

Western Washington University Energy Policy Proposal

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Campus Sustainability Planning Studio

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1.0 Executive Summary

1.1 Problem

At the moment, WWU lacks an official set of central policies regarding our energy use, despite our commitment to sustainability and a zero carbon footprint by 2050 from our Climate Action Plan (CAP) and an obligation to State law. Our position as a leader in sustainability in Washington State is threatened by our scattered approach to energy efficiency. Sustainability is an identified value of Western and is utilized by its branches, but to varying degrees through different measures. This has led to disparate levels of energy conservation and a lack of information sharing and communication between portions of the University regarding best practices.

1.2 Solution

To address the goals established in the Climate Action Plan (CAP) and Revised Code of Washington (RCW), a policy emphasizing the need for information gathering and sharing, establishing campus-wide standards for energy use, and the responsibilities of the campus community is recommended. This will allow for the integration and centralization of Western's sustainability efforts going forward. Providing Western with one central motivating factor and basic conservation policy will help Western more effectively tackle its goals related to climate neutrality and improve its position as a leader in sustainability. Current measures toward climate neutrality and sustainability will be solidified as requirements, guaranteeing their continued use or expansion going forward.

1.3 Funding Requirements

For the adoption of an official energy policy, time is needed to deliberate and pass such policy, and then potential ongoing costs of enforcement and utilization must be considered. Ideally, this policy seeks to save the University energy expenses, and will likely involve investment as Western moves forward towards its goals. The primary funding requirements of this policy parallel those associated with the implementation procedure for all university policies (University Policies and Procedures, 2009).

1.4 Organization

The proposed set of policies would be adopted as a means of operation for Business and Financial Affairs, probably under Facilities Management (Section 5700 of University Policies and Procedures) or its own Sustainability and Energy Conservation section (WWU, 2012). By adopting an energy conservation policy as a required means of operation, rather than a choice, the policy would be given sufficient leverage. This would provide a necessary compliance point for all University actions, which would bring about significant change.

2.0 Statement of Need

Western is in need of a policy governing energy use because of its commitment to climate neutrality, to State requirements for the reduction of green house gas emissions, to better harness our identified campus value of sustainability, to shift from elective actions to solid policy commitments, to better transparency and communication between different components of the University, and to improve our posture as a sustainability and energy leader in Washington State

and the nation. Presently, WWU does not have a specific policy or set of policies governing energy use, conservation, or sustainability (WWU, 2010).

Western currently purchases 102% renewable energy credits for our use as a result of student-led initiatives. Western is in the top 20 of Puget Sound Electric's Green Power purchases (GBC) and ranked 18th by the EPA's Green Power Partnership. The student-driven motivation for this energy consciousness indicates the cultural adoption of sustainability as a valued ethic on campus. Despite a multitude of conservation and sustainability initiatives currently implemented across campus, Western lacks a truly cohesive effort driving sustainability and energy efficiency at an administrative level. Western ranks 14th on the Sierra Club's Coolest Schools list of 2011, but behind University of Washington at 1st and Evergreen State College at 10th. Given the success of our sister schools, Western can no longer say it is a leader in Washington State (Becktold, 2012).

The Revised Code of Washington (RCW) requires State buildings to be 50% below 1990 greenhouse gas emissions levels by 2050 (RCW 70.235.020); Western's Climate Action Plan exceeds this by aiming for climate neutrality on the same timeline. In either case, these are serious requirements that necessitate Western's best efforts and organization. Exceeding the requirements set by the RCW provides an opportunity to lead Washington's effort against climate change. Currently, WWU is not on track to meeting its goals in the CAP because of increased emissions during 2010. As of the 2011 report, WWU stands 23% behind on its track to climate neutrality (WWU Office of Sustainability, 2012).

An integral goal of this proposal is to reaffirm Western's commitment to sustainability and climate neutrality with a policy framework to support future efforts and officially adopt

current practices. The cultural value of sustainability is present and strong at WWU. Student initiatives fund the purchasing of 102% renewable energy and the distribution of bus passes to students with over six credits a quarter (renewed this year), and aim to eliminate the sales of bottled water on campus (Jimenez, 2012). The desire for a more sustainable campus exists, but a more official commitment to these actions and goals is needed. By introducing a top-down approach towards energy conservation, Western will be capable of more effectively orchestrating its efforts and may assume a more powerful stance against climate change at an institutional level.

Currently, sustainability and energy conservation are in the operating mindset of the University's different departments, but a lack of a venue for information sharing and communication hinders a more collective approach. Western as a whole is committed to climate neutrality, but its different arms and departments are more or less individually responsible for their efforts. This isolation does not give WWU the best means for reaching our goals and an official policy should be seen as the first step in unifying our efforts. A means for collaboration and common metrics are necessary components for Western to most efficiently meet its goals.

3.0 Project Description

3.1 Objectives

The primary objective of this proposal is to provide Western a stronger backbone in the form of policy for achieving the goals established in the Climate Action Plan and adhering to Washington State law. The language and contents of this policy are influenced by those adopted by our peer institutions and Western's current sustainability and energy conservation efforts.

Additionally, this proposal aims to encourage dialogue within the campus community about energy use and conservation through the provision of a central motivating factor and the structure for information and knowledgebase trading. This policy aims to breed accountability for our impact on the environment, involving the cooperation and understanding of all members of the campus community by addressing personal and communal impacts of energy use on campus. Ultimately, the goal of this proposal is to reduce our energy consumption as a means to reduce both our operating costs and our climate and environmental impact.

3.2 Methods

Seen as the manifest of focusing campus energy conservation efforts, the roots of this proposed policy are grounded in Western's Climate Action Plan. As approved by the Board of Trustees, we have looked to our peer institutions to provide "guidance for policy development and strategic planning" (University Planning and Budgeting, 2012). Western's energy conservation policy will be built out of the principles set forth in our CAP and will use proven and practical approaches demonstrated by our peer institutions to reduce energy load at a campus-wide level. These approaches will include the promotion of conservation efforts, the analyses of energy consumption across campus, and developing a set of university wide standards defining appropriate heating and lighting use.

Western Washington's 31 peer institutions' energy policies were surveyed to formulate the proposed policy for WWU through website research and contacting relevant officials. Though not all universities responded or had a dedicated portion of their website, twenty were found to have a Climate Action Plan in place, eleven of which also had an energy policy – nine did not. Three were found to possess an energy policy without any CAP, which illustrates a recognized

need for an official approach towards campus energy conservation despite not signing on to the American College & University Presidents' Climate Commitment. All peers were confirmed to have a university smoking policy, which was used as a metric of cultural change over time. Over the last sixty years the public perspective on tobacco use has changed dramatically, which the authors conclude to be analogous to sustainability and energy efficiency come 2050.

The policies of the fourteen peer institutions possessing energy policies were then surveyed for contents. The construction of a draft policy for WWU was modeled upon the frequently used topics of peer institutions – excluding those unrelated to WWU. Though not all peer institutions used identical language for their topics, Young grouped them into eleven categories. By synthesizing pertinent categories, the authors developed a draft policy for Western addressing four fields: monitoring and information, electricity and water, buildings and development, and responsibilities. Through acknowledging the identified need for such policy and with the inclusion of a model draft policy, it is the authors' hope to see refinement come in time for presentation to the Board of Trustees within one year. We recognize the involved process of policy creation, but feel it is important to note the trend of energy conservation through official policy occurring amongst our peer institutions, and with Western behind the curve of change we will soon be in a minority position with none.

Upon administrative approval, the policy will exist at the uppermost level of University protocol, giving the responsibilities of our efforts in energy conservation to the administration, faculty, facilities management, and the campus community as a whole. This top-down, seminal policy approach provides a core integration of our sustainability ethic. Western's trends in sustainability efforts have given the university community the needed momentum to

unanimously accept this type of policy. Administrative adoption is seen as an essential step in a more appropriate approach to energy conservation as we strive to improved our leadership in environmentalism, reduce our climate impact, and become a more aware and efficient campus.

In reality, the scope of this proposal largely encompasses practices already undertaken and lacks only the formalization as official policy. However, the necessity for the installation of hardware as directed by the policy, such as room occupancy sensors for lights, and the expansion of the current beta monitoring system, dashboard, may require a formal timeline and a budget analysis. With both of these measures currently implemented to lesser degrees, these timelines and budgets will have sound baselines from which to operate. The long-term effects of this policy will be seen to guide the form of new developments and renovations on campus towards energy efficiency. A focus in these long-term efforts will be on purchasing, lighting, water, and heating standards such that only what is needed is used and what is used is as efficient as is viable. Policy will regulate new developments and renovations as to simplify the building occupants' responsibilities of energy conservation, such as turning off lights and computers when unused.

In the short-term, this policy will mandate that energy monitoring take the front stage in Western's conservation efforts. Coupled with strengthened information sharing between departments, students, administration, and the community, the ability and willingness to analyze the energy load across campus will lead to heightened awareness and tangible gains to our conservation efforts. This monitoring effort will stem from the current beta dashboard system currently isolated to four of Western's buildings on campus and will grow into a key role in the management of our energy use. The fully implemented dashboard system would be publicly

available and allow future and ongoing efforts to access information easily so that progress may be monitored and inefficiencies may be addressed. It has become crucial that Western eliminate as many barriers to energy use reduction and conservation as possible. By compiling reports of energy use trends, facilities management will be empowered to make changes where needed in order to further eliminate excess consumption. Simultaneously, awareness of our energy use will proliferate and provide motivation to the campus community to further reduce consumption where unnecessary. Data visible on a building-to-building level will foster responsibility through a departmental sense of ownership. In placing our energy use under the microscope we will be able to make informed decisions leading not only to less waste, but lower operating costs.

This policy outlines appropriate levels of heating and electricity use to be implemented immediately upon its adoption. Following the example of buildings already engaged in Western's 10x12 Program, all campus facilities will follow the heating and lighting standards of the policy as controlled by facilities management and aided by all persons of the campus community. As has been stated, much of this policy should be seen as the cementation of current philosophies and practices into formalized standards guiding energy consumption. Immediate physical efforts will be in utilizing the infrastructure already in place by regulating heating levels and mandating appropriate light use across campus. Going forward, infrastructure will require more meticulous monitoring technology in order to effectively analyze consumption. Nonetheless, with a dashboard system already in place, this policy will speak directly to its expansion into all campus facilities and the ongoing publication of data to be interpreted and utilized by the entire community.

3.3 Administration

At the onset of this policy, the engagement of the Western Washington University's administration, president, and Board of Trustees will be tasked with its finalization and enactment. Facilities management, with ground already being covered by their use of a dashboard monitoring system, will carry out the monitoring and analyses of energy use information – and be responsible for the transparency and publication of this information. As Western's energy usage is more finely understood, facilities management will install occupancy and light level sensors where needed to decrease the number of hours lights are left on unused. The approach to increased heating efficiency will be similar. Western's Office of Sustainability and Facilities Management will be tasked with interpreting energy consumption data and materializing programs and initiatives, as is already the case, to further reduce our usage. With a more comprehensive understanding of energy use at a campus wide level from the monitoring information and aided by the knowledge of facilities management members regarding excess energy usage it is our hope that the programs and initiative devised by the Office of Sustainability will yield unprecedented improvements in our campus's conservation efforts.

3.4 Evaluation

The evaluation of these efforts is inherent in the efforts themselves. The monitoring system set in motion will give campus administrators access to current and trending energy use data at both a building and a campus level. In reporting to the Board of Trustees the evaluation of this data will speak to our level of success in reducing our emissions and closing the gap between our current condition and the energy level goals put forth in our Climate Action Plan. The nature of this proposal means an ongoing evaluation of the efforts and results – by utilizing a

thorough monitoring system across campus we empower ourselves to make the most informed decisions and draw the most accurate conclusions as to our adherence with our commitments.

3.5 Sustainability

From a monetary standpoint, this policy's sustainability is seen in the savings of experienced through conservation and decreased energy usage. In time, the costs of further monitoring infrastructure and sensors can be seen as offset by the savings arising from conservation. Frankly, WWU's commitments to reducing its climate impact are very sizable and require a stronger central core in University Policy driving lower-level practices. A policy regarding energy use and efficiency would provide the best opportunity for change by motivating a shift in specific practices and management. As is, Western may be incapable of wholly meeting its commitments otherwise.

4.0 Conclusion

Western's commitment to climate neutrality is a serious and difficult goal. Given Western's sensitivity towards sustainable and environmental ethics, the greatest possible outcome will be through bolstering our efforts going forward by creating a higher-level University Policy directly addressing energy use, conservation, and our climate impact. This policy would include a requirement to implement the monitoring of energy use throughout campus, infrastructure for information and knowledgebase sharing for a more unified approach to energy efficiency, establish standards and practices regarding campus operations, and reaffirm the responsibilities of the campus community in reducing our impact. Without such policy, it is unlikely Western will truly address the uncomfortable truth of the difficulty of climate neutrality.

Western has the knowledge and the desire, but we have not gathered the courage or initiative to commit more seriously to our goals, despite significant need. By starting each University action with energy conservation formally (rather than informally) in mind, our strength in meeting our goals increases dramatically.

5.0 Draft Policy

DRAFT POLICY: ENERGY CONSERVATION

This policy applies to all members of the Western Washington University campus community and actions of the University.

ENERGY CONSERVATION POLICY & STANDARDS

1. Monitoring & Information

- a. Implement an integrated monitoring system for all campus buildings.
- b. Ensure monitoring data and analyses are accessible to the campus community.
- c. Report annually on conservation progress to Board of Trustees and develop mitigation strategies when not compliant with WWU Climate Action Plan.

2. Electricity & Water

- a. It is Western Washington University's goal to conserve fresh water and electricity.
- b. Close doors and windows when appropriate to reduce heating costs.
- c. Lights, computers, and other equipment will be turned off when unused.
- d. Computers will follow energy saving power management settings.
- e. Room occupancy sensors and daylight sensors will be used to reduce amount of unused lighting.
- f. Daylight harvesting to be prioritized to light buildings.
- g. Universal heating & lighting standards will be established.

3. Buildings & Development

- a. New construction and renovations to follow LEED-Gold standards.
- b. Purchasing of equipment to be ENERGY STAR certified when possible.

4. Responsibilities

- a. Energy conservation on WWU campus concerns the entire WWU campus community. Every member of the university community should assume the responsibility of conserving water, electricity, and heat.
- b. Facilities Management & Custodial Staff are responsible for turning off lighting and unused equipment at end of day.
- c. Faculty members are responsible for turning off room lights and equipment after use.

6.0 Works Cited and Contacts

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8.2 Contacts

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7.0 APPENDICES

Figure 1: University Policy Creation Flowchart

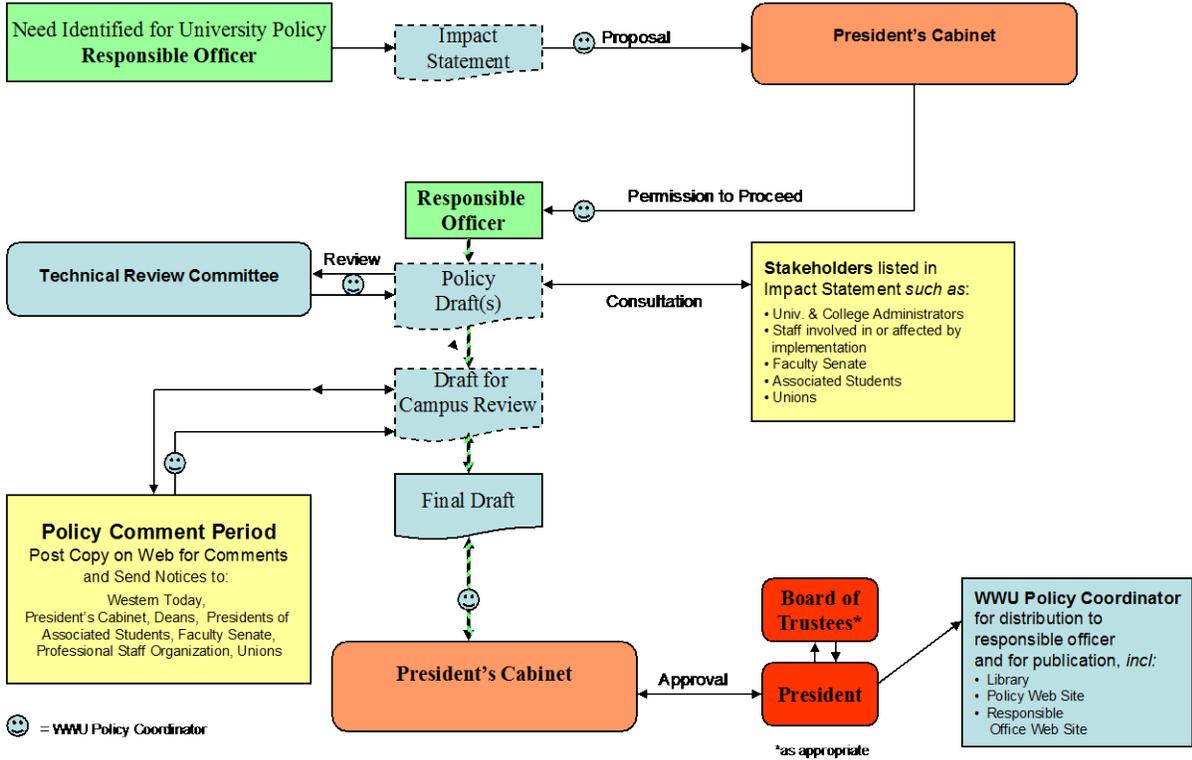


Figure 2: Comparison of Peers with Climate Action Plans (CAPs)

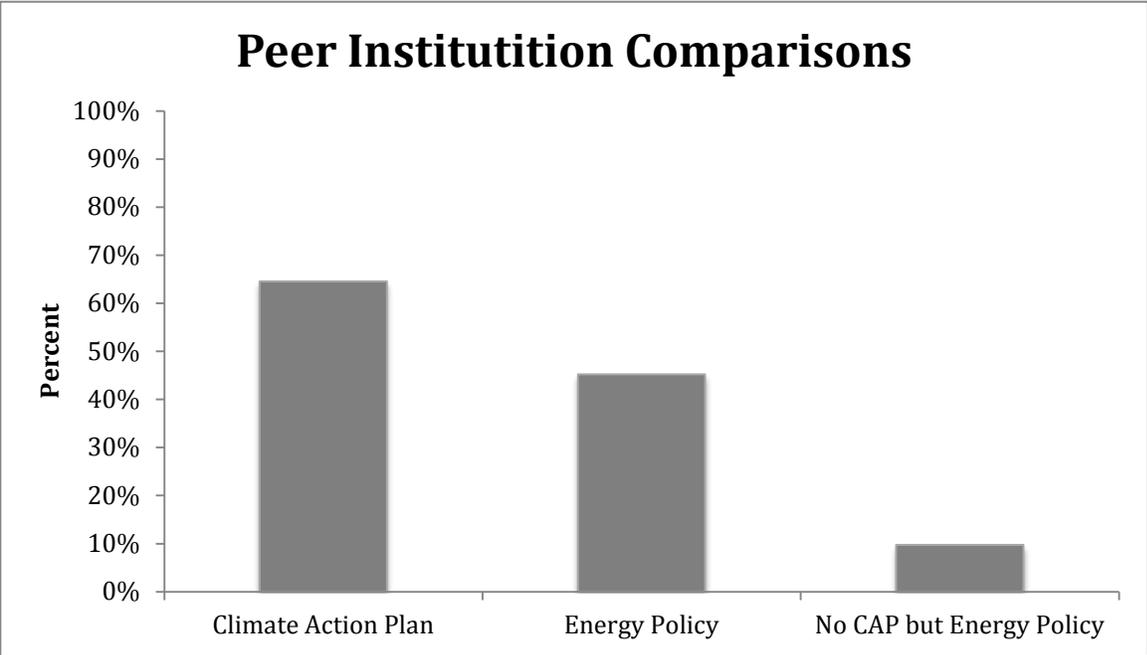


Figure 3: Peers with Energy Policies

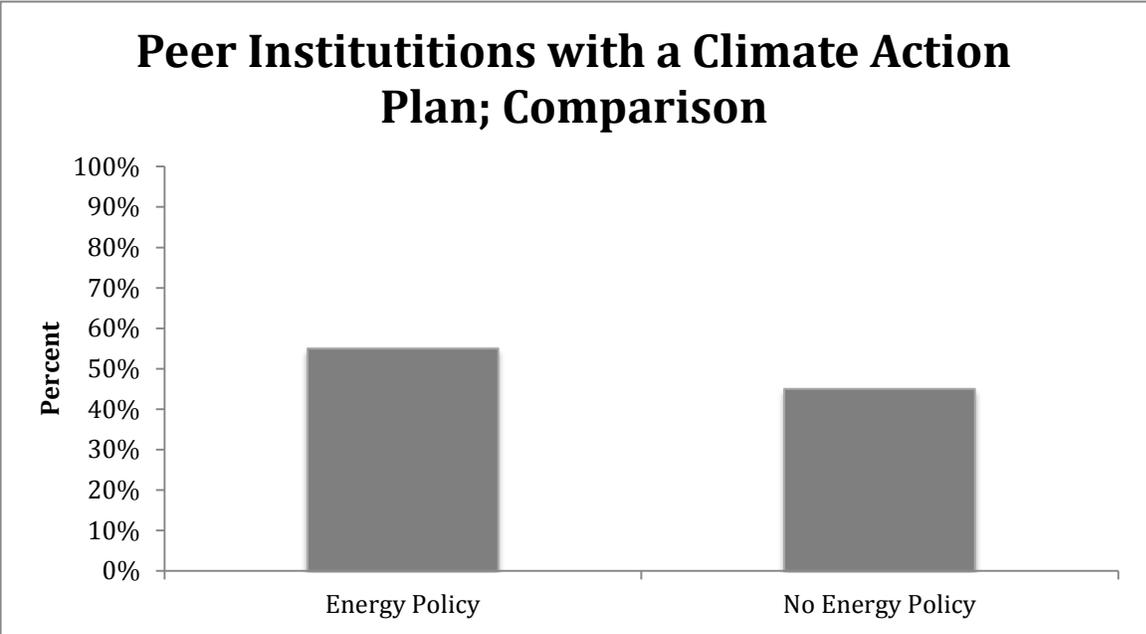


Figure 4: Policy Components Frequencies

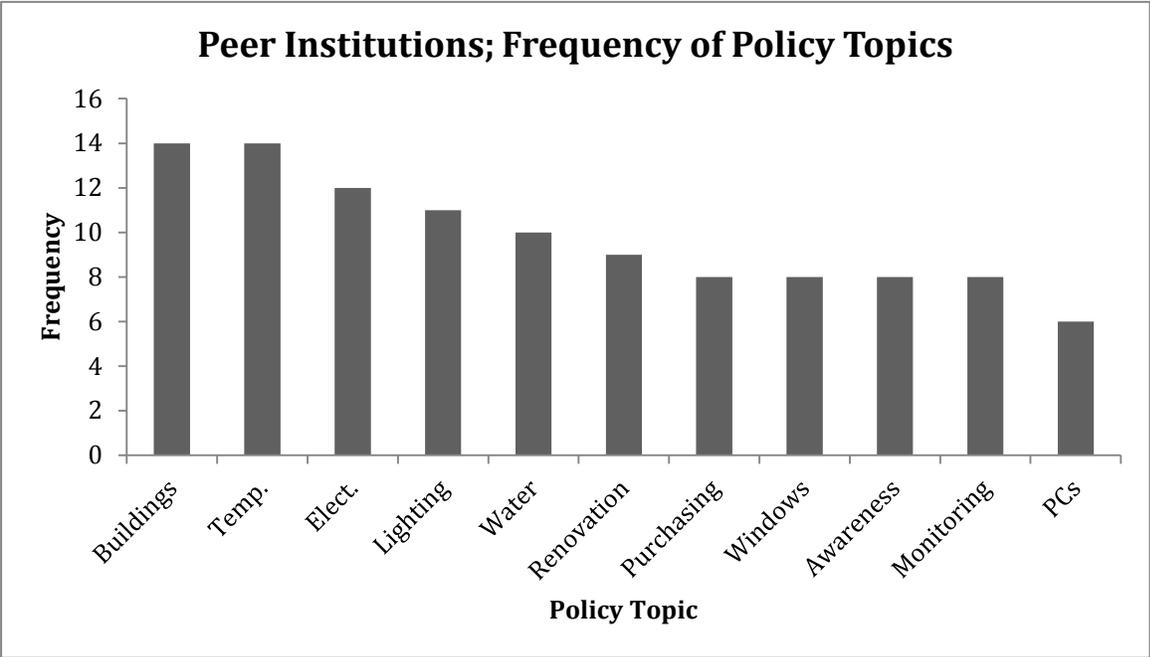


Figure 5: List of WWU approved peer institutions.

Western Washington University
 WWU Board-approved Peer List and Global Challenge States Peer List

<i>Western Washington University Board Approved Peer List December 10, 2004</i>	<i>Western Washington University Global Challenge States Peer List OFM Approved July 17, 2008</i>
1 California Polytechnic--San Luis Obispo CA	1 California Polytechnic--San Luis Obispo CA
2 California State University-Chico CA	2 California State University-Chico CA
3 Humboldt State University CA	3 California Polytechnic-Pomona CA
4 Sonoma State University CA	4 Southern Connecticut State University CT
5 Univ. of Colorado - Colorado Springs CO	5 Central Connecticut State University CT
6 Univ. of Northern Iowa IA	6 Towson University MD
7 Eastern Illinois University IL	7 Montclair State University NJ
8 Washburn University of Topeka KS	8 William Paterson University of New Jersey NJ
9 Murray State University KY	9 Rowan University NJ
10 Salisbury University MD	10 James Madison University VA
11 Towson University MD	11 Radford University VA
12 Truman State University MO	
13 Appalachian State University NC	red = appears on both lists
14 Univ. of North Carolina--Charlotte NC	
15 Univ. of North Carolina--Wilmington NC	
16 Rowan University NJ	
17 The College of New Jersey NJ	
18 SUNY College of Arts & Sci.--Geneseo NY	
19 Millersville U. of Pennsylvania PA	
20 College of Charleston SC	
21 Winthrop University SC	
22 James Madison University VA	
23 Univ. of Wisconsin--Eau Claire WI	
24 Univ. of Wisconsin--La Crosse WI	
25 Univ. of Wisconsin--Stevens Point WI	