

# NYCHA Selects PSD Software And Training to Help Prioritize Building Energy Improvements



## Our Client

The New York City Housing Authority (NYCHA) provides housing for over 400,000 New Yorkers. They are the largest public housing authority in North America, operating roughly 2,500 buildings in more than 330 developments spread across the 5 boroughs of New York City. Their buildings range from individual brown-stones to 40 floor high-rises, with the vast majority being multifamily multi-story buildings.



## The Challenge

Energy efficiency building improvements support NYCHA's mission to provide safe and affordable housing to low and moderate income residents by helping to keep operating costs lower. Yet, with so many properties under their management, NYCHA wanted additional tools to help them prioritize which energy efficiency improvements would yield the greatest return (energy savings) for their capital budget investments.



*Quotes presented here are from conversations between PSD and members of NYCHA's Energy Finance and Sustainability Management Department:*

*"We wanted a more objective way to determine where we are getting the most bang for our buck. That is, what energy efficiency investments saved us the most money."*

*– Chris Haun, Deputy Director*

## Our Solution

After evaluating energy modeling and training solutions, NYCHA turned to Performance Systems Development for **TREAT multifamily software and training**.



*"Our main issue is energy efficiency. We're doing everything from lighting upgrades to boiler replacements to retrofitting with energy audits. We're doing a lot of different energy efficiency projects and we wanted use one software package that was widely used within the industry TREAT seemed like the natural choice to us."*

*– Chris Haun, Deputy Director*



**T**argeted **R**etrofit  
**E**nergy **A**nalysis **T**ool

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NYCHA had seen that some of their third party energy auditors already use TREAT. And with as many as 12 staff tasked with performing energy audits and recommending energy efficiency retrofits, they knew they could benefit from using TREAT as well. Not only would they be able to predict energy savings, but they would also be able to keep third party audits on file electronically for future use when targeting a building for improvements.

*“We also have energy audits conducted on our properties by third parties who are modeling our buildings in TREAT as well. By having a better understanding of the software, we can review these models internally to verify the accuracy of the results.”*

– Rory Christian, Director

Key in the selection of TREAT is its ability to combine multiple building improvements into packages. It's often most cost efficient to have multiple improvements done to a building at the same time. However, predicting the energy savings of a combination of improvements is not as simple as summing that of the individual improvements as they often have overlapping and/or synergistic effects on one another. TREAT incorporates these effects in order to create more accurate energy savings predictions for any combination of energy retrofits. This allows NYCHA to determine which building improvement packages will yield the best energy savings for their capital budget, and how improvements can best be staged over time.

*“Until now, we didn't possess an objective capability to model multiple energy efficiency projects in the same building at the same time. What if I want to do a lighting upgrade, a boiler change, weather stripping, and change the windows? Those are obviously going to affect each other and it's a question of what the net impact on energy is going to be. And it's not always going to be just the sum of them individually.”*

*“Now we have a tool that gives us the ability to model that across multiple buildings and say: Well this one is going to be the most efficient use of funds.”*

– Daniel Leonhardt, Assistant Director

Understanding the best practices for modeling buildings with TREAT is a knowledge that must be first learned, and then practiced in the field. TREAT's interface and capabilities, while comprehensive, are best applied after thorough training. Training for NYCHA included a custom 5 day course that included both classroom and in-field sessions taught by Chris Balbach (PE, CEM, CVMP, BEMP, LEED AP), our Vice President of Research and Development and one of our top trainers.

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Here's some of NYCHA's reaction to the training sessions:

*"The training was very helpful. We really liked it. Face to face personal interactive training is always better than any sort of video tutorial or 'books only' based training. This was no exception."*

*"I think Chris was great. He clearly had a very good mastery of the software. I don't think there was a single question we threw at him that he couldn't answer. He's very knowledgeable about field work, primary data gathering, and discussing pitfalls and best practices. Chris was very good at listening to questions and helping people along through the technical stuff as we went. He definitely has very good patience."*

– Shibu Mammen, Deputy Director

With TREAT software and training, NYCHA is equipped to apply TREAT effectively in prioritizing building improvements to maximize energy savings.