



Dairy Lighting Inventory

Now you're moving! Keep going...



1

Learn about LED lighting for livestock barns



LED lighting in your barns can reduce lighting energy by up to 85%, saving \$1,000s each year and paying for itself in 3 years or less. Visit mncerts.org/dairy for step-by-step resources and a chance to win \$100!

2

Take an inventory of existing lighting



Barns that have existing lighting with incandescent or high pressure sodium (HPS) light bulbs are your best bet for a cost-effective upgrade. Write down information in the white boxes below as you walk through your barns.

Light bulb type	Power used by each bulb type (watts)		Number of this bulb type		Total Power (watts)
Incandescent:	<input type="text" value="A"/>	×	<input type="text"/>	=	<input type="text"/>
High Pressure Sodium or Metal Halide:	<input type="text" value="+ 40* B"/>	×	<input type="text"/>	=	<input type="text"/>

* HPS and MH fixtures have a ballast, typically using 40 W

Add the above gray boxes:
Use this number on the CERTs assistance form if you request support

Calculate the gray cells above. Divide the number in box C by 1,000 and write this number in box D in Step 3.

Find out how much you'll save with LED lighting

Copy box C above into box C1 below. Then re-do the calculation in Step 2 to figure how much power will be used by LEDs. Use 12 watts in box A if replacing incandescents with LEDs and use 53 watts in box B if replacing HPS with LEDs (don't add 40 to 53, as shown in Step 2, because LEDs don't have a ballast). Divide the number re-calculated in box C by 1,000 and write this number in box C2 below. Calculate box D below by subtracting box C2 from box C1.

Total Power Before (kW)	Total Power After (kW)	Power Savings (kW)	Annual Lighting Use (hours)	Annual Energy Savings (kWh)
<input type="text" value="C1"/>	<input type="text" value="C2"/>	<input type="text" value="D"/>	<input type="text" value="E"/>	<input type="text" value="F"/>

Need help?
Call Fritz at
612-626-1028

Estimate annual lighting use in box E by multiplying the number of days that cows are in the barn each year and the number of hours lights are on each day (average summer & winter hours). Calculate box F above by multiplying box D and box E.

Multiply box F by \$0.10 to calculate your **Estimated Annual Cost Savings:** \$

Continue to steps 3, 4, and 5 at mncerts.org/dairy!



Fill out the form at mncerts.org/dairy for a chance to win \$100!