



**New York State
Energy Research and
Development Authority**

**RESIDENTIAL
ELECTRICAL SUBMETERING
MANUAL**

Prepared for
New York State Energy Research and Development Authority
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NOTICE

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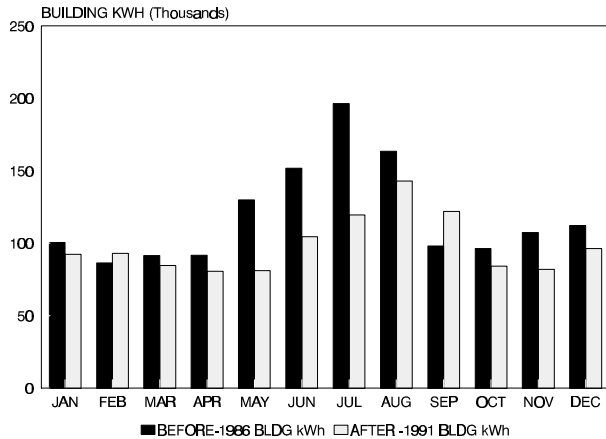
Residential Submetering Case Study

Carlyle Towers Cooperative

Scott Towers Cooperative

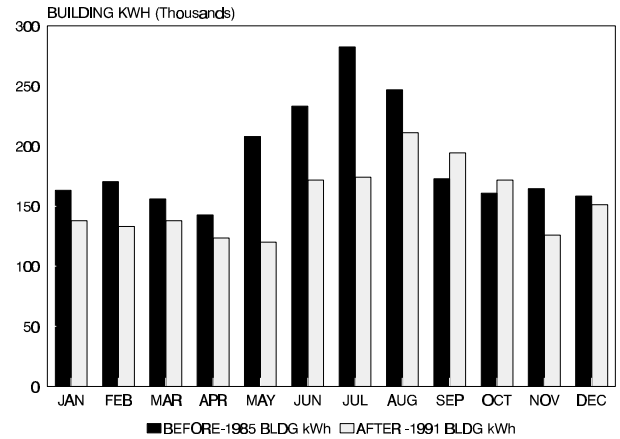
Residents at Carlyle Towers and Scott Towers have been saving on their energy costs for many years - Thanks to Submetering!

CARLYLE TOWERS ENERGY USE



(Adjusted to 1991 weather conditions)

SCOTT TOWERS ENERGY USE



(Adjusted to 1991 weather conditions)

Comparison of Building Energy Consumption Before and After Submetering Submetering - The Solution

If you live in a cooperative or condominium, wouldn't you rather pay *only* for the electricity that *you* use? That way, you can decide how much you pay and how much you save!

Submetering provides multiple-unit residential buildings with individual apartment meters, so each resident pays only for the actual amount of electricity they use. It allows your building to distribute electric costs fairly, yet you still pay the lower bulk rate. It's just like your phone bill, where you pay only for the calls *you* make, not those of others.

Studies have shown conclusively that submetered buildings use less electricity; so they have lower energy costs. Submetering means lower costs for those who use less electricity and motivation for others to conserve. It offers a way to significantly lower your electric bills from now on.

Carlyle Towers Cooperative

Location: 138-10 Franklin Avenue
Flushing (Queens), New York

Size: 194 units (15 floors)
(74 one bedroom; 90 two bedroom; and 30 three bedroom units)

Common Areas: Lobby, laundry, garage and one commercial tenant

Scott Towers Cooperative

Location: 3400 Paul Avenue
Bronx, New York

Size: 352 units (21 floors)
(62 one bedroom; 207 two bedroom; and 83 three bedroom units)

Common Areas: Lobby and laundry

"Users of Electricity will vote for submetering, abusers will vote against it. "

Charles Rappaport (dec.) - former Carlyle Towers Representative and President of Federation of New York Housing Cooperatives

Submetering Savings History

Carlyle Towers and Scott Towers, original participants in the Con Edison Residential Submetering Program, each installed their submetering systems by 1987. Each building had good reasons to participate and both recognized the advantages of submetering to their residents, namely cost savings, energy conservation and fairness. Their experiences confirm these benefits and have shown that submetering savings **DO PERSIST!** Savings at these buildings have been maintained at levels at least as high or higher than originally demonstrated for over five years!

Significant Cost and Energy Savings

Based on a comparison between 1986 (before submetering) and 1991 (after submetering) for Carlyle Towers and between 1985 and 1991 for Scott Towers, each saved over 18% in building electric costs, after adjusting for weather and utility rates. This represents a 25% reduction in average apartment energy consumption for each building.

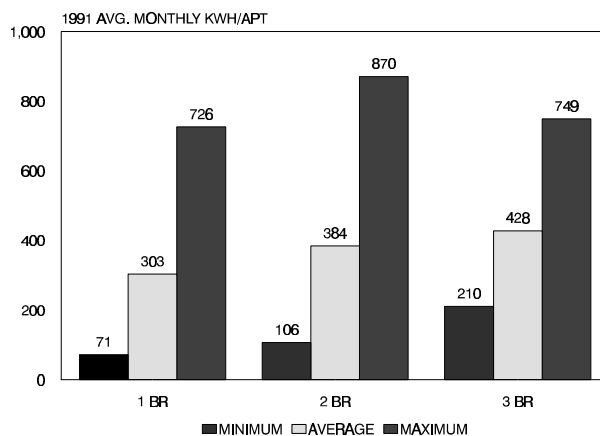
Impact on Shareholders

The impact of submetering on residents has varied widely, based on each resident's individual usage habits, conservation efforts and occupancy patterns. Overall, 73% of residents in Carlyle Towers now use *less* energy than the pre-submetering average, so they **PAY LESS** for electricity than they would have without submetering. Only 7% are using significantly more than the pre-submetering average, so they pay more, and should, because they use more than their neighbors. Those who take extended vacations can also save with submetering, since they won't pay for what they don't use.

Fairness to All Residents

In Carlyle Towers and Scott Towers, like most Coops, residents in the same apartment size used to be charged approximately the same for their electric usage, based on their shares in the cooperative. In fact, there is a wide range of usage levels. For Carlyle Towers' two bedroom apartments, for example, usage in 1991 varied from 106 kWh/month to 870 kWh/month - a difference of over *eight times!* With submetering, these residents are **NO LONGER** charged the same amount for electricity. Submetering provides a **FAIRER** allocation of building electric costs.

CARLYLE TOWERS ENERGY USE BY APARTMENT



Consumption Comparison by Apartment Size

If you want to pay only your fair share for electricity, save money and energy, like they do at Carlyle Towers and Scott Towers, consider residential submetering for your building.

***Switch to Submetering. Save Energy.
Save Money, Too!***

Information Package sponsored by The New York State Energy Research and Development Authority