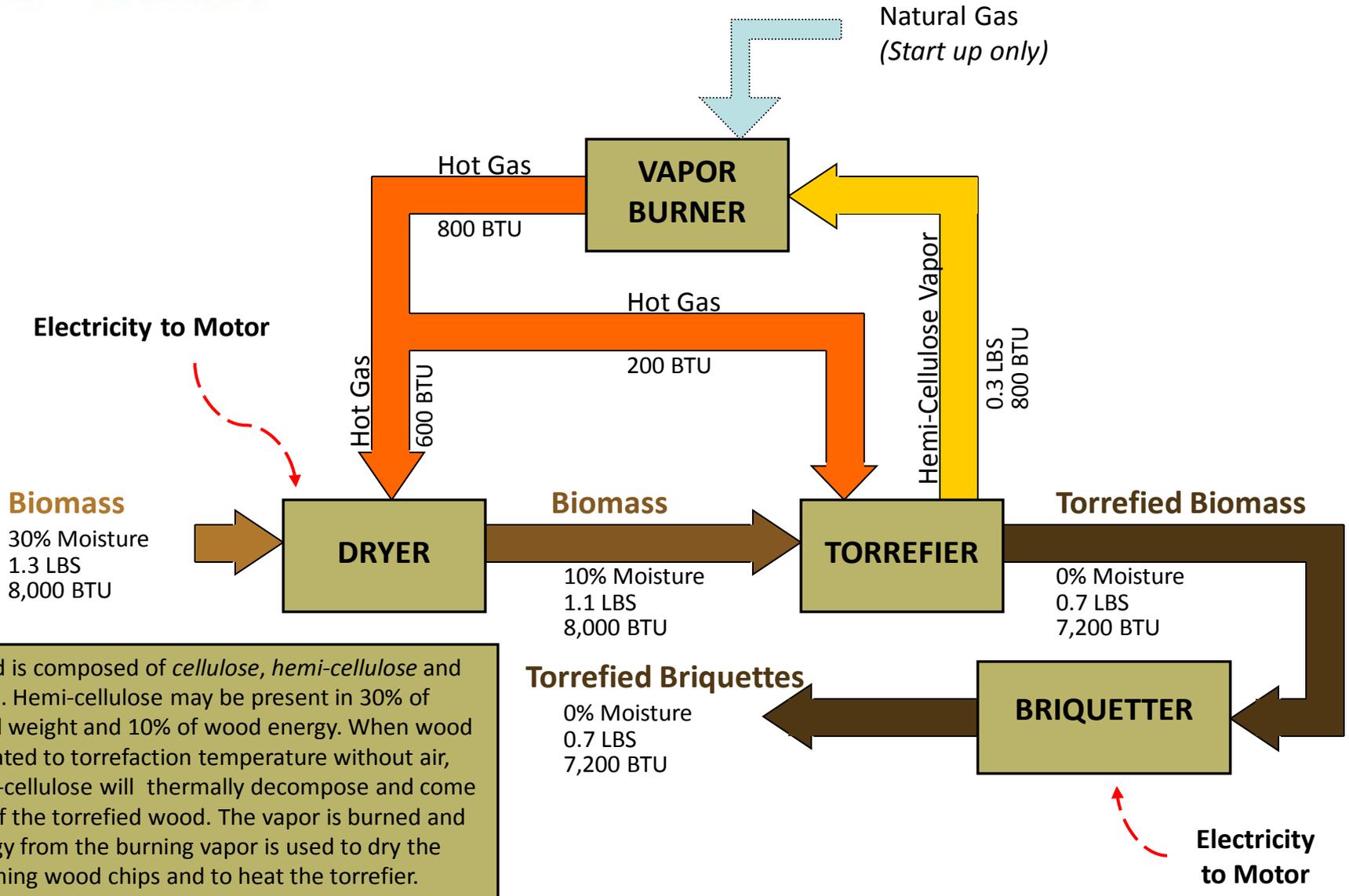




Torrefaction Mass and Energy Balance



Wood is composed of *cellulose*, *hemi-cellulose* and *lignin*. Hemi-cellulose may be present in 30% of wood weight and 10% of wood energy. When wood is heated to torrefaction temperature without air, hemi-cellulose will thermally decompose and come out of the torrefied wood. The vapor is burned and energy from the burning vapor is used to dry the incoming wood chips and to heat the torrefier.