



Illinois' Weatherization Program Heats Up with Innovation

Digital Experience: Agency/Program Solutions

State of Illinois
Julio C. Rodriguez
DCEO Chief Information Officer
JC.Rodriguez@illinois.gov

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EXECUTIVE SUMMARY

The Illinois Home Weatherization Assistance Program (IHWAP) is a program for eligible low-income households across Illinois to reduce energy costs, improve home safety, and increase energy efficiency. Weatherization assistance can take many forms including air sealing, attic/wall insulation, HVAC repair/replacement, water heater repair/replacement, electric base load reduction, or ventilation and moisture control remediation. Assistance provided through IHWAP is crucial to families who may struggle with high utility bills or unsafe living conditions.

In response to growing operational demands, aging technology infrastructure, and evolving business requirements, the Illinois Department of Commerce and Economic Opportunity (DCEO) and the Illinois Department of Innovation & Technology (DoIT) launched the IHWAP system modernization project that went live in July of 2024 with the online application section operational in October of 2024. The initiative was designed to replace an outdated system, streamline business operations, enhance data security, improve the customer experience, and position the organization for scalable future growth.

The modernization effort involved upgrading a critical agency application, migrating to a cloud-based solution, integrating modern cybersecurity measures, and ensuring seamless interoperability across program entities. The legacy system, which was 18 years old, had increasingly posed challenges in reliability, maintenance costs, security vulnerabilities, and adaptability to a new business model. Key success metrics included reduction in system downtime, enhanced reporting and analytics capabilities, improved processing speeds, a strengthened cybersecurity posture, and improved customer engagement and experience.

IDEA

The IHWAP system addresses a critical need to modernize the legacy system by replacing the outdated technology with a more secure, cloud-based system. The legacy system was a VB6 application running on a Windows 2008 R2 server, which posed inefficiencies, security risks, and accessibility challenges.

The old system did not have an online application module, so prospective applicants had to make an appointment to apply in person via paper application. The IHWAP system eliminates barriers to program access, allowing clients to apply online from their residences. This is particularly important for individuals with mobility limitations, transportation challenges, or time constraints. By streamlining the process, DCEO ensures thousands of households can receive weatherization benefits faster and with fewer complications.

Local Community Action Agencies (CAAs), integral to the intake and vetting process for potential clients, did not have a document storage tool in the old system to maintain client files. Audit files kept at CAAs could total 100 pages per applicant. Home assessments were documented on paper by contractors in the field, who had to return to an office to record the same information in the system. Reporting did not meet their needs, and the paper applications left ample room for error, posing an audit challenge.

Modernization provided an opportunity to improve efficiency, security, and accessibility for clients, CAAs, and DCEO. Applicants can now initiate and complete the application process online, which eliminates geographic and logistical barriers. They can also be confident in the security of their data and

ease of use as the new system leverages multi-factor authentication for secure access and utilizes cloud technology for enhanced performance. With multi-factor authentication, only authorized users can access the system. This comprehensive approach safeguards user information, building trust in the systems designed to assist low-income households in accessing essential services.

The CAAs have streamlined workflows, reduced manual processing time, and enhanced program compliance tools to meet U.S. Department of Energy (DOE) standards. In addition, CAAs can utilize mobile devices in the field to conduct home energy audits, communicate with clients via text and email notifications, and keep them informed about the process along the way. The CAAs are able to capture and store pictures and documents in the system, in lieu of maintaining paper files for each applicant and property.

Additionally, DCEO can now generate more detailed reports and monitor the application process to ensure compliance with program rules. DCEO also utilizes a grant tracking system that monitors grants to ensure compliance and usage. The new system allows DCEO to automatically generate and send client satisfaction surveys via email once the job is completed, providing valuable feedback to the agency about the process. Furthermore, the system enables programmatic monitoring of the CAAs to ensure compliance. The survey and programmatic grant monitoring capabilities were not possible with the previous system.

Failing to modernize the system would have jeopardized program efficiency and limited access to the federal and state funded program. The IHWAP system ensures greater accessibility, stronger security, and faster service delivery, making it a necessary and impactful upgrade for the future. This digital-first system establishes a foundation for future program enhancements and seamless integration with other services through APIs, ensuring continued efficiency and scalability for years.

The IHWAP system is the most comprehensive and advanced of its kind in the United States, a benchmark in the Federal Weatherization Program. A presentation on the system by the DCEO Weather Program Office and private partner Apex is scheduled at the National Association of State Community Services Program 2025 Annual Training Conference. The invitation to present at this event is a testament to the efficiency and effectiveness of program delivery, enhancements, innovations and grant management, and other states have inquired about Illinois' system.

IMPLEMENTATION

The modernization of the legacy application was a top priority for DCEO due to aging infrastructure and limited technology capabilities. The goal was to align with DCEO's strategic plan to modernize applications that support federal programs providing benefits to the residents of Illinois. The IHWAP application modernization soon became a priority to be in compliance with a certification requirement by DOE. The DOE certification process can take up to six months and presented potential application edits to meet the criteria for certification.

The management approach to modernization began with an assessment of best-in-class cloud-based solutions providing modern capabilities and features meeting the business need. A first step was to gain a thorough understanding of the project's goals and objectives by working closely with stakeholders and

identifying key deliverables and milestones. A detailed project plan was developed that outlined a timeline, budget, development methodology, and resources required.

Project assessment criteria:

- A review of critical milestones comparing actual performance to the project plan.
- KPIs such as timeline met, budget compliance, quality standards, and stakeholder satisfaction.
- Change management tracking that included scope, timeline, or budget changes.
- Risk and issue management documented and reviewed to minimize impact.
- Final evaluation with post implementation review to evaluate project results.

Implementation success:

- All deliverables completed by project deadlines.
- Total expenditures not to exceed approved budget.
- All project requirements met as defined in the project scope.
- Deliverables to meet or exceed quality standards and stakeholder expectations.
- Users trained and a support structure in place.
- Minor punch list items closed following implementation.

Modernization of IHWAP required a commitment from all stakeholders to complete the project and obtain DOE certification. The IHWAP project included many key teams to make it a successful reality. DCEO partnered with DoIT and discussed the magnitude and complexities of the program and current application. Other technical and business teams contributed to the success of the project, including project sponsors, project manager and team members, DCEO and DoIT stakeholders and leaders, technology vendors and contractors, quality assurance teams, and end users. Their singular goal was to develop a benchmark system to be used nationwide.

Resources needed to complete the project were a \$10 million approved budget, a 15-member project and development team, and a timeline of three years to complete. The IHWAP application was built on a modern SAAS-based platform with multiple out of the box modules and custom-built functionality. The technical architecture was the key element to success as all modules, API integrations, and custom-built functionality worked seamlessly and in harmony.

IMPACT

Before the implementation of the IHWAP application, the legacy application relied on an outdated VB6 system running on an unsupported Windows 2008 R2 server. The legacy system was inefficient and heavily reliant on manual paperwork, making it difficult for both clients, CAAs, and DCEO to navigate the application process and home energy audits. Applicants were required to visit CAAs in person, submit paper forms, and wait for manual processing, often leading to delays and limited accessibility.

The introduction of the IHWAP application revolutionized the entire process, transforming it into a digital, cloud-based, and automated system that streamlined operations, enhanced security, and improved accessibility for applicants across all states. Here's how the environment changed:

Before IHWAP system modernization:

- Manual, paper-based applications led to processing delays, data entry errors, and lost documents.
- Clients had to visit CAAs in person, creating barriers for those with mobility challenges, transportation limitations, or busy schedules.
- The legacy system lacked modern security measures, increasing the risk of data breaches and compliance issues.
- CAAs faced high operational costs for printing, storage, and manual processing.
- Scalability was limited, preventing efficient updates or integrations with other systems.

After IHWAP system modernization:

- Clients now have full online access to apply, submit documents, and track their application remotely, anytime, from any device.
- The paperless system eliminates errors, ensuring fast, secure processing and easy retrieval of documents.
- Multi-factor authentication provides strong security and controlled access, ensuring compliance with State of Illinois standards.
- The cloud-based platform reduces costs by eliminating outdated infrastructure and paper-heavy workflows.
- Improved scalability ensures the system can evolve with future DOE or State of Illinois initiatives, supporting long-term sustainability.

By modernizing the IHWAP application, DCEO has created a more efficient, secure, and accessible solution that empowers both clients and administrators. The project has removed barriers to assistance, enhanced processing capabilities, and ensured long-term success in delivering weatherization support to low-income households in Illinois.

The introduction of mobile device compatibility has been a game-changer, allowing users to conveniently submit their assessments on the go. This enhanced feature allows assessors to attach pictures directly within various sections of the assessment. It has improved both the efficiency and accuracy of the monitoring processes, providing contractors with a clearer understanding of what to expect. In contrast, the previous system relied heavily on paper forms, requiring assessors to complete assessments manually and then return to their offices to input the data into the system. This process not only caused delays in processing but also introduced potential errors during data entry, as all information had to be transcribed by staff. Furthermore, the inability to include visual documentation limited the ability to evaluate assessments comprehensively. Overall, the transition to an online platform has streamlined operations, reduced administrative burdens, and enhanced data collection capabilities.

Since the launch of the intake online application module on October 8, 2024, a total of 3,114 applications have been processed as of April 25, 2025. By providing the functionality for digital submissions, the total number of applicants for IHWAP has already increased by 28% in less than one year.

The launch of the modernized IHWAP application has transformed what a benefits system can look like and showcases how innovative technology can streamline processes, scale efficiencies, reduce costs, and provide residents of the State of Illinois a reimaged digital customer experience. This new system will continue to be maintained and supported into the future by a skilled DoIT development team capable of integrating all new DOE requirements and was well worth the investments. Illinois can now

offer a service to eligible applicants that significantly improves user interface, customer engagement, customer experience, business processes, mobile capabilities, cost reduction, identity access management, and detailed reporting.