

C. Sustainable Energy

1. Introduction: Sustainable energy sources are those whose stock is rapidly replenished by natural processes, and which aren't expected to be depleted within the lifetime of the human species. Sustainable energy sources do not involve combustion of fossil fuels and therefore do not contribute directly to global warming or other degradation to the environment. They also avoid the use of nuclear fuels, and usually avoid direct production of toxic wastes. Sustainable energy technologies vary greatly in terms of embodied energy used and pollution emitted in building and maintaining equipment, or in the production of biofuels. Thus institutions need to proceed with caution and thorough studies before adopting and choosing amongst these new technologies.



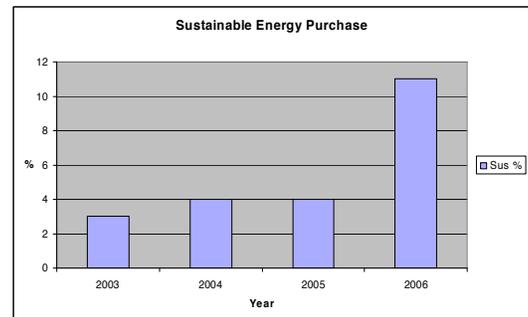
2. Goal: UW Oshkosh is pursuing the ambitious goal of becoming 100% independent of fossil fuel energy for electricity, heating and cooling.

3. History: UW Oshkosh has a significant record of achievement as a leader in the promotion and use of sustainable energy.



a. Sustainable Power Purchase

- (1) In 2003, UW-Oshkosh became the first Wisconsin university to join the Environmental Protection Agency's Green Power Partnership after it signed an agreement with its local utility, Wisconsin Public Service (WPS) Corp., to make renewable energy at least 3 percent of its annual energy purchase.
- (2) In 2004, UW –Oshkosh increased its commitment to at least 4 percent of its annual energy purchase.
- (3) In 2006, UW – Oshkosh increased its commitment once again to purchasing 11 percent of its annual energy from renewable sources (approximately 3.3 million kWh).



b. Awards and Recognition:

- (1) 2003 EPA Leadership Award: The eleventh university nationwide to be presented with this national award and the first Wisconsin university to join the Environmental Protection Agency's (EPA) Green Power partnership, receiving the EPA's Green Power Purchaser Award in 2003.
- (2) 2003-2004 National Wildlife Federation Campus Ecology Recognition Award
- (3) UW Oshkosh ranks 23rd among all US colleges and universities using renewable energy, and, for the past four consecutive years, has led all state agencies in the purchase of alternative energy.

4. Related Legislation

a. Wisconsin, 2005 Act 141, enacted into law on March 17, 2006, directed the Dept. of Administration to:

- (1) set energy standards for all energy consuming equipment purchased by state agencies.
- (2) develop energy standards for construction of state buildings.
- (3) establish goals for certain state agencies to purchase at least 10% of their total electricity from renewable energy sources by December 31, 2008, and at least 20% by December 31, 2011.

b. On September 27, 2006, Governor Doyle selected four campuses (including UW Oshkosh) to take part in a pilot program to become energy independent of fossil fuels by 2012. Upon completion, the schools will be the first state owned facilities capable of acquiring or producing renewable energy equivalent to their consumption.

5. Action Plan

Based upon the Governor's directive, UW Oshkosh has an overall goal of becoming 100% independent of carbon based fossil fuel energy by 2012. The campus, in consultation with the three other state universities, is working with the Department of Administration and our local utility company, Wisconsin Public Service Corp., to develop a plan to achieve this goal. Campus Sustainability Team has prepared the following list of recommendations for generating sustainable energy on campus that will contribute to achieving this goal (See Appendix G for justifications for these proposals).

Initial Consideration

- *Perform engineering analysis of campus heating plant, and other campus facilities necessary to develop a plan for transitioning away from fossil fuels for heating and electrical consumption.*

Future Consideration (Five years or greater):

- *Install integrated photovoltaic panels (solar panels) where feasible*
- *Explore the possibility of installing a small, demonstration wind turbine on campus.*
- *Study the feasibility of installing a biomass production facility to provide on-campus electrical generation*
- *Study the feasibility of installing biodiesel peak load shaving generators*
- *Evaluate the potential for the use of pressure reducing steam turbines in the campus central plant or at individual buildings, for electrical generation*