

# Codes and Regulations applicable to Biomass Boilers in Canada

## Codes

- **electrical: CSA- or UL-standards**
- **pressure vessel codes vary from province to province**
- **ASME-code most common, in BC also CSA-standard acceptable**
- **solid-fuel burning appliance:**
  - CAN/CSA-B365, "Installation Code for Solid-Fuel Burning Appliances and Equipment."
  - CAN/CSA-B366.1-M91, "Solid-Fuel Fired Central Heating Appliances"
  - CAN/CSA-B415.1-00 emission specification for wood burning devices up to 2 MW of 0.137 g/MJ (or 0.32 lb/MMBtu equivalent to approx. 180 mg/sm<sup>3</sup>)
  - CAN/ULC S629-M87, "650o C Factory-Built Chimneys,"
  - CAN/ULC S635-M90, "Standard for Lining Systems for Existing Masonry or Factory-Built Chimneys and Vents,"
  - CAN/ULC S641-M87, "Factory-Built Chimney Connectors."
  - A Professional Engineer's letters of assurance for system design and installation is required for all solid fuel burning heating systems (including plenums and ducting), *combined or added to an existing gas or oil system.*

## Regulations

- **operation of pressure vessels:** governed by provincial safety authorities
- **emission control:**
  - no federal requirements
  - only provincial thresholds
    - BC: particulate matter (PM) < 50 mg/sm<sup>3</sup>
    - Alberta Substance Release Regulation (Alta. Reg. 124/93): 0.20 g of PM per kg of effluent
  - local bylaws in some areas stricter than in Austria or Germany (Greater Vancouver: PM < 18 mg/sm<sup>3</sup>)
  - NOx generally not (yet) a concern