paying approximately **\$8k annually** more for electricity without the efficiency upgrades if their consumption had remained the same (see graph 1).

Likewise, efficiency upgrades helped mitigate the bill impact of natural gas rates increasing from around \$0.79 to \$0.91 per therm. **Energy efficiency and solar production have been critical in preserving affordability.**

Graph 1: Pablo Davis Tenant Electricity Cost Scenario: With and Without EE Upgrades



THE INDIVIDUAL IMPACT

Mary Steadman and Gracie Bentley are two Pablo Davis residents who have benefited from the facility's renovations. Mary and Gracie have lived at Pablo Davis for a few years, and both are pleased with the energy efficient and renewable energy upgrades due to the utility bill savings.

According to Gracie, "Having an affordable home makes it so much easier and I don't have to be stressed. And having a comfortable home, being able to relax and to be able to enjoy myself—that makes a world of difference." Between the new appliances, the solar panel installation and the other efficient upgrades, Gracie says, "Everything that they did during the remodeling has just been wonderful."

Mary noted, when asked what she would want to tell elected officials about this project: "What I would say to an official is we need more programs like this that's accessible to everybody. You know, there is a problem with extremely low-income people that cannot afford to even live in a place with assistance."

Gracie agrees: "If I were to talk to any of our elected officials, I would urge them to do whatever they could to make it possible financially for a senior citizen to be able to rent an apartment." Ultimately, Gracie hopes the project can be an example for other dwellings in the city. "I hope they continue to do what they are doing and in helping to make the neighborhoods safer and cleaner and more efficient. It's just wonderful," she says.