

Building Better Codes

UNECE Group of Experts on Energy Efficiency 11th Int. Forum on Energy for Sustainable Dev. Rob Bernhardt September 20, 2021

BC Energy Step Code Goals

- To put BC on a path to meet the province's target of all new buildings being 'net zero energy ready' by 2032 and provide assurance that they perform 'as billed'.
- New homes are to be 80% more efficient that the current base building code by 2032 – the net-zero energy ready standard.
- Enable the province to meet its commitments under the Paris Accord and related obligations.

Reference Building Approach Results

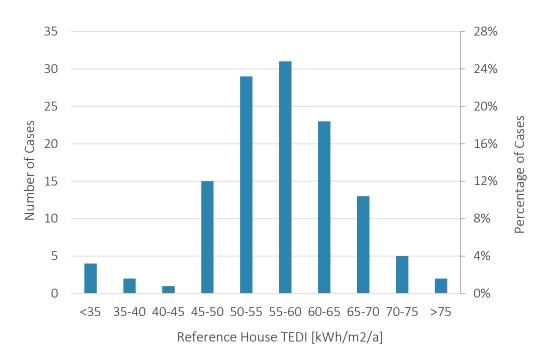


Figure 2. Distribution of the Reference House TEDI based on energy models of 125 single- and two-family dwellings built under the Energy Step Code in Richmond, British Columbia

- Achieving a set thermal energy demand requires different relative improvements – depending on the TEDI of the Reference Building (baseline). For example, the first 125 projects could comply with Step 5 of the BC ESC, which targets 15 kWh/m²/a, by producing an energy model predicting a TEDI ranging from 17.5 – 37.5 kWh/m²/a.
- Given the endemic performance gap, the actual building performance is likely more varied.
- Other technical shortcomings in methodology diminish actual results even further.