

Building Decarbonization - Decommissioning Best Practices Guide

1.1 Disclaimer

This document is provided for informational purposes only and is intended as a general reference guide based on industry best practices. It does not constitute legal, engineering, or code compliance advice. All decommissioning work must be completed in compliance with applicable local, state, and national rules, regulations, and building codes, which supersede any guidance contained in this document. Where any item in this guide conflicts with applicable code or regulatory requirements, the applicable code or regulatory requirement governs.

This guide does not create any obligation, liability, or reliance on the part of the utility, its program administrators, or their contractors or subcontractors. The utility is not a party to any contract between a customer and a contractor for the performance of decommissioning work and assumes no responsibility for the manner in which decommissioning work is performed. The contractor retained to perform decommissioning work is solely responsible for ensuring that all work is performed in compliance with applicable laws, regulations, and codes, and in accordance with safe and professional industry standards. Program Ally attestation requirements are outlined separately in the Decommissioning and Controls Attestation form.

This guide does not apply to projects where fossil fuel systems are retained as backup heating under an integrated controls configuration. Those projects are governed by the Integrated Controls Requirements in the program rules.

This guide is not a substitute for the knowledge, expertise, and professional judgment of a licensed contractor. Contractors should consult the applicable authority having jurisdiction (AHJ) for project-specific requirements.

1.2 Scope

This guide addresses best practices for the decommissioning of existing natural gas, oil, and propane space heating systems and domestic hot water (DHW) systems as part of a Building Decarbonization project. It is intended for use by licensed contractors performing decommissioning work in connection with program-eligible installations. All space heating system decommissioning under this program requires full removal of the existing fossil fuel appliance.

1.3 General Best Practices - All Projects

1.3.1 Customer and Utility Notification

The following notification steps should be completed prior to beginning any decommissioning work:

- Notify the customer that they should contact their gas utility or fuel provider to inform them of reduced or eliminated fossil fuel usage following project completion.
- Confirm with the customer that any shared gas service affecting other appliances in the building is identified prior to beginning work.
- Confirm whether any remaining appliances share fuel supply lines, venting, or exhaust systems with the appliance being decommissioned, and address shared systems in accordance with applicable codes before beginning work.

1.3.2 Carbon Monoxide Safety

The following carbon monoxide safety steps must be verified before leaving the site:

- Confirm that a working carbon monoxide detector is installed and functional in the vicinity of the combustion appliance zone prior to and following all decommissioning work.
- If any appliance in the building continues to use natural gas, propane, or fuel oil following the decommissioning, verify that carbon monoxide and smoke detectors are installed and operational before leaving the site.

1.3.3 Electrical Disconnection

The following electrical disconnection steps should be completed for all decommissioned appliances:

- Disconnect the appliance power supply and remove all visible wiring to the decommissioned appliance.
- Remove the thermostat(s) controlling the decommissioned appliance if they will not be used to control the new heat pump system.

1.3.4 Permitting and Inspections

The following permitting and documentation steps apply to all projects:

- Obtain all required permits from the AHJ prior to beginning decommissioning work.
- Retain documentation of all permits, inspections, and AHJ approvals as these may be requested as part of the program application or post-installation inspection process.
- All work should be performed by appropriately licensed contractors in accordance with applicable state and local licensing requirements.

For more information, visit bizsolutions.energysave.nj.com.

1.4 Space Heating System Decommissioning Best Practices

1.4.1 All Space Heating Systems

The following steps apply to all fossil fuel space heating system decommissioning regardless of fuel type:

- Completely remove the existing space heating appliance from the site.
- Remove the exhaust venting for the decommissioned appliance. Seal exhaust openings with rigid metal caps and fasteners, or repair the wall penetration if the exhaust vent is fully removed.
- Seal any disconnected ductwork with rigid metal caps and fasteners.
- Seal any hydronic or steam distribution system piping. For hydronic systems use metal soldered caps, threaded fittings, press fittings, or brazing. For steam systems use a threaded fitting or PVC cap with a metal clamp.
- Remove any circulation pumps and valves associated with the decommissioned space heating system.
- Disconnect the appliance power supply and remove visible wiring to the decommissioned appliance.
- Remove the control module including ignition controls, pressure controls, and zone pump valves as appropriate.

1.4.2 Natural Gas Space Heating Appliances

The following additional steps apply to natural gas space heating appliances:

- Disconnect and remove the visible fuel line to the appliance valve.
- Cap the fuel line with a press fitting or threaded fitting using thread sealant.

1.4.3 Fuel Oil or Propane Space Heating Appliances

The following additional steps apply to fuel oil or propane space heating appliances:

- Disconnect and remove visible fuel lines to the decommissioned appliance, including the oil filter, and cap with a threaded fitting.
- If fuel oil or propane will no longer be used at the property following the conversion, follow all applicable local, state, and federal codes regarding the removal or decommissioning of the fuel tank.
- If removing the fuel tank, remove the fuel fill line and repair all wall penetrations.
- If the fuel tank will remain on site and unused following the conversion, inform the customer of applicable code requirements for abandoned tanks.

For more information, visit bizsolutions.energysave.nj.com.

1.5 DHW System Decommissioning Best Practices

1.5.1 All DHW Systems

The following steps apply to all fossil fuel DHW system decommissioning regardless of fuel type:

- Completely remove the existing DHW appliance from the site.
- Remove exhaust venting for the decommissioned appliance. Seal exhaust openings with rigid metal caps and fasteners, or repair the wall penetration if the exhaust vent is fully removed.
- Disconnect and remove any visible electrical wiring to the existing DHW system that will not be used by the new appliance.
- Confirm that a working carbon monoxide detector is mounted in the vicinity of the combustion appliance zone.

1.5.2 Natural Gas DHW Appliances

The following additional steps apply to natural gas DHW appliances:

- Disconnect and remove the visible fuel line to the appliance valve.
- Cap the fuel line with a press fitting or threaded fitting using thread sealant.

1.5.3 Fuel Oil or Propane DHW Appliances

The following additional steps apply to fuel oil or propane DHW appliances:

- Disconnect and remove visible fuel lines to the decommissioned appliance, including the oil filter, and cap with a threaded fitting.
- If fuel oil or propane will no longer be used at the property following the conversion, follow all applicable local, state, and federal codes regarding the removal or decommissioning of the fuel tank.
- If removing the fuel tank, remove the fuel fill line and repair all wall penetrations.
- If the fuel tank will remain on site and unused following the conversion, inform the customer of applicable code requirements for abandoned tanks.

1.6 Shared Systems: Space Heating and DHW Served by the Same Appliance

In buildings where a single fossil fuel appliance serves both space heating and domestic hot water, the decommissioning approach depends on whether the DHW function is also being replaced as part of the project.

1.6.1 Scenario A: Both Space Heating and DHW Being Replaced

Follow the Space Heating System Decommissioning and DHW System Decommissioning best practices above in full. The entire appliance should be removed from site.

1.6.2 Scenario B: Space Heating Being Replaced, DHW Remaining on Existing Appliance

Where the existing appliance must remain operational to continue providing DHW, the following additional considerations apply:

- Remove only the space heating distribution components within the project scope, including zone pump valves, circulation pumps, and piping connections serving the space heating zones being electrified. Seal all disconnected hydronic or steam piping as described above.
- Do not disconnect fuel supply, exhaust venting, or electrical connections required for continued DHW operation.
- Remove wiring between the appliance control module and zone valves or circulation pumps serving the space heating zones being decommissioned.
- Remove thermostats controlling the space heating zones being decommissioned, or confirm that existing thermostats will be repurposed to control the new heat pump system.
- Confirm that DHW production is not impacted by the removal of space heating components before leaving the site.
- Confirm that exhaust venting remains properly configured for continued DHW operation and complies with applicable codes following removal of the space heating components.
- Notify the customer that the fossil fuel appliance will remain in operation solely for DHW purposes and that they should contact their fuel provider to update their usage profile accordingly.

1.7 Photo Documentation Best Practices

The following photos are recommended as best practice to document existing and post-decommissioning conditions. All photos should be date and time stamped.

1.7.1 Prior to Beginning Work

The following photos should be taken of space heating systems before work begins:

- Existing space heating appliance
- Exhaust vents of the existing space heating appliance

For more information, visit bizsolutions.energysave.nj.com.

- Supply and return ductwork or hydronic piping where it connects to the appliance
- Fuel line connections at the appliance valve
- Space heating control module
- Burner assembly
- Thermostat(s) controlling the appliance
- Fuel tank and fill line if applicable

The following photos should be taken of DHW systems before work begins:

- Existing DHW appliance
- Exhaust vents of the existing DHW appliance
- Fuel line connections at the appliance valve
- Distribution piping connected to the existing DHW appliance

1.7.2 Following Completion of Work

The following photos should be taken of space heating systems after work is complete:

- Confirmation that the appliance has been removed from site
- Sealed or repaired exhaust vent opening
- Capped fuel line at the point of disconnection
- Sealed ductwork or hydronic piping connections
- Carbon monoxide detector installation location

The following photos should be taken of DHW systems after work is complete:

- Confirmation that the appliance has been removed from site
- Sealed or repaired exhaust vent opening
- Capped fuel line at the point of disconnection
- Carbon monoxide detector installation location

1.8 Additional Considerations

The following additional considerations apply to all decommissioning projects:

- Contractors should verify all applicable permit and inspection requirements with the AHJ prior to beginning work.

- Any decommissioning scope not addressed by this guide should be resolved in consultation with the AHJ and in accordance with applicable codes and manufacturer specifications.
- Contractors should retain all documentation related to decommissioning work, including permits, inspection reports, and AHJ approvals.

This document was prepared for informational purposes only. Nothing in this document should be construed as legal advice, engineering guidance, or a representation of code compliance. All decommissioning work is the sole responsibility of the licensed contractor performing the work.