



Student Government

UNIVERSITY OF COLORADO **BOULDER**

University of Colorado Student Government
Legislative Council

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82 LCR 01 – Evaporative Coolers

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**A Resolution in Support of the Sustainability Think Tank Effort to Incorporate
Evaporative Coolers in Existing and Future Campus Buildings**

Resolution History

Fossil fuels are a major contributor to climate change¹. CUSG has recognized this, and on May 2, 2013, the student legislative council passed 78LCR06, a resolution urging CU to decrease and to eventually cease its investments in the fossil fuel industry. CU's commitment to reducing its environmental impact extends beyond this resolution. In 2007, CU signed the American College and University Presidents' Climate Commitment (ACUPCC)². The ACUPCC acknowledges that "ACUPCC institutions have agreed to take immediate steps to reduce greenhouse gas emissions". In 2010, CU named Moe Tabrizi the first director of campus sustainability in order to further CU's goal of a more sustainable campus³.

¹ Global Greenhouse Gas Emissions Data. (2013, September 9). Retrieved from <http://www.epa.gov/climatechange/ghgemissions/global.html>

² Climate Action Plan for University of Colorado at Boulder. (2009, October 15). American College & University President's Climate Commitment. Retrieved from <http://rs.acupcc.org/cap/100/>

³ CU-Boulder Names Moe Tabrizi Its First Director of Campus Sustainability. (2010, December 22). Retrieved from <http://www.colorado.edu/news/releases/2010/12/22/cu-boulder-names-moe-tabrizi-its-first-director-campus-sustainability>

CU Boulder uses the Sustainability Tracking, Assessment, and Rating System (STARS) as a way to assess its sustainability performance, and in 2014, STARS awarded CU Boulder a Gold ranking with a score of 72.45 out of 100 possible points⁴. Achieving a Platinum rating - a national first for a major University - would reinforce CU's sustainability reputation. We have the opportunity to improve our rating by raising our Operation score; this will be done partially through reducing the CU Boulder campus use of fossil fuels. CUSG's Sustainability Think Tank has identified central air conditioning systems as a major type of cooling used in campus buildings⁵. Central air conditioning uses a high amount of energy when compared to other cooling systems, and the primary energy source for campus cooling is natural gas⁶. The Sustainability Think Tank has further identified evaporative coolers as a viable cooling alternative to other campus cooling systems because evaporative coolers function especially well in Colorado's dry climate, and are a cost-effective and energy efficient cooling source⁷

Evaporative coolers are a commonly used alternative cooling source, and they have already been installed in many major buildings on the CU Boulder campus, including the Center for Community⁸, the new Recreation Center completed in 2014⁹, the Space Science Data Center, the Roser ATLAS Building, Wolf Law, and the Athletics Practice Facility. Introducing them into more campus buildings and including a student presence in their installment plans would help CU Boulder to decrease its energy use further. This would not only improve the campus Sustainability Tracking, Assessment, and Rating System (STARS) evaluation in the Operations category, it would support CU's larger goals of a more sustainable campus, greater student engagement, and increased transparency in the University system.

Resolution Summary

This resolution seeks CUSG's full support for ongoing Sustainability Think Tank efforts to reduce the energy use of cooling systems by introducing evaporative coolers in viable existing and future buildings on campus, and CUSG's full support of the Think Tank's ongoing efforts to raise awareness of evaporative cooling and its use on campus among students and the greater community.

⁴ Sustainability Tracking, Assessment & Rating System: University of Colorado Boulder. (2014, September 22). AASHE. Retrieved from <https://stars.aashe.org/institutions/university-of-colorado-at-boulder-co/report/2014-09-22/>

⁵ Master Plan: Land and Facilities Plan. *University of Colorado at Boulder*, 96. Retrieved from http://www.colorado.edu/masterplan/plan/documents/SectionV_000.pdf

⁶ Master Plan: Land and Facilities Plan. *University of Colorado at Boulder*, 96. Retrieved from http://www.colorado.edu/masterplan/plan/documents/SectionV_000.pdf

⁷ Evaporative Cooling. (2014). Retrieved from http://www.consumerenergycenter.org/residential/heating_cooling/evaporative.html

⁸ CU's Center for Community building earns LEED platinum rating - See more at: <http://www.colorado.edu/news/releases/2012/04/27/cu%E2%80%99s-center-community-building-earns-leed-platinum-rating#sthash.zBEDXrKz.dpuf>. (2012, April 27). Retrieved from <http://www.colorado.edu/news/releases/2012/04/27/cu%E2%80%99s-center-community-building-earns-leed-platinum-rating>

⁹ Sustainability . (2014). Recreational Services: University of Colorado Boulder. Retrieved from <http://www.colorado.edu/recreation/about-us/sustainability>

Whereas, CU's Campus Environmental Policy and Campus Sustainability Plan supports decisions that reduce the administration's environmental impact¹⁰;

Whereas, the ACUPCC supports decisions that reduce the administration's environmental impact¹¹;

Whereas, the STARS evaluation has identified the amount of energy used in CU's building operations as higher than necessary¹²;

Whereas, the Sustainability Think Tank has identified the campus dependence on central air conditioning as environmentally concerning;

Whereas, evaporative coolers can be just as effective at cooling in dry climates as central air conditioners¹³;

Whereas, Colorado in particular has been identified as a good environment for evaporative coolers¹⁴;

Whereas, evaporative coolers can effectively cool large, multi-storied structures¹⁵;

Whereas, evaporative coolers use as much as 75% less electricity than central air conditioning¹⁶;

Whereas, evaporative coolers usually cost less than central air conditioning to purchase and to install¹⁷;

Whereas, Home Energy reports the operation costs of evaporative coolers as 4 to 10 times less than that of central air conditioning¹⁸;

¹⁰ Director of Environmental Health & Safety. (2004, August 18). Environmental Policy. Retrieved November 9, 2014, from <http://www.colorado.edu/policies/environmental-policy>

¹¹ Climate Action Plan for University of Colorado at Boulder. (2009, October 15). American College & University President's Climate Commitment . Retrieved from <http://rs.acupcc.org/cap/100/>

¹² Sustainability Tracking, Assessment & Rating System: University of Colorado Boulder. (2014, September 22). AASHE. Retrieved from <https://stars.aashe.org/institutions/university-of-colorado-at-boulder-co/report/2014-09-22/>

¹³ Navon, R., & Arkin, H. (1994). Feasibility of direct-indirect evaporative cooling for residences, based on studies with a desert cooler. *Building and Environment*, 29(3), 393-399. doi:10.1016/0360-1323(94)90040-X

¹⁴ Kinney, L. (n.d.) *Evaporative Cooling Policy and Program Options: Promising Peak Shaving in Growing Southwest* (Prepared for U.S. Department of Energy & Building America Program). Boulder, Colorado: Midwest Research Institute & National Renewable Energy Laboratory Division. Retrieved from http://www.swenergy.org/publications/documents/evaporative_cooling_policy_options.pdf

¹⁵ Evaporative Coolers. (2012, July 1). Retrieved from <http://energy.gov/energysaver/articles/evaporative-coolers>

¹⁶ Consumer Energy Center: California Energy Commission. (2014). Evaporative Cooling . Retrieved from http://www.consumerenergycenter.org/residential/heating_cooling/evaporative.html

¹⁷ Evaporative Cooling. (2014). Retrieved from http://www.consumerenergycenter.org/residential/heating_cooling/evaporative.html

Whereas, CUSG has a distinguished legacy of leading initiatives and practices that reduce the use of energy on campus;

Whereas, central air conditioning uses an inefficient amount of energy that contributes to CU's environmental footprint;

Whereas, CUSG and the Sustainability Think Tank believe that more sustainable alternatives to central air conditioning should be implemented in a greater number of campus buildings;

Whereas, CUSG and the Sustainability Think Tank believe that student and community awareness of evaporative cooling and its use on campus should be increased;

THEREFORE BE IT RESOLVED by the Legislative Council of the University of Colorado Student Government, that:

Section 1: CUSG fully supports the Sustainability Think Tank's ongoing effort to implement evaporative coolers in all viable buildings on campus. This resolution includes current buildings and future buildings.

Section 2: Upon passage of this resolution, the Sustainability Think Tank will begin the development of a significant, long-lasting partnership with Facilities Management directed toward the continued installation of evaporative coolers in viable buildings on the CU Boulder campus. This Think Tank - Facilities partnership will seek to maximize energy efficiency while considering and accounting for the unique challenges presented by each building. This will include drafting financial projections for installation costs versus energy savings and looking at other pre-existing large university models. The partnership will also seek to maximize student and community awareness of the campus use of evaporative cooling so that people are meaningfully involved in campus development, and so that the campus will exist as a model of energy efficiency for the greater community and for other campuses.


Section 3: Upon passage, this resolution will be distributed to the UMC, the Recreation Center, CUSG executive staff, CUSG Sustainability Think Tank, The Environmental Center, Residence Hall Association, Housing and Dining, CU Athletics, and media sources.

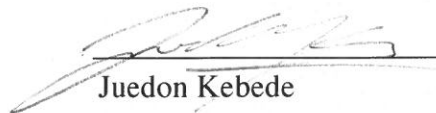
¹⁸ Cooling and Air Conditioning. (2014). Installing and Maintaining Evaporative Coolers. Retrieved from <http://www.homeenergy.org/show/article/id/1211>

Section 4: The bill shall take effect upon final passage in Legislative Council and upon either obtaining the signature of two Tri-Executives and the Legislative Council President or the lapse of six days without action by the Tri-Executives.

Vote Count

12/4/14	Approved on 1st Reading	Acclamation
12/11/14	Amended to add sponsor, wording changes and Sec. 4	Acclamation
12/11/14	Approved on 2nd Reading	Acclamation


Rachel Leonard
Legislative Council President


Juedon Kebede
Tri-Executive


Lora Roberts
Tri-Executive


Chelsea Canada
Tri-Executive

