



National Wildlife Federation®  
**CAMPUS**  
ecology®

**Western Washington University  
Bellingham, Washington  
Spring 2008, Energy**

## **BACKGROUND**

### **Campus Profile**

Western Washington University (WWU) strives to be a national leader in campus sustainability. From our commitment to green energy and waste reduction to WWU's Sustainability Committee and sustainability-minded courses, WWU incorporates sustainability into many areas of campus operations and academics. The WWU Office of Sustainability is dedicated to furthering Western's strategic goal of campus sustainability. As defined by the WWU Sustainability Committee, a sustainable WWU "protects local and global ecology; upholds social equity; creates economic vitality; and protects the health of its inhabitants."

### **Contact**

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## **GOALS AND ACCOMPLISHMENTS**

### **Goals**

"Go for the Green" was an energy reduction challenge for the 2008 winter quarter. It was the main focus of ResRAP (Residents' Resource Awareness Program) during that time.

The goals of the challenge were a 10 percent reduction of electricity and to increase participation in programs and awareness about energy use, with a specific focus on electricity since that is metered by hall and the most easily and regularly measured.

### **Accomplishments**

EcoReps and resident directors (RDs) were told that an energy challenge was a great program for residence halls and would activate students to be more mindful of their effect on the environment, create conservation awareness, and make a positive contribution to the environment. Helpful examples of successful collegiate residential energy reduction campaigns were easy to find using resources from the National Wildlife Federation (NWF) Campus Ecology program and the Association for the Advancement of Sustainability in Higher Education (AASHE) peer-to-peer programs.

There are 16 separate residence halls at Western Washington University, which house nearly 4,000 students. About half of them participated in the energy reduction challenge during the winter quarter of 2008. A green pledge stating "I pledge to reduce my energy use in the hall" were signed by 804 residents. The pledge listed five ways to conserve energy: unplug electronics, shut your window, turn off lights, limit shower time, and shut off your power cords. Reduction of electricity was calculated by the number of kilowatt hours used per resident during the campaign as compared to use averaged over the three

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previous years. The challenge resulted in a 13 percent reduction, saving approximately \$9,300. The halls that did not participate appear to have been influenced indirectly, since those halls experienced a 6 percent reduction.

The challenge was split into two groups: small and large residence halls. A point system was created, and throughout the fall and winter quarter prizes were solicited from local businesses to serve as incentives (see Tables 1 and 2).

<b>Table 1: Prize System</b>	
<b>Small-Hall Challenge</b>	<b>Large-Hall Challenge</b>
UpFront Theatre performance in hall	UpFront Theatre performance in hall
2 REI Taku Jackets (\$269 value each)	2 REI Taku Jackets (\$269 value each)
\$35 gift value at Fairhaven Walkers and Runners	\$35 gift value at Fairhaven Walkers and Runners
\$20 certificates at Fairhaven Bike & Ski Shop (2)	\$20 certificates at Fairhaven Bike & Ski Shop (2)
\$25 certificate at Co-Op	\$25 certificate at Co-Op
Outdoor Center trip for your hall exclusively	Outdoor Center trip for your hall exclusively
Free Mt. Baker Climb	Day on High ropes course
Great Harvest Bread gift certificate	Yoga Northwest \$50 gift certificate
\$60 entry to Mt. Baker hill climb bike race	BackCountry Essentials gear
BackCountry Essentials gear	FairTrade Haven gifts

<b>Table 2: Point System</b>	
<b>Small-Hall Challenge</b>	<b>Large-Hall Challenge</b>
<b>Kappa, Higginson, Edens, Edens North</b>	<b>Birnam Wood, Buchanan Towers, Fairhaven, Mathes</b>
Reduce electrical consumption (20 points for each % reduction)	Reduce electrical consumption (20 points for each % reduction)
Attend hall events (1pt)	Attend hall events (1pt)
Complete surveys (1pt)	Complete surveys (1pt)
Sign pledges (1pt)	Sign pledges (1pt)
	Enter poster contest (5pts)
	Attend campus events (1pt)
	Join "Save the Planet-Start at Western" Facebook Group (1pt)

Per capita electricity use decreased in every hall on campus, but the reduction in Go for the Green halls was significantly larger.<sup>1</sup> The average percentage change in electrical consumption over the three-month period was -13 percent for all challenge halls and -6 percent for nonparticipating halls (see Table 3). This represents a savings of \$9,316 in electricity costs for the challenged halls and \$1,391 for the other halls.

**Table 3: Add Title**

<b>Go Green Halls</b>	<b>% Change from Baseline use to 2008</b>	<b>Nonparticipating Halls</b>
Buchanan Towers	-8.0	-6.1 Beta
Birnam Wood	-8.1	-10.6 Gamma
Edens	-7.2	-3.4 Sigma
Edens North	-8.1	2.9 Highland
Fairhaven	-15.5	-9.3 Alpha
Higginson	-14.6	-4.1 Delta
Kappa	-22.4	-14.3 Omega
Mathes	-16.1	-3.6 Nash
<b>Average</b>	<b>-12.5</b>	<b>-6.1 Average</b>

The largest reduction within targeted halls was in February. This is not surprising, since by the second month implementation had had time to sink in, and February was the only full month of the challenge. In

<sup>1</sup> Details for this statistical finding can be found in Kimbrough Mauney, *The Effects of the Go for the Green Challenge on Electricity Use, Behaviors and Attitudes of Western Washington University Residents*, Masters thesis, Western Washington University, 2008. **[correct year?]**

other words, residents had full control over electricity use in February, whereas in January and March, residents are absent from the buildings for a week or more.

Questionnaires were sent out to gauge the effect the contest had on students. Open-ended questions asked student leaders to tell how they spread word about the challenge and what they themselves changed and/or observed (Tables 4, 5 and 6). Most common methods of diffusion were word of mouth, including going door to door and speaking one on one.

**Table 4: Methods Reported by EcoReps, RAs and RDs to Spread Word about Go for the Green**

Method (with total times reported) <sup>1</sup>	BT	BW	E,EN,H <sup>2</sup>	F	K	M
Floor meeting (11)			xxxxxx			xxxxx
<b>Word of mouth (17)</b>		x	xxxx	xxxxx	xxx	xxxx
Door to Door (11)		xxxx	x	x	xxxx	x
One on One (9)			xxxxxx	x		xx
<b>Bulletin boards, signs, flyers, posters (22)</b>		xx	xx	xxxxxx	xxxx	xxxxx
Emails (6)		xx		xx	x	x
Other methods <sup>3</sup> (19)		xx	xxxx	xxxxxx	xxxxx	xx
Totals	0	11	23	23	17	21
# of leaders in hall	8	6	9	15	6	10
# who completed questionnaire	0	6	8	12	5	10

1. Abbreviations are for names of residence halls (see Table 3).  
 2. Since leadership is coordinated under one RD, results from leaders in these three halls are combined.  
 3. Included showing the website, highlighting the competition and prizes, talking about awareness, holding an eco-event, promoting the EcoReps' "Save the Planet, Start at Western" Facebook group and tabling.

Most of the changes made regarded use of lights, followed by unplugging appliances. Taking stairs more was encouraged. Since it is easy to see that lights are off more than usual, for example, it is not surprising that light use was the most commonly observed change.

**Table 5: Behaviors that Leaders Changed, Asked Residents to Change and Observed**

Hall	Personal Behavior Changes Reported										Changes Requested								Observations				
	L	A	H	S	D	W	C	R	P	B	L	A	H	S	C	G	N	M	L	H	W	S	C
BW	5	4	4			1	2				3	1	2					1	1	1			1
E,EN,H	8	4	2	1			3			1	2	1					1	4	6		1	1	2
F	11	13		6	1		1	1			6	5	1	1	2			1	7	2			2
K	6	2									1	1						2	5				
M	9	6	2	3	2	1	1	2	1	1	6	2		1	1	1			7		1		1
Totals	<b>39</b>	<b>29</b>	8	10	3	2	5	5	1	2	<b>18</b>	<b>10</b>	3	2	3	1	1	8	26	3	2	1	6

Note: L = decrease light use; A = use appliances/electronics less or unplug; H = turn heat off or down; S = use stairs more; D = use dryer less/more sustainable laundry habits; W = shower less (in length or frequency); C = more conscious ("asked to observe tips we posted"); R = start recycling or composting more; P = less paper towel use; B = blinds closed; G = general suggestions; N = nothing/"it's their choice"/"they did it themselves"; M = asked residents to do what they were doing.

<sup>1</sup>

We hoped to have two events in every hall that would be called “eco-events.” Since implementation varied, not all halls had the same number or types of events.

**Table 6: Add Title**

Hall	Event(s)	Planned By	Date (all 2008)	Attendance
Birnam Wood	1. <i>Planet Earth</i> showing and local foods 2. Reusable mug making	EcoRep	Thurs., 2/14, 8pm Mon., 3/3, 8pm	16 30
Buchanan Towers	1. Strong bag making, with Mallard’s Ice Cream donated	EcoRep	Thurs., 3/6, 6:30pm	6–12
Edens/ E. North/ Higginson	1. Local Foods Festival 2. Recycled art 3. Sustainability Podcast	EcoRep 5 Resident Advisors(RA) and RD	Sat., 2/9 3pm Sat., 2/23 & Sun. February	65 3 and none n/a
Fairhaven	1. Captain Planet Marathon 2. Steam Plant Tours	EcoRep EcoRep & RA	Wed., 1/30, 8pm Sat., 3/8, 2pm	17 None
Kappa	1. <i>Bio Dome</i> film showing 2. Sustainability Film Festival (3 resident-created films)	RA RAs	Tues., 3/11, 7pm Fri., 3/14, 7pm	25 47
Mathes	1. <i>Oil + Water</i> film showing, with Mallard’s Ice Cream	RA	Wed, 3/12, 8pm	5–7

Most students realized that they could reduce their impact on the environment by changing their behaviors. Here’s how the 523 respondents to the mid-survey answered the question, “If you have made any behavior changes, why have you?”

**Table 7: Add Title**

Reasons for making changes	BT	BW	E	EN	FH	H	K	M	Totals
B/c of the Go Green Challenge	21	16	23	14	50	49	43	51	<b>267</b>
B/c my hall mates are doing it	3	4	4	4	9	6	6	12	48
To lessen my environmental impact	48	39	20	22	79	51	42	75	<b>376</b>
To reduce my carbon footprint	23	23	14	9	56	37	32	44	<b>238</b>
Some other reason	14	14	8	4	24	14	11	14	103
I am not trying to reduce	1	5	4	0	3	0	2	4	19

RAs, RDs and EcoReps shared what worked and wondered about things that did not work as well. A few aspects of good implementation stand out, and they should be considered along with building design, which in some cases dictates how implementation can occur:

**Effective implementation**

Feedback, including other halls’ progress

Signage

- Simple
- Prominently displayed all over

Reminders posted near the action target

Talk about it daily

Film making: residents create their own sustainability messages

Local food tasting

Sense of competition with another hall

**Building designs = easy to realize reductions**

Shared bathrooms

- Residents see each other being efficient with resources
- Guaranteed visibility of posters, flyers, reminders.

Shared hallways

No elevators

**Building designs = harder to realize reductions**

No shared living space, such as apartments in BW

No control over resource use, such as Edens administration on first floor

## **Challenges and Responses**

Halls with the greatest results had both EcoReps and resident advisors working toward Go for the Green goals. RAs who adopted Go Green as their programming created signage, talked about the challenge with residents, collected pledges and planned eco-events. EcoReps' implementation varied. Some put up flyers or chalked information on walls (this is possible with approval from resident directors); some planned eco-events in their halls; most simply talked about it with residents.

The eight halls that did not participate did not elect EcoReps at the beginning of the school year, nor did the RDs communicate interest early on. Since ResRAP goals are to have EcoReps in every hall and have every hall participate in the energy challenge, the ResRAP coordinator will increase EcoRep recruitment efforts and continue to approach RDs and RAs before school begins to discuss integration into their plans. Next year, ResRAP will have a paid assistant. This position will work closely with the coordinator and volunteer EcoReps. They will help recruit EcoReps and implement Go for the Green in those halls without volunteer EcoReps, as long as the RD permits.

Future challenges should apply successful strategies from the halls with large reductions to those where such reductions were not realized, especially those for which design makes marketing strategies difficult to perform effectively. To ensure strong implementation, participating halls should have involvement from RAs as well as EcoReps or equivalent volunteer organizers. These leaders should be educated about diffusion methods.

Behavior modifications targeted by Go for the Green were ones that people living in a collegiate community can make fairly easily. Future campaigns could set higher goals, even targeting natural gas, water, and gasoline use as well. To increase effectiveness of a campaign, Residence Life could set goals for the residents, such as certain levels of reduction or participation, and offer positive consequences if those goals are reached.

Longer studies could include a follow up survey to ex-residents to assess any long-term responses to the intervention. Another need is to determine how to return the money saved to the halls with electricity reductions. Barriers to a simple transfer of dollars include determining to what extent exactly the residents' behaviors led to the reductions and deciding how the halls should spend the money saved.

## **ENGAGEMENT AND SUPPORT**

### **Leaders and Supporters**

Kimbrough Mauney, ResRAP Coordinator 2007–2008

Judith White, Resident Director, Kappa dormitory

Phil Burns, Resident Director, Edens dormitory

### **Community Outreach and Education**

Most of the hall leaders noticed people talking about resource use or changing their behaviors. Most of them (79 percent) learned from Go for the Green about energy use. Since 25 leaders were either unsure or not able to explain a kilowatt hour, coordinators in the coming years can focus education on this fundamental part of electricity measurement.

**Table 8: Leaders' Reports of Critical Thinking and Learning**

Residence Hall	Did you notice conversations about critical thinking? Approximately how many?	Do you know more about campus energy (electricity and heating) than you did before?			Can you explain a kilowatt hour?		
		Yes	No	Maybe	Yes	No	Maybe
BW	4 did, ~20	4		1	4	1	1
E,EN,H	7 did, ~12	5	1	2	1	4	3
F	9 did, ~35	8	1	1	6	2	4
K	3 did, ~3	4		1	1	1	3
M	7 did, ~11	9		1	4	2	4
<b>Totals</b>	<b>30 did, ~81</b>	<b>30</b>	<b>2</b>	<b>6</b>	<b>16</b>	<b>10</b>	<b>15</b>

**Campus Climate Action: Your School's Carbon Footprint**

Climate change is an issue that concerns us all. ResRAP hopes to help residents form habits that reflect their desire to reduce their footprint on the earth.

**CLOSING COMMENT**

Peer-to-peer education and efforts to change behaviors so that positive effects on the environment are realized require personal communication, establishment of individual relationships and mutual goals, and active participation by the target audience. The leaders of the Go for the Green Challenge mobilized, at various levels, around the challenge and its goals to meet these requirements. The target audiences were motivated and inspired by hall leaders and by each other. This first year of the Go for the Green showed that positive results can be realized in many different ways, and inspires others to continue to implement behavior change interventions.