



Example 2

Estimating the annual electrical cost of operating circulation fans in Gainesville, FL

Assumptions:

40 circulation fans with 1 hp motors in naturally ventilated barn

1 hp motor consumes 1 kW of power^[15]

Electricity costs \$0.11/kWh

Set point temperature is 68 °F

In typical meteorological year, Gainesville has 5,002 hours with a temperature at or above 68 °F^[2]

(note: from Table 1, with a THI set point of 68, fans would only run 4,751 hours)

Annual electrical costs [\$] = (hours over set point [hours/yr]) * (number of fans) *(electrical use per fan [kW/fan]) *(costs of electricity [\$ /kWh]) = 5,002 hours/year * 40 fans * 1 kW/fan * \$0.11/kWh = \$22,008/year