

BIT BUILDING PILOT EXECUTIVE SUMMARY

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Commonwealth Edison Company

Prepared By
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1.0 EXECUTIVE SUMMARY

Slipstream partnered with Southface Institute, Illinois Green Alliance (IGA), and the Chicago Housing Authority (CHA) to implement a pilot program for ComEd that engages building owners and operators in underserved communities in a continuous performance improvement approach.

The BIT Building program, managed by Southface Institute, is a performance improvement framework. The program provides sixteen low-cost best practices, resources, and guidance for sustainable operations. Buildings that go through the process can receive BIT certification after successfully demonstrating adoption of best practices for resource efficiency and sustainability.

The BIT pilot investigated the energy efficiency specific elements of the BIT Building program by analyzing its energy savings potential on a sample set of multifamily properties. We reviewed current energy performance of 13 properties owned by CHA and assessed potential savings from implementing the BIT Building recommended approach. We also integrated a workforce development component in this pilot. We trained 10 CHA residents through a BIT Training program and hired three residents to support the pilot implementation.

The BIT pilot demonstrates potential opportunities for job creation and energy savings in multifamily public housing. It addresses two critical industry needs: creating long-term career opportunities for CHA residents and improving the energy performance of underserved existing building stock with limited resources.

The BIT pilot achieved the following milestones:

- Developed the BIT curriculum - an intensive training to introduce the basics of building science, operations and management, and BIT best practices for individuals with non- technical backgrounds but interested in long term careers in the building management sector.
- Partnered with CHA to hire ten residents as BIT trainees under the auspices of HUD's Section 3 economic development opportunities for public housing residents.
- Delivered an intensive, ten-week online training on BIT curriculum for selected trainees
- Hired three trainees as BIT Aides to assist with the year-long pilot implementation.
- Identified 13 properties consisting of 30 different building types from CHA's portfolio to implement the BIT pilot.
- Benchmarked the 13 properties through an extensive review of existing building documentation and utility data; assessed existing building conditions through audits (virtual and on-site)
- Created and calibrated energy models representing major building types to identify savings potential at each site

- BIT Aides analyzed each property with the EZ Retrofit tool and identified savings from a standard set of energy conservation measures (ECMs) applicable to multifamily buildings
- Drafted a step-by-step user guide, the BIT Playbook, on the implementation process
- Developed individualized career advancement plans for the BIT Aides.

Findings and recommendations

While the BIT energy audits uncovered significant energy efficiency opportunities in existing multifamily buildings, a key question was: what percent of the energy savings opportunities were low hanging fruit with low-to-no capital requirements. Additionally, what opportunities could connect to other Energy Efficiency (EE) programs and what opportunities require large capital investment? Budget, program, and procurement processes constrain the ability to implement all solutions simultaneously, prompting analysis of a phased approach to identify deeper savings.

The pilot also demonstrated that individuals with non-technical backgrounds can be effectively trained to support energy assessment and improvements. With the support of trained energy efficiency professionals, the BIT Aides served as non-technical support staff and provided cost effective audit capabilities. The BIT Aides then used their knowledge of best practices to identify and inform energy efficiency project development. Based on the pilot activities and findings we recommend:

- CHA should implement a phased retrofit approach to maximize energy savings based on capital availability. Electrification process should be prioritized in CHA's retrofits.
- Existing energy efficiency programs should continue efforts to engage with residents and communities to advance energy efficiency goals, while using an apprenticeship model like BIT Aides to provide career growth opportunities to residents.
- Developing a program that identifies low- to no- cost improvement opportunities and engages residents to champion energy efficiency initiatives.
- Affordable housing developments outside of public housing and commercial facilities could also benefit from the BIT Building program.