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Christmas Lights and Decorations in America

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# Consumption: Christmas Lights and Decorations in America





If Clark Griswold were to decorate his house for Christmas

- Maryland
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- •

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- New Jersey
- NewYork
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- •

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Fina ncia and pay today's national average of 12 cents per kWh, it'd cost him \$1,600!

### What about the rest of America?

With Christmas less than a week away, neighborhoods around America are filled with homes and yards decked out with Christmas lights — string lights, tree lights, icicle lights, robotic waving Santas, spotlights showcasing wreaths hanging on windows — you name it.

While Christmas lights have been a long, time-honored tradition during the holiday season, what many people fail to realize is just how much these lights may be costing them.

While we make quite a few assumptions in our calculations

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M Ope n Elec below, the math ultimately shows that America uses *a lot* of electricity for Christmas. In fact, some states use more electricity for Christmas than other countries do — **all year long.** 

### Types of Christmas Lights

### **Christmas Tree**

The average strand of 100 mini lights that you can find at your typical hardware or grocery store uses about 45 watts per strand. That isn?t too much when you compare it to other items that use electricity, but the average Christmas tree requires about 10 strands of these lights.

1,000 lights at 45 watts per strand is 450 watts to keep your Christmas tree lit. This is about the same number of watts used

trici ty Mar ket in Sing apo re to power your 55 inch flat screen television.

Ultimately, when it comes to
Christmas tree lights, if you can
keep your lighting simple like this,
this simple, tactful decoration is
one of the least expensive to
light. However, some of the
other Christmas lights can be far
more costly...

### **Outdoor String Lights**

Those big festive pre-lamped bulbs that really make your house pop are a great addition to any home?s roof or windows, but these bulbs also come with a high operational price tag. The average strand of 100 of these lights uses 500 watts of energy. To cover a traditional two story home, you will need around 20 strands of these lights, which

comes to a whopping 10,000 watts of energy.

That is about as much energy as you need to heat a 1,500 square foot home with an electric furnace.

### **Outdoor Tree Lights**

Have a few large trees in your front end? The average 20 foot outdoor tree requires around 20,000 lights. The average C9 multicolored outdoor Christmas lights consume around 175 watts per strand of 25 lights. If you have 80 strands of these to cover your trees, that is about 14,000 watts of energy per tree.

How much energy is that? It is about the same as running your oven, dryer, dishwasher, microwave, coffee maker, toaster and washer all at once, meaning

those trees are taking up a lot of your electricity bill.

## Christmas Decorations/Accessories Requiring Electricity

We're talking about light up decorations that come in all different types of creature shapes from reindeers to animals, Santas, snowmen and anything in between. The average one of these decorations uses about 120 watts. So if you have a pair of light up holiday animals you are only looking at about 140 watts of energy.

This is about the same as using your computer monitor.

### **Icicle Lights**

The average strand of those fun icicle lights has 95 lights on it and

uses about 6,056 watts of energy. If you want to line your gutters with three strands of these lights, you are looking at around 18,168 watts of energy. This is about the same as washing 50 loads of laundry.

### **Overall Costs**

If you take these amounts and multiply them by the national average kWh rate of about 12 cents per kWh, it can be very revealing on how much energy we use to keep our homes festive during the holiday season. If you keep your home lit through from Thanksgiving to New Years (45 days), the cost of keeping your home decorated can really start to add up. Not all decorations are created equal, of course:

### **Christmas Tree**

450 watts at 7 hours a day for 45

days at \$0.12 per kWh= \$17.01

### **Outdoor String Lights**

10,000 watts at 7 hours a night for 45 days at \$0.12 per kWh= \$378.00

### **Outdoor Tree Lights**

14,000 watts per tree x 2 trees at 7 hours a night for 45 days at \$0.12 per kWh= \$529.20

### **Christmas**

Decorations/Accessories
Requiring Electricity

240 watts at 7 hours a day for 45 days at \$0.12 per kWh= \$9.07

### **Icicle Lights**

18,168 watts at 7 hours a night for 45 days at \$0.12 per kWh= \$686.75

This means if you went *all out* and lit your house ala-Griswald Christmas, you would be

spending \$1,620.03 during the 45 day holiday season. That comes down to an extra \$36.00 per day on electricity costs. While not everyone will hold an extravaganza such as this, it does paint a pretty realistic picture of how much these lights could be costing you. Keep this perspective in mind when it comes to shopping for your home?s energy rates. Saving just one cent per kWh on your electricity plan can lead to \$3.00 in savings a day or \$135 in savings over the 45 day holiday season. If you live in a deregulated state and have the power to shop for plans, this can be a great way to save money without changing a single thing in your holiday décor.

### The Big Picture

On an individual level, many
Americans are spending dozens,
hundreds, if not thousands of
extra dollars every year to light
their homes with Christmas
lights, so in total how much is this
holiday tradition costing the
United States as a country?

According to the Pew Research
Center, approximately 90 percent
of Americans celebrate
Christmas. This means there are
approximately 105,000,000
households in the United States
that celebrate the holiday. While
not every home in the U.S. that
celebrates Christmas decorates
with extravagant lighting, many
of them do. Say every home
decorated with lights this holiday
season, here is what it would cost
the United Sates:

Total, it would cost the country \$3,780,000,000 per day and

\$170,103,150,000 for the whole 45-day holiday season. This would have Americans using 31 million MW of electricity just on Christmas lights.

This means that the United States has the capacity to use more than double the amount of electricity that Ecuador and Cuba use together in a single year.

Americans also have the capacity to use just as much energy on Christmas lights as the country of Belarus.

## So, how much energy is America using for Christmas?

In our above example, an average American home can use 42,690 watts (43 kW) of electricity per hour in order to power their

home Christmas lights, or 301 kWh per day, with the lights only being on seven hours a night. This comes to 13,545 kW or 13.5 MW per home over the holiday season. How much energy is this really? It's more than the average U.S. home tends to use in electricity over the rest of the year.

Let?s break this down by comparing some states, assuming once again that 90 percent of Americans will be celebrating Christmas:

**Ohio –** 54,196,195 MW over the holiday season. Or, about the same as the entire country of Iraq (55,660,000 MW) uses in an entire year.

**Pennsylvania** – 67,923,031 MW over the holiday season. This much energy is only slightly less

energy than the entire United Arab Emirates (70,580,000 MW) uses in an entire year.

**Texas** – 126,676,872 MW over the holiday season. Or, about virtually the exact same amount of electricity Indonesia uses in an entire year.

Illinois – 64,482,737 MW over the holiday season. This is approximately the same as the entire country of Austria (65,670,000 MW) uses in an entire year.

**New Jersey –** 43,637,794 MW over the holiday season. The entire state can use about the same amount of electricity for their lights as all of Hong Kong (43,140,000 MW) uses in a year.

**Maryland –** 29,429,657 MW over the holiday season. This is more

electricity than Syria uses is a year (28,990,000 MW).

**New York** – 99,521,135 MW over the holiday season. Or, just slightly less than Vietnam uses in energy over an entire year (101,000,000 MW).

Now, we've taken liberties and had some fun coming up with these numbers. Obviously, not all Americans who celebrate Christmas adorn their homes with lights from Clark Griswold's attic — and not all homes are of equal size requiring the same strands/numbers of lights. Also, some won't keep their homes lit 7 hours a night.

We also haven't even taken into consideration public/business displays of Christmas lights and decorations — churches, zoos,

parks, city squares, main streets — you name it.

Regardless, America uses *a lot* of electricity to celebrate Christmas and the holiday season.

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