

# commercial renewable definition 2

IECC: (New),

**Proponent:** jim edelson, representing New Buildings Institute (jim@newbuildings.org)

## 2018 International Energy Conservation Code

**Add new text as follows:**

**WASTE MATERIALS.** Otherwise discarded combustible materials that, when burned, produce energy for such purposes as space heating and electric power generation. The size of the waste may be reduced by shredders, grinders, or hammermills. Noncombustible materials, if any, may be removed. The waste may be dried and then burned, either alone or in combination with fossil fuels.

**BIOMASS GAS.** A medium Btu gas containing methane and carbon dioxide, resulting from the action of microorganisms on organic materials such as a landfill.

**ON-SITE RENEWABLE ENERGY.** Energy derived from solar radiation, wind, waves, tides, ~~landfill~~biomass gas, biogas, biomass-waste materials or the internal heat of the earth. The energy system providing on-site renewable energy shall be located on the project site.

**Reason Statement:** The existing definition in IECC dates to the 2012 IECC. It was proposed by the team of New Buildings Institute, US Department of Energy and American Institute of Architects. It was one clause in a comprehensive overhaul of the 2009 IECC. When it was written in 2010, it was the first time that renewable energy had been defined in an I-code, and it reflected a very early understanding of a much less mature industry. It has not been significantly revised since.

This proposal updates the language by further refining biogas and biomass energy sources with consistent published terms. The revision limits the biomass sources to those that meet specifications as waste products. There are many flavors of biomass energy, but this proposal ensures that virgin material of unknown origin is not used as a steady source of energy in a building and then used in Section C406 as a trade-off for energy efficiency features of the building. The definitions of *biomass gas* and *waste materials* are taken from the glossary of the Energy Information Administration.

This proposal impacts and clarifies only the "landfill gas, biogas and biomass" terms in the on-site renewable definition. It is independent of another proposal to restructure and revise other terms in the same definition.

**Bibliography:** U.S. Energy Information Administration Glossary; <https://www.eia.gov/tools/glossary/>

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction

This proposal is a definition of renewable energy that will no have an impact on construction costs. The modification of the definition only applies only to the fuel used after occupancy.