

A Faculty Senate Resolution on Climate Change for Iowa State University

In affirmation of the mission of Iowa State University as a Land Grant institution founded to educate and conduct research in service of the citizens of Iowa;

And facing overwhelming evidence supported by the leading scientific institutions of our time (including the National Academy of Sciences and the Intergovernmental Panel on Climate Change) of an increasing climate crisis fueled by human behavior;

And whereas this strong evidence demands urgent action from the leading institutions of the country so that the heating of the atmosphere does not continue unabated towards and beyond an environmental tipping point. As the Global Climate Project states, "We are faced with the need for large reductions in greenhouse gas emissions over this century in order to minimize anthropogenic interference with the climate system";

And given that climate change has created the largest set of environmental problems to ever face humanity with wide-ranging effects that can already be seen throughout our state, nation, and world. These effects on crucial planetary environmental systems continue to be well documented through careful scientific analysis, and these effects will only worsen with time if nothing is done to slow and/or reverse them;

And in understanding that if we are to create solutions to our climate crisis, we must educate, innovate, and conduct research in all disciplines to change the way humans live their lives, and we acknowledge that to make these changes on a global scale, we must start where we live and work;

And in affirmation of the growing movement toward carbon neutrality and environmental consciousness in colleges and universities around the country:

We therefore resolve that Iowa State University makes a commitment to moving toward carbon neutrality as an institution and assumes a leadership role in promoting carbon neutrality in Iowa and the nation. "Carbon neutrality" means balancing the carbon released by our university with an equivalent amount removed (or sequestered) from the atmosphere.

Be it further resolved that the Faculty Senate of Iowa State University strongly supports increased research on technologies that result in lowering emissions and/or existing atmospheric concentrations of all greenhouse gases, education that prepares our citizens to understand and make decisions based on scientific evidence, and extension activities that promote environmentally sustainable economic development.

In presenting and supporting this resolution, we commit ourselves to the principles articulated in the strategic plan of the university, specifically its mission to "make Iowa and the world a better place" and its vow to conduct "high impact research that addresses the grand challenges of the 21st century."

In order to reach the goal of carbon neutrality, we further resolve that the following actions be encouraged and/or implemented on the ISU campus:

1. To work with Facilities Planning and Management (FP&M)¹ to increase energy efficiency, energy conservation, and use of renewable energy.
2. To replace high-pollution energy sources with lower or no-carbon fuel sources;
3. To continue to review all new construction and renovation projects so that they are ecologically sustainable and achieve LEED (Leadership in Energy and Environmental Design) standards;
4. To continue to review older buildings and update them for energy efficiency;
5. To continue our efforts to make transportation to and around campus easier, to limit single-occupancy vehicles, encourage increased faculty use of Cy-Ride, and to support electric vehicles with charging stations;
6. To continue to initiate strategies addressing energy demand reduction on campus, including implementing educational and behavioral change programs, and supporting student led action.
7. To actively encourage the ISU Foundation and other campus and non-campus organizations involved in making decisions regarding the investment of our capital funds to invest in firms that meet criteria for environmental sustainability.²
8. To create a University Sustainability Group to monitor the progress toward achieving the targets and ideas set forth in this resolution with membership from administration, faculty, and students. This group should build on and coordinate with the work of other existing sustainability groups on campus and work with the Office of Sustainability Programs at FP&M. This group should also work with ISU climate researchers and sustainability experts to define “carbon neutrality” as a measurable concept in order to track our progress in achieving our goal.

Further, we recognize and applaud the efforts of the FP&M in replacing three of the five coal fired burners with natural gas burners, the efforts of the Office of Sustainability as it continues its goal of making our campus a “greener” work environment, and our University leadership in fostering and supporting these efforts. We must build on these successes and accelerate our sustainability efforts.³

Finally, we urge all faculty, in all disciplines, to educate students on climate change and our human impact on global climate systems, where applicable, and to help them discover personal ways that they can take action in their lives so that our global community can work together to avoid the environmental disaster that will surely result if we do not drastically reduce greenhouse gas emissions soon.

Respectfully submitted for presentation and action,

Climate Change Resolution Task Group:

Senator James R. Tener, chair of the Climate Change Resolution Task Group, Senior Lecturer in Music. Particular interests in the causes and solutions to human-caused climate change.

Senator/Prof. Brianna Burke: English Department and Native American Studies. Research areas include Environmental Justice, Climate Change and Literature, and American Indian Studies.

Senator/Prof. Sarah Ryan: Joseph Walkup Professor of Industrial and Manufacturing Systems Engineering with particular research on integrating renewable energy into the power grid.

Senator/Prof. Kathleen Delate: Dept. of Horticulture and Dept. of Agronomy. Extension and research focusing on agroecology, organic crop production, and minimizing carbon footprint in agriculture.

Senator/Prof. Andrea Wheeler: Prof. of Architecture and of Sustainable Environments. Research, teaching, and interest in sustainable architecture.

Distinguished Prof. Gene Takle: Faculty in Sustainable Agriculture Graduate Program, Prof. in Geological and Atmospheric Science Dept. and the Dept. of Agronomy. Authoring responsibilities in state, national and international climate change and climate assessment documents; research in renewable energy.

Prof. William Gutowski: Dept. of Geological and Atmospheric Sciences and Associate Dean of LAS. Specific research and interest in world climate systems and climate models for the future.

¹ In the process of drafting this resolution, our committee met with representatives of the Facilities Planning and Management Department: Merry Rankin (Office of Sustainability) and Jeff Witt. In our discussion we learned that FP&M is purchasing up to 10% of our electricity from wind farms and are negotiating to purchase electricity from the proposed City of Ames solar array. We also learned that our regular use of electrical energy could be cut drastically by basic conservation techniques. Each year, FP&M recommissions several campus buildings to ensure building systems are operating properly. We applaud their efforts and the commitment to these practices but feel more needs to be done. The urgency of carbon neutrality is not lost on FP&M. Support from the entire University and increased budgets would help them to ramp up their efforts.

² Contact was made with Lisa Eslinger of the ISU Foundation in the process of drafting this resolution. Ms. Eslinger works directly with the Foundation Investment Committee, and she felt the language in item #7 is good as it stands and she will share the language of the resolution with the Investment Committee to show that the faculty supports these efforts.

³ While we have not suggested a target date for achieving carbon, or greenhouse gas, neutrality, we hope that the Sustainability Group created in item 8 above and the Office of Sustainability can work together to set target dates for reaching this goal in the future. This hope is informed by the 2025 target set by the University of California system in 2013, a target they are on track to reach. No matter what date we set, humanity is on a collision course with the planetary environment, so a resolution like this should be backed up by tangible goals. While scientists cannot give firm predictions regarding the global tipping point, global temperatures are rising at alarming rates. The only positive variable in their predictions is the **urgent** resolve of nations, states, cities, institutions, and individuals who understand the problem and seek active ways to solve it.