Shining the light on the unmetered
Environmental Defense Fund’s Approach

Sound Science

Corporate Partnerships

Market-Based Solutions

Non-Partisan Policy
Agenda

1. Background

2. Methodology & Findings

3. Policy Recommendations
NYS 2030 Goals

40% Reduction in GHG emissions from 1990 levels
Reducing greenhouse gas (GHG) emissions from the energy sector—power generation, industry, buildings, and transportation—is critical to protecting the health and welfare of New Yorkers and reaching the longer term goal of decreasing total carbon emissions 80% by 2050.

50% Generation of electricity from renewable energy sources
Renewable resources, including solar, wind, hydropower, and biomass, will play a vital role in reducing electricity price volatility and curbing carbon emissions.

185 TBtu Savings in statewide energy efficiency
Energy efficiency results in lower energy bills and is the single most cost effective tool in achieving clean energy objectives. 185 trillion British thermal units in energy efficiency savings in end use energy by 2030.
Quantifying The Scope

560K-800K unmetered homes

>25% of all NYC homes
Data & Methodology

- Two years of 15 minute interval data
- 500 apartments – Affordable Housing
- 1, 2, 3 bedroom apartments
Findings

Legend

Use at allowance

Avg. monthly use*

Estimated Consumption based on typical usage from annual RECS data

Average actual consumption based on data collected from check meters
Findings

Frequency

Legend

Estimated Monthly
Cost based on typical
usage from annual
RECS data.

Average actual cost
based on data
collected from check
meters

Use at allowance

$ XX

Avg. monthly use*

$ YY
Use at allowance  Avg. monthly use*

1

KWH 44%

2

KWH 53%

3

KWH 44%

RECS  Average monthly bill**
# Potential Savings

<table>
<thead>
<tr>
<th>Current Electric Expense</th>
<th>Potential Actions</th>
<th>Outcomes</th>
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<tbody>
<tr>
<td>$10 million</td>
<td>Do Nothing</td>
<td><strong>- 31%</strong></td>
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<tr>
<td>Bulk Rate</td>
<td>Submetering (Check-metering)</td>
<td></td>
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<td></td>
<td>Direct Metering (Individually metered)</td>
<td><strong>- 8%</strong></td>
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<td>ConEd rate</td>
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CASE STUDY – PARK CITY ESTATES, QUEENS
SUBMETERING FOR MULTIFAMILY BUILDING

From growing costs to big savings — thanks to submetering

SNAPSHOT

Background
• 1,049 unit, five-building co-op complex
• Built in 1960 with one master meter for electricity in each building
• All residents paid the same amount for electricity monthly, regardless of usage

Benefits
• 15% savings in maintenance costs
• Residents only pay for the electricity they use
• Electrical issues posing safety risks were found and fixed

Residents of Park City Estates, a co-op in Queens, NY, had a relatively common problem for apartment dwellers. Each of the complex’s five buildings were metered, so it was impossible to bill residents individually. They all paid the same electricity bill, whether or not they were conservative with their energy use.

When FirstService Residential took over management in 2010, the complex had been experiencing double-digit maintenance charge increases for five years. “It was self-managed, and it seemed that the operating expenses were spiraling out of control,” said Aubrey Philibert, the FirstService Residential senior property manager of Park City Estates.

To lower maintenance costs and reduce building-wide energy consumption, Park City Estates owners decided to upgrade to electricity submetering and give residents control over their electricity use. Now, Park City Estates residents only pay for the electricity they actually consume.

Smooth switch to savings

The superintendant and the installation team put residents’ minds at ease, explaining that there would be no damage to their living space—and reminded them of the upside of submetering. “We showed them how to do a back-of-the-envelope calculation of what we could save them,” Philibert says. All of the communication worked. Despite its large scale, Park City Estates’ submetering project proceeded smoothly. Residents are also changing their behavior, and finding even more ways to reduce their bills and their impact on the environment.

nyserda.ny.gov/submetering

Case Study – Tower East, Manhattan
Submetering for Multifamily Building

Taking ownership of electricity use in a NYC co-op

SNAPSHOT

Background
• 21-unit co-op building
• Built in 1960, with one master meter for electricity
• All residents paid the same amount for electricity monthly, regardless of usage

Benefits
• Electrical issues posing safety risks were found and fixed
• Up to 20% reduction in building energy use and cost
• Residents only pay for the electricity they use

All residents of New York City’s Tower East co-op paid the same monthly electricity bill, whether or not they were conservative with their energy use. As the price of electricity rose, the building’s co-op board decided to take action.

Tower East is a co-op apartment building built in 1960 that rises 34 floors above East 72nd Street between Lexington and Third Avenue in Manhattan. Like other buildings of its era, Tower East had a single electric meter meter, so it was impossible to bill residents individually. Tower East residents decided to upgrade to electricity submetering and gain control over their electricity use, which can reduce building-wide energy consumption by up to 20%.

Teamwork leads to success

 Resident Manager Adrian Sanchez implemented a two-pronged strategy to make the conversion to submetering simple and effective. First, he scheduled a pre-install walk-through with each resident to identify meter location and assess carpentry and pluming needs. Second, he worked with an energy metering expert to ensure the electrical crew could work quickly. In tandem with Sanchez’s finishing team.

Communication with residents throughout the project eliminated surprises, and the crews finished the entire building install in only 10 days. “The process was seamless and transparent. Our residents had no evidence that we were even in their apartments, except for the new meter being there,” said Sanchez.

Lower bills, added value

Tower East residents now only pay for the electricity they actually consume, which has increased the property’s value. Residents are still able to purchase electricity at a bulk rate, which creates additional savings.

nyserda.ny.gov/submetering
Recommendations

• Residential metering in new construction
• Enhanced support for landlords & tenants
• Develop transition plan/guidelines
• Establish EAMs/EE Targets for metering
Thank you

Rory Christian
Director, New York Clean Energy
Findings

Monthly Use for One-Bedroom Apartments

- Use at allowance: 204 kWh
- Avg. monthly use*: 368 kWh

* Average of 164 apartments
Findings

Monthly Use for Two-Bedroom Apartments

Use at allowance: 207 kWh
Avg. monthly use*: 442 kWh

* Average of 148 apartments
Findings

Monthly Use for Three-Bedroom Apartments

* Average of 142 apartments
Findings

Projected Monthly Bills for One-Bedroom Apartments*

*Under direct-metering at current usage levels
**Average of 164 apartments
Findings

Projected Monthly Bills for Two-Bedroom Apartments*

*Under direct-metering at current usage levels
**Average of 148 apartments
Findings

Projected Monthly Bills for Three-Bedroom Apartments*

*Under direct-metering at current usage levels

**Average of 142 apartments
Use at allowance  Avg. monthly use*

1

Frequency

204 kWh  368 kWh

20 15 10 5 0

150 100 50 25

20 15 10 5 0

20 15 10 5 0

KWH  ($)

44%  51%

$63  $95

53%  72%

$64  $110

44%  54%

$82  $126

Frequency

RECS  Average monthly bill**

Frequency