# Computer Energy Assessment

## Sustainable Campus 2000
## ENVS 480

**Richard Hansis**
**Tuesday Thursday 3:30**

**Energy Sub-Committee**:
**Lizzy Andrew**
**Alysia Cervantes**
**Elisabeth Gingrich**
**Matthew A. Tolley**

# Outline

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Outline

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# Introduction

Energy consumption has increased throughout the country with the introduction and increased popularity of the Internet. HSU energy consumption has increased significantly since 1990. Starting in November California residents began to take part in Brown Outs to save energy because some plants have been shut down for cleaning. While the brown outs are expected to be only temporary many are well aware that if we continue to consume at our current rate that eventually the brown outs will lead to black outs that won't be short lived. To aid in more efficient energy use, our Energy subcommittee decided to focus on energy consumption by computers and determined how much HSU's overall energy consumption (Which totaled 15,611,394 KWH for July 1999 to June 2000) do computers consume. After much trial and error we were able to complete an assessment of the number of computers and amount of computer use by students, faculty, and staff.

*[handwritten: small or]*

*[handwritten: How has this changed over time?]*

**Quote on Energy-**



> ''Energy cannot be recycled, and it might be said that
> energy is for the mechanical world what consciousness is
> for the human world. If energy fails, everything fails.''
> -E.F Schumacher

## Mission Statement:

To assess the amount of energy used by computers on campus.
This assessment includes the following on-campus facilities:

       Staff computers
       Dorm inhabitant computers
       Faculty computers
       Campus computer labs.

*→ Total KWH Hours →*

## Problem Statement:

The Sustainable Campus Energy Committee strongly believes that the current inefficent use of computers on the Humboldt State Campus has contributed to the increase in energy costs and consumption. Using methods of research, interviews, and class observation we plan to evaluate this problem and offer selective solutions through our derived specific objectives towards a realistic resolution to this campus, if not country, wide problem.

## Specific Objectives:

To discover how many students, staff, and faculty have computers.
To determine what brands and models of computers are used.
To find the amount of volts hard drives, printers, and monitors use.
To record how many hours a day campus computers are on.
To register how many computers have sleep modes or power downs.

## Solution:

To complete an assessment of the campus wide computer use. *how..?*
To reduce energy use on campus.
To raise energy awareness concerning computer use.
To educate student, staff, and faculty about energy consumption.

*Are there alternatives. Why did you choose these*

*were those done? If not, why not*

*How did you go. about doing this? You need to write up what you did*

# Total KWH July 1999 → June 2000

| | campus total KWH | KWH$ | campus total Therms | Therm $ | |
|---|---|---|---|---|---|
| Jul-99 | 1,019,496 | 75,386.00 | 76,007 | 35,311.00 | |
| Aug-99 | 1,042,835 | 78,583.00 | 84,278 | 42,984.00 | |
| Sep-99 | 1,381,202 | 106,501.00 | 86,822 | 48,873.00 | |
| Oct-99 | 1,427,553 | 108,406.00 | 113,627 | 60,402.00 | |
| Nov-99 | 1,466,143 | 87,985.00 | 85,435 | 70,119.00 | |
| Dec-99 | 1,398,598 | 73,267.00 | 130,973 | 81,149.00 | |
| Jan-00 | 1,134,558 | 61,507.00 | 129,726 | 77,804.00 | |
| Feb-00 | 1,528,087 | 75,835.00 | 116,784 | 71,096.00 | |
| Mar-00 | 1,380,704 | 71,893.00 | 121,959 | 73,864.00 | |
| Apr-00 | 1,390,137 | 72,557.00 | 108,196 | 64,728.00 | rebate from PG&E on gas transportation |
| May-00 | 1,364,445 | 91,312.00 | 112,961 | 41,326.00 | " " |
| Jun-00 | 1,077,636 | 86,988.00 | 79,151 | 34,106.00 | " " |
| Totals- | 15,611,394 | 990,220.00 | 1,245,919 | 701,762.00 | |

0.063 KW

20% came from cogen
.063 cent kw
.56 cent therm

- Campus wide
- entire Campus
- housing (cogen)
  10% of ours

I compared to market
are low

# General Computer Information

Information gathered from the book entitled <u>Stuff, The Sercret Lives of Everyday Things</u>, by John C. Ryan and Alan Thein Durning (1997)

- ❖ 150 watt current of electricity, enough to power two incandescent light bulbs, brings a computer to life

- ❖ U.S. owns 40% of the worlds' 300 million computers

- ❖ Computers use 5% of the total electricity in an office, compared to lighting which uses 20-25%

- ❖ Screen savers, saves no energy

- ❖ One-third of computers, in the U.S., are left on 24 hours a day, 7 days a week

- ❖ Electricity, that comes from hydroelectric power (generated from dams), has ruined one-third of all salmon habitat in 7 states and one province, the Columbia Basin

> **Turn-Ons and Turn-Offs**
>
> Many people leave computers on because they believe that turning computer equipment off and on is bad for it. In fact, turning my computer off is good for it. By reducing the time it generates heat and mechanical stress- the two leading causes of personal computer failure- turning my computer off at night is likely to increase its life –span.

- ❖ There are 55 pounds of plastics, metals, glass, and silicon in an average desktop computer

- ❖ Chips generate more waste than any other part of the computer, a 400 step process

- ❖ Total wastes: 139 pounds; Total hazardous waste: 49 pounds

- ❖ By the year 2005, about 150 million personal computers will have been sent to the landfills in the US, occupying 300 million cubic feet, equivalent to a football field stacked a mile high.

- ❖ The total process using 7,300 gallons of water and 2,300 kilowatt-hours of energy (about one-fourth the energy the computer would use over its four-year lifetime)
  Conclusion: The computer industry thrives on the rapid adoption of new technologies and resists change much less than older industries. If nudged by governments and consumers, the computer industry could apply its technical expertise toward cleaning up its own act- and fast.

> **What to Do?!**
> - ❖ Print less often, Send e-mail instead of faxes, and print on scrap paper when you can.
> - ❖ Turn off your computer, or at least your screen, whenever you're not using it.
> - ❖ Choose the most power-saving setting in your computer's setup. Look for EPA's Energy Star logo if you buy new equipment.
> - ❖ If you need to upgrade your computer, have new memory or circuit boards added rate̶ than replacing the whole thing.
> - ❖ If you need a new computer altogether, refurbish a used one or buy a laptop, before buying a new desktop. Laptop computers weigh about on-tenth as much as desktop computers and require about one-third the electricity.

Frequently Asked Questions

Gateway PC FAQs

Q: Should the computer run continuously?

A: The following information may help you decide whether to leave your computer on or turn it off
when you are finished.

With today's Power Management technology, Advanced Power Management or Advanced
Configuration and Power Interface (ACPI), the computer sets itself into a low power usage mode after
a user-specified amount of time when the computer is left on. The computer is in a sleep or stand-by
mode and uses less power. The computer can be brought out of this state quickly and is ready to be
used with a touch of a button, a mouse movement, or a simple keystroke.

There are times, though, when it is better to turn off the computer, such as when the computer will not
be used for long lengths of time or during inclement weather. It is also a good idea to unplug the power
cord and the telephone cord to the modem during inclement weather.

But if you are stepping away from the computer to refill the coffee mug, answer the doorbell, or take a
short break, it is better to leave the computer on and let it go to sleep.

Did you find the answer to your question?
Yes
No

Office of the Dean
College of Natural Resources and Sciences

## *MEMORANDUM*

**DATE:**     November 5, 2000

**TO:**     Elizabeth Andrew, Elizabeth Gingrich, Alysia Cervantes, & Matt Tolley
Richard Hansis, Environmental Science Department

**FROM:**     Beverly Nachem, Chair
Committee for the Protection of Human Subjects in Research

**SUBJECT:**     Your Proposal, "Energy Efficiency" **(00-91)**

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Thank you for submitting documentation of your proposal, "Energy Efficiency," **(00-91)** for research using human subjects. Humboldt State University's Policy for the Protection of Human Subjects in Research requires that all human subjects research, including that which is exempt from federal regulation, be submitted to this office for approval before initiating the study. Exempt research is reviewed only for its exemption status, and is filed with the permanent records of the Institutional Review Board. I agree that your planned research is in the category of research exempt from federal regulation because it is an anonymous survey which does not pose a risk to participants. Before you begin your survey, please send me a copy of the revised survey form with the changes described via e-mail. Your proposal will be filed with the permanent records of human subjects research at Humboldt State University.

This memo constitutes formal approval of your research proposal. This approval is for one calendar year, and will expire on November 5, 2001. If you find it necessary to continue your research beyond this date, please apply for renewed approval in advance of this date to prevent interruptions in your project. If your research plan must be altered, please notify this office according to the policies established for Humboldt State University. If this research is for a graduate thesis or project, retain this letter of approval for your records. It is mandatory that the project number be indicated on your thesis/project, as well as you advancement to candidacy paperwork.

Please note that survey and interview procedures involving children are not exempt from federal regulation. If your research subjects will include children (persons under 18 years of age who are neither emancipated, nor married), your project will require further board review.

Thank you for your careful attention to the protection of the human subjects of your research.

cc:     Members of the Committee for the Protection of Human Subjects in Research:
Maria Bartlett, Department of Social Work
Eleanor Castleberry, Counseling and Psychological Services
Leslie Foote, Arcata Family Health Center
Chris Hopper, College of Professional Studies
Senqi Hu, Department of Psychology
Diane Johnson, Department of Mathematics
Richard Langford, Department of Psychology
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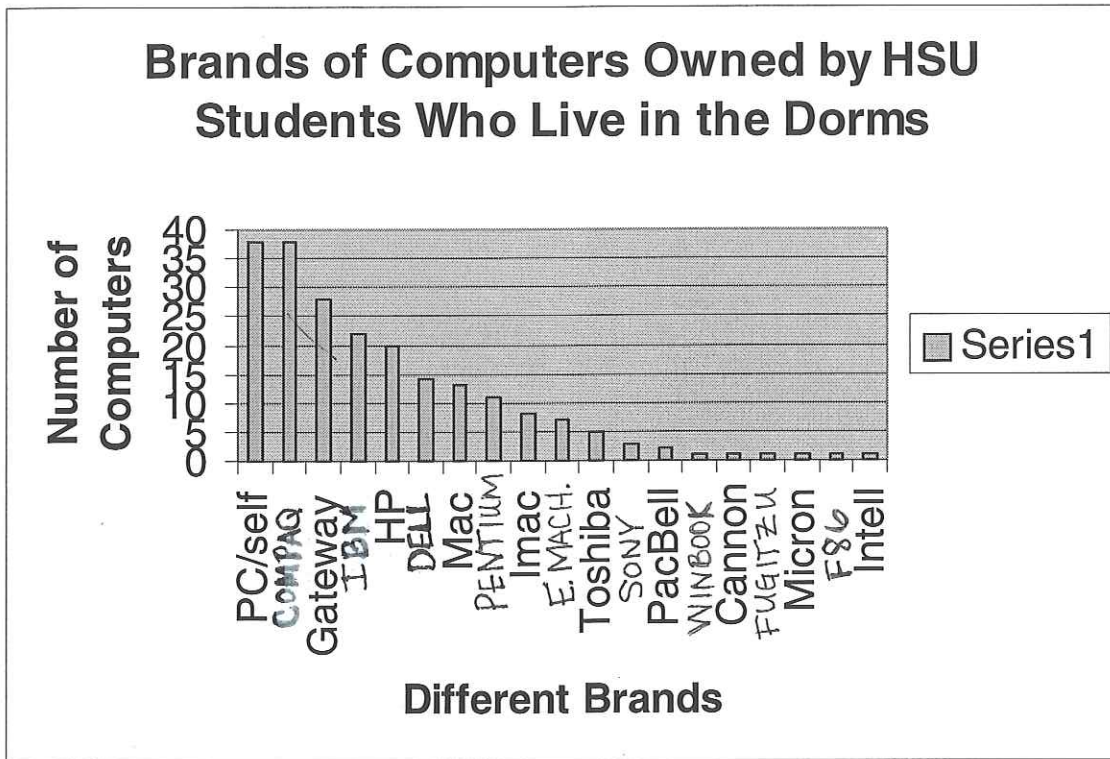
Computer Survey
Sustainable Campus

As Humboldt State University students we are attempting to compile information to assess energy use on campus. Energy consumption on campus has increased significantly since 1990 when the Internet gained popularity. We are conducting a confidential survey to determine the amount of energy used by computers on campus. By collecting this data we will be able to obtain the information necessary to make our campus more energy efficient. If you own a computer on campus, and are 18 years or older, please answer the following questions.

Please state if you are a student, faculty member, or staff member.

1) What brand of computer do you own?

2) How many volts does your hard drive, printer and monitor run on?
   (Located on the back of each item listed above)

3) How many hours a day is your computer on?

4) How many hours a day do you actually use the computer?

5) Do you have a sleep mode on your computer?

Figure 4



**Brands of Computers Owned by HSU Students Who Live in the Dorms**

A sample of two-hundred students survey results.
Figure 3



**Student residents with sleep mode**

yes
no

Figure 2

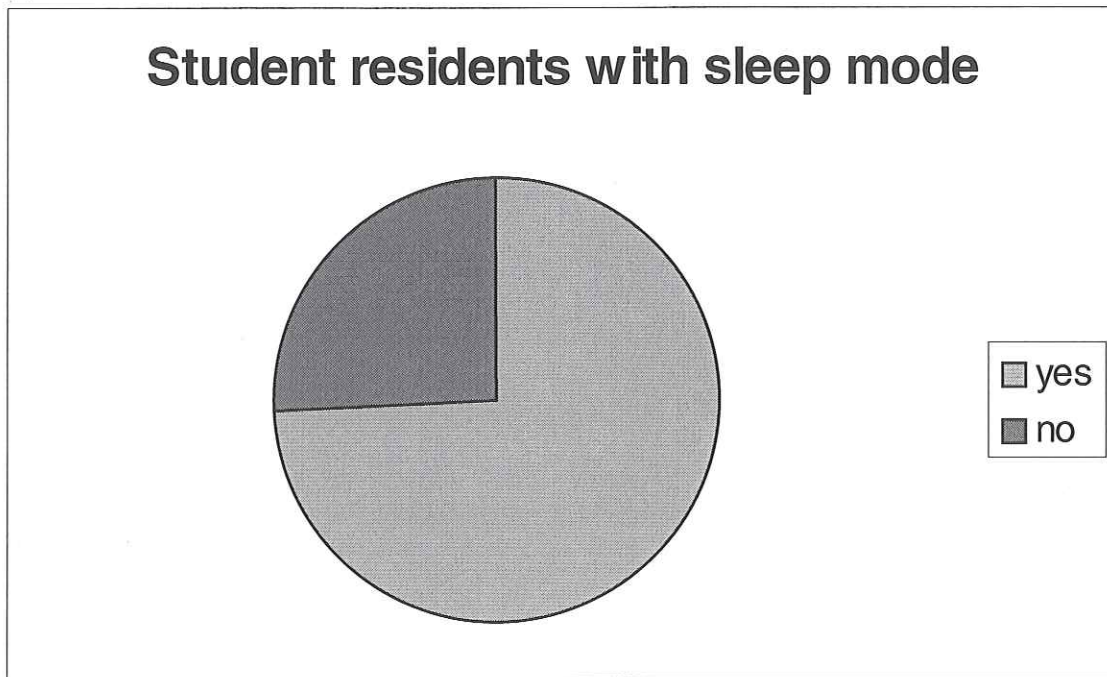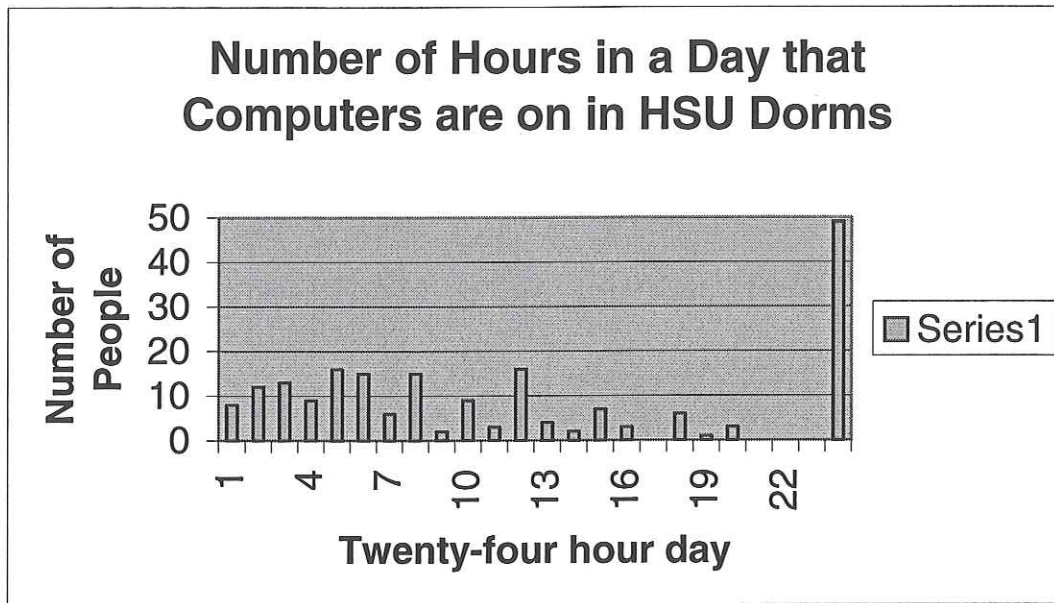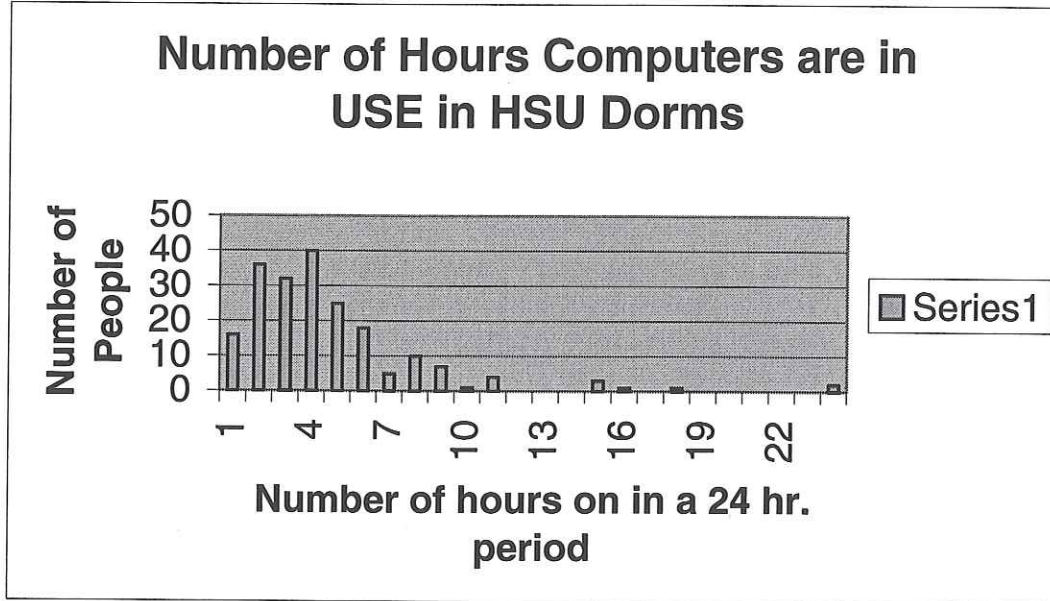**Number of Hours in a Day that Computers are on in HSU Dorms**

Twenty-four hour day

Two hundred dorm residents of HSU were surveyed at the Jolly Giant Commons
Cafeteria to assess how many hours computers are used vs. how many hours the
computers are on.  The following graphs display the results.
Figure 1



**Number of Hours Computers are in USE in HSU Dorms**

## Number of Computer on Campus:

### Labs in Library:

- 147 total computers (34 of which are counted under Academic Computing)
- 78 run 24 hours, seven days a week
- 44 run 9 hours, five days a week
- 25 run less than 9 hours, five days a week

### Help Desk: *Library*

- 8 computers total
- 3 PC
- 4 I Mac
- 1 G 4 Mac
- 2 Scanners
- 2 Printers

### Hours the computer is on:

| | |
|---|---|
| Monday- Thursday | 8 a.m.-8 p.m. |
| Friday | 8 a.m.- 5p.m. |
| Saturday-Sunday | 12p.m.-4p.m. |

### Development Center: *Library*

- 8 computers total
- 4 Mac
- 4 PC

### Hours the computer is on:

| | |
|---|---|
| Monday- Friday | 8a.m.-5p.m. |
| No weekends | |

Academic Computing

- Founders Hall Room 202          PC/Mac 25
- Gist Hall Room 215              PC/Mac 25
- Gist Hall Room 218              PC/Mac 44
- Harry Griffith Hall Room 105    PC/Mac 25
- Harry Griffith Hall Room 229    PC      25
- Jenkins Hall Room 212           PC/Mac 27
- Library Room 121                PC/Mac 25
- Library Room 310                PC/Mac 16
- Science A Room 364              PC/Mac 25
- Siemans Hall Room001            PC/Mac 16
- Siemans Hall Room 118           PC/Mac 25
- Siemans Hall Room 119           PC 27
- Annex Room 123                  PC 8
  Staff                          PC/Mac  14

  Total Computers under Academic Computing = 327

## Hours the computer is on:

| | | |
|---|---|---|
| FH 202 | Mon.-Fri. | 8a.m.-11p.m. |
| | Sat.& Sun. | 10a.m.-11p.m. |
| SH 1 | Mon.-Fri. | 7a.m.-10:30p.m. |
| | Sat.& Sun. | 12p.mp-10:30p.m. |
| SH 118 | Mon.-Fri. | 7a.m.-11:30p.m. |
| | Sat.& Sun. | 12p.m.-11:30p.m. |
| SH 119 | Closed | |
| LIB310 | Mon.-Thurs. | 8a.m.-11:15p.m. |
| | Fri. | 8a.m.-4:45p.m. |
| | Sat. | 12p.m.-4:45p.m. |
| | Sun. | 11:30a.m.-10:15p.m. |
| LIB 121 | Mon-Thurs. | 8a.m.-11:15p.m. |
| | Fri. | 8a.m.-4:45p.m. |
| | Sat. | 11:30a.m.-5:45 p.m. |
| | Sun. | 11:30a.m.-10:15 p.m. |
| GH215 | Mon.-Thurs | 8a.m.-10p.m. |
| | Fri. | 8a.m.-12a.m. |
| | Sat.& Sun. | 11:30a.m.-10p.m. |
| GH218 | Mon.-Thurs. | 8a.m.-12a.m. |
| | Fri. | 8a.m.-10p.m. |
| | Sat.&Sun. | 11a.m.-12a.m. |
| HGH229 | Mon.-Fri. | 8a.m.-10:30p.m. |
| | Sat. & Sun. | 11a.m.-10:30p.m. |
| HGH105 | Mon.-Fri. | 8a.m.-10p.m. |
| | Sat. & Sun. | 11a.m.-10p.m. |
| JH212 | Closed | |
| SCI A | Mon.-Thurs. | 8a.m.-10:30p.m. |
| | Fri. | 8a.m.-6p.m. |
| | Sat. & Sun. | 12p.m.- 5p.m. |

NWH 244          Mon.-Thurs. 7:30a.m.-11:15p.m.
                      Fri. 7:45a.m.-4:45p.m.
                      Sat. 8:30a.m.-4:45p.m.
                      Sun. 8:30a.m.-10:15p.m.

In a typical computer lab a computer is on an average of 12 hours a day.

Student Survey Stats:
Leave the Computer On:
        25% less than or equal to 5hrs./day
        25% less than or equal to 10 hrs./day
        26% between 11-23 hrs./day
        **24% of students leave their computers on for 24 hrs./day!!!!**
Computer is actually being used:
        61% less than or equal to 4 hrs./day
        21.3% less than or equal to 6 hrs./day

        Only 17.7% resident students use their computers for more than 6 hrs./day, but 50% of residents leave their computers on for **MORE** than **10** hrs./day!!!

**Total Computers on Campus not including dorms: 1685 PC/Mac**
Based on our total sample size of two hundred forty-one resident students only 16% did not own computers.  Therefore we are estimating that 84% of the total 1236 resident students at HSU own computers:  .84(1236)= 1038 students who have computers.

Academic Year Average FTEF by College
                  Report generated: 01-MAY-98

| College | 91/92 | 92/93 | 93/94 | 94/95 | 95/96 | 96/97 | 97/98 | 98/99 |
|---|---|---|---|---|---|---|---|---|
| Arts, Humanities & Soc Sci | 158.4 | 159.9 | 146.0 | 148.1 | 152.7 | 152.7 | 158.4 | |
| Natural Resources & Sci | 147.7 | 154.5 | 146.3 | 158.0 | 160.3 | 167.4 | 169.2 | 168.8 |
| Professional Studies | 79.1 | 64.8 | 65.8 | 70.9 | 75.3 | 79.4 | 78.8 | 76.6 |
| All University | 0.7 | 0.2 | 0.1 | 0.5 | 0.6 | 0.5 | 1.2 | 1.1 |
| UNIVERSITY TOTALS | 385.9 | 379.5 | 354.2 | 375.4 | 384.3 | 399.9 | 401.8 | 404.9 |

Total Computers according to our assessment:
Academic Computing:  327
Library:  147-34 included in AC= 113
College of Natural Resources and Science:  747
College of Arts & Humanities (labs):  70
                    Staff:  ~160
College of Professional Studies (labs):  16
                    Staff:  ~77
Student Business and Services:  175

TOTAL:  1,685
        + 1,038 owned by HSU student residents
        = 2,723 total computers on HSU campus

*What percentage of energy use is this of total campus use*

# Energy Sub-Committee Personal Evaluation.

## Dick Hansis
## Environmental Science: Sustainable Campus
## Matthew A. Tolley

In my personal reflection of my activity in the Energy Sub-Committee, I found it to be an informative experience. Through my efforts, along with those of my group, I formed an intense interest in the energy concerns facing our campus. Though many are unaware, today with more computers than ever we now face a energy crises. In this new Century, technology triumphs all. The use of such new means of information, especially in the form of computers, is highly critical to the success of the economy and even the country itself.

Throughout the beginning of semester we initially determined what was the problem? With the help of George Wright, we decided to focus our efforts on the computer energy use on campus. Though finding this an overwhelming problem, we began our assessment through contacting staff and other faculty members.

We found that most people we contacted were fairly helpful in what knowledge they had to offer, yet determining everyone who we needed to contact was essential in the quality of our work. Our objectives became a series of specific resources of knowledge that we had to obtain. First, we applied for permission to survey a sample of the dorm inhabitant student body. Second, we met with energy consultants and searched the internet for alternate energy solutions. Third, we contacted the Human Resources Department weekly for an update on the status of our survey. Lastly, we worked out of class, going building to building to recover the numbers of how many computers, and where they were located.

After weeks of waiting for confirmation on our student survey, we finally began in November to actually reach the student body with the strength and purpose of our project. I found most students to be helpful in

# Energy Sub-Committee Personal Evaluation.

## Dick Hansis
## Environmental Science: Sustainable Campus
## Matthew A. Tolley

answering our selective yet politically correct questions. All in all, the public was reasonable to take time from their busy, yet boring, dorm lives to answer us, and help us in our research. Through 5 days of work, we obtained a sufficient sample of the student body to make an overall assessment of the energy consumption occurring.

I found that my groups efforts were well meant and well thought out. Working with my group was initially hostile, yet improved throughout the semester once we focused on our established task. Overall, I felt that I learned the responsibility of working close with others, and the respect that be must carried with it. Working with the school was difficult because of the conflicts of opinion concerning our projects intentions. Today, I believe that the student body is more aware of their computer use and that the administration is supportive of our efforts and assessment goals.

Alysia Cervantes

## Personal Reflection

In the beginning of the sustainable campus class the "energy" sub-committee group had no direction of how to attack to energy problem, but after talking with George Wright (Plant Operations) we found where to begin and how to accomplish our problem. We as a group decided to assess the amount of computers on campus and how much energy was being use.

I found that it was difficult to start this assessment because we needed approval to do a survey, which had to be approved by the Dean of Natural Resource this took several weeks. Because of this delay we did not get to start our survey until November. As we conducted our survey in the "J", we found that many students were interested in why we were doing this survey. At this time we informed them of what we had learn from George and they were not to surprise to know that a vast amount of the energy being used was because of the increase in computer use on campus.

Finding out information on the numbers of staff computers used on campus was difficult to obtain, so this lead to us to do an estimate on the numbers. Overall, I found that "energy" is an important resource and we must eliminate the access use on campus. By educating others on the amount of resource use will help this amount to be reduced. This can be the next step that can be taken and we hope that the next class will take on this initiative.

Overall, this project was very time consuming and took a lot of patience for all the group members, but we got through it. And I would like to say that all of us

contributed a numerous amount of information about energy use. I feel that all of us

deserve the highest grade possible for putting so much time and effort.   I also think

that our group worked real well together and managed to get our assessment done on

time.

# Reflection On Our Energy Project
## By Elisabeth Gingrich
### ENVS 480

For this project I felt as though we were led on a path blindly. As a group I believe that we accomplished a lot of our goals that we set for ourselves. We started out with nothing, and have ended up with a good assessment of energy use due to computers on campus. If it had not been for the group that I was assigned to I would of given up on the project. They were at our meetings, researched, typed, put in their input, and told me not to be so negative. It seemed as though everything we did fell through, took a long time, was hard to find, or just was the wrong way of doing the task at hand. This in turn helped me get an idea of the real world and how one has to work through, around, over, or under them to gain what they need in life. I am happy that we made a good start to this project, and hope that people in future classes can use a part of, or the whole project to help them get to their desired solution dealing with the energy issue on campus. — Grading on Back—

Elizabeth N. Andrew

Despite the rocky start our group had on this project, I feel we have been successful in our assessment and very productive in helping to reach a sustainable campus. The dynamic of our group was incredible and we were each able to provide information on various topics and different points-of-view to contribute to the whole. The most difficult part of this project was determining exactly where to begin. Once we narrowed down our topics and got the survey approved our assessment flowed fairly well. I have learned a great deal from this project that I will be able to apply to my career once I graduate, most of all that every little bit helps. We worked with a lot of different people, and even the ones who could offer us 10 min. of their time helped out. Most of all I hope that the group who continues the Energy Project will focus on computers

CONCLUSION:

In collecting all the data for our assessment we have realized that compiling extremely accurate information is more difficult than we originally thought. Our original plan included determining how much energy is used on campus to power our computer use. We were unable to maintain this goal, so we decided to focus on assessing how many computers are on campus and gather as much information as we could on how often these computers are on. Accurate numbers were difficult to gather because of the various different offices and departments on campus all of who use computers. Some of the problems we ran into were inaccessibility to certain buildings on campus, time restraints in waiting for the approval of our survey by the Health and Human Subjects Dept. and being uninformed by RHA President once our survey was approved were only a few of our obstacles. This led to a six weeklong wait for approval of the survey and permission to conduct the survey in the Jolly Giant Commons cafeteria. Once the survey was approved the questioning of HSU residents went very smoothly. This made us aware that there are various roadblocks in the environmental problem solving process and red tape is often associated with rules and regulations.

All in all, this project was an eye-opening experience to the excessive energy use put towards computers on campus. A statement we heard numerous times while conducting our survey was that turning off your computer when you are not using it is detrimental. This is a widespread myth. Fortunately, through our survey we were able to educate many students about the inefficiency of their computer use. Future plans we would like to see include raising awareness of faculty and staff and perhaps the entire Arcata community on how to be more computer efficient.

After hours of research on Energy Star we are not sure if it is the best route to travel in our quest for sustainability. We found that many of the computers on campus have sleep modes installed in them, but they are inactivated for one reason or another.

We feel that through our assessment we fulfilled successfully the portion of objectives regarding students in dorms, campus computers in labs, and an estimate of faculty. There are definitely computers owned by staff on campus that we were unable to include due to time restraints and red tape.

We met our first solution by completing our assessment of the campus wide computer use, and inadvertently met our third and fourth solutions of raising awareness and education of inefficient computer use through our student survey, but did not reach very many staff and faculty on the issue. Although we did not complete all of our solutions we hope that our information will provide a good base for the succeeding group to continue on the project.

# Time Line of Events

September 17th- All group members met with Panama to talk about sustainable group we had formed. Told us to talk to George Wright. He was very excited to have us start, energy consumption and awareness.  2hours

September 26th –email professor Hansis problem statement. 1hour

September 26th –Alysia and Elisabeth met with George Wright (Plant Operations Engineer) talked about various problems with energy around campus. He gave us the idea to asses the computer use on campus, staff, faculty, and student residents.  2hours

September 29th- Matt went to a committee presentation, talked about what we wanted to do, presented objectives.  2hours

September 29th- Alysia attempted to go to Academic Computing to find out the number of computers in labs, on campus, no one was in the office all day. 1hour

September 30th- Elizabeth Andrew researched Humboldt State University climate related activities, regarding alternative energy resources. 4 hours

October 3rd- Alysia found out how many students are living on campus, from the housing department. 1236 students in dorms. 1hour

October 5th- Elisabeth researched the Energy Star program. 4hours

October 12th- Typed up survey, made questionnaire, turned in all paper work to the Dean of Natural Resources. 4hours

October 9th- Alysia met with Panama to ask if we could have our survey responses from staff, students, and faculty sent to his mailbox. 1hour

October 10th- Decided mailing out survey was a bad idea, (less than 10% response) Alternative is to do door to door advised by Michael Winkler. E-mail is worse, not everyone checks e-mail, can delete easily.

October 24th- Elisabeth searched periodicals for different energy issues going on in different campuses. Looked at different surveys, and sustainable buildings. 2 hours

October 27th- Elizabeth and Alysia  talked over the plan of attack for the dorms. Checked with Dean to see if survey was done. 2 hours.

October 27th- Matt contacted Bill Cannon, and RJ Wilson to obtain statistical data about computers on campus. 1 hour.

October 31st- Matt contacted the Lumberjack about doing an article on our project, talked with the editor, James Tressler. 1 hour

October 31st- Wrote out the list of all the different people associated with our energy consumption group. 1 hour.

October 31st- Dick Hansis confirmed if we had not received permission for the survey to go ahead and do the survey to start compiling information. 1hour

November 2nd- Got in touch with Dan Ihara, and RJ Wilson informing them on our progress of the energy group. 1 hour

November 7th- Received the approval for our Human Subject Survey, emailed corrections on how it was to be a Confidential Survey. Talked with the RHA President about the survey, printed out surveys. 2 hours

November 8th- made plans to set up a table in the "J" (cafeteria), for the student survey. 2 hours

November 14th- Called Tech People from the Colleges around Campus. Talked with RHA about student survey. 3 hours.

November 30th- Finally able to start the student survey. Elizabeth and Alysia 12 to 1pm. Matt and Elisabeth 5 to 6pm at the "J" 2hours

December 1st- Elisabeth and Alysia 12 to 1pm. Matt and Elizabeth 5 to 6pm. 2hours

December 4th- Alysia and Elisabeth 12 to 1pm. Matt and Elizabeth 5 to 6pm. 2hours

December 5th- Compiled survey numbers. Decided to start Final Report and Presentation on Thur. Dec. 7th. Elisabeth printed out the three College Computer Numbers. 2 hours

December 7th- Started Final Report, typing, editing. Started Presentation outline. Elizabeth Talked with RJ Wilson about Academic Computing. Alysia and Elizabeth talked with Riley Quarles, and Derek Toups from the library to get a complete number of computers from the library. Matt went to the Student Services Building to get a complete count of the computers in that building. 4 hours

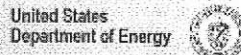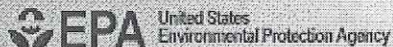December 9th- Met at the Library to work on final report, and presentation. 3 hours

December 10th- Met at the Library to work on final report and presentation. 3 hours

December 11th- met at Elisabeth's house to finish the final report. 4 hours

December 12th- printed out Conclusion, Personal Reflections, Computer numbers, and made copies of newspaper clippings. 1 hour.

10/17/00

**EPA** United States
Environmental Protection Agency

United States
Department of Energy

# ENERGY STAR™ - labeled office equipment

## Products

- PRODUCTS
- STORE LOCATOR
- CONTACT US

- CPD HOME PAGE
- EREN HOME PAGE

- HOTLINE
  1-888-STAR-YES

### Computers

Computer equipment is the fastest growing electric load in the business world. In fact, energy use by computers could even double by the year 2000. Unfortunately, much of the energy associated with computers is wasted because PCs are often kept on while not in use. This is why it is important to purchase a computer that automatically "goes to sleep" when not in use.

### Why choose an ENERGY STAR-labeled computer?

ENERGY STAR-labeled computers automatically power down to 30 watts or less when not in use.

ENERGY STAR-labeled computers are available at no additional cost to you and can actually save you anywhere from $7 to $52 per year in electricity bills.

ENERGY STAR-labeled computers may actually last longer than conventional products because they spend a large portion of time in a low-power sleep mode. By purchasing an ENERGY STAR-labeled computer and remembering to turn it off during long periods of non-use, it can actually last 10 times as long as a conventional computer.

ENERGY STAR-labeled computers generate less heat than conventional systems. upgrading your existing equipment to ENERGY STAR can lead to cooling eductions of up to 25 percent. This can create a more comfortable work space for you and your office mates. ENERGY STAR-labeled computers also tend to be quieter than conventional computers since some have no noisy fans. What else can you do to save energy when operating your computer?

See a summary of ENERGY STAR PC and monitor specifications.

### What else can you do to save energy when operating your PC?

Make sure your computer is turned off at night and on weekends and even during the day when it is not being used for an extended period of time.

Experiment with your delay setting to achieve the shortest possible time that is acceptable before your computer automatically goes to sleep.
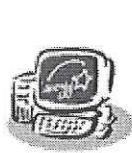
To find the ENERGY STAR-labeled computer that is right for you, click on our product list

Click here for a list of ENERGY STAR Computer Manufacturer Partners.

office
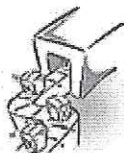equipment
products          for
                manufacturers       faq          $avings      purchasing      news

Last Revision: Wed, Jan 13, 1999
http://www.epa.gov/appdstar/esoe/computers.html

Emailed on 10/17/00

# Stop complaining and conserve

JOHN KRIST

*Energy Group*

WHEN we checked into our Paris hotel room this summer, I spent the first 15 minutes searching for a way to turn on the lights.

There were switches on the walls, but no matter how many times I flicked them up and down, I could not make the lights come on. At one point I was even peering inside closets looking for a circuit-breaker panel. The historic building was being renovated, after all; perhaps a worker had forgotten to reset something after the latest wiring upgrade.

Still no luck. My wife, the only one among us with reliable linguistic skills, headed downstairs to inquire of the desk clerk. A few minutes later she returned and plugged the plastic room key into a receptacle we'd overlooked on the wall near the door.

And, voila! — light. The room circuits were activated when the key was inserted into the outlet, but shut off moments after it was withdrawn, making it impossible to leave the room without extinguishing the lights (unless you also left without your key).

That ingenious mechanism no doubt saved the hotel a great deal of money by preventing thoughtless guests from illuminating empty rooms with high-priced French electricity. That I had never encountered such a thing in the United States says a great deal about the contrasting attitudes of Europeans and Americans toward energy.

Here, it is so cheap we hardly think about it. There, it is dear and not to be squandered.

I had forgotten about the mystery of the unlit hotel room until a few weeks ago, when the customers of San Diego Gas & Electric Co. began screaming bloody murder about their monthly electricity bills. There was, to be sure, something to scream about: Residents who paid 10 cents per kilowatt-hour last summer were paying more than 23 cents this summer for the same amount of electricity. Since an average household uses around 500 kilowatt-hours a month, the basic homeowner's bill for power went from $50 to about $115.

And for those residents not living near the coast (the utility's 1.2 million customers are spread across San Diego County and into southern Orange County), things were even worse. Inland San Diego County encompasses a big chunk of the Colorado Desert, the lowest, driest and hottest of North America's desert provinces. In the resort town of Borrego Springs, for example, summer temperatures routinely hit 110 degrees. Some homeowners there paid more for electricity in August than they did for rent — nearly $700.

So who spends the summer in a place like that? People with central air conditioning, mostly.

Technology, and historically cheap and abundant energy supplies, have enabled dense concentrations of human beings to live full-time in places few mammals can tolerate. That so many Southern Californians are hollering about electricity bills this year is as much a reflection of our disregard for natural constraints on habitation patterns as it is a product of economic chaos in the power industry.

Still, there is no way to move millions of people out of the interior Southwest, a place only the hardiest (or most desperate) of folk could tolerate year-round were it not for air conditioning, imported water and generous amounts of electricity. So what is the answer to economically crippling electricity bills?

The odd room key in that old Paris hotel offers a clue.

Not since the oil-driven energy crisis of the 1970s have Americans been forced to pay such close attention to the value — not just the price — of the energy they consume. Now that they have, they've demonstrated that there is plenty of room in their consumption patterns to squeeze far more use out of the existing generating capacity.

PRELIMINARY surveys indicate SDG&E customers may voluntarily have cut their electricity use by as much as 20 percent, motivated solely by price. Imagine how much could be accomplished if the entire state embarked on a concerted effort to replace incandescent bulbs with new-generation fluorescents (which use only a quarter as much power) or adopted any number of other energy-efficiency strategies?

Turn out the lights when you leave the room. Don't stand there with the refrigerator door open. Keep the shades down when the sun is up. Sure, it's the stuff Mom used to nag you about. But it appears Californians could use a good nagging these days.

*John Krist writes for the Ventura County Star.*

# Blackouts loom as state's power shortage worsens

SACRAMENTO (AP) — California declared an unprecedented electricity alert Thursday after the state's overwhelmed power grid, crippled by idled power plants and scant supplies, struggled to meet evening demands.

The alert lasted about two hours, and the power grid's managers said they hoped to avoid blackouts by tapping electricity intended for the enormous state and federal pumps that push water from Northern California to the central and southern regions of the state.

"We're hoping that with these resources we can avoid the blackouts," said Lorie O'Donley, a spokeswoman for the Independent System Operator.

The Stage Three alert, which lasted

from about 5:30 to 7:30 p.m., followed hours of increasing stress on California's electricity grid, which has been strapped by cold weather, power plants idled for maintenance and repairs, and dwindling imports.

But by temporarily halting the pumps — two-story structures that suck water from the Sacramento-San Joaquin River Delta east of San Francisco — authorities hoped to obtain at least an additional 500 megawatts, perhaps more.

The demand on grid reached 31,600 megawatts Thursday evening, nearly the maximum available. Reserves dipped to below 1,000 megawatts, prompting the alert. One megawatt is enough electricity for 1,000 homes.

"We are within less than 1,000 megawatts right now," said ISO spokeswoman Stephanie McCorkle.

If the reserve is exhausted, power outages likely will begin.

"If we're short by 500 megawatts, that's 500,000 people affected (by blackouts). If we're short 1,000 megawatts, that's a million people," McCorkle said.

She said about 85 percent of California, which is about 900 miles long with 34 million people, was covered by the alert.

Throughout the day, hundreds of companies cut their electricity usage. Others awaited notification to do likewise — computer chip maker Intel prepared to turn off 50 percent of the lights at its

6,500-employee Folsom campus if necessary.

"If that's not enough, we'll take the lights down 100 percent and work in the dark," said Bill Mueller, Intel's director of communications.

The ISO said an unidentified 500-megawatt power plant unexpectedly went down in the afternoon, further stressing the system.

Shortly before the Stage Three alert, the ISO said California utilities, which try to buy power at least a day in advance to obtain the best possible price, had purchased power with just one hour of lead time.

■ See SHORTAGE/A5

## SHORTAGE

FROM A1

By late afternoon, that lead time had been cut to 10 minutes, the ISO said, reflecting a dramatic tightening in the market.

The ISO also said a new cold snap was expected to hit Sunday evening, posing new stresses for the system.

Gov. Gray Davis said the problems stemmed in part from flaws in California's newly deregulated electricity system, including huge increases in the cost of wholesale power.

"We're simply not ready for deregulation in California," the governor said.

"California is riding point on this deregulation experiment," Davis added. "The problem is, I can't control the process. There are too many players. I'm trying to use a combination of reforms, good ideas and guilt to produce the desired result" of stability and an easing of high rates.

# Humboldt's climate related activities

Energy Efficiency: 1971-1992: through a series of upgrades the university reduced its' BTU/Gross Square Foot(GSF) from 185,000 to 92,000, a reduction of over half! Due to new construction and the proliferation of computer facilities on campus that number has risen to 106,604 BTU/GSF as of spring 2000, still significantly less than the 1971 figure. In 1996 the university finished a $1 million lighting upgrade which replaced almost 99% of the schools lighting and earned it a $100,000 rebate from local utility, PG&E. Purchases of more energy efficient machinery, such as boilers and air supply systems, has allowed for further reductions.

The university is looking into the purchase of energy through a "green" provider, which would account for a significant reduction in carbon emissions, as of summer 2000.

A natural gas powered co-generation system will be incorporated into the Physical Education upgrade due in 2001. The system will power three buildings and capture its' excess heat to provide heating for four buildings. Contact George Wright for further info.

George Wright

Dear liz,
Your system (Persario 2275) specifications are as followed:

### Power Specifications

-----------------------------------------------------------
|                    | U. S.            | Outside U. S.      |
-----------------------------------------------------------

#### Input Specifications
-----------------------------------------------------------

| | U. S. | Outside U. S. |
|---|---|---|
| Nominal Line Voltage | 100 to 120 VAC | 220 to 240 VAC |
| Range Input Line | 90 to 132 VAC | 180 to 264 VAC |
| Frequency Range | 47 to 63 Hz | 47 to 63 Hz |
| Power Factor | 0.6 | 0.6 |
| Input Power | 106.5 W at 90 VAC | 106.5 W at 180 VAC |
| Input Current | 1.93 A at 90 VAC | 0.937 A at 180 VAC |
| Inrush Current | 90 A / 10 ms max | 90 A / 10 ms max |
| Holdup Time | 16 ms from zero crossing at 120 VAC | 16 ms from zero crossing at 240 VAC |

#### General Specifications
----------------------

| | | |
|---|---|---|
| Full Output Rating | To 122ÿ F and 5,000 ft | To 50ÿ C and 1524 m |
| | To 90ÿ F and 10,000 ft | To 32ÿ C and 3048 m |
| | (derate linearly) | (derate linearly) |
| Minimum Load | 1.0 A on + 5.0 V output | 1.0 A on + 5.0 V output |

Ambient Temperature Range
-------------------------

| | | |
|---|---|---|
| Operating | 50ÿ to 122ÿ F | 10ÿ to 50ÿ C |
| Storage | -40ÿ to 151ÿ F | -40ÿ to 66ÿ C |

Dielectric Voltage Withstand
-----------------------------

| | |
|---|---|
| Input to Ground | 2500 VAC per second |

| | |
|---|---|
| Safety Standard | UL 1950; CSA 22.2 #950 or CSA 22.2 #234; TUV/VDE EN 60 950 (VDE0805/11.91); EMKO-TSE (74-SEC) 207/93 |

Input Transient Susceptibility
-------------------------------

| | |
|---|---|
| Common and Differential Mode (superimposed on AC line) | 2500 V, 1 ÿs, damped sinusoidal  600 V, 10 ÿs pulse |
| Differential Mode | 20% step change in AC input voltage |

-----------------------------------------------------------------------

If you have any further questions, please REPLY to this specific message.
Regards,
Compaq Consumer E-Services
<!-- *KBU-CCS_0007_1.00-KBU* -->
------- Original Message --------
From:        ssw777@hotmail.com
To:          ccsconsumer@ems00414.egain.net
Subject:     Re: Presario 2278 [#1066210]
Date:        12/07/00 16:51:38
thank you, just a reminder, how much, on average do laptops, and desktops
energy per hour. thanks! Liz
>From: ccsconsumer@ems00414.egain.net (Consumer Compaq)
>To: ssw777@hotmail.com
>Subject: Re: Presario 2278 [#1066210]
>Date: Thu, 07 Dec 2000 16:46:51 -0800
>>Dear Compaq Customer,
>Your inquiry has been received by our support staff. We look forward to
>bringing your particular issue to resolution shortly.
>Regards,
>Compaq Online Support
>Your Compaq tracking number is 1066210. If you reply to this message,
>please do not change the subject line.
>http://www6.compaq.com/athome/support/index.html
>----- ssw777@hotmail.com Wrote -----
>ssw777@hotmail.com has emailed the following information:
>COMMENTS:
>I actually do not own a computer, but I have this off the wall question
>regarding a survey I did on my college campus. Hopefully someone will know
>this answer. I need to know on average how much energy is used per hour of
>desktops and laptops, so I am able to calculate how much energy is being
>used by compaq computers on campus. If someone could email me back or call
>or something soon that would be wonderful.
>LAST_NAME:     gingrichFIRST_NAME:     liz EMAIL:        ssw777@hotmail.com SN:>PRESARIO PRODUCTS:>COUNTRY:United States OS:
MS Windows 98 >HTTP_REFERER:     http://askq.compaq.com/askpresario/form.asp>HTTP_USER_AGENT:  Mozilla/4.08 [en] (Win98; U ;Nav)
>REMOTE_ADDR:     137.150.36.49 >REMOTE_HOST:     137.150.36.49 >SERVER_PROTOCOL:  HTTP/1.0
>HTTP_COOKIE:
>HTTP_FROM:

Associated Members of Energy Committee

R.J. Wilson- Head of technology for HSU, Manager of Academic Computing
Bill Cannon- Head of appropriate technology
Michael Winkler- student who led paper assessment project and is currently working with George Wright for energy assessment.
George Wright- Plant Operations Manager; the person for whom we want to supply numbers for.
Mark Marshall- Shots Energy; has device to plug into computer to gage energy use
Dan Ihara- our faculty contact
Panama- Associated Students member, head of Students for a Sustainable Campus
Pat Collins- Head of information technology for College of Natural Resources
Megan McKenzie- Head of information technology for College of Arts/ Humanities
Cristy Hawken-Smith- Head of information technology for College of Professional Studies
John Adorador- responsible for the Academic Computing in the library
Riley Quarles- head of Development Center in the library
Derek Toups- Help Desk employee

Background Data Collected

**Academic Computing**

① Dual: Mac OS/VPC: Win 95
③ Dual: Mac OS/PC card: win 95
② PC: win 95

Computer labs

| Lab | Hours | | | |
|---|---|---|---|---|
| FH 202 | Mon-Fri 8-11pm / Sat Sun 10-11 | (25) | ① | 5 (15) / 2 (13) |
| SH 1 | m-F 7-10:30 / S-S 12-10:30 | (16) | ② ① | 5 (15.5) / 2 (10.5) |
| SH 118 | m-F 7-11:30 / Sat Sun 12-11:30 | (25) | ② ② | 5 (16.5) / 2 (11.5) |
| SH 119 | closed | (27) | ③ | 2 15.25 / 1 5.00 |
| LIB 310 | m-T 8-11:15  S-12-4:45 / F 8-4:45  S-12-10:15 | (16) | ① | 1 10.25 / 1 9.00 |
| LIB 121 | mon-T 8-11:15  S-11:30-5:45 / Fri 8-5:15  S 11:30-10:15 | (25) | ② | 15.25 / 6.00 |
| GH 215 | mon-thur 8-10  Sat Son 11-10 / Fri 8-12 mid | (25) | ② | 10.00 / 9.25 |
| GH 218 | M-T 8-Mid  S-S11-mid / F 8-10 | (44) | ② | 11.00 / 14.00 |
| HGH 229 | Mon Fri 8-1030 / Sat Sun 11-10:30 | (25) | ③ | 6.00 / 16 |
| HGH 105 | mon-Fri 8-10 / Sat-Sun 11-10 | (25) | ② | 14 / 13 |
| JH 212 Jenkins | closed | (27) | ① | 14.5 / 12.00 |
| SCIA 364 | mon-thur 8-10:30 / Fri 8-6  Sat Sun 12-5 | (25) | ② | 14 / 11 |
| NHW 244 | mon-T-7:30-1:15  Sat 8:30-4:45 / F 7:30-4:45  Sun 8:30-10:15 | | | 4.5 / 10 |

5
16
10
8
14

12/11/2000

Academic
Computing

total = 305
+ 14 staff
319

375

3

~ 12

*last years*
*needs to be updated*

CNRS | CAHSS | CPS

## College of Natural Resources and Sciences

| Unit | Lab Name | Location | Computers | Platform | LAN/Internet | Responsible Staff | "Smart" Classroom |
|------|----------|----------|-----------|----------|--------------|-------------------|-------------------|
| Biology | 105 Lab | Sci-B 105 | 6 | Mac | yes | Biology/ITC | ye |
| Biology | Technology Lab | Sci-B 122 | 10 | Mac/PC | yes | Biology/ITC | ye |
| Biology | Physiology Lab | Sci-B 328 | 9 | Mac | yes | Biology/ITC | ye |
| Biology | SEM | Sci-C 108 | 3 | Mac | yes | Biology/ITC | |
| Biology | Human Physiology | Sci-A 457B | 2 | Mac | yes | Biology/ITC | |
| Biology | Worm Lab | Sci-B 324C | 3 | Mac | yes | Biology/ITC | |
| Biology | Misc Lab Systems | Sci 100 | 3 | Mac | ? | Biology/ITC | |
| CNRS | Spatial Analysis Lab | For 203 | 18 | PC | yes | ITC | ye |
| CNRS | Advanced Spatial Analysis | NRS 225 | 13 | Sun/PC | yes | ITC | ye |
| CNRS | UNIX Lab | Sci-D 15 | 26 | Sun/PC | yes | ITC | ye |
| CNRS | Quantitative Sciences Lab | Sci-D 17 | 26 | PC | yes | ITC | ye |
| Computing Science | Computing Sciences Lab | NHW 244 | 25 | PC | yes | Acad.Comp/ITC | ye |
| Forestry | McClean Lab | For 104 | 15 | PC/Mac | yes | Forestry/ITC | ye |
| Geology | GIS Lab | FH 11 | 4 | PC | yes | Geology/ITC | |
| INRSEP | Student Lab | HS 38 | 7 | PC | yes | INRSEP | |
| Marine Lab | Student Lab | ML | 6 | PC/Mac | no | Marine Lab | |
| NRPI | Student Lab | NRS 210A | 8 | PC/Mac | yes | NRPI/ITC | |
| Nursing | Student Lab | GH 120 | 8 | PC/Mac | yes | Nursing/ITC | |
| Psychology | Student Lab | HGH 112 | 2 | PC | Yes | Psychology | |
| Wildlife | Undergraduate Lab | WF 138 | 13 | PC | yes | Wildlife/ITC | ye |
| Wildlife | Graduate Lab | WF 274 | 6 | PC | yes | Wildlife/ITC | |
| Wildlife | Habitat Lab | WF 230 | 25 | PC | yes | Wildlife/ITC | ye |
| Fisheries | Age & Growth Lab | WF 208 | 7 | PC | yes | Fisheries/ITC | |

**College Total = 245**

## College of Arts, Humanities and Social Sciences

| Unit | Lab Name | Location | Computers | Platform | Lan/Internet | Responsible Staff | Cl |
|------|----------|----------|-----------|----------|--------------|-------------------|-----|
| Art | Art Studio | Art 206 | 8 | Mac | yes | Art/ITC | |
| English | English Writing Lab | FH 234 | 12 | PC | Yes | English | ye |
| Geography | GIS and Cartography | FH 106 | 16 | PC | yes | Geography/ITC | ye |
| Modern Languages | Modern Languages Lab | GH 227 | 21 | PC | yes | Modern Lang./ITC | ye |
| Music | Student Lab | M 128 | 1 | Mac | yes | Music | |
| Music | Student Lab | M 203 | 12 | Mac | yes | Music | ye |

**College Total = 70**

## College of Professional Studies

| Unit | Lab Name | Location | Computers | Platform | Lan/Internet | Responsible Staff | Cl |
|------|----------|----------|-----------|----------|--------------|-------------------|-----|
| Child Development | Early Childhood Lab | Art 26 | 2 | Mac | no | Child Develop. | |
| Industrial Technology | CADD Lab | JH 214 | 10 | PC | yes | Indust. Tech. | ye |
| ITEPP | Indian Teacher Educ. | Hs 85 | 4 | Mac | yes | ITEPP | |

**College Total = 16**

**Discipline Specific Total = 331**

Return to Academic Computing

# CNRS Computer Inventory Summary - August 2000

| PC Computers | Total | Current | Obsolete |
|---|---|---|---|
| Department | 20 | 6 | 14 |
| Faculty | 155 | 61 | 94 |
| ITC | 16 | 1 | 15 |
| Research | 8 | | 8 |
| Staff | 65 | 21 | 44 |
| Student-General | 54 | 25 | 29 |
| Student-Lab | 212 | 132 | 80 |
| Count | 530 | 246 | 284 |
| | | 46% | 54% |

*other technology*

*all up + running*

| CNRS Macs | Total | Current | Obsolete |
|---|---|---|---|
| Department | 18 | 3 | 15 |
| Faculty | 87 | 39 | 48 |
| ITC | 0 | 0 | 0 |
| Research | 11 | | 11 |
| Staff | 27 | 5 | 22 |
| Student-General | 14 | 3 | 11 |
| Student-Lab | 38 | 4 | 34 |
| Count | 195 | 54 | 141 |
| | | 28% | 72% |

11
155
87
6
―
248 faculty

| CNRS Unix-Sun | Total | Current | Obsolete |
|---|---|---|---|
| Department | 1 | | 1 |
| Faculty | 6 | 2 | 4 |
| ITC | 6 | 2 | 4 |
| Research | | | |
| Staff | 2 | 1 | 1 |
| Student-General | | | 0 |
| Student-Lab | 7 | 7 | 0 |
| Count | 22 | 12 | 10 |
| | | 55% | 45% |

| Total CNRS | 747 | 300 | 425 |
|---|---|---|---|
| Computers | | 40% | 57% |

| CSU (Cannon) | |
|---|---|
| Criteria For Classifying Computers Current or Obsolete | |
| Current PC Desktop | 350Mhz with Win95 or Better |
| Current PC Notebook | 233Mhz with Win95 or Better |
| Current Mac Desktop | 233Mhz with OS-8 or Better |
| Current Mac Notebook | 250Mhz with OS-8 or Better |
| Sun (Collins Criteria) | SUN Sparc Station 20 or Better |

747 CNRS
175 St. Business
598 Academic Computing
147 library (-25-16)=106

Arts Humanities
70 College of Prof Studies
not including staff faculty

16 College of Prof. St.
not including staff + faculty

| CNRS - Total Computer Count | | |
|---|---|---|
| Platform | Numbers | Percent |
| PC | 530 | 71% |
| Mac | 195 | 26% |
| Unix | 22 | 3% |
| Total | 747 | 100% |

= 1753
+ 159 AH+SS
   77 P.S.
―
= 1989

# AOL.COM

| ▸ AOL Mail | ▸ My AOL.COM | ▸ People/Chat | ▸ Search | ▸ Shop | ▸ Web Centers | ▸ Try AOL FREE! |

## AOL Mail℠

Exit AOL Mail

| Close | Keep As New | Delete |     ◁ Prev **1 of 4** Next ▷ |

Subj: COMPUTER INVENTORY (QUANTITY)
Date: Thu, 7 Dec 2000 5:57:06 PM Eastern Standard Time
From: "Pierce, Andrew" <ajp@lib-mail.humboldt.edu>
To: "'lizneilles@aol.com'" <lizneilles@aol.com>

Lizzie and Alysia,

Here is the information that you requested.

Our organization, the HSU Library, has 147 computers that are online (capable of running). Of the 147 computers, 78 are running seven days of a week for 24 hours. Forty-four of the 147 computers are utilized for approximately nine hours of a day, five days of a week. The remaining 25 computers (of the 147) are running five days of the week for less than nine hours in a day.

Listed below are entities that do not fall under the authority of the Library dean. I placed a number beside the entity if I was able to count the organization's computers.

Computer Room, Academic Computing: qty 2
1st Floor Computer Lab, Academic Computing: qty 24
3rd Floor Computer Lab, Academic Computing: qty 10
3rd Floor Public Area, Academic Computing: qty 6
Copy Center: qty unknown
Faculty Development Center: qty unknown
Help Desk: qty unknown
Student Disability Resource Center (Rm. 118): qty unknown

*[handwritten annotations:]*
*LIB 121 } already been included w/*
*LIB 310 } Academic Computing total*
*— 2 (next to Copy Center)*
*8 (next to Faculty Development Center)*
*8 (next to Help Desk)*

Please contact me if you have any questions or comments.

**Andrew Pierce**
Phone Extension: 5607

*[handwritten calculation:]*
147
- (24)
‾‾‾‾‾
123
- 10
‾‾‾‾‾
113 ) Lib total

```
-------------------Headers -------------------
Return-Path: <ajp@lib-mail.humboldt.edu>
Received: from  rly-xa01.mx.aol.com (rly-xa01.mail.aol.com
        [172.20.105.70]) by air-xa05.mail.aol.com (v77.14) with ESMTP; Thu,
        07 Dec 2000 17:57:06 -0500
Received: from  lib-mail.humboldt.edu (lib-mail.humboldt.edu
        [137.150.180.22]) by rly-xa01.mx.aol.com (v77.27) with ESMTP; Thu, 07
        Dec 2000 17:56:34 -0500
Received: by lib-mail.humboldt.edu with Internet Mail Service
        (5.5.2650.21) id <VV0DCRTB>; Thu, 7 Dec 2000 14:56:33 -0800
Message-ID:
        <5962A745B310D411B610009027DCF40E1696C8@lib-mail.humboldt.edu>
```

Academic Computing

RJWilson

Current 12/7/00 includes spares ~50 for repair

| Location | PC | Mac |
|---|---|---|
| FH202 | 25 | 25 |
| GH215 | 25 | 25 |
| GH218 | 44 | 44 |
| HGH105 | 25 | 25 |
| HGH229 | | |
| JH212 | 27 | 27 |
| Lib121 | 25 | 25 |
| Lib310 | 16 | 16 |
| SciA364 | 25 | 25 |
| SH001 | 16 | 16 |
| SH118 | 25 | |
| SH119 | 27 | |
| UNX123 | 8 | 8 |
| Subtotal 1 | 288 | 236 |
| Lab Total1 | | 524 |
| | | |
| Plus Spares | 26 | 20 |
| Subtotal2 | 314 | 256 |
| Lab+Mtce Total2 | | 570 |
| | | |
| Plus Staff | 14 | 14 |
| Subtotal 3 | 328 | 270 |
| Lab+Ops Total3 | | 598 |

not actually different computers but each computer can go back+ forth b/w PC + Mac (Dual)

WRONG Double Counted
actually 288
+ 14
___
302

turned on in the morning + off at night
sleep still has some energy got shocked into activity
some x energy it doesn't work, loss of work when rebooting
not efficient to turn off com on campus
home computers are different ∴ awareness in the dorms +
community in general
non energy x 10% Watts
energy x 75.44 Watts   publicity hype?
turning on surges require most energy, then runs on less
flat screens use less but are up to 5x more expensive b/c of screen matrix
45 watts, less than 8 when just sitting there
energy use even when turned off!

Nov. 30 12-1 / Dec. 4 12-1          Total 83

1) What brand of computer do you own?

| | | |
|---|---|---|
| labtop Cannon — | built — | PC = |
| Toshiba Satalite — | Compact — | HP Laptop — |
| Gateway — | Dell — | Selfbuilt — |
| IBM — | Dell (Laptop) — | IBM — |
| PC - Pac Bell — | Compact — | Emachine — |
| Toshiba — | Packev — | IBM — |
| Compact Labtop — | Fugitzu = | IBM — |
| Dell — | PC — | IBM — |
| Dell — | Imac — | Gateway — |
| Huller Pacer — | Packer — | Dell 450 — |
| IBM — | Custom built — | IMAC — |
| Huller Pacer — | 2/compact/clone — | IBM Laptop — |
| 1980 F86 — | HP — | Built — |
| Compact — | Koshiba — | Gateway — |
| IBM Clone — | Compact — | Gateway — |
| Laptop Dell — | Winbook — | Compact 95 — |
| Gateway — | built - own — | E-machine — |
| Compact — | Imac — | Laptop — — |
| IBM — | HP — | Mac/PC AAA — |
| Compact — | Gateway — | PC — |
| Gateway — | Compact Besario — | MAC — |
| general PC — | Sony Vail — | ~~xxxx~~ |
| Gateway — | H Packer — | |
| Compact — | Compact — | |
| Dell — | Peniam II IBM — | |
| HP — | Dell — | |
| Packer — | Intell — | |
| Built own — | Pentium 2000 — | |
| Gateway — | PC - Built — | |
| | Gateway — | |
| | IMAC — | |

1)What brand of computer do you own?

| | | |
|---|---|---|
| Compaq — | HP — | mac PC — |
| IBM Pentium II — | Compaq — | compact Labtop — |
| Gateway — | PC / IBM — | mac den PC — |
| PC — Compaq — | Dell — | Gateway PC — |
| Sony Biod — | Compaq — | compact 120 t — |
| HP — | Compaq — | Hew Pak PC — |
| IBM — | | Gateway — |
| IBM — | Toshiba — | Gateway Labtop — |
| IBM — | Compaq — | Labtop Compact 125 t — |
| Mac — | HP Pavillion — | Gateway PC — |
| Sony — | compact labtop — | mac — |
| Mac — | mac — | Gateway PC — |
| IBM — | mac — | IBM PC — |
| Compaq — | IBM 86 — | Compaq — |
| E machine — | Compact PC — | Custom — |
| Apple Mac — | Compact PC — | |
| Toshiba — | PC — | |
| PC — | IBM PC — | |

③ Toshiba | Cannon | Gateway | ① IBM | Pac.Bell | ② ↓ compq
Compact
~5 | 1 | 28 | 22 | 2 | 38

Dell | HP ⑤ | 786 | ① PC + self built | I Mac | Mac
4 | 20 | 1 | 38 | 8 | 13

Emachine | Fugitzy | Winbook | Sony | 
11 | 1 | 1 | 3 | 

Micron | √ Pentium ~ √ Intell
1 | 11

IBM    Compac
HP     Micron
Gateway
Emachine
Dell
Imac
mac

type

1)What brand of computer do you own?

Desktop = (Avg)
Desktop = (Avg)
Laptop = (Avg)
Built = (Avg)

1 Laptop brand? —
2 IBM —
3 HP - Laptop —
4 Gateway —
5 ~~Desk~~
6 Emachine - White —
7 Dell - Laptop —
8 PC —
9 HP Desk —
10 Built —
11 PC - upgraded —
12 HP Pavillion —
13 Laptop Compac 1200 —
14 Imac 400 Desk —
15
16 Built —
17 emachine —
18 PC - emisions —
19 Gateway Desk —
20 Imac Desk —
21 Compac Presario —
22 Dell —
3 HP Desk —
4 Gateway desktop —
25 HP —
26 Gateway Desk —
27 emachine Desk —
28 IBM HP Desk —
29 emachine —
30 Mac 7200 —
31 Compaq laptop —
32 mac - Desk —
33 Dell lap —
34 Gateway —
35 Desk —
36 Laptop - Compac —
37 compac Presario —
38 Gateway Sole —
39 Compac Presario —
40 Built —
41 PC Desktop —
42 Built —
43 Compac lap —
44 IBM Laptop —
45 HP Pavillions —
46 Built —
47 Gateway Desk —
48 MaC —
49 PC - Built —
50 IBM Lap - old —
51 Compac Laptop —
52 Desk —
53 Dell Desk —
54 Built —

55 Desk —
56 Desk —
57 Desk —
58 ~~Compac~~ Ibm —
59 Micron - Desk —
60 Desk —
61 Compac laptop —
62) Built —
Actual 62) → 63) Gateway laptop —
64) Desk —
65) emachine - Desk —
66) Gate Desk —
67) Desk —
68) Desk Built —
69) Dell - Desk —
70) Gate Desk —
71) Imac Desk —
72) Desk —
73) Imac 333 —
74) Compac - laptop —
75) Gateway - Desk —
76) Compac Desk —
77) Built - —
78) Gateway - Laptop —
79)
80)
81)
82)
83)
84)
85)
86)
87)
88)
89)
90)

3)How many hours a day is your computer on?

| | | | |
|---|---|---|---|
| ~24 hrs./day | ~4 hrs | ~24 | 4/24 |
| ~5-6 hr/day | ~ all day | ~8 | |
| ~4-5 hr/day | ~14 hrs | ~14-15 hrs | |
| ~4-5 hr/day | ~15 | ~10 | |
| ~All day turns off at night | ~24 hrs | ~1/2 day -3 hours | |
| ~1hr. | ~2 hrs | ~5-8 | |
| ~5-6 | ~1/2 hr | ~3 hrs | |
| ~7 | ~8 | ~16-20 | |
| ~6 | ~4 | ~8 | |
| ~24 off @ night | ~5 | ~10 | |
| ~all day | ~5 | ~12 hrs | |
| ~all day | ~all off @night | ~7-8 | |
| ~less than 1hr. | ~all day + night | ~24 hr | |
| ~all day -off @night | ~7 | ~8 | |
| ~10 hrs. | ~10-11 | 1-2 | |
| ~2 hr | ~8 | ~12-13 | |
| ~3-4 | ~1hr | ~18 | |
| ~5 hrs | ~5-6 hr | ~24 | |
| ~8-24 hrs. | ~10 | ~3 | |
| 10-4-5 hrs | ~24 | ~3-4 | |
| ~8 hrs. | ~all day off @night | ~18 | |
| ~1hr. | ~24 off @ night | ~24 | |
| ~7 hr. | ~8 hr. | ~12 | |
| ~8-9 hrs. | ~5 hr. | ~10 | |
| ~2 hr | ~20 | ~2 | |
| ~2-3 hrs. | ~24 | 24/24 | |

~~always 31~~

| | | |
|---|---|---|
| 0 | II | (2) |
| 1 | HHT II | (6) |
| 2 | HHT HHT II | (12) |
| 3 | HHT HHT III | (13) |
| 4 | HHT IIII | (9) |
| 5 | HHT HHT HHT I | (16) |
| 6 | HHT HHT HHT | (15) |
| 7 | HHT I | (6) |
| 8 | HHT HHT HHT | (15) |
| 9 | II | (2) |
| 10 | HHT IIII | (9) |
| 11 | III | (3) |
| 12 | HHT HHT HHT I | (16) |
| 13 | IIII | (4) |
| 14 | II | (2) |

| | | |
|---|---|---|
| 15 | HHT II | (7) — |
| 16 | III | (3) — |
| 17 | | |
| 18 | HHT I | (6) |
| 19 | I | (1) — |
| 20 | III | (3) |
| 21 | | |
| 22 | | |
| 23 | | |
| 24 | (49) | i 49 — |

107 ↑median   10/

126   12

81

1
51
81
49

201 +2 = 203

$\underline{\text{median}}$
10 hrs. a day

mean – 5,12

24% of students in
the dorms leave
their computers
on 24 hrs. a day

50% leave on
∠ 10 hrs./day

25% leave on
∠ 5 hrs. day

remaining

62%
203)126.00

24
203)49.000
406
870
812
280

203)49.000
196
10
48

4)How many hours a day do you actually use the computer?

hr.

| | |
|---|---|
| 1 | 4 |
| 2 | 2-3 |
| 3 | 4 |
| 4 | 5 |
| 5 | 5 |
| 6 | 10 |
| 7 | 2 |
| 8 | 4 |
| 9 | 4 |
| 10 | 4 |
| 11 | 16 |
| 12 | 5-6 |
| 13 | 2 |
| 14 | 3-4 |
| 15 | 3-4 |
| 16 | 1 |
| 17 | 3 |
| 18 | 1 |
| 19 | 6 |
| 20 | 6 |
| 21 | 4 |
| 22 | 7 |
| 23 | 5 |
| 24 | 2 |
| 25 | 3 |
| 26 | 5 |
| 27 | 7-8 |
| 28 | 6 |
| 29 | 3-4 |
| 30 | 2.5 |
| 31 | 2-3 |
| 32 | 2 |
| 33 | 3 |
| 34 | 2 |
| 35 | 3-4 |
| 36 | 1-2 |
| 37 | 8+ |
| 38 | 4 |
| 39 | .5 |
| 40 | 2-3 |
| 41 | 4 |
| 42 | 5 |
| 43 | 2 |
| 44 | 3-4 |
| 45 | 5 |
| 46 | 10 |
| 47 | 5 |
| 48 | 1-2 |
| 49 | 8 |
| 50 | 5 |
| 51 | 11 |

| | |
|---|---|
| 52 | 3 |
| 53 | 8 |
| 54 | 15 |
| 55 | 4 |
| 56 | 3-4 |
| 57 | 2 |
| 58 | 2 |
| 59 | 2 |
| 60 | 1 |
| 61) | 4 |
| 62) | 3 |
| 63) | 4 |
| 64) | 1-2 |
| 65) | 2 |
| 66) | 1-2 |
| 67) | 8-9 |
| 68) | 1 |
| 69) | 14-15 |
| 70) | All |
| 71) | 3 |
| 72) | 11-12 |
| 73) | 2-3 |
| 74) | 1-2 |
| 75) | 3 |
| 76) | 6 |
| 77) | 4-5 |
| 78) | |
| 79) | |
| 80) | |
| 81) | |
| 82) | |
| 83) | |
| 84) | |
| 85) | |
| 86) | |
| 87) | |
| 88) | |
| 89) | |
| 90 | |

only 15 turn on the computer <u>only</u> when they are using it

# Data

4)How many hours a day do you actually use the computer?

1 3
2 3-4
3 4
4 a.5 on w/using . 1
5 7
6 6
7 .5
8 .5
9 3
10 3 - on w/using 2
11 4
12 on-using 3      3
13 on-using .2    4
14 3-4
15 0
   2
17 4.5
18 2
19 4.-5
20 3wks / week
21 2
22 3
23 3-4
24 3↓
25 3
26 5
27 always
28 3-4
29 2
30 4
31 6
32 .5- 1
33 2
34 3
35 4
36 2
37 4.5
38 3
39 6
40 -1

41 - 6-7
42 2
43 2 on when using 5
44 on only when using 6
45 4-5
46 8 hrs.
47 0 hrs.
48 2
49 4
50 4
51 6.5
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70

4)How many hours a day do you actually use the computer?

2-4 hrs./day

3-4 hrs

~~4-5hrs~~ 1hr/day

~~4-5hrs~~ 2-3hrs

4-5

1hr. only when in use[7]

1hr.

5

4

8

10

3-4

3hrs./week

10hrs.

4-5

1hr.

1-2

1.5

6hrs.

4-5

3

1hr. only when in use[8]

5

2

2  only on when in use[9]

---

[15] 2 - only when in use

3 hrs.

1hr

~~6-8~~

4

6

2

[14] ½ only when in use

[13] 7-8 only "   "   "

5

2-3

2

4

4

5-6 only when in use (OWIU)[5] [12]

5-6

10

1  OWIU "

4

2

4 hrs/day

2-4

4-5

4-3

6      OWIU  [10]

12-15

6

6

5-6

2

2

1 hrs

4-6

3

10-12

---

3

8

10

1½

2-3

3

1-2

3-4

4-5

2 5

3

3-4

8

2-3

4

2

12/12

4

5

# HR ACTUAL ON COMPUTER | 0.1

**203 Total**

*using*

| Hrs | Tally | Count |
|-----|-------|-------|
| 0.5 | IIII | 4 |
| 1. | LHT LHT II | 12 |
| 2. | LHT LHT LHT LHT LHT LHT LHT I | 36 |
| 3. | LHT LHT LHT LHT LHT LHT III | 32 |
| 4. | LHT LHT LHT LHT LHT LHT LHT LHT | 40 |
| 5. | LHT LHT LHT LHT LHT | 25 |
| 6. | LHT LHT LHT III | 18 |
| 7. | LHT | 5 |
| 8. | LHT LHT | 10 |
| 9. | II | 2 |
| 10. | LHT II | 6 |
| 11. | I | 1 |
| 12. | IIII | 4 |
| 13. | | 3 |
| 14. | | 1 |
| 15. | III | 1 |
| 16. | I | |
| 17. | | 2 |
| 18. | I | |
| 19. | | |
| 20. | | |
| 21. | | |
| 22. | | |
| 23. | | |
| 24. | II | |

↑167   82.3%

↓ 36   17.7%

mean / median 124

$\frac{5}{28}{3}$

Median 4 hrs. *mean*

Avg.

24% leave computers on 24 hrs. a day.

61% ≤ 4hrs. use

203 ) 124.00
121 5
    2 2 0

82.3% use the computer 6 hrs. or less a day

17.7% use their computer for more than 6 hrs. a day.

15 people out of 203 turn on the computer only

7.4% actually use it.

5)Do you have a sleep mode on your computer?

1) Yes
2 Yes
3 Yes
4 Yes
5 Yes
6 Yes
7 NO
8 NO
9 NO
10 NO
11 Yes
12 Yes
13 Yes
14 Yes
15 Yes
16 Yes
17 NO
18 Yes
19 Yes
20 Yes
21 Yes
22 Yes
23 Yes
24 Yes
25 Yes
26 Yes
27 Yes
28 Yes
29 Yes
30 Yes
31 Yes
32 Yes
33 NO
34 NO
35 Yes
36 NO
37 Yes
38 Yes
39 NO
40 Yes
41 Yes
42 Yes
43 Yes
44 NO
45 Yes
46 Yes
47 NO
48 Yes
49 Yes
50 NO
51 Y

52 N
53 N
54 N
55 N
56 X
57 Y
58 N
59 N
60 Y
61) Yes
62) Yes
63) Yes
64) Yes
65) Sorta ?? AO
66) No
67) Yes
68) Yes
69) Yes
70) Yes
71) Yes
72) Yes
73) NO
74) Yes
75) Yes
76) No
77) Yes
78)
79)
80)
81)
82)
83)
84)
85)
86)
87)
88)
89)
90)

Question #5

Yes's = 156
NO's = 54
Total = 210

1
81
+ 78
+ 51
(210)

56
40
60
156

22
11
21
54

yes = 60      no = 21

total = 81          80

5)Do you have a sleep mode on your computer?

| yes. | no | no |
|------|-----|-----|
| yes | yes | yes |
| yes | no | yes |
| no | yes | yes |
| no | yes | N |
| yes, but it doesn't work | yes | N |
| no | yes | N |
| yeah | yes | Y |
| yes | yes | Y |
| yes | yes | N |
| yes | yes | Y |
| yes | yes | N |
| yes no | yes | N |
| no | yes | Y |
| no | ?no | maybe no |
| yes | yes | N |
| yes | yes | Y |
| yes (shuts off after ½ hr.) | no | N |
| yes | yes | N |
| yes | yes | N |
| yes | yes | Y - but don't use |
| yes | yes | N |
| yes | yes | Y |
| yes | yes | |
| yes | yes | |
| yes | yes | |
| yes | yes | |
| no | yes | |

5)Do you have a sleep mode on your computer?

| # | | # | |
|---|---|---|---|
| 1 | | 41 | Y |
| 2 | Y | 42 | Y |
| 3 | Y | 43 | N |
| 4 | Y | 44 | Y |
| 5 | Y | 45 | Y |
| 6 | Y | 46 | N |
| 7 | N | 47 | N |
| 8 | Y | 48 | Y |
| 9 | Y | 49 | N |
| 10 | Y | 50 | Y |
| 11 | Y | 51 | Y |
| 12 | Y | 52 | |
| 13 | Y | 53 | |
| 14 | Y | 54 | |
| 15 | Y | 55 | |
| 16 | Y | 56 | |
| 17 | | 57 | |
| 18 | Y | 58 | |
| 19 | Y | 59 | |
| 20 | Y | 60 | |
| 21 | Y | 61 | |
| 22 | Y | 62 | |
| 23 | Y | 63 | |
| 24 | Y | 64 | |
| 25 | N | 65 | |
| 26 | Y | 66 | |
| 27 | no | 67 | |
| 28 | Y | 68 | |
| 29 | Y | 69 | |
| 30 | Y | 70 | |
| 31 | N | | |
| 32 | N | | |
| 33 | Y | | |
| 34 | N | | |
| 35 | Y | | |
| 36 | Y | | |
| 37 | Y | | |
| 38 | Y | | |
| 39 | Y | | |
| 40 | Y | | |

X-WebMail-UserID:  eag11
Date: Tue, 26 Sep 2000 15:54:56 -0700
Sender: eag11 <eag11@humboldt.edu>
From: eag11 <eag11@humboldt.edu>
To: rah14@humboldt.edu
X-EXP32-SerialNo: 00003015
Subject: Sustainable Campus:  Problem Assessment
X-WebMail-Urgent: Y

*#1 assessing*

*#2 reducing*

Energy Problem Statement:  We feel that the inefficient use of computers
on campus has contributed to the increase in energy consumption.  By
gathering information from George Wright, head engineer of energy
conservation, Panama, and the internet, we hope to evaluate this problem
and offer solutions and specific objectives towards a resolution to this
campus wide problem.
Thank you,
Lizzy Andrew
Alysia Cervantes
Liz Gingrich
Matt Tolley

The Energy Conservationists!!!!!
P.S. We chose to use e-mail to save paper.

Objectives: (What we want to accomplish; when

- To find out how many students, staff, + faculty have computers and what brand if they do.

- To find out how many volts the hard drive, printer, + monitor run on.

- To find out how many hours a day computers on campus are on.

- To find out how many hrs. a day the computer is actually used.

- To find out how many computers have a sleep mode/ Energy ☆ etc.

Solution: to "complete" ~~do~~ an assessment of
- to reduce energy use
- educate people (student, staff, + faculty)

## WebMail - Energy Group ☒

| Delete | File | Create | Reply | Reply All | Forward | Previous | Next | Options | Index | Help |

**Date Sent:** Tuesday, October 17, 2000 9:41 PM

**From:** "elisabeth gingrich" <ssw777@hotmail.com>          Add to Address Book

**To:** bradford <bradford@humboldt1.com>, ▼

**Subject:** Energy Group

Status: ☐ Urgent ☐ New

Mission Statement:
To assess the amount of energy used by computers on campus.
This includes all computers used by students in the dorms, all computers used by faculty and staff on campus, and all computer labs.

We are currently waiting for the approval to conduct a survey of computer use and once received 100% cooperation by students, faculty, and staff will be greatly appreciated and will aid us in conducting an accurate assessment.

Our long term plans consist of compiling the information and educating the campus population.

We are also researching Energy Star appliances which greatly increase energy efficiency. An Energy Star Computer has a feature called sleep mode, the computer will go into sleep mode when a computer is not used for a set amount of time.
We strongly encourage residents(students), staff and faculty to complete our survey.
Thanks, The Energy Group
Alysia-avc2@humboldt.edu
Lizzy-lizneiles@aol.com
Liz-ssw777@hotmail.com
Matt-mat21@humboldt.edu

Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com.

Share information about yourself, create your own public profile at http://profiles.msn.com.

Date Sent:　　Thursday, November 02, 2000 2:09 PM

From:　　Danny Ihara <dmi1@humboldt.edu>

Add to Address Book

To:　　mat21

Subject:　　RE: energy

Status:　　☐ Urgent ☐ New

---

Matt,

Good to hear from you. Good to hear about the survey, article etc.

The survey can be a useful information source. I'd suggest you try to be as representative in your sample as you can. You might record whether the respondents are male/female, what year in school (which dorm they live in), number of years in the dorm, whether from Humboldt County or not. This will give a profile of the sample (and perhaps you can see if it seems representaive of dorm residents, e.g. about the same proportion of male to female, perhaps there are figures regarding what % of dorm residents are first year HSU students, what percent are 2nd year), also you might get majors so as to see that all respsonpends aren't environmental science majors.

You've probably hought of this, but you could ask how many have cars and then out of this group how many have student parking permits, how many drive to the other side of campus and park.

Another hint is that the more questions (variables) you are investigating the bigger a sample you need for it to be statistically significant. In general it is good to get at least 20 sample surveys, a few more 25 - 30 would be good, depending on the questions you ask. For example, if only 5 out of 20 had cars, you'd probably need to have a big enough initial survey so that you have about 20 people with cars, so that the response to the parking permit questions would be significant.

It's best not to have only "open ended questions", not "How often do you drive to campus?" rather, "In the last week, how many times did you park in a student parking lot" or something like that or better yet, circle the closest answer not at all, 1, 2, 3, 4, 5 6-10 times, more thana 10 times.

Perhaps you've had some statistics classes and all this is "old hat".

If you'd like some more suggestions, I might have time to give you some.

Please let me know.

Best wishes,

Dan

p.s. Anything good question might be: (for those with cars) would you ride
a shuttle that went from the dorms to ? south side of campus (if the
shuttle ran every 15 minutes? 1/2 hour.


p.p.s. what are your objectives for the survey? What are you trying to
find out? Why? This might help shape the survey. Think about what
points you'd like to cover in the article.

On Thu, 2 Nov 2000, mat21 wrote:

> hey Dan, this is Matt Tolley with the energy sub-committee.
> I just wanted to contact you before you leave the country, and brief you on
> our groups progress now that you are our falculty representitive. We hope to
> survey students in the dorms, and also contact staff concerning any data we
> can obtain. I plan to submit an article to the Lumberjack, in the hope of
> raising the awareness of those students in mind. Any help or insights you
> might have would be greatly appreciated as we formulate a plan of assessment.
> thanks again.
>
>

**WebMail**

Secure mode active.

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Delete   File   Create   Reply   Reply All   Forward   Previous   Next   Options

Index   Help

**Date Sent:** Thursday, November 02, 2000 10:48 AM

**From:** "R.J. Wilson"
<wilsonrj@acad-comp.humboldt.edu>

Add to Address Book

**To:** mat21 <mat21@humboldt.edu>

**Cc:** Acad-Comp <wilsonrj@acad-comp.humboldt.edu>

**Subject:** RE: computer data request

Status:   ☐ Urgent  ☐ New

on 11/1/00 6:59 PM, mat21 at mat21@humboldt.edu wrote:

> Hey RJ, I'm looking for data on the computers in use on campus. I'm with the
> energy committee and we are trying to assess the amount of energy used by
> those computers. I hope you have some information pertaining towards the
> number of computers in labs, models, power down options, and those also in
> faculty and staff use. I would be most grateful for any help, and would
> gladly meet with you in person if it would be more efficient.
> sincerly matt
>
> Matt,
Since we don't have individual building meters (to measure effectiveness vs.
non-effectiveness) for energy consumption, since we don't turn the machines
off/on needlessly (which harms the electronic components), since sleep
states of most computers are unreliable and since electronic failures (due
to frequent power off/on) we don't have much else to improve upon. We do
power on all systems once each day and power all systems off once each
night.

Replacement equipment costs combined people costs with lost staff time (to
fix because of failures due to needless off/on cycles), lost student time
(when those failures take machines off line) and lost user data (when those
failures take student data and media down too) would be gigantic when
compared to saving a some watts; therefore we rely on equipment vendors to
comply with energy star standards. Our printers have a normal sleep state
that is fairly effective since these units are extremely simplistic.

Our Ac web page has the model and type of computer and monitor in each of
our labs. Feel free to read off the power info of one system and monitor in
each lab. I respectfully decline to do your research for you.

Just curious, what "energy committee" are you referring to and what is the

stated goal of your committee and your specific exercise? An email answer would be adequate.

Thank you.

--

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-- The concept is interesting and well-formed, but in order to earn better than a 'C,' the idea must be feasible.
--A Yale University management professor in response to Fred Smith's paper proposing reliable overnight delivery service. (Smith went on to found Federal Express Corp.)

**WebMail**

Secure mode active.