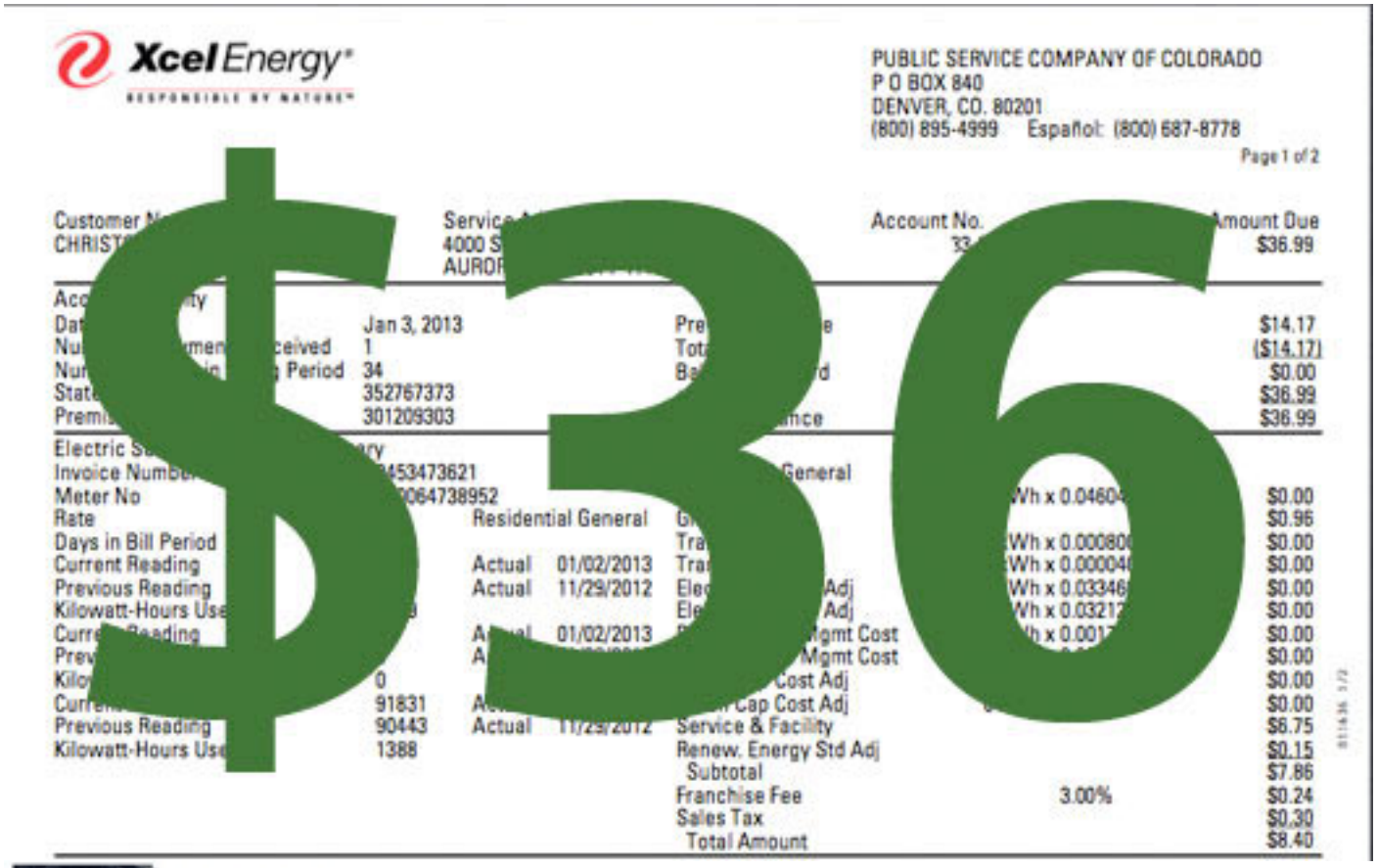


editor's blog entry

Ho, ho, ho, ho! Our *entire* utility bill (gas + electric) for December 2012 was – drum roll, or, more appropriately put, a big Santa high five, please -- $36.99!

This in a household of four people and for a house that's 2,100 square feet (if you include the furnished basement), and which is located in Aurora, Colo., not exactly a balmy climate at this time of year. In fact, according to our December 2012 Xcel Energy bill, the average monthly temperature was 32 degrees Fahrenheit.

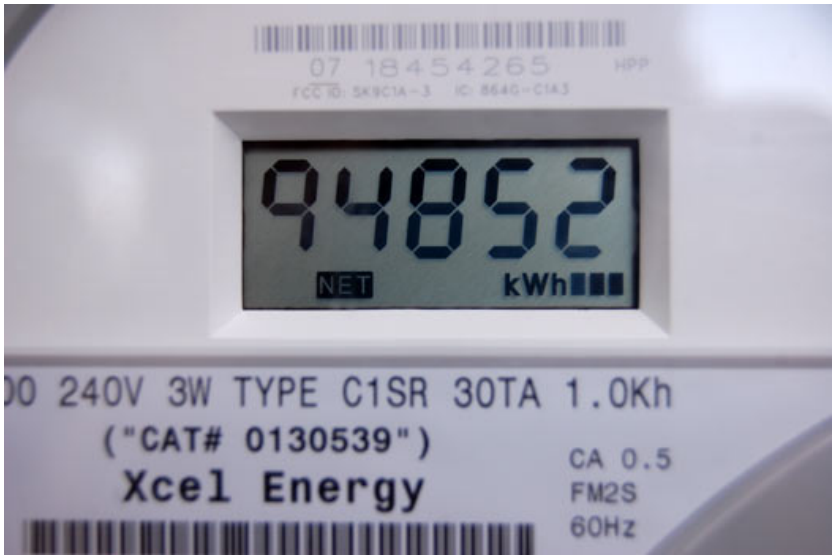
$36 December utility bill

Okay, so $36 ($0 of which is for electricity) is about $10 more than the we've been paying per month for the past eight months, but it's pretty much unthinkable for any of our neighbors, and, until we got solar – which we're now using to power electric resistance wall heaters in our home – it was pretty much unthinkable for us.

For some perspective: We once shelled out $189 for our December utility bill, or about five times what we paid this month.

How'd we manage a $36 utility bill -- 1/3 of which is actually fees and taxes -- for one of the coldest months of the year in wintry Colorado?

No, we didn't freeze ;-)



10,400 extra kWh generated

The reason for our incredibly low utility bill is solar: Since going online in June of 2009, our 5.59 kW solar system has produced way more electricity than we've used. In fact, by August of 2012, we'd amassed about 10,400 extra solar-generated kWh which our utility Xcel Energy allows us to bank indefinitely and save to use later on.

Since we have so many extra solar kWh, we're heating 90 percent with electric this winter via six eheat.com resistance wall heaters (four of these are movable, two are not).

Economically speaking, it definitely feels good to be spending next to nothing to heat our home by using the past extra solar kWh we've generated, though, of course, we did plunk down $8,000 for our 5.59 kW solar system, and about $500 for our six eheat.com electric resistance

heaters.

What's greenest?

Environmentally speaking, as I've noted in another recent entry (and actually others before that), I've been a little bit ambivalent. There's no doubt that the "greenest" thing for us to do would be to continue to overproduce electricity and simply donate all of this extra electricity to our neighbors – forever.

Since we aren't doing that, though, it makes sense to do a quick comparison in terms of total gas therms used last December (when we heated our house primarily via our natural gas forced hot air central furnce) to gas therms + kWh used this December.

A bit of a qualifier: We had an extra person living with us in December 2011 (a German exchange student). It was also slightly colder in December 2011 than in December 2012, with Xcel reporting an average daily temperature of 29 degrees Fahrenheit vs. 32 degrees.

Crunching the comparative numbers

Okay, the numbers:

104 = therms burned in December 2011

27 = therms burned in December 2012

524 = kWh used in December 2011 (our exchange student used one eheat.com electric wall heater about 16 hours per day)

1,636 = kWh used in December 2012

Using an online therms to kWh conversion calculator , here are our December 2011 vs. December 2012 numbers:

December 2011 -->104 therms = 3,050 kWh + 524 = 3,574 kWh used

December 2012 -->27 therms = 791 kWh + 1,636 kWh = 2,427 kWh used

{googleAds}
<script type="text/javascript"><!--
google_ad_client = "pub-7703542917199961";
/* 200x200,
created 12/8/09 */
google_ad_slot = "7950368454";
google_ad_width
= 200;
google_ad_height = 200;
//-->
</script>
<script
type="text/javascript"
src="http://pagead2.googlesyndication.com/pagead/show_ads.js">
</script>
  {/googleAds}

According to my calculations, heating primarily with electricity rather than gas (probably only 14 of the 27 therms we burned in Dec. 2012 went to our natural gas furnace; the other 13 went to our natural gas hot water heater) we used 1,147 *fewer* kWh worth of total energy in December 2012 than in December 2011.

That makes me feel better, environmentally speaking, about our decision to heat with electricity and to use solar offset to do so and to radically reduce the amount of natural gas we're burning to heat our home. In addition, there is a very deep sense of fueling independence satisfaction that comes along with coming close to generating all of the energy we use to power and heat our home :-)

Related articles-->

- Should we feel guilty for heating with solar?
- Why our utility hates us: Solar independence
- Is using solar offset to power an EV cheating?
- Defining solar EV miles could be controversial