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Evaluation Design for U.S. DOE's WAP Quality Work Plan



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Agenda

Evaluation Design for WAP's Quality Work Plan (QWP)

Background

Stakeholder Input

Research Questions

Overview of Evaluation Approach

Evaluation Tasks

Status and Discussion

Background

- The Quality Work Plan (QWP) was initiated during PY2014 in response to:
 - lessons learned through various quality assurance reviews
 - concerns expressed by WAP network
- Culminated in DOE issuing Weatherization Program Notice (WPN) 15-4:
 - "The QWP defines what constitutes a quality installation of weatherization measures, outlines how these measures are inspected and validated, and prescribes acceptable training and credentialing of workers." (WPN 15-4)
- The QWP includes a requirement that 100% of completed WAP units are inspected by a Certified Home Energy Professional Quality Control Inspector.
- DOE tasked ORNL to implement an evaluation to measure potential impacts attributable to the QWP – ORNL tasked Three³ to develop an evaluation plan.



Response to WAP Network Concerns¹

Issues raised by the entire WAP network led to the QWP:

- No way to establish the value of experienced crews
- No way to place value on high-quality training
- No national standards for work quality
- No nationally recognized credentials for experienced WAP workers
- Inconsistent methods of inspection across the network
- Inconsistent expectations at all levels of monitoring



¹ Source: Olsen, Josh (DOE). ACI National Home Performance Conference & Trade Show. May 2014.

Stakeholder Input

Over a dozen stakeholder groups around the country were contacted to gain inputs for the evaluation design.

- The interview protocol was designed for the stakeholders to help us:

Understand the
QWP requirements

Capture all
important impacts
of the QWP

Develop research
questions

Identify most
useful information
to capture

Identify available
data pertinent to
the evaluation

Provide insights
into the best way
to collect data

Research Questions

- How well does the Program's resources and inputs provide necessary support for QWP compliance?
- How well are Grantees/Subgrantees fulfilling their obligations under DOE regulations and the state plans they have submitted with respect to QWP?
- Do Subgrantees have the capacity and structure to fulfill the QWP requirements?
- How did Grantees/Subgrantees manage increased work quality expectations?
- How did Subgrantees manage training of more qualified staff?
- What are the strengths and weaknesses of BPI QCI certification curriculum and protocol?
- Has the number of crew-based program delivery models decreased while contractor-based increased?

Research Questions (continued)

- In which way can the QWP requirements be more beneficial?
- In which way can the QWP requirements be less burdensome?
- How have certification programs changed since development of SWS? Since QWP?
- How have increased certification requirements changed weatherization staff hiring and retention practices?
- To what extent did the QWP impact WAP program administration?
- To what extent did QWP produce desired changes in work quality?
- To what extent did QWP impact production rates?

Evaluation Approach Overview

- The evaluation will include seven components:
 1. In-field work quality assessments
 2. Assessment of client files
 3. Grantee/Subgrantee survey
 4. Weatherization staff survey
 5. Informal discussions with high-level Subgrantee and Grantee staff
 6. Assessment of monitoring records (State and Federal level)
 7. DOE's PAGE data review
- The in-field assessment component will reprise a study conducted by APPRISE, through the 2010 national WAP evaluation, the Field Process Study
- Surveys were adapted from the 2010 national WAP evaluation
- Direct comparisons will be made to observations of weatherization delivery conducted through national WAP evaluation in 2010

In-Field Work Quality Assessments



- Pre-tested data collection instruments (check-lists) will guide in-field assessments
- Checklists track ~450 different weatherization tasks among all job categories
- Information specific to service delivery quality, implementation challenges, and solutions will be collected
- Technical experts will be hired to conduct in-field work quality assessments
- Experts will be trained on how to use checklists for data collection and not interfere with work in process
- Data will be analyzed and presented in such a way that Grantees and Subgrantees are unidentified
- All results will be presented in an aggregate form

Subgrantee Client File Reviews

- Collect key data from Subgrantee client files in order to characterize:
 - Extent of proper documentation
 - Evidence of work quality at all phases of weatherization delivery
- Client file reviews will be combined with records collected during the national evaluation of WAP
- Findings will be reported by program year to track changes across time

Examples of Data to be Collected	
Predicted to increase during PY2015 then decrease in subsequent years:	Predicted to increase beginning with PY2015:
Number of reworks	Thoroughness and quality of unit assessment and diagnostics
Cost of reworks	Combustion Appliance Testing (Yes/No)
Number of failed inspections	CFM Reduction Met Goal (Yes/No)

Surveys and Case Studies

Weatherization Staff Survey

- 40 questions / 20-25 minutes
- Key data to be collected:
 - Job characteristics, experience, certifications, training history and needs, perceptions of impacts of QWP on weatherization industry.
 - Changing employment status

Subgrantee/Grantee Survey

- 19 questions / 15 minutes
- Key data to be collected:
 - QWP compliance, track training needs, perceptions of impacts of QWP on weatherization industry.

Case Studies

- 20 - 25 minutes per staff / 3-4 staff per Subgrantee
- Data from the client file reviews and surveys will be supplemented by informal in-person discussions.

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DOE-related Data Resources Review

- Review of DOE's Performance and Accountability for Grants in Energy (PAGE)
- Data from Grantee annual files and monthly performance reports
- DOE Program Officers' quarterly performance reports

Data limitations:

- Reliability and consistency of data for some variables is uncertain

Sample Size by Research Task

Entity/ Person	Desired Sample Size	In-field Work Assessments	Client File Reviews	Wx Staff Surveys	Grantee/ Subgrantee Surveys	Review of Monitoring Files
Subgrantees	40 Subgrantees	400 assessments (10 per)				
Subgrantees	40 Subgrantees		2,000 files (50 per)			
Subgrantees	200				X	
Grantees	58				X	X
Auditors	260			X		
Crew Members	260			X		
QCIs	260			X		
DOE (PAGE & Other Resources	TBD					X

Status and Discussion

- **Status** - Draft QWP Evaluation Plan developed and being reviewed by ORNL and DOE
- **Next Steps** - After the evaluation plan is finalized, ORNL will select a contractor to implement the plan
- **Discussion**
 - Suggestions
 - Concerns
 - Other

Thank you!

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