

# WAP 101

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# Session Goals

- Provide an introduction to WAP and Weatherization Plus
- Alert LIHEAP and WAP managers about options for LIHEAP funding of WX
- Look at the value of different models for WAP and utility program collaboration
- Learn how the National WAP Evaluation will help you make program decisions

# Introduction to WAP and Weatherization Plus

# What is WAP?

The Weatherization Assistance Program has been in operation for over thirty years and is the nation's largest single residential energy efficiency program. Its primary purpose, established by law, is

*“...to increase the energy efficiency of dwellings owned or occupied by low-income persons, reduce their total residential energy expenditures, and improve their health and safety, especially low-income persons who are particularly vulnerable such as the elderly, the handicapped, and children.”*

Title 42 of the U.S. Code, Chapter 81, Subchapter III, Part A, 6861.

# WAP Logistics

- DOE provides grants to states and territories based on funding formulas
- States provide grants to local weatherization agencies
- Eligible households receive energy audits and weatherization services
- About 35 million households are income-eligible for WAP

# WAP Services

- Typical Energy Efficiency Measures
  - Air Sealing: Attics, ducts, windows
  - Insulation: Attics, walls, rim joists
  - Furnace: Tune-up, repairs
- *Energy efficiency measures need a savings to investment ratio (SIR) of 1.0 or greater*
- *Spending limits mean that sometimes measures with a  $SIR > 1.0$  are not installed*

# WAP Services

- Health and Safety Measures
  - Combustion Appliances: Furnace, Water Heater, Stove/Oven, Dryer
  - Moisture Management: Kitchen and Bathroom Ventilation, Dryer Vents
- *Health and Safety measures are subject to limits identified in each state WAP Plan*

# WAP Funding

- WAP pre-ARRA (PY2008)
  - WAP Budget = \$250 million
  - Annual Goal = 100,000 homes
  - Average Investment = \$2,500 per home
  - Income Limit = 150% of poverty
- WAP during ARRA
  - ARRA Budget = \$5 billion
  - Target = 650,000 homes
  - Average Investment = \$6,500 per home
  - Income Limit = 200% of poverty

# Weatherization Plus

The goal of Weatherization Plus is to achieve significantly greater energy cost savings for more low income households and to increase the Program's contribution to the economic and environmental health and sustainability of the nation's communities.

# Weatherization Plus Strategies

- Flexibility – Make changes in program legislation and regulations to facilitate interactions with other programs and funding sources
- Capabilities – Increase technological capabilities by making training and technical assistance available to the Weatherization Network
- Leveraging – Expand resources by disseminating information on successful initiatives and partnerships

# WAP/LIHEAP Collaboration

# LIHEAP Program Elements (2008)

- Heating Assistance – 51 Grantees / 53% of funds
- Crisis Assistance – 49 Grantees / 19% of funds
- **Weatherization – 43 Grantees / 10% of funds**
- Cooling Assistance – 15 Grantees / 3% of funds
- Assurance 16 – 23 Grantees / 1% of funds
- **Equipment Repair – 13 Grantees / 1% of funds**

# WAP/LIHEAP Funding

- PY 2008 WAP Funding
  - WAP Budget = \$239 million (30%)
  - LIHEAP Contribution = \$362 million (45%)
  - PVE = \$9 million (1%)
  - Other = \$195 million (24%) [Note: Excludes Alaska \$200 million]
- PY 2008 WAP Units
  - DOE Units = 92K
  - LIHEAP Units = 74K
  - PVE Units = 3K
  - Other Units = 64K Units
- *Source: NASCSP PY 2008 Funding Survey*

# WAP/LIHEAP Models

- LIHEAP WX Using DOE Rules
  - Advantages: Energy Savings Predictability, Accountability
  - Disadvantages: Health and Safety Limits, Per Unit Limits
- LIHEAP WX Using LIHEAP Rules
  - Advantages: Flexibility to meet client needs
  - Disadvantages: Expertise of LIHEAP managers
- Emergency Furnace Replacement Program
  - Advantages: Need independent of WX needs
  - Disadvantages: Furnace sizing issues for weatherized units
- Assurance 16 Energy Education

# Wisconsin Model

- Energy Office = LIHEAP and WAP
- WAP Funds – DOE Rules
- LIHEAP WX Funds – LIHEAP Rules
  - Additional measures with SIR of 1.0 or more
  - Needed health and safety measures (reduces “walk aways”)
- Emergency Furnace Program – LIHEAP / Other Sources
  - Can be coordinated with Weatherization
  - Can be implemented independently

# Other Common Models

- LIHEAP in DHS / WAP in DCA (NJ / Old)
  - LIHEAP funds transferred to WAP
  - Emergency furnace funds transferred to WAP
- LIHEAP in CDHS / WAP in Governor's Office (CO)
  - LIHEAP funds transferred to WAP
  - Crisis Intervention Program (CIP) administered by DHS
- LIHEAP and WAP in Maine Housing Office
  - LIHEAP funds available for Weatherization
  - Direct access to home rehabilitation funds

# Collaboration Between WAP and Ratepayer-Funded Usage Reduction Programs

- Missouri
- Pennsylvania
- Ohio

# Missouri

# Missouri Collaboration

- Department of Natural Resources (DNR) administers WAP and several ratepayer funded utility low-income usage reduction programs.
- Program is delivered by Community Action Agencies, city government, and other nonprofits.

# Missouri Collaboration

- Most providers have 3 funding sources:
  - WAP
  - Electric utility
  - Gas utility
- All programs are integrated.
- All programs follow WAP rules.
- Some agencies prioritize jobs that can be coordinated with utility programs.

# Missouri Collaboration

- Measure Limitations
  - No replacement of electric heating systems.
  - \$600 incidental material repair limit.
  - No refrigerator replacement.
  - Air conditioning work only if related to health issues.
  - CFLs began as an optional measure in mid 2008.

# Missouri Collaboration

- Benefits
  - Increased efficiency – single intake, audit, and inspection.
  - Economies of scale – can maintain trained weatherization staff at small agencies.
  - One set of standards and training.
  - More comprehensive treatments.
  - Increased ability to provide health and safety and repair work. (\$600/home)
  - Reduced client time on waiting lists.

# Missouri Collaboration

- Disadvantages
  - Less client awareness of utility program.
  - Less focus on program specific goals.
  - Clients who received WAP cannot later receive utility program.

# Pennsylvania

# Pennsylvania Collaboration

- PA Department of Commerce and Economic Development (DCED) administers WAP.
- Utilities deliver the Low Income Usage Reduction Program (LIURP).
- PA Electric utilities have additional Act 129 Funding.
- Some utilities have been coordinating programs for some time.

# Pennsylvania Collaboration

- PA Public Utilities Commission Working Group – Universal Service Coordination Working Group.
  - DCED, gas and electric utilities, low-income advocates.
- Guidelines for coordination based on heating source and contractor’s program provision.

# Pennsylvania Collaboration

- FirstEnergy LIURP/WAP Coordination
  - LIURP priority for highest usage/lowest income customers, as specified by PUC.
  - FirstEnergy will move WAP applicants up on their priority list.
  - WAP agencies were not able to do this.
  - Working better under ARRA.
  - Utilities have given WAP agencies lists of high use LIHEAP customers.
  - 21 of their 28 contractors do combination jobs.

# Pennsylvania Collaboration

- FirstEnergy LIURP/WAP Coordination
  - WAP agencies will log on to FirstEnergy's LIURP data system to check for customer application.
  - WAP agencies will send list of scheduled customers to FirstEnergy to check pending applications.
  - FirstEnergy will ask WAP applicants to apply for LIURP if FirstEnergy does not have a LIURP application for that customer.
  - Customers must meet usage requirements to be served under LIURP.

# Pennsylvania Collaboration

- FirstEnergy LIURP/WAP Coordination
  - Joint WAP/LIURP audit is conducted.
  - Mostly FirstEnergy non electric heat customers.
  - LIURP provides:
    - Refrigerators, freezers, lighting, air conditioners.
    - 25% of job costs can be spent on health and safety.
  - FirstEnergy data system captures information on WAP spending for jointly delivered jobs.

# Ohio

# Ohio Collaboration

- OH Department of Development (ODOD).
  - WAP
  - Electric Partnership Program (EPP), ratepayer funded electric efficiency program
- Gas and electric utilities deliver additional ratepayer funded usage reduction programs.
- Some providers deliver both WAP and ratepayer funded programs.

# Ohio Collaboration

- Coordination between WAP and EPP is minimal.
  - Length of audits required.
  - Auditor skills.
  - Program targeting.
- Ohio has been more successful integrating WAP with weatherization focused utility programs.

# National WAP Evaluation

# Data Collected

## Surveys

- All States Survey
- All Agency Survey
- Subset Agency Survey

# Data Collected

## Surveys

- Occupant Survey
  - Energy knowledge, non-energy benefits, occupant health, satisfaction
- Weatherization Staff Survey
  - Weatherization careers and training
- Open-ended Interviews
  - DOE, sample of states and agencies

# Data Collected Program and Utility

- Housing Unit Data
- Energy Usage Data
  - Natural gas
  - Electricity
  - Fuel oil
  - Propane

# Data Collected On-Site

- 6-10 High Performing Agencies
- Process Field Study
  - Audits, Education, Training, Quality Assurance
- Special Technical Studies
  - Air sealing, duct sealing, heating system
  - Indoor air quality
  - Refrigerator monitoring
  - Air conditioner monitoring

# Data Collected Innovative Programs

- Client education
- Staff training

# Analyses Conducted

- Program characterization
- Energy impacts
- Cost savings
- Non-energy impacts (utility, occupant, societal)

# Analyses Conducted

- Cost effectiveness
- Explanatory factors
  - Pre consumption, measures, house characteristics, occupant characteristics, fuel prices, climate zone, training methods, funding sources, testing results (air leakage, duct leakage, furnace efficiency)

# What it Will Tell You

- How much energy was saved through WAP in 2007 and 2008?
- How cost effective were the energy savings?
- What measures were most cost-effective?
- What was the value of the non-energy benefits result from the program?

# What it Will Tell You

- What are the characteristics that are related to higher energy savings?
- How effective are different approaches to weatherization?
- How effective are different client education approaches?

# What it Will Tell You

- How effective are weatherization staff training approaches?
- How effective are quality assurance procedures?

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