# SPS Neg

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# **Solvency**

## 1NC Inherency

### **The Affirmative concludes in their Inherency evidence that the plan is not cost effective. The negative team agrees that the plan is not being passed in the status quo-however, by saying that the plan is not cost-effective the affirmative team essentially concluded their solvency argument.**

## Delay

### The Plan will, if it goes on schedule (unlike every other NASA mission) occur in 2050 at best.

Foust ’07 [Jeff Foust, Editor and Publisher of the Space Review, 8-13-2007, “A Renaissance for Solar Space Power” http://www.thespacereview.com/article/931/1]

Smith made it clear, though, that he’s not looking for a quick fix that will suddenly make solar power satellites feasible in the near term. “If I can close this deal on space-based solar power, it’s going to take a long time,” he said. “The horizon we’re looking at is 2050 before we’re able to do something significant.” The first major milestone, he said, would be a small demonstration satellite that could be launched in the next eight to ten years that would demonstrate power beaming from GEO. However, he added those plans could change depending on developments of various technologies that could alter the direction space solar power systems would go. “That 2050 vision, what that architecture will look like, is carved in Jell-O.

### There are problems with the plan, no matter how popular it seems to be

Farrar ’08 [Lara Farrar, Correspondent for CNN, 6-1-08, “How to Harvest Solar Power? Beam it down from Space!http://www.cnn.com/2008/TECH/science/05/30/space.solar/index.html]

But a number of obstacles still remain before solar satellites actually get off the ground, said Jeff Keuter, president of the George C. Marshall Institute, a Washington-based research organization. "Like any activity in space, there are enormous engineering challenges," he said. One major barrier is a lack of cheap and reliable access to space, a necessity for launching hundreds of components to build what will be miles-long platforms. Developing robotic technology to piece the structures together high above Earth will also be a challenge. Then there is the issue of finding someone to foot what will be at least a billion-dollar bill.

### The plan will take decades to implement

Day ’07 [Dwayne A. Day, Writer for Space Review, 10-4-2007, “SpaceWar 2057” http://www.thespacereview.com/article/970/1]

What we have learned from fifty years of military space operations is that the pace of development is slowing down, and the space component is subject to greater constraints than the ground component. What we have also learned is that revolutionary change now seems less and less likely compared to the past. Fifty years of military space experience can allow us to draw some general conclusions about the principles guiding the development of military space systems. We know that the most important aspect of military space programs is that they are developed by humans, and social, economic, political and even emotional factors will have an effect upon the evolution of military space over the next five decades that will be just as important as the pace of technology development—itself controlled by the decisions that humans make. The first principle that we can now derive from all of this experience is that the development of space systems takes a long time, sometimes decades.

## Can’t Work

### Huge Barriers stopping any development of SBSP-won’t actually work, SBSP has simply been built up by illegitimate means.

Day ’08 [Dwayne A. Day, Writer for Space Review, 6-9-2008, “Knights in shining Armor” http://www.thespacereview.com/article/1147/1]

The reason that SSP has gained nearly religious fervor in the activist community can be attributed to two things, neither having to do with technical viability. The first reason is increased public and media attention on environmentalism and energy coupled with the high price of gasoline. When even Reese’s Peanut Butter Cups are advertised with a global warming message, it’s clear that the issue has reached the saturation point and everybody wants to link their pet project to the global warming discussion. SSP, its advocates point out, is “green” energy, with no emissions—other than the hundreds, or probably thousands, of rocket launches needed to build solar power satellites. The second reason is a 2007 study produced by the National Security Space Office (NSSO) on SSP. The space activist community has determined that the Department of Defense is the knight in shining armor that will deliver them to their shining castles in the sky. Space activists, who are motivated by the desire to personally live and work in space, do not care about SSP per se. Although all of them are impacted by high gasoline prices, many of them do not believe that global climate change is occurring; or if they do believe it, they doubt that humans contribute to it. Instead, they have latched on to SSP because it is expedient. Environmental and energy issues provide the general backdrop to their new enthusiasm, and the NSSO study serves as their focal point. Many people now claim that “the Department of Defense is interested in space solar power.” But it is not true. The NSSO study is remarkably sensible and even-handed and states that we are nowhere near developing practical SSP and that it is not a viable solution for even the military’s limited requirements. It states that the technology to implement space solar power does not currently exist… and is unlikely to exist for the next forty years. Substantial technology development must occur before it is even feasible. Furthermore, the report makes clear that the key technology requirement is cheap access to space, which no longer seems as achievable as it did three decades ago (perhaps why SSP advocates tend to skip this part of the discussion and hope others solve it for them). The activists have ignored the message and fallen in love with the messenger. But in this case, the activists touting the NSSO study do not understand where the NSSO fits into the larger military space bureaucracy. The National Security Space Office was created in 2004 and “facilitates the integration and coordination of defense, intelligence, civil, and commercial space activities.” But any office that “facilitates” the activities of other organizations has limited influence, especially when those other organizations are much bigger and have their own interests and connections to the senior leadership. The NSSO has a minimal staff and budget and does not command any assets—it does not fly any satellites, launch any rockets, or procure any hardware, all of which are measures of power within the military space realm. Simply put, the NSSO exists essentially as a policy shop that is readily ignored by the major military space actors such as Strategic Command, Air Force Space Command, and the National Reconnaissance Office whenever it suits them. As one former NSSO staffer explained, the office consists of many smart, hardworking people who have no discernible influence on military space at all. In fact, for several years there have been persistent rumors that the NSSO was about to be abolished as unnecessary, irrelevant, and toothless. Add to this the way in which the NSSO’s solar power satellite study was pursued—the study itself had no budget. In Washington, studies cost money. If the Department of Defense wants advice on, say, options for space launch, they hire an organization to conduct the study such as the RAND Corporation, or they employ one of their existing advisory groups such as the Air Force Scientific Advisory Board. All of this requires money to pay for the experts to perform the work. Even if the study is performed by a committee of volunteers, there are still travel, printing, staff support, overhead, and other expenses. Costs can vary widely, but at a minimum will start in the many tens of thousands of dollars and could run to a few million dollars. In contrast, the NSSO study of space solar power had no actual funding and relied entirely upon voluntary input and labor. This reflects the seriousness by which the study was viewed by the Pentagon leadership.

## Environment Turn

### Solar Powered Space Satellites will lead to the atmosphere being damaged and increase risk of cancer in humans

Bansal ’11 [Gaurav Bansal, correspondent for Ecofriend, 5-23-11, “The Good, the Bad, and the Ugly: Space Based Solar Energy” http://www.ecofriend.com/entry/the-good-the-bad-and-the-ugly-space-based-solar-energy/]

Till now microwave and other transmission methods that are adopted for all over the world are for communication and broadcast purposes only. However, for energy transmission, the wavelength has to very high which can be potentially dangerous to our atmosphere and will increase the risk of leukemia and cancer among humans. Suggested concentration and intensity of such microwaves at their center would be of 23 mW/cm2 and at periphery would be 1 mW/cm2 , which compares to the current United States Occupational Safety and Health Act (OSHA) workplace exposure limits for microwaves. Similarly very high frequency used for such long distance propagation can be very dangerous and may lead to increase in radioactivity in earth’s environment.

## Space Collision Turn

### Satellite collisions may occur with the development of SBSPs.

Bansal ’11 [Gaurav Bansal, correspondent for Ecofriend, 5-23-11, “The Good, the Bad, and the Ugly: Space Based Solar Energy” http://www.ecofriend.com/entry/the-good-the-bad-and-the-ugly-space-based-solar-energy/]

A large number of such projects can lead to overcrowding of space in the geosynchronous orbit. This may lead to a mishap like the one collision that happened between the Iridium Satellite LLC-operated satellite and the Russian Cosmos-2251 military satellite occurred at about 485 miles above the Russian Arctic on Feb, 2009.

## Space Terrorism Turn

### It would be easy for Terrorists to target the Solar-Powered Satellites

Economist ’08 [The Economist, 1-17-08, “Disharmony in the Spheres” http://www.economist.com/node/10533205?story\_id=10533205]

Many strategists argue that the most vulnerable parts of the American space system are closer to home. Ground stations and control centres, particularly those of commercial operations, are exposed to conventional bombing, whether by armies or terrorists. Communication links to and from satellites are open to interference. In cyber-warfare, critical parts of the space system could be attacked from distant computers. Even without external meddling, notes Tom Ehrhard, a senior fellow at the CSBA, American forces struggle to find enough bandwidth and to prevent the myriad of electronic systems from jamming each other.

# Warming Advantage

## 1NC Warming 1/4

### SBSP leads to even more Global Warming

### Manufacturing Solar-Powered Cells leads to the emission of greenhouse gases

**Decker ’08 [Kris de Decker, creater of low-tech magazine, freelance journalist, 3-20-2008, “The Ugly Side of Solar Panels”, http://www.lowtechmagazine.com/2008/03/the-ugly-side-o.html]**

Solar panels don’t come falling out of the sky – they have to be manufactured. Similar to computer chips, this is a dirty and energy-intensive process. First, raw materials have to be mined: quartz sand for silicon cells, metal ore for thin film cells. Next, these materials have to be treated, following different steps (in the case of silicon cells these are purification, crystallization and wafering). Finally, these upgraded materials have to be manufactured into solar cells, and assembled into modules. All these processes produce air pollution and heavy metal emissions, and they consume energy - which brings about more air pollution, heavy metal emissions and also greenhouse gases.

1NC Warming 2/4

### Building Solar Cells causes mass pollution, creates green-house gases, and hurts people surrounding the manufacturers

Cha ’08 [Ariana Eunjung Cha, a correspondent for the Washington Post who focuses on technology and science, 3-9-2008, “Solar Energy firms leave Waste Behind in China” http://www.washingtonpost.com/wp-dyn/content/article/2008/03/08/AR2008030802595\_3.html]

In China, a country buckling with the breakneck pace of its industrial growth, such stories of environmental pollution are not uncommon. But the Luoyang Zhonggui High-Technology Co., here in the central plains of Henan Province near the Yellow River, stands out for one reason: It's a green energy company, producing polysilicon destined for solar energy panels sold around the world. But the byproduct of polysilicon production -- silicon tetrachloride -- is a highly toxic substance that poses environmental hazards. "The land where you dump or bury it will be infertile. No grass or trees will grow in the place. . . . It is like dynamite -- it is poisonous, it is polluting. Human beings can never touch it," said Ren Bingyan, a professor at the School of Material Sciences at Hebei Industrial University. The situation in Li's village points to the environmental trade-offs the world is making as it races to head off a dwindling supply of fossil fuels. Forests are being cleared to grow biofuels like palm oil, but scientists argue that the disappearance of such huge swaths of forests is contributing to climate change. Hydropower dams are being constructed to replace coal-fired power plants, but they are submerging whole ecosystems under water. Likewise in China, the push to get into the solar energy market is having unexpected consequences. With the prices of oil and coal soaring, policymakers around the world are looking at massive solar farms to heat water and generate electricity. For the past four years, however, the world has been suffering from a shortage of polysilicon -- the key component of sunlight-capturing wafers -- driving up prices of solar energy technology and creating a barrier to its adoption. With the price of polysilicon soaring from $20 per kilogram to $300 per kilogram in the past five years, Chinese companies are eager to fill the gap. In China, polysilicon plants are the new dot-coms. Flush with venture capital and with generous grants and low-interest loans from a central government touting its efforts to seek clean energy alternatives, more than 20 Chinese companies are starting polysilicon manufacturing plants. The combined capacity of these new factories is estimated at 80,000 to 100,000 tons -- more than double the 40,000 tons produced in the entire world today. But Chinese companies' methods for dealing with waste haven't been perfected. Because of the environmental hazard, polysilicon companies in the developed world recycle the compound, putting it back into the production process. But the high investment costs and time, not to mention the enormous energy consumption required for heating the substance to more than 1800 degrees Fahrenheit for the recycling, have discouraged many factories in China from doing the same. Like Luoyang Zhonggui, other solar plants in China have not installed technology to prevent pollutants from getting into the environment or have not brought those systems fully online, industry sources say.

1NC Warming 3/4

### SBSP could cause a large ozone depletion, we cannot deploy it until extensive studies are done in ozone impacts from rockets

Ross, M,N, Toohey, D, 2008, American Geophysical Union, (http://adsabs.harvard.edu/abs/2008AGUFM.U43A0039R)

We show that launching the mirrors or sunshade would cause global ozone loss between 2% and 20%. Ozone loss associated with an economically viable SSP system would be at least 0.4% and possibly as large as 3%. It is not clear which, if any, of these levels of ozone loss would be acceptable under the Montreal Protocol. The large uncertainties are mainly caused by a lack of data or validated models regarding liquid propellant rocket engine emissions. Our results offer four main conclusions. (1) The viability of space-based geoengineering schemes could well be undermined by the relatively large ozone depletion that would be caused by the required rocket launches. (2) Analysis of space- based geoengineering schemes should include the difficult tradeoff between the gain of long-term (~ decades) climate control and the loss of short-term (~ years) deep ozone loss. (3) The trade can be properly evaluated only if our understanding of the stratospheric impact of rocket emissions is significantly improved. (4) Such an improved understanding requires a concerted effort of research including new in situ measurements in a variety of rocket plumes and a multi-scale modeling program similar in scope to the effort required to address the climate and ozone impacts of aircraft emissions.

Global Warming is a problem, but algae solves for that. Trying to create Space Based Solar Satellites will only lead to more global warming as well as disease and eventually causing extinction.

### The Earth Won’t Explode

1NC Warming 4/4

### **The Earth was previously far hotter than worst case current day warming scenarios predict**

Brian T. Huber, Science, 12/18/98: 2199-2200.” Tropical Paradise at the Cretaceous Poles?” (The author is in the Department of Paleobiology, NHB MRC 121, Smithsonian Institution, Washington, DC 20560, USA)

The high-latitude paleobotanical record also provides convincing evidence of polar warmth during the Cretaceous. The occurrence of deciduous trees as far north as 82ºN during the middle Cretaceous indicates that permafrost was absent, and the abrupt cessation of cell growth in their tree rings reveals that winter darkness was the seasonal growth-limiting factor rather than cold temperatures (4). A more quantitative measure of terrestrial climate stems from the temperature-controlled size and shape relationships among modern leaf assemblages. This "leaf physiognomic" approach [HN8] to paleotemperature reconstruction has been applied mostly to latest Cretaceous and Tertiary floras with internally and externally consistent results. Its reliability is less certain, however, when used for mid-Cretaceous plant assemblages, because this was a time of evolutionary innovation and radiation among the angiosperms. Using the leaf physiognomy method, Herman and Spicer (5) estimate that the mean temperature of the warmest summer month in the Arctic during the Turonian and Coniacian ranged between 18º and 20ºC, whereas the coldest winter month ranged from -4º to 0ºC during the Turonian and 0º to 4ºC during the Coniacian (see figure below). Mean annual temperatures estimated from the Alaskan North Slope with this method yield similarly mild temperatures. The case for extreme high-latitude warmth during the middle Cretaceous has recently been strengthened by oxygen isotope paleotemperature estimates from extraordinarily well-preserved foraminifera [HN9] from the circum-Antarctic region (see figure on next page). An Aptian-Maastrichtian record from a deep-sea site in the southern South Atlantic [Deep Sea Drilling Project (DSDP) Site 511, Falkland Plateau] [HN10] reveals that the entire water column warmed abruptly during the early Turonian, with deep waters (~1000-m paleodepth) reaching 18ºC and surface waters reaching over 30ºC at a site located at 59ºS paleolatitude (6). The high-latitude ocean remained very warm from the Turonian through earliest Campanian, with surface waters varying between 20º and 27ºC and deep waters varying between 14º and 16ºC. This period of sustained warmth was followed by long-term cooling through the Maastrichtian, which yields the lowest temperatures of the Cretaceous (7). So why was the Cretaceous climate so warm? The different land-sea configurations provide a partial explanation. In the middle Cretaceous, sea level was higher than at any other time during the past 250 million years. The greater proportion of continental surface covered by seawater resulted in reduced seasonal variations in temperature because of the lower surface albedo and greater thermal capacity of water. Seaways covering the Arctic, West Antarctica, and parts of East Antarctica also provided a means for heat transport to both poles throughout the year. With Australia against Antarctica and the Drake Passage closed, ocean surface currents sourced in the tropics reached further poleward than they do today, providing an additional moderating effect on Antarctic climate. However, computer simulations of Cretaceous climate indicate that radiative warming caused by increased greenhouse gas concentrations (principally CO2) were more important than paleogeography in explaining Cretaceous global warmth (9). Estimates of Cretaceous pCO2 generally range from four to eight times preindustrial values (10), and some intervals, such as the Turonian-Coniacian (1), may have exceeded this amount severalfold (perhaps explaining the warming spike observed for that time). Climate models have revealed, however, that although CO2-induced warming can approximate globally averaged temperatures for the Cretaceous, the models predict steeper latitudinal temperature gradients (both warmer tropics and colder poles) than geologic data seem to allow. This has led some to suggest that the oceans played a greater role in transporting heat from the tropics to the poles than they do today, particularly through sinking of dense, saline waters formed in restricted low-latitude basins (9). However, Sloan et al. (11) [HN13] calculated that doubling the ocean heat transport to balance the energy budget for the warm climate of the early Eocene would require a mechanistically prohibitive poleward flow of warm, saline water masses. These authors concluded that either the oceanic processes of a greenhouse world were very different from those of the present or some other mechanisms must be used to explain the low equator-to-pole temperature differences.

The Affirmative’s claim of Warming leading to the Earth blowing up is ridiculous-there is no way that the Earth will heat up that much. Venus is much hotter than the Earth, and it hasn’t blown up yet, so there’s no reason that Earth will. While Warming can hurt humans, it won’t occur such that the Earth blows up

## Global warming is not caused by humans 1/5

### Global warming is not caused by humans, major scientists agree.

James A. Peden, 1/17/09,(Atmospheric Physicist at the Space Research and Coordination Center in Pittsburgh and Extranuclear Laboratories in Blawnox, Pennsylvania) “The Great Global Warming Hoax?”, (<http://www.middlebury.net/op-ed/global-warming-01.html>)

But then something unusual happened. On Dec. 13, 2007, 100 scientists jointly signed an Open Letter to Ban Ki-Moon, Secretary-General of the United Nations, requesting they cease the man-made global warming hysteria and settle down to helping mankind better prepare for natural disasters. The final signature was from the President of the World Federation of Scientists.

So what's really causing the endless cycles of warming and cooling, if it isn't a constantly changing "Greenhouse Effect" - with man to blame? Man wasn't producing much CO2 in the past million years, so he hasn't simply been turning the greenhouse up and down at will. Just look up - one of the most likely culprits is our old friend, the Sun.

Our satellites are pretty good at measuring overall ocean temperatures from afar, and CO2 measurements are being taken daily around the globe. The best results we have been able to turn up so far is that measurable CO2 increases appear about 9 months after an upswing in ocean temperatures. The data is messed up a bit every time a volcano decides to blow its top, because that's the mother of CO2 producers, bar none. And a buffalo emits about the same amount of methane (CH4) as driving your automobile about 8,000 miles - which can combine with O2 in a highly exothermic reaction ( gives off heat ) to produce CO2 and H2O as end products.

Global warming is not caused by humans 2/5

### Scientists agree that global warming is not caused by humans

Mark Morano, 11/13/07, US Senate Committee on Environment and Public Works. (http://epw.senate.gov/public/index.cfm?FuseAction=Minority.Blogs&ContentRecord\_id=d4b5fd23-802a-23ad-4565-3dce4095c360)

The scientists, many of whom are current and former UN IPCC (Intergovernmental Panel on Climate Change) scientists, sent an open letter to the UN Secretary-General questioning the scientific basis for climate fears and the UN's so-called "solutions."

"Attempts to prevent global climate change from occurring are ultimately futile, and constitute a tragic misallocation of resources that would be better spent on humanity's real and pressing problems," the letter signed by the scientists read. The December 13 letter was released to the public late Thursday.

The letter was signed by renowned scientists such as Dr. Antonio Zichichi, president of the World Federation of Scientists; Dr. Reid Bryson, dubbed the "Father of Meteorology"; Atmospheric pioneer Dr. Hendrik Tennekes, formerly of the Royal Netherlands Meteorological Institute; Award winning physicist Dr. Syun-Ichi Akasofu of the International Arctic Research Center, who has twice named one of the "1000 Most Cited Scientists"; Award winning MIT atmospheric scientist Dr. Richard Lindzen; UN IPCC scientist Dr. Vincent Gray of New Zealand; French climatologist Dr. Marcel Leroux of the University Jean Moulin; World authority on sea level Dr. Nils-Axel Morner of Stockholm University; Physicist Dr. Freeman Dyson of Princeton University; Physicist Dr. Zbigniew Jaworowski, chairman of the Scientific Council of Central Laboratory for Radiological Protection in Poland; Paleoclimatologist Dr. Robert M. Carter of Australia; Former UN IPCC reviewer Geologist/Geochemist Dr. Tom V. Segalstad, head of the Geological Museum in Norway; and Dr. Edward J. Wegman, of the U.S. National Academy of Sciences.

"It is not possible to stop climate change, a natural phenomenon that has affected humanity through the ages. Geological, archaeological, oral and written histories all attest to the dramatic challenges posed to past societies from unanticipated changes in temperature, precipitation, winds and other climatic variables," the scientists wrote.

Global warming is not caused by humans 3/5

### **Global warming is caused by water vapor, humans don’t truly affect it**

David Bradley, 3/16/09, Sciscoop Science, “Water Vapor and Global Warming”, (http://www.sciscoop.com/climate-change-evidence.html)

Water vapour is the most abundant and important greenhouse gas in the atmosphere. However, human activities have only a small direct influence on the amount of atmospheric water vapour. Indirectly, humans have the potential to affect water vapour substantially by changing climate. For example, a warmer atmosphere contains more water vapour. Human activities also influence water vapour through methane emissions, because methane undergoes chemical destruction in the stratosphere, producing a small amount of water vapour.

So, where does carbon come into the equation, if at all? Even late nineteenth century chemist Svante Arrhenius famously outlined a mathematical argument proving that raising atmospheric carbon dioxide levels could not be used to heat Sweden so it could again grow bananas as it had in antiquity.

Scientists have been analyzing these energies since 1857 and British physicist John Tyndall who wrote, “Water vapor is the principle gas heating the atmosphere.” He too made absolutely no reference to carbon dioxide because he considered it insignificant.

Global warming is not caused by humans 4/5

### Global Warming is not anthropogenic, and was contrived by pseudoscience

James A. Peden, 1/17/09,(Atmospheric Physicist at the Space Research and Coordination Center in Pittsburgh and Extranuclear Laboratories in Blawnox, Pennsylvania) “The Great Global Warming Hoax?”, (<http://www.middlebury.net/op-ed/global-warming-01.html>)

It's hard to nail down exactly when the sky started falling, but certainly the work of Michael Mann provided its first global exposure. Michael Mann, a paleoclimatologist ( one who attempts to interpret the past climate through certain Paleolithic records, such as ice core samples, sea bed sediments, coral heads, and tree ring growth ), submitted a paper to Nature magazine in 1998 which, unfortunately, was not subjected to peer review before publication. In it, he offered what has now become known as the famous "hockey stick" chart, showing the earth's temperature having been relatively constant for the past thousand years before suddenly skyrocketing upward at the dawn of the 20th century. His interpretation was that man's production of CO2 in the modern age was obviously responsible for the sudden increase. It turned out to be one of the biggest scientific blunders of all time.

Along comes Steve McIntyre, a Canadian analyst, who spends two years of his own personal time reverse-engineering Dr. Mann's PCA program. McIntyre subjects Mann's PCA program to a "Monte Carlo" analysis - which inserts random data sets into the function - and discovered that no matter what data he fed it, the result was always the same. The arm of the "hockey stick" ( paleo-record ) always came out straight. In Dr. Mann's case, the rising temperature of the Medieval Warm Period and the expected trough of the Little Ice Age had been completely erased. The hockey stick was broken. Fini. Kaput. We may never know whether Mann's work was deliberately contrived to fit some personal environmental agenda, or just a colossal mathematical blunder.

The National Academy of Sciences has found Mann's graph to have “a validation skill not significantly different from zero” – i.e., the graph was useless. Note the corrected version, below, in which neither today's temperatures nor the rate of warming are particularly unusual compared to the historical record. Thus, even the "global warming" of the 20th century was not even remotely a cause for the slightest alarm. It was all "much to do about nothing".

The Medieval Warm Period, of which the proponents of Anthropogenic Global Warming don't want you to be aware, was a period in which agriculture flourished, helping Europe emerge from the Dark Ages.

The Little Ice Age produced crop failures from too-short growing seasons leading to widespread hunger and even starvation in some more northern locales.

### US Congress agrees that Global Warming is not anthropogenic

Ben Geman, 4/6/11, The Hill, (<http://thehill.com/blogs/e2-wire/677-e2-wire/154445-house-votes-down-climate-science-amendment>)

The House rejected a Democratic amendment Wednesday that would have put the chamber on record backing the widely held scientific view that global warming is occurring and humans are a major cause.

Global warming is not caused by humans 5/5

### Even the top scientist on hurricanes and tropical storms agrees that global warming is not caused by humans

Steve Verdon, 9/20/06, Outside the Beltway, (<http://www.outsidethebeltway.com/prof_william_gray_global_warming_real_not_caused_by_man/>)

Global warming is happening, but humans are not the cause, one of the nation’s top experts on hurricanes said Monday morning. Bill Gray, who has studied tropical meteorology for more than 40 years, spoke at the Larimer County Republican Club Breakfast about global warming and whether humans are to blame. About 50 people were at the talk.

Gray, who is a professor at Colorado State University, said human-induced global warming is a fear perpetuated by the media and scientists who are trying to get federal grants.

## Global Warming Good 1/3

### Melting icecaps open up new oil deposits and shipping routes

Associated Press, reposted by Fox News, 3/26/07 (<http://www.foxnews.com/story/0,2933,261240,00.html>)

But some see a lucrative silver lining of riches waiting to be snatched from the deep, and the prospect of timesaving sea lanes that could transform the shipping industry the way the Suez Canal did in the 19th century.

The U.S. Geological Survey estimates the Arctic has as much as 25 percent of the world's undiscovered oil and gas. Russia reportedly sees the potential of minerals in its slice of the Arctic sector approaching $2 trillion.

### Global warming lengthens growing seasons, photosynthetic growth, and alarmists are biased

Patrick J. Michaels, 11/3/04, Cato Institute (Author is a senior fellow in environmental studies at the Cato Institute and author of Meltdown: The Predictable Distortion of Global Warming by Scientists, Politicians, and the Media (2004).) (<http://www.cato.org/pub_display.php?pub_id=2872>)

Objectively speaking, any environmental change should have both positive benefits and negative effects. For example, theory predicts and observations confirm that human-induced warming takes place primarily in winter, lengthening the growing season. Satellite measurements now show that the planet is greener than it was before it warmed. There are literally thousands of experiments reported in the scientific literature demonstrating that higher atmospheric carbon dioxide concentrations -- cause by human activity -- dramatically increase food production. So why do we only hear one side about global warming?

Perhaps because there's little incentive for scientists to do anything but emphasize the negative and the destructive. Alarming news often leads to government funding, funding generates research, and research is the key to scientists' professional advancement. Good news threatens that arrangement.

Global Warming Good 2/3

### Global warming is good, but human activities could not have caused it

### **Senator Mark R Warner, 10/4/09, Climate Realists (http://climaterealists.com/index.php?id=4127)**

Then just 12,000 years ago, there was dramatic natural global warming - ice sheets melted, sea levels rose and the warming seas expelled carbon dioxide. The warmth and extra carbon dioxide plant food in the atmosphere encouraged the spread of grasslands, forests, animals and humans over lands once covered by thick, barren sheets of ice.

None of these beneficial climate changes were caused by emissions from the camp fires of the Cave Men. Since then earth has experienced a see-saw of minor natural heating and cooling. The most recent warming phase started at the depth of the Little Ice Age about 300 years ago, before James Watt invented the steam engine. There were no emissions from cars, trucks, trains, planes or cement plants, but still the planet warmed up.

Climate fluctuations continue in modern times, but not in step with industrial man’s carbon dioxide emissions. When industry declined in the Great Depression of the 1930s, CO2 emissions fell but temperatures rose to a peak. Then during the immediate post war boom in industry, emissions soared but temperatures fell and there were fears of a new ice age starting. Now, since the start of the new century, with emissions from China and India booming, world temperatures are again falling.

### Global Warming causes life to flourish

Judith Parrish, 10/15/98, (Geologist at the University of Arizona, paleoclimatologist), Scienceagogo.com (http://www.scienceagogo.com/news/19980915065904data\_trunc\_sys.shtml)

Yet despite the darkness and polar location, the fossils indicated that the lands in question supported a thriving forest during the mid-Cretaceous. Parrish and her colleagues believe the forests resembled modern-day forests of western Oregon, with a canopy of cone-bearing trees shading an understory of ferns and horsetails.

Yet the warmer poles did not necessarily mean hotter tropical climates, as Parrish points out. Other researchers have found evidence for relatively stable temperatures in the lower latitudes around the equator when comparing the Cretaceous to modern times. "When you have global change, the action is in the higher latitudes," Parrish explained. Computer models today predict most of the 2 to 7 degree Fahrenheit warming expected over the next century will also be centered on the poles rather than tropical regions.

Global Warming Good 3/3

### Global warming is good for humanity: more precipitation, milder climates, more food, fewer deserts.

Thomas Gale Moore, 1995 (senior fellow at the Hoover institution, printed in The Public Interest, “Global Warming: A boon to man and animals”), (http://www.stanford.edu/~moore/Boon\_To\_Man.html)

Only if warmer weather caused more droughts or lowered agricultural output would even Third World countries suffer. Should the world warm -- and there is little evidence or theory to support such a prognostication -- most climatologists believe that precipitation would increase. Although some areas might become drier, others would become wetter. Judging from history, Western Europe would retain plentiful rainfall, while North Africa and the Sahara might gain moisture. The Midwest of the United States might suffer from less precipitation and become more suitable for cattle grazing than farming. On the other hand, the Southwest would likely become wetter and better for crops. A warmer climate would produce the greatest gain in temperatures at northern latitudes and much less change near the equator. Not only would this foster a longer growing season and open up new territory for farming but it would mitigate harsh weather. The contrast between the extreme cold near the poles and the warm moist atmosphere on the equator drives storms and much of the earth's climate. This difference propels air flows; if the disparity is reduced, the strength of winds driven by equatorial highs and Arctic lows will be diminished. Warmer nighttime temperatures, particularly in the spring and fall, create longer growing seasons, which should enhance agricultural productivity. Moreover, the enrichment of the atmosphere with CO2 will fertilize plants and make for more vigorous growth. Agricultural economists studying the relationship of higher temperatures and additional CO2 to crop yields in Canada, Australia, Japan, northern Russia, Finland, and Iceland found not only that a warmer climate would push up yields, but also that the added boost from enriched CO2 would enhance output by 17 percent.[11] Researchers have attributed a burgeoning of forests in Europe to the increased CO2 and the fertilizing effect of nitrogen oxides.[12] Professor of Climatology Robert Pease writes that we may now be living in an "icehouse" world and that a warming of about two degrees Celsius, which is what his model indicates, may actually make the earth more habitable. The higher temperatures combined with more carbon dioxide will favor plant and crop growth and could well provide more food for our burgeoning global populations. Geologic history reveals that warmer global temperatures produce more, not less, precipitation, a fact reflected by a recent scientific investigation that shows the Greenland ice-cap to be thickening, not melting. So much for the catastrophic prediction that our coastlines will be flooded by a rise in sea level from polar meltwaters.[13]

## Energy-Reliance on Oil

### US reliance on oil is declining and will continue to decline

Dogget ’11 [Tom Dogget, Correspondent for Reuters, 5-25-11, “U.S. Oil Dependency Drops Below 50%, Energy Department Reports” http://af.reuters.com/article/energyOilNews/idAFN2514864020110525?pageNumber=1&virtualBrandChannel=0&sp=true]

U.S. dependence on imported oil fell below 50 percent in 2010 for the first time in more than a decade, thanks in part to the weak economy and more fuel efficient vehicles, the Energy Department said on Wednesday. The department's Energy Information Administration said it expected the moderating trend in U.S. oil-import dependency to continue through the next decade due to improvements in energy efficiency and even higher fuel economy standards. The new data could undercut efforts by Republican lawmakers to expand offshore oil drilling to reduce oil imports, and support the position of the Obama administration and environmental groups that higher mileage requirements for cars and trucks would help cut dependence on foreign oil. Imports of crude and petroleum products accounted for 49.3 percent of U.S. oil demand last year, down from the recent high of 60.3 percent in 2005. It also marked the first time since 1997 that America's foreign oil addiction fell under the 50 percent threshold.

### Sufficient Oil for the US to survive-better, cheaper alternative to slowly develop clean energy alternatives rather than simply shoot something into space

Swann ’11 [Christopher Swann, Reuters Columnist, “U.S. Oil Independence no longer a joke” http://blogs.reuters.com/columns/2011/01/26/u-s-oil-independence-no-longer-a-joke/]

America imports some 10 million barrels of crude oil daily. Presidents have paid lip service to reducing this dependence since the 1970s. But as drivers shun gas guzzlers and U.S. production rises, imports could be cut in half this decade. Oil self-sufficiency could even be within reach. In 1973 Richard Nixon became the first in a line of U.S. presidents to decry the nation’s reliance on overseas crude. At the time America bought just over a third of its oil from abroad, and Nixon believed it was possible to become self- sufficient by 1980. Instead, import dependence climbed to 60 percent by 2005. To be fair, much of this deterioration was beyond the control of politicians. Aging wells meant that America’s oil production declined steadily after Nixon’s famous pledge — sliding almost 50 percent between 1970 and 2008. The national penchant for muscle cars and other gas guzzlers made the situation worse. By 2007, drivers were burning an extra 3 million barrels a day — a fifth more than in the early 1970s. However, both of these trends have recently swung into reverse. All of a sudden America’s oil wells seem more fecund. Output from the Gulf of Mexico could increase by 1.7 million barrels a day by the end of the decade, research by Credit Suisse suggests. And more advanced oil recovery techniques are prolonging the life of geriatric wells and giving access to formerly inaccessible fuel. Meanwhile, gasoline demand in the U.S. appears to have passed a peak. Already, this combination has caused import dependency to fall back to around half total consumption. If Credit Suisse is right, imports could be cut roughly in half by 2020. And that’s with energy policy on auto-pilot. A more active Congress could, for example, choose to tax emissions in general or gasoline in particular. Those or other moves could promote conservation and a switch from oil to cleaner, domestically produced natural gas. Add that to the trends already in place and, 40 years on from Nixon’s target date, his dream of oil self-sufficiency just might come true.

# Hegemony Advantage

## 1NC Hegemony/Energy 1/3

The Affirmative team is wrong in stating that Oil is the primary resource being used-algae is being used as a viable alternative for biofuel. Its being used already today, turning the affirmative’s argument about Military reliance on Fossil Fuels. Both their energy and hegemony arguments are incorrect.

### Algae is a cheaper, more viable, and much easier to access alternative to oil than solar energy

Hartman ’08 [Eviana Hartman, Founding columnist of Washington Post’s *EcoWise,* 1-6-08“A Promising Oil Alternative: Algae Energy” http://www.washingtonpost.com/wp-dyn/content/article/2008/01/03/AR2008010303907.html]

With petroleum reserves dwindling, the search is on to replace gasoline with a cleaner, greener alternative. Though much eco-talk has centered on ethanol from corn and biodiesel from soybeans, the biofuel that looks more likely to replace petroleum on a large scale comes from a most unlikely place: pond scum. Algae, like corn, soybeans, sugar cane and other crops, grows via photosynthesis (meaning it absorbs carbon dioxide) and can be processed into fuel oil. However, the slimy aquatic organisms yield 30 times more energy per acre than land crops such as soybeans, according to the U.S. Department of Energy. The reason: They have a simple cellular structure, a lipid-rich composition and a rapid reproduction rate. Many algae species also can grow in saltwater and other harsh conditions -- whereas soy and corn require arable land and fresh water that will be in short supply as the world's population balloons. "If you replaced all the diesel in the U.S. with soy biodiesel, it would take half the land mass of the U.S. to grow those soybeans," says Matt Caspari, chief executive of Aurora Biofuels, a Berkeley, Calif.-based private firm that specializes in algae oil technology. On the other hand, the Energy Department estimates that if algae fuel replaced all the petroleum fuel in the United States, it would require 15,000 square miles, which is a few thousand miles larger than Maryland. Another bonus: Because algae can be grown just about anywhere in an enclosed space, it's being tested at several power plants across the nation as a carbon absorber. Smokestack emissions can be diverted directly into the ponds, feeding the algae while keeping greenhouse gases out of the atmosphere. Although processing technology for algae fuel -- a.k.a. "oilgae" in some environmentalist circles -- is improving, it's still years away from reaching your local gas pump. "It's feasible; it's just a question of cost, because no large-scale facilities have been built yet," Caspari says. Boeing and Air New Zealand recently announced a joint project with a New Zealand company to develop an algae-based jet fuel, while Virgin Atlantic is looking into the technology as part of a biofuels initiative. Watch this space for updates.

1NC Hegemony/Energy 2/3

### Companies have eagerly started to invest in algae-spending billions less then they would on Space Based Solar Power

Stein & Kreiger ’09 [Mara Lemos Stein and Sari Kreiger, Columnists for the Wall Street Journal, 9-13-09, “Biofuel’s New Crop” http://online.wsj.com/article/SB10001424052970203863204574348722001404210.html]

When exposed to light and carbon-dioxide, pools of algae produce lipids that can be refined into oil. The algae consumes the carbon-dioxide during the process, scoring a double hit for protecting the environment. Drawn by that potential, **Exxon Mobil Corp.** in July **announced it was investing $600 million** in a partnership with Synthetic Genomics Inc. of La Jolla, Calif., to develop commercially viable biofuels from algae. That followed an announcement by Dow Chemical Co. in June that it was teaming up with Algenol Biofuels Inc. of Bonita Springs, Fla., to develop a $50 million, algae-to-fuel pilot-scale plant. Also in June, Solazyme Inc., of South San Francisco, Calif., said it raised $57 million in a Series C funding round aimed at bringing its algae-based biotechnology to commercialization.

### Algae Biofuel is being used in the Military Right now-Successful tests have been run

BrighterEnergy ’11 [BrighterEnergy, News source for alternative energy, 6-21-11, “US Navy demonstrates algal biofuel in military helicopter” http://www.brighterenergy.org/24060/news/bioenergy/us-navy-demonstrates-algal-biofuel-in-military-helicopter]

The US Navy has successfully demonstrated algal-derived jet fuel in an MH-60S Seahawk helicopter test flight in a 50/50 blend with petroleum-derived jet fuel. This marks the first military aircraft to fly on an algal-based jet fuel in history. The fuel was provided by Solazyme, Inc. (NASDAQ:SZYM), a renewable oil and bioproducts company based in San Francisco, in the form of its Solajet HRJ-5. The test flight preceded the historic announcement by ASTM International that it has preliminarily approved biofuel from algae and other renewable sources to be blended with traditional jet fuel on commercial flights worldwide, with formal approval expected sometime in July. “We applaud ASTM International and the ATA and CAAFI for their efforts to advance the world’s newest and most sustainable fuels for aviation. The aviation industry has demonstrated a strong leadership position in fuel supply diversification and sustainability, and today’s announcement is a major step in its efforts to commercialize advanced low-carbon biofuels,” said Jonathan Wolfson, CEO, Solazyme. “Solazyme is honored to be working with the US Navy and DLA-Energy in driving forward the testing and certification process for advanced biofuels. The successful flight demonstration of the Seahawk helicopter on a 50/50 blend of Solajet HRJ-5 and petroleum-derived jet fuel marks a significant milestone in this process, and reinforces the Navy’s commitment to securing our nation’s energy supply.”

The Affirmative Team’s internal link to both hegemony and energy are wrong, because of the fact that Algae is already a viable replacement for oil. The Affirmative may claim that even though people are using algae, there is still some oil demand. However, Algae lowers the fossil fuel demand by half, which is better for the environment as well as the job market.

1NC Hegemony/Energy 3/3

### The Plan will lead to a loss of jobs from oil and other such industries

Schulz ’09 [Max Schulz, Senior fellow at Manhattan’s institute for Energy Policy and the Environment, “Don’t Count on ‘Countless’ Green Jobs’ http://online.wsj.com/article/SB123509599682529113.html]

What about jobs in the traditional industries currently supplying Americans with reliable, affordable energy? The American Petroleum Institute reports that **the oil and gas industry employs 1.6 million Americans**. Coal mining directly and indirectly supports hundreds of thousands of jobs, according to the National Mining Association and the U.S. Bureau of Labor Statistics. A radical plan to transform our energy economy will put an untold number of these men and women out of work. Digging deeper each month to pay for expensive renewable energy, consumers will have less to save or spend in other areas of the economy. Killing jobs in efficient industries to create jobs in inefficient ones is hardly a recipe for economic success. There may be legitimate arguments for taking dramatic steps to fight climate change. Boosting the economy isn't one of them.

Loss of Jobs leads to the economy being severely hurt. The economy being hurt leads to, as the affirmative states in their energy argument, a global depression and then extinction.

## 2NC Hegemony Bad

### Hegemony Bad for Economics-Complete US dominance would mess up economic system and leads to War

A few—and only a few—prescient commentators have questioned whether the U.S. can sustain its informal global empire in the wake of the most severe economic crisis since World War II. And the simultaneous quagmires in Iraq and Afghanistan are leading more and more opinion leaders and taxpayers to this question. But the U.S. Empire helped cause the meltdown in the first place. War has a history of causing financial and economic calamities. It does so directly by almost always causing inflation—that is, too much money chasing too few goods. During wartime, governments usually commandeer resources from the private sector into the government realm to fund the fighting. This action leaves shortages of resources to make consumer goods and their components, therefore pushing prices up. Making things worse, governments often times print money to fund the war, thus adding to the amount of money chasing the smaller number of consumer goods. Such “make-believe” wealth has funded many U.S. wars. For example, the War of 1812 had two negative effects on the U.S. financial system. First, in 1814, the federal government allowed state-chartered banks to suspend payment in gold and silver to their depositors. In other words, according Tom J. DiLorenzo in Hamilton’s Curse, the banks did not have to hold sufficient gold and silver reserves to cover their loans. This policy allowed the banks to loan the federal government more money to fight the war. The result was an annual inflation rate of 55 percent in some U.S. cities. The government took this route of expanding credit during wartime because no U.S. central bank existed at the time. Congress, correctly questioning The Bank of the United States’ constitutionality, had not renewed its charter upon expiration in 1811. But the financial turmoil caused by the war led to a second pernicious effect on the financial system—the resurrection of the bank in 1817 in the form of the Second Bank of the United States. Like the first bank and all other government central banks in the future, the second bank flooded the market with new credit. In 1818, this led to excessive real estate speculation and a consequent bubble. The bubble burst during the Panic of 1819, which was the first recession in the nation’s history. Sound familiar? Although President Andrew Jackson got rid of the second bank in the 1830s and the U.S. economy generally flourished with a freer banking system until 1913, at that time yet another central bank—this time the Federal Reserve System—rose from the ashes. We have seen that war ultimately causes the creation of both economic problems and nefarious government financial institutions that cause those difficulties. And of course, the modern day U.S. Empire also creates such economic maladies and wars that allow those institutions to wreak havoc on the economy. The Fed caused the current collapse in the real estate credit market, which has led to a more general global financial and economic meltdown, by earlier flooding the market with excess credit. That money went into real estate, thus creating an artificial bubble that eventually came crashing down in 2008. But what caused the Fed to vastly expand credit? To prevent a potential economic calamity after 9/11 and soothe jitters surrounding the risky and unneeded U.S. invasion of Iraq, Fed Chairman Alan Greenspan began a series of interest rate cuts that vastly increased the money supply. According to Thomas E. Woods, Jr. in Meltdown, the interest rate cuts culminated in the extraordinary policy of lowering the federal funds rate (the rate at which banks lend to one another overnight, which usually determines other interest rates) to only one percent for an entire year (from June 2003 to June 2004). Woods notes that more money was created between 2000 and 2007 than in the rest of U.S. history. Much of this excess money ended up creating the real estate bubble that eventually caused the meltdown. Ben Bernanke, then a Fed governor, was an ardent advocate of this easy money policy, which as Fed Chairman he has continued as his solution to an economic crisis he helped create using the same measures. Of course, according to Osama bin Laden, the primary reasons for the 9/11 attacks were U.S. occupation of Muslim lands and U.S. propping up of corrupt dictators there. And the invasion of Iraq was totally unnecessary because there was never any connection between al Qaeda or the 9/11 attacks and Saddam Hussein, and even if Saddam had had biological, chemical, or even nuclear weapons, the massive U.S. nuclear arsenal would have likely deterred him from using them on the United States. So the causal arrow goes from these imperial behaviors—and blowback there from—to increases in the money supply to prevent related economic slowdown, which in turn caused even worse eventual financial and economic calamities. These may be indirect effects of empire, but they cannot be ignored. Get rid of the overseas empire because we can no longer afford it, especially when it is partly responsible for the economic distress that is making us poorer.

# Spending DA

## 1NC Spending DA 1/2

### SBSP is not happening in the status quo- it’s perceived as too costly. NASA has already shot the idea down once due to budgetary issues.

Shiga, David, staff writer for NewScientist, Short, Sharp Science, “will Obama pursue Space Based Solar Power?”, 22 December 2008, http://www.newscientist.com/blogs/shortsharpscience/2008/12/will-obama-pursue-space-based.html

Could power beamed to Earth from space solve our energy problems? Advocates of space-based solar power may find a receptive ear in the Obama administration. The space-based solar power (SBSP) concept involves using geosynchronous satellites to [collect solar energy and beam it down to Earth](http://www.newscientist.com/article/dn12774-pentagon-backs-plan-to-beam-solar-power-from-space.html), most likely in the form of microwaves ([this graphic](http://www.newscientist.com/data/images/archive/2631/26311601.jpg) shows how the idea might work). The key advantage over Earth-based solar power is that such satellites would enjoy nearly continuous sunshine. A major challenge for Earth-based solar power is that it is so inconstant - it isn't available at night or when skies are cloudy. You could solve this problem by storing energy for later use, but it's difficult to do this in a cost-effective way, and something people are still researching. The major disadvantage for SBSP is that it's so costly to launch stuff into space. But advocates of the idea point to new launch vehicles being developed, like [SpaceX's Falcon 9 rocket](http://www.spacex.com/falcon9.php), which could [bring down the cost of access to space](http://www.newscientist.com/article/mg19926756.300-space-taxis-could-cut-the-cost-of-spaceflight.html), and make SBSP more attractive. Advocates for SBSP are hoping to secure some support for developing the technology from the Obama administration, given the incoming president's pledge to make developing alternative energy sources a top priority. They have posted a [white paper on the topic](http://change.gov/open_government/entry/space_solar_power_ssp_a_solution_for_energy_independence_climate_change/) on the transition website, [change.gov](http://change.gov/). One thing that surely helps their cause is that one of Obama's transition team members for NASA is George Whitesides, who has been a vocal advocate for SBSP. Whitesides is currently on leave from his post as executive director of the National Space Society, where he helped [push for SBSP research](http://www.spaceref.com/news/viewsr.html?pid=27921). On the downside, earlier this month NASA cancelled early work on a proposed SBSP demonstration project, which apparently could have involved putting a [demonstration device on the International Space Station](http://www.transterrestrial.com/?p=13094). But it sounds like the decision owes more to a tight budget at NASA than anything else, and I see no reason why the project couldn't be revived if the next administration takes an interest in SBSP. So I wouldn't count out SBSP just yet. On the other hand, I'm sure SBSP will be competing with lots of other alternative-energy ideas seeking research dollars. And even though Whitesides has a record of strong advocacy for SBSP, this doesn't guarantee that the Obama administration will go for it. There are more highly placed people who will undoubtedly get a bigger say in this, like [energy secretary nominee Steven Chu](http://www.newscientist.com/article/mg20026874.600-nobel-laureate-to-be-next-us-energy-secretary.html), who hasn't said much publicly about SBSP. I think it's fair to say that this could be a crucial moment for SBSP, however, so it's definitely something to watch over the next few months.

### Satellites cost an enormous amount to build and launch

Brown ’2k [Gary Brown, Energy Correspondent, “How Satellites Work” http://science.howstuffworks.com/satellite8.htm]

Satellite launches don't always go well, as shown by this story on failed launches in 1999. There is a great deal at stake. For example, this hurricane-watch satellite mission cost $290 million. This missile-warning satellite cost $682 million. Another important factor with satellites is the cost of the launch. According to this report, a satellite launch can cost anywhere between $50 million and $400 million. A shuttle mission pushes toward half a billion dollars (a shuttle mission could easily carry several satellites into orbit). You can see that building a satellite, getting it into orbit and then maintaining it from the ground control facility is a major financial endeavor!

1NC Spending DA 2/2

### If the Government spends much more money, the economy will become damaged

Riedl ’06 [Brian Reidl Fellow in Federal Budgetary Affairs in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation, 6-19-2006, “The Stop Over-Spending Act: A Real Opportunity to Limit Spending” http://www.heritage.org/Research/Reports/2006/06/The-Stop-Over-Spending-Act-A-Real-Opportunity-to-Limit-Spending]

The Stop Over-Spending (S.O.S.) Act, authored by Senate Budget Committee Chairman Judd Gregg (R-NH) and cosponsored by over a dozen senators, provides a strong blueprint for building a budget process that reflects America's budget priorities. The S.O.S. Act would create discretionary caps and temper exploding entitlement costs. It would create commissions to wrestle with unsustainable entitlement growth and government waste. The S.O.S. Act includes President Bush's line-item veto proposal, a switch to biennial budgeting, and several enforcement and rules improvements that would help Congress get a better handle on federal spending. This package of budget process reforms would help lawmakers pare back spending trends that would otherwise, within a decade, require tax increases of nearly $7,000 per household just to balance the budget. Serious budget process reform is necessary. Federal spending has leaped 45 percent since 2001 to a peacetime record of $23,760 per household.[1] Even worse, the impending retirement of 77 million baby boomers threatens to push Social Security, Medicare, and Medicaid spending to levels that would require European-size tax increases or the elimination of all other government programs.[2] Yet it is nearly impossible for well-intentioned lawmakers to rein in runaway spending while still clinging to an outdated budget process that was created in 1974 to maximize spending and then subjected to more than 30 years of loopholes and abuse.

### Spending with a deficit will collapse the economy

Bohn ’10 [Henning Bohn, UC Santa Barbara, 4-1-2010, “The Economic Consequences of Rising U.S. Government Debt: Privileges at Risk” http://escholarship.org/uc/item/7kz6v3zs”

The rapidly growing federal government debt has become a concern for policy makers and the public. Yet the U.S. government has seemingly unbounded access to credit at low interest rates. Historically, Treasury yields have been below the growth rate of the economy. The paper examines the ramifications of debt financing at low interest rates. Given the short maturity of U.S. public debt -over $2.5 trillion maturing in 2010 - investor expectations are critical. Excessive debts justify reasonable doubts about solvency and monetary stability and thus undermine a financing strategy built on the perception that U.S. debt is safe. The rapidly growing U.S. government debt has become a concern for policy makers and the public. The ratio of U.S. public debt to GDP has increased from 36.2% in 2007 to 53.0% in 2009. Under current policies, the debt-GDP ratio is likely to reach 70% by 2011 and 90% by 2020. What are the consequences of this rising U.S. government debt? The paper will argue that a proper analysis of U.S. debt must account for the U.S. government's ability to issue debt at interest rates that are on average below the growth rate of the U.S. economy. Evidence suggests that the low interest rates are largely due to perceptions of safety, with a secondary role for liquidity effects. Given the short maturity of U.S. public debt - over $2.5 trillion maturing in 2010 - investor expectations are critical. To refinance its debt, the government must ensure that bond buyers remain firmly convinced of the government's solvency. Excessive debts justify reasonable doubts about solvency and about inflation. Hence they undermine a financing strategy built on a **perception** of safety.

## 2NC Links 1/4

### US space travel too expensive

White House panel (by Staff Writers; Washington (AFP)) Sept 9, 2009 (http://www.space-travel.com/reports/US\_manned\_space\_program\_too\_expensive\_White\_House\_panel\_999.html)

NASA's plans to fly to the moon and Mars are under threat from a lack of funds and the space agency needs another three billion dollars for its dreams to become reality, a presidential panel said.

In a 12-page summary report released Tuesday offering a bleak assessment of plans to send astronauts back to the moon, the committee said the space agency would need the three billion dollars on top of its 18-billion-dollar budget to meet its ambitious targets.

### US space travel is impossible.

White House panel (by Staff Writers; Washington (AFP)) Sept 9, 2009 (http://www.space-travel.com/reports/US\_manned\_space\_program\_too\_expensive\_White\_House\_panel\_999.html)

NASA's plans to fly to the moon and Mars are under threat from a lack of funds and the space agency needs another three billion dollars for its dreams to become reality, a presidential panel said.

In a 12-page summary report released Tuesday offering a bleak assessment of plans to send astronauts back to the moon, the committee said the space agency would need the three billion dollars on top of its 18-billion-dollar budget to meet its ambitious targets.Space operations become all the more difficult when means do not match aspirations," the committee wrote. "Such is the case today."As US president in 2004, George W. Bush launched a program dubbed Constellation with the goal of returning to the moon by 2020 and then establishing a lunar launchpad for a first trip to Mars.But in an executive summary of its report, a White House commission named by Bush's successor Barack Obama to review the US manned space program, said the current schedule was unachievable. The committee recommended a "flexible path" that could explore the inner solar system with a "possible rendezvous with Mars' moons or human lunar return by the mid to late 2020s." A full report was due to be released later this month. NASA offered various scenarios for a possible continuation of the program, but cautioned that "whatever space program is ultimately selected it must be matched with the resources needed for its execution."

2NC Links 2/4

### NASA is already broke – new funding would increase the deficit

Rhian 11 (Jason, Universe Today Staff Writer, NASA Says it Cannot Produce Heavy-Lift Rocket on Time, Budget, 1-17, http://www.universetoday.com/82535/nasa-says-it-cannot-produce-heavy-lift-rocket-on-time-budget/)

NASA has sent Congress a report stating that it cannot meet the requirements that it produce a heavy-lift rocket by the current 2016 deadline – or under the current allocated budget. In the NASA Authorization Act of 2010, NASA was directed to develop a heavy-lift rocket in preparation to flights to an asteroid and possibly Mars. NASA said it cannot produce this new rocket despite the fact that the agency would be using so-called “legacy” hardware – components that have been employed in the shuttle program for the past 30 years. NASA would also utilize modern versions of engines used on the massive Saturn V rocket. Now, approximately three months after the act was signed into law, NASA is telling Congress that they can’t build the vehicles that will succeed the shuttle. At least, NASA said, not in the time allotted or for the amount allocated to them. The agency expressed these inadequacies in a 22-page report that was submitted to Congress. In the report, NASA said it “recognizes it has a responsibility to be clear with the Congress and the American taxpayers about our true estimated costs and schedules for developing the SLS and MPCV, and we intend to do so.” “Currently, our SLS (Space Launch System) studies have shown that while cost is not a major discriminator among the design options studied, none of the design options studied thus far appeared to be affordable in our present fiscal condition.” Senators Bill Nelson (D-FL) and Kay Bailey Hutchinson (R-Texas) who helped to draft and pass the NASA Authorization Act said that none of the rationale posted within the report provided justification for NASA not to meet its requirements. Congress has been hoping to shore up any potential failings of the emerging commercial space market by having NASA design, in parallel, a heavy-lift rocket. That way, if these firms don’t produce, the nation has a ‘backup’ in place. NASA has essentially admitted that it cannot accomplish the task set in front of it. Congress might decide to take funds from other areas of the space agency’s budget to fill in the projected shortfall. There have been some suggestions that these funds may come from those intended for Kennedy Space Center (KSC). KSC has already been sent reeling from massive layoffs which are set to continue until the end of the shuttle program. There is no established program set to follow the space shuttle program. Many have tried to compare the gap between shuttle and whatever is to follow to the gap between Apollo and shuttle. But this is a false analogy. At the end of Apollo the next program was established (the space shuttle was approved during the Apollo 16 mission). As the twilight of the shuttle era nears – there no longer is any established program. Under the Vision for Space Exploration, the succeeding program was called Constellation and consisted of a Apollo-like capsule, man-rated rocket the Ares-I (based off a single shuttle solid rocket booster) and a unmanned heavy-lift booster – the Ares-V. While Congress may have signed the directive to produce the new heavy-lift booster into law – they haven’t done as much to pay for it. NASA was supposed to receive $11 billion over the course of the next three years to build both the rocket as well as the Orion spacecraft. Congress is now working to find ways to cut federal spending and NASA could find itself receiving far less than promised.

2NC Links 3/4

### The link is huge – each mission costs billions

Kaku 9 (Michio, professor of theoretical physics at the City University of New York, “The Cost of Space Exploration,” 7-16, http://www.forbes.com/2009/07/16/apollo-moon-landing-anniversary-opinions-contributors-cost-money.html)

But after 1969, the Soviets dropped out of the race to the moon and, like a cancer, the land war in Asia began to devour the budget. The wind gradually came out of the sails of the space program; the Nielsen ratings for each moon landing began to fall. The last manned mission to the moon was Apollo 17, in 1972. As Isaac Asimov once commented, we scored a touchdown, then took our football and went home. After all is said and done about what went wrong, the bottom line is simple: money. It's about $10,000 to put a pound of anything into a near-earth orbit. (Imagine John Glenn, the first American to orbit the earth, made of solid gold, and you can appreciate the enormous cost of space travel.) It costs $500 to $700 million every time the shuttle flies. Billionaire space tourists have flown to the space station at a reputed price of $20 million per head. And to put a pound of anything on the moon costs about 10 times as much. (To reach Mars, imagine your body made of diamonds.) We are 50 years into the space age, and yet space travel is just as expensive as it always was. We can debate endlessly over what went wrong; there is probably no one correct answer. But a few observations can be made. The space shuttle, the workhorse of the space program, proved to be somewhat of a disappointment, with large cost overruns and long delays. It was bloated and probably did not need to have seven astronauts on board. (The Soviet copy of the space shuttle, a near-clone called the Buran, actually flew into outer space fully automated, without any astronauts whatsoever.) An alternative to the space shuttle was the original space plane of the Eisenhower era. It was to be small and compact, but provide easy access to space on a moment's notice, instead of the long months to prepare each shuttle launch. It was to take off and land like a plane, but soar into outer space like a rocket. President Ronald Reagan called one version of it the "Orient Express." (Ironically, now there will be a hiatus as the space shuttle is mothballed next year. Instead of fast and cheap access to space, for five years we will have no access to space at all. We'll have to beg the Europeans and Russians to piggy-back off their rockets.) One of the primary missions of NASA should have been to drive down the cost of space travel. Instead of spending half a billion dollars on each shuttle mission, it should have diverted some of the funds to make research and development a primary focus. New materials, new fuels and innovative concepts, which would make space exploration less expensive, should have been prioritized. (Today, some of that entrepreneurial spirit still lives in the commercial sector, as it tries to nourish a fledgling space tourism industry.) The space station costs upward of $100 billion, yet its critics call it a "station to nowhere." It has no clearly defined scientific purpose. Once, President George H.W. Bush's science adviser was asked about the benefits of doing experiments in weightlessness and microgravity. His response was, "Microgravity is of microimportance." Its supporters have justified the space station as a terminal for the space shuttle. But the space shuttle has been justified as a vehicle to reach the space station, which is a completely circular and illogical argument.

2NC Links 4/4

### It snowballs – deficit spending gets sugar-coated with funding for other programs

Fox News 5-24 (Chad Pergram, "Natural Disasters Could Challenge Campaign Spending Promises", http://politics.blogs.foxnews.com/2011/05/25/natural-disasters-could-challenge-campaign-spending-promises)

It often starts like this. There's a series of natural disasters. Or 9-11. Or war. And Congress decides it needs to approve an additional spending bill to fund a critical area of the federal government in mid-year. Lawmakers fillet the federal budget into 12 sections, each one receiving an annual spending measure. But over the past 11 years, Congress has approved 16 extra spending bills, known as "supplementals," totaling nearly $1 trillion. $20 billion just after September 11th. $79 billion in 2003 for the war in Iraq. $10.5 billion in 2005 to respond to Hurricane Katrina. And in each case, some lawmakers make a compelling case for tacking on additional spending. It's essential for the troops. The people of New Orleans are desperate. And on Tuesday afternoon, the process started again. Rep. Robert Aderholt (R-AL) chairs the House Homeland Security Appropriations Subcommittee. That panel controls the purse strings for the Federal Emergency Management Agency (FEMA). Twisters ravaged parts of Aderholt's district and other sections of Alabama just a few weeks ago. Then came floods, up and down the Mississippi River. The federal government even blew up a major levee in Missouri to alleviate upstream flooding. And then a monster tornado sacked Joplin, MO, Sunday night. "It's going to be close," said Aderholt, when asked if FEMA had enough money to make it through September 30, the end of the government's fiscal year. On Tuesday, the House Appropriations Committee "marked-up" or wrote the final version of a measure to fund Homeland Security programs and FEMA. No one has tallied the cost of the storms in Alabama. There's no price tag on the flooding. And it's way too early to ring up the damages in Missouri. But Aderholt and others wanted to make sure FEMA had enough money for now. So during the markup session, lawmakers from both sides of the aisle injected $1 billion into FEMA's budget. Aderholt and others believe that on top of the $1 billion, they'll also have to craft an entirely separate supplemental spending bill to pay for the natural disasters. And perhaps those yet to come. "Hurricane season is just days away," warned Aderholt ominously. Not a single lawmaker expressed reservation and the Appropriations Committee adopted Aderholt's request by voice vote. There's a reason why no one objected. This year, it's flooding and tornadoes in the South and Midwest. But come summertime, it could be hurricanes in Florida and North Carolina. Or earthquakes in California. Wildfires in the west. Fiscal hawks are loathe to vote against such emergency measures. First, they want to help those in need. And second, they know their district or state could be next. Now here's where it gets interesting. In tight budget times, lawmakers are intent to find "pay-fors" to cover the additional costs of the natural disasters. In the case of the $1 billion for FEMA, the Appropriations Committee transferred unused funds from an Energy Department "green vehicle" program. Still, this money is not for NEXT fiscal year. It's for THIS fiscal year. The fiscal year for which Congress and President Obama just finished doing battle. The fiscal year where Republicans successfully pared $61 billion out of the budget. An alternative interpretation, but inaccurate interpretation of Tuesday's $1 billion FEMA infusion means the budget deal dwindled to just $60 billion. That's they way it would appear on a balance sheet if you're scoring at home. But if you're scoring in Congress, it doesn't work that way. Congress considers FEMA's $1 billion as an emergency. By definition, all emergency money is "off-budget." It's real dollars and cents going out the door. But Congress doesn't count it against the bottom line. It's kind of like a pitcher's Earned Run Average (ERA) in baseball. If a pitcher yields a run, it counts on the scoreboard. However, if someone committed an error that allowed that run to score, it's not marked against the pitcher's ERA. Regardless, the run crossed the plate and shows up on the scoreboard. Spending is spending. And a budgetary gimmick like this is precisely what so incensed the electorate last fall. Now there's a question of forging a supplemental spending bill once all of the disasters are paid for. Aderholt has talked about the need for an additional spending bill to cover FEMA. And he's not the only one. "$1 billion isn't going to do it," conceded Rep. David Price (D-NC), the top Democrat on the House Homeland Security Appropriations Subcommittee. "We are going to need the administration to offer a supplemental request." House Majority Leader Eric Cantor (R-VA) knows how sensitive this is. "If there is support for a supplemental, it would be accompanied by support for having pay-fors to that supplemental," said Cantor on Monday. Note that Cantor said "if there is support for a supplemental." Locating that support could be a problem. Rep. Jo Ann Emerson (R-MO) is a senior member of the Appropriations Committee and represents the district right next to where the tornadoes hit Sunday. Emerson conceded it may be hard to court conservatives whose districts aren't experiencing a natural disaster. "We can try and be responsible, but people need money," Emerson said. "While I think it's important we do everything to offset (the additional FEMA spending), I don't think we can find all that money." When it's a challenge to cobble together votes for a supplemental spending bill, lawmakers often turn to a time-honored tradition on Capitol Hill. They begin to decorate the supplemental with all sorts of baubles and ornaments to attract the support of reluctant lawmakers. But times have changed in Washington. And most conservatives are unwilling to go that route. "These bills become Christmas trees," said Rep. Steve Scalise (R-LA). "You end up having a bunch of items that having nothing to do with the bill." Rep. Jeff Landry (R-LA) is a freshman who represents Cajun country and the mouth of the Mississippi River. Some of the most serious flooding has washed over parts of Landry's southern Louisiana district. Landry knows what's essential to recover from the floods.

## SBSP Not Cost-Effective 1/4

### Will raise energy prices and kill jobs

Schulz ’09 [Max Schulz, Senior fellow at Manhattan’s institute for Energy Policy and the Environment, “Don’t Count on ‘Countless’ Green Jobs’ http://online.wsj.com/article/SB123509599682529113.html]

The subsidies involved are considerable. The U.S. Energy Information Administration reported in early 2008 that the government subsidizes solar energy at $24.34 per megawatt-hour (MWh) and wind power at $23.37 per MWh. Yet even with decades of these massive handouts, as well as numerous state-level mandates for utilities to use green power, wind and solar energy contribute less than 1% of our nation's electricity. Compare the subsidies to renewables with those extended to natural gas (25 cents per MWh in subsidies), coal (44 cents), hydroelectricity (67 cents), and nuclear power ($1.59). These are the energy sources (along with oil, which undergirds transportation) that do the heavy lifting in our energy economy. The alternative technologies at the heart of Mr. Obama's plan, relying on mandates and far greater handouts, will inevitably raise energy prices -- and high power prices are job killers. Industries that make physical products, whether cars or chemicals or paper cups, are energy-intensive and gravitate to low-cost-energy locales.

SBSP Not Cost-Effective 2/4

### The Costs to follow the Affirmative Plan are much too great to be made up for by the Plan

Roseman ’07 [Paul Roseman, Longtime member of National Space Society, Speech for New York Space Society, 2007, “Barely affordable SPS using ISRU in LEO” http://crowlspace.com/?page\_id=50]

Let’s look at the revenues from a 5 Gigawatt version of this project. The highest cost that you could charge for this clean power, and have customers willing to pay, is about ten cents a kilowatt hour. That is high for most Americans, but not unreasonable. I live in New York City, and sometimes pay more than that for electricity, and sometimes less. If you had a 5 gigawatt power plant and ran it 24 hours a day for a year, your revenue would be about $4 billion dollars. It would actually be a bit more than that, but this makes the numbers easy. So, in ten years of operation, you would sell $40 billion dollars of energy, in 15 years, $60 billion. If we can get costs into this range, the project might be possible. That sure seems like a lot of money! Then the costs must really be large. Let’s take a look at those problems. The launch cost from Earth to low earth orbit is the greatest impediment to this project. It is currently about $5,000 per pound to low earth orbit, and it has been about that cost for a long time. One important reason for this is that the rocket booster that launches the payload is destroyed after it’s task is finished. I get that $5,000 per pound to low earth orbit figure by dividing the delivered payload of a launch by the cost of that launch. As an example, published on the net, the European Space Administration’s Ariane V costs $180 million dollars per launch, and delivers 16,000 kg to low earth orbit. That works out to about $5,100 per pound. Going back in time, the Space Shuttle was sold to the American public as a way to lower the costs to low earth orbit by being able to be reused. As it turned out, it was widely said to cost about double the standard cost to low earth orbit. The payload is 40,000 pounds and it cost $400 million dollars, making the launch cost $10,000 dollars a pound to low earth orbit. Since then, the work done on Single Stage to Orbit (SSTO) vehicles hasn’t changed that cost to low earth orbit yet, and NASA is no longer paying much attention to that field, though private industry is. But for the foreseeable future, launch costs to low earth orbit are going to be in the area of $5,000 per pound. Now what does that really mean for the costs of this project? One part of a solar power satellite is solar cells. One way to rate these cells is in kilowatts of power collected per kilogram of weight of the cell (kW/Kg ). Current cells are 2 kW/Kg. To launch 5 gigawatts of solar cells to low earth orbit would cost $22.5 billion at $5,000 per pound launch costs, and that is just for the solar cells. If you launch them to geosynchronous orbit, where they need to be, the cost doubles to $45 billon. That is why it is so expensive to do this project. To compare, the solar cells cost about $1 apiece or about $5 billion for 5 gigawatts of collecting capacity. The hardware that has to be delivered to geosynchronous orbit and assembled to do this project consists of the solar cells, the wiring and power management hardware, the structural parts, and the transmitter. The total weight that goes to geosynchronous orbit comes to about 3 times that of the solar cells, making the cost of delivering just the parts to geosynchronous orbit about $135 billion. And they still have to be bought, and assembled. How can we make those costs less?

SBSP Not Cost-Effective 3/4

### **SBSP costs too much to use right now-hurts the economy**

The Space Island Group Inc. ’09 [Space Island Group Inc., Prepared for Executives of Utility Companies, 4-20-09, “Frequently Asked Questions about the Space Island Group’s Solar Power Satellite Program]

Why Haven’t Solar Sats Been Built in Orbit Until Now? The single hurdle is the economics of launching them. Based on estimates we have gotten from several aerospace firms, the total cost of mass producing all the solar sat components (including the cells, the guidance and transmitting equipment) works out to about $2,000 per pound. It takes about 2 pounds of these components to generate and transmit 1 kilowatt of electricity to the antenna. But it costs $10,000 to $20,000 per pound to get these components up to this 22,000 mile altitude. Launching robot assemblers controlled from Earth to put these components together nearly double this cost. Launching and housing astronauts in orbit to do this assembly would double it again. Solar satellites can physically be built, but at the above costs their electricity would have to sell for $5 per kWh to even approach breakeven.

### SBSP takes too long and costs too much to be built right now

Bansal ’11 [Gaurav Bansal, correspondent for Ecofriend, 5-23-11, “The Good, the Bad, and the Ugly: Space Based Solar Energy” http://www.ecofriend.com/entry/the-good-the-bad-and-the-ugly-space-based-solar-energy/]

Development cost for solar panels of that magnitude would be very large and will also take long time to manufacture as even the first space-based solar project passed California State also has gestation period of 7 long years. Similarly, costs to operationalize even a single large panel is very high, which makes it even more difficult for poor nations to do so. Such pilot project by Japan also even runs into more than 20 billions of dollars even before operationalization.

SBSP Not Cost-Effective 4/4

### NASA traditionally spends too much on its various projects, running inefficient and expensive programs

Grichar ’04 [Jim Grichar, former CIA analyst, 1-14-2004, “Wielding the Budget Axe: It’s time to abolish NASA” http://www.lewrockwell.com/grichar/grichar33.html]

The National Aeronautics and Space Administration (NASA) has been around since the late 1950's, and it has gobbled up billions of dollars to develop and launch various types of satellites and manned space craft, including the Mercury, Gemini, and Apollo spacecraft as well as the space shuttle. Nearly half of NASA’s $15.4 billion fiscal year 2004 budget goes for developing and launching satellites that are either used in scientific experiments or gathering other data. Satellite missions are used to observe deep space, other planets or for observing the earth and conducting measurements of this planets’ temperature, etc. The other half of the NASA budget is used for space flight, and that includes the space shuttle.

## Plan kills Jobs

### The Plan will lead to a loss of jobs from oil and other such industries

Schulz ’09 [Max Schulz, Senior fellow at Manhattan’s institute for Energy Policy and the Environment, “Don’t Count on ‘Countless’ Green Jobs’ http://online.wsj.com/article/SB123509599682529113.html]

What about jobs in the traditional industries currently supplying Americans with reliable, affordable energy? The American Petroleum Institute reports that **the oil and gas industry employs 1.6 million Americans**. Coal mining directly and indirectly supports hundreds of thousands of jobs, according to the National Mining Association and the U.S. Bureau of Labor Statistics. A radical plan to transform our energy economy will put an untold number of these men and women out of work. Digging deeper each month to pay for expensive renewable energy, consumers will have less to save or spend in other areas of the economy. Killing jobs in efficient industries to create jobs in inefficient ones is hardly a recipe for economic success. There may be legitimate arguments for taking dramatic steps to fight climate change. Boosting the economy isn't one of them.

## Deficit Spending Collapses Economy

### Deficit spending collapses the economy

Bohn 10 (Henning, University of California Santa Barbara, “The Economic Consequences of Rising U.S. Government Debt: Privileges at Risk” Departmental Working Papers, Department of Economics, UCSB, http://escholarship.org/uc/item/7kz6v3zs)

The rapidly growing federal government debt has become a concern for policy makers and the public. Yet the U.S. government has seemingly unbounded access to credit at low interest rates. Historically, Treasury yields have been below the growth rate of the economy. The paper examines the ramifications of debt financing at low interest rates. Given the short maturity of U.S. public debt – over $2.5 trillion maturing in 2010 – investor expectations are critical. Excessive debts justify reasonable doubts about solvency and monetary stability and thus undermine a financing strategy built on the perception that U.S. debt is safe. The rapidly growing U.S. government debt has become a concern for policy makers and the public. The ratio of U.S. public debt to GDP has increased from 36.2% in 2007 to 53.0% in 2009. Under current policies, the debt-GDP ratio is likely to reach 70% by 2011 and 90% by 2020.1 What are the consequences of this rising U.S. government debt? The paper will argue that a proper analysis of U.S. debt must account for the U.S. government’s ability to issue debt at interest rates that are on average below the growth rate of the U.S. economy. Evidence suggests that the low interest rates are largely due to perceptions of safety, with a secondary role for liquidity effects. Given the short maturity of U.S. public debt – over $2.5 trillion maturing in 2010 – investor expectations are critical. To refinance its debt, the government must ensure that bond buyers remain firmly convinced of the government’s solvency. Excessive debts justify reasonable doubts about solvency and about inflation. Hence they undermine a financial strategy built on a perception of safety.

## Economic Collapse Bad Impact

### A U.S. economic collapse leads to global economic depression

Walter Mead, Senior Fellow at the Council on Foreign Relations, March/April, 2004 America’s Sticky Power, Foreign Policy, Proquest

Similarly, in the last 60 years, as foreigners have acquired a greater value in the United States-government and private bonds, direct and portfolio private investments-more and more of them have acquired an interest in maintaining the strength of the U.S.-led system. A collapse of the U.S. economy and the ruin of the dollar would do more than dent the prosperity of the United States. Without their best customer, countries including China and Japan would fall into depressions. The financial strength of every country would be severely shaken should the United States collapse. Under those circumstances, debt becomes a strength, not a weakness, and other countries fear to break with the United States because they need its market and own its securities. Of course, pressed too far, a large national debt can turn from a source of strength to a crippling liability, and the United States must continue to justify other countries' faith by maintaining its long-term record of meeting its financial obligations. But, like Samson in the temple of the Philistines, a collapsing U.S. economy would inflict enormous, unacceptable damage on the rest of the world.

### **Econ Collapse = Extinction**

BEARDEN, LT U.S. Army 2k T.E.-;“The Unnecessary Energy Crisis: How to Solve It Quickly,” [<http://www.freerepublic.com/forum/a3aaf97f22e23.htm>, June 24]

History bears out that desperate nations take desperate actions. Prior to the final economic collapse, the stress on nations will have increased the intensity and number of their conflicts, to the point where the arsenals of weapons of mass destruction (WMD**)** now possessed by some 25 nations, arealmost certain to be released**.** As an example, suppose a starvingNorth Korea launches nuclear weapons upon Japan and South Korea, including U.S. forces there, in a spasmodic suicidal response. Or suppose a desperate China- whose long-range nuclear missiles (some) can reach the United States-attacks Taiwan. In addition to immediate responses, the mutual treaties involved in such scenarios will quickly draw other nations into the conflict, escalating it significantly. Strategic nuclear studies have shown for decades that, under such extreme stress conditions, once a few nukes are launched, adversaries and potential adversaries are then compelled to launch on perception of preparations by one's adversary. The real legacy of the MAD concept is this side of the MAD coin that is almost never discussed. Without effective defense, the only chance a nation has to survive at all is to launch immediate full-bore pre-emptive strikes and try to take out its perceived foes as rapidly and massively as possible. As the studies showed, rapid escalation tofull WMD exchange occurs**.** Today, a great percent of the WMD arsenals that will be unleashed, are already on site within the United States itself.The resultinggreatArmageddon will destroy civilizationas we know it,andperhapsmost of the biosphere**,** at least for many decades.

# Politics DA

## 1NC Link

### It needs massive political capital in order for it to pass-not enough will to do it right now

Boswell ’04 [David Boswell, keynote speaker at International Space Development Conference, 8-30-2004, “Whatever happened to Solar Power Satellites?” http://www.thespacereview.com/article/214/1]

In the 2004 budget the Department of Energy has over $260 million allocated for fusion research. Obviously the government has some interest in funding renewable energy research and they realize that private companies would not be able to fund the development of a sustainable fusion industry on their own. From this perspective, the barrier holding back solar power satellites is not purely financial, but rather the problem is that there is not enough political will to make the money available for further development.

## 2NC Link 1/3

### In Order to give NASA the funding it needs, Obama is required to spend massive amounts of political capital

Powell ’09 [Stewart M. Powell, Washington Bureau (written for Houston Chronicle) “Potential Uphill Battle for NASA” http://www.chron.com/disp/story.mpl/nation/6615751.html]

NASA supporters are bracing for an uphill battle to get the extra funding needed to take on missions more ambitious than visits to the international space station. A high-level panel told President Barack Obama last week that the space program needs an infusion of about $3 billion more a year by 2014. That may be a tough sell, even though the amount could be considered spare change in a fast-spending capital where the White House and Congress are on track to dole out nearly $4 trillion this year to finance federal operations, including bailouts for Wall Street firms, banks and automakers. “The congressional agenda over the next year is going to be focused on cutting programs, not adding to them,” said Scott Lilly, a scholar at the Center for American Progress. Adding resources to the nation's $18.7 billion-a-year space program would require cuts in other areas, said Lilly, who doesn't think lawmakers are willing to make those trades. Rep. Pete Olson, R-Sugar Land, the ranking Republican on the House subcommittee that has jurisdiction over NASA, said wrangling the additional $3 billion a year would be “an enormous challenge — but one I am prepared to win.” Added Olson, whose district includes Johnson Space Center: “NASA doesn't require bailout funds — it needs the promised level of investment that previous Congresses have endorsed.” The 10-member panel of space experts led by retired aerospace executive Norman Augustine suggested extending U.S. participation in the $100 billion space station for five years, extending budgeting for the retiring shuttle fleet by six months, delaying plans for a 2020 return to the moon and extending the timeline for the next generation of manned spacecraft by two years at least until 2017. But the experts warned in their 12-page preliminary report to Obama on Tuesday that “meaningful human exploration” would be possible only under “a less constrained budget ramping (up) to approximately $3 billion per year” in additional spending by 2014. Former astronaut Sally Ride, a member of the committee, forecast $27.1 billion in additional funds would be needed over the next decade — a 27 percent increase over the $99.1 billion currently planned. Even before Obama publicly reacts to Augustine's report to map the next steps in the nation's manned space exploration, members of Congress are scrambling. “The immediate challenge goes beyond money to just getting NASA on the radar screen when everyone is focused on health care reform,” said a key congressional staffer involved in NASA issues. Finding support NASA supporters initially are targeting the Democratic leadership of appropriations subcommittees in the House and Senate with jurisdiction over NASA. Space advocates have an ally in Sen. Barbara Mikulski, D-Md., chairwoman of the Senate Appropriations Committee panel that handles space agency spending. But in the House, pro-NASA lawmakers expect a fight with Rep. Alan Mollohan, D-W.Va., chairman of the House Appropriations Committee panel that cut next year's NASA spending nearly $500 million below what Obama requested. Lawmakers are looking for a House-Senate conference committee to restore the funds that Mollohan cut before the Augustine panel completed its work. Aides to Sen. Bill Nelson, D-Fla., chairman of a Senate subcommittee that oversees NASA, said they have already identified six potential sources of additional NASA funding within the federal budget, including some of the $8 billion promised over the next decade to private energy firms to research fossil fuels and deep drilling for oil and gas. Lawmakers also are exploring the possibility of redirecting some of the two-year, $787 billion economic stimulus package from shovel-ready transportation construction projects and other federally subsidized programs into the NASA budget. The administration so far has only paid out $160 billion of the total, according to Vice President Joe Biden. “A lot of stimulus money has not been spent,” said Sen. John Cornyn, R-San Antonio. “We should redirect some of those stimulus funds to pay for enhancements to the NASA budget because I believe human space flight is so important.” Aerospace executives and veteran space experts are hoping for reliable year-to-year funding. “These are challenging economic times, but this is not the moment to turn away from leading a global space exploration effort,” said Dean Acosta, head of the Houston-based Coalition for Space Exploration. President's influence Presidential leadership will be essential to gaining an increase, emphasized John Logsdon, a space policy expert who served on the Shuttle Columbia Accident Investigation Board. “The president has to use some portion of his political capital to put forward an Obama space program.” Congressional staffers are looking to Tuesday's hearing by the House Committee on Science and Technology with testimony by Augustine to gauge the breadth of potential support for additional NASA spending.

2NC Link 2/3

### If any NASA plan is implemented, then Obama is going to lose polcap

I would like to see NASA get a significant extra boost in spending to get past the transition from flying the shuttle to the CEV. I doubt that anything of great significance will happen in this area. Given that realization, Michael Griffin and his staff have to make hard decisions as to what will be the most effective way to spend the amount allotted. The President and Congress have to use their judgment as to how money gets allocated to each agency with spending guidelines and missions. Like any compromise and negotiated deals, there will always be people unhappy with the outcome. Proponents and agencies need to always fight for more because if they don’t, they will get less because there is always an alternative use for the money they get.

### Congress always tries to block presidential attempts to establish space programs

Young ‘8 [Anthony Young, Author of The Saturn V F-1 Engine: Powering Apollo into History, “Review: Spaceflight and the Myth of Presidential Leadership”, The Space Review, 9-29, http://www.thespacereview.com/article/1218/1]

During every United States presidential campaign, space exploration enthusiasts seek the candidates’ position on the topic and what their prospective administration will do. This is once again the case, as advocates seek policy statements on the subject from Barack Obama and John McCain. Space exploration, both manned and unmanned, always seems to be a lesser plank in the Republican and Democratic platforms, if it is there at all. That is most curious considering the importance of space exploration to US prestige, international respect, scientific accomplishment, and maintenance and advancement in aerospace technology and national security. Ever since the administration of President John F. Kennedy and his call to send astronauts to the Moon and return them safely to Earth, there has been the commonly held belief that U.S. presidents can and do drive national space policy. As the editors and contributors to Spaceflight and the Myth of Presidential Leadership are wont to point out, this is really not the case. The book title flies in the face of conventional wisdom that presidents do, in fact, help to formulate national space exploration goals and have the power to move Congress to fund those goals. The authors in this book put forth the views that US presidents do not have that power and certainly cannot mandate the Congress to fully fund ambitious manned and unmanned exploration programs. The reality is that formulating and funding space programs is a much more complex process than it would appear to the man on the street. This myth, the authors contend, probably stems from the iconic speech President Kennedy made before Congress—as part of “Urgent National Needs”—and the seemingly unobstructed carte blanche funding the Congress agreed to provide for Kennedy’s announced space exploration programs.

2NC Link 3/3

### SPS Needs a lot of political capital-won’t be able to use that for more necessary projects later

Overall, pushing forward on SBSP "is a complex problem and one that lends itself to a wide variety of competing solutions," said John Mankins, President of Artemis Innovation Management Solutions, LLC, in Ashburn, Virginia. "There's a whole range of science and technology challenges to be pursued. New knowledge and new systems concepts are needed in order to enable space based solar power. But there does not appear, at least at present, that there are any fundamental physical barriers," Mankins explained. Peter Teets, Distinguished Chair of the Eisenhower Center for Space and Defense Studies, said that SBSP must be economically viable with those economics probably not there today. "But if we can find a way with continued technology development ... and smart moves in terms of development cycles to bring clean energy from space to the Earth, it's a home run kind of situation," he told attendees of the meeting. "It's a noble effort," Teets told Space News. There remain uncertainties in SBSP, including closure on a business case for the idea, he added. "I think the Air Force has a legitimate stake in starting it. But the scale of this project is going to be enormous. This could create a new agency ... who knows? It's going to take the President and a lot of political will to go forward with this," Teets said.

# Alternative Energy Counterplan

## 1NC Algae Counterplan

### The United States federal government should fund the research and development of algae as a source of fuel

### Biofuel Works-It’s being used in airlines already, which proves there is no need for SBSP

Downing ’11 [Louise Downing, Energy Correspondent for Bloomberg, 7-1-11, “Airlines Win Approval to Use Biofuels in Commercial Flights”

Airlines won final approval from a U.S.-based technical-standards group to power their planes with a blend made from traditional kerosene and biofuels derived from inedible plants and organic waste. The decision published today on the website of ASTM International allows airlines to fly passenger jets using derivatives of up to 50 percent biofuel made from feedstocks such as algae and woodchips. It will help carriers that account for 2 percent of global carbon dioxide emissions reduce pollution blamed for damaging the Earth’s atmosphere. “We’re extremely pleased to see the approval of the first group of biofuels for aviation,” Billy Glover, Boeing Co. (BA)’s vice president of environment and aviation policy, said in an e- mail. “The ASTM Emerging Fuels Taskforce, co-led by Boeing and the Federal Aviation Administration, worked for years to enable aviation to diversify its fuel sources and reduce our environmental footprint.” Airlines already have conducted test flights using the fuel. Air France-KLM Group on June 29 operated the world’s first commercial flight using a blend including cooking oil. It’s planning 200 similar test flights from Amsterdam to Paris starting September. Boeing did a trans-Atlantic flight with fuel from the camelina plant.

### Algae is a cheaper, more viable, and much easier to access alternative to oil than solar energy

Hartman ’08 [Eviana Hartman, Founding columnist of Washington Post’s *EcoWise,* 1-6-08“A Promising Oil Alternative: Algae Energy” http://www.washingtonpost.com/wp-dyn/content/article/2008/01/03/AR2008010303907.html]

With petroleum reserves dwindling, the search is on to replace gasoline with a cleaner, greener alternative. Though much eco-talk has centered on ethanol from corn and biodiesel from soybeans, the biofuel that looks more likely to replace petroleum on a large scale comes from a most unlikely place: pond scum. Algae, like corn, soybeans, sugar cane and other crops, grows via photosynthesis (meaning it absorbs carbon dioxide) and can be processed into fuel oil. However, the slimy aquatic organisms yield 30 times more energy per acre than land crops such as soybeans, according to the U.S. Department of Energy. The reason: They have a simple cellular structure, a lipid-rich composition and a rapid reproduction rate. Many algae species also can grow in saltwater and other harsh conditions -- whereas soy and corn require arable land and fresh water that will be in short supply as the world's population balloons. "If you replaced all the diesel in the U.S. with soy biodiesel, it would take half the land mass of the U.S. to grow those soybeans," says Matt Caspari, chief executive of Aurora Biofuels, a Berkeley, Calif.-based private firm that specializes in algae oil technology. On the other hand, the Energy Department estimates that if algae fuel replaced all the petroleum fuel in the United States, it would require 15,000 square miles, which is a few thousand miles larger than Maryland. Another bonus: Because algae can be grown just about anywhere in an enclosed space, it's being tested at several power plants across the nation as a carbon absorber. Smokestack emissions can be diverted directly into the ponds, feeding the algae while keeping greenhouse gases out of the atmosphere. Although processing technology for algae fuel -- a.k.a. "oilgae" in some environmentalist circles -- is improving, it's still years away from reaching your local gas pump. "It's feasible; it's just a question of cost, because no large-scale facilities have been built yet," Caspari says. Boeing and Air New Zealand recently announced a joint project with a New Zealand company to develop an algae-based jet fuel, while Virgin Atlantic is looking into the technology as part of a biofuels initiative. Watch this space for updates.

## 2NC Algae Solves

### Despite some people’s opinions, algae biofuels do not drive up the prices of food and create jobs-more than SBSP does

Abbot ’11 [Charles Abbot, Reporter for Reuters quoting U.S. Agriculture Secretary Tom Vilsack, 6-21-11, “Biofuels are Job Creators, Not Hunger Villans: US” http://www.reuters.com/article/2011/06/21/us-g20-agriculture-usa-idUSTRE75J7CK20110621]

Biofuels are a "tremendous job creator" for rural areas, said U.S. Agriculture Secretary Tom Vilsack on Monday, ahead of a global meeting where the farm-grown fuels may be criticized as a factor in high food prices. Later this week in Paris, agriculture ministers from the Group of 20 rich nations are expected to agree to share data on crop output and supplies more widely, as a step to calm volatile commodity markets, Vilsack told reporters. Vilsack said, the United States has doubts about creating regional food caches for emergency use--one step suggested for G20 countries' to consider for alleviating hunger. Some 925 million people, roughly one-in-seven, are chronically hungry. Global food prices are at near-record highs. Biofuels, especially ethanol distilled mainly from corn (maize) in the United States, have been blamed for driving up food prices. Vilsack says, biofuels' role in price spikes is small and the fuels boost farm income and spark rural growth. "This is a tremendous job creator," he said.