

# Elevate Energy

Helping Affordable Housing Achieve High-Performance Buildings with C-PACE



# Who We Are

Founded in 2000, we are a nonprofit organization that seeks to create a world in which everyone has clean and affordable heat, power, and water in their homes and communities — no matter who they are or where they live.

We design and implement programs that make the benefits and services of the clean energy economy accessible to everyone to fight climate change while supporting equity.



SMARTER



ENERGY USE



FOR ALL

# What We Do

We support properties and portfolios at every stage to achieve a higher performance and generate operational savings by providing:

- Portfolio planning
- Energy and water use tracking and remote monitoring
- Energy, water, resiliency, and healthy homes property assessments
- Integrated design support and plan & specification reviews
- Energy modeling of existing and new developments
- Solar and net-zero energy feasibility evaluation
- Financing and incentive coordination
- Installation project management, quality inspections, testing, and verification
- Green certification



# Our Partners

- Multifamily affordable housing owners and managers
- Homeowners and renters
- Nonprofits (community-based and direct services organizations)
- State and local government and public agencies
- Investor owned, municipal, and cooperative utilities
- Financial institutions



# Case Study: Madison-based Private Owner

- Year built: 1973
- Number of tenant units: 8
- Construction type: Two-story masonry
- Heating system: Natural gas boiler
- Annual energy and water utility costs: \$15,500
- Support provided:
  - Energy and water use tracking in ENERGY STAR® Portfolio Manager®
  - Property assessment
  - Solar feasibility evaluation



# Estimated Energy and Water Savings

Recommendation	Estimated Cost	Incentives	Annual Savings	Life (yrs)	Simple Payback (yrs)
Replace T12/T8 florescent tube lighting with LED lighting	\$81	\$18	\$843	16	0.1
Replace incandescent and CFL lighting to LED lighting	\$9	\$5	\$228	8	0.0
Install high efficiency aerators of 1.5 GPM or less	\$16	\$8	\$114	10	0.1
Add air sealing behind existing insulation within the exterior building rim joist	\$474	\$474	\$70	10	0.0
Install smart power strip in unit to control an entertainment center or home office power loads	\$480	\$320	\$117	6	1.4
Install high efficiency showerheads of 1.5 GPM or less	\$272	\$24	\$58	10	4.3
Insulate all accessible domestic hot water piping	\$906	-	\$113	15	8.0
Insulate all accessible hot water building heating piping	\$2,270	-	\$215	15	10.6
Replace the existing 80% efficient boiler with a 90% efficient or greater boiler	\$24,552	\$788	\$464	20	18.3
Replace in-unit air conditioning units with high efficiency ENERGY STAR certified units	\$9,448	\$600	\$64	9	27.4
Replace fridges with ENERGY STAR certified models	\$6,000	-	\$570	10	16.6
Replace Thermostats with Smart Thermostats	\$2,349	\$600	\$123	10	15.8
Replace existing 80% domestic water heaters (2004) with high efficiency water heater	\$6,576	\$800	\$104	13	55.7
<b>TOTAL</b>	<b>\$39,768</b>	<b>\$4,236</b>	<b>\$3,121</b>	<b>-</b>	<b>11.4</b>

# Potential Savings from Solar PV System

Solar Potential	Initial Investment	Focus on Energy Incentives	Tax Incentives	Total First Year Owner Savings (\$)	Owner Utility Cost Savings (%)	Total Lifetime Savings (\$)	Life (Yrs)
Medium-Low	\$10,016	\$800	\$2,604	\$4,403	68%	\$103,726	25



When combined with the 30 properties in this portfolio, the total opportunity is:

**Solar Capacity:** 175.6 kW

**Total Investment:** \$456,560

**Incentives:** \$34,060

**Average Annual Savings:** \$20,391





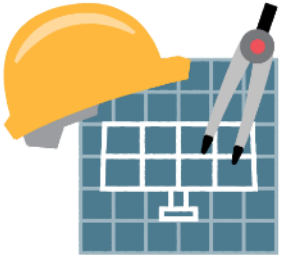
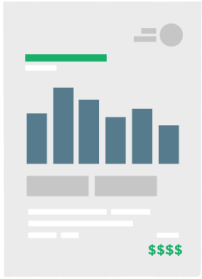
# Case Study: Valley View III – Ionia, MI

- Owner: Hollander Development Corporation
- Year built: 2001
- Number of tenant units: 39
- Construction type: Two-story wood frame
- Heating system: Natural gas central boiler





# Support Provided



- Energy use tracking in WegoWise
- On-site energy assessment
- Report of recommended cost-effective upgrades:
  - Projected savings
  - Installation cost estimates
  - Financial analysis including utility incentives
- Project plan development
- Qualified contractor bid solicitation
- Owner's rep construction oversight and quality inspections
- Utility incentive coordination
- Post-upgrade energy use analysis



# Upgrades and Funding



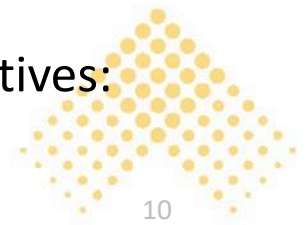
## Upgrades Completed

- Attic air sealing insulation
- Domestic hot water pump timer
- Lighting and occupancy sensors in common areas
- Heating pipe insulation



## Project Funding

- Total cost: \$26,429
- Michigan State Housing Development Authority (MSHDA) Low Income Housing Tax Credit (LIHTC) reserve funding: \$22,608
- Consumers Energy “Energy Savers Pilot” incentives: \$3,821

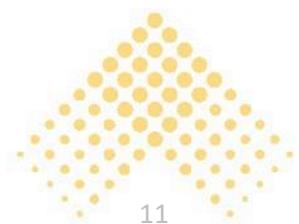


# Savings

Annual Use & Cost Metrics	Natural Gas	Electricity	Total Energy
Pre-Upgrade Use	14,818 therms	127,512 kWh	1,916,871 kBtu
Post-Upgrade Use	12,674 therms	90,650 kWh	1,570,874 kBtu
Use Savings	2,134 therms	36,862 kWh	345,997 kBtu
Percent Savings	14%	30%	18%
Owner Cost Savings	\$6,158		
Upgrade Cost after Incentives	\$22,608		
Simple Payback	3.67 years		

Total Energy: Btu per square foot

Savings of 18%. Usage reduced from 59k to 48.5k.



# Awards & Owner Perspective

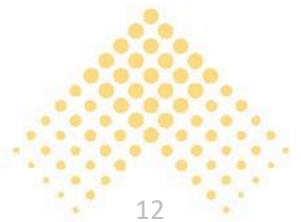
The energy upgrade project at Valley View III won two awards:

- Honorable Mention, Michigan Governor's Energy Excellence Awards, October 2015
- 1<sup>st</sup> Place, USGBC Michigan Battle of the Buildings, Multifamily Category, April 2016



*"I would tell other owners: First, if you are not doing energy audits, you should be. They are a great tool to figure ways to save utility costs. If you are doing energy audits already and you are looking for a more streamlined package, one-stop solution, [Elevate Energy has] a great program."*

**Matt Hollander, President  
Hollander Development Corporation**



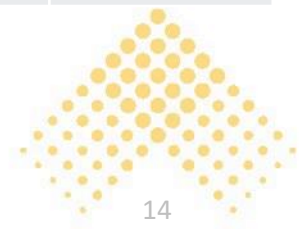
# Case Study: Apartment Complex (8 Buildings) in Orland Hills, IL

- Year built: 1983
- Number of tenant units: 176
- Construction type: Three-story masonry
- Heating system: Individual natural gas furnaces
- Estimated Annual energy and water utility costs: \$370,000
- Support provided:
  - Energy and water use tracking in ENERGY STAR® Portfolio Manager®
  - Property assessment
  - Solar feasibility evaluation



# Estimated Energy and Water Savings





Recommendation	Estimated Cost	Incentives	Annual Savings	Life (yrs)	Simple Payback (yrs)
Replace Existing Thermostats with Programmable Thermostats	\$16,804	\$16,804	\$2,638	8	Immediate
Replace All Incandescent Lamps in the Management Office with LED Lamps	\$121	\$121	\$588	10	Immediate
Retrofit T8 Fixtures in Management Office, Tool Room, and Computer Room with Type C TLEDs	\$435	\$435	\$78	15	Immediate
Replace All Incandescent and CFL Lamps in the Apartment Units with LED Lamps	\$7,672	\$6,747	\$13,514	10	0.1
Test Toilets for Leaks and Repair Toilet Flappers	\$4,760	-	\$69,231	5	0.1
Replace Exterior High Intensity Discharge Fixtures with LED Fixtures	\$18,000	\$15,810	\$4,366	10	0.5
Install Astronomical Clocks to Control Exterior Fixtures	\$2,400	\$160	\$282	10	7.9
Replace Furnaces with High Efficiency Furnaces	\$440,148	\$247,800	\$16,075	20	12.0
Replace Air Conditioning Systems with High Efficiency Equipment	\$564,460	\$316,800	\$16,672	18	14.9
<b>TOTAL</b>	<b>\$1,054,800</b>	<b>\$604,678</b>	<b>\$123,444</b>	<b>-</b>	<b>3.6</b>



# Let's Stay Connected

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# Where We Work

Elevate Energy is headquartered in Chicago with a national presence and localized expertise delivering programs and services.

