

## The BC Energy Plan and Energy Efficiency Standards Regulations

The 2008 Energy Efficient Buildings Strategy charts a course for significant energy and emissions reductions in new and existing buildings. This article will review the approach that the Ministry of Energy, Mines and Petroleum Resources is pursuing to improve energy efficiency in buildings.

### Targets

The strategy sets targets for commercial, institutional and industrial buildings to consume 9% less energy per square metre by the year 2020. The target of an average 20% reduction in demand for energy of households in BC has also been set.

### BC Energy Efficiency Standards Regulations (EESR)

The regulation for Windows, Glazing and Sliding Glass doors can best be summarized in the attached chart. **Please note that the standards for high-rise buildings take effect on January 1, 2011. This article and the attached chart will help your company comply with the regulation by the effective date.**

Product performance (U-value) falls into one of two streams. The first stream on the left side of the flow chart is largely residential but does include non-residential buildings of less than 600 metres squared.

The right hand side of the chart includes commercial, institutional and industrial buildings of greater than 600 metres squared, and residential buildings 5 stories and greater.

Residential door slabs and door glazing is also covered in the regulation but has been excluded from this article since this product type is not commonly provided by GCA-BC companies.

### Testing Standards

Products may be tested using the most recent versions of NFRC 100 or CSA A440.2 to determine the U-value of the products to be installed in the building. It should be noted that the U-value takes into account the framing systems including mullions, and the IGU's (sealed units). Operable vents are included in the analysis as well.

A number of Canadian and American companies are capable of providing the testing services. It should be noted that the testing is accomplished with computer simulation programs.

### Exemptions for Buildings over 600 Square Metres and High-Rise Residential

Exemptions are noted on the chart.

It is important to note that if you are providing products to buildings larger than 600 square metres or high-rise residential which are ASHRAE 90.1 (2007 or 2004) compliant, then your products will be considered compliant. All new construction as of September 2008 has to comply with ASHRAE 90.1 (2004) under the BC Building Code. ASHRAE 90.1 permits the building designer a number of approaches to building performance.

### Effective Date

Products manufactured after the effective date must meet the EESR.

**This is important since you must inform your clients of this fact if their projects are being built or renovated after January 1<sup>st</sup>, 2011. Products manufactured after that date are subject to the regulation. Products manufactured before January 1, 2011 which do not meet the standards can still be sold after the effective date.**

### Verification

Glazing products that fall under the EESR must be verified by certification organizations who are accredited by the Standards Council of Canada or the National Fenestration Rating Council (NFRC).

Under some circumstances, professional engineers and architects registered in British Columbia may verify products.

### Details of the Energy Efficiency Standards Regulation

For the complete regulation, refer to the official version at <http://www.bclaws.ca>

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