

LED LIGHTING

Commercial and Industrial Lighting Incentives offered by Energy Trust of Oregon and Portland General Electric

LED Lighting in Sheep Barn:

Mark Whitney, Energy Specialist with Portland General Electric, visited the farm on July 6, 2018. His recommendations included increasing energy efficiency for irrigation/pumps and for barn lighting.

Based on Mark's recommendations, 300 watt incandescent bulbs were replaced with 45 watt LED bulbs in the sheep barn. The goal is to provide more light using less energy. We applied to Energy Trust of Oregon for the "Lighten Up with LEDs Promotion" and received a \$20 incentive rebate on each bulb.

We worked with Matt Vosper, Platt Electric in Salem, as one of the approved subcontractors by Energy Trust of Oregon. The cost of each bulb was \$55 minus the rebate of \$20. We installed 6 bulbs in the sheep barn at a total cost of \$210.

Energy Savings: *The 45 watt LED bulbs replaced the 300 watt incandescent bulbs. Ignoring the additional light output for the LED bulbs, which is significantly superior to the incandescent bulbs, the energy savings per hour is the difference of the two wattages, times the cost per Kilowatt Hour from the energy provider. 6 bulbs X (300-45) * \$0.10/1000 watts = \$0.153/hour. For a 24-hour period that the lights are on, one can save \$3.67. In one months time, one can save \$110.16. The LED lights cost more, but 10 years from now they will still be working while the incandescent would have been replaced three times due to burn-out. The cost of a 300 watt incandescent bulb is around \$8 X 3 = \$24.00/10 years, as compared with \$35 (with rebate) for the 45 watt LED bulbs.*



300 watt bulbs (on left) were removed from the sheep barn. They were replaced with 45 watt LED retrofit bulb. Our high school farm assistant, Jared, installed the LED bulbs.