

## Summary of Electrification Code Updates for IBC Regulated Buildings

**The City of Bellingham is proposing a draft ordinance amending Bellingham Municipal Code Chapter 17.10 - Building Codes, modifying the Washington State Energy Code – Commercial, by promoting energy efficiency and the decarbonization of commercial and large multifamily buildings.**

In 2020 the Bellingham City Council adopted Resolution 2020-45 amending the 2018 Climate Action Plan by adding 10 new measures, including one entitled “Electrify New Buildings.” That measure allows for development of policy and regulations requiring the electrification of all new buildings built in Bellingham. The draft ordinance is modeled on codes adopted by Seattle in February 2021, in Shoreline in December 2021 and currently under review in King County. The changes focus on electrification, efficiency, renewable energy and specifically on space and water heating which accounts for the majority of energy consumption in buildings. The following are highlights of the code amendments:

1. More complete and detailed definitions which accommodate new terms relating to energy efficiency and clarifies existing language.
2. Better performing building envelopes. These attributes will be for the life of the building so it’s imperative to get them right from the start. The exterior wall envelope elements consist of insulation integrity, component performance and air barriers.
3. Mechanical systems become more efficient and restricts the use of electric resistance and fossil fuel utilized for space heating. This applies to larger commercial and multifamily buildings. There is some allowance for small, special purpose electric resistance heating. The code encourages multiple types of heat pump technologies and requires balanced ventilation and exhaust systems including their controls.
4. More efficient service water heating which again restricts the use of fossil fuel and electric resistance while promoting heat pump type water heaters. There are also improvements in hot water circulation, controls, insulation, and storage.
5. More efficient use of electrical power and lighting improvements related to the types of fixtures, the configuration, and controls. This includes requirements for outlets and circuits for future electric conversion of gas-powered appliances currently allowed in multifamily dwelling units.
6. With energy modeling compliance, the ordinance prohibits envelope heat loss to not more than 10% when using the prescriptive compliance method. Whereas the State code threshold allows 20% worse.
7. Requires buildings to obtain additional energy credits from 6 to 8 for code compliance.
8. Enhanced commissioning requirements and additional energy metering to assess building performance.
9. Commercial buildings are currently required by state code to meet *solar ready* requirements. This proposal requires both low-rise and larger residential buildings to also be solar-ready. This entails attention to placement of items such as vents and other equipment that could impede solar panels. For multifamily buildings less than 20 stories, 40% of the roof area, or an area adequate to generate 20% of building electrical energy use, must be clear of obstructions so that solar could be installed. For low-rise

residential buildings, 300 square feet is required for a single-family unit, and 150 square feet per unit is required for duplexes and townhouses.