

Summary of Stakeholder Feedback on Commercial Electrification Reach Code Concepts

Representatives from the City's Building Division of the Community Planning & Development Department and the Climate Program met with regional stakeholders to discuss the City's approach to building electrification. The outreach occurred in March 2023 and addressed an early version of a proposed Commercial Reach Code. This early version was developed prior to the Ninth District Court of Appeals decision prohibiting jurisdictions from using the building code to require building electrification.

Meetings with stakeholders occurred over a two-week period and consisted of phone calls, in-person and Zoom meetings. Stakeholders included design/architectural and specialized technical contractor teams, project developers, and two downtown restaurant owners.

City staff provided the New Construction Code Concepts informational sheet (attached) to the stakeholders in advance of the meetings and this document served as a guide for the discussion. Feedback from the stakeholder meetings is summarized below.

Construction Design Teams

- General concern about lack of choice for customers with a prohibition on gas equipment.
- New construction is not a big impact; retrofits will increase costs for customers.
- Electric water heater installation costs for new construction and retrofits are a concern.
- No concern with using heat pumps for servicing commercial buildings, but there will be difficulty for recirculating systems in multi-family buildings and restaurants in terms of recovery.
- Concerned about costs for upgrading conduit size for a minor equipment replacement or minor remodel.
- Obtaining Puget Sound Energy (PSE) infrastructure parts requires a long lead time which adds to cost and timing considerations for both new construction and retrofit projects.
- Consider using a point system for retrofits, as an alternative to the more expensive upgrade to the service panel. The alternate points measures could be an upgrade to more energy-efficient windows or insulation upgrades.
- For retrofits, provide an option to pay for carbon offsets or pay into a City electrification fund instead of installing full-service upgrades.

Technical Team

- No concerns about whole-building electrification for new construction.
- Concerned about retrofit costs.

- Concerned that heat pumps do not supply adequate conditioned air to large commercial kitchens.
- Suggest providing an exemption for process loads for industrial buildings .
- Support for setting a cost cap of 25 percent of project cost for building electrification retrofits.
- Consider allowing other energy measures using points or a prescriptive path.
- Concerned about costs associated with revising plans and work practices.
- The technology is available, and design alternatives can address project feasibility. Manufacturers provide free engineering support to customers

Restaurants

- Electric makeup systems are not energy-efficient for commercial hoods.
- Recovery time for electric water heaters is a concern. If buffer tanks are used, seating space in the restaurant may be impacted.
- Concerned about the availability of replacement induction stoves.
- Concerned that induction stoves differ from gas in terms of temperature controls. Recipes and cooking techniques may be affected.
- Concerned about the speed of cooking, seating space, and turning tables.
- Concerned that electrification requirements would make it even more difficult to start a new restaurant with the added costs of infrastructure.

Developers

- Long wait times for PSE infrastructure parts are a concern.
- Concerned about retrofit costs.
- Concerned about conduit size for retrofits due to increased costs.
- Service panel upgrades are not a significant issue.
- Concerned about limited equipment options for customers and building owners.
- Concerned that electric hot water tanks may decrease the amount of housing units per building due to additional space required for storage tanks.
- Worried about the increased cost to build housing, but for new construction, upgrades to panel size is not a concern.

New Construction Code Concepts

Measure	Description
Whole-Building Electrification Requirements	
<p>This section describes code provisions that can be adopted to require all-electric or mostly-electric buildings. The advantage of these approaches is that they achieve electrification broadly with a single code provision. The downside of these approaches is also that they are broad, so they don't provide a targeted and severable approach to electrification of each building system.</p>	
Require All-Electric buildings	<p>This proposal prohibits the installation of gas infrastructure in commercial buildings. It can be paired with targeted exceptions for process loads like manufacturing and potentially commercial kitchens.</p>
Exempt Building Requirements	
<p>This section describes code provisions that do not require electrification, but that incentivize project teams to choose electric equipment by disadvantaging combustion equipment installations.</p>	
Increase code stringency for mixed-fuel buildings	<p>Increase the credit requirement in C406 for mixed-fuel buildings.</p>
Additional Efficiency for Gas Equipment	<p>Requirement for gas equipment installs to be accompanied by efficiency improvements (such as reduced infiltration, equipment efficiency, controls upgrades, etc.) to the building.</p>
Commercial Gas Pipe Testing	<p>When new gas equipment is installed, the gas piping must be leakage tested.</p>
Existing Building Code Concepts	
Whole-Building Electrification Requirements	
<p>This section includes a provision that can be used to require existing buildings or additions to be fully electrified.</p>	
Electrification of Substantial Alterations	<p>This proposal requires removal and/or disconnection of gas infrastructure in <i>substantial alterations</i>. Can be paired with targeted exceptions for gas end-uses such as process loads.</p>
Commercial Addition Electrification	<p>This proposal prohibits the installation of combustion equipment in additions, the extension of gas equipment into additions and the extension of gas piping into additions.</p>

Existing Building Code Concepts (Continued)

Targeted Electrification Retrofit Requirements

This section includes provisions that require the electrification of specific gas end uses at certain building lifecycle events. They have been tailored to coordinate with the forthcoming version of WSEC, particularly the allowances for like-for-like gas equipment replacements in WSEC.

Require Electrification of Furnaces	Require electrification when a gas furnace is replaced. The provision can include accommodations for emergency replacements.
Require Electrification of Storage Water Heaters	Require electrification when a gas storage water heater is replaced. The provision can include accommodations for emergency replacements.
Heat Pumps for Split System AC Compressors	Require the installation of heat pumps for split-system AC compressor replacements for systems with gas furnaces and the configuration of the gas furnace as supplementary heat.
Service Upgrade	Require replacement service connections to be sized for full building electrification.

Code Incentivizations for Electrification Retrofits

This section describes code provisions that do not require electrification retrofits, but that incentivize project teams to choose electrification retrofits at certain building lifecycle events.

Mandatory full system commissioning with gas equipment replacement	Require the entire system to meet the acceptance testing requirements in the code, not just the new equipment.
Full code compliance for gas equipment replacement	Require code compliance for all parts of the system (duct leakage, controls, duct insulation, economizer, etc.) when gas equipment is replaced.
Upgraded ventilation for gas cooking	Require more ventilation in any space undergoing an alteration that has gas stove in it (exception for non-commercial kitchens).

DEFINE: Emergency replacement

COMMENTS: