NW Energy Coalition
for a clean and affordable energy future

Build it Right:

Seattle's Commercial Energy Code

Buildings are one of the largest and fastest-growing sources of Seattle's climate pollution, contributing over a third of total emissions—and rising. These emissions pollute our air and accelerate climate change, which disproportionately harms communities of color. **For the health of people and our planet, Seattle must dramatically reduce fossil fuels in buildings over the next decade.**

One critical part of the solution is right before us, as the City of Seattle is updating its commercial and large multifamily building energy codes in 2020. We need to build it right from the start to prevent costly renovations in the future. Adopting these codes will also drive innovation that leads to sustainable green jobs and significant reductions in climate emissions from buildings—moving our city further toward a clean energy future

Proposed Amendments to Seattle's Commercial Energy Code

To reduce climate pollution, we can—and we must—make significant energy efficiency and energy use improvements in the design and construction of buildings being built today. The updates to the Seattle Commercial Energy Code are based on the latest knowledge, experience, and science of constructing clean and efficient buildings.

Eliminate Most Fossil Fuel Uses

For a clean energy future, we must stop installing fossil fuel equipment in buildings today. The bulk of building emissions comes from burning fossil fuels like gas and oil for space and water heating and powering appliances. A critical code update is to eliminate most fossil fuel uses for space and water heating in favor of clean, efficient technologies.

Prioritize High-Efficiency Building Envelopes

Building envelopes, such as the walls and windows, often remain unchanged for generations, so it is imperative to build them right from the start. Code updates call for efficient envelopes to minimize heat loss and air leakage, making it more comfortable for tenants. It is also cost-effective for owners, increasing the building's value, while lowering operating costs and avoiding costly upgrades down the road.

Make the Best Use of Seattle's Clean Electricity

Seattle has carbon-neutral electricity, and we should make the best use of it. The changes to the energy code eliminate most inefficient electric resistance space and water heating in favor of efficient heat pumps, and ensure that lighting installed is state of the art.

Ramp Up Renewable Solar Energy

The code updates extend solar readiness requirements to multifamily buildings and require more on-site solar in commercial buildings. Putting more solar on buildings leaves more clean electricity available for other uses, like transportation and heating.

Getting Involved

Let city staff and elected officials know that these code updates are both necessary and doable. Join an upcoming meeting and share your comments:

- SDCI public meetings – Aug 27, Sept 10, and Sept 17
- Construction Codes Advisory Board meetings
- City Council committee and full Council meetings

You can also provide written comments or request to join the Seattle Energy Code mailing list by contacting Duane Jonlin at SDCI, duane.jonlin@seattle.gov.

Process for Code Review and Approval

Every three years, the Seattle Department of Construction and Inspections (SDCI) develops amendments to strengthen the City's energy code for commercial and large multifamily buildings. The process to date and next steps include:

- ✓ **End of 2019:** SDCI reviewed and built on the statewide commercial energy code and latest technology, consulting with engineers, architects, developers, building owners, and other stakeholders.
- ✓ **Jan – Feb 2020:** The City held four public meetings to solicit technical comment and input on the initial draft changes.
- ✓ **Mar – July 2020:** SDCI refined the proposed amendments, integrating stakeholder feedback.
- **Aug – Sept 2020:** SDCI holds public meetings to review the draft amendments.
- **Oct 2020:** Seattle Construction Codes Advisory Board (CCAB) reviews the proposed amendments.
- **Nov or Dec 2020:** Seattle City Council reviews and adopts the energy code amendments.
- **Feb 2021:** The updated Seattle Commercial Energy Code goes into effect, in line with the statewide building code updates.

For more information on getting involved, contact Peachie Aquino or Amy Wheeless, NW Energy Coalition, peachie@nwenergy.org or amy@nwenergy.org.

Proposed Amendments to Seattle's Commercial Energy Code

Highest-impact proposals

1. **Table C402.4.** Reduce allowable fenestration U-values
2. **C402.1.4.2.** Thermal resistance of mechanical equipment penetrations.
3. **C403.1.4.** Formalize existing code restrictions on electric resistance and fossil fuel space heating. Extend to multifamily.
4. **C404.2.3.** Require heat pump water heater for R-1 & R-2 buildings with central hot water (Delayed implementation until Jan 1, 2022)
5. **Table C405.4.2.1.** Reduce interior LPAs (lighting power allowances) 10%.
6. **C406.1.** Increase C406 credit requirement to 8 (from 6) credits
7. **C407.3.1.** For energy modeling, prohibit envelope heat loss any worse than prescriptive code
8. **Table C407.3(2).** Require building performance factor (BPF) 10% below WA Appendix G modeling values
9. **C412.1.** Increase on-site solar PV from 0.07 W/square foot to 0.25 W, based on all floors

Additional envelope measures

1. **C402.2.9 & C402.2.10.** Thermal bridging control for concrete balconies & window frames
2. **C505.1.** Exempt certain change of use projects with high process loads from envelope improvement requirements

Additional mechanical measures

1. **C403.3.5.1.** Require both DCV (demand control ventilation) and energy recovery for high occupancy spaces larger than 650 sf
2. **C403.7.1.** Reduce DCV threshold from 25 to 15 occupants/1000 sf (per mechanical code)
3. **C403.3.5.1 and C403.7.6.** Increase energy recovery ventilation effectiveness from 50% to 60%
4. **C404.7.3.1.** Service hot water circulation controls and pipe/tank insulation
5. **C409.1.3.** Require individual gas meter at each dwelling unit with gas appliances
6. (Mechanical Code) Require MERV 13 filtration to mitigate wildfire smoke impacts. Exception for small HVAC units.

Additional Lighting & Electrical Measures

1. **C405.2.** Provide LLLC (luminaire-level lighting controls) or networked lighting control system for large (>5,000 sf) open office areas
2. **C405.4.1.** Increase minimum efficacy for "indoor horticultural lighting" to 1.6 micromoles per joule
3. **C405.7.1.** Provide electrical receptacles at dwelling unit gas-fired appliances, for future electric appliances
4. **C411.1.** Extend solar readiness requirement to multifamily buildings

Additional Efficiency Credit Measures (C406)

1. **Table C406.1.** Reduce to two credits for "basic" dedicated outdoor air system (DOAS) in R-2 occupancy (double dipping)
2. **Table C406.1.** Disallow C406 credits for fossil fuel-fired equipment

Additional Energy Modeling Measure (C407)

1. **Table C407.3(2).** Base Target Performance Path (TPP) targets on Appendix G BPF values, instead of the current list of target values