WATTS UP WITH OUR ENERGY USE ON CAMPUS?

Erika Redzinak
and Kelsey Brubaker
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Outline

- Background Information
- Process
- Software
- Research and Contacts
- Case Studies
- Future Works
Why this Project?

- Savings could reach $20 or $40 or more per computer
- 56 ResTek Residence Hall Computers
  - $1120 per year, for low end
  - $2240 per year, high end estimates

- Administrative Bodies
  - ResTek
  - ATUS
  - Individual Colleges
Computer Energy Terms

- Sleep Mode
  - EPA Recommendations
- Hibernate Mode
- Screen Savers
- Power Management Software
  - JuicePress
3–Stage Process

1. Record data with no changes
Nash Hall Computer Lab
2. Follow EPA guidelines for sleep/hibernate/screen saver settings

3. Install a third-party software (JuicePress) and monitor changes
JuicePress Software

- Part of LabStats Suite, energy monitoring
- Costs
  - $500 per server to start
  - $9 per computer for program
  - $3 per computer per year maintenance
- Costs may be recovered through Puget Sound Energy (PSE) Grants
Internet Research

- EPA Energy Star Website
- Case Studies
Contacts

- Deborah Frost, WWU
- Jonathan Geller, WWU
- Spencer Mister, WWU
- Susan Brown, WWU
- Bill Welch, Yale University
- Laura Knaapen, University of Wisconsin
Case Study

- Saved $20 per computer per year
- 700 Computers Involved
- CO$_2$ Readout on all computer desktops for all labs
Case Study

- Also saved about $20 per computer per year
- In the past 5 years they have saved about $75,000
Case Study

Yale University

- Saved $40 per computer per year
- Could temporarily shut down 105 computers and wake them back up
- Want to reduce greenhouse gas emissions by 43% by 2020
- Sustainability Strategic Plan 2010–2013
Graph Example

No Changes
Average 283.3767 Watts/hour

With Changes
Average 263.93105 Watts/hour
Future Works

- Continue with Phase 2 and Phase 3
- Have more raw data
- Install JuicePress trial on computers in Nash Residence Hall
- Continue to work with ResTek
- Evaluate user experience with changes
Questions?

It's QUESTION TIME!!