

## Chicago Region Retrofit Ramp-up (CR3) Proposal Summary

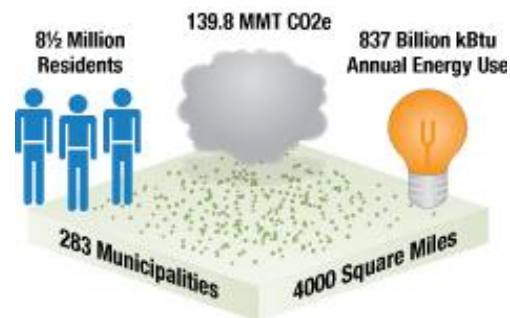
### Summary

In December 2009, in partnership with the cities of Chicago and Rockford and on behalf of the seven-county region, the Chicago Metropolitan Agency for Planning (CMAP) submitted a \$75 million proposal to the [U.S. Department of Energy \(DOE\) Energy Efficiency Retrofit Ramp-up](#) program. The grant would help fund a strategy called the “Chicago Region Retrofit Ramp-up” (CR3), which takes a comprehensive approach to facilitating retrofits of commercial and residential buildings across the region. The regional strategy would create efficiencies and economies of scale by improving access to information and financing and by building a strong workforce to support retrofits. CR3 is a groundbreaking example of regional collaboration, and it exemplifies the strong local leadership and commitment to becoming a more energy-efficient region.

If funded by DOE, CR3 would result in a viable local market that maximizes the number of retrofits throughout metropolitan Chicago, is economically sustainable for years to come, and is scalable and replicable elsewhere. In recent years, the CR3 partners have created a solid base of research into the region’s energy consumption, while developing practical strategies for improving efficiency. The proposal leverages more than \$911 million in local resources and responds directly to the DOE program’s goal of making strategic investments that will help the nation to achieve energy independence and take a leadership role in addressing climate change. The vision and dedication of CR3 partners has led to a competitive proposal that is anticipated to bring more federal resources and energy efficiency opportunities into the region.

### Overview

At present across the Chicago region, significant funding and numerous programs promote energy efficiency. Units are being retrofitted region-wide as a result of the Chicago Climate Action Plan (CCAP) and other programs. In the City of Chicago alone, more than 14,000 units have been retrofitted since the CCAP was launched in 2008, with thousands more residents having been touched through a range of energy efficiency programs offered by local utilities. Local research on a variety of climate change and energy retrofit topics -- including an analysis of the retrofit programs currently underway -- confirms the urgency to reduce energy consumption in buildings, revealing a market that is fragmented and in the beginning stages of growth. The market is impeded from maturing quickly due to multiple and incomplete information sources, current financing products that do not meet the retrofit market needs, and a lack of trained workers.



The CCAP specifically identifies building retrofits as a key strategy to reducing carbon emissions in the City. Building on the CCAP, a unique partnership of utilities, local and state government, and large providers who came together and engaged a leading consulting firm to identify how the partnership could provide energy retrofits to their customers and constituents more effectively and efficiently. Applying lessons learned from that research, they created the

Chicago Energy Efficiency Building Retrofit Strategy (Chicago Strategy) guided by a Steering Committee comprised of the major energy efficiency stakeholders. The Chicago Strategy identifies both the barriers to market transformation and the ways to eliminate them. This partnership continues to work together to maximize programs' overall impact and to achieve synergies in meeting their individual and joint goals.

As the official federally and state-designated Metropolitan Planning Organization, CMAP is responsible for crafting the long-range plan -- called *GO TO 2040* -- that will guide regional development and investments for decades to come. Among the dozens of recent research papers by CMAP and its partners, several have contributed significantly to understanding patterns of energy consumption at the regional and local levels, including many promising strategies for reducing waste and inefficiencies. CMAP and partners recognize that for retrofit activity to have meaningful impact on climate change, programs must be implemented at the metropolitan scale.

### ***Why a Chicago Region Proposal?***

This is an unprecedented opportunity to partner with DOE and effectively use federal grant resources to develop a comprehensive program across multiple building sectors and geographies by building on a strong strategy that is supported by all major stakeholders. CR3 is:

- Based on market structures (e.g., information systems, workforce development, capital), which are not confined by city boundaries.
- Aligned with utility partner boundaries, which creates economies of scale for private-sector partners.
- Consistent with the *GO TO 2040* plan and the Chicago Climate Action Plan, which both place a priority on innovative strategies to reduce energy consumption.
- Aligned with the objectives of the Retrofit Ramp-up program and other emerging federal policies to maximize federal resources across political boundaries.

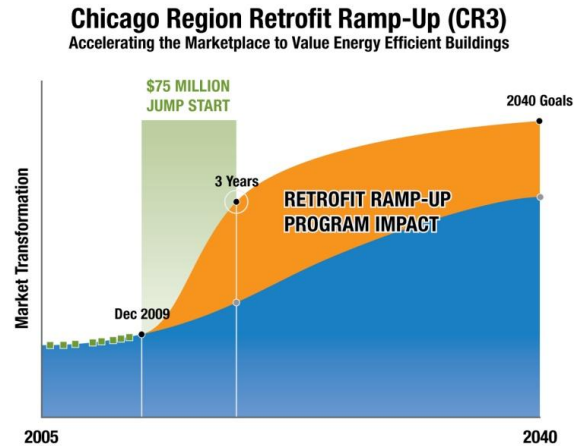
### **Our Vision for this Funding Opportunity**

The objective of the CR3 proposal is to secure \$75 million in U.S. Department of Energy (DOE) funding that can be leveraged by additional regional resources to organize and align the market by overcoming barriers already clearly identified in the Chicago Strategy. The overall CR3 vision is to facilitate the transition from an emerging market made up of a loose set of programs to a fully developed, efficient market that can operate with the efficiencies of scale and scope. When this happens, every homeowner and business owner will have the information they need to make rational decisions about whether, how, and how much they desire to improve their energy performance. Financial products will be readily available to facilitate the installation of selected measures. And suppliers can respond to consumer demand for retrofits with consistent, efficient, and affordable solutions. This collaboration covers 4,000 square miles and represents over 8 million residents in northeastern Illinois.

By investing in these initiatives through CR3, the Chicago region will see a significant increase in retrofit activity, which will benefit all stakeholders. These grant funds will provide the necessary funding to develop market infrastructure that will support a sustainable energy efficiency market for years to come by addressing the challenges holistically and dynamically. This will allow the market to transition from an emerging set of programs and systems to a fully developed and efficient economy.

This proposal accelerates the implementation of the Chicago Strategy across the region, leveraging significant existing resources and program components at a rate in excess of 12:1 from partners, financial institutions and the utilities. CR3 is guided by the following three principles:

- Plan programs in collaboration with Steering Committee members where possible to maximize the impact of all programs and funding dollars (i.e., a portfolio-based approach).
- Balance overall program efficiency (as measured by dollars per metric ton of carbon dioxide reduced) against other goals, including serving low-income residents and creating jobs.
- Invest in indirect efforts to transform the market and provide enabling infrastructure.



### The three CR3 goals are:

1. **Increasing access to information**, which will be accomplished by:
  - Developing a comprehensive information system that will both educate consumers and facilitate transactions by creating a forum to connect consumers with suppliers
  - Launching a broad-based marketing campaign to educate consumers on the impact that buildings have, and the energy efficiency opportunities that are available to them
  - Leveraging the EAN model being piloted in Chicago and the Rockford Neighborhood Network to increase penetration in selected target areas
2. **Increasing access to capital**, which will be accomplished by:
  - Providing more funding to early-stage pilot programs that have shown strong results
  - Investing in infrastructure to support innovative new delivery options
  - Increasing capital in specific sectors to help prove energy efficiency investment models
3. **Increasing access to a trained workforce**, which will be accomplished by:
  - Agreeing to a common, consistent certification standard for both contractors and
  - Leveraging the existing green workforce development collaboration to train people on the common certification standard
  - Creating a workforce intermediary that will connect trained workers with contractors

These funds will be used to leverage the more than \$911 million already expected to be spent on existing energy efficiency programs in the region. This is expected to result in a conservatively estimated increase of 26,740 residential and 1,900 commercial, industrial and public direct retrofits (i.e., specifically resulting from financing activities, thus more accurately estimated).

### The CR3 Methodology

Each of the three CR3 goals has been crafted based on significant research and strategic analysis conducted prior to this funding opportunity. The plan leverages existing pilots and partnerships, which will allow the region to optimize this grant opportunity in both short and long-term energy efficiency market impact. EECBG will be used to develop the connecting

infrastructure to better leverage the individual programs to stimulate the retrofit market and increase its efficiency.

**Increasing Access to Information:** One of the greatest barriers is the lack of information to support market activities. It is currently very difficult for a consumer to identify and navigate the process to get a retrofit, or even to know what a retrofit is and how it might apply to their specific situation. Similarly, it is very difficult for any of the specialized service providers or program administrators to share information about their programs and services to a potential customer in an efficient manner. Finally, most consumers have not been educated on the impact of their buildings on the environment, or the economic opportunities afforded by retrofits. A dynamic information system leveraging advanced internet functionality, in combination with a strong marketing and branding effort, will support market emergence by capturing and synthesizing the most important information to support transactions.

Establishing accessibility and confidence in building retrofit information and resources will drive consumer demand. This demand generation complimented by aligned suppliers will transform a fragmented market into a coherent set of information sources that effectively connects customers and suppliers. This system will drive users to the programs (utility, state weatherization, private market) that are best suited to their needs. This will reduce the costs of customer acquisition, thus lowering transaction costs and the barriers to entry for both suppliers and consumers.

**Increasing Access to Capital:** A significant challenge in the current retrofit market is that funding is not appropriately targeted to the specific needs of each segment and does not match the expected cash flows from savings resulting from energy efficiency measure implementation. The current cost of capital also prohibits private consumer retrofit activity. In addition, banks do not yet fully value energy efficiency savings as effective collateral to use to obtain significant capital inflows. CR3 will support the development and delivery of financing products targeted at each type of retrofit consumer, while at the same time providing test-case data that proves that energy savings are an effective and dependable cash flow stream.

Currently, many financial institutions are wary of entering into energy efficiency financing transactions. This lack of activity is driven by a combination of factors, including limited history of providing capital for these types of projects, lack of infrastructure systems to support these specialized loans, and reduced capital because of the current reduction in available lending capital. An example of this challenge from recent discussions is that local institutions have required substantial loan loss reserves, tying up important funding streams and reducing overall leverage. Sustainability will be achieved through a combination of paying for infrastructure and system development and also by providing lending institutions additional capital to increase the overall size of their energy efficiency loan portfolios.

**Increasing Access to a Trained Workforce:** A significant barrier to a coordinated workforce for energy efficiency is a lack common certification standard for energy efficiency workers and contractors. In addition, it is difficult for contractors to identify qualified workers. The CR3 Steering Committee will select a common certification standard, and then leverage the current municipal and regional workforce development organizations to develop and launch a comprehensive training program. Trained workers will then be connected with employers, by establishing Energy Works, a workforce intermediary. Finally, a list of certified contractors will be developed and disseminated publicly. Certified contractors can then be evaluated using online functions (potentially through the information system) to ensure that the best contractors are supported, and underperformers are identified.