**Anticipated savings for ${AREA} lighting:**

The savings resulting from replacing the ${PREV} in ${AREA} with LED bulbs is outlined in this section. The estimated energy savings, ES${i}, for replacing these lights with LED bulbs is calculated as follows:

ES${i}= (CN${i} × CPR${i} × COH${i} - PN${i} × PPR${i} × POH${i}) / C1

where,

CN${i} = Current number of ${PREV}; ${CN}

CPR${i} = Power rating of current ${PREV} in ${AREA}; ${CPR} W

COH${i} = Current Operating hours of lights in ${AREA}; ${COH} hrs/yr (${CHR} hours per day, ${CDY} days per week, ${CWK} weeks per year)

PN${i} = Proposed number of LED bulbs; ${PN}

PPR${i} = Power rating of proposed LED bulbs in ${AREA}; ${PPR} W

POH${i} = Proposed operating hours of lights in ${AREA}; ${POH} hrs/yr (${PHR} hours per day, ${PDY} days per week, ${PWK} weeks per year)

C1 = Conversion constant; 1,000 W/kW

The estimated energy savings, ES${i}, realized by replacing ${PREV} with LED bulbs is calculated as:

ES${i} = (${CN} × ${CPR} W × ${COH} hrs/yr - ${PN} × ${PPR} W × ${POH} hrs/yr) / 1,000 W/kW

= ${ESi} kWh/yr.

The following relation gives the demand savings, DS${i}, if the lights in a specific area were replaced with LED bulbs:

DS${i} = (CN${i} × CPR${i} - PN${i} × PPR${i}) × CF${i} × C2 / C1

where,

CF${i} = Coincidence factor − probability that the equipment contributes to the facility peak demand, per month, assumed to be ${CF}%

C2 = Convection constant; 12 months per year

Thus, the demand savings, DS${i}, is calculated as follows:

DS${i} = (${CN} × ${CPR} W - ${PN} × ${PPR} W) × ${CF}%/mo × 12 mos/yr / 1,000 W/kW

= ${DSi} kW/yr.