

December 5, 2016

President-Elect Donald J. Trump
725 Fifth Avenue
New York, NY 10022

Dear President Elect Trump,

As you prepare to take office in January, you will face many challenges. One of the most serious is the very real threat posed by global warming. As faculty members and researchers from Departments of Physics and Astronomy around the United States, we urge you to address this issue as a most urgent priority.

Our appeal to you rests on three central points: First, climate scientists have established beyond any reasonable doubt that our planet is warmer now than it has been since 1850, when reliable records begin. The atmosphere and oceans are warmer, snow cover has decreased, glaciers have retreated, polar ice sheets are losing mass, arctic sea ice is vanishing and the sea level is rising.

Second, the scientific community is highly confident that human use of fossil fuels is the dominant driver of this warming. Burning fuels releases carbon dioxide and rising global carbon dioxide levels promote global warming. Carbon dioxide levels are now higher than at any time in the past 800,000 years. Of all possible agents, only this rise in carbon dioxide and other greenhouse gases can account for the observed warming. Natural variability in the climate system, changes in solar intensity, volcanic eruptions and many other possible mechanisms have been investigated and have been ruled out as the primary cause of the warming. These statements reflect a true consensus among climate scientists. There is no meaningful dissent.

Lastly, climate change is an economic and existential threat to our country and to human and animal life on our planet. If we do not replace fossil fuel dependence with more sustainable choices, warming will continue and we will face increased risks of severe and irreversible impacts, at home and abroad. Sea level rise is already threatening US cities and global agricultural yields are being negatively impacted. Flooding of coastal cities will lead to forced resettlement, thereby increasing the risk of violent conflict, both within the United States and around the globe. All of these effects will have enormous societal consequences, with impacts most severe on the poorest citizens.

America is a great nation because of our hard-working and creative citizenry and because of our mastery of science and technology. Addressing climate change will involve short-term costs, but will also mean new investments, new jobs and new opportunities for global leadership; things that Americans around the country will welcome.

President-elect Trump, we implore you to address the threat of climate change immediately. In so doing, you have a unique opportunity to make America an even greater country and secure a better future for all the children of the world.

Sincerely,

Physicists from
United States Colleges and Universities