Caltech strives to incorporate high quality, reliable, and environmentally preferable energy in the campus energy portfolio to support research and education while working with the campus community to improve efficiency and reduce demand.

Caltech’s onsite generation portfolio consists of a combined heat and power plant with a 10MW natural gas turbine and 2.5MW steam generator, 1.3MW of solar photovoltaic panels and 2MW of fuel cells. Remaining electrical demands are met with grid purchases.

Minimizing grid power purchases assists the Institute in meeting emission reduction goals and is an important facet of Caltech’s energy procurement strategy since Caltech’s on-site electricity generation portfolio is approximately 20 percent cleaner than the power provided by the municipal utility. Caltech is actively engaged with the city to investigate options to provide clean, cost effective power to service all municipal customers.

In a typical year, 90 percent of the campus demand is met through onsite generation. In 2013, however, unplanned disruptions in the on-site combined heat and power plant and fuel cell installations resulted in more power purchased from the grid than the previous year.

Despite unplanned disruptions, continued investment in energy efficiency measures across campus have reduced energy intensity by 10 percent and chilled water and steam demand by 39 and 24 percent, respectively, since 2009.