



ENERGY UPDATE

An update to the state of energy in the State of Oregon
November 2002



General Updates

- Utility Rates – utility rate projections haven't changed since the October update. NW Natural went down in October 2002 and PGE is still going down 10-13% in January 2003.
- Weather Update – looks a lot like the October update: "the outlook for November-December-January 2002/03 calls for above normal temperatures over much of the northern U.S. due to El Niño aided by trend. Precipitation is expected to be below normal in the Pacific Northwest and Montana."
<http://www.wrh.noaa.gov/cgi-bin/Portland/afd?SLCPMD90D>
- Holiday Operation Reminder –
 - Building operators: don't forget to adjust your buildings to unoccupied mode on Veterans' Day and Thanksgiving. If you have automatic controls, give them a quick glance to make sure the calendar is set correctly and that daylight savings rolled over properly.
 - Building tenants: even though you normally turn all your electrical-consuming equipment off evenings and weekends, take an extra look around and make sure they're off for the holidays.

TIP OF THE MONTH:

When having holiday potlucks and get-togethers this season, bring items that don't need re-warming with electrical devices. Bring yummy chips and dips, fudge, cookies or other items that can be served at room temperature. Microwaves and other warming devices consume a large amount of electricity, and the less we use them in our buildings, the better. This about the following question before bringing the slow cooker or other electrical device to reheat food for a potluck: can I bring something delicious that doesn't cost the state money, instead?



ELECTRICITY 101

This section of the next several updates will be a brief description of different elements of electricity that impact our buildings and our bills.

#4: Reactive Demand Charge

According to PGE, the Reactive Demand Charge is "based on the Power Factor (ratio between KW & KVAR). It comes from inefficiencies caused by customer's equipment. For example, a power factor of 0.72 would mean only 72% of your power was being used to do useful work. There is no penalty for power factor of 92.8% and above."

This is a hard concept to understand to both energy and non-energy professionals, but it essentially means that we are penalized for not using the equipment in a building to their original design intent. The less efficient the building equipment is operating, the higher reactive demand is required and the higher the charge on our bill. For example, if a pump in a building is designed to run at 80% efficiency, but for lack of maintenance or age, it is running at 60%, then we have a 20% gap in the performance. That 20% gap causes slight problems in the power levels and that is charged as a reactive demand cost.

Most of the equipment in DAS buildings runs at levels where we receive very little reactive demand charges. DAS has an extensive preventive maintenance program and all equipment is routinely checked, cleaned, and even repaired, if needed. Most large buildings do have some reactive demand charges, but they are generally very low – in the range of less than 1% of the total bill cost.



Holiday Lights

As the holiday season approaches, agencies may be wondering if holiday lights will be allowed in DAS buildings this year. Yes, they are allowed for 2002...with some restrictions:

- ❖ Lights will only be used in common areas, such as reception areas or breakrooms.
- ❖ They may be operated from 8 a.m. to 5 p.m.
- ❖ Lights may be installed after Dec. 1, but should be down by Dec. 24.
- ❖ Only mini or LED lights should be used.

As always, these and all electrical consuming devices should be turned off and/or unplugged when staff are not in the office, which includes evenings, weekends, and holidays.

These lights do cost money, especially multiplied around state buildings. The more we can all do with our other plug loads, such as turning off computers, monitors and task lights, can help offset this extra cost. Here's the cost of the holiday light bulbs (operating 9 hours a day for the 17 days allowed in December):

- ❖ One LED light uses 0.04 watts/bulb - a string of 100 lights costs \$0.04
- ❖ One mini light uses 0.4 watts/bulb - a string of 100 lights costs \$0.44
- ❖ Standard holiday C-7 incandescent lights use 4 watts/bulb - a string of 100 bulbs costs \$4.41

Source: WSU, http://www.energyideas.org/documents/2001_holiday_lights_fs_ei.pdf

