Serving Multifamily Building Owners

A Full Service Comprehensive Approach for Improving Existing Buildings

ELEVATE ENERGY

Smarter energy use for all

Agenda

- Who is Elevate Energy and why are we Interested in Low Income Multifamily Housing ?
- Our Approach to Low Income Multifamily
- Impact, Case Studies

Our Mission

We promote smarter energy use for all.

We give people the resources they need to make informed energy choices.

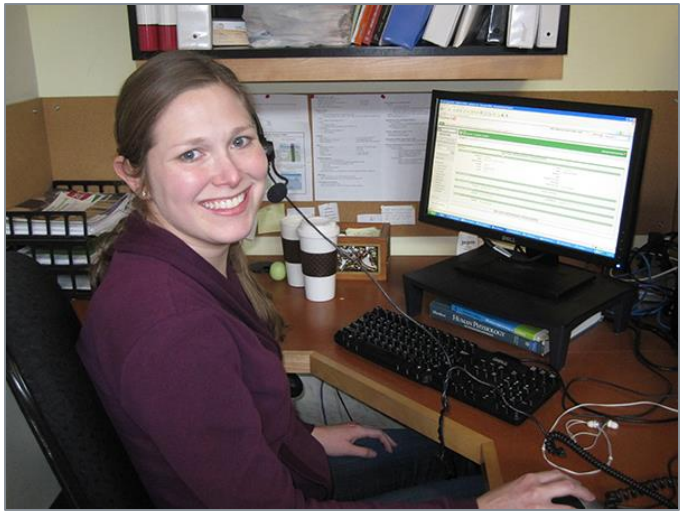
We design and implement efficiency programs that lower costs, and protect the environment.

We ensure the benefits of energy efficiency reach those who need them most.

The Elevate Energy Team

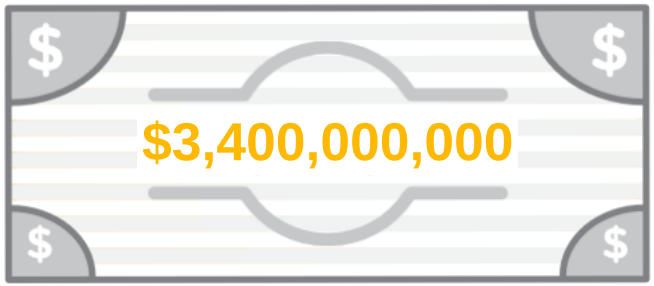
Team members include:

- Energy analysts, engineers, and construction managers
- Quality assurance and quality control experts
- Bilingual CRM specialists
- Researchers and data analysts
- Energy law and policy experts
- Communication, marketing, and outreach professionals
- Project managers and program administrators



Affordable Multifamily Market

10.5 million units of affordable multifamily housing in the US



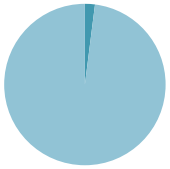
$3.4B could be saved through multifamily energy efficiency improvements

Multifamily Energy Expenditure

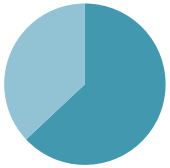
13.5% of monthly income spent on energy
(compared to median household: 7%)

23% energy cost increase from 2001 to 2009
(compared to rent increase: 7.5%)

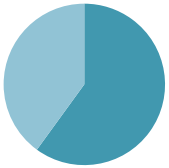
Multifamily Building Characteristics



2% of MF 5+ units have received an energy audit



63% of MF 5+ units are poorly or only adequately insulated



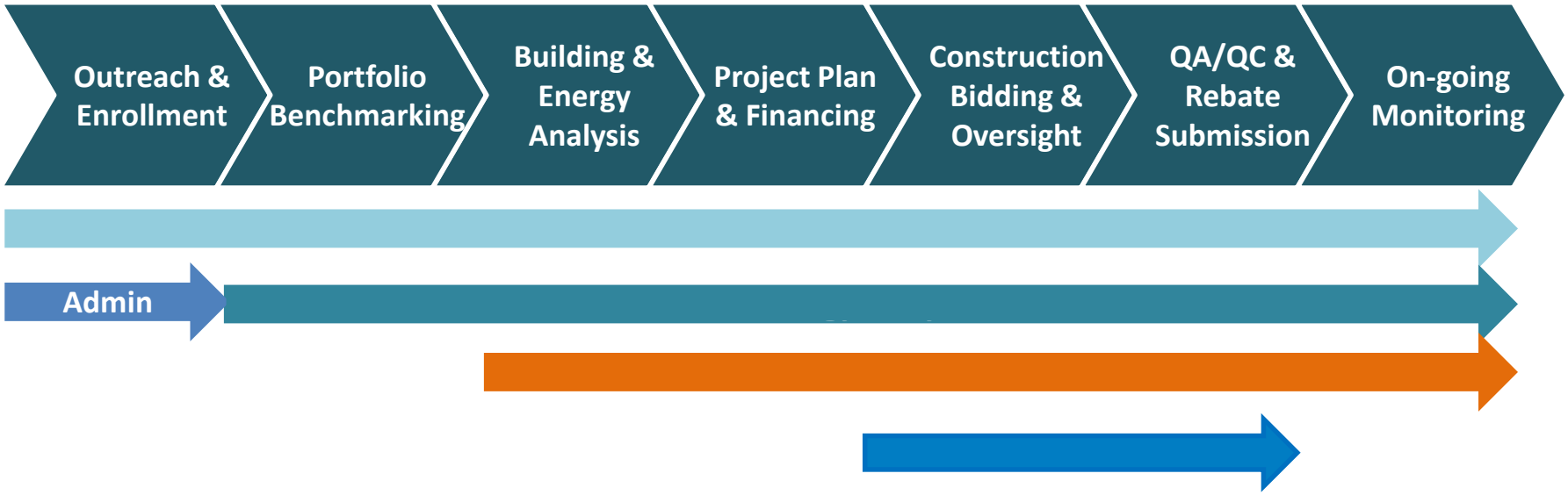
60% of MF 5+ units have heating equipment not routinely maintained (in last year)

Sources: EIA, Residential Energy Consumption Survey (RECS) 2009; US Census American Community Survey, 2007-2011, 5-Year Estimates; Elevate Energy & ACEEE, "Engaging as Partners in Energy Efficiency: Multifamily Housing and Utilities," 2012; Benningfield Group for The Energy Foundation, "Addendum Report: U.S. Multifamily Housing Stock Energy Efficiency Potential," 2010; Deutsche Bank, "The Benefits of Energy Efficiency in Multifamily Affordable Housing," 2012.

Our Approach to Multifamily Housing

Our Multifamily Energy Efficiency Program

A Flexible, Streamlined Process Grounded in Actual Data



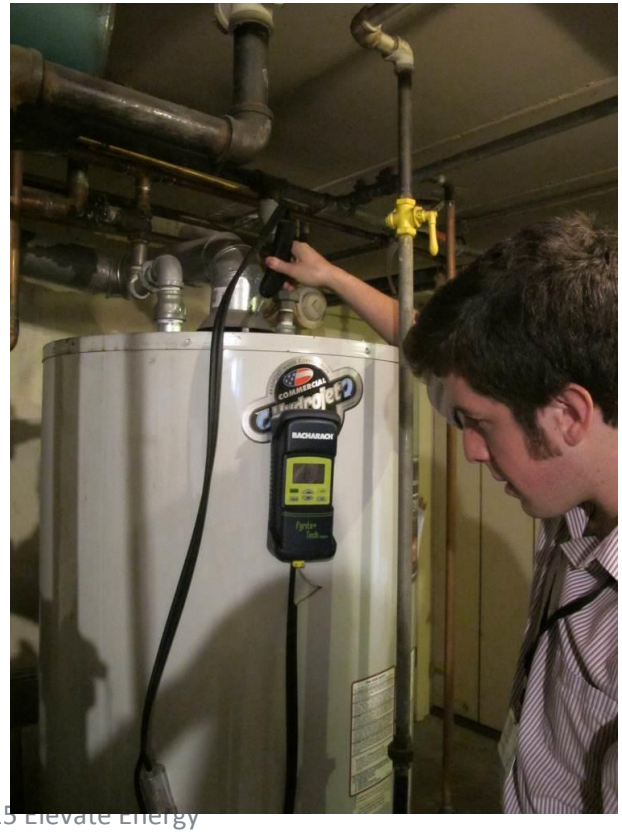
- **Robust data** to baseline energy use, estimate savings and monitor post-retrofit results
- High quality customer service through a **single point of contact**
- Strong construction management with **100% QA** of jobs

Addressing Barriers

Barriers	Key Program Design Elements
Limited awareness of applicable programs	Single point of contact to support owners throughout the energy upgrade process
Lack of energy use data and comparison benchmarks	Utility Benchmarking/Baselining
Lack of knowledge of cost-effective efficiency upgrades	Energy analysis, onsite building assessment, and cost-effective energy savings recommendations
Lack of access to low-cost capital	Access to low-cost energy efficiency financing products and any available state, local, or utility incentives or grants
Lack of time and knowledge to oversee construction and ensure high quality work	Contractor bid solicitation, construction oversight, and QA/QC provided
Lack of mechanisms to track post-retrofit savings	Post-retrofit energy use monitoring and reports

Best Practice-Use Assessment Time Well

Use the on-site assessment to create momentum, collect data and address customer's pain points



Best Practice: Provide Clear, Concise Deliverables

Energy Assessment & Potential Savings Report

Completed for: **Aurora Apartments**
123 Main St
Aurora, IL

Total projected energy cost savings: 40%

Estimated current yearly natural gas usage:	$87,064
- Estimated post-retrofit yearly natural gas usage:	$52,814
Estimated yearly natural gas cost savings:	$34,250

Table 1 Recommended retrofits

Recommendation	Cost ($)	Savings (therms/year)	Savings* (kWh/year)	Savings* ($/year)	Simple payback (years)	Retrofit lifetime (year)	SIR
1. Insulate all accessible heating hot water pipe with all sleeve jacket fiberglass (R-6)	3,200	700	-	700	4.6	25	5.5
2. Roof cavity: Air seal roof cavity perimeter and all penetrations, gaps and bypasses with foam, and insulate with blown-in cellulose (R-49)	64,000	12,600	-	12,600	5.1	25	4.9
3. Insulate all accessible domestic hot water pipe with all sleeve jacket fiberglass (R-4.5)	800	150	-	150	5.3	25	4.7
4. Install low-flow shower heads (1.5 GPM) and faucet aerators (1.5 GPM kitchen, 1.0 GPM bathroom)	12,800	5,300	-	5,300	2.4	10	4.1
5. Install new high-efficiency (90%+ AFUE) heating hot water boiler with indoor averaging temperature sensors and outdoor cutoff	105,000	12,600	-	12,600	8.3	20	2.5
6. Convert incandescent exit sign bulbs to LEDs	4,900	-	8,750	875	5.6	10	1.8
7. Install new high efficiency (90%+ AFUE) domestic hot water heater	45,000	2,900	-	2,900	15.5	20	1.3
TOTAL	**$235,700**	**34,250**	**8,750**	**$35,125**	**6.7**	-	-

* Assumes $1.00 per therm of natural gas or $0.10 per kWh of electricity. 1 therm = 29 kWh

Best Practice: Speak “Building Owner”

Key Benefits

- Increased cash flow
- Average savings on gas, electricity and water
  - Energy Savers saves 30% on utility bills – ~ $10,000/ year for a typical 24-unit building
- Tenant comfort and retention
- Improved HVAC systems – higher efficiency, better maintenance, longer life
- Preserves and renews old and affordable building stock

Best Practice: Coaxing the Deal

- Proactively encourage customers to take small steps by suggest a few items that owner can explore further (e.g., requesting a few contractor price quotes)
- Enlist another owner who trusts you to advocate for you with the target customer
- Reiterate expertise and success in helping other owners with similar needs save money

Best Practice: High Rigor QA/QC

- Energy Analyst and the Construction Manager:
  - Develop an implementation plan with the customer
  - Solicit and review bids from contractors with customers
  - Confirm bids are aligned with current pricing and the scope of work
- Construction Manager:
  - Serves as an owner's representative monitoring the installation to ensure high quality work
  - Remains available after the work is completed should the customer have questions

Best Practice: Bidding and construction oversight lead to high quality installations & energy savings

Best Practice: Measure Performance

- Analyze utility bill data at 1 and 2 year intervals after construction completed
- Calculate savings and post-upgrade EUI
- Report savings to building owners
- Check actual savings against initial projections
- Return to investigate underperforming buildings

NATURAL GAS	Baseload EUI	Heating Load EUI	Total EUI	Cost* ($)
Pre-Upgrade (Jul 2007 - Jul 2009)	27	147	174	$23081
Post-Upgrade (Aug 2010 - Jul 2012)	19	78	98	$12905
% Savings	29%	47%	44%	44%

* Assumes $1.00 per therm of natural gas

Best Practice: Ask Your Customers, Reflect on What They Tell You

Important Benefits from Retrofits

- Reduction in operations and maintenance costs*
- Less complaints regarding draftiness, enhanced tenant comfort
- Smaller utility bills

Building Owner Concerns

- Turnover costs
  - Could range from a few hundred dollars to a few thousand
- Vacancy rates lowered

Owner Insights

Energy Efficiency Savings facilitated Capital Improvements

- "Two of the buildings that needed new parkways where I have parking, I ripped out all the concrete and put new parking pads. They're parking for 5 cars, so it's a big area that I had to do – around $10,000 at each building. Which let me have the money to do that, just with the increased savings."

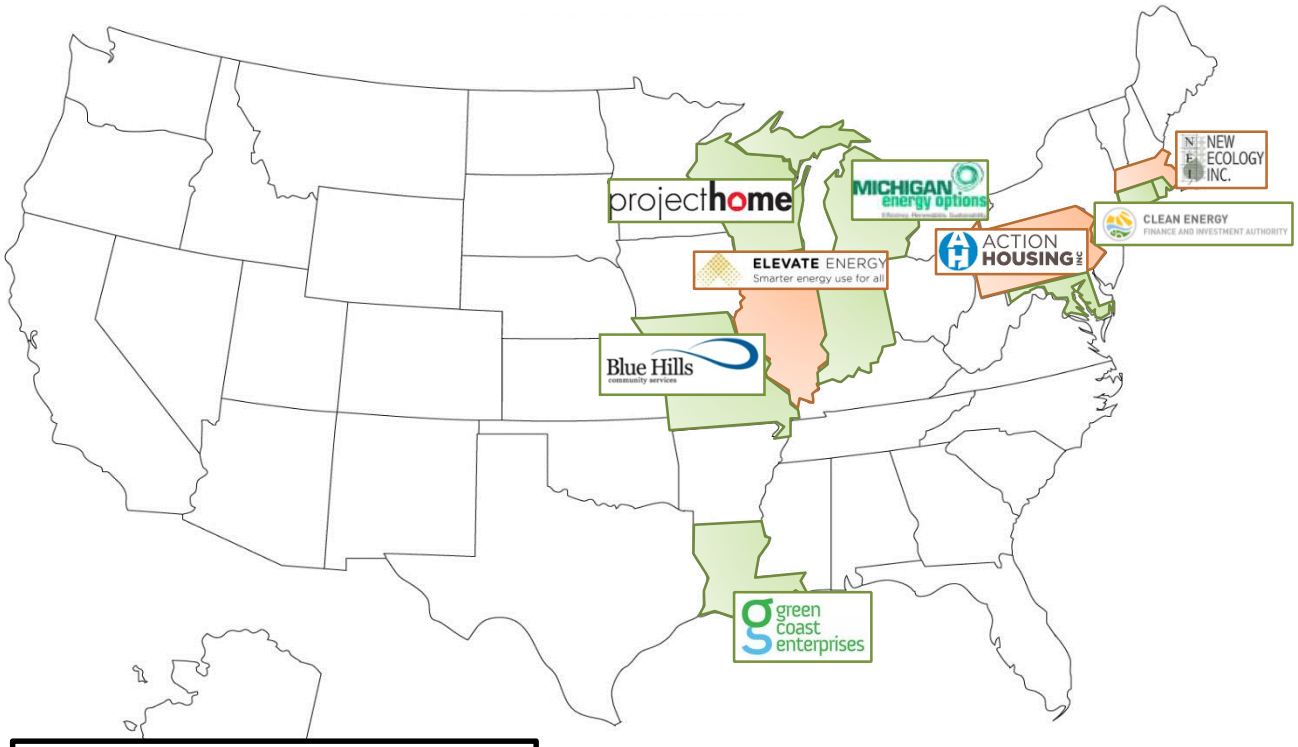
Owner Insights

On not raising rents and the split-incentive

- "You'll have less turnover, you'll be able to keep certain tenants for longer, even though they're paying less rent…I would say that's your biggest asset, is that it provides you stability. I mean you can always rebuild your tenant base. But you have to have a core group of tenants, even in a troubled area. So I think it's always important to be able to hold on to that, and make it a little more affordable for them, at least that's how we view it."

Impact, Case Studies

Where we are working…



Existing Elevate/NEI Program or Supported Program

Partner/New Location

Connecticut – Audits and pilot financing products

Indiana – Expand IL MF program

Maryland & Rhode Island – NEI expansion offices

Michigan – Pilot one-stop shop services for Consumers Energy

Missouri – Pilot MF program and benchmarking

Louisiana – Expand retrofit and remote monitoring services to southeast

Pennsylvania – Grow program pipeline

Wisconsin – Enhance program offering

We believe that to fully address this untapped and underserved market, new ways of thinking and working together are necessary.

* Elevate Energy currently operates a program in Illinois and Indiana
* NEI currently provides energy efficiency and green services in Massachusetts and Rhode Island.

Impact

	Buildings	Units
Applications & Units Received	1,679	71,801
Audits	1,340	58,355
Retrofits	592	24,930
Gas therms saved	5,983,200	
kWh saved	16,204,500	
Metric tons CO_2e from gas saved	46,456	
Jobs created	536	
Financing leveraged from Community Investment Corporation	$14, 254,543	

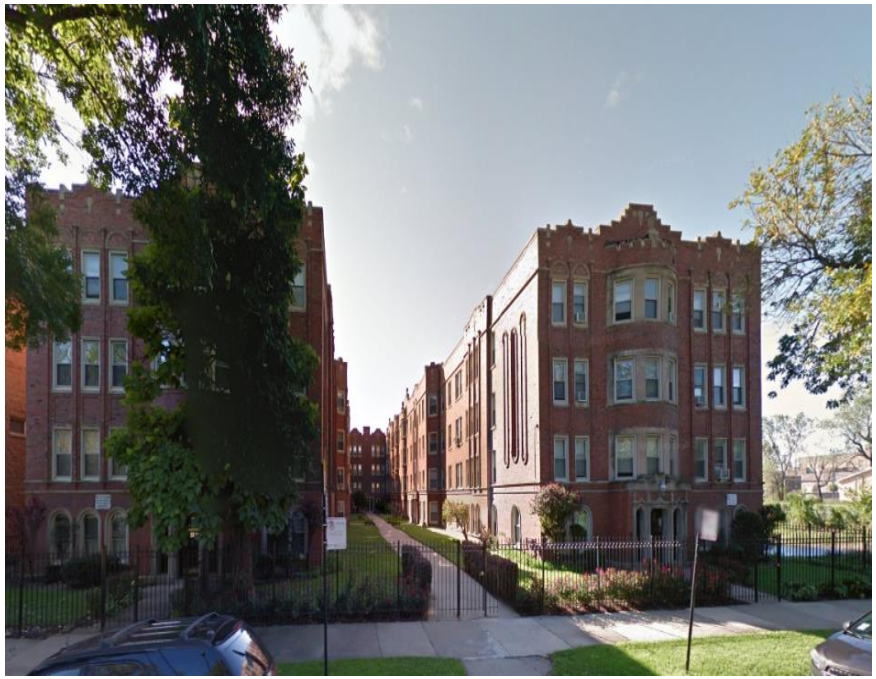
Case Studies

Jeffery Parkway, retrofitted by Elevate Energy, is **one of the first 17 existing multifamily** properties nationwide to become **Energy Star certified**

"We were facing, just on the gas bill, a $60,000 bill a year. As of last year, our bill was $18,000. It was unbelievable savings…By putting more upfront funds [in our building], our tenant retention is much better... It's something to tell tenants, that we care about the building."

Quote from **Sandeep Sood**, owner of Jeffery Parkway, in the November 24, 2014 *Chicago Tribune* article "South Side apartment building among 3 Chicago energy efficiency stars."

Case Study: 4336-44 S Drexel Blvd, Chicago, IL



Building Overview

- Building Owner: Redel Rentals
- Building type: 4-story, 110-unit brick building
- Year of construction: 1926
- Heating system: natural gas-fired steam boiler

Case Study: 4336-44 S Drexel Blvd, Chicago, IL

Scope of Work

- Roof Cavity Air Sealing and Insulation
- Pipe Insulation

Further Project Information

- DCEO Incentive $58,400
- 25% annual natural gas savings
- $14,500 annual savings

Questions?

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