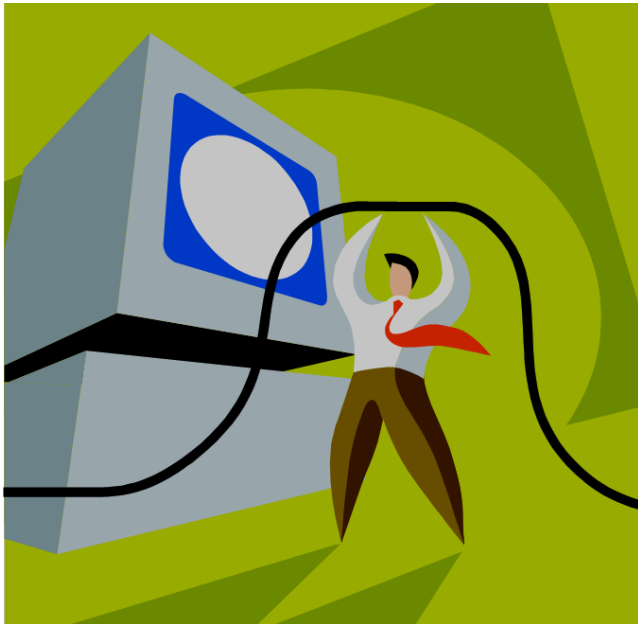# WATTS UP WITH OUR ENERGY USE ON CAMPUS?

Erika Redzinak

ESTU 471

Spring 2011

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Outline

- Background Information

- Contacts

- Case Studies

- Process

- Software

- JuicePress Images

- Conclusion

- Future Works

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Why this Project?

- Administrative Bodies
  - ResTek
  - ATUS
- Savings could reach $20 or $40 or more per computer
- 56 ResTek Residence Hall Computers
  - $1,120 per year (low end)
  - $2,240 per year (high end)
- 23 ATUS computer labs
  - 590 computers
    - $11,800 (low end)
    - $23,600 (high end)
- Combined = up to **$25,840!**
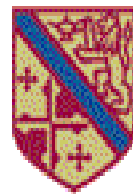
Contacts

- **Deborah Frost,** WWU

- **Susan Brown,** WWU

- **Joe Molinario**, Harvard KSG

- **Michael Lohrbach**, Iowa State University

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Howard Case Study

- Power Save software
- Maintains 2020 workstations
- Saves about $4,200 per month
  - 50,000 per year

Harvard Case Study

- EZ-Save software
- 800 computers
- Able to save $14,000 per year

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Iowa State Case Study

- Live Green campaign
- 700 computers
- $60 per computer per year
- About $40,000 per year of savings

Computer Energy Terms

- Sleep Mode

  - EnergyStar Recommendations

- Hibernate Mode

- Standby Mode

- Screen Savers

- Power Management Software

  - JuicePress

JuicePress

Nash Hall Computer Lab
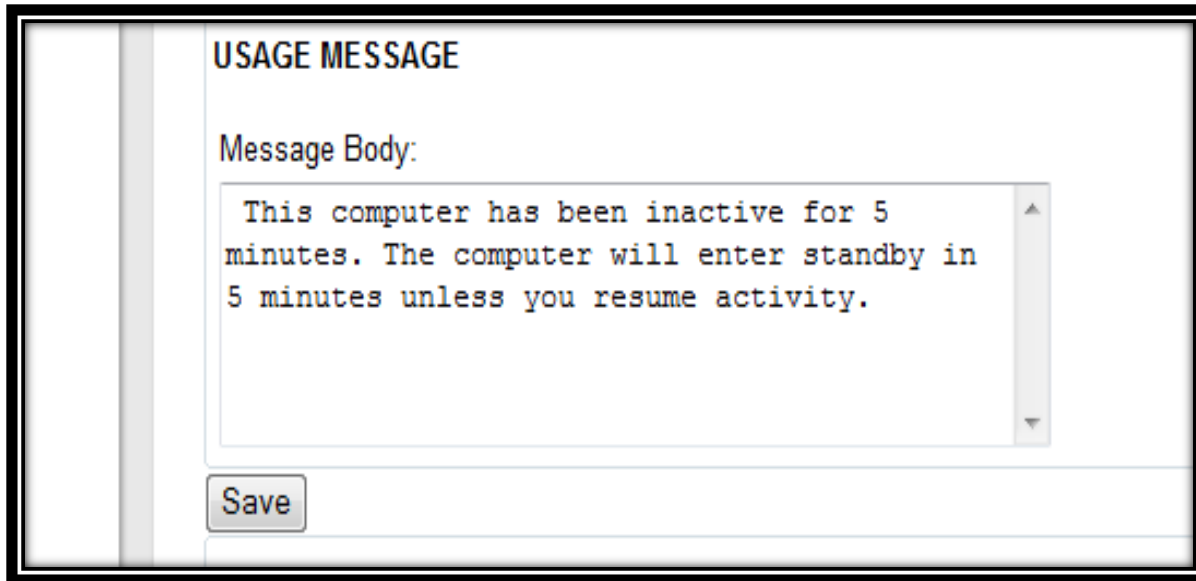
3-Stage Process

- 1. Record data with no changes

- 2. Follow EnergyStar guidelines for sleep/ hibernate settings for computers

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

JuicePress Software

- Part of LabStats Suite
- Costs
  - $500 per server to start
  - $9 per computer for program
  - $3 per computer per year maintenance

- Puget Sound Energy can provide $8 toward the cost for the program

JuicePress Image

Save   Cancel   Clear

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	
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01:00								01:00
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03:00								03:00
04:00								04:00
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23:00								23:00
	Sun	Mon	Tue	Wed	Thu	Fri	Sat	

Save   Cancel   Clear

Peak Usage edit
Low Usage edit
Closed edit

ResTek Peak edit
ResTek Low edit
ResTek Moderate e

Schedule Wake ups

Monday ▼

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WattsUp Data

Phase	Total	# of Days	% change
1	**95,519** kWh	10	0%
2	**34,874** kWh	15	~64%
3	**7,953** kWh	17	~77%

Conclusion

- JuicePress in other computer labs
- Case Studies

Future Works

- Continue working directly with Restek and ATUS

- Potential school year long project

- Monitor other computers labs around campus

- Try JuicePress on other computers

Questions?

It's QUESTION TIME!!