

Part 9 - Design Verification Report

for Buildings Complying with Section 9.36 of the BCBC

Last updated August 31, 2021

Instructions: 1. Effective July 1, 2018
2. To be completed by the Applicant
3. To be submitted at time of Building Permit application, accompanied with supporting documentation

I, _____, am the Applicant for the below-mentioned project and have coordinated the design to substantially comply with the requirements of Section 9.36 of the 2018 BC Building Code, based on pursuing the Energy Regulation indicated in the Project Details below.

| Project Details | |
|---|--|
| Project Address | |
| Building Permit # | |
| BCBC Compliance Pathway (check one) | <input type="checkbox"/> 1. Prescriptive: 9.36.2 to 9.36.4 (COMPLETE SECTION A) |
| | <input type="checkbox"/> 2. Performance: 9.36.5 (COMPLETE SECTION A + C) |
| | <input type="checkbox"/> 3 Performance: 9.36.6 – Energy Step Code (COMPLETE SECTION A + C) |
| | Step pursued: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |
| | <input type="checkbox"/> 4 Prescriptive: NECB-2015 Part 3-7 (COMPLETE SECTION A) |
| | <input type="checkbox"/> 5 Performance: NECB-2015 Part 8 (COMPLETE SECTION A + C) |
| Low Carbon Energy System (LCES) (Step 3 with LCES OR Step 5 as per Construction Bylaw 8271) | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| HOT2000 Energy Report Attached? (Required) | <input type="checkbox"/> Yes |

The following space conditioning and hot water heating systems will be installed:

| | Principal Dwelling (Single Family Dwelling) | Secondary Dwelling <input type="checkbox"/> Secondary Suite <input type="checkbox"/> Coach House |
|---|---|---|
| Space Conditioning (Heating and cooling) | <input type="checkbox"/> Air-to-Air Ductless Heat Pump (Single or Multi-Head Mini Split) <input type="checkbox"/> Air-to-Air Central Heat Pump <input type="checkbox"/> Air to Water Hydronic Heat Pump/Radiant Floor Heating <input type="checkbox"/> Combination Space and Water Heat Pump <input type="checkbox"/> Electric Resistance Baseboard Heaters <input type="checkbox"/> Electric Furnace <input type="checkbox"/> Ground-source/Geothermal Heat Pump <input type="checkbox"/> Other _____ | <input type="checkbox"/> Air-to-Air Ductless Heat Pump (Single or Multi-Head Mini Split) <input type="checkbox"/> Air-to-Air Central Heat Pump <input type="checkbox"/> Air to Water Hydronic Heat Pump/Radiant Floor Heating <input type="checkbox"/> Combination Space and Water Heat Pump <input type="checkbox"/> Electric Resistance Baseboard Heaters <input type="checkbox"/> Electric Furnace <input type="checkbox"/> Ground source/Geothermal Heat Pump <input type="checkbox"/> Other _____ <input type="checkbox"/> N/A |
| Hot Water Heating | <input type="checkbox"/> Electric Pump Water Heater <input type="checkbox"/> Electric Tank Water Heater <input type="checkbox"/> Electric Instantaneous Water Heater <input type="checkbox"/> Combination Space and Water Heat Pump <input type="checkbox"/> Ground-source/Geothermal Heat Pump Water Heater <input type="checkbox"/> Solar Hot Water Heating System <input type="checkbox"/> Other _____ | <input type="checkbox"/> Electric Heat Pump Water Heater <input type="checkbox"/> Electric Tank Water Heater <input type="checkbox"/> Electric Instantaneous Water Heater <input type="checkbox"/> Combination Space and Water Heat Pump <input type="checkbox"/> Ground-source/Geothermal Heat Pump Water Heater <input type="checkbox"/> Solar Hot Water Heating System <input type="checkbox"/> Other <input type="checkbox"/> N/A |
| Modelled Greenhouse Gas Intensity (Note: GHGI to be calculated using highest emitting system, modelled as primary) | _____ kgCO ₂ e/m ² /year | _____ kgCO ₂ e/m ² /year |

Section A: DRAWING SUBMISSION REQUIREMENTS

The following compliance pathways were utilized for each Section of ASHRAE 90.1-2019 and the responsible professionals for each Section are indicated and the Design Intent Letters are attached:

| | | |
|--------------------------------|--------------------------|---|
| | <input type="checkbox"/> | Envelope section drawing(s) indicate the <i>Effective Thermal Resistance(RSI) of Assembly</i> for all Exterior Opaque Building Assemblies. |
| 9.36 Compliance (Pathways 1-2) | <input type="checkbox"/> | Window section drawing(s) indicate the <i>Overall Thermal Transmittance(U-Value)</i> for all Fenestration, Doors and Skylights. |
| | <input type="checkbox"/> | Drawing(s) indicate the <i>Performance Rating</i> and <i>Energy Source</i> for all space-heating, space-cooling and service hot water systems. |
| 9.36.5 Compliance (Pathway 2) | <input type="checkbox"/> | Drawing(s) indicate the corresponding Areas (in m ²) of each Wall, Window and Door Assembly type, the Solar Heat Gain Coefficient (SHGC) of each Window, and the Ratio of total Vertical Fenestration and Door Area to Gross Wall Area. |
| 9.36.6 Compliance (Pathway 3) | <input type="checkbox"/> | Drawing(s) include a statement indicating the Step pursued |
| NECB Compliance (Pathways 4-5) | <input type="checkbox"/> | Drawing(s) indicate requirements as per Part 2 of the NECB-2015 |

Section C: PERFORMANCE MODELLING

| | | |
|--|--------------------------|---|
| 9.36.5 Compliance (Pathway 2) | <input type="checkbox"/> | BC Energy Compliance Report Attached |
| | <input type="checkbox"/> | Reference House Energy Model Attached |
| | <input type="checkbox"/> | Proposed House Energy Model Attached |
| 9.36.6 – Energy Step Code Compliance (Pathway 3) | <input type="checkbox"/> | BC Energy Compliance Report Attached |
| | <input type="checkbox"/> | Energy Model Attached |
| | <input type="checkbox"/> | EnerGuide Homeowner Information Sheet Attached (if using the EnerGuide Rating System) |
| NECB Part 8 Compliance (Pathway 5) | <input type="checkbox"/> | NECB-2015 Modelling Report Attached |

Applicable to all Compliance Pathways

The undersigned has produced and/or reviewed the above-mentioned project with the Compliance Pathway indicated in the ProjectDetails, created based on the project's design as provided by the Designer of Record. The undersigned has verified that the project complies with the Compliance Pathway, as detailed in Section 9.36 of the 2018 BC Building Code.

Information

| | | | | | |
|--------------|--|----------|--|-------------|--|
| Signature | | | | | |
| Name | | | | Date Signed | |
| Company Name | | | | | |
| Address | | | | | |
| City | | Province | | Postal Code | |
| Email | | Phone | | Cell | |