



It's not a power plant, it's a heating plant....

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By: Joseph Tateoka

Every day thousands of BYU students walk past the "smokestack" located on the south end of campus to get to class rarely taking the time to examine what is the so-called BYU power plant.

To straighten out the myth, the large column rising above the BYU skyline at the south end of campus is a chimney for BYU's heating facility and not a smokestack for a power plant.

"There is no power plant at BYU," said Travis Ball, engineering manager of Provo City Power. "We supply power to BYU and they have their own substations and transformers to deliver the power to its buildings."

BYU is Provo City Power's largest client, purchasing 14 percent of all electricity sold in the area, Ball said.

"The average person, especially students, don't have the slightest idea of what goes into keeping the buildings warm and how much it costs to do so," said Ole Smith, assistant administrative vice president of physical facilities.

BYU spends an average of \$500,000 during each of the winter months and up to \$625,000 during each of the summer months on electricity, said Dan Gleason, director of capital needs and utilities analysis.

Most of BYU's electricity costs are due to the heating and cooling units used within the different buildings on campus.

Buildings ranging from the Maeser Building, Smith Fieldhouse, the Marriott Center, the Harman Building and even the on-campus housing are all connected to BYU's high-temperature water heater and chilled water plant.

A few of the buildings on campus have their own chilling units and use more energy than the buildings attached to the chilled water plant.

Hot and cold water are pumped through two 18-inch pipes, buried 4-to-7 feet underground, to and from the plant at 320 pounds per square inch. The hot water is pumped out at 400 degrees Fahrenheit and returns around 320 degrees.

The heating and cooling plant is located south of the Crabtree Technology Building and north of the Knight Mangum Building.

During the summer months, the chilled water plant cools buildings on campus and requires \$40,000 a month to run, Gleason said.

To supply cool air to buildings on campus during the summer months, BYU pays \$60,000 for the MTC, \$48,000 for the WSC, \$40,000 for the chilled water plant, \$31,000 for the Widstoe Building and \$30,000 for the HBLL each month, Gleason said.

"Each building has different cooling needs because the labs require outside air, some buildings are newer and some of the buildings are bigger," Gleason said. "The lab buildings require air from the outside, instead of recycled air from inside the building, so it takes a lot more to cool the air on a hot summer day."

During the winter months different buildings take the lead for power usage.

The MTC still uses the most power during the winter with the HBLL in a close second. The Benson Building and the Clyde Building are third and fourth respectively in highest winter electrical costs, said Gleason.

BYU buys electricity from Provo City Power at the rate of five cents per kilowatt hour that roughly translates into 1,000 watts per hour, Gleason said.

"The heating plant runs 24/7, 365 days a year," said Cliff Riley, director of utilities, engineering and maintenance.

Running the heat on BYU campus isn't cheap: BYU pays \$400,000 for coal during the summer and \$1.5 million for natural gas in the winter.

For those concerned about BYU's consumption of coal and possible pollution effects, a "bag house" was designed and built to block 99.99 percent of all particulate matter from polluting the air of Utah Valley to keep BYU in line with air pollution standards, Gleason said.

When March rolls around and a warm spell hits the valley, students should not be surprised if it takes a few days to get the air conditioning going.

"It takes a day or two from the time the chiller is turned on to the time full cooling capability is achieved," Riley said. "We have to anticipate the warmer weather because it doesn't just turn on in five minutes."

BYU students can help lower BYU's electrical costs by turning the thermostat down to 68 degrees during the winter and up to 78 degrees during the summer, Ball said.

"People think turning off a light doesn't help because it is so minimal," Smith said. "But if everyone did a little tiny bit, it would literally save tens of thousands of dollars."

BYU is ahead of the curve when compared to other universities in Utah, Gleason said.

"We have saved the university and the church millions of dollars each year because of our high quality people that work for us," Gleason said. "We have some of the best engineers and electricians that use a methodical and professional approach to plan things out, and that makes all the difference."

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