

**BUDGET INFORMATION - Non-Construction Programs**

1. Program/Project Identification No. EE0007910		2. Program/Project Title Weatherization Assistance Program	
3. Name and Address Delaware Division of Climate, Coastal, & Energy 89 Kings Highway Dover, DE 199010000	4. Program/Project Start Date 04/01/2020		
	5. Completion Date 03/31/2021		

**SECTION A - BUDGET SUMMARY**

Grant Program Function or Activity (a)	Federal Catalog No. (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Federal	81.042	\$ 0.00		\$ 844,216.00		\$ 844,216.00
2.						
3.						
4.						
5. TOTAL		\$ 0.00	\$ 0.00	\$ 844,216.00	\$ 0.00	\$ 844,216.00

**SECTION B - BUDGET CATEGORIES**

6. Object Class Categories	Grant Program, Function or Activity				Total (5)
	(1) GRANTEE ADMINISTRATION	(2) SUBGRANTEE ADMINISTRATION	(3) GRANTEE T&TA	(4) SUBGRANTEE T&TA	
a. Personnel	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
b. Fringe Benefits	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
c. Travel	\$ 0.00	\$ 0.00	\$ 2,500.00	\$ 0.00	\$ 2,500.00
d. Equipment	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
e. Supplies	\$ 4,000.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 4,000.00
f. Contract	\$ 27,000.00	\$ 53,422.00	\$ 87,100.00	\$ 93,258.00	\$ 837,716.00
g. Construction	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
h. Other Direct Costs	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
i. Total Direct Charges	\$ 31,000.00	\$ 53,422.00	\$ 89,600.00	\$ 93,258.00	\$ 844,216.00
j. Indirect Costs	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
k. Totals	\$ 31,000.00	\$ 53,422.00	\$ 89,600.00	\$ 93,258.00	\$ 844,216.00
7. Program Income	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00

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SECTION A - BUDGET SUMMARY						
Grant Program Function or Activity (a)	Federal Catalog No. (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1.						
2.						
3.						
4.						
5. TOTAL		\$ 0.00	\$ 0.00	\$ 844,216.00	\$ 0.00	\$ 844,216.00

SECTION B - BUDGET CATEGORIES					
6. Object Class Categories	Grant Program, Function or Activity				Total (5)
	(1) PROGRAM OPERATIONS	(2) HEALTH AND SAFETY	(3) FINANCIAL AUDITS	(4) LIABILITY INSURANCE	
a. Personnel	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
b. Fringe Benefits	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
c. Travel	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 2,500.00
d. Equipment	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
e. Supplies	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 4,000.00
f. Contract	\$ 483,804.00	\$ 72,000.00	\$ 14,532.00	\$ 6,600.00	\$ 837,716.00
g. Construction	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
h. Other Direct Costs	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
i. Total Direct Charges	\$ 483,804.00	\$ 72,000.00	\$ 14,532.00	\$ 6,600.00	\$ 844,216.00
j. Indirect Costs	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
k. Totals	\$ 483,804.00	\$ 72,000.00	\$ 14,532.00	\$ 6,600.00	\$ 844,216.00
7. Program Income	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**WEATHERIZATION ANNUAL FILE WORKSHEET**

(Grant Number: EE0007910, State: DE, Program Year: 2020)

**IV.1 Subgrantees**

Subgrantee (City)	Planned Funds/Units
Energy Coordinating Agency (Philadelphia)	\$542,712.00 49
TBD Subgrantee (DOVER)	\$180,904.00 15
<b>Total:</b>	<b>\$723,616.00</b> <b>64</b>

**IV.2 WAP Production Schedule**

Weatherization Plans	Units
Total Units (excluding reweatherized)	64
Rewatherized Units	0

Note: Planned units by quarter or category are no longer required, no information required for persons.

Average Unit Costs, Units subject to DOE Project Rules		
VEHICLE & EQUIPMENT AVERAGE COST PER DWELLING UNIT (DOE RULES)		
A	Total Vehicles & Equipment (\$5,000 or more) Budget	\$0.00
B	Total Units Weatherized	64
C	Total Units Reweatherized	00
D	Total Dwelling Units to be Weatherized and Reweatherized (B + C)	64
E	Average Vehicles & Equipment Acquisition Cost per Unit (A divided by D)	\$0.00
AVERAGE COST PER DWELLING UNIT (DOE RULES)		
F	Total Funds for Program Operations	\$483,804.00
G	Total Dwelling Units to be Weatherized and Reweatherized (from line D)	64
H	Average Program Operations Costs per Unit (F divided by G)	\$7,559.44
I	Average Vehicles & Equipment Acquisition Cost per Unit (from line E)	\$0.00
J	Total Average Cost per Dwelling (H plus I)	\$7,559.44

**IV.3 Energy Savings**

Method used to calculate savings: <input type="checkbox"/> WAP algorithm <input checked="" type="checkbox"/> Other (describe below)			
	Units	Savings Calculator (MBtus)	Energy Savings
This Year Estimate	64	N/A	866 *
Prior Year Estimate	80	N/A	1146 *
Prior Year Actual	21	N/A	88 *
* Energy Savings values were manually entered.			
<b>Method used to calculate savings description:</b>			
In 2017, Delaware contracted with Optimal Energy to utilize Delaware utility data of the weatherization clients to develop a methodology to calculate energy savings. As part of this methodology, the consultant looked at the Delaware-specific measures used in each of the homes and distinguished between fossil fuel-heated homes and electric-heated homes. Again in 2019, Delaware contracted with EcoMetric to validate the energy savings for the Delaware homes weatherized. EcoMetric also provided a revision to the Optimal Energy methodology to improve on the accuracy of the estimates. The energy saving estimates provided for the 2020 grant used this revised methodology from EcoMetric (provided as an attachment).			

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**IV.4 DOE-Funded Leveraging Activities**

**IV.5 Policy Advisory Council Members**

☐ Check if an existing state council or commission serves in this category and add name below

Bill Lietzinger	Type of organization: Unit of State Government Contact Name: Phone: 3027444811 Email: <a href="mailto:William.Lietzinger@delaware.gov">William.Lietzinger@delaware.gov</a>
Brad Whaley	Type of organization: Unit of Local Government Contact Name: Phone: 3028557777 Email: <a href="mailto:bwhaley@sussexcountytde.gov">bwhaley@sussexcountytde.gov</a>
Chrystal DiGioro	Type of organization: Non-profit (not a financial institution) Contact Name: Phone: (302)472-0764 Email: <a href="mailto:Chrystal.Kirby@USE.SalvationArmy.Org">Chrystal.Kirby@USE.SalvationArmy.Org</a>
Cynthia Ventresca	Type of organization: Utility Contact Name: Phone: 3024544015 Email: <a href="mailto:Cindy.Ventresca@pepcoholdings.com">Cindy.Ventresca@pepcoholdings.com</a>
Haly Laasme	Type of organization: Unit of State Government Contact Name: Phone: 3022559744 Email: <a href="mailto:Haly.Laasme-McQuilkin@delaware.gov">Haly.Laasme-McQuilkin@delaware.gov</a>
Liosa Locke	Type of organization: Non-profit (not a financial institution) Contact Name: Phone: 3025819007 Email: <a href="mailto:llocke@delawareipl.org">llocke@delawareipl.org</a>
Susan Eliason	Type of organization: Unit of State Government Contact Name: Phone: 3027394263 Email: <a href="mailto:susane@destatehousing.com">susane@destatehousing.com</a>

**IV.6 State Plan Hearings (Note: attach notes and transcripts to the SF-424)**

Date Held	Newspapers that publicized the hearings and the dates the notice ran
01/09/2020	The Public Hearing was held on 1/9/20 and the transcript of the hearing is attached to the SF-424. The requirement to submit a revised State Plan was included in the Hearing Notice and that the State Plan was developed using the prior year's allocation. It was also announced in the Public Hearing that the Delaware WAP would be seeking a new Subgrantee to implement the Program in Kent and Sussex Counties.

**IV.7 Miscellaneous**

No carryover funds are anticipated into PY2020.

The Grantee had determined that better communication with the Subgrantee was necessary based on the results of the ACSI Survey (2017). The Grantee set up regular face-to-face meetings with the Subgrantee (Catholic Charities) to improve communication. These meetings occurred monthly during the timeframe of June-September 2017. In the 2019 ACSI survey, Delaware showed a marked improvement in their overall score. The Grantee continues to schedule face-to-face meetings with both of their Subgrantees to ensure that the communication continues to improve. Because Delaware is a small state, the Program interacts with their Subgrantees on a daily basis.

The Delaware WAP will be seeking a new Subgrantee to fill the role of implementing the WAP in Kent and Sussex Counties. The procurement will follow the required state competitive bidding process. A new Subgrantee is anticipated to be under contract by the end of June 2020. At that time, a revision to the PY2020 State Plan will be submitted. Due to the anticipated low production in PY2020 due to bringing on a new Subgrantee, Delaware will be limiting the amount of LIHEAP funds accepted. Delaware WAP anticipates using all of the DOE funds by the end of PY2020 (March 31, 2021).

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**WEATHERIZATION ANNUAL FILE WORKSHEET**

**(Grant Number: EE0007910, State: DE, Program Year: 2020)**

The most recent T&TA Report was submitted on 4/27/2019; the next report will be submitted on or before 5/31/20.

Eric D. Dawson will serve as the Business Officer and Principal Investigator for this grant. He can be reached at (302) 739-9222 or [Eric.Dawson@delaware.gov](mailto:Eric.Dawson@delaware.gov)

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007910, State: DE, Program Year: 2020)**

This worksheet should be completed as specified in Section III of the Weatherization Assistance Program Application Package.

**V.1 Eligibility**

**V.1.1 Approach to Determining Client Eligibility**

Provide a description of the definition of income used to determine eligibility

The State of Delaware defines eligibility for weatherization assistance as follows: A dwelling shall be eligible for weatherization assistance if it is occupied by a family whose income is at or below 200% of poverty level as determined and established by the Director of the Office of Management and Budget (OMB), and as specified in 10 CFR 440.22(a). The application eligibility expires 12 months from the certification date if work on the dwelling unit (energy audit) has not been initiated. DNREC recognizes clients as being "categorically eligible" for weatherization when they have qualified for other low-income federal programs like LIHEAP and TANF. Catholic Charities provides intake services for the LIHEAP Fuel Assistance throughout Delaware and continues to process their information for eligibility in the WAP. Depending on which county the client resides, Catholic Charities refers the client to the proper WAP Subgrantee.

Native Americans are served in the general population and will be eligible to receive benefits equivalent to assistance provided to other low income persons within the State.

Interested persons wishing to apply for the program must apply in person to the Subgrantee, who conducts the intake process to determine eligibility. The Subgrantee has employed different processes to expedite the application process by receiving some of the documents via email.

Verification of eligibility is monitored by the State through an online review of documentation in the State's WAP Online system. Periodic, random reviews occur using the Online system that assesses the client eligibility documents prior to any weatherization work being initiated.

This is a link to the Delaware WAP Manual:

<http://de.gov/wap> and click on "Info for Professionals"

Describe what household eligibility basis will be used in the Program

As per 10 CFR 440.22 Eligible dwelling units, the dwelling unit is eligible for assistance if it is occupied by a family unit:

that is eligible for assistance under the Low Income Home Energy Assistance (LIHEAP) Act of 1981, provided that the income eligibility level is at least at 200% of the poverty level determined in accordance with criteria established by the Director of the Office of Management and Budget. There is only one location where clients can apply for WAP currently due to Delaware is in the process of seeking a new Subgrantee for the Kent and Sussex County areas.

Describe the process for ensuring qualified aliens are eligible for weatherization benefits

Delaware's eligibility criteria are in compliance with Federal requirements. Services are provided only to U.S. citizens or qualified aliens, as defined in section 431 of Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA). Qualified aliens are eligible to receive assistance and services under the WAP program so long as they meet all other WAP program requirements.

**V.1.2 Approach to Determining Building Eligibility**

Procedures to determine that units weatherized have eligibility documentation

DNREC requires that the Subgrantee maintains client files in our WAP OnLine database and tracking system that document client and building eligibility. Client files are available electronically to DNREC for program evaluation and monitoring purposes. The Subgrantee's auditors review the client files and the buildings upon the initial home energy audit to ensure that the structures comply with the WAP federal guidelines. State staff will monitor files and check application dates to ensure that clients received services during the period of eligibility within one year of their application; if work has not begun starting with the energy audit.

- Owner documentation - website [de.gov/wap](http://de.gov/wap) under Eligibility Guidelines
- Income documentation for renters - website [de.gov/wap](http://de.gov/wap) under Required Documentation

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007910, State: DE, Program Year: 2020)**

- o Landlord Agreement is provided as an attachment to the SF-424

**Describe Reweathering compliance**

The Subgrantee is responsible for cross-checking all eligible households with the updated database of units that have been weatherized after September 30, 1994 so that no units weatherized after September 30, 1994 receive additional services as per 10 CFR 6865(c)(2). DNREC maintains a database of previously weatherized units and has made it available to the Subgrantee, this list is referred to as the "Legacy List". The combination of the Legacy List and the WAP Online database of clients is the comprehensive list of all units weatherized in Delaware after September 30, 1994.

**Describe what structures are eligible for weatherization**

Single family residential (stick built and mobile homes) are eligible, as are duplexes or other structures with four or less units per building structure. Included in this definition are rowhomes and townhouses and other similar structures.

Delaware will be cautious with respect to non-traditional housing stock (shelters, apartments over businesses, non-stationary dwellings, etc.), making sure that all units weatherized meet eligibility requirements. Where any question on eligibility arises, we will consult with our DOE Project Officer.

Multi-family structures are eligible under the Delaware program for WAP services where 66% or more of the multi-family unit residents are eligible for services (50% for duplex's and units with four or fewer units) as per 65 Fed. Reg. 77210, Dec. 8,2000. Delaware may also weatherize multi-family buildings preapproved by HUD and DOE as eligible projects under HUD DOE MOU executed in 2010.

In such circumstances where a dwelling unit is located in a disaster area, the Grantee will refer to the procedures contained in WPN 12-7.

For Historic Structures, DNREC has an executed agreement with the Delaware State Historic Preservation Office dated August 2010 located at the Department of Energy's website:

[https://energy.gov/sites/prod/files/2014/01/f7/state\\_historic\\_preservation\\_programmatic\\_agreement\\_de.pdf](https://energy.gov/sites/prod/files/2014/01/f7/state_historic_preservation_programmatic_agreement_de.pdf)

**Describe how Rental Units/Multifamily Buildings will be addressed**

Rental units are eligible providing that the Subgrantee has obtained written authorization from landlords/building owners and said landlords agree to the stipulation regarding rent increases in the Landlord Agreement form. The Delaware WAP Manual contains the policy for renters and the Landlord Agreement form as an appendix to the manual (which is in adherence to 440.22 (b)(3) and 440.22 (c)-(e)). The Landlord Agreement is provided as an attachment. The policy for renters is located in the Delaware WAP Manual, Section 2.2.9 at de.gov/wap under Info for Professionals.

In situations where we weatherize rental units, the Subgrantee is required to ensure that the benefits of the weatherization assistance accrue primarily to the low income tenants. No undue enhancement to the property should occur beyond the scope of energy conservation. Owners may not increase rent for a period of two years after completion of the unit's weatherization. Unless increases are demonstrably related to matters other than the weatherization work performed, the owner will have to repay the full cost of weatherization if rent is increased. Any dispute of the circumstances for a rent increase will be reviewed by the Subgrantee. The determination may also be reviewed by DNREC, if requested by the Subgrantee, landlord or tenant.

Landlords are not required to contribute toward the cost of weatherization. However, they may do so voluntarily. Work on the unit agreed to by the landlord does not affect any aspect of the unit cost or the program. Landlord financial contributions made to the Subgrantee for weatherization work performed are to be considered by the Subgrantee to be program income and as such, used for weatherization work costs.

Beginning in Program Year 2020, Delaware will consider weatherizing multifamily dwellings as allowed under WPN 11-4 providing state and Subgrantee staff are adequately trained in multifamily WAP techniques or adequate funding is available to secure qualified, contracted services. Priority will be given to identifying and providing weatherization assistance to: elderly persons, persons with disabilities, families with children, high residential energy users, and households with high energy burden. Multi-family buildings, because of their size and character, may offer an opportunity to meet many of these priorities. When addressing "significant energy improvement" in multifamily dwellings, WAP will contact the DOE Project Officer and refer to the WPN 16-5 Multifamily Weatherization and WPN 16-6 Weatherization of Rental Units.

**Describe the deferral Process**

The deferral process is defined in our Deferral Policy which is provided as Section (5) in the Health and Safety Plan, the Health & Safety Plan is attached to this application with the SF-424.

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

(Grant Number: EE0007910, State: DE, Program Year: 2020)

**V.1.3 Definition of Children**

Definition of children (below age): **18**

**V.1.4 Approach to Tribal Organizations**

☐ Recommend tribal organization(s) be treated as local applicant?

If YES, Recommendation. If NO, Statement that assistance to low-income tribe members and other low-income persons is equal.

In accordance with 440.16(f) the State requires that low-income members of an Indian tribe receive benefits equivalent to the assistance provided to other low-income persons within the state unless the applicant has made the recommendation provided in 10 CFR 440.12 (b)(5). In such case, the applicant shall provide a recommendation that a tribal organization be treated as a local applicant eligible to submit an application pursuant to 10 CFR 440.13(b).

**V.2 Selection of Areas to Be Served**

The entire State of Delaware is served by our Weatherization Assistance Program as described in this application. As Delaware enters into the program year 2020, DNREC will be using a competitive process to attract a Subgrantee to provide services in Kent and Sussex Counties while continuing with the Subgrantee providing services in New Castle County.

DNREC ensures equal distribution of all WAP funds across all of Delaware's three counties (New Castle, Kent and Sussex) through contract provisions to ensure that we provide 50% of services to New Castle County (including the City of Wilmington) and 50% of services to Kent and Sussex counties, which is proportional to the distribution of the Delaware's population across the three counties. This will be clearly set up in the next contractual situation with the new Subgrantee.

**V.3 Priorities**

The State of Delaware's waiting list is comprised of eligible clients who have applied for the WAP program as described previously and is prioritized for families to receive weatherization services and to maximize energy saved. Prioritized categories include one or more of the following; elderly persons, disabled persons, households with children, households with high energy use and/or households with high energy burden as required by 10 CFR 440.16(b). DNREC coordinates a single database of eligible clients and a single, transparent, and objective process is used for prioritizing the client priority list. DNREC closely monitors the Subgrantee for adherence to the client priority list, which is integrated into our WAP OnLine database system. Additionally, DNREC monitors for compliance of intake procedures and client eligibility. The categories of high energy burden and high energy use are not being tracked in the WAP Online database and cannot be reported in the Quarterly Reports; yet the client intake worker can acknowledge the client is in one of these categories and recommend for the client to receive priority. Owner occupied and renter occupied dwelling units have equal priority.

Re-application into the WAP is required if the dwelling unit has not begun services within 12 months of the certification date.

If a unit is otherwise eligible for WAP services, and is also receiving home services from other social service agencies, DNREC may elect to prioritize services to those units where interagency coordination may be advantageous in leveraging funding sources and where selected units meet Delaware's and DOE's priorities for providing services to the disabled, elderly, households with children and households with high energy use and burden. These leveraged opportunities have the potential to provide more comprehensive solutions to owners. At the beginning of PY20, DNREC will develop protocols to track clients with high energy use and burden.

**V.4 Climatic Conditions**

Delaware's climatic data is based on a formula calculation found in the Statistical Abstract of the United States, published by the U.S. Bureau of the Census (2018). The total number of annual heating and cooling degree-days in the State of Delaware is 2,630 and 2,413 respectively, which indicates relatively mild climatic conditions. There are only slight variations in the number of heating and cooling degree-days among the three counties of the State.

**V.5 Type of Weatherization Work to Be Done**

**V.5.1 Technical Guides and Materials**



**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
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**(Grant Number: EE0007910, State: DE, Program Year: 2020)**

DNREC ensures homes weatherized in Delaware receive the highest quality of work to maximize energy savings and long-term efficiency. The Delaware Weatherization Program accomplishes this by maintaining a well trained staff to monitor work completed, as well as providing trainings for all weatherization staff, contractors, and their employees. To ensure that procedures are being properly applied, the Subgrantee receives administrative and technical training, along with field visits and enhanced training at the field site. State staff, Subgrantee staff, and contractors are trained to strictly adhere to the approved energy modeling and the Delaware Standard Work Specifications (SWS). At the beginning of the 2019 program year on April 1, the newly approved SWS also became the Delaware Field Guide. The SWS is provided digitally via a Dropbox account and is also provided to the Subgrantee and their contractor in a hard copy form.

All technical requirements and specifications are included in our SWS, and every worker in the program has direct access to the SWS at every active weatherization site via the Crew Leader copy on site and digital access. Reference to the SWS is included in the contract between DNREC and the Subgrantee and the contract specifically calls for the Subgrantee and all contractors to follow the provisions contained in the SWS. Upon signing the contract between the Subgrantee and the home performance contractor at the beginning of each program year, the contractor is bound to adhere to the Delaware Standard Work Specifications, the Delaware Weatherization Policy Manual (WAP Manual), and all other applicable state and federal weatherization Program Updates or directives. The contract clearly states the requirement to adhere to the SWS for work quality as outlined in WPN 15-4, Section 2, expresses the adherence to the approved energy audit procedures and 10 CFR 440 Appendix A.

Homes being weatherized, first receive extensive testing of combustion appliances to ensure family health and safety. Work is then assigned to the unit based on the specific recommendations from an initial energy audit performed on the unit. The Subgrantee selects contractors to complete the weatherization work based on the energy audit recommendations and Delaware's approved Hancock software modeling. The types of work to be done include general air sealing (blower door directed), insulation (attics, crawl spaces/basements/walls/ducts), DHW insulations and some mechanical equipment efficiency or health and safety work.

All work is being performed in accordance to the DOE approved energy audit procedures and 10 CFR 440 Appendix A. In addition, all work done is in compliance with the Delaware WAP Manual, available to the general public, clients, the Subgrantee, contractors and others online at: [www.de.gov/wap](http://www.de.gov/wap)

DNREC ensures adherence to federal and state requirements through our contracts with the Subgrantee which require that "...VENDOR shall comply with 42 U.S.C. § 6861 et seq., and 10 CFR Part 440 and 2 CFR 200, the approved U.S. Department of Energy (DOE) Weatherization Assistance Program (WAP) State Plan for the State of Delaware, the Delaware Weatherization Policy Manual (WAP Manual), the Delaware Standard Work Specifications, and all other applicable state weatherization Program Updates or directives." In turn, the Subgrantee's contract with their home performance contractors require that they adhere to all contractual language held between DNREC and the Subgrantee.

Besides the contractual agreement, regular monitoring of site activities by the Subgrantee's auditors and the State Monitor assures that adherence is occurring daily. The Subgrantee provides the required documentation to each subcontractor at the time of entry into the WAP and at the beginning of each program year upon signing new contracts. Beginning in PY16, contractors were required to sign acknowledgements that they received the Delaware SWS and the WAP Manual. The State Monitor visits the in-progress sites on a regular basis and reviews all of the WAP subcontractors' work. At the time of an in-progress review, the subcontractor must verify that the SWS is on site and available for use. The State Monitor also accepts the digital access to the required document, and the subcontractor must show the access digitally. A sample contractor acknowledgement is provided as an attachment to the SF-424.

As per the guidance in WPN 20-1, Section 2.8, the WAP Manual lists the exempt activities and requires the Environmental Questionnaire (EQ-1) to be submitted for review.

Field guide types approval dates

Single-Family: 1/15/2019
Manufactured Housing: 1/15/2019
Multi-Family:

**V.5.2 Energy Audit Procedures**

Audit Procedures and Dates Most Recently Approved by DOE

Audit Procedure: Single-Family
Audit Name: HEAT
Approval Date: 7/8/2019

Audit Procedure: Manufactured Housing
Audit Name: HEAT
Approval Date: 7/8/2019

Audit Procedure: Multi-Family
Audit Name: Other (specify)
N/A

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007910, State: DE, Program Year: 2020)**

Approval Date:

Comments

Delaware received a conditional approval from DOE to use HEAT for single family and manufactured homes beginning 02/04/19. This conditional approval is based on providing a list of items to DOE. Delaware had provided three trainings to their auditors (February and March 2019 by an in-house trainer and October 2019 by Community Housing Partners (CHP)). At the conclusion of the October training, the auditors were tested for competency with Hancock. Two auditors re-tested through CHP to ensure competency. The re-testing was conducted on January 30, 2020.

DOE is tasked with reviewing the home energy audits in Hancock/HEAT to ensure that the energy modeling is being applied accurately. DOE will be finalizing their review of Delaware audits prior to April 1, 2020. In addition, Delaware is required to provide a Delaware Auditor's & QCI Guide which is slated for completion prior to April 1, 2020.

Delaware is in compliance with having an approved SWS/Field Guide as of 01/15/19.

For Multi-family situations, Delaware will treat such situations on a case-by-case basis using EA-Quip with DOE approval as needed. Currently Delaware does not have a certified auditor for multifamily. In pursuing multifamily weatherization, Delaware will contract for the auditing services (initial audit and final inspection). The 2020 Training Plan contains opportunities for the WAP auditors to obtain the multifamily certification. DNREC will submit all multifamily projects to the DOE Project Officer for approval in the absence of a multifamily audit protocol.

**V.5.3 Final Inspection**

DNREC requires Quality Control Inspectors (QCI) working for, or contracted by, the WAP to possess the knowledge, skills and abilities in the National Renewable Energy Laboratory (NREL) Job Task Analysis for Quality Control Inspectors. Every DOE WAP unit reported as a "completed unit" has received a final inspection ensuring that all work meets the minimum specifications outlined in the Delaware SWS. In addition, every client file will contain verification that certifies that the unit had a final inspection and that all work met the required standards signed by a certified QCI. If a unit has received both a final inspection and has also been monitored by DNREC, there will be evidence in the file to that effect, in addition to the QCI report.

Currently Delaware has three QCI certified inspectors working in the Delaware WAP program. Two are employees at ECA and the State Monitor. ECA uses all in-house employees for their auditors, QCIs and installing crew. The two QCI inspectors working at the Subgrantee are sufficient resources to ensure compliance with WPN 15-4 for the New Castle County area. The lower two counties, Kent and Sussex, will be part of the competitive process to attract a new Subgrantee.

The final inspection ensures that all health and safety issues were addressed in a manner which protects the client. Final Inspections include: post blower door readings at CFM 50; health and safety checks including Worst Case CAZ and compliance with ASHRAE 62.2; checks of accuracy of measures charged against measures installed; and evaluations of the appropriateness of all work completed, including air sealing, insulation, client education, duct insulation, pressure differentials, and costs. A dwelling unit may not be reported as completed until a final inspection has been performed and it has been certified that the work is high quality, all materials have been properly installed, and approved procedures have been followed. Standardized forms are used to document the results of the final inspection, and are recorded and maintained in the client file in the WAP OnLine database. Only completed dwelling units with successful final inspections are reimbursed by the State and DOE.

ECA has transitioned from an independent auditor/QCI protocol to an in-house auditor/QCI protocol since 2019. Delaware will utilize an in-house auditor/QCI protocol whereby the auditor (on-staff at the Subgrantee) performs the audit, creates the work order, and sometimes may perform the final QCI inspection. The auditor is not involved in any of the actual work on the home. Because this model does not allow for an independent review of the audit on every home, DNREC will perform quality assurance reviews of at least 10 percent of all completed DOE units. Given the high experience level of our contractors and our small technical staff, we believe a 10 percent target to be justifiable. We will however be measuring any failure rates or problem areas and may increase the quality assurance target if field work or the work of the auditor/inspector is unsatisfactory.

In the event that a QCI is found to have inadequate inspection practices and/or lacks adherence to the SWS and WAP policies and procedures, DNREC will determine if the inadequacy is a training void or ethical concern. If the QCI requires additional training, the QCI will have a Corrective Action Plan (CAP) to address the training needs. If the QCI refuses training or does not adhere to the CAP, the QCI will be terminated from the Program. If DNREC identifies an ethical concern that is substantiated, the QCI will be terminated.

A copy of the final QCI inspection form, provided as an attachment, is used in concert with the Work Order that lists all of the measures installed. The QCI verifies on the Hancock Final Acceptance Report that all measures have been installed and notes if there are any missed opportunities. The policy and procedures that govern QCI inspection and enforcement are located at [de.gov/wap](http://de.gov/wap) under Info for Professionals - WAP Manual Sections 5.2.1, 5.2.6, and 5.2.8.4.3.

**V.6 Weatherization Analysis of Effectiveness**

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DNREC had a third party consultant conduct a program review of the Delaware WAP with the report being delivered in November 2017. Report recommendations were used to target areas of improvement for communication, diversity training, pipeline tracking, client intake training, and inventory tracking. DNREC saw improvements in each of these areas.

In addition, continuous Program improvement is being achieved through the Annual Administrative Review (AAR), Annual Technical Review (ATR), regular meetings with the Subgrantee, formal field monitorings, training, formal corrective actions, and auditor quarterly meetings. Management mechanisms being used are Corrective Action Plans for findings during the AAR and ATR, semi-annual meetings with the Program Managers to discuss production goals, auditor shortfalls, staffing challenges, contractor retention, and contractor procurement. Another mechanism is regular meetings with the Subgrantee; DNREC meets monthly with ECA.

The findings from the final inspections are included in an ongoing evaluation of quality of the subcontractors that feed directly into the procurement and selection process. Contractors found to have substandard quality work do not continue in the Program, the goal being to create specialized experts in weatherization. The next level of oversight comes from the quality assurance inspections performed by the DNREC staff. The quality assurance inspections assess all the elements of the final inspectors, as well as detailed inspections of the energy audit itself and adherence to the SWS. The quality assurance inspections also include detailed review of the full documentation of the client file, procedures followed by the Subgrantee, procurement, documentation, competency of energy modeling, and the invoicing. DNREC staff performs quality assurance inspections on 10% of completed units. One-on-one interactions with the Subgrantee auditors and installing crews prove to be effective in reviewing quality workmanship on a daily basis. Training needs are quickly identified and addressed by pertinent training.

Currently there are three QCI certified inspectors that work for WAP in the state; two are employed at ECA, and one as the State Monitor. The quality of final inspections conducted by QCIs is an on-going process that is reviewed by the State Monitor. Any lack of quality is addressed through the regular auditor meetings and can be addressed by the process of removing a QCI in the Delaware WAP (WAP Manual, Section 5.2.8).

The WAP has only one Subgrantee at this time and preparing to bring on another in early program year 2020. Currently the effectiveness of the weatherization is measured through the regular observations made in the field, the AAR and the ATR. The State Monitor holds quarterly meetings with all of the Delaware auditors to improve Program consistency and he provides training at these meetings. Trainings have included Health & Safety updates and corrections to his observations made in the field.

The State Monitor performs a biannual market analyses that tracks weatherization prices in the region. He also compares the Delaware Price List to other states in the region to ensure that Delaware pricing is fair and reasonable. The State Monitor stays abreast of new products and includes them on the revised Delaware Price List which is reviewed twice a year.

In late 2019, EcoMetric delivered a report to the DNREC Energy Section that evaluated and verified the energy savings reported by WAP and customer satisfaction. EcoMetric provided a revision to the energy savings methodology being used prior to PY19. The revised EcoMetric methodology provides more accurate results for reporting energy savings due to WAP services. This revised methodology has been used to calculate anticipated energy savings in the Annual File and has been provided as an attachment to this Plan. In addition, the report quantified the non-energy benefits gained by WAP clients due to the WAP services received as being \$236 per household per year and a benefit-cost ratio of 1.71 showing that the program is cost-effective. In PY2020, EcoMetric will conduct follow-on analyses to verify the non-energy benefits reported in PY2019.

## **V.7 Health and Safety**

The Health and Safety (H&S) Plan is attached. Find on pages 22-23 the Health and Safety survey that is filled out by the client at intake. A second part of the survey is later filled out by the home energy auditor as part of the initial home energy audit of the home.

On page 2 of the H&S Plan, there is an explanation of the maximum percent for the H&S costs of 14.9% per unit when figured across the total number of DOE units weatherized. In addition, Delaware removes H&S from calculating the average cost per unit because we elect to have a separate H&S cost category. When the new H&S guidelines were provided to the WAP network, training for the auditors was provided and all the WPN 17-7 information was sent to the Subgrantee. To ensure the continuation of H&S training, each Subgrantee provides a new contractor with an orientation that includes the Delaware H&S training. Every two years, DNREC holds an All-Hands mandatory H&S training for all persons in the WAP; July 31, 2019 was the last one held which ensured that all changes to H&S in WPN 17-7 were covered.

DNREC tracks all training of the Subgrantee's staff and their weatherization contractors. DNREC and auditors ensure that the installing crews have an RRP-certified individual on-site. Contractors are required to have access to their copy of Firm Status and their RRP certification. The Subgrantee must obtain the Firm Status and copies of all valid RRP certifications for their Crew Leaders at the beginning of each program year for signing new contracts. In addition, these certifications are reviewed during the annual administrative review of the Subgrantee.

Last program year, DNREC provided accredited training on radon, mold and asbestos to the technical staff (QCI, auditors, & crew leaders). The focus of the radon portion of the training was on general radon education, reviewing the client education that the auditors must provide to clients, overview of the EPA's Consumer Guide to Radon Reduction, and the new WAP radon client consent form. The Radon Client Consent form has been updated in late PY19 to contain a phone number for clients to call and obtain a free radon test kit. Refresher training is slated for July 2020.

Delaware does not repair/replace air conditioning (AC) systems. The only instance when an AC unit is part of a repair/replace is when the AC unit is intrinsic to the primary heating system (heat pump). If AC of the home is necessary for health & safety purposes, the client is referred to the SCAP AC Program that uses

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state LIHEAP funds to install window AC units.

ASHRAE 62.2 training will occur in May 2020 for all auditors in the Program to ensure that there is consistency in how auditors are applying the 2016 standard. The deferral checklist is provided at pages 20-21 in the H&S Plan (attached to the SF-424). When a home is deferred at the time of the audit, the client is notified by mail, the reason(s) for deferral is cited, and the right to appeal information is provided. Catholic Charities in Delaware implements a program that is funded through the Delaware Sustainable Energy Utility that provides home repairs for the sole purpose of having deferred WAP homes placed back into the Weatherization Program; called the Pre-Weatherization Program (Pre-WAP). In implementing this program, a home that is deferred through WAP may be returned to the WAP to proceed with weatherization. The synergy of the Pre-WAP and WAP programs is proving to be tremendously successful in weatherizing more homes that may have remained in a deferral status indefinitely. A rate of 85% of the homes deferred to the Pre-WAP come back into WAP to complete services.

In DOE's guidance each state is required to define what major and minor repairs constitute. In Delaware, the WAP follows the use of incidental repairs, those repairs employed to support successful installation of ECMs, with a maximum cost of \$400. All other minor and major repairs necessary that fall outside of the definition of an IRM are deferred to a sister program called Pre-Weatherization and that program provides the necessary repairs within their funding limits. Delaware WAP can also defer homes to other programs for heating system repair/replacements and major home repairs like a complete roof replacement. If the home requires immediate assistance (like a heating system in the dead of winter or major electrical repairs), other state funds are used for these occurrences.

## **V.8 Program Management**

### **V.8.1 Overview and Organization**

The Delaware Weatherization Assistance Program is administered by the Delaware Department of Natural Resources and Environmental Control's (DNREC) Division of Climate, Coastal, & Energy. The Division includes other key energy and climate policy staff for DNREC. The role of the Subgrantee has been fulfilled for 2 years by the Energy Coordinating Agency (ECA). Delaware will be conducting a competitive bid process in early 2020 to attract another Subgrantee to implement the Program in Kent and Sussex Counties. The competitive bid process, a Request for Proposal (RFP), will be in compliance with all state of Delaware requirements.

The Division of Climate, Coastal, & Energy in DNREC also administers the State Energy Program (SEP) grant under DOE. The Division is the lead state agency in development of energy policy and plans related to renewable energy systems, energy efficiency and utility policies. We work in concert with the State Public Service Commission, the Sustainable Energy Utility and other state agencies having an interest in energy issues, including the Department of Transportation, the Division of Historical and Cultural Affairs, the Delaware State Housing Authority, the Division of Air Quality in DNREC and many affected electric and gas utilities across the State. DNREC also works closely with the Department of Health and Social Services, the lead agency for the LIHEAP program in Delaware.

As part of the Program Management, DNREC immediately implemented an Improvement Plan to increase communication with the Subgrantee based on the results of the 2017 American Consumer Satisfaction Index (ACSI) survey. The Grantee was holding monthly meetings via conference call with the Subgrantee but chose to convert the calls to face-to-face meetings for 6 months. At each meeting during the 6 months, a different topic was discussed that directly related to the ACSI survey results (discussed in the Annual File under Miscellaneous IV.7). The follow-up ACSI survey administered in 2019 showed a significant increase in satisfaction with communication. DNREC continues to apply best practices to maintain excellent communication with the Subgrantee.

### **V.8.2 Administrative Expenditure Limits**

Delaware has traditionally received relatively small federal WAP appropriations, so allocating the full 10% of allowable administrative dollars fails to meet the administrative expenses of both the Subgrantees and the Grantee. In addition, the State (Grantee) is prohibited from using program operations funds to meet salary or other operating expenses. Delaware allocates the allowable 10% for administrative expenses with a split of 51/49, with the Subgrantee receiving 51% and the Grantee 49%.

### **V.8.3 Monitoring Activities**

The monitoring approach is to assist the Subgrantee in providing high quality energy conservation weatherization services to low income individuals and to comply with all Program Rules and Guidance. In addition, monitoring ensures that high quality comprehensive services are consistently applied throughout the state.

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Monitoring will ensure adherence to new program policies and procedures at the State level and effective implementation of the Program at the local level.

The State has one statewide technical monitor referred to as the State Program Monitor. The Grantee also pays for staff time to monitor the Subgrantee on the administrative and financial portions as well. Our State Program Monitor position is required to be QCI and BPI certified and have a minimum of 5 years of experience in weatherization and home energy performance. The WAP State Manager and a Planner II are the other staff at the Grantee level which provide monitoring at the administrative and financial levels. They participate in the technical monitoring portion of the Annual Administrative/Technical Review yet yield to the technical expertise of the State Program Monitor. The WAP State Manager received the BPI Building Analyst training and has significant experience in building science, which aids in program performance overall.

The goal of the Subgrantee monitoring approach is for constant communication, coordination, assistance, and constructive evaluation between DNREC and the Subgrantee; it is monitored regularly. Onsite monitoring of the Subgrantee includes the following: client file review; most recent organization audit; procurement procedures review; fiscal review; review of Liability & Pollution Occurrence Insurance (POI); review of compliance with all DOE and State regulations and procedures; and production management review. The Subgrantee must provide a copy of their most recent financial audit as part of the annual monitoring. DNREC staff review the client files for completeness, accuracy, and appropriateness of forms and signatures. Monitoring staff also review timelines of vendor payments as well as evaluation of appropriateness of cost for services. Delaware utilizes a monitoring checklist that is based upon Program Guidance 16-4 which includes all provisions in the Subgrantee checklist and applicable programmatic and financial checklists found on EERE. If the Subgrantee has deficiencies, a Corrective Action Plan will be created with deadlines for the deficiencies to be corrected. If the Subgrantee fails to correct the deficiencies as outlined in the Plan, the language in the State Professional Services contract and the WAP Manual provide the vehicle through which to terminate the Subgrantee from the Program. Both of the 2019 Subgrantees were formally monitored in PY19.

In compliance with the Quality Work Plan and SWS goals, DNREC will conduct random quality assurance evaluations of 10% of all completed dwelling units (6 units). We use the 10% minimum because we have opted to allow final QCI inspectors to inspect units on which they conducted the initial audit. The State Monitor is required to conduct 6 formal monitorings in PY 2020; these will be scheduled at approximately one monitoring every other month. The unit being monitored has not received final payment and will not until all issues are completed as per the monitoring report. The travel necessary for the State Monitor is conducted within the standard work day, Delaware is quite small and special travel arrangements and budgets are not necessary. DNREC conducts multiple site visits during weatherization activities (referred to as informal monitorings) to ensure that weatherization services are provided in a professional and workmanlike manner in compliance with all standards, regulations and policies set forth by DNREC in the Delaware SWS and DOE rules and guidance. The State Monitor ensures that all work is being conducted by fully trained contractors and installers (the state is small; the Monitor knows all of the contractors and their crews by name). The field inspection includes: base load measures installed, air sealing, insulation, mechanical ventilation review, CAZ testing etc. The monitor must verify that the work being performed is appropriate and effective, and in compliance with all DOE and State regulations. Monitoring staff also gather feedback from subcontractors and program participants to better understand strengths, weaknesses and opportunities for improvement, training and technical assistance. In the event a unit has a weatherization issue after being deemed complete, the Subgrantee auditor is responsible to conduct an investigation of the issue. If the issue is not resolved, the State Monitor will investigate the issue and make a determination of how to resolve the issue.

The QCI final inspections will verify that the SWS has been followed for each measure installed in the home. QCI certifications will be monitored by the Grantee and records kept on when each final inspector attains his QCI certification and its expiration (DNREC receives electronic notifications from an automated database when credentials are ready to expire). When the State Monitor discovers a lapse in a QCI's credentials or when inspectors are not following established SWS guidelines, such lapses will be brought to the Subgrantee's attention and an additional QCI inspector will be required to redo the inspection. Further, QCI inspectors found not following SWS or other programmatic guidelines in a consistent fashion are subject to removal from the program (WAP Manual, Section 5.2.8). Similarly, the State Monitor, who is a contractual entity, if found to be disregarding standard work specifications or other standards under the program, or if he fails to maintain the proper credentials, will be subject to disciplinary action and/or dismissal provisions; the same as other QCI professionals.

Seventy three percent (73%) of the Grantee's T&TA funds are spent directly on monitoring the Subgrantee. The remaining T&TA funds are used for training, data management and travel.

Programmatic monitoring occurs at least annually. DNREC uses such monitoring to determine whether a Subgrantee is deficient in its procedures. If a Subgrantee is found deficient they will be required to remedy all deficiencies and will be offered training specific to the agency's needs as per WPN 16-4. A deficient Subgrantee will also be subject to increased frequency and monitoring by the State if deficiencies are not addressed in a timely fashion.

Within thirty (30) days of each formal field monitoring, the State prepares a written report on its findings and sends it to the Subgrantee for corrective action. The Subgrantee has thirty (30) days to respond in writing with a Corrective Action Plan in response to each state monitoring report. Noncompliance findings, unresolved within forty five days, are then reported to DOE; sensitive or significant noncompliance findings are reported to DOE immediately. Deficiencies in the process of the formal monitorings and reporting will give reason for Subgrantee suspension or termination through the Delaware WAP Manual, Section 4.2.3 Failure to Meet Program Goals.

#### **V.8.4 Training and Technical Assistance Approach and Activities**

The State of Delaware's Training and Technical Assistance (T&TA) is intended to increase the efficiency and effectiveness of the weatherization program at all levels. T&TA activities are also designed to help maximize energy savings; minimize production costs; improve the quality of workmanship; and reduce the potential for waste, fraud and mismanagement. All stakeholders in the Program including the state, the Subgrantee, and the weatherization contractors and subcontractors receive T&TA. Each stakeholder engages in training and/or receives technical assistance to replicate best practices and adhere to DOE standards of excellence throughout the entire project. Agencies receive T&TA consultations from the DNREC staff as appropriate. These visits assist local agency staff with issues

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relating to program operations, fiscal management, procurement procedures, and the technical aspects of the program. The State Monitor quickly addresses deficiencies in the field with training.

The Subgrantee holds retention agreements with their subcontractors to ensure that the subcontractors remain in the Program for a period of at least 6 months after receiving the training. If a subcontractor leaves the Program, the Subgrantee must reimburse the Program for the training received.

The Subgrantee in Delaware receives 56% of the T&TA funds. DNREC arranges the majority of the training by handling professional training contracts, funding, participant registration, and hosting the training days. In PY16, all of the Delaware Crew Leaders and Installers attended comprehensive training at the Williamsport Training facility and completed the Crew Leader and Retrofit Installer programs. Major Tier 1 training for the Crew Leaders and Installers will be updated every five (5) years. The training schedule in PY20 is focused on informal trainings through ToolBox Talks and quarterly Auditor Meetings. More formal trainings in PY20 will focus on HPC, NASCSP and Energy OutWest conferences, basic HVAC training, and multi-family certification.

**Assessment of Training Needs**

The State assesses the training needs of the Subgrantees and contractors through quality assurance monitoring in the field, observations of performance, discussions, regularly scheduled management meetings, and monitoring visits. Through close monitoring of contractors' work, the Subgrantee is able to further assess areas for improvement and provide robust feedback to the State for additional training needs of their contractors.

**Maintaining Workforce Credentials**

DNREC and the Subgrantee require all new weatherization contractors coming into the WAP to provide all credentials for their crews as part of submitting their business documents. As a minimum, the Crew Leader must have OSHA 30 and a BPI Energy Auditor certification. Installing crew members must have OSHA 10. Before performing any WAP work on homes, the installing crew must prove competency on installing weatherization measures through credentials and/or close oversight by the Energy Auditor representing the Subgrantee. In addition, at the beginning of each program year the Subgrantee requires all credentials (the company and all individuals) to be submitted as part of their contracting process. All credentials are scanned and maintained in a training database held at DNREC and made available to administrative Subgrantee staff. The database provides monthly notifications of any expiring credentials contained within. DNREC informs the Subgrantee of expiring credentials and then individuals are notified by the Subgrantee to pursue refresher courses and/or recertifications. Once the renewed credentials obtained, the new certificates are scanned into the DNREC system.

**Training Plan**

The training plan will continue in 2020 and show that the implementation of the Tier 1 and Tier 2 levels are met. All WAP workers will be provided with JTA training provided by an IREC-accredited training facility for Tier 1, as required by DOE. Delaware's program currently employs three staff at the Grantee and six staff at the Subgrantee level. Delaware uses a two tier system of training as outlined in WPN 15-4. Below under **Training Plan Components** is a detailed training schedule and the budget planning to show how the Grantee will meet the needs. If there are any un-utilized T&TA funds, they will be moved to Program Operations to weatherize more homes before the end of the grant cycle in March 2021.

**Tier 1**

In November of PY19, Delaware provided Retrofit Installer training to all technical staff in the Program. As a follow-up to that training, more training was defined in the area of blowing wall insulation. In 2020, DNREC will look for training on HVAC systems to help the auditing staff to better understand all types of heating systems. This was a request from one of the auditors to be more knowledgeable about HVAC systems.

**Tier 2**

DNREC will continue Tier 2 training sessions when new staff are brought into the program and when a need may be evident based on monitorings or other indications that additional training or refreshers are required. Hancock Software training for using the HEAT Tool and software essentials for all users will continue; especially as WAP moves forward with the full home energy audits in 2020.

Health & Safety training is provided by the Subgrantee as part of their new contractor orientation. DNREC requires all WAP personnel to attend H&S training every two years; which won't be undertaken until PY21.

Quarterly Auditor Meetings hosted by the State Monitor will have webinars and field observations incorporated for training purposes. These meetings/trainings will serve the purpose of maintaining consistency throughout the state.

ECA has a monthly training session that they hold for their employees. They cover installation techniques for pipe wrap, duct wrap, insulation tips & tricks, door sweeps and door kit installation, etc. with a focus on any findings by the State Monitor through monitoring visits.

DNREC has set a goal of providing ToolBox Talks on various subjects to keep the installing crews abreast of any new program changes, basic safety, knob & tube wiring, and new weatherization techniques and products. In this way, the State Monitor can focus training for the installing crews where work quality may be faltering. This training approach will continue into PY20 under the direction of State Monitor on a quarterly basis. These Talks will be given in the field and be a 15-20 minute discussion.

**Training Plan Components**

Formal trainings are mandatory. Failure to attend formal training requires comparable outside training (with proof of passage) or termination from the Program.

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Training prior to hire is not a requirement in Delaware, the individual must acquire training as prescribed in the Delaware WAP Update 16-03 (Training Requirements) for each core competency. The Training Plan contained herein is modified as necessary in response to monitoring reports from DOE, state monitoring findings, or observed technical deficiencies as noted by the State Monitor on an as-needed basis. Delaware's WAP Manual is in the process of a full revision which is slated to be released at the beginning of PY20. Delaware's WAP Manual specifies minimum qualifications and core competencies for each JTA working in the Delaware Program.

DNREC maintains a spreadsheet of all training held by DNREC and attended by WAP workers presently working in Delaware. When DNREC requires training, DNREC records the names of attendees and issues certificates of completion. The scanned certificates and training name are kept on file digitally. All workers are tracked for maintaining certifications; DNREC will notify workers when they are set to expire. When training is obtained outside of DNREC's purview, the worker is required to supply DNREC a scanned copy of the certificate.

**Training courses slated for PY20 include:**

Projected Date	Training Name	Number Trained	Budget Amount
Quarterly 2020	Tool Box Talks	35	\$1,000*
Quarterly 2020	Auditor Meetings/Trainings	7	\$1,000*
Apr 2020	HPC Conference	5	\$7,500
Apr 2020	Basic HVAC Training	11	\$14,000*
May 2020	Radon Refresher Training & ASHRAE 62.2	5	\$8,000*
Jul 2020	Blowing Walls with Insulation	11	\$15,000*
Jul 2020	NEUAC Conference	1	\$1,500
Aug 2020	Energy OutWest Conference	5	\$11,500
Sep 2020	NASCSP Conference	2	\$4,600
Nov 2020	Multifamily Certification	4	\$14,100
Feb 2021	NASCSP Conference	3	\$3,600

**Total \$81, 800**

**\* Mandatory Training**

Client education is one of the pillars of the Delaware WAP, DNREC and the Subgrantee are ever vigilant to provide client education at intake, during monitoring visits, during the initial audit, and at the final inspection and project completion. A radon refresher training is slated to solidify the educational component for all of the auditors.

Outreach and education is included as a performance parameter in the state contracts with the Subgrantee and reviewed through the annual Subgrantee monitoring process. The Delaware WAP has a display at the Delaware State Fair every year which provides education about weatherization and energy conservation. The Grantee undertook an outreach campaign in PY19 that delivered 4,200 WAP brochures through Meals-On-Wheels, Food Bank boxes, laundromats, senior centers, and libraries; this effort will continue into PY20. Where shortcomings in client education capabilities are discovered the Grantee will provide targeted remedial training to address the need.

**Percent of overall trainings**

Comprehensive Trainings:	36.0
Specific Trainings:	64.0

**Breakdown of T&TA training budget**

Percent of budget allocated to Auditor/QCI trainings:	68.6
Percent of budget allocated to Crew/Installer trainings:	19.6
Percent of budget allocated to Management/Financial trainings:	11.8

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**V.9 Energy Crisis and Disaster Plan**

Delaware does not include any disaster or energy crisis plans in our WAP application. If the circumstance arises in Delaware, WAP will follow the appropriate procedures defined in WPN 12-7.