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Amy Klusmeier, WAP Director  
[aklusmeier@nascsp.org](mailto:aklusmeier@nascsp.org)

Andrea Schroer, Program Manager  
[aschroer@nascsp.org](mailto:aschroer@nascsp.org)

Eric Behna, Policy and Communications Manager  
[ebehna@nascsp.org](mailto:ebehna@nascsp.org)

# WAP AND AC

NASCSP conducted info request in April 2020

- WAP central or window/room AC unit replacements and installations?
- 25 states responded:
  - 16 states are running programs for AC units;
  - 9 responded they do not install AC
  - Funded by LIHEAP, DOE, Utility

Central AC Only (5)	Window/Room AC Only (5)	Both (6)
AZ, NM, OK, SC, UT	DE, HI, NC, RI	KS, MO, NH, OH, TN, TX, ND

- Three states reported some type of bulk/group purchasing, done at the local level only.
- The majority of the states indicated that AC units were purchased by individual local agencies or their HVAC contractors.

# DOE WAP AND AC

**DOE requirements per WPN 17-7:** AC unit does not qualify as an ECM then conditions must be met before the unit can be replaced with Health and Safety funds.

## **Primary AC system replacement**

- Installation is only allowed if client meets “At-Risk” definition; AND
- Climate conditions must warrant replacement
- Proper sizing protocols (manual J)
- Unsafe **primary units must** be repaired/replaced/removed or deferral is required.

## **Secondary AC Units**

- If they are unsafe, they must be repaired/removed
- Replacement or installation of secondary units is not allowed.

# LIHEAP WAP AND AC

- LIHEAP is a block grant
  - flexibility with the LIHEAP funds that transfer into WAP

## **LIHEAP State Plan Example:**

### WEATHERIZATION ASSISTANCE Section

Check “**Mostly DOE WAP rules**”; under “Other – Describe”

- Clean, tune, evaluate and replace heating and cooling systems will be allowed outside of DOE rules in order to provide safe, adequately and efficiently conditioned living space to comply with LIHEAP's focus on health and safety. Households with elderly members and households with young children may receive air conditioning.

# LIHEAP WAP AND AC

## Another LIHEAP State Plan Example:

Check “**Mostly LIHEAP rules**”; under “Other – Describe”

- Energy Related Repair (ERR) is a crisis program for heating and cooling systems that do not heat or cool, do not distribute heat or cooling, are malfunctioning or have health and safety issues ( such as producing carbon monoxide). Households must be homeowners as landlords are required to maintain heat or cooling in rental units.
- A client is considered to be in a life-threatening crisis when the household has:
  - No heating or cooling
  - No heating or cooling distribution
- Access the LIHEAP CLEARINGHOUSE and State Plans [HERE](#)

# WAP AND AC

*Please launch poll Question: Have you updated your LIHEAP state plan in response to COVID-19?*

## WAP AND AC

*Let us hear from our four state  
presenters on their specific AC programs.*

*North Dakota*

*New Mexico*

*Rhode Island*

*Tennessee*

## WAP AND AC

- Bruce Hagen
- Weatherization Program Manager
- North Dakota
- Started in WAP in 1982
- Most challenging thing you have had to deal with during COVID-19 has been putting policies together so the agencies can move back into the field as safely as possible
- The silver lining you experienced in COVID-19 is that we got a lot of training accomplished







# WAP AND AC - North Dakota

- North Dakota Residential Cooling Program
  - Funds come from the LIHEAP Emergency Furnace Repair, Replacement, and Cooling Program
  - A household who is income eligible for LIHEAP benefits from DHS may qualify for a cooling device, if a member of the household has a documented medical need or is 60 years of age or older. The household need not be responsible for payment of heating costs, so tenants in subsidized housing may qualify.
  - Cooling jobs may be done between May 1st and September 30th. Any work done outside those dates will need state approval. All jobs should be completed in WxPro before October 31st.

# WAP AND AC - North Dakota

- North Dakota Residential Cooling Program
  - Where no existing air conditioner unit exists an air conditioner may be purchased
  - Repair or replacement of an existing central air conditioning unit is allowed.
    - Up to \$1,000.00 may be spent on installation of a central air conditioning unit where none exists. In special circumstances the installation may be fully paid for. This will require state approval.
  - Where there is an existing window air conditioner unit and it does not meet the current federal minimum seasonal energy efficiency rating (SEER=13), a new unit may be purchased

# WAP AND AC - North Dakota


- North Dakota Residential Cooling Program
  - Where there is an existing air conditioning unit which meets the federal minimum energy efficiency rating, the client may select measures from the following:
    - a. Ceiling Fan installation and related installation modifications
    - b. Installation of manual fan switch for furnace thermostat
    - c. Installation of a whole house ventilation fan
    - d. Installation of screening material on doors and/or windows
    - e. Installation of reflective foil heat barriers in attics
    - f. Installation of window awnings or sun-screen shutters
    - g. Purchase of oscillating or window fans

# WAP AND AC - North Dakota

- North Dakota Residential Cooling Program
  - If the client has received services in the past, they would be eligible for services again as long as they still meet the requirements for eligibility and if the following conditions exist:
    - a. The air conditioner the client received in the past is not repairable or will cost more than \$350 to repair and is no longer under warranty
    - b. Circumstances may have changed for this individual and a second air conditioner may be needed based on the individual's medical condition and the make-up or design of the home



# WAP AND AC

- Name: Troy Cucchiara
  - Title: Program Manager
  - State: New Mexico
  - Years in WAP: 13.5
  - Most challenging thing I have had to deal with during COVID-19: Removing the denial with myself and others that things will not be the same for a very long time, and finding that balance between safety and moving forward.
  - Silver Lining: Educating the workforce to conduct work safely and eliminate risks.
- 

# WAP AND AC - New Mexico

- AC units, heat pumps, and evaporative cooling has always been allowed as ECM, but not commonly replaced for single family
- Health and Safety Plan allows for repair or replacement
  - Must meet one of two categories

# WAP AND AC - New Mexico

## Conditions Required to Address Cooling

- Must meet certain climatic conditions – Average of 800 CDD using base 70
  - Two of the three climate zone qualify

~AND~

- Client must be at risk with **medical eligibility proof from third party professional**
  - Over the age 60
  - Respiratory Ailments
  - Pregnancy
  - Other Unique Conditions
  - Letter of proof is the key- (we are not licensed medical practitioners)



# WAP AND AC - New Mexico

## Technical Requirements for Cooling

- Must be run as ECM by auditor first
- Manual J is used to determine sizing
- Type of unit considered under client circumstances
  - Does it make sense to save energy and install an evaporative cooler?
  - Will this qualify for heat pump?
- Follow SWS, NM Technical Standards, and field guides.\
- Obtain permission prior to replacement
- At risk clients do not need to have existing unit for replacement
- Client education for maintenance
  - Existing units that do not qualify
  - Units being replaced

# WAP AND AC - New Mexico

## Numbers of Units and Costs

- PY 2019-2020 was first year allowed in H & S Plan
- Three evaporative coolers were replaced and no ACs
- \$1200 to \$1,500 depending on existing conditions
- Several units of both types were repaired
- \$3,500 is cap
- Lessons learned- Client education on maintenance and use is a must- especially when there was not an existing unit
- Lessons learned- Apprehension to address cooling is both good and bad. Must find happy medium between:
  - Missed opportunity – how much does at risk client need it if not mentioned?
  - Slippery slope of everybody suddenly becoming “at risk”

# WAP AND AC

- Julie Capobianco
- Chief of Program Development
- Rhode Island
- Years in WAP: 10
- Most challenging thing you have had to deal with during COVID-19: Not being able to see my 91 year old mother in assisted living 😞
- The silver lining – if any – you experienced in COVID-19: I have had the opportunity to revisit my priorities
- Teamwork 😊





# WAP AND AC – Rhode Island

- Is it an ECM or H&S measure. *Not modeled in HEAT; utility has a deemed savings model. The deemed savings for an AC replacement is 71 kWh. The deemed savings for a mini split is 5,891 kWh.*
- Which funding source? – *UTILITY funded, LIHEAP as needed.*
- Client Eligibility Criteria for receiving an AC unit? *A-60 customer (A-60 = utility discount rate)*
- Client Eligibility Criteria for receiving a Mini Split? *Electric heated homes only. Owner-occupied. One of the criteria for receiving a min-split is that the customer must also receive weatherization (if it has not already been done). Weatherization adds another 1,231 in deemed savings for a total of 7,122 kWh savings for that customer.*
  - Replacement only? *AC's are replacement only (1 for 1)*
  - Install new AC units where there was none before? *No*
- Criteria for units (ENERGY STAR?) *AC's must be Energy Star*
- Averages costs or cost caps – *AC's have a set cost, auditor makes the selection. Like for like. Prices range from \$305-\$520 for 5,000; 6,000; 8,000; 12,000 BTU . Cost for a mini split system ranges from \$8,000 -15,000/system*
- Bulk purchasing of units at either local or state level? *NGRID has bulk purchasing through PC Richards (Distributor).*
- Number of annual installs if you have it – *In 2019, distributed 2,557 AC units and did 12 mini-splits installs. Goal for 2020 is 40, and have done 5 to date. YTD on AC's is 1,025. Goal is 1,848.*

# WAP and AC - Rhode Island (cont.)

- RI has an Appliance Management Program (AMP) that is UTILITY funded. AMP auditors work alongside energy auditors at the Subgrantee level. AKA Baseload program – addresses electrical usage and needs
- Must be discount rate (A60) residential customers.
- Replaces/Installs: LED's, Refrigerators, Freezers, Dehumidifiers, Washing Machines, AC's, Smart Strips
- Decision making is done by the NGRID InDemand program. AMP auditors complete the audit in the InDemand system. They take the info off the old unit to get the EE rating and enter than info into the program. Almost all are replaced.
- AC's are replaced 1:1. They are exchanges so NGRID can claim savings. Old unit must be exchanged for a new Energy Star unit. Currently happening curbside.
- Even before COVID, the AC installation was the responsibility of the customer. Old ones are recycled – there is a company that PC Richards uses that does the recycling. (Same company that does the refrigerator recycling).
- Who delivers the new AC's? PC Richards

# WAP & A/C



- Tim Good
  - Senior Housing Program Coordinator
  - Tennessee
- 
- 2.5 years in WAP
  - Most challenging thing you have had to deal with during COVID-19
    - Seemingly Endless
  - The silver lining – if any – you experienced in COVID-19
    - Unified WAP Network

# TN WAP & A/C

## **WAP Energy Conservation Measure**

- Recommended Measures
  - Rarely Cost Effective

## **WAP Health and Safety Measure**

- “At Risk” – Disabled, Over 60 / Under 6, Occupant with specific health condition
- TN WAP H&S Plan defines need for air conditioning in our climate
- Energy Star and Sized Correctly
- Rarely funded through WAP

# TN LIHEAP Weatherization & A/C

## **BACKGROUND**

### **LIHEAP Weatherization (LWx) Funds**

- Program Year 2016 Tennessee began allocating percentage of LIHEAP funds to WAP
- Currently allocate 5% of the allowed 10% to subgrantees
  - PY19 Approximately \$3.3 million

### **LIHEAP Wx Allowable Measures**

- 3 cost categories – Administrative, Program Support, Health and Safety
  - Allowable Measures funded through LWx Health & Safety cost category
  - CURRENTLY, Tennessee does not allow funding of ECMs/IRMs through LWx.
  - Fund common H&S measures – many of which mirror WAP H&S measures (HVAC included)
- \$10,000 LWx cap per unit



# TN LIHEAP Weatherization & A/C

## **BACKGROUND**

### **LWx Funded Air Conditioning Measure**

- May fund both replacement / repair
- Roughly 170 systems. (PY18 + PY19)
- Majority 2-2.5 ton systems
- Statewide Average Cost \$6,600 (All tonnages, system types)

# TN LIHEAP Weatherization & A/C

## LWx Air Conditioning Replacement Notables

### Reasons for Existing System Replacement

- **WAP “At-Risk” Rules**
- **De-Rate 10 SEER or Below**
  - Does not need to be recommended by audit tool
- **Non-Functioning / Poorly Functioning, Unsafe Existing Systems**
  - Evaluate for repair prior to replace. Can pose challenges

### System Types

- **Heat Pump (Most Common), A/C Only**
  - Window, Mini-split, Central (Split/Package)
  - No Existing System: Replace with Window Units / Mini-splits, Central system (case by case)

### Replacement Criteria

- **Energy Star (15 SEER). Verify with AHRI Certificate**
- **Load / Sizing Calculation – Manual J/S**
- **Product Registration / Warranty**

# TN LIHEAP Weatherization & A/C

## **PROS**

- **FLEXIBILITY**
- **Increased Energy Efficiency, Occupant Health, Safety, Comfort**
- **More Measures, Greater Impact**

## **CHALLENGES**

- **Energy Star verification**
- **Load Calculation (Training)**
- **Audit Runs**
- **Manufactured Housing**
- **Reporting**

# WAP AND AC

*Thank you to all our presenters today!*

*We would like to welcome open discussion and take any questions. Please type in your questions or raise your hand for Q&A.*