

## Example 2

### Estimating the fan electrical costs of Example 1 barn in Madison, WI

#### Assumptions:

- ✓ 57 exhaust fans with 2 hp motors
- ✓ 2 hp motor consumes 2 kW of power
- ✓ Electricity costs \$0.11/kWh
- ✓ Setpoints and percent fans on listed in table below

Setpoint range	Percent of fans on	Hours per year	kWh per year
<0°F	5%	366	2,086
0-20°F	10%	834	9,508
20-30°F	20%	835	19,038
30-50°F	25%	2,774	79,059
50-68°F	40%	2,269	103,466
>68°F	100%	1,682	191,748

Annual electrical consumption (kWh) 404,905

Annual electrical costs [\$] = 404,905 kWh \* \$0.11/kWh = \$44,539/year