

A New Tool to Enhance the Efficiency of Buildings Throughout Chicagoland

Ellen Bell 19 May 2018

Buildings are responsible for a [third of harmful greenhouse gas](#) (GHG) pollution from U.S. electricity use, with that percentage rising dramatically in urban centers. Chicago is no exception: Buildings account for [approximately 70 percent of the city's GHG emissions](#). Moreover, many buildings use more energy than they need to, which is unnecessarily expensive and damaging to the environment.

Although there are programs like Energy Star, LEED, and Green Globes that help buildings manage energy use, they don't always meet the needs of every building. A large portion of the built environment doesn't have the resources to pursue complicated certifications. In fact, it's estimated that less than one percent of buildings can achieve LEED certification.

To address this opportunity gap, a group of dedicated built environment professionals -- with backgrounds in environmental science, policy, business, and commercial real estate -- developed the BIT Building Program (BIT). BIT is a framework that drives the adoption of

sustainability best practices in existing buildings, specifically those whose age, resources, and operations put other industry standards out of reach. By following BIT's guidelines, buildings can achieve measurable improvements in energy, water, and waste impacts.

Why Invest in Efficiency?

To reduce GHG pollution across the city, region, and country, every community must be engaged in the adoption of sustainability solutions. Fortunately, existing green design and technology can make where people live, work, and learn more efficient and resilient.

By advancing building efficiency in all sectors and neighborhoods, there are economic upsides in addition to environmental benefits. [According to a 2012](#) report on retrofits, the opportunity exists to invest more than \$279 billion in building efficiency in the U.S., leading to a projected 10-year cost savings of \$1 trillion, employment creation of 3.3 million cumulative job years, and a nearly 10 percent reduction in national emissions. Lower emissions mean less pollution, cleaner air, and healthier people.

Clearly, investing in building efficiency offers a proven, cost-effective path to both climate change mitigation and adaptation, while also delivering health benefits and new jobs.

Who Does BIT Serve?

So, what do we do about the buildings that could help drive these numbers, but operate well below, for example, LEED's required threshold for energy performance? These buildings' operators often want and need to be more sustainable, but have not found a program that addresses their specific needs.

The BIT Building Program is ideal for underserved communities that have not yet been able to take advantage of sustainability opportunities in the built environment. BIT provides structure, peer support, expert guidance, and public recognition for buildings working to reduce their operational impacts on the environment. In addition to a simple set of 16 proven best practices, the program standardizes ongoing performance measurement and improvement goals, and creates an online clearinghouse to spread implementation tools and build community among novice practitioners.

By creating a more holistic, grassroots approach to building sustainability, BIT is adaptable to different parts of the built environment that the energy efficiency revolution hasn't reached yet.

Why is the Time Right for BIT?

In recent years, municipal- and state-level energy benchmarking ordinances -- by which buildings report on

their energy use -- have emerged. Ideally, these mechanisms create market forces that help drive volunteer efficiency actions by building owners and operators. Chicago passed its Benchmarking Ordinance in 2013 and [updated it](#) in late 2017 to improve the visibility and transparency of the reported information.

Following the passage of the original ordinance, a coalition of local government representatives, non-profits, and sustainability professionals spearheaded one of the most successful early implementation phases of an energy benchmarking ordinances among larger cities. According to the 2015 Chicago Energy Benchmarking Report, first-year compliance rates for other cities typically land in the 60-75 percent range. Chicago hit more than 90 percent in the first year of its reporting cycle (when large buildings' reports were due), and continues to maintain an above 85 percent reporting rate as the number of properties covered by the ordinance expands. According to the 2017 report, the City of Chicago received a total of 2,780 reports-- representing all 77 Chicago communities.

The BIT Building Program looks to amplify this effect by expanding the capacity and motivation for building operators, especially in the lowest performing buildings, to make improvements -- without requiring large upfront investments of time and resources. In Chicago, Environmental Defense Fund is working with BIT, Illinois Green Alliance (formerly USGBC-Illinois), and Chicago

community groups and organizations, like the Chicago Housing Authority and the Chicago Urban League, to identify opportunities to use BIT and improve the efficiency of buildings. By spreading the benefits of efficiency to areas where resources are not often targeted, we aim to increase the success of benchmarking ordinances.

Where Do We Go from Here?

EDF and the BIT Building Program are partnering with Illinois Green Alliance, a longtime collaborator of BIT, as well as a founding member of the Chicago Benchmarking Coalition. Last year, Illinois Green Alliance announced an expanded strategic effort to increase the communities that BIT is able to reach. The organization is undertaking a new focus called the [Epic Challenge](#), which will concentrate on engaging 3,500 Chicago buildings in adopting one or more sustainability strategies (including BIT) through retrofits, tenant engagement, and operational improvements, empowering all 77 of Chicago's neighborhoods to implement pollution-reduction strategies.

Our partnership will support Illinois Green Alliance as they educate community members to socialize, advance, and implement sustainability strategies and best practices throughout Chicagoland, including providing training and resources for 30,000 people. We will work together to recruit participants, coordinate volunteers, and drive

awareness of BIT through programming and events.

Cutting carbon pollution across the city and region will bring health, environmental, and economic benefits, and every community must be engaged in the adoption of climate strategies and solutions. The opportunity is particularly great in the built environment, where pollution is high but reduction strategies have not been made available to everyone who lives and works there. The BIT Building Program is an important step in bridging the gap between existing programs that target a select few, and providing the economic and environmental benefits of energy efficiency to a larger percentage of Chicagoans.