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November 22, 2023

Washington State Building Code Council
PO Box 41449
Olympia, WA 98504-1449

RE: Proposed EPCA Changes to the 2021 WSEC, Residential and Commercial Provisions Published as WSR 23-21-105 and WSR 23-21-106

Members of the Washington State Building Code Council:

Avista Corporation, d/b/a Avista Utilities, (Avista) appreciates the opportunity to comment on the CR-102 draft changes to the Commercial and Residential Energy Codes filed on October 18, 2023. The Council sought changes to these provisions of the building code in light of the legal deficiencies in the codes adopted in November 2022 related to Energy Policy Conservation Act (EPCA) preemption issues identified in the Ninth Circuit Court ruling in California Restaurant Association v City of Berkley.

Avista recognizes the Council's obligation to avoid violations of the federal preemption standards under EPCA. However, the amended codes published on October 18, 2023, suffer from the same legal infirmities as the underlying draft codes in that they violate the federal preemption rules. The Council has merely "gamed" the energy efficiency crediting tables to impose a de facto ban on heating appliances fueled by natural gas or propane. As with the underlying codes approved last year, this approach violates federal preemption provisions of EPCA in the following ways.

The energy efficiency crediting values included in the draft code are not designed to achieve standards of efficiency, but instead assign point values for the sole purpose of prohibiting the use of appliances that use natural gas. The required additional energy efficiency credits for new residential construction under Section R406.3 (WAC 51-11R-40620) are too high to be effectively achieved. The Energy Equalization Table R406.2 (WAC 51-11R-40610) increased values by 1.5 credits across all system types sans one exception; however, the required additional energy credits in Section R406.3 (WAC 51-11R-40620) increased by 3.0 for all sizes of construction. SBCC only authorized limited rulemaking to address EPCA preemptive provisions—not to further increase energy efficiency targets for this code cycle. Builders and remodelers have anecdotally reported that projects will fall about 0.5 credits short as a result of this new proposed increase of efficiency credits. Failing to provide a pathway where builders can install EPCA-covered gas appliances in practice would violate EPCA.

Under the proposed commercial code, buildings complying with the fossil fuel compliance path must achieve additional efficiency credits. Tables C401.3.3 (Option 1 – WAC 51-11C-40100), C406.1.3.1 (Option 2 – WAC 51-11C-40600), and C406.1.3.2 (Option 2 – WAC 51-11C-40600), would increase the number of credits for buildings that use natural gas or other combustion-driven fuels by two to seven times, increasing the additional credits required on average by 435 percent. Burdening projects that utilize natural gas, heating oil, propane, and other delivered fuels with mandatory energy credits that are two to seven times that of projects utilizing heat pump-based equipment is tantamount to a ban on appliances that use these fuels, thereby violating EPCA. Consumers will be unable to select the equipment that best suits their needs, fits the project constraints, has the lowest emissions, or represents the lowest-priced fuel option due to the unreasonable burden posed by the mandatory energy credits assigned by these tables. Furthermore, the overly inflated additional credit requirements for the fossil fuel pathway were determined without any visibility or input from the public, stakeholders, or other interested parties. We believe that the commercial efficiency credit values have no basis and were set as an unreasonable burden to deter any use of fossil fuels regardless of actual efficiency or carbon emissions. A transparent study must be performed by an independent third-party to determine accurate credit values based upon source energy.

Within the residential energy code, Section R405 Total Building Performance pathway, specification of the standard reference designs are provided in Table R405.4.2(1) (WAC 51-11R-40551). The standard reference design for the building's heating system is specified as an air source heat pump. For the building's service water heating systems, the standard reference design is specified to be a heat pump water heater meeting the Tier 1 standard for NEEA's Advanced Water Heating Specifications. Whereas the amended code will allow for the use of equipment other than heat pumps, the amended code also requires standard reference designs must be revised to 'the same system type as proposed'. By requiring that the proposed design be compared to a standard reference design of a specific equipment type, EPCA preemption remains an issue. See 42 U.S.C. § 6297(f)(3)(E).

Likewise, in the commercial energy code, Table D602.11 (Option 1 & 2 – WAC 51-11C-80500), the standard reference design for HVAC system heating sources is stipulated to be a heat pump. Whereas the amended code will allow for the use of equipment other than heat pumps, the standard reference designs must be revised to 'the same system type as proposed'. By requiring that the proposed design be compared to a standard reference design of a specific equipment type, EPCA preemption remains an issue. See 42 U.S.C. § 6297(f)(3)(E).

The Council has failed to meet its statutory obligation under RCW 19.27A.020 to "Require new buildings to meet a certain level of energy efficiency, but allow flexibility in building design, construction, and heating equipment efficiencies within that framework…" and RCW 19.27.020 "To eliminate restrictive, obsolete, conflicting, duplicating and unnecessary regulations and requirements which could unnecessarily increase construction costs or retard the use of new materials and methods of installation or provide unwarranted preferential treatment to types or classes of materials or products or methods of construction."

Additionally, in an abbreviated rulemaking process designed to push out new codes that would take effect in March of next year, the Council has failed to meet the required steps under the Administrative Procedures Act. Specifically, the Council has failed to conduct a full cost-benefit analysis to give stakeholders the opportunity to review and verify the data needed to inform the Council's decisions related to these energy codes. The process lacks transparency, making it impossible to validate or refute the analysis that was the basis for the code requirements.

Given the unusual steps that have occurred to adopt these code changes hastily, the legal questions surrounding the Council's preconceived outcomes, and the failure to follow required rulemaking procedures, Avista proposes that the Council delay the adoption of the 2021 Energy codes while legal and technical questions can be settled with complete transparency.

Absent a pause, we would request technically sound changes that will preserve the energy efficiency objectives of the energy code while meeting the Council's statutory obligation of maintaining flexibility in appliance types, eliminating restrictive requirements, and avoiding unnecessary construction costs and preferential treatment of products. Residential energy code amendments R1 through R6 and commercial energy code amendments C1 through C7 are attached to this letter.

Many of these changes proposed by Avista account for the diminishing efficiency and capacity of heat pump technology at lower ambient temperatures. Even cold-weather heat pumps fall below 100 percent capacity at five degrees Fahrenheit, a common occurrence in regions where Avista customers live. When considering source energy, a HSPF 9 heat pump causes the same amount of carbon emissions as a high efficiency natural gas furnace or boiler at approximately 36 degrees Fahrenheit. At any temperature below this point, the high efficiency natural gas furnace or boiler results in lower carbon emissions. A slightly higher efficiency heat pump (HSPF 9.5) that would yield 0.5 credits under Option 3.3 reaches parity with a high efficiency natural gas furnace or boiler at approximately 30 degrees Fahrenheit. No heat pump—not even the high-efficiency, cold weather heat pumps often promoted—can exceed the requisite 3.0 COP for parity in the cold weather eastern Washington experiences every winter. Eliminating or penalizing natural gas as a supplemental or backup heat increases carbon emissions. The law specifically directs the Building Code Council to consider regional climate conditions (RCW 19.27a.020 (3)), authorizing different codes for different climate zones designated throughout the state. No such consideration was given for the diminished performance of heat pump technologies and the inefficiency of frequent reliance on electric resistance heat in the colder climate zone designated in law.

In addition to increasing carbon emissions, forcing the use of heat pumps and electric resistive heat at periods of peak usage poses capacity problems for both utilities and customers. Capacity constraints can often be avoided or diminished by using natural gas supplemental heat. Forcing electrification results in customers having to oversize their electrical service and incur massive construction costs to account for peaks in usage. Electric utilities are also experiencing capacity constraints that on occasion have resulted in power outages. Unnecessarily increasing peak demand not only increases utility costs but also reduces electric system reliability.

Avista appreciates the opportunity to submit these comments for the record. We urge the Council to delay the 2021 energy codes indefinitely until legal questions can be settled, requisite third-party energy studies are completed, and a cost-benefit analysis can be performed to properly inform this process. This would provide predictability for builders and code officials in the near term and avoid complications and confusion in the building sector. In the absence of a delay, we request the Council consider the proposed changes attached to this letter to ensure the code meets statutory requirements for adoption—both in substance and administrative process—and comports with the federal preemption provisions of EPCA.

Sincerely,

Gregory Johnson, P.E., RCDD
Senior Electrical Engineer

Enclosures: Suggested amendments to Residential Code Proposal, R1 thru R6
Suggested amendments to Commercial Code Proposal, C1 thru C7

Residential Proposal R1: Remove Supplemental Heat Penalty

(Proposal in red. Additions underlined. Deletions double-strikethrough.)

WAC 51-11R-40610

TABLE R406.2
((~~FUEL NORMALIZATION~~)) ENERGY EQUALIZATION CREDITS

System Type	Description of Heating Sources	Credits	
		All Other	Group R-2[a]
2	For an initial heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(2) and supplemental heating provided by electric resistance or a combustion furnace meeting minimum standards listed in Table C403.3.2(5)[b]	((0)) ~~1.5~~ Same as System Type 4	~~0~~ Same as System Type 4

RATIONALE:

Heat pumps should receive the same credit value regardless if provided with supplemental heat or not. Supplemental heat is designed to only operate in cold temperatures—periods where heat pumps are the least efficient and least able to keep up with heating demands. This proposal will REDUCE carbon emissions due to the marginal carbon emissions associated generating and delivering electricity during the coldest periods of the year.

Residential Proposal R2: Forgotten System Type – Mini-Split with Combustion

(Proposal in red. Additions underlined. Deletions double-strikethrough.)

WAC 51-11R-40610

TABLE R406.2
((~~FUEL NORMALIZATION~~)) ENERGY EQUALIZATION CREDITS

System Type	Description of Heating Sources	Credits	
		All Other	Group R-2[a]
5	For heating system based on electric resistance or combustion with: Inverter-driven ductless mini-split heat pump system installed in the largest zone in the dwelling **or** 1. With 2 kW (6,824 Btu/hr) or less total installed heating capacity per dwelling	((~~0.5~~)) 2.0	0

RATIONALE:

The energy equalization table fails to provide a System Type 5 that uses combustion heat in lieu of electric resistance. This forgotten system type must be assigned, more or at the very least the same amount of equalization credits as the electric resistive counterpart since electric resistive heating results in the greatest amount of carbon emissions when considering the source of power.

Residential Proposal R3: Electric Resistance Credit Value Error

(Proposal in red. Additions underlined. Deletions double-strikethrough.)

WAC 51-11R-40610

TABLE R406.2
((~~FUEL NORMALIZATION~~)) ENERGY EQUALIZATION CREDITS

System Type	Description of Heating Sources	Credits	
		All Other	Group R-2[a]
3	For heating system based on electric resistance only (either forced air or zonal)	((~~-1.0~~)) ~~0.5~~ -0.5	-0.5

RATIONALE:

Electric resistive is the most expensive heating system to operate and results in the greatest amount of carbon emissions when considering the source of power. The Group R-2 occupancy column appropriately recognizes this fact by assigning a negative half a credit to this system type. It is only reasonable to assume that a negative sign was missed, and the value for "All Other" occupancy types was supposed to be the same value.

Residential Proposal R4: Heat Pump Credit Adjustment

(Proposal in red. Additions underlined. Deletions double-strikethrough.)

WAC 51-11R-40610

TABLE R406.2
((~~FUEL NORMALIZATION~~)) ENERGY EQUALIZATION CREDITS

System Type	Description of Heating Sources	Credits	
		All Other	Group R-2[a]
4[c]	For a heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(2) or C403.3.2(9) **or** Air to water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/590	((~~1.5~~)) ~~3.0~~ 2.0	2.0

RATIONALE:

Heat pumps transfer heat from one location (outdoors) to another (indoors). It is significantly harder to extract heat from outdoor air when it is 0 degrees verses 47 degrees, thus the reason heat pump efficiency varies significantly with temperature. The heat pump efficiency used in creating this table was exaggerated using idealistic western Washington climate. Actual heat pump efficiency in eastern Washington is significantly worse.

Residential Proposal R5: Energy Credit Adjustment

(Proposal in red. Additions underlined. Deletions double-strikethrough.)

WAC 51-11R-40620

R406.3 Additional energy efficiency requirements. Each *dwelling unit* in a *residential* building shall comply with sufficient options from Table R406.2 and R406.3 so as to achieve the following minimum number of credits:

1.	Small *Dwelling Unit*: *Dwelling units* less than 1500 square feet in conditioned floor area with less than 300 square feet of fenestration area. *Additions* to existing building that are greater than 500 square feet of heated floor area but less than 1500 square feet.	((~~2.5~~)) ~~5.0~~ 3.5 credits
2.	Medium *Dwelling Unit*: All *dwelling units* that are not included in #1, #3, or #4.	((~~5.0~~)) ~~8.0~~ 6.5 credits
3.	Large *Dwelling Unit*: *Dwelling units* exceeding 5000 square feet of conditioned floor area.	((~~6.0~~)) ~~9.0~~ 7.5 credits
4.	*Dwelling units* serving Group R-2 occupancies. See Section ion R401.1 and *residential building* in Sect R202 for Group R-2 scope.	((~~4.5~~)) ~~6.5~~ 5.0 credits
5.	*Additions* 150 square feet to 500 square feet:	2.0 credits

RATIONALE:

The energy equalization table R406.2 increased values by 1.5 credits across all system types sans one exception; however, the required additional energy credits in Section R406.3 increased by 3.0. SBCC only authorized limited rulemaking to address EPCA preemptive provisions—not to further increase energy efficiency targets for this code cycle.

Residential Proposal R6: Update Standard Reference for EPCA Compliance

(Proposal in red. Additions underlined. Deletions double-strikethrough.)

WAC 51-11R-40551

TABLE ((~~R402.4.2(1)~~)) R405.4.2(1)
SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSEDDESIGNS

BUILDING COMPONENT	STANDARD REFERENCE DESIGN	PROPOSED DESIGN
Heating systems[d, e]	~~The standard reference design shall be an air source heat pump meeting the requirements of Section C403 of the WSEC—Commercial Provisions.~~ Same system type as proposed. Same system efficiency as required by prevailing minimum federal standard. Capacity: Sized in accordance with Section ((~~R403.6~~)) R403.7	As proposed
Cooling systems[d, f]	Same system type as proposed. Same system efficiency as required by prevailing minimum federal standard. Capacity: Sized in accordance with Section ((~~R403.6.~~)) R403.7	As proposed
Service water heating[d, e, f, g]	~~The standard reference design shall be a heat pump water~~ ((~~heating~~)) ~~heater meeting the standards for Tier 1 of NEEA's Advanced Water Heating Specifications.~~ Same system type as proposed. Same system efficiency as required by prevailing minimum federal standard. Use, in units of gal/day = 25.5 + (8.5 x N_{br}) Where N_{br} = number of bedrooms	As proposed Use, in units of gal/day = 25.5 + (8.5 x N_{br}) x (1 - HWDS) Where: N_{br}= number of bedrooms HWDS = factor for the compactness of the hot water distribution system **Compactness ratio[i] factor** / **HWDS** **1 story** / **2 or more stories** >60% / >30% / 0 >30% to ≤60% / >15% to ≤30% / 0.05 >15% to ≤30% / >7.5% to ≤15% / 0.10 ≤15% / ≤7.5% / 0.15

RATIONALE:

For compliance with EPCA preemptive provisions, the standard reference design must be the prevailing minimum federal standard efficiency of the proposed system type.

Commercial Proposal C1: Exception Parity for EPCA Compliance

(Proposal in red. Additions underlined. Deletions double-strikethrough.)

Option 1 (OTS-5008.3) & **Option 2** (OTS-5009.3)
WAC 51-11C-40314

C403.1.4 Use of electric resistance and fossil fuel-fired HVAC heating equipment.

EXCEPTIONS:

1. **Low heating capacity.** Buildings or areas of buildings, other than *dwelling units* or sleeping units, that meet the interior temperature requirements of Chapter 12 of the *International Building Code* with a total installed HVAC heating capacity no greater than 8.5 Btu/h (2.5 watts) per square foot of *conditioned space* are permitted to be heated using electric resistance or fossil fuel appliances.
2. **Dwelling and sleeping units.** Dwelling or sleeping units are permitted to be heated using electric resistance or fossil fuel appliances as long as the installed HVAC heating capacity in any separate space is not greater than:
2.1. Seven hundred fifty (750) watts (2,559 Btu/h) in Climate Zone 4, and 1000 watts (3,412 Btu/h) in Climate Zone 5 in each habitable space with fenestration.
2.2. One thousand (1,000) watts (3,412 Btu/h) in Climate Zone 4, and 1300 watts (4,436 Btu/h) in Climate Zone 5 for each habitable space that has two primary walls facing different cardinal directions, each with exterior fenestration. Bay windows and other minor offsets are not considered primary walls.
2.3. Two hundred fifty (250) watts (853 Btu/h) in spaces adjoining the *building thermal envelope* but without fenestration.
For the purposes of this section, habitable space is as defined in the International Building Code. For buildings in locations with exterior design conditions below 4°F (-16°C), an additional 250 watts (853 Btu/h) above that allowed for Climate Zone 5 is permitted in each space with fenestration.
3. **Small buildings.** Buildings with less than 2,500 square feet (232 m^2) of *conditioned floor area* are permitted to be heated using electric resistance or fossil fuel appliances.
4. **Defrost.** Heat pumps are permitted to utilize ~~electric resistance~~ supplemental heating sources when a heat pump defrost cycle is required and is in operation.

6. **Air-to-water heat pumps.** Buildings are permitted to utilize ~~electric resistance (for Climate Zone 4 or 5) or fossil fuel-fired (for Climate Zone 5)~~ auxiliary heating to supplement heat pump heating for hydronic heating systems that meet all of the following conditions:

10. **Kitchen make-up air.** Make-up air for commercial kitchen exhaust systems required to be tempered by Section 508.1.1 of the International Mechanical Code is permitted to be heated by using fossil fuel ~~in Climate Zone 5~~ or electric resistance in Climate Zone 4 or 5.

13. **Temporary systems.** Temporary electric resistance or fossil fuel heating systems are permitted where serving future tenant spaces that are unfinished and unoccupied, provided that the heating equipment is sized and controlled to achieve interior space temperatures no higher than 40°F (4°C).
14. **Pasteurization.** Electric resistance or fossil fuel heat controls are permitted to reset the supply water temperature of hydronic heating systems that serve service water heating heat exchangers during pasteurization cycles of the service hot water storage volume. The hydronic heating system supply water temperature shall be configured to be 145°F (63°C) or lower during the pasteurization cycle.

15. **Freeze protection.** Heating systems sized for spaces with indoor design conditions of 45°F (7°C) and intended for freeze protection are permitted to use electric resistance or fossil fuel. The building envelope of any such space shall be insulated in compliance with Section C402.1.
16. **DOAS ERV auxiliary heat.** Dedicated outdoor air systems with energy recovery ventilation are permitted to utilize fossil fuel ~~for Climate Zone 5~~ or electric resistance in Climate Zone 4 or 5 for auxiliary heating to preheat outdoor air for defrost or as auxiliary supplemental heat to temper supply air to 55°F (13°C) or lower for buildings or portions of buildings that do not have hydronic heating systems.

Option 1 (OTS-5008.3) & **Option 2** (OTS-5009.3)
WAC 51-11C-40402

C404.2.1 Service water heating system type. Service hot water shall be provided by an ~~electric~~ air-source heat pump water heating (HPWH) system meeting the requirements of this section. Supplemental service water heating equipment is permitted to use electric resistance or fossil fuel in compliance with Section C404.2.1.4.

EXCEPTIONS:
1. 24 kW (81.9 kBtu/h) plus 0.1 watts (0.34 Btu/h) per square foot of building area of electric resistance or fossil fuel service water heating capacity is allowed per building.

5. Commercial dishwashers, commercial food service equipment, and other approved process equipment are permitted to utilize electric or fossil fuel booster heaters for supply water temperatures 120°F (49°C) or higher.

RATIONALE:
Electric resistive is allowed in many instances for space and water heating where fossil fuel is not, yet electric resistive is the most expensive heating system to operate and results in the greatest amount of carbon emissions when considering the source of power. For compliance with EPCA preemptive provisions, fossil fuel heating must be allowed in all situations where electric resistive heating is allowed.

Commercial Proposal C2: Supplemental Heat Controls

(Proposal in red. Additions underlined. Deletions double-strikethrough.)

Option 1 (OTS-5008.3) & **Option 2** (OTS-5009.3)
WAC 51-11C-40314

C403.1.4 Use of electric resistance and fossil fuel-fired HVAC heating equipment.

EXCEPTIONS:

5. **Air-to-air heat pumps.** Buildings are permitted to utilize ((~~internal electric resistance heaters to supplement heat pump~~)) supplemental heating sources for air-to-air heat pumps that meet all of the following conditions:

5.1. Controls for the auxiliary heating sources are configured to lock out the supplemental heat when the outside air temperature is above 36°F (2°C), unless the heat pump has insufficient capacity to maintain set point or to warm up the space at a sufficient rate.

~~5.1. Internal electric resistance heaters have controls that prevent supplemental heater operation when the heating load can be met by the heat pump alone during both steady-state operation and setback recovery.~~

~~5.2. The heat pump controls are configured to use the compressor as the first stage of heating down to an outdoor air temperature of 17°F (-8°C) or lower except when in defrost.~~

~~EXCEPTIONS TO 5.2:~~

~~1. Packaged terminal heat pumps (PTHPs) that comply with the minimum heating efficiency requirements in Table C403.3.2(4) are exempt from heating pump controls capable of operating the compressor as the first stage of heating down to an outdoor air temperature of 17°F (-8°C) or lower.~~

~~2. Heat pumps whose minimum efficiency is regulated by NAECA and whose ratings meet the requirements shown in Table C403.3.2(2) and include all usage of internal electric resistance heating are exempt from heat pump controls capable of operating the compressor as the first state of heating down to an outdoor air temperature of 17°F (-8°C) or lower.~~

~~5.3. The heat pump complies with one of the following:~~

~~5.3.1. Controlled by a digital or electronic thermostat designed for heat pump use that energizes the supplemental heat only when the heat pump has insufficient capacity to maintain set point or to warm up the space at a sufficient rate.~~

~~5.3.2. Controlled by a multistage space thermostat and an outdoor air thermostat wired to energize supplemental heat only on the last stage of the space thermostat and when outdoor air temperature is less than 32°F (0°C) except when in defrost.~~

~~5.3.3. The minimum efficiency of the heat pump is regulated by NAECA, its rating meets the requirements shown in Table C403.3.2(2), and its rating includes all usage of internal electric resistance heating.~~

5.4. The heat pump rated heating capacity is sized to meet the heating load at an outdoor air temperature of 32°F (0°C) or lower and has a rated heating capacity at 47°F (8°C) no less than 2 times greater than supplemental ((~~internal electric resistance~~)) heating capacity in Climate Zone 4 and no less than the supplemental ((~~internal electric resistance~~)) heating capacity in Climate Zone 5, or utilizes the smallest available factory-available internal electric resistance heater.

6. **Air-to-water heat pumps.** Buildings are permitted to utilize ~~electric resistance (for Climate Zone 4 or 5) or fossil fuel-fired (for Climate Zone 5)~~ auxiliary heating to supplement heat pump heating for hydronic heating systems that meet all of the following conditions:

6.1. Controls for the auxiliary ((~~electric resistance or fossil fuel-fired~~)) heating sources are configured to lock out the supplemental heat when the outside air temperature is above 36°F (2°C), unless the hot water supply temperature setpoint to the building heat coils cannot be maintained for 20 minutes.

~~6.2. The heat pump controls are configured to use the compressor as the first stage of heating down to the lowest exterior design temperature for which the equipment is rated except during startup or defrost operation.~~

6.3. The heat pump rated heating capacity at 47°F (8°C) is no less than 75 percent of the design heating load at 29°F (-2°C).

RATIONALE:

Simply noting a lockout temperature—maximum outdoor air temperature at which supplemental heat may operate—is more than sufficient for energy efficiency purposes. However, the Energy code oversteps into the jurisdiction of the International Mechanical Code (IMC) and specifies unnecessary and inappropriate amounts of mechanical design. These overly restrictive requirements have little to no actual impact on energy usage and in some situations may increase carbon emissions. The intent is quite apparent: make installing fossil fuel supplemental heat as complicated and difficult as possible even when it is unrelated to energy usage.

Commercial Proposal C3: Electrification Readiness

(Proposal in red. Additions underlined. Deletions double-strikethrough.)

Option 1 (OTS-5008.3)
WAC 51-11C-40100

~~**C401.3.6 Electrification readiness.** Additionally, the following provisions shall be required for new construction:~~

~~1. Provide a spare electrical branch circuit conduit to thatappliance sized to support an equivalent heat pump appliance.~~

~~2. Provide spare electrical service entrance conduits for the purpose of upgrading the main electrical service to support allheat pump appliances throughout the building.~~

~~3. The main electrical room has sufficient space to accommodate increasing the main electrical service's size to support all heatpump appliances throughout the building.~~

~~4. Additional accommodations for the utility equipment comprised of transformer(s) and other equipment necessary to support an electrical service upgrade. These accommodations shall include adequatespace on the site. If the utility equipment is located in a transformer vault, that vault must include not only the space but the additional cooling for larger transformer(s).~~

Option 2 (OTS-5009.3)
WAC 51-11C-40314

C403.1.4 Use of electric resistance and fossil fuel-fired HVAC heating equipment.

1. Fossil fuel space heating pathway:

~~Additionally, the following provisions shall be required for new construction:~~

~~1.1. Provide a spare electrical branch circuit conduit to that appliance sized to support an equivalent heat pump appliance.~~

~~1.2. Provide spare electrical service entrance conduits for the purpose of upgrading the main electrical service to support all heat pump appliances throughout the building.~~

~~1.3. The main electrical room has sufficient space to accommodate increasing the main electrical service's size to support all heat pump appliances throughout the building.~~

~~1.4. Additional accommodations for the utility equipment comprised of transformer(s) and other equipment necessary to support an electrical service upgrade. These accommodations shall include adequate space on the site. Where the utility equipment is located in a transformer vault, that vault must include not only the space but the additional cooling for larger transformer(s).~~

Option 2 (OTS-5009.3)
WAC 51-11C-40402

C404.2 Service water heating equipment performance efficiency.

1. Fossil fuel water heater pathway:

~~Additionally, the following provisions shall be required for new construction:~~

~~1.1 Provide a spare electrical branch circuit conduit to that appliance sized to support an equivalent heat pump appliance.~~

~~1.2 Provide spare electrical service entrance conduits for the purpose of upgrading the main electrical service to support all heat pump appliances throughout the building.~~

~~1.3 The main electrical room has sufficient space to accommodate increasing the main electrical service's size to support all heat pump appliances throughout the building.~~

~~1.4 Additional accommodations for the utility equipment comprised of transformer(s) and other equipment necessary to support an electrical service upgrade. These accommodations shall include adequate space on the site. Where the utility equipment is located in a transformer vault, that vault must include not only the space but the additional cooling for larger transformer(s).~~

RATIONALE:

The Energy code requires unnecessary electrical construction that will remain unused. Providing accommodates for future “what-if” scenarios is well beyond the scope of the Energy code. This is a massive oversteps into the jurisdiction of the National Electrical Code and National Electrical Safety Code, both of which fall under the governance of Labor & Industries. The SBCC has no jurisdiction. These requirements have zero impact on energy usage and serve no purpose other than increasing construction costs of buildings with EPCA covered appliances.

Commercial Proposal C4: Clarify Pathway with Exceptions

(Proposal in red. Additions underlined. Deletions double-strikethrough.)

Option 1 (OTS-5008.3)
WAC 51-11C-40100

C401.3 Fossil fuel compliance path. Buildings complying with the fossil fuel compliance path shall comply with the prescriptive compliance path of this code as defined in Item 1 of Section C401.2, and as modified by this Section C401.3. Where this code provides an exception to allow a fossil fuel appliance, use of that exception does not trigger the fossil fuel path.

Option 2 (OTS-5009.3)
WAC 51-11C-40314

C403.1.4 Use of electric resistance and fossil fuel-fired HVAC heating equipment.

1. Fossil fuel space heating pathway: HVAC heating provided by a fossil fuel appliance, not allowed via an exception provided within this code, shall comply with Section C406.1.3. Fossil fuel combustion appliances are permitted for HVAC heating, and shall comply with the applicable efficiency standards referenced in Section C403.3.3.2.

Option 2 (OTS-5009.3)
WAC 51-11C-40402

C404.2 Service water heating equipment performance efficiency.

1. Fossil fuel water heater pathway: Service water heating provided by a fossil fuel combustion appliance, not allowed via an exception provided within this code, shall comply with Section 406.1.3.

RATIONALE:

This code provides many commonsense exceptions where heat pumps are not required, ranging from supplemental heat, defrost cycles, small spaces, etc. However, it remains ambiguous if the fossil fuel pathway is still required when taking an exception explicitly granted within this code. We propose the above changes to clarify that the fossil fuel pathway is not required in these situations.

Commercial Proposal C5: Discrete Area-Weighting Wording Error

(Proposal in red. Additions underlined. Deletions double-strikethrough.)

Option 1 (OTS-5008.3) & **Option 2** (OTS-5009.3)
WAC 51-11C-40600

C406.1.2 Discrete area-weighted project compliance.

1. ((~~Project credit requirement shall be the individual occupancy group requirements from Table C406.1 for each discrete area weighted by discrete area conditioned floor area.~~)) Required project credits shall be prorated on an area-weighted basis for each occupancy group by multiplying the occupancy group floor area by the number of credits required, and then dividing this value by the total area of all the occupancy groups combined. Where one occupancy group is less than 10 percent of the floor area of the project, that occupancy group may be included within the floor area of ~~use~~ the primary occupancy group for ~~all~~ credit~~s~~ weighting.

RATIONALE:

The discrete area-weighted project compliance contains imprecise language that could result in only a single occupancy group being used in a mixed-use building. The wording ought to clarify that only those occupancy groups amounting to less than 10-percent may be included with the primary occupancy group—not all occupancy groups in a building that has just one occupancy group amounting to less than 10-percent.

Commercial Proposal C6: Footnote Editing Error

(Proposal in red. Additions underlined. Deletions double-strikethrough.)

Option 1 (OTS-5008.3) & **Option 2** (OTS-5009.3)
WAC 51-11C-50300

TABLE C503.4.6
Compliance Options for Mechanical Heating Equipment Alterations

[Footnote]

b Equipment shall have a capacity-weighted average heating system efficiency that is ~~10~~ 5 percent better than that shown in the reference table (((~~1.10~~)) 1.05 x values in reference table).

RATIONALE:

The footnote changed from 10-percent down to 5-percent via the multiplier but failed to make the same change earlier in the note.

Commercial Proposal C7: Fossil Fuel Pathway Additional Credits

(Proposal in red. Additions underlined. Deletions double-strikethrough.)

Option 1 (OTS-5008.3)
WAC 51-11C-40100

TABLE C401.3.3
ADDITIONAL CREDITS REQUIRED

Measure Title	Applicable Section	Occupancy Group					
		Group R-1	Group R-2	Group B	Group E	Group M	All Other
New building - Additional efficiency credits required for space heating systems using the fossil fuel pathway	C401.3.3.1	~~7~~ *	~~24~~ *	~~101~~ *	~~38~~ *	~~111~~ *	~~56~~ *
New building - Additional efficiency credits required for service water heating systems using the fossil fuel pathway	C401.3.3.2	~~198~~ *	~~212~~ *	~~27~~ *	~~17~~ *	~~79~~ *	~~107~~ *
Building additions - Additional efficiency credits required for space heating systems using the fossil fuel pathway	C401.3.3.1	~~4~~ *	~~12~~ *	~~51~~ *	~~19~~ *	~~56~~ *	~~28~~ *
Building additions - Additional efficiency credits required for service water heating systems using the fossil fuel pathway	C402.3.3.2	~~99~~ *	~~106~~ *	~~14~~ *	~~9~~ *	~~40~~ *	~~54~~ *

* Additional credits required shall be 10-percent of that required for the respective heat pump pathway.

Option 2 (OTS-5009.3)
WAC 51-11C-40600

TABLE C406.1.3.1
FOSSIL FUEL SPACE HEATING BASELINE NORMALIZATION

Measure Title	Applicable Section	Occupancy Group					
		Group R-1	Group R-2	Group B	Group E	Group M	All Other
Additional baseline credits required for space heating systems using the fossil fuel pathway.	C406.1.3.1	~~7~~ *	~~22~~ *	~~101~~ *	~~38~~ *	~~111~~ *	~~56~~ *

* Additional credits required shall be 10-percent of that required for the respective heat pump pathway.

Option 2 (OTS-5009.3)
WAC 51-11C-40600

TABLE C406.1.3.2
FOSSIL FUEL SERVICE WATER HEATING BASELINE NORMALIZATION

Measure Title	Applicable Section	Occupancy Group					
		Group R-1	Group R-2	Group B	Group E	Group M	All Other
Additional baseline credits required for service water heating systems using the fossil fuel pathway.	C406.1.3.2	~~198~~ *	~~204~~ *	~~27~~ *	~~17~~ *	~~79~~ *	~~105~~ *

* Additional credits required shall be 10-percent of that required for the respective heat pump pathway.

RATIONALE:
The fossil fuel pathway requires an additional 2x to 7x number of credits (423% average increase). This excessive number of additional credits isn't even feasible and amounts to a ban on appliances that use fossil fuels, thereby violating EPCA. Furthermore, these overly inflated credit values were determined in secrecy without any visibility or input from the public, stakeholders, or other interested parties. We believe that these values have no basis and were set as an unreasonable burden to deter any use of fossil fuels regardless actual efficiency or carbon emissions. A transparent study must be performed by an independent third-party to determine accurate credit values based upon source energy. We propose using a 10-percent increase in credits otherwise required instead of the values noted as an interim placeholder until the requisite study can be completed.