



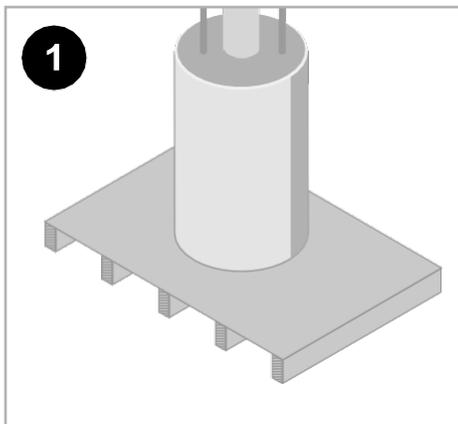
Install a Water Heater (Heat Pump)

Island Grantee Job Aid

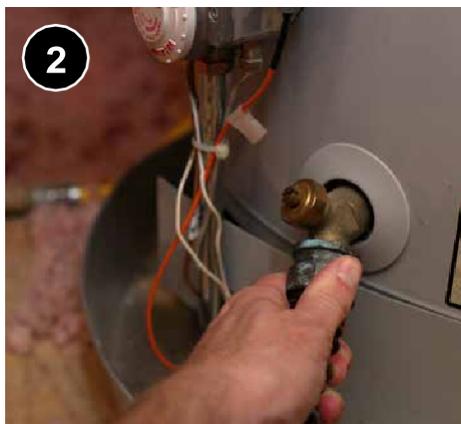
Aligns With Standard Work Specification 7.0302.3

Priority List Optional:

Use the DOE-approved Water Heater Savings Calculator to determine allowable cost and Savings to Investment Ratio (SIR) for replacing the existing system with either a hybrid heat pump water heater (HPWH) or solar water heater. The replacement system showing the highest SIR must be installed.



Ensure the floor can support the additional weight of the HPWH and that plumbing is adequate and leak-free. [7.0302.3a.](#)



Turn off water to the old unit, drain, and permanently remove it from the job site and recycle or dispose of it in accordance with local and federal law. [7.0302.3m.](#)



Select a new HPWH that is ENERGY STAR® certified, equivalent, or better and fits in the installation space with appropriate clearances and provides sufficient hot water for the home and occupants. [7.0302.3b.](#)

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4 Ensure the room meets requirements for the unit. Is there enough volume and clearance for airflow around the unit? Are the ceilings high enough? Is there adequate space to allow maintenance of the heat pump components, including removal and cleaning of the air filter? Ensure the unit will not blow directly on an indoor thermostat or occupants. [7.0302.3c.](#)



5 If the HPWH will be installed in or above conditioned space or in a location where water damage could occur, install a drain pan according to IRC requirements. Drain the pan to the exterior of the building. [7.0302.3g.](#)



6 Install the HPWH in compliance with applicable code and manufacturer specifications. If conflict exists between code and manufacturer specifications, apply the more restrictive requirement (e.g., seismic straps may be required in some areas). [7.0302.3d.](#)



7 Double check clearance in front of the unit's control side to allow at least 30" x 30" to allow for inspection, maintenance, and replacement of components. [7.0302.3e.](#)



8 Install a Temperature and Pressure (T&P) relief valve per IRC and manufacturer specifications. Pipe the valve to within 6" of the floor or drain pan, or directly to the outdoors in an observable location. Piping material must meet IRC requirements. [7.0302.3f.](#)



9 If not already present, install separate water cut-off valves for both hot- and cold-water lines. [7.0302.3h.](#)

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If the cold water supplying the HPWH passes through a check valve, **pressure reducing valve (PRV)**, or backflow preventer, install an expansion tank on the cold-water supply line at a point that is downstream of all those valves. Size the expansion tank in accordance with manufacturer specifications and applicable code. **7.0302.3i.**



Support the expansion tank so that it does not move or sag using rigid support material that is able to support twice its weight when filled with water. **7.0303.5d.**



Image from RHA Job Aids for the Retrofit Installation of Heat Pump Water Heaters (10/23 California version)

Set the pressure in the expansion tank to match incoming water pressure. **7.0303.5e.**



Install dielectric unions when connecting copper to galvanized steel piping in accordance with IRC and manufacturer specifications. **7.0302.3j.**



If not provided by the manufacturer, install heat traps on the inlet and outlet piping. **7.0302.3k.**



Set the discharge temperature to 120°F. **7.0302.3l.**

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16
If the HPWH is hardwired, a certified electrician will need to make the final electrical connections.



17
Turn water back on and ensure there are no leaks.



18
On all accessible pipes carrying hot water, install pipe insulation of R-3 or better that is a vapor retarder and sized for the correct diameter of the pipes. [7.0301.1b](#).



19
Seal all insulation seams, joints, and connections with tape, tie straps, or other independent means. [7.0301.1c](#).

Turn the unit on and ensure proper operation.



20
Provide the occupant/owner with the user's manual for the system, warranty information, installation instructions, and installer contact information. [7.0302.3n](#).



Checklist

Install a Water Heater (Heat Pump)

DESIRED OUTCOME

Adequate hot water supplied by a leak-free, safe, durable, efficient, and accessible water heater.

- Verify room requirements (ceiling height, volume, appropriate support for unit).
- Verify drain pan if present (if in area where water damage may occur) and plumbed to the outside of the building.
- Verify shut-offs on hot and cold water.
- Verify presence of T&P valve.
- Verify appropriate installation of expansion tank (if required).
- Verify a minimum of 30" x 30" maintenance area in front of unit.
- Verify presence of heat traps on inlet and outlet piping.
- Verify all hot-water pipes are insulated to a minimum of R-3 and seams/joints sealed with independent means.
- Verify temp set at 120°F.

ACKNOWLEDGEMENTS

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