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An Optimal Solution to Global Warming

Robert L Hirsch and Roger H Bezdek*

Management Information Services, Inc. Oakton, Virginia, USA

***Corresponding author**
Roger H Bezdek, Management Information Services, Inc. Oakton, Virginia, USA. E-mail: rbezdek@misi-net.com

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Nature has given us a method of cooling the planet quickly. Among other things volcanic eruptions discharge droplets that reflect sunlight back into space, causing global cooling. We could conduct a human-made mimic relatively quickly without the volcanic mess, thereby dramatically changing the climate change dialogue and beginning to relieve populations from the astronomical costs of impending climate mitigation efforts.

Climate change is a whole earth problem, which inherently means that mitigation must be done on a massive scale. Two mitigation spheres exist: terrestrial and atmospheric. Thus far, all efforts have been terrestrial. These involve the reduction in human use of fossil fuels, whose combustion releases carbon dioxide–which most environmentalists and decision-makers want to reduce. The UN has attempted to organize the worldwide reduction of fossil fuel use and massive increases in renewable energies to mitigate climate change. Various ambitious commitments have been made, but enforcement is impossible because a world government does not exist. Efforts have been spotty and have thus far failed to solve the problem. Some governments have adopted expensive renewable energy technologies and fossil fuel reduction mandates, burdening their populations with higher energy prices and less reliable energy, while other governments have not.

On the other hand, nothing significant has been done to mitigate climate change via atmospheric means, even through various techniques have been suggested under the name of geoengineering. Enter volcanos, which have already demonstrated one long-term method. For example, the 1991 eruption of Mt. Pinatubo caused a maximum cooling of about a degree, which lasted over a year.

While we cannot trigger volcanos to do our bidding, we do have relatively low cost heavy-lift rockets that could be used to deliver similarly reflective particles into the atmosphere/stratosphere to cause global cooling. Volcanologists have developed models that reasonably describe the aftermath of volcanic eruptions, so human attempts to mimic the cooling effects could be intelligently guided and would certainly be better optimized than the explosive eruptions of volcanos.

Why do such a project quickly? If we were to wait and launch related research programs, we might have better-thought-out options, but a dramatic demonstration would be delayed, and current mixed and extraordinarily expensive and disruptive terrestrial mitigation efforts would continue.

Recent estimates of the cost of a global forced energy transition exceed $30 trillion just through 2030. The geoengineering initiative we propose would cost infinitesimally less. If it succeeds, the world would save an enormous amount of money and avoid harmful disruptions to global energy systems. If it fails, the cost would be in the statistical noise of the alternative solutions.

Be warned

There will be intense opposition to this proposal. Environmentalists and renewable energy advocates will detest it because it threatens to obviate the need for a rapid and drastic "energy transition" away from fossil fuels, which is very much their mantra. Extensive opposition can also be expected from numerous special interest groups and industries currently salivating over the expenditures of trillions of dollars per year on alternative energy programs.

Nevertheless, the justification for doing something quickly is to demonstrate to the world that it can be done, thereby reducing the terrestrial race "to do something" and reliving citizens of some of the exorbitant near-term costs many now face. Ensuing research could then proceed with priority. Sometimes a major jolt is needed to change the ineffective course of human events. Our proposal would provide such a jolt.

Dr. Hirsch has conducted research and managed technology programs in oil and natural gas exploration and production, petroleum refining, synthetic fuels, fusion, fission, renewables, defense technologies, chemical analysis, and basic research in industry, government, and the non-profit sectors. He has served on and chaired a wide range of advisory committees for government and industry and is the author of the new book, Energy: Modern Life, Climate Change, and Oil Production.

Dr. Bezdek has over 30 years' experience in the energy, utility, environmental, and regulatory areas, serving in private industry, academia, and the Federal government, and is the founder and president of MISI – a Washington, D.C.-based economic, energy, and environmental research firm. His background includes energy

R&D, technology, and markets; oil, coal, natural gas, hydrogen, renewable, hydro, and nuclear energy analyses; assessment of DOE energy programs; estimation of the costs and benefits of energy systems; economic analyses of environmental and energy technologies; energy forecasting; and creation, funding, and management of Federal government and private industry energy programs.