



# SEED

## Sustainable and Energy Efficient Dorm Pilot Proposal

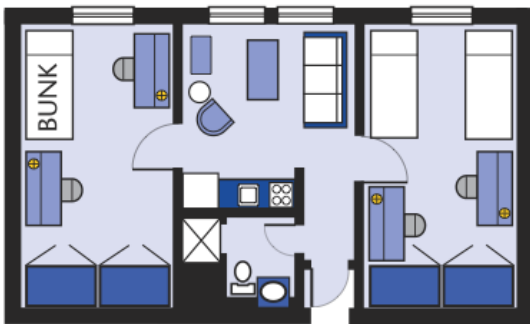
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Campus Sustainability Planning Studio, Winter 2012  
Huxley College of the Environment  
and Office of Sustainability

# Problem and Goals

- Climate Action Plan
  - Climate neutrality by 2050
  - Addressing discrepancies in student lifestyles
  - Improving dorm sustainability
- President's Strategic Goals
  - Lifelong learning
  - Model for sustainability

# Solution

- Catching new students as they enter
  - Simple and attractive example
  - Skills and practices to take away
- Retrofit existing room
  - Energy- and water-saving tech
  - Education and outreach
  - New tech trials



# Proposal

- For Fall 2012, one room in BT – Classic
  - Grow and duplicate in the future
- Replacing lighting, faucets, appliances, and toilet
- Smart strips and power monitors
- Discovery Days involvement
- ecoReps' blog or Facebook



## Appliances

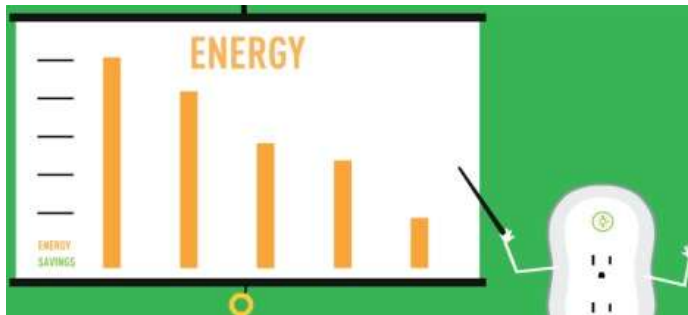
- Convection ovens can save up to 1/3 the energy
- Proposed fridge saves 35%
- Induction boils 1.5 gal of water in 8.5 min vs. 12 min (30% faster)
  - Safer and easier to clean

# Improved Water Efficiency

<b>Proposed Fixture</b>	<b>Percent Water Saved</b>
Shower	43%
Toilet	73%
Bathroom Faucet	32%
Kitchen Faucet	32%
<b>TOTAL</b>	<b>47.4%</b>



**7,385 gallons of water saved per student over three quarters!**



## Energy Monitoring Technology

- P3 Kill-a-Watt, Belkin Conserve, and ThinkEco Modlet
- *Manage what we measure*
- CO<sub>2</sub> and coal
- Phantom drain and automation



## LED Lighting

- 30% over CFL
- 83% over incandescent
- Environmental impact
- Safety (no mercury or heat)



# Funding

Component	Cost
Bricor EcoFit Showerhead	\$29.95
One2flush Dual flush Toilet	\$22.95
Delta Kitchen faucet	\$78.40
Delta Bathroom faucet	\$60.21
GE ENERGY STAR Refrigerator	\$550.00
GE Profile Oven/range	\$2,889.00
2 Belkin Conserve Sockets	\$19.98
2 Belkin Conserve Smart AV	\$59.98
P3 International Kill-a-Watt Wireless Monitor	\$97.99
3 Wireless Electricity Sensors	\$298.50
3 Wireless Electricity Sensors	\$298.50
Replaced lighting	\$243
<b>SUBTOTAL</b>	<b>\$4,349.96</b>
Installation, 6-8 hours of labor	\$544
<b>TOTAL</b>	<b>\$4,893.96</b>

# Conclusion

- Easily applied, installed, and replicated
- Testing ground for new, efficient tech
- Students will like a more sustainable dorm
- Step toward climate neutrality
- Teaching sustainable life skills and practices
- Community outreach, image improvement, and leadership through innovation.

# Thank you!

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Questions?