

Streamlining Permitting and Installation of Heat Pump Water Heaters

Executive Summary

The TECH Clean California Streamlining Permitting Pilot team is part of an ongoing effort to identify and overcome the barriers to widespread residential heat pump water heater adoption in California, focusing on inefficient or otherwise excessively burdensome permitting practices for heat pump water heater compared to permitting practices for traditional water heater replacements. The Pilot Team first established three baseline resources that can be used by building departments and installers alike as a best practices reference for heat pump water heater permitting. To help support adoption of these resources, the team conducted both quantitative and qualitative research on existing permitting practices and analyzed the data.

The pilot team determined that while the statewide average time to heat pump water heater permit issuance is 5.9 days, permitting timelines and challenges vary widely by jurisdiction. Specific to the incremental challenge of permitting a heat pump water heater rather than a gas-to-gas water heater change out, the most common permitting barriers faced were a lack of technical knowledge about heat pump water heaters by building department staff, the lack of a standardized permitting process across jurisdictions, and the difficulties that contractors face when managing differing permitting rules and guidelines. Written resources distributed by the team were useful as reference tools, but not sufficient in altering heat pump water heater permitting to be more efficient and code compliant. Online training sessions were more effective at developing knowledge, but significant learning gaps remain. The analysis suggests that providing direct experiential learning opportunities tailored to address the specific knowledge gaps of local building and permitting departments will be an important initiative in the development and implementation of a streamlined, single day permitting process for heat pump water heaters.

Important next steps include the design and widespread implementation of these experiential learning programs, and direct support for select jurisdictional partners during the first 10–20 heat pump water heaters permitted within their jurisdictions.