

MAY/JUNE 2010



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Improving Weatherization with WAP+

In New York City, Weatherization Assistance program (WAP) subgrantees perform retrofits on a wide variety of buildings, from single-family homes to affordable housing complexes with hundreds of units. In addition, we perform computerized audits and install valuable retrofit measures—from attic insulation to boiler modernization. Over the past year, weatherization providers have seen a huge gain in support for WAP: increased funding for the overall program, increased per-unit allowances, and a substantial rise in the funding available for training and technical assistance. At the same time, our responsibilities as energy efficiency providers have increased. Creating well-paid jobs during the economic downturn and mitigating the climate crisis are critical goals for WAP today. With the additional resources and increased per-unit allowances provided to subgrantees, we have a unique chance to implement strategies that improve the program and increase the benefits of weatherization.

In the past, Richard Cherry, founder and president of Community Environmental Center (CEC) has participated in national efforts by DOE to improve the performance and delivery of weatherization services. While DOE has partially implemented some previous Weatherization Plus strategies, others have languished. Now providers nationwide can take advantage of their increased funding to augment their programs in creative and effective ways. CEC believes that if WAP implementers can take the initiative in augmenting these programs, we can provide even greater energy savings, retain federal support for our activities, and promote environmental responsibility in our communities.

At CEC, we stand poised to augment the basic framework of the weatherization program

with four specific strategies. We refer to these strategies collectively as WAP+ (a phrase borrowed from previous efforts to improve weatherization). The four strategies are (1) client education and energy awareness promotion, (2) postconstruction monitoring, (3) renewable energy installation, and (4) green jobs training. I will give a brief overview of each of these strategies and describe how each one benefits ongoing weatherization efforts at the federal and state levels.

Client Education and Energy Awareness Promotion

Too often, weatherization implementers overlook the most important factor in determining energy consumption and conservation. That factor is the people who live in the buildings. One of the most valuable aspects of WAP is the access it provides to individual low-income tenants and their energy habits. Since the goal of WAP is to decrease overall energy consumption, CEC will target the consumers of energy directly and teach them to reduce consumption by making simple changes in their behavior.

We also plan to use this branch of WAP+ to distribute and promote energy awareness devices that interact with consumer electronics and digital displays to provide valuable energy efficiency and consumption data to residents. Smart strips, housewide energy readout devices, and remote outlet triggers all contribute to in-house energy conservation by making residents more aware of the ways in which they use energy and of the amount of energy they are using. By spreading awareness of efficient consumption in individual homes and large multifamily buildings, weatherization providers can increase the long-term impact



TAMAS REWESZ

Many homeowners are unaware of the energy-saving potential of well-insulated attics and roofs.

of WAP and further reduce energy bills for residents.

Postconstruction Monitoring

To realize the benefits of weatherization, retrofit measures must be effectively maintained. Ensuring that they are maintained is one of the most important goals of WAP+. Especially in multifamily buildings, maintenance staff often need technical assistance and training to support modernized boilers, ventilation systems, or digital energy control systems. For single-family homes, it is equally important to ensure that residents understand the retrofits being performed and how to maintain their investment. By checking back in with buildings that have been retrofitted, we get a valuable chance to address the concerns of building management staff after they have familiarized themselves with retrofitted technologies.

In order to support the effective maintenance of efficiency measures, we have recently begun a relationship with the Service Employees International Union (SEIU) Local 32BJ, which represents more than 50,000 building service workers in New York, to develop innovative [delete 'training'] programs that support maintenance staff in energy-efficient practices. By developing and promulgating a standardized training curriculum for maintenance staff and tenants, we hope to have a huge impact on efficiency in a wide range of buildings. Receiving feedback from maintenance staff improves our service delivery and motivates staff to support energy-efficient practices. Postconstruction monitoring



ANDRE O. WATTS

Improving insulation for low-income buildings is a common and cost-effective retrofit measure that WAP firms provide.

protects our WAP investments and encourages residents and maintenance staff to take a more-direct interest in energy efficiency work by providing reliable support for proactive conservation.

As WAP subgrantees in postconstruction monitoring we grapple with one special obstacle. Because WAP contracts are awarded on an annual basis, all program funds must be spent during the program year of the contract. This precludes us from spending any WAP funds on in-depth postinstallation monitoring that lasts more than one year. We firmly believe that the overall effectiveness of WAP could be improved by including provisions to allow these activities on a multiyear basis.

Renewable Energy Installation

In our efforts to expand the range of WAP implementation, we are experimenting with applying renewable energy strategies to retrofitted WAP buildings. We believe that the

increased per-unit allowance in WAP funding is the perfect opportunity for subgrantees to venture into renewable energy generation. Based on the widespread implementation of solar-thermal water heating on a global scale, we have begun a pilot project that will show renewable generation strategies to be as effective in New York City as they are in Copenhagen and Madrid. To this end, we have been training our own weatherization crews to perform solar-thermal installations and to determine the most cost-effective ways of integrating solar-thermal technologies into existing boiler systems in retrofitted buildings. Our retrofitting crews have provided feedback about everything from the appropriate sizes of pipe connections for solar-thermal equipment manufacturers, to the intuitive labeling of solar-thermal equipment that allows building maintenance staff to operate the equipment. So far we have installed two cost-effective



EARTHKIND ENERGY

CEC workers have been installing Solar Thermal water heating systems in multifamily buildings to show that this technology is cost-effective and appropriate for inclusion in WAP workscopes.

solar-thermal systems in multifamily buildings and have two more under way.

In addition to our solar-thermal strategy, we are pursuing solar PV installations for multifamily buildings receiving support through WAP. Solar electricity lowers energy costs for residents and has recently proven to be cost-effective in many regions. By performing cost-and-performance studies like those we recommend for solar-thermal, we can prove to government agencies that renewable solar energy generation should be an important component of low-income energy efficiency programs going forward. The fruits of modern technology must be deployed as widely as possible if we are to combat global climate change effectively.

As renewable energy generation becomes more affordable, expanding investments in weatherization will ensure that these cost-effective technologies are widely deployed in urban areas. We hope to provide the empirical arguments for this deployment through pilot programs within our WAP+ strategy.

Green Jobs Training

As part of WAP+, CEC will be deepening its relationship with Local 10 of the Laborers' International Union of North America (LIUNA) and assisting in the development of Green City Force, a service-learning organization dedicated to providing green jobs to urban youth. With Local 10, we have collaboratively developed a training curriculum and are preparing union members for comprehensive retrofit work; our 15 years of experience will ensure



TAMAS REKESZ

CEC engineers and retrofit workers make sure that homeowners and residents are involved in every step of the Weatherization process.

>> For more information:

To learn more about CEC, go to www.cecenter.org/weatherization.

To learn more about the global implementation of solar-thermal water heating, go to <http://solarge.org>.

that best practices are promoted throughout the retrofit workforce. We are using our extensive WAP contracts to provide opportunities for in-field training and developing a green-collar workforce in New York City. Through WAP+, these relationships will strengthen the program locally and develop valuable skills in

our potential workforce. On a larger scale, the program will be strengthened through standardized training procedures and increased awareness of green-collar opportunities for urban youth and union members.

WAP+ Going Forward

By pursuing the strategies outlined above, CEC hopes to build on the national success of the weatherization program. We similarly hope that WAP subgrantees across the country can take advantage of increased resources and per-unit allowances to ensure that retrofits are performed to the highest standards. WAP+ is a template for increased accountability and performance within ongoing energy efficiency programs, and the current federal support for WAP provides a unique opportunity for pursuing progressive retrofit strategies.

—Jay Ackley and Richard Cherry

Jay Ackley is a policy associate at the Community Environmental Center. Richard Cherry is the president and CEO of Community Environmental Center.