PTCS Program Redesign:
Pre-Roundtable Brown Bag

Amy Burke, Program Support Specialist
August 1, 2019
Hello!

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The Agenda

- The Why
- Big Picture Goals
- The Process
- Down in the Weeds
- Discussion
- Next Steps
We got the message: PTCS is complicated.
PTCS Annual Savings

![Graph showing annual savings (aMw) from 2012 to 2018 with a target indicated.](image-url)
Big Picture Goals

- Simplify PTCS for utilities and technicians to increase uptake
- Simplify systems, materials, and infrastructure
- Update technical specifications and program design to reflect the changing market
The Process

NOV – DEC 2019

Plans to present the three lowest barrier options

Option 1
Option 2
Option 3

JAN 2019 - Present

Called in the experts:
Utility Workgroup, Engineering, IT, Compliance, and Evaluation

NOV 2018 – APR 2019

Started down in the weeds: What are all the issues?

Specifications  Reporting  Documentation
Lack of Training  Cumbersome QA

What are all the issues?
# Utility Workgroup

**Thank you, participants!**

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<tr>
<th>Alicia Harmanson, Lewis County PUD</th>
<th>Jim Maunder, Ravalli Electri</th>
<th>Michael Currie, Clallam PUD</th>
<th>Ryan Perry, Tillamook PUD</th>
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<tr>
<td>Anita Clever, Klickitat PUD</td>
<td>Jody Howe, Central Electric Co-Op</td>
<td>Michelle Ehrlich, Cowlitz PUD</td>
<td>Sara Bernards, McMinnville Water and Light</td>
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<td>Brandy Neff, PNGC</td>
<td>Joe Hull, Midstate Electric</td>
<td>Nancy Phillip, Benton PUD</td>
<td>Scott Mayfield, Kootenai Electric</td>
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<td>Charles Schifferdecker, Eugene Water &amp; Electric</td>
<td>Kevin Watier, Snohomish PUD</td>
<td>Pat Didion, Milton-Freewater</td>
<td>Todd Williams, Inland Power</td>
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<td>DuWayne Dunham, Clark PUD</td>
<td>Lindsey Hobbs, Inland Power</td>
<td>Penny Brambrink, Flathead Electric</td>
<td>Wid Ritchie, Idaho Falls Power</td>
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<td>Eric Miller, Benton REA</td>
<td>Mattias Jarvegren, Clallam PUD</td>
<td>Ryan Davies, Central Electric Co-Op</td>
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Workgroup Topics

- **Specification Review**
  - Ease of implementation
  - Inspection failure rates
  - Cost to commission
  - Variable speeds: game changing?
  - Data and market trends

- **Documentation**
  - Obstacles and best practices
  - Assess requirements
  - Impact to oversight

- **Reporting**
  - Obstacles and best practices
  - Assess reporting requirements and impact to savings
  - Impact to oversight

- **Training Content & Process**
  - Streamline training obligations
  - Improve scheduling and rural access
  - Leverage regional and market partners
  - Address contractor turnover

- **Quality Assurance Criteria & Process**
  - Streamline QA process and lower cost
  - Reduce barriers
  - Partner with utilities
The Advisors

Expertise Gathered Up Until Today

- Engaged Utilities
- Contractor Network
- Engineering & National Experts
- Manufacturer Data & Interviews
- Research Projects
- IT Systems
- Program Data & Market Trends
- Compliance, Planning, & Evaluation
- EERs

Next Step Consultation

- Engaged Utilities
- IT Systems
- Compliance & Planning
- Engineering
- Heat Pump Field Studies
- Marketing & EERs
- Contractor Network
Progress Report
Reviewed requirements for 24 non-BPA utilities with similar programs.

Some questions that were considered:

- Which specifications are being used and how are they applied?
- Are there alternatives methods to verify specifications?
- Are there other useful tools, models, calculators or methods?
Goals:
- Reduce duplication between documentation and reporting requirement
- Only require relevant documentation
- Make any documentation and report user friendly

Analysis underway regarding if the sizing documentation is a necessary requirement

We are aware of issues involving paperwork burnout and contractor turnover
Considering all options! Options to be presented in November, but ideas being discussed are:

- Offline version of the registry
- Option to upload backup documentation and email utility directly
- Simplify the interface to enter projects
- Suggest the appropriate Measure RefNo on the report

Goal: Least amount of interaction with reporting as possible.
Technical Specifications

Research Goals:

- Identify any specifications that could be simplified or removed
- Update any specifications for Variable Speed units and any other current applications

High Level Overview

- Identified questions
- Prioritized specifications from 12 to 6

Scoped Research

- National Experts
- National Utilities
- Utility Workgroup
- Heat Pump Field Study

Coming soon in November

Final Recommendations
Technical Specifications

Sizing
- “Like for like” sizing is common
- Investigating all alternative sizing methods

External Static Pressure & Airflow
- Exploring the accuracy and reliability of multiple alternative methods to measure airflow, including external static pressure and temperature rise
- Discussing if the correction factor in the TrueFlow test can be eliminated
Refrigerant Charge

- Considering using the manufacturer’s charging method as the preferred option
- Exploring the reliability of the temperature rise method and its ability to capture overcharged systems

Controls

- Discussing if the current Compressor Low Ambient Lockout specification is relevant to today’s installations
- Considering how to adapt the spec for systems sized without strip heat
Technical Specifications

Duct Leakage

- BPA is aware that duct system design and tightness is important to a heat pump installation, but overall feedback is that requiring the ducts be sealed is a significant hardship

Ground Source Heat Pumps

- Recommendations to simplify coming in November

PTCS & Prescriptive Duct Sealing

- Recommendations to simplify coming in November
Training Process

Goals: Increase availability, decrease cost, decrease need for travel, and address low literacy levels

- Remote, online classes to be available at any time
- In-person training for some elements, test proctoring, and in-field technician support
- Training on other topic areas created and available: sizing & administrative process
Quality Assurance Process

Goals: Reduce contractor call-backs for failures, increase real-time inspections and on-site corrections, decrease inspection cost, and simplify remediation

- Adding ability to inspect a percentage of projects remotely
- Working with the contractor for on-site inspections with a combination of pictures and non-recorded video
- Process possible offline
- Test pilot planned to start in early 2020
Quality Assurance Process

- In-person inspections criteria and process will still be available for the QA vendor and utilities
- Percentage of in-person inspections will be devoted to working with new technicians
- Analyzing how to target the inspection criteria on the highest failing specifications
- Simplifying requirements for utility representatives to become inspectors and offer self-inspections
Discussing more ideas!

- Technician recognition program
- Some sales training
- Some element of continuing education
- Clarifying requirements for alternative qualifying certifications
- Considering certifying entire contracting companies in addition to individual technicians
General Program Design

- Streamlining the program participation requirements
- Streamlining the contractor sign on process
- Discussing how best to leverage a technician network and recognize high-performing technicians
- Planning to schedule a regular meeting for participating utilities to discuss wins and obstacles with PTCS
Discussion
Is the approach comprehensive enough? If no, what is one thing you would add?
From project completion through invoicing, are there additional barriers you would like us to address?
Next Steps
Next Steps

AUG ~ OCT
Fall Roundtables

Brown Bag & Customer Feedback

NOV ~ DEC

Early 2020
Internal Decisions Based on Feedback

2020
RTF Discussions, System and Tool Development, Implementation Pilots, Extensive Field Testing

OCT 2021
Implement Redesigned Program
Next Steps

- November 21, 2019 brownbag
- Present three groups of recommended options to improve PTCS
- Prior to this meeting, a summary document will be provided including received feedback, all the simplification efforts, and what can or cannot be done and why.
Any feedback or questions?
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