



# CHICAGO HOUSING AUTHORITY CASE STUDY

## BACKGROUND

When the Chicago Energy Benchmarking Ordinance was passed in September 2013, the Chicago Housing Authority (CHA) partnered with the Illinois Green Alliance and others to refine their energy data collection processes, employ EPA's ENERGY STAR Portfolio Manager tool with the agency to comply with the ordinance, and implement BIT Building Best Practices, a sustainable building operations program run by Southface (see more details in Phases 2 & 3), at several pilot properties.

## COLLABORATION OUTCOMES AND LOOKING TO THE FUTURE

In addition to support from Illinois Green Alliance volunteers to help track energy use, align properties with the BIT Building Best Practices, and examine sustainability strategies more closely, the CHA is undertaking some exciting energy efficiency projects to lower their energy use and make their facilities more efficient for their residents. As a result of these projects, the CHA has saved over 10% on their energy usage since 2014.

Illinois Green Alliance will continue to support the CHA's efforts and partnerships as they engage more buildings with BIT Building, energy efficiency, and sustainability.

## PHASES AND STRATEGIES

### Phase 1 - 2015 CHA ENERGY DATA JAM

To engage CHA's energy and facility managers, an in-person Data Jam event was planned in February 2015. The Data Jam, organized by Illinois Green Alliance, engaged local experts and volunteers from the industry to provide information and training on ENERGY STAR Portfolio Manager to CHA's staff. Illinois Green, ASHRAE-Illinois, and the Midwest Energy Efficiency Alliance (MEEA) staff and volunteers provided technical support for the event. These industry specialists included engineers, architects and building policy experts who had experience with benchmarking building energy use. The Data Jam workshop focused on 39 CHA senior apartment buildings in the City of Chicago and was instrumental in making sure accurate data was input into ENERGY STAR Portfolio Manager in time for compliance with the city ordinance.



Data Jam, February 2015

## CHA FACTS (as of 11/2018)

Third largest public housing authority in the nation.

Serving 25,000 traditional housing units.

- 10,000 senior high-rise building units.
- 5,000 family-property row houses and mid-rise building units.
- 6,000 scattered site units.
- 4,000 ACC units in mixed-finance developments.

Using ENERGY STAR to benchmark 63 properties.

## Phase 2 - 2016 BIT BUILDING PILOT

The following year, an EDF Climate Corps Fellow, in collaboration with Illinois Green, assisted CHA

to assess and align six of its properties to the BIT Building Best Practices. BIT Building is a framework that encourages the adoption of 16 sustainability best practices in existing buildings, and is designed to empower facilities staff to improve building performance, operations, and maintenance. The BIT Building Best Practices suggest strategies and tools for collecting data and conducting audits for energy, water and waste, holding annual meetings, and creating policies, among other things. The CHA BIT Building pilot project began in the summer of 2016 and helped improve sustainability of the participating properties in an incremental way. The CHA Sustainable Initiatives and Projects team's main focus areas are: utilities and energy management, engineering operations, and community gardens. The CHA BIT Building Strategies Guide suggested focusing on the best practices related to energy operations and preventative maintenance. In addition, a financial model was created showing the potential savings from operations and management changes to boilers and AC equipment.



Climate Corps Fellow conducting an energy audit.

## Phase 3 - 2017 BIT AIDE VOLUNTEERS

During the summer of 2017, Illinois Green recruited volunteers for the BIT Building

Pilot properties to delve deeper into implementing the BIT Building Best Practices. The project's five volunteers included two engineers, an architect, a project manager and an environmentalist. The volunteers assisted CHA with tracking the waste stream, performing water leak audits, and creating a preventative maintenance guide. As a result, the BIT Aide team helped CHA engineers include sustainability considerations in their new preventative maintenance contracts.

## 6 Properties Participating in BIT Building Pilot:

- Ella Flagg Young (high-rise building)
- Lidia Pucinska (high-rise building)
- Dearborn (mid-rise buildings)
- Lawndale Gardens (row houses)
- Touhy (small 6-unit property)
- Karlov (small 2-unit property)



BIT Building Pilot: **Ella Flagg Young**  
Image source: [www.thecha.org](http://www.thecha.org)



BIT Building Pilot: **Lidia Pucinska Apartments**  
Image source: [www.thecha.org](http://www.thecha.org)



BIT Building Pilot: **Dearborn Apartments**  
Image source: [www.thecha.org](http://www.thecha.org)



BIT Building Pilot: **Lawndale Gardens**  
Image source: [www.thecha.org](http://www.thecha.org)