President's Report on Sustainability at UNM – April 2012

President's Report

April 2012



Focus on Sustainability At UNM

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American College and University Presidents' Climate Commitment

- Originated in October 2006.
- 12 Presidents were founding signatories.
- Launched in December 2006.
- Signed on behalf of UNM, on June 1, 2007.



ACUPCC Mission:

To accelerate progress towards climate neutrality and sustainability by empowering the higher education sector to educate students, create solutions, and provide leadership-by-example for the rest of society.



Discussion Points for Today

- Areas of Progress:
 - 1. Energy Conservation Initiatives
 - 2. Renewable Energy
 - 3. Transportation
 - 4. Water Initiatives
 - 5. Inclusion in the Curriculum



1. Energy Conservation Initiatives

- Energy Educators, Inc.
- Facilities
- LEED certification
- Utilities Renewal Project
- Retro-commissioning



Energy Educators Inc. (EEI)

- Contract with Lobo Energy Inc.
- Objective: Reduce energy consumption by focusing on modifying the systems of the campus community and refining the management of buildings.
- Completed 20 engineering blitz audits.



EEI - Results

- \$8.1 million in net avoided utility costs.
- 17.66% cumulative avoided utility use since May 2008.
- Projected net avoided costs of \$41.9 million through 2018.
- Allowed postponement of \$2.5 M chiller.



2. Renewable Energy – Taos Campus Solar Array

- First community college in the nation to be 100% powered by renewable solar energy.
- This solar array features:
 - 2,700 photovoltaic panels that sit on 3.5 acres on the campus.
 - Generates 500 kilowatts of power on a sunny day.
- Provided almost 180,000 Kwh's (kilowatt hours) of green energy over the past year.
- Cost savings of over \$28,000 dollars 25% reduction to the carbon footprint.



3. Transportation

- 15.2% of the UNM community uses the free transit program as their primary form of transportation to campus.
- Additional 5% use it as their second form of transportation.
- UNM reduced single occupant vehicle usage by 5.4% between 2010 and 2011.



4. Water Initiatives – Reverse Osmosis

- PPD Utilities Division installed a reverse osmosis machine in 2006.
- Saves water, as well as energy and chemicals in the boiler water.
- Saves 65,000 therms of natural gas and 2,000,000 gallons of water annually.
- Produced savings of about \$75,000 per year for a payback period of just over two years.



5. Inclusion in the Curriculum: Sustainability Studies Program

- SSP: One of the Provost's Areas of Public Engagement.
- Minor in Sustainability Studies: A crossdisciplinary approach involving the sciences, humanities, and arts.
- Dr. Milne's Summer Field School.



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The Future

- Steam Turbine Generator Reduction of our carbon footprint by 2,800 MTCDE* per year.
- 2nd CoGeneration Unit Reduction of our carbon footprint by an additional 14,000 MTCDE per year.
- Solar Panels on the Science and Math Learning Center – Reduction of our carbon footprint by about 40 MTCDE.

* MTCDE = Metric Ton Carbon Dioxide Equivalency



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The Future

These three projects alone will reduce the carbon footprint of UNM by nearly 12%.



UNM's Climate Action Plan Goal:

"To achieve a zero net carbon emissions campus while ensuring and improving its economic strength, community cohesiveness, and environmental footprint, along with the well-being of individual community members."



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"The future will be green, or not at all.
This truth lies at the heart of
humankind's most pressing challenge:
to learn to live in harmony with the
Earth on a genuinely sustainable basis."

- Sir Jonathon Porritt

Environmentalist & Writer

