A House is a House
Increasing synergies between low-income weatherization work and the private sector home performance industry

Date: January 26, 2015
Time: 3:00pm-4:30pm EST / 12:00pm-1:30pm PST
National association for America’s home performance industry
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A House is a House – Home Performance and Weatherization, Policies for the Future
Kara Saul Rinaldi
Vice President of Government Affairs and Policy, HPC
The Home Performance Coalition

- National stakeholder and conference organization
- Addresses challenging issues in the residential energy efficiency / home performance industry
  - Supporting development of national data standards
  - Making the value of energy efficiency visible in the real estate transaction
  - Finding intersections between smart grid and device technologies and home performance
  - Reforming cost-effectiveness screening practices
  - Advancing a dialogue between the weatherization and home performance industries.
Why Are We Here?

- The Weatherization Program was established in 1976

- Home Performance Programs, addressing non-low income families began to emerge in 1986-88

- ARRA Fund in 2009 grew both programs

- Now, in some states, there are 2 different sets of programs and contractors providing energy efficiency upgrades – split by income levels.

*In a world of shrinking public dollars and increasing needs: How can both initiatives succeed?*
Federal Status

- Pre-ARRA Average Annual Funding $225M
- ARRA Level Funding: 2009 Stimulus $5Billion
- FY2014: $174M
- FY2015: $193M
- FY2016: ??

Advocacy Groups are requesting: $230M
Federal Status -- HP

- Home Star Legislation
  - $6B Stimulus Program/Jobs Bill
  - Passed the House May 6, 2010. Died in Senate
- Tax Policy: 25E
- Rebate Policy: Home Act

**Department of Energy**

- Home Performance with Energy Star Program
- Better Buildings Neighborhood Program
National Discussion on Coordination

  - U.S. Senators Chris Coons (D-Del.), Susan Collins (R-Maine), and Jack Reed (D-R.I.)
  - BPI Training, Open bidding process
- FY2015 Appropriation: “the Department is encouraged to engage stakeholders, including the existing home performance industry and weatherization network, for the purpose of developing policy recommendations that could lead to a new residential energy efficiency retrofit program supporting all residential buildings and income levels.”
Opportunities

- New funding potentials emerging: New metrics for measuring energy savings and opportunities to capitalize on measured savings.

- New impetus for state investments: Clean Air Act 111(d) requirements

- Working together – small businesses and low income interests – can raise greater political awareness of the broad job growth, energy savings, economic investment from home retrofits.
Outstanding Questions

- What are the differences and similarities between low income, moderate, and high income programs?
- What are the lessons that the two programs can share with each other?
- In an era of reduced public financing, how can the WAP and HP industries work together to achieve their mutual goals of energy savings?
- Where are the programs working well together and can/should these activities be replicated?

_in a world of shrinking public dollars and increasing needs: How can both initiatives succeed?_
Big-Picture Take-Aways

- The goal of BOTH of these initiatives is to make homes more energy efficient.
- Building Science is Building Science.
- Energy savings is a public good and in both of these program types public benefits directly (home upgrades, comfort, lower energy bills) and indirectly (national security, job growth, carbon reduction).

*Working together we can do more to advance home retrofit programs than staying in our silos.*
Thank you!

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Share Your Questions & Comments

Throughout the webinar, you can type questions and comments in the chat box on your control panel.

Are you a contractor that does low-income work? Are you a low-income agency or program that works with contractors? Tell us about your experience.

What kinds of benefits/challenges have you seen between low-income programs and private market contractors?

Also, tell us about your company and the work you do!
Weatherization Assistance Program Operations Overview

Presented by:
Robert C. Adams, WAP Manager
January 25, 2015

Efficiency First/ Home Performance Contractors Webinar
Washington, DC
Context

- Over 90% of WAP Operations is based in regulation or law. Policies developed by DOE help implement the statutes.
- The network is comprised of federal, state, and local operations.
- Private contractors are hired at the local level. We need private contractors in the WAP. Over 60% of network uses contractors exclusively. Nearly all of the remaining agencies use contractors for at least their mechanical work
- Both Josh and I come from a private contractor background. We understand the business models used by your organization and try to ensure that WAP can fit within your portfolio of service offerings
- The presentation that follows is a WAP primer. We hope that we can explain some of the myths surrounding the Program or at least shed light on some of the darkness created from an outside perspective.
- What we talk about today is what should happen. If things are being done in contrast, we may need further investigation to understand why.
Why Do We Weatherize?

- Heavy energy burden on low-income
  - Typically spend 14% to 15% of annual income on energy, compared with 3% to 4% for other households
- Low-income families often choose between heat and other necessities like food, shelter, clothing and medicine
- Often times, WAP may be the only professional organization available to these families
- Increases energy efficiency, health and safety of the home while reducing energy costs year-round
- Provides relief from expensive energy bills for 10 to 20 years
- Alleviates arrearages, breaks destructive cycle of shut-offs and re-connections, and provides a better environment for families and children
WAP Impact

- Average annual energy savings = $250 to 450 first year savings per home, depending on fuel source, housing type and location
- Returns $1.72 in energy-related benefits per $1 invested
- Returns nearly $3 in non-energy benefits per $1 invested
- Avoids 1 metric ton of carbon dioxide emissions for every home weatherized
- Average reduction in energy use – 25%
- Lessens financial burden so families can afford other essentials
- Helps stabilize housing in neighborhoods
- Used as catalyst to attract other investments form utilities, other federal agencies, state governments, and private sources
Federal Regulations
Federal Regulations 10CFR Part 440

- Increase energy efficiency of dwelling units owned or occupied by low-income persons
- Reduce total residential energy expenditures
- Improve the health and safety of low-income persons, especially the elderly, persons with disabilities, and families with children
The Team Approach

Department of Energy Headquarters and Golden Field Office

Homeowner/Renter Residing in Single Family, Multi-Family, and Manufactured Housing

50 State Energy Offices, the District of Columbia, 5 U.S. Territories, and 3 Native American Tribes

800 Local Agencies Using Crews and Private Contractors
Sources of Funds

- Congressional Appropriations for 2015 - $193 million - $190 million Formula and $3 million HQ T&TA
- 46 states transferred funds from their Low-Income Home Energy Assistance Program in PY 2013
- 33 States had funds from “Other” sources like utilities, landlords, state appropriations, and private grants in PY 2013
- According to the NASCSP 2013 Funding Survey:
  - DOE Allocation to States - $152.9 million
  - LIHEAP - $406.9 million
  - Utility, State Funds, Other - $358.2 million
  TOTAL - $917.0 million
Allocation Factors to Grantees

- Low-Income Population as it relates to Total Population based on most current U.S. Census updates

- Climatic conditions for both heating and cooling degree days based on NOAA ten year averages

- Residential Energy Expenditures by Low-Income Households in each State based on the EIA Residential Energy Survey

- Baseline of funding per grantee established in federal regulations. Percentage used for calculations up to $209 million

- Revised Formula impacts states at higher funding levels – funds shift from the Northeast and Midwest to the South and Southwest
10CFR 440.15 Subgrantees.

(a) The grantee shall ensure that:

1. Each subgrantee is a CAA or other public or nonprofit entity;
2. Each subgrantee is selected on the basis of public comment received during a public hearing conducted pursuant to §440.14(a) and other appropriate findings regarding:
   i. The subgrantee's experience and performance in weatherization or housing renovation activities;
   ii. The subgrantee's experience in assisting low-income persons in the area to be served; and
   iii. The subgrantee's capacity to undertake a timely and effective weatherization program.
3. In selecting a subgrantee, preference is given to any CAA or other public or nonprofit entity which has, or is currently administering, an effective program under this part or under title II of the Economic Opportunity Act of 1964, with program effectiveness evaluated by consideration of factors including .......
State Plan Process
State Plan Submission Process

- Required annually based off funding availability from Congress
- Grantee prepares State Plan in Compliance with 10CFR 440, 10CFR 600, DOE Program Notices, and other State and DOE policy documents
- Distribute Plan to Network and Display State Plan for at least 10 days prior to a public hearing
- Solicit input from Policy Advisory Council
- Conduct Public Hearing on Plan Contents
- Submit State Plan and public hearing to DOE for Review and Approval
- Process can take 60 days to 120 days from Notice of Fund Availability to State Plan approval by DOE
Contents of State Plan

- Budget for all WAP activities – personnel, travel, administration contractor costs, etc.
- Allocation of Funds to Subgrantees
- Audit Techniques and Array of Allowable Services
- Health and Safety Plan
- Quality Control Inspection Process
- Training and Technical Assistance Plan (including travel)
- Major Purchases of Vehicles and Equipment (over $5,000)
- Monitoring Process and Evaluation of Subgrantees
- Other Program Operations Requirements
Grantee Responsibilities

- Sets policies for WAP operation – usually through Program Operations Manuals, Field guides, and other control documents
- Allocates funds to subgrantees according to state formula
- Prepares and executes contractual agreements with subgrantees, including pass-through provisions from DOE
- Conducts required implementation training for subgrantees to update operational protocols and policies
- Performs routine monitoring of subgrantees for fiscal and policy compliance and quality of production (at least 5% of units inspected)
- Coordinates subgrantee reporting for production, demographics and budgets, including the processing of invoices for reimbursement
- Prepares fiscal and program activity reports for DOE and performs the necessary drawdown of grant funds to reimburse subgrantees
Service Delivery
Client Eligibility

- Household income must be at or below 200% of poverty - $47,700 or less for a family of four
- Or if the State elects, they can use the LIHEAP criteria of 60% State-median income
- Selected criteria must be use State-wide
- There can be an eligibility gap if LIHEAP sets its limit at 150% or less and DOE must use 200% or less by law.
- Applications are ranked using priorities in federal law:
  - Elderly, disabled, family with children, household with high energy burden, households with high energy use
- Renters are eligible - must get approval from property owner
- When demand is high, customers may be added to waiting list
Profile of the “typical” WAP recipients based on the last Meta-Evaluation conducted by Oak Ridge National Laboratory in 2006:

- Over 90% have incomes less than $15,000
- Over 13% have incomes less than $2,000
- Average energy cost is $1,348 per year
- 34% have elderly persons in residence
Types of WAP Services

- Energy audits
- Air infiltration reduction using blower doors
- Attic and floor insulation
- Dense-pack wall insulation
- Duct sealing
- Water system treatment
- Health and safety testing

- Furnace service
- Furnace replacements
- New refrigerators
- Duct system balance and sealing
- Energy efficient lighting retrofits
- Incidental repairs
- And more............
Process for Service Delivery

- Customer applies for services through LIHEAP, the WAP subgrantee, or other intake venue
- Application reviewed and prioritized based on the five criteria
- Home receives an energy audit (site specific or priority list); technicians identify energy-related problems for repair of health and safety
- List of cost-effective measures developed
- Energy efficiency measures installed by direct hire crews or contractors
- Client education provided by subgrantee staff
- Post-work inspection and reporting of completion to the grantee
Energy Audit

- Mandated by the DOE on each home; grantees may develop their own audit protocol to be approved by DOE or use the DOE approved NEAT audit - 440.21 (a) and (b)
- Diagnostic tools like blower door and furnace efficiency equipment used to identify energy problems
- Auditor develops list of cost-effective measures based on test results, audit feedback, and priority list application
- Auditor also identifies energy-related health and safety measures needed (e.g., carbon monoxide, lead safe protocol use, mold, mildew, etc.)
- Audit results ensures that all materials installed, except those to eliminate health and safety hazards, pass a cost savings test over the life of the measures, discounting for net present value
Health and Safety

- Workers must conduct WAP activities in a safe manner and use materials, tools and equipment to avoid exposing the customers, themselves, and their families to any environmental hazard
- Avoid contaminating homes with lead-based paint dust and debris - assume the presence of lead-based paint in homes built before 1976
- Identify natural gas leaks from stoves and furnaces
- Test for carbon monoxide; caused by incomplete combustion in household appliances and excess moisture conditions; all homes must have a carbon monoxide detector installed where appropriate
- Avoid mold contamination; WAP funds can not be used to remove mold and other related biological substances; Customer must be notified
- If necessary, services may be delayed until the existing mold problem can be eliminated
Post-Work Inspection

- Every home must receive a quality control inspection for workmanship and appropriateness prior to reporting to state and DOE – CFR 440.16 (g)
- Blower door tests are conducted to ensure proper air sealing
  - Identifies any remaining air leaks
  - Indicates need for ventilation
- Insulation and other measures checked for quality and completeness
- Health and safety protocols are replicated to ensure no CO leakage lead dust or other contaminant remains
- Client interviewed and required to sign completion certificate
- Beginning in PY 2015 all QC inspection performed by certified staff
Walk Away Standards

- Many housing problems beyond the scope of WAP
- Walking away does not mean that assistance will never be available
- Work is postponed until the problems can be resolved
- Some reasons to “walk away”
  - Customer has known health conditions that prohibit the installation of insulation and other materials
  - Structure or its mechanical systems are in such a state of disrepair that failure is imminent and the conditions cannot be resolved
  - Sewage or other sanitary problems so that existing conditions endanger the customer and the weatherization installers
  - House has been condemned or electrical, heating, or plumbing has been "red tagged"
  - Moisture problems are so severe they cannot be resolved under existing health and safety measures and minor repairs
  - Dangerous conditions exist due to high carbon monoxide levels in combustion appliances, and cannot be resolved
  - Customer is uncooperative, abusive, or threatening to crew, subcontractors, auditors, inspectors, or others
Leveling the Playing Field: The Guidelines For Home Energy Professionals
National Consistency

- The Guidelines for Home Energy Professionals resources were created to provide a common approach to work quality, training and credentialing across the country.
- Developed in response to common concerns from contractors, program administrators and other stakeholders that the disparate requirements among various energy efficiency programs makes it difficult for contractors to work across programs.
- The WAP is adopting these standards to clarify the expectations of the program and to create a clear pathway for individuals and organizations who want to work in the program.
Standard Work Specifications
For Home Energy Upgrades

A national baseline for work quality
The Accreditation of Energy Efficiency Training

National 3rd party assessment of energy efficiency training programs
Certify the Workforce

National Home Energy Professional Certification

National job oriented certification program for the four most common residential energy efficiency jobs
Myths About WAP
**Service Selection**

**Myth:** WAP crews and contractors can select only the easiest or most profitable service to provide to families

**Response:** False

- The service selection is made based on the audit results. Each service must be cost effective based on computer modeling (site specific or check list).
- Health and safety testing and mitigation must be performed on all homes.
- All work must be warranted for at least one year post inspection
Subgrantees and Contractors

**Myth:** Poorly operated subgrantees and contractors are allowed to continue operations in WAP regardless of complaints from families being served.

**Response:** True and False

- **True** – Once poor performance is reported by either a contractor or a subgrantee, the entity is provided an opportunity to correct the noted deficiencies; reasonable corrective action plans are developed and monitored.

- **False** – Throughout the network, subgrantees and contractors are eliminated and added to remedy poor quality and accountability; had over 1,000 subgrantees and 4,000 contractors during ARRA; now have 800 subgrantees and less than 2,000 contractors
Network Design

**Myth:** Once a subgrantee or contractor is selected, they remain in the Program for all time

**Response:** False

- Subgrantee selection is based on composition, experience and other factors. Some states re-bid their local network every few years. There is a shortage of qualified organizations to operate at the local level. Subgrantees are replaced by the state as necessary.

- Private contractors are selected by competition at the local level. Selection are made annually with multi-year extensions as long as services are being provided effectively.
Private Sector Competition

**Myth:** Subgrantees are creating contractors to compete against private sector

**Response:** True and False

- **False** - Non-profit organizations can capitalize for profit entities but cannot use federal funds or assets to support the endeavor. Must use unrestricted funds and separate all assets and operations. Violation of IRS 501(c)(3) designation to compete against the private sector

- **True** – nearly 100 non-profit organizations have created for profit entities – not all related to WAP; must reflect for-profit business models; separate vehicle and equipment costs, insurance, etc.; any profits must be delivered to the non-profit
Web Sites

- Weatherization Assistance Program Website [http://energy.gov/eere/wipo/weatherization-assistance-program](http://energy.gov/eere/wipo/weatherization-assistance-program)
- WAPTAC Website [www.waptac.org](http://www.waptac.org)
About Our Company

- Founded 2009
- Initially we focused on private-market work
- Started performing low-income weatherization work (WAP) in 2011
- Pursued low income work because of company stability
- Stimulus package -- way to even out peaks and valleys
WAP in Our Area

- North Carolina Weatherization Assistance Program works with local agencies.
- Agencies put WAP projects out to bid each year to contractors.
- Contractor is assigned jobs on a regular basis throughout the year.
- Agencies conduct the energy audit and determine the scope of work for the contractor.
- Contractor completes the work, then the agency performs a WAP QI inspection.
Our Company & WAP Projects

- First year -- 25% low income, year round.
- Now more like 50/50, as we got more WAP experience and private economy slowed
- Crews got more experience with weatherization standards -- increased our ability to do more WAP jobs.
- Now doing several jobs/week… though we could be doing more.
Initial Hurdles We Worked On

Some of what we’ve learned over the last few years:

- We’ve gotten better at doing work to WAP standards (Quality control / quality assurance issues)
- Challenge of lack of project control: With WAP jobs in our area, audits/scope are done by the agency. We’re used to controlling the process in-house. So we had to adjust our process accordingly for WAP work.
- Because audits/scope isn’t done by us, need to supply adequately on the job site for items that the agency might have missed (like knee walls, vapor barriers, etc)
Benefits We Have Seen

- Started implementing WAP standards → Improved quality of work
- Less call backs on private market work, more customer satisfaction
- Has helped even out business peaks and valleys to a certain extent.
- Makes it easier to keep quality employees on board, because you can give them more work.
- Tends to be a close-knit community in NC, all of our current employees come from WAP or companies doing WAP work.
With Benefits, Some Challenges

- What happens when an auditor/agency gets it wrong?
  - Ex: Sent out to house built in 1923, 3-4K sq ft. 4 hours of air sealing allowance. Have to go back the agency and try to get credit for more hours.
  - Time wasted means money spent.
- Paying for overhead costs:
  - Materials and product, shipping, employee materials (gloves, tyvek suits, etc), business overhead, etc. Need to bill to cover these items
  - Important to have people with contracting business experience embedded in programs, so pricing is realistic.
- Pricing problems
  - In NC, program/agencies have benchmarked pricing for HVAC contractors and other trades but not as much for weatherization -- so they tend to value it less and pay less.
  - HVAC = ~$130/hr, weatherization = ~$55-$65/hr (but many of the same overhead costs)
Challenges (Cont.)

- No subsidized trainings (only OSHA, paid by contractors)
- QA processes have been a major issue -- for low-income weatherization jobs, we need same-day inspection so crews can move onto the next job.
- Number of jobs hasn’t met expectations:
  - We’d been told to expect much more work than we’ve gotten
  - Most of the delays seem to be agency/marketing-related -- this has a big impact on contractors.
Looking to the future

- More private work, so we are not so reliant on low-income.
- WAP work can help stabilize business, keep people employed.
- But for us, it is not a long-term growth strategy -- that’s where private market work is vital.
- Recently opened up handyman division to help meet growth aspirations as well.
Looking to the future

But need to solve some key challenges:

- Pay rate, good benchmark pricing for weatherization
- Ways to pay for non-labor costs
- Logistical challenges
- Better communication directly between contractors and the state program
Share Your Questions & Comments

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Are you a contractor that does low-income work? Are you a low-income agency or program that works with contractors? Tell us about your experience.

What kinds of benefits/challenges have you seen between low-income programs and private market contractors?

Also, tell us about your company and the work you do!
Damian Hodkinson
True Energy Solutions
Rochester, NY
True Energy Solutions

- Rochester, NY area home performance contractor
- Founded in 2008 as a building sciences driven company
- We hold certifications in: Energy auditing, Multifamily, Commercial, HVAC
- We work in multiple markets, both as an energy consultant & contractor:
  - Single family
  - Multifamily
  - Private market
  - Low-income work
Low-Income Programs in NY

2 predominant programs:

- **WAP**: Agencies across the state with various models
  - Some do all their work in-house
  - Some put contracts out to bid for private contractors

- **Empower NY (more info later)**
  - Low-income weatherization program
  - Funded by RGGI (regional cap&trade) funds, NOT by WAP
  - Same contractor reqs as NY’s home performance program
  - Assigns jobs to qualified contractors based on ability to handle volume.
Our Background in Low-Income Work

- We started doing WAP work in 2011

- We had talked with a few of the WAP subgrantees in our area since our founding...wereceived NO leads or bid opportunities from them until the Stimulus.

- To date we have worked with 6 different subgrantees in differing capacities:
  - Action for a Better Community - Multifamily audits and small Multifamily measures
  - PEACE - Multifamily measures
  - GVRPC - Multifamily Projects
  - Tioga Opportunities - single family projects
  - Supportive Services- Buffalo - Multifamily audits
  - Pathstone - single family projects
Why did we pursue low-income work?

- We saw low-income as a way to help even out the production peaks and valleys annually.
- There was a need in our area for experienced Multifamily contractors.
- Wanted to help the low income population...energy bills are a higher percent of their income and thus work we do has a relatively greater impact.
Long-term Challenges With WAP in NY

- Pricing
- Endless paperwork
- Doesn't include overhead costs, trainings, trucks, tools, etc.
  - This is a significant disadvantage when looking for WAP programs to open up to more contractors -- since private companies will often need to bid higher to cover these costs.
- In our area, the results are often sub-standard, hurting the homeowner and the ability of quality contractors to fairly bid “apples for apples”
- Very opaque process for awarding contracts
- Other goals are combined with the goal of weatherizing low-income homes.
  - Social Welfare - favoring women & minority (or other demographic based) businesses, employing & training very specific demographics---often not readily employable in the general market-place
  - Political - often subgrantees are politically active and confuse the goals (within the community) of weatherization and political action
Benefits We Have Seen

- Although the low-income projects are not profitable for us *directly*, they allow us to keep our crews always busy and help us with volume purchasing.
- Low-income projects tend to be more straightforward HP work...are a good place to start training new crewmembers.
- Has helped even out business peaks and valleys... somewhat.
- Encourages company streamlining(!)
But Changes Are Needed

- Current WAP structure in NY makes it difficult for private contractors to participate
- Successful private contractors are the key to a successful WAP program -- effectively leveraging contractors will help WAP reach more homes and do so effectively.
Our Current Work

- Because of WAP challenges, our company stopped bidding for WAP projects
- We do still participate in EmPower New York, which takes a different approach to funding low income projects...a step in the right direction
The NY EmPower Model

- The program issues approved customers to contractors who meet the standards
- reimburses contractor for bringing customer to program
- open to any contractor who decides to meet the standards
- Work is free to homeowners
- Measures and income requirements exactly the same as WAP
- Requires audit and characterization of savings...must meet SIR
- fixed pricing (often problematic…)
- fixed list of eligible measures
The NY EmPower Model-cont.

- EmPower NY model benefits:
  - leverages the private sector to serve low-income households
  - very cost effective
  - allows for relationships to build between good contractors and communities
  - homeowners have a responsive goto company if they have concerns
  - Private sector companies often bring more services to the table to better serve the homeowner
The NY EmPower Model-cont.

- EmPower NY model challenges:
  - fixed pricing often excludes certain measures
  - very low profitability (but it serves other business needs)
  - contractors often cannot do the work that would truly help the homeowner due to measure restrictions
  - bureaucracy...a ridiculous amount of paperwork, hoops to jump through, and TIME put into every project (though not as much as WAP)
  - Program implementers eat up money that could be used to help customers ...another cost of bureaucracy!
The Future: Move Toward a Market Solution

- As the home performance sector transitions to a market-based industry, low-income weatherization can too.
- Leverage the huge potential of the private market to professionally serve low-income households at a scale never before possible.
- Rather than focus on methods and measures, we can focus on outcomes.
- We should look for ways to add low-income subsidies onto payments for energy savings/"negawatts" from energy providers — or other market-based mechanisms for paying for low-income weatherization work. (Low income houses often offer incredible opportunities for significant energy savings!)
Time for the Q&A!

Please share questions and comments for our panelists

Use the chat box in your control panel to type your questions and comments as we start the Q&A

Please ask any questions you have!
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Thank you to our presenters!

Kara Saul Rinaldi, Home Performance Coalition
Bob Adams, US Department of Energy
John Redmond, Home Energy Solutions of the Triad
Damian Hodkinson, True Energy Solutions