

Richard Heath & Associates – RHA

Heat Pump Water Heater Retrofit Installation Field Guide and Job Aids

Project Description

Richard Health & Associates (RHA) aimed to address key barriers to the widespread adoption of heat pump water heaters by developing industry best practices and visual job aids for heat pump water heater retrofit installations. The project team assembled a diverse group of stakeholders including subject matter experts, educators, contractors, and industry partners to collaboratively create these field guide resources. The goal was to enable quality, consistent heat pump water heater installations by providing standardized training materials for educational instructors and practical field guides for contractors and their installation employees.

The theory of change was that these resources would help overcome the lack of consistent, accurate training and give installers the necessary confidence and knowledge needed to successfully retrofit heat pump water heaters, ultimately driving broader market adoption. There is a lack of standardized training resources for this new water heating technology.

Downloadable [Job Aids](#) and [Best Practices](#) Retrofit Manual aim to address this lack. They are designed to be easy to follow and use field guide pieces for contractors that include checklists and visual installation pictures for support.

**TIMELINE:**

February 2023 -
February 2024

**HOUSING TYPE:**

Residential

**EQUITY SEGMENT:**

Accessible
Contractor
Training

**TECHNOLOGY:**

Heat Pump Water
Heaters

**LOCATION:**

SoCal Gas Service
Area, California

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This program is part of the TECH Quick Start Grants (QSG) program, designed to fund targeted, innovative projects that test approaches to overcoming market barriers to heat pump space and water heating adoption.

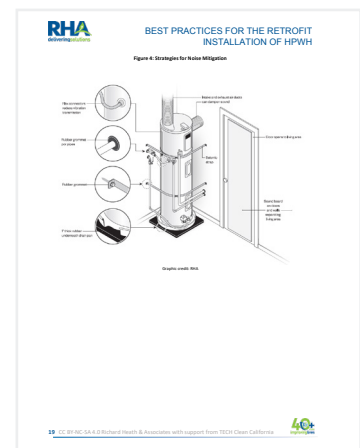
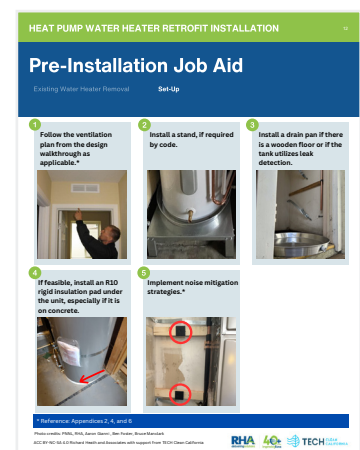
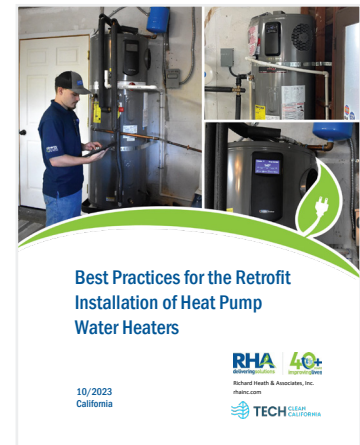
Key Learnings, Identifying Best Practices

Developing future educational and training tools, similar to the Job Aids and Best Practices Retrofit Manual, would benefit from the following learnings:

- Experts are eager to contribute to workforce training projects, but coordination of feedback must remain flexible, clear, and simple. Shifting from group meetings to independent document review accommodated participants' schedules more effectively.
- A single industry viewpoint cannot guarantee comprehensive, quality installation procedures. Soliciting input from a broad range of experts resulted in a thorough and widely approved final product.
- Current market conditions are favorable for the adoption of the Best Practices Manual and Job Aids into the routines of contractors and educators. The documents could also be helpful for policy makers and permitting departments.
- Drawing on educational psychology and cognitive development theories is crucial for equitably expanding the electrification workforce. Using simple checklists makes knowledge more accessible and reduces potential for error.

Next Steps for Making Retrofit Tools Widely Available

- Planned: RHA plans to promote the Best Practices Manual and Job Aids throughout their current programs and incorporate them into new workforce education and training partnerships.
- Recommended: Developing dynamic digital versions of the materials, such as an app for Job Aids, would ensure the most relevant and up-to-date information is easily accessible.
- Recommended: Making the documents available in multiple languages and creating short instructional videos to accompany Job Aids would be beneficial.



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