



# *Poultry Housing Tips*

## **Lighting System Operating Cost**

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With yearly electricity bills often exceeding fuel bills, managing electricity usage is a major area of concern for most broiler growers. Often, when growers are trying to figure out how they can reduce their power bills, they concentrate their efforts on reducing fan usage. Though fans are typically responsible for the largest portion of a growers power bill, it is important to note that electricity bills can be significantly reduced on many farms by making relatively inexpensive changes to the lighting system.

The following charts show the yearly lighting system operating cost for a broiler house with 50 light bulbs. Power usage is calculated assuming a 49 day growout, six flocks per year, half house brooding for the first 10 days, and an electrical cost \$0.08 per Kw\*hr.

<b>Conventional Incandescent Light Bulbs (annual cost)</b>					
<b>Bulb Size</b>	<b>25 watt</b>	<b>40 watt</b>	<b>60 watt</b>	<b>75 watt</b>	<b>100 watt</b>
<b>10 hrs of light</b>	\$264	\$422	\$633	\$792	\$1,056
<b>23 hrs of light (solid side wall or black curtain house)</b>	\$607	\$971	\$1,457	\$1,821	\$2,428

With higher wattage incandescent light bulbs the cost of lighting a broiler house 10 hours a day can be fairly expensive. In houses which use their lights nearly 24 hours a day, lighting cost can come close to \$2,000 a year. Dimmers reduce electricity usage as bulbs are dimmed, but a fair amount of electricity is still consumed.

<b>100 Watt Conventional Incandescent Light Bulbs Operated at Full Intensity Three Days, Dimmed Remainder of Growout (annual cost)</b>				
<b>Dimmed Level</b>	<b>25 watt</b>	<b>40 watt</b>	<b>60 watt</b>	<b>75 watt</b>
<b>10 hrs of light</b>	\$622	\$750	\$864	\$1,000
<b>23 hrs of light</b>	\$1,432	\$1,725	\$1,989	\$2,300

<b>60 Watt Conventional Incandescent Light Bulbs Operated at Full Intensity Three Days, Dimmed Remainder of Growout (annual cost)</b>		
<b>Dimmed Level</b>	<b>25 watt</b>	<b>40 watt</b>
<b>10 hrs of light</b>	<i>\$450</i>	<i>\$534</i>
<b>23 hrs of light</b>	<i>\$1,034</i>	<i>\$1,235</i>

One of the best ways of reducing energy usage is to switch to compact fluorescent light bulbs. In general, fluorescent lights use only 20% of the power of a conventional incandescent bulb, saving the typical broiler grower hundreds of dollars a year per house! Though a compact fluorescent light bulb costs about six dollars, they last about ten times as long, and as a result they will pay for themselves in a year or less in most instances.

<b>Compact Fluorescent Light Bulbs (annual cost)</b>					
<b>Bulbs Size</b>	<i>5 watt (equal to a 25 watt bulb )</i>	<i>7 watt (equal to a 40 watt bulb)</i>	<i>9 watt (equal to a 60 watt bulb )</i>	<i>11 watt (equal to a 75 watt bulb )</i>	<i>22 watt (equal to 100 watt bulb)</i>
<b>10 hrs of light</b>	<i>\$73</i>	<i>\$95</i>	<i>\$116</i>	<i>\$137</i>	<i>\$253</i>
<b>23 hrs of light</b>	<i>\$170</i>	<i>\$218</i>	<i>\$267</i>	<i>\$315</i>	<i>\$582</i>

Since you cannot dim compact fluorescent light bulbs you may want to install a single row of incandescent light bulbs down the center of the house which can be used during the first three days of the growout and then shut off. These incandescent bulbs can be installed down the entire length of a house and placed on a dimmer if low light intensity is required during catching.

<b>Compact Fluorescent Light Bulbs With Single Row of 100 Watt Bulbs Down Center Used During First Three Days of the Growout (annual cost)</b>			
<b>Bulbs Size</b>	<i>5 watt</i>	<i>7 watt</i>	<i>9 watt</i>
<b>10 hrs of light</b>	<i>\$113</i>	<i>\$135</i>	<i>\$156</i>
<b>23 hrs of light</b>	<i>\$210</i>	<i>\$258</i>	<i>\$307</i>

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