

Distribution Transformer Value of Losses

SMUD uses a “lowest lifelong owning cost” methodology for evaluating bids for distribution transformers. The lowest owning cost is the first cost + net present value of no-load losses + net present value of load losses. The manufacturers quote the first cost, the no-load losses for each transformer design, and the load losses for each transformer at 100% nameplate loading. SMUD establishes the value of the losses based upon annual and daily load factors for distribution transformers, as well as the forecast value of energy over the life of the equipment and the capacity and energy losses for distribution lines, transmission lines and generating facilities.

In 2006 the values established for distribution losses were:

| | |
|----------------|-------------|
| No-Load Losses | \$5.9/Watt |
| Load Losses | \$1.06/Watt |

SMUD buys the transformers with the lowest evaluated cost. SMUD pays the first cost for these transformers, not the evaluated lifelong owning cost.

Due to increasing energy cost forecasts and Federal and State mandates for renewables the value of losses has increased significantly since 2006.