# Warming CP’s

## Ocean Fertilization

### 1NC Ocean Fertilization CP

#### The United States federal government should substantially increase investment in ocean fertilization to reduce global warming.

#### Ocean fertilization solves warming

Eco Global Fuels (EGF), 2011, “Iron Fertilization- the worlds #1 method of CO2 sequestering,” http://ecoglobalfuels.com/news/iron-fertilization-worlds-1-method-co2-sequestering

Recent research just completed by our team, has revealed that the Eco Global Fuels (EGF) renewable energy technology- not only creates carbon neutral ethanol, but with our free by product from our unique IP hydroxyl process - iron oxide - and using the validated results from our test trials at Macquarie university, we have proven that our EGF process makes enough iron oxide to be able to be used in sequestering CO2 by promoting algae growth Iron oxide is a by-product of the hydroxy electrolysis process, and with our calculations below, we have proven that sequestering all CO2 from a 60 MW turbine is achievable (which means we can apply this to any scale, using any power supply for example photovoltaic, gas /coal turbines, off peak electricity etc.). Because it is a byproduct- it is free to be utilized into various methodologies (making them economical) Technologies and industries which benefit from Increasing the growth of algae: Ocean fertilization Algae based bio fuels Algae based fertilizers Algae products (supplements, cosmetics) Sewage treatment Produces freshwater Food production Pharmaceuticals EGF will implement an on-going program with the incentive of carbon neutral Solanol fuel production to fund the iron fertilization program, utilizing the free by-product of iron oxide produced by the hydroxy gas for the manufacture of carbon neutral Solanol. No other methodology can provide these two factors: free iron oxide and the economic incentive to implement. We believe we have the answer of sequestration of all the carbon dioxide produced by the combustion of fossil fuels and at the same time the ability to produce carbon neutral Solanol transport fuel Please note, in the "Virgin Earth Challenge" competition, the majority of finalists have based their findings on the utilization of biomass for carbon dioxide sequestration. Iron fertilization (we can produce iron oxide at no cost) and the production of algae is the most cost-efficient and reliable production of biomass for the absorption of carbon dioxide and in addition it is top of the food chain and represents 80% of this food chain. Due to the vast quantities of carbon dioxide generated in the production of electrical power, we have formulated into our methodology, a process known as ocean fertilization, which can efficiently sequester vast amounts of CO2. Ocean Fertilization is used in our calcul5ations (you will find in the documents section on our website "What is ocean fertilization") , as it has the most potential on a larger scale to deal with massive amounts of CO2 sequestering. However, there are many other processes such as bio fuels that increased algae grow can be utilized. We have also used off peak electricity produced by a coal power station- with precise information of inputs/outputs provide by a Czech based power company whom have become interested in our technology Ocean Fertilization Definition This is the process of distributing iron oxide into the ocean, which encourages the growth of algae, which sequesters CO2 from the atmosphere. Coal turbine -Co2 sequestering by EGF Recent information supplied to us by a potential licensee in Prague that operates a 178MW coal fired power station. The intent is to utilize their off-peak waste electricity to produce carbon neutral Solanol fuel to replace their dependence on importing all their transport fuels. What is Ocean Fertilization? This is the process of distributing iron oxide into the ocean, which encourages the growth of algae, which sequesters CO2 from the atmosphere. The good news is we have free iron oxide from our hydroxyl electrolysis process, equivalent to the level necessary to sequester all the CO2 produced by a 60 MW turbine. We produce the necessary iron oxide as a by-produce of the hydroxy electrolysis process, required for iron fertilization of the ocean, to sequester all carbon dioxide emissions.

### Ocean Fertilization CP – Solvency

#### Ocean fertilization useful and effective.

Nigel Moore, Governance Project Manager at the Oxford Geoengineering Programme, 06 Feb 2012, “Much to learn about ocean fertilization,” Oxford Martin School, http://www.oxfordmartin.ox.ac.uk/blog/view/138

The oceans store a huge amount of carbon compared with the Earth’s atmosphere. This fact has led some scientists and institutions to ask the question of whether human intervention might be used to cause an increase in oceanic uptake of atmospheric carbon whereby a small relative increase in carbon stored in the oceans would have a significant impact on CO2 concentrations in the atmosphere. Following the recent Ocean Fertilization seminar, Nigel Moore from the Oxford Geoengineering Programme explains. One ocean fertilization method is known as the ‘biological pump’—essentially adding nutrients (such as iron) in areas of the ocean where they are limited, in order to cause more plankton blooms. When plankton grow they require carbon, which they get from the atmosphere, and thus it is posited that increasing the amount of oceanic plankton blooms would cause more carbon to be pulled out of the atmosphere and—potentially—be sequestered for a long period of time in the ocean once the plankton die.

#### Ocean fertilization definition and benefits.

Alex Wall, Environmental Science at the University of York, 5th January 2012, “Ocean Fertilization: A case study from the Southern Ocean assessing the feasibility of this Geo-engineering option,” UK Energies, http://ukenergies.wordpress.com/2012/01/05/ocean-fertilisation-a-case-study-from-the-southern-ocean-assessing-the-feasibility-of-this-geo-engineering-option/

It is likely that global warming will exceed 2°C this century unless greenhouse emissions are cut by at least 50% of 1990 levels by 2050 and by even more thereafter. The 2°C level is widely regarded has being a threshold and no current emissions scenario has been able to produce a viable strategy to achieve this, to stabilize the concentration of Carbon dioxide at 450ppm (~380ppm ambient) by 2100. Geo-engineering technologies may form part of a solution to attain this outcome, or to make up for lost time in the future whilst political consensus has not been found at the present (highlighted by current inability of the Kyoto Protocol to reduce Carbon emissions). Geo-engineering technologies deliberately manipulate the planetary environment to counter-act the enhanced global greenhouse effect caused by anthropogenic emissions (either through carbon dioxide removal or solar radiation management). These technologies may serve to avoid currently unidentified tipping points (positive feedbacks) in the climate system such as the release of methane from gas hydrates in Arctic and the increase in global soil respiration rates both induced by higher global temperatures. As of yet, no Geo-engineering technologies have been demonstrated to be effective at an affordable cost, with acceptable side effects. Nevertheless, this report will focus on analyzing the potential of the theory of “Ocean Fertilization” geo-engineering technologies which aim to remove carbon dioxide from the atmosphere and therefore directly cool the planet. Scientific Background The cycling of Carbon in the earth’s oceans is driven in part by a biological pump, which utilizes carbon from the atmosphere to produce organic matter (this growth is either limited by light or by a nutrient). Due to biological degradation the majority of this organic carbon is re-mineralized to its organic form in the upper “euphotic zone” of the ocean, however a small fraction escapes and sinks due to gravity to the deep ocean where it can be regarded as “sequestered” by the IPCC as it will be unable to re-enter the atmosphere for at least a century. The Southern Ocean is regarded as being an HNLC region (High Nutrient Low Chlorophyll) and the primary productivity appears to be limited by the deficiency of Iron, the crux of the Ocean Fertilization theory in this region is that the addition of Iron, will lead to a greater primary productivity and subsequently lead to a greater sequestration of Carbon from the atmosphere. Due to the characteristic Redfield ratios of the nutrient elements to carbon in algal tissues 106:16:1:0.001, (C:N:P:Fe) the addition of one atom of Fe could theoretically stimulate the production of 100,000 organic carbon atoms. It is also true that if the biological pump were to stop operating the concentrations of atmospheric carbon dioxide would increase by more than 100ppm in a few decades. However it is incorrect to assume that this stimulation of phyto-plankton equates to a correlationally greater sequestration of Carbon, as the majority of organic matter is remineralized, and phyto-plankton growth is still limited by light and grazing of zooplankton, with only a small fraction being finally transported and sequestered in the deep ocean (un-quantifiable at present). There may also be a “nutrient robbing” effect, where the addition of Fe in one area, causes the withdrawal of macronutrients in another, removing the net benefit of the addition of Iron. Recent high resolution modeling of iron fertilization efficiency indicates that this technology could reduce the atmospheric C, by a modest 10ppm (whilst anthropogenic activity releases Carbon at the rate of 8.5 Gt/yr) which is far removed from claims in the 1980’s that the addition of Iron could produce a global cooling effect sufficient to bring forward an ice age. Due to the speciation of Iron in the environment it is difficult to model its biogeochemical processes in the marine environment (effecting the bioavailability, photochemical processes and colloidal interactions), indicating a high unpredictability with this technology.

### Ocean Fertilization CP – Politics NB

#### Legislators prefer alternatives to cap-and-trade solutions.

JENNIFER A. DLOUHY, Thursday, December 3, 2009 “Legislators seek alternatives as cap-and-trade wanes,” Houston Chronicle, http://www.chron.com/business/article/Legislators-seek-alternatives-as-cap-and-trade-1735417.php

WASHINGTON — Lawmakers on Wednesday began examining an array of ways to combat global warming, amid signs that the carbon dioxide emissions trading plan known as cap-and-trade may be faltering in the Senate. “We need to dispense with this somewhat blind loyalty to economy-wide cap-and-trade,” said Sen. Lisa Murkowski of Alaska, one of a handful of Republicans who has signaled she might support a climate change bill. “We need to be encouraged to look to all of the alternatives, and, unfortunately, so many of them have just been kicked to the side with the discussion about cap-and-trade. We've kind of boxed ourselves in.” Murkowski's comments at a Senate Energy and Natural Resources Committee hearing came just days before President Obama heads to international climate negotiations in Copenhagen, where he is set to pledge that by 2020, the U.S. will cut greenhouse gas emissions about 17 percent below 2005 levels. Although the House passed cap-and-trade legislation in June that meets that target, the Senate is not expected to take up a similar measure until spring. Sen. John Kerry, D-Mass., is huddling with a group of senators to rewrite the leading climate change bill he co-sponsored with Barbara Boxer, D-Calif., in a bid to get support from Republicans.

### Ocean Fertilization CP – Politics NB – CEOs

#### CEOs want federal investment in green R & D.

NBC4 Washington, Elizabeth Wynn Johnson, Jun 13, 2010, transcribed from YouTube, http://www.youtube.com/watch?v=xagrs-CSC-o

This is power breakfast. Good morning, I’m Elizabeth Wynn Johnson.

Energy independence won't come cheap. A coalition of top American CEOs says Washington needs to triple its spending on energy related projects. “This group combined with others of like minds will do whatever they can to try and get the R&D portion, the investment in R&D and innovation in any one of these bills." (Tim Solso, Chairman & CEO, Cummins) How to pay for it? One idea is to end tax subsidies for oil and gas companies. "It’s past time that congress takes a run at this." (Rep. Earl Blumenauer, D-Ore.) Sometimes timing is everything. "Certainly when we see the spectacle of what's happened in the gulf, should we be giving these people more tax incentives?" (Rep. Earl Blumenauer, D-Ore.) Taking from big oil to support green energy - the robin hood of bills could be ready for the house as early as this week. And that's power breakfast.

#### Business support key to congressional approval of any plan.

Eric P. Grimsrud, Copyright 2012, “Thoughts of a Scientist, Citizen, and Grandpa on Climate Change: Bridging the Gap between Scientific and Public Opinion,” http://books.google.com/books?id=4mO\_OUJknFQC&printsec=copyright&source=gbs\_pub\_info\_r#v=onepage&q&f=false

Note also that our government has been clearly and repeatedly informed of this plan even though our elected officials have not generally shared it with the public. For example, a formal presentation of this plan1 called Carbon Fee with 100% Dividend, was provided on February 25, 2009, before the House Ways and Means Committee 1w Dr. lames Hansen, a leading climate change scientist. The full text of his presentation can be seen on the Web at; www.columbia.edu/~jeh1/mailings/2009/20090226\_WaysAndMeans.pdf. So why is this plan not embraced by more of our Congressmen? It you put that question to any of them, the answer you are likely to receive is simply this: “this plan has no chance of being politically acceptable in the U.S. Congress”, period. That’s it. The logic behind this anemic response is that big changes in existing business-as-usual practices are not likely to see the light of day in Washington because firmly entrenched existing businesses control Congress. This is a self-fulfilling prophecy that is not being sufficiently challenged today.

### Ocean Fertilization CP – Spending NB

#### Ocean fertilization is the cheapest effective method.

Eco Global Fuels (EGF), 2011, “Iron Fertilization- the worlds #1 method of CO2 sequestering,” http://ecoglobalfuels.com/news/iron-fertilization-worlds-1-method-co2-sequestering

Recent research just completed by our team, has revealed that the Eco Global Fuels (EGF) renewable energy technology- not only creates carbon neutral ethanol, but with our free by product from our unique IP hydroxyl process - iron oxide - and using the validated results from our test trials at Macquarie university, we have proven that our EGF process makes enough iron oxide to be able to be used in sequestering CO2 by promoting algae growth Iron oxide is a by-product of the hydroxy electrolysis process, and with our calculations below, we have proven that sequestering all CO2 from a 60 MW turbine is achievable (which means we can apply this to any scale, using any power supply for example photovoltaic, gas /coal turbines, off peak electricity etc.). Because it is a byproduct- it is free to be utilized into various methodologies (making them economical) Technologies and industries which benefit from Increasing the growth of algae: Ocean fertilization Algae based bio fuels Algae based fertilizers Algae products (supplements, cosmetics) Sewage treatment Produces freshwater Food production Pharmaceuticals EGF will implement an on-going program with the incentive of carbon neutral Solanol fuel production to fund the iron fertilization program, utilizing the free by-product of iron oxide produced by the hydroxy gas for the manufacture of carbon neutral Solanol. No other methodology can provide these two factors: free iron oxide and the economic incentive to implement. We believe we have the answer of sequestration of all the carbon dioxide produced by the combustion of fossil fuels and at the same time the ability to produce carbon neutral Solanol transport fuel Please note, in the "Virgin Earth Challenge" competition, the majority of finalists have based their findings on the utilization of biomass for carbon dioxide sequestration. Iron fertilization (we can produce iron oxide at no cost) and the production of algae is the most cost-efficient and reliable production of biomass for the absorption of carbon dioxide and in addition it is top of the food chain and represents 80% of this food chain. Due to the vast quantities of carbon dioxide generated in the production of electrical power, we have formulated into our methodology, a process known as ocean fertilization, which can efficiently sequester vast amounts of CO2. Ocean Fertilization is used in our calcul5ations (you will find in the documents section on our website "What is ocean fertilization") , as it has the most potential on a larger scale to deal with massive amounts of CO2 sequestering. However, there are many other processes such as bio fuels that increased algae grow can be utilized. We have also used off peak electricity produced by a coal power station- with precise information of inputs/outputs provide by a Czech based power company whom have become interested in our technology Ocean Fertilization Definition This is the process of distributing iron oxide into the ocean, which encourages the growth of algae, which sequesters CO2 from the atmosphere. Coal turbine -Co2 sequestering by EGF Recent information supplied to us by a potential licensee in Prague that operates a 178MW coal fired power station. The intent is to utilize their off-peak waste electricity to produce carbon neutral Solanol fuel to replace their dependence on importing all their transport fuels. What is Ocean Fertilization? This is the process of distributing iron oxide into the ocean, which encourages the growth of algae, which sequesters CO2 from the atmosphere. The good news is we have free iron oxide from our hydroxyl electrolysis process, equivalent to the level necessary to sequester all the CO2 produced by a 60 MW turbine. We produce the necessary iron oxide as a by-produce of the hydroxy electrolysis process, required for iron fertilization of the ocean, to sequester all carbon dioxide emissions.

#### Most cost effective, solves for econ.

Arnold Nadler, mechanical engineer, urban/regional planner, taught at universities, consulted/written on energy, environment, economics and technologies, June 2004, “Carbon Sequestration: Can It Help Beat Back Global Climate Change?” Public Power, magazine of the American Public Power Association http://www.publicpower.org/Media/magazine/ArticleDetail.cfm?ItemNumber=2104

Much research will be needed before ocean fertilization moves beyond the concept stage. There could be removal of atmospheric CO2 at costs as low as $2/ton of CO2 removed, plus enhancement of fish life. However, another study suggests that although fish catches in the Southern Hemisphere might increase, there could be significant decreases in tropical waters. A University of Rhode Island study concluded that shallow living organisms, such as shelled mollusks and corals, are already being damaged by increasing CO2 concentrations in upper layers of the oceans. If a growing tree removes CO2 from the atmosphere (and it does), should that count as carbon sequestration? If owned by a power plant, should it count as an emissions credit offsetting CO2 discharged in stack gases? Scale that up to millions of trees and a coal-burning utility, and you have an important economic, environmental and public policy question. Trees and other vegetation convert CO2 to oxygen, and store carbon in their living matter, in wood products and in the soil. Through these processes, almost a quarter of CO2 emissions globally from fossil fuel and cement production are removed from the atmosphere. In the United States, it is estimated that urban trees alone sequester about 23 million tons of carbon annually. This is about 1.5 percent of U.S. carbon emissions. Analyzing NASA satellite data, researchers estimate that during the 1980s and 1990s, forests in the United States, Europe and Russia were storing nearly 0.7 gigatons/year of carbon. This was equivalent to about a quarter of energy-generated carbon emissions from these three regions. The United States has argued that the increasing size of our eastern forests and our use of no-till farming raises the nation’s carbon absorption rates and therefore is part of our carbon sequestration portfolio. According to one State Department estimate, our terrestrial biological sequestration should count for 0.3 gigatons/year of carbon absorbed. If accepted, this number would account for roughly half of our emissions reductions that would have been required by the Kyoto protocols. American Electric Power Co. emits more CO2 than any other utility in the United States. According to a Wall Street Journal article (Dec. 10, 2003), AEP emits about 167 million tons of CO2 annually, about 3 percent of the U.S. total. The power industry estimates that building cleaner power plants would cost $50 to $75 per ton of CO2 avoided. AEP estimates that growing trees costs about $1 to $2/ton of CO2 sequestered. Assuming that eventually the United States would adopt a carbon emissions reduction program, in the mid 1990s several U.S. power companies began planting forests to capture CO2. AEP did the bulk of its planting abroad, in countries such as Brazil, where the growing season is long and land is cheap. It was assumed that carbon credits would apply globally. According to recent research in Arkansas, Mississippi and Louisiana, nested plot test beds were storing about 4.3 tons of CO2 per acre per year. A typical coal power plant pumps out about one ton of CO2 for each 1,200 kWh. For a typical 1,000-MW plant, this works out to 6 million tons of CO2 per year. Doing the arithmetic means it takes about 1.4 million acres of relatively fast-growing trees to absorb the amount of CO2 emitted by a 1,000-MW conventional coal plant. This is equivalent to 2,400 square miles, or somewhat greater than the land area of Delaware. Continuing with this exercise, if land costs $1,000/acre, the cost of 1.4 million acres is $1.4 billion dollars — or roughly the cost of building a new 1,000-MW IGCC plant from scratch. Of course, a large part of this can be amortized by eventually selling the timber for construction and other uses. This also makes clear why utilities would look for cheap land in tropical countries. In August 2002, as a carbon-reducing offset for its 25 fossil-fueled power plants, Entergy Corp. agreed to donate 600 acres of land, along Louisiana’ s Red River, to become part of the Red River National Wildlife Refuge. The land will be used to grow trees that will store an estimated 275,000 tons of CO2. The utility will receive credits if and when the United States decides to use an emissions trading program and count biomass absorption as an offset to stack emissions. Research on terrestrial biological carbon sequestration is proceeding on a number of fronts. For example, a U.S. Department of Agriculture project has looked at the use of forest slash to restore degraded soil in North Carolina, thereby accelerating forest growth. At Ohio State University, researchers have looked at the potential of flue gas desulfurization products to increase the carbon absorption capacity of worn out mining lands. The Rodale Institute claims that organic farming retains 15 to 28 percent more soil carbon than conventionally farmed soil. The Japanese Ministry of Education, Culture, Sports, Science and Technology is researching genetically modified “super trees” to absorb more CO2. Some scientists argue that as second growth forests mature, the rate of carbon uptake will plateau. While growing vegetation removes CO2, decaying vegetation does the opposite. Forest fires, which were extensive in the United States in 2002, release large amounts of CO2 quickly. Researchers from the United Kingdom and Germany estimate that the 1997 Indonesian forest fires released CO2 equivalent to 13 to 40 percent of the total annual worldwide carbon emissions from all fossil fuels Both inside and outside the United States, objections have been raised to counting trees and other terrestrial vegetation as offsets to carbon emissions. Carbon sequestration is a work in progress. However, we’re good at R&D and subsequent deployment of new technologies. With continued research and development, we can play a major role in creating cost-effective solutions to reduce atmospheric CO2 levels. In addition, these technologies might become significant export items, thereby helping our economy, and also demonstrating to the world that we really are engaged in global efforts to address global warming.

### Ocean Fertilization CP – AT: U.N. Regulations

#### Germany and India already violated it with no consequences.

http://www.wired.com/wiredscience/2009/01/fertilizethis/

A major Indian-German geoengineering expedition set sail this week for the Scotia Sea, flouting a U.N. ban on ocean iron fertilization experiments in hopes of garnering data about whether the process actually does take carbon dioxide out of the atmosphere and sequester it in the deep ocean, a technique that may help reverse global warming. The LOHAFEX experiment will spread 20-tons of iron sulphate particles over a 115-square-mile section of open ocean north of Antarctica — that’s about 1.7 times the size of Washington, D.C. The initiative has drawn fire from environmental groups who point out that 200 countries agreed to the moratorium until more evidence was available about its efficacy. But that hasn’t stopped the LOHAFEX team, composed of Alfred Wegener Institute and Indian National Institute of Oceanography scientists, who say they need to conduct experiments to get such data. “If the LOHAFEX iron dump goes ahead, it will be a clear defiance of the U.N. Convention on Biological Diversity,” Jim Thomas of ETC Group, said in a press release. It’s becoming clear that when it comes to global warming reversal schemes, deciding who will control the global thermostat is as complex an issue as how such schemes could actually be accomplished. Ocean iron fertilization is considered one of the more promising options for global-scale geoengineering, which aims to slow or reverse the effects of climate change caused by man’s burning of fossil fuels. While Thomas expressed outrage, Jamais Cascio, a futurist who has written about the geopolitical repercussions of geoengineering for the journal Foreign Policy, took a more measured tone. "ETC is right that we need international standards and safeguards for these experiments, and hopefully this attempt will spur action in that regard," Cascio said. "I think they’re wrong, however, to suggest that any look at geoengineering is inherently problematic." Importantly, iron fertilization would deal directly with the amount of CO2 in the atmosphere, as opposed to, say, blocking out some of the sun’s rays with a global molecular parasol. By providing plankton with iron in water where iron is lacking, the marine creatures grow in tremendous numbers, incorporating carbon into their bodies. When the plankton die and sink, the carbon goes with down with their skeletons. It is unknown, however, how much of that carbon actually makes it deep into the ocean, where it would be sequestered for decades, not days. At a panel at meeting of the American Association for the Advancement of Science last year, marine geochemist Ken Buesseler of the Woods Hole Oceanographic Institute said that somewhere between 2 and 50 percent of the carbon the plankton eat could actually make it to the depths of the ocean, which is basically like saying that we don’t know if the process works. "The efficacy of iron-induced sequestration of atmospheric CO2 to the deep sea, however, remains poorly constrained," he summarized. "We do not yet understand the full range of intended and potential unintended biogeochemical and ecological impacts." The voluntary U.N. ban included language to allow countries to do tests near their shores. But it’s the open seas, particularly in the southern hemisphere, that would allow in-situ testing of the LOHAFEX scientists’ hypotheses. "The fate of carbon from the bloom could not be adequately determined in earlier experiments," the LOHAFEX website reads. "LOHAFEX will now study the entire range of processes determining the partitioning of carbon between atmosphere and deep ocean in the experimental bloom." Cascio said that it’s likely that further geoengineering experiments or actual efforts will be made. "This comes as absolutely no surprise to me," he said. "The confluence of desperation as we see climate disruption hit faster than anticipated, inaction on the carbon emission front, and the ease with which geoengineering can be undertaken means that this won’t be the last time that a sub-national group tries something like this." Already, two ocean-iron-fertilization companies, Climos and Planktos, have been founded. They’ve met different fates, though. Last year, Planktos went belly up, while Climos pulled in $4 million in venture capital. UPDATE 11:10 am PST: Climos CEO, Dan Whaley, notes in our comments section that there was a clause included in an October resolution of a separate U.N. organization, parties to the London Convention, in which 88 countries voted to allow "legitimate scientific research" on ocean iron fertilization, without restrictions to coastal waters. It was under this ruling that the researchers proceeded.The full text of that resolution is available at Climos’ website.

## Peridotite

### 1NC Peridotite CP

#### The United States federal government should substantially increase the use of peridotite global warming sequestration.

#### Peridotite solves for warming

Candice Gaukel Andrews, author, writer, and editor specializing in nature and travel, Apr 19th, 2010, “Rocking the Cure” for Climate Change,” http://goodnature.nathab.com/rocking-the-cure-for-climate-change/

Peridotite is the most common rock found in the Earth’s mantle, the layer just below the crust. Every continent, except perhaps Antarctica, contains substantial amounts of it. And in some places on our planet, such as in the nation of Oman, it lies right on the surface. What makes peridotite so special is that it could “cure” global warming. Sucking Up CO2. During fieldwork in Oman’s desert, two scientists from Columbia University’s Lamont-Doherty Earth Observatory in New York (geologist Professor Peter Kelemen and geochemist Dr. Juerg Matter) found that exposed peridotite reacts with the global-warming carbon dioxide in the air, absorbing up to 100,000 tons of the greenhouse gas each year and transforming it into a solid mineral (like limestone or marble). They estimate that the exposed peridotite in Oman alone could “sequester” four billion tons of atmospheric carbon dioxide a year — or one-seventh of the 30 billion tons the world emits annually. Furthermore, Kelemen and Matter say that simple and relatively inexpensive drilling into the peridotite deposits and then injecting them with heated water enriched with pressurized CO2 captured from power plants could speed up the process of locking the carbon dioxide in the rocks by 100,000 times or more. Once set in motion, the carbon-capturing process would start building upon itself. The reaction would naturally generate heat, in turn that heat would hasten the reaction, fracturing large volumes of rock. The newly fractured rocks would then be exposed to reactions with still more CO2-rich solution. Since the farther down you drill, the higher the temperature gets, heat generated by the Earth itself also would help. Kelemen and Matter propose that such a chain of events would need little energy input to sustain itself after it was first jump-started.

### Peridotite CP – Spending NB

#### Peridotite is cheap.

Candice Gaukel Andrews, author, writer, and editor specializing in nature and travel, Apr 19th, 2010, “Rocking the Cure” for Climate Change,” http://goodnature.nathab.com/rocking-the-cure-for-climate-change/

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#### Peridotite is cost-effective.

Mike Millikin, editor and analyst in the IT industry, founder and editor of the online publication Green Car Congress (GCC), 7 November 2008, “In-Situ Carbonation of Peridotite Offers Large Scale Capacity for Permanent Storage of CO2,” http://www.greencarcongress.com/2008/11/in-situ-carbona.html

Researchers at Columbia University’s Lamont-Doherty Earth Observatory have concluded that the in situ carbonation of peridotite, a type of rock found at or near the surface in Oman and other areas around the world, could consume more than 1 billion tons of CO2 per year in Oman alone, affording a low-cost, safe, and permanent method to capture and store atmospheric CO2. Their studies show that the rock reacts naturally at surprisingly high rates with CO2 to form solid minerals, and that the process could be speeded by multiple orders of magnitude with simple drilling and injection methods. The study appears in this week’s early edition of the Proceedings of the National Academy of Sciences. Peridotite comprises most or all of the rock in the mantle, which undergirds earth’s crust. It starts some 20 kilometers or more down, but occasionally pieces are exhumed when tectonic plates collide and push the mantle rock to the surface, as in Oman. Geologists already knew that once exposed to air, the rock can react quickly with CO2, forming a solid carbonate like limestone or marble. However, schemes to transport it to power plants, grind it and combine it with smokestack gases have been seen as too costly and energy intensive. The researchers say that the discovery of previously unknown high rates of reaction underground means CO2 could be sent there artificially, at far less expense.

## Solar Radiation Management

### 1NC Solar Radiation Management CP

#### The United States federal government should substantially increase investment in Solar Radiation Management technology

#### SRM is a quick, effective solution to warming

M. Granger Morgan and Katharine Ricke, Department of Engineering and Public Policy at Carnegie Mellon University, 2010, “Cooling the Earth Through Solar Radiation Management: The need for research and an approach to its governance,” The International Risk Governance Council (IRGC), http://www.irgc.org/IMG/pdf/SRM\_Opinion\_Piece\_web.pdf

There is a way to cool the planet quickly. A few times every century, nature provides a practical demonstration of this fact when an explosive volcanic eruption lofts millions of tons of SO2 gas and ash high into the stratosphere. Once there, the SO2 is converted into fine sulphate particles. These particles reflect sunlight before it has a chance to penetrate deeper into the atmosphere and get absorbed. For example, the eruption of Mount Pinatubo in the Philippines (Figure 1) in 1991 produced global scale cooling of about 0.5°C. The fraction of sunlight that is reflected back into space is called the “planetary albedo”. There is nothing new about the idea of modifying the climate by increasing albedo. Scientists have known for many years that this could be done9. However, until very recently, there has been almost no serious research on how to do SRM, on what it might cost, on how well it might work, or what its undesirable side effects and risks might be. We believe that there are two reasons the climate research community has not devoted serious research attention to these issues: • Scientists have been reluctant to divert scarce research funds away from the urgent task of studying the climate system, climate change, and its impacts. • Scientists have been legitimately concerned that studying this topic might increase the likelihood that someone might actually do it. Humans have a dismaying track record of changing their intentions as their capabilities change. In our view, today the world has passed a tipping point and there are two reasons why it is too dangerous not to study and understand SRM: 1. There is a growing chance that some part of the world will find itself pushed past a critical point where, for example, patterns of rainfall have shifted so much that agriculture in the region can no longer feed the people. Believing this shift is the result of rising global temperatures, such a region might be tempted to unilaterally start doing SRM to solve its problem. If this situation arises, and no research has been done on SRM, the rest of the world could not respond in an informed way. (9) In addition to adding small reflective particles to the stratosphere, other methods such as increasing marine cloud brightness or placing mirrors in space, have been proposed. Here we concentrate on reflective particles in the stratosphere, though many of the climatic effects would be similar with other SRM methods. 2. With luck, the major effects of climate change will continue to occur slowly, over periods of decades. However, if the world is unlucky and a serious change occurs very rapidly, the countries of the world might need to consider collectively doing SRM. If this situation arises, and no research has been done, SRM would involve a hopeful assumption that the uncertain benefits would outweigh the uncertain and perhaps unknown costs. While there is great uncertainty about SRM, we are confident that it has “three essential characteristics: it is cheap, fast and imperfect”10. CHEAP: The classification of SRM activities as “cheap” doesn’t just refer to the low economic costs associated with cooling the planet with these mechanisms, but also to the fact that only a little bit of material is necessary to implement these planetary-scale changes, which can offset the influence of tons of CO2. For example, under the current understanding of SRM technologies, the mass of fine particles needed to counteract the radiative effects of a doubling of atmospheric CO2 concentrations is approximately 2.6 million tons per day of aerosol if injected into marine stratus clouds or 13,000 tons per day of sulphate aerosol if injected into the stratosphere. By comparison, to achieve the same radiative effect (whether by artificial or natural means), we would need to remove 225 million tons per day of CO2 from the atmosphere for 25 years straight11. While few realistic engineering analyses have been done on the economic costs of SRM, a 1992 report of the U.S. National Research Council12 estimated the potential costs of a programme of stratospheric albedo modification based on the use of a standard naval gun system dispensing commercial aluminium oxide dust to counteract the warming effect of a CO2 doubling. Undiscounted annual costs for a 40-year project were estimated to be USD100 billion. More recent analyses13,14, have suggested that well designed systems might reduce this cost to less than USD10 billion per year – clearly well within the budget of most countries, and much less costly than any programme to dramatically reduce the emissions of CO2. For additional details on costs see Box 3. FAST: While cutting emissions of CO2 and other greenhouse gases would slow or halt their rising concentrations in the atmosphere, much of the CO2 released through past emissions will reside in the atmosphere for 100 years or more. In addition, inertia in the climate system means that global temperatures will continue to rise. Reducing planetary temperatures through emissions reductions will take many decades to centuries. In contrast, increasing planetary albedo by doing SRM can reduce planetary temperature in days or months. This fast response cuts two ways. On the one hand, it means that SRM could be used to rapidly cool the planet in the event of a “climate emergency”, such as the rapid deterioration of the Greenland ice sheet15 or the sudden release of large amounts of methane from arctic tundra or the deep edges of the coastal oceans. On the other hand, if SRM were started and then stopped before greenhouse gas concentrations in the atmosphere were drastically reduced, then global temperatures could shoot up dramatically16. This would be devastating for many ecosystems.

### SRM CP – Spending NB

#### SRM is cheap.

M. Granger Morgan and Katharine Ricke, Department of Engineering and Public Policy at Carnegie Mellon University, 2010, “Cooling the Earth Through Solar Radiation Management: The need for research and an approach to its governance,” The International Risk Governance Council (IRGC), http://www.irgc.org/IMG/pdf/SRM\_Opinion\_Piece\_web.pdf

CHEAP: The classification of SRM activities as “cheap” doesn’t just refer to the low economic costs associated with cooling the planet with these mechanisms, but also to the fact that only a little bit of material is necessary to implement these planetary-scale changes, which can offset the influence of tons of CO2. For example, under the current understanding of SRM technologies, the mass of fine particles needed to counteract the radiative effects of a doubling of atmospheric CO2 concentrations is approximately 2.6 million tons per day of aerosol if injected into marine stratus clouds or 13,000 tons per day of sulphate aerosol if injected into the stratosphere. By comparison, to achieve the same radiative effect (whether by artificial or natural means), we would need to remove 225 million tons per day of CO2 from the atmosphere for 25 years straight11. While few realistic engineering analyses have been done on the economic costs of SRM, a 1992 report of the U.S. National Research Council12 estimated the potential costs of a programme of stratospheric albedo modification based on the use of a standard naval gun system dispensing commercial aluminium oxide dust to counteract the warming effect of a CO2 doubling. Undiscounted annual costs for a 40-year project were estimated to be USD100 billion. More recent analyses13,14, have suggested that well designed systems might reduce this cost to less than USD10 billion per year – clearly well within the budget of most countries, and much less costly than any programme to dramatically reduce the emissions of CO2. For additional details on costs see Box 3.

#### SRM is the most cost-effective.

M. Granger Morgan and Katharine Ricke, Department of Engineering and Public Policy at Carnegie Mellon University, 2010, “Cooling the Earth Through Solar Radiation Management: The need for research and an approach to its governance,” The International Risk Governance Council (IRGC), http://www.irgc.org/IMG/pdf/SRM\_Opinion\_Piece\_web.pdf

BOX 3: How much might SRM cost? Nobody knows exactly what the cost of a full-scale implementation of SRM would be. We can, however, make a crude estimate. A 1992 National Research Council report1 estimated the undiscounted annual costs for a 40-year project to be USD100 billion. A report from Lawrence Livermore National Laboratory2 suggested that well designed systems might reduce this cost to as little as a few hundred million dollars per year. We can use those two reports to estimate cost to be between USD100 million and USD100 billion per year. The size of the global economy is roughly USD60x1012 per year. So: (0.1-100 x109 USD/year)/60x1012 USD/year is roughly 0.0002% to 0.2% of world GDP/year. How does this compare with the cost of reducing emissions of CO2 and other greenhouse gases? Today, the world is emitting about 50x109 tons per year CO2 equivalent of greenhouse gases (of which about 30x109 is CO2). The IPCC 4th assessment3 reports that: “Modeling studies show that global carbon prices rising to USD20-80/tCO2equivalent by 2030 are consistent with stabilization at around 550ppm CO2-equivalent by 2100. For the same stabilization level, induced technological change may lower these price ranges to USD5-65/tCO2-equivalent in 2030.” So: (50x109 tCO2-eq)(5 to 65USD/tCO2-eq) = 250 to 3300x109 USD/year. (0.25 to 3.3x1012 USD/year)/60x1012 USD/year is roughly 0.4% to 5.5% of world GDP/year In short, it is probably safe to assume that the direct monetary cost of doing SRM would be at least 100 times less than the cost of a full programme of greenhouse gas abatement…and perhaps even cheaper than that!

## Trees

### 1NC Trees CP

#### The United States federal government should substantially increase tree planting.

#### Planting trees solves warming

Arnold Nadler, mechanical engineer, urban/regional planner, taught at universities, consulted/written on energy, environment, economics and technologies, June 2004, “Carbon Sequestration: Can It Help Beat Back Global Climate Change?” Public Power, magazine of the American Public Power Association http://www.publicpower.org/Media/magazine/ArticleDetail.cfm?ItemNumber=2104

Much research will be needed before ocean fertilization moves beyond the concept stage. There could be removal of atmospheric CO2 at costs as low as $2/ton of CO2 removed, plus enhancement of fish life. However, another study suggests that although fish catches in the Southern Hemisphere might increase, there could be significant decreases in tropical waters. A University of Rhode Island study concluded that shallow living organisms, such as shelled mollusks and corals, are already being damaged by increasing CO2 concentrations in upper layers of the oceans. If a growing tree removes CO2 from the atmosphere (and it does), should that count as carbon sequestration? If owned by a power plant, should it count as an emissions credit offsetting CO2 discharged in stack gases? Scale that up to millions of trees and a coal-burning utility, and you have an important economic, environmental and public policy question. Trees and other vegetation convert CO2 to oxygen, and store carbon in their living matter, in wood products and in the soil. Through these processes, almost a quarter of CO2 emissions globally from fossil fuel and cement production are removed from the atmosphere. In the United States, it is estimated that urban trees alone sequester about 23 million tons of carbon annually. This is about 1.5 percent of U.S. carbon emissions. Analyzing NASA satellite data, researchers estimate that during the 1980s and 1990s, forests in the United States, Europe and Russia were storing nearly 0.7 gigatons/year of carbon. This was equivalent to about a quarter of energy-generated carbon emissions from these three regions. The United States has argued that the increasing size of our eastern forests and our use of no-till farming raises the nation’s carbon absorption rates and therefore is part of our carbon sequestration portfolio. According to one State Department estimate, our terrestrial biological sequestration should count for 0.3 gigatons/year of carbon absorbed. If accepted, this number would account for roughly half of our emissions reductions that would have been required by the Kyoto protocols. American Electric Power Co. emits more CO2 than any other utility in the United States. According to a Wall Street Journal article (Dec. 10, 2003), AEP emits about 167 million tons of CO2 annually, about 3 percent of the U.S. total. The power industry estimates that building cleaner power plants would cost $50 to $75 per ton of CO2 avoided. AEP estimates that growing trees costs about $1 to $2/ton of CO2 sequestered. Assuming that eventually the United States would adopt a carbon emissions reduction program, in the mid-1990s several U.S. power companies began planting forests to capture CO2. AEP did the bulk of its planting abroad, in countries such as Brazil, where the growing season is long and land is cheap. It was assumed that carbon credits would apply globally.

### Trees CP – Solvency

#### Tree planting effective in the SQ.

RAZAQ AYINLA, Thursday, 19 April 2012, “Global Warming: Ogun to plant 1.5m trees,” Business Day News, http://www.businessdayonline.com/NG/index.php/city-file/city-file/36122-global-warming-ogun-to-plant-15m-trees

Ogun State government says it is set to combat the destructive effects of global warming, desert encroachment and deforestation with the planting of 1.5 million trees across the state under an afforestation programme, tagged ‘’Green Revolution’’. Falilu Sabitu, the state commissioner for Forestry, disclosed in Abeokuta that state government planned to plant 1.5 million trees in order to stem the tide of the global climate change as climatic condition continues to reverberate in the forms of rising temperatures and sea levels, leaving behind its trail disasters in the form of floods, desertification and other environmental degradation. Falilu stated that the state government would achieve its set target on afforestation through the massive utilisation of 1.5 million tree seedlings allotted to Ogun State by the Federal Government under the National Afforestation Programme. The forestry boss, who was represented at a stakeholders’ forum held in Abeokuta by the Director of Horticulture in the ministry, Oladipo Odeyemi, confirmed that about 1.5 million tree seedlings that were allotted to the state, would be distributed freely to schools, churches, and mosques in addition to other stakeholders in the forestry business. He stated that the step was necessary to combat serious desertification and deforestation coupled with the green house effect resulting from gas emission, domestic and industrial pollution, adding that indiscriminate human action had contributed in no small measure to complicating the present climate change that characterised the global weather. The commissioner, however, declared that tree planting was a panacea to the present condition, stating that “trees on their own have the ability to absorb green house effects”.

### Trees CP – Spending NB

#### Planting trees is very cheap.

Arnold Nadler, mechanical engineer, urban/regional planner, taught at universities, consulted/written on energy, environment, economics and technologies, June 2004, “Carbon Sequestration: Can It Help Beat Back Global Climate Change?” Public Power, magazine of the American Public Power Association http://www.publicpower.org/Media/magazine/ArticleDetail.cfm?ItemNumber=2104

Much research will be needed before ocean fertilization moves beyond the concept stage. There could be removal of atmospheric CO2 at costs as low as $2/ton of CO2 removed, plus enhancement of fish life. However, another study suggests that although fish catches in the Southern Hemisphere might increase, there could be significant decreases in tropical waters. A University of Rhode Island study concluded that shallow living organisms, such as shelled mollusks and corals, are already being damaged by increasing CO2 concentrations in upper layers of the oceans. If a growing tree removes CO2 from the atmosphere (and it does), should that count as carbon sequestration? If owned by a power plant, should it count as an emissions credit offsetting CO2 discharged in stack gases? Scale that up to millions of trees and a coal-burning utility, and you have an important economic, environmental and public policy question. Trees and other vegetation convert CO2 to oxygen, and store carbon in their living matter, in wood products and in the soil. Through these processes, almost a quarter of CO2 emissions globally from fossil fuel and cement production are removed from the atmosphere. In the United States, it is estimated that urban trees alone sequester about 23 million tons of carbon annually. This is about 1.5 percent of U.S. carbon emissions. Analyzing NASA satellite data, researchers estimate that during the 1980s and 1990s, forests in the United States, Europe and Russia were storing nearly 0.7 gigatons/year of carbon. This was equivalent to about a quarter of energy-generated carbon emissions from these three regions. The United States has argued that the increasing size of our eastern forests and our use of no-till farming raises the nation’s carbon absorption rates and therefore is part of our carbon sequestration portfolio. According to one State Department estimate, our terrestrial biological sequestration should count for 0.3 gigatons/year of carbon absorbed. If accepted, this number would account for roughly half of our emissions reductions that would have been required by the Kyoto protocols. American Electric Power Co. emits more CO2 than any other utility in the United States. According to a Wall Street Journal article (Dec. 10, 2003), AEP emits about 167 million tons of CO2 annually, about 3 percent of the U.S. total. The power industry estimates that building cleaner power plants would cost $50 to $75 per ton of CO2 avoided. AEP estimates that growing trees costs about $1 to $2/ton of CO2 sequestered. Assuming that eventually the United States would adopt a carbon emissions reduction program, in the mid-1990s several U.S. power companies began planting forests to capture CO2. AEP did the bulk of its planting abroad, in countries such as Brazil, where the growing season is long and land is cheap. It was assumed that carbon credits would apply globally.

# Economy/Competitiveness CP’s

### 1NC EB Visas CP

#### The United States federal government should lift the cap on its non-investor employment-based permanent visas for Science, Technology, Engineering and Mathematics applicants.

#### Solves econ and competitiveness

Stuart Anderson, former staff director of the Senate Immigration Subcommittee, is executive director of the National Foundation for American Policy, 12-2008, “Creating Staying Power for U.S.-Educated Internationals,” International Educator, https://www.aplu.org/NetCommunity/Document.Doc?id=1285

A recent report from the National Science Foundation provides confirmation: The rate of growth of the S&E [science and engineering] labor force may decline rapidly over the next decade because of the aging of individuals with S&E educations, as the number of individuals with S&E degrees reaching traditional retirement ages is expected to triple. If this slowdown occurs, the rapid growth in R&D employment and spending that the United States has experienced since World War II may not be sustainable. The growth rate of the S&E labor force would also be significantly reduced if the United States becomes less successful in the increasing international competition for immigrant and temporary nonimmigrant scientists and engineers. Many countries are actively reducing barriers to high-skilled immigrants entering their labor markets at the same time that entry into the United States is becoming somewhat more difficult. Despite this, many recent statistics suggest that the United States is still an attractive destination for many foreign scientists and engineers. Slowing of the S&E labor force growth would be a fundamental change for the U.S. economy, possibly affecting both technological change and economic growth.5 Countries with a larger share of the population with at least a college degree include Russia, Canada, Japan, South Korea, Norway, Ireland, Belgium, Spain, Denmark, and France.6 “America will feel the full impact of the 30-year stagnation in skill levels in the U.S. workforce when many baby boomers begin retiring, which makes expeditious reform of U.S. high-skilled immigration policies imperative,” writes Kirkegaard. “Urgent reforms of the broader U.S. education system—even if immediately and successfully implemented—will produce more young American graduates only in the long term. However, in the short term—say at least over the next decade— only high-skilled immigration can provide American employers with the skilled workforce they need to continue to compete and expand in a global skills-biased economy.”7

### EB Visa CP – Solvency

#### Immigrants key to economy

Daily Telegraph Reporter, 25 August 2008, Immigratin is ‘big boost for economy’, <http://www.telegraph.co.uk/news/uknews/2621595/Immigration-is-big-boost-for-economy.html>

Immigrant workers fill skill gaps and do jobs British workers do not want, says a report by the Institute for Public Policy Research (IPPR). But it found that employers and local economies were not reaping the full benefits because many migrants were staying for short periods instead of settling in Britain. The IPPR said local economies benefited because migrants might have different skills that could lead to the establishment of new types of businesses and they tended to be more entrepreneurial. Immigrants could also expand the market for local businesses by establishing links to their countries of origin. IPPR analysis of statistics showed that more than a million immigrants came to Britain from the eight countries that joined the EU in May 2004 but about half of those had now returned home. The report recommends that local councils and the Government ensure they are doing enough to attract and retain immigrants. At the same time, the IPPR says the Government should ensure that British-born workers receive adequate training and career development opportunities. Local authorities and employers need to ensure that British workers' wages and job opportunities are not damaged and that firms do not become overly reliant on immigrant workers. Laura Chappell, an IPPR research fellow, said: "Migrant workers can bring enormous benefits. However, many of these contributions – such as new ideas and ways of working, and an entrepreneurial spirit – may have been neglected. "Local communities, alongside local leaders, businesses, universities, and central government, need to recognise the variety of benefits that migrants can bring, and plan accordingly."

#### EB Visa solvency

Demetrious G. Papademetriou et al, PhD Political Science, July 2009, Aligning Temporary Immigration Visas with US Labor Market Needs: The Case for a New System of Provisional Visas, Migration Policy Institute, <http://www.migrationpolicy.org/pubs/Provisional_visas.pdf>

Provisional visas offer several clear advantages over the existing system of employment- based immigration. They would: • Protect the rights and working conditions of both immigrant and US workers. Provisional visas would give immigrants clear ownership of their visas within a reasonable time frame, and would decouple long-term immigration status (the path to permanent residence) from a particular employer relationship. Visa portability would permit immigrants to leave a bad job, allowing more room for market forces to set wages and working conditions. Protect the interests of employers. Provisional visas would require less bureaucracy, since employers would not be required to sponsor multiple visas for the same worker. Employers would also gain greater certainty about their immigrant employees’ future immigration status. • Promote immigrant integration and long-term investment in human capital. The provisional visa’s increased predictability would encourage immigrant workers to make investments that pay off over many years, including learning new skills or improving English language ability. This would improve long-term integration. Indeed, by establishing clear criteria which provisional visa holders must meet to renew their visas, the system would create positive incentives for immigrants to adopt the behaviors Americans value. Provisional visas provide an organic mechanism for the United States to prioritize over-arching criteria such as immigrants’ English acquisition, constructive engagement with their new communities, paying taxes, or any other reasonable goals that Congress may determine. • Improve economic efficiency. Provisional immigrants would be better able to respond to market demand by moving to where demand is greatest, rather than being tied to one employer or even one sector. Immigrants as a group are already thought to boost the economy because they are more sensitive to wage differentials across the country when they first arrive;31 provisional visas would allow them to remain flexible in this manner even as they wait for their permanent resident status. • Sharpen immigrant selection while preserving the market-driven system. In recent years, governments across the world have grappled with immigrant selection systems in search 31 George Borjas, “Does Immigration Grease the Wheels of the Labor Market?” (Brookings papers on economic activity, 1:2001, Brookings Institution, March 2001). ￼16 of a more effective way to recruit immigrant workers who can make the greatest contribution and thrive in their country. Provisional visas retain the crucial selection device that allows this to happen — employer screening — while creating a mechanism to base permanent status decisions on a six-year track record in the United States. • Attract top talent from around the world. The most talented immigrant workers — including young individuals with high potential — may have a choice of destination.32 World-class firms and universities still allow the United States to have something akin to a “right of first refusal” when it comes to the most talented.33 This advantage must be safeguarded — and strengthened — as other countries (many of whom also offer good economic opportunities) provide a much more competitive immigration package, both to employment-based immigrants and to international students who represent one of the most important sources of foreign-born talent. The provisional visa would attract talented workers who are willing to work on time-limited visas, but want the option of permanent residence in the future, and allow the United States to continue to enjoy its overwhelming advantage in choosing the most qualified foreign workers for some time to come. • Facilitate enforcement where immigrants are not a good long-term fit. The provisional visa would include requirements during the period of residence to be in touch with the immigration information systems (for example, providing updated employer and address information). Such requirements and records also would facilitate enforcement for workers who fail to meet the criteria for visa renewal or transition to permanent status. Provisional visa holders who leave as required at the end of their visa period could be first in line for a future provisional visa, while overstaying a provisional visa could bring disqualification from future legal admission.

#### EB Visa’s start the tip off for global economic prosperity. (green energy)

Audrey Singer, Senior Fellow, Brookings Metropolitan Policy Program, and Devashree Saha, senior policy analyst Brookings Metropolitan Policy Program, 4/4/ 2012, Eb-5 Visas: A Smarter, Cleaner Plan, The New Republic, <http://www.tnr.com/blog/the-avenue/102368/eb-5-visas-smarter-cleaner-plan>

Even though the EB-5 program has been around since 1990, it is only in the last few years that state and local economic development officials have begun to look toward using EB-5 for development in target sectors. Austin, Tex. has recently proposed creating the state’s first regional center that will focus specifically on green tech and renewable energy projects. It would be one among eight other regional centers in Arizona, California, Michigan, and Nevada that are geared toward renewable energy development. Other regional centers have focused on other industry sectors with considerable success, such as the redevelopment of former military bases into mixed-use projects. The Immigrant Investor Program has had its share of problems, which accounts for its low use since being introduced more than two decades ago. The latest data reveals that since being established, the EB-5 program has so far created 43,300 full-time jobs and attracted more than $2.2 billion, with half of this happening just since 2008. While the $2.2 billion number is small (annualized that is just over $100 million a year, a fraction of $236 billion the U.S. brings in foreign direct investment), in the current economic context this source of international financing can make a difference for local projects and the communities that host them. The complexity of the application process, the uncertainty of meeting the requirements and the long adjudication process to move from conditional to permanent residency have been cited as stumbling blocks for potential investors in a study by the GAO. Add to those a complex international set of intermediaries, little oversight of the marketing of EB-5 visas, and unclear guidelines regarding the measurement of job creation, and the proposition weakens for many potential investors. Nonetheless, local leaders like Mayor Leffingwell of Austin may be onto something by focusing on green energy, a sector that Austin “has in its DNA,” which might be very attractive to foreign investors—especially those from China, which has aggressively set its sights on leading the global clean energy race. While the immigrant investor program should not be viewed as a magic bullet, it is more likely that carefully vetted projects that fit into local development plans can have success. Indeed, as noted in Brookings’ recent report outlining an economic development agenda for Nevada, one of Nevada’s most promising routes to attracting investment in its identified target sectors is by strategically making use of the EB-5 program. Other regions can similarly make use of the so far underutilized EB-5 program to attract much needed inward investment into their target sectors. EB-5 investment financing should be viewed as one piece of funding within a broader global engagement strategy

#### Employment Visas economic impacts

Demetrious G. Papademetriou et al, PhD Political Science, May 2009, Harnessing the Advantages of Immigration for a 21st-Century Economy: A Standing Commission on Labor Markets, Economic Competitiveness, and Immigration, Migration Policy Institute, [http://www.google.com/url?sa=t&rct=j&q=harnessing%20the%20advantages%20of%20immigration&source=web&cd=1&ved=0CFQQFjAA&url=http%3A%2F%2Fwww.migrationpolicy.org%2Fpubs%2FStandingCommission\_May09.pdf&ei=tiHuT\_vENaue6wG7o\_SbCg&usg=AFQjCNE-dm1VvtTCqiJeSJhiJ822pa0O2A&sig2=2caZD\_6YlxkASLvyNNTxEg](http://www.google.com/url?sa=t&rct=j&q=harnessing%20the%20advantages%20of%20immigration&source=web&cd=1&ved=0CFQQFjAA&url=http%3A%2F%2Fwww.migrationpolicy.org%2Fpubs%2FStandingCommission_May09.pdf&ei=tiHuT_vENaue6wG7o_SbCg&usg=AFQjCNE-dm1VvtTCqiJeSJhiJ822p)

Rather, our focus is on one set of policy priorities and outcomes — the effects of immigration on US labor markets and economic growth — and on the subset of immigration streams that are most directly tied to these economic outcomes: employment- based/labor market immigration, in both permanent and temporary variants. And while permanent employment-based visas account for just 15 percent of the permanent visas the United States issues each year,7 they are the immigration stream dedicated to the nation’s economic and labor market interests and thus should be driven by a calculus of economic costs and benefits. These economic effects are complex. On the one hand, labor market immigration makes an immediate contribution to the US economy by allowing US firms to hire immigrant workers across the skills continuum. At the high-skilled end, foreign-born students, researchers, workers across many disciplines (but primarily in the sciences, technology, and the professions), and entrepreneurs have been at the heart of American innovation and productivity for decades. About a third of America’s 20th-century Nobel Prize winners, for example, were immigrants.8 Immigrants also founded or cofounded a quarter of all new engineering and technology companies formed in the United States between 1995 and 2005, were responsible for a quarter of America’s patents in 2006 (up from 7 percent in 1998)9 and made up seven out of 16 inductees into the National Inventors Hall of Fame in 2009.10 What is significant about the latter set of numbers is that they can be attributed to changes to US immigration law in 1990 that substantially expanded the number of visas available to better-skilled and educated immigrants. This lesson animates the proposal being made here.

#### Boosting immigration solves the economy

Dowell Myers, Professor at the USC School of Policy Planning and Development, director of Population Dynamics Research Group and Co-Director of the Center for the Study of Immigrant Integration, 11-24-2008, “Old Promises and New Blood: How Immigration Reform Can Help America Prosper in the Face of Baby Boomer Retirement,” The Reform Institute, http://www.policyarchive.org/handle/10207/bitstreams/15660.pdf

As the economy has risen to the top of the national agenda, immigration has dropped as a voter concern. However, these two issues are not mutually exclusive and should not be treated as such. While the present economic crisis requires immediate attention and action, an even greater economic challenge, posed by the aging of our society, lies directly ahead. As we seek to recover from the current recession, the onset of the aging effect may hold back our recovery, due to a mounting fiscal deficit, workforce shortages, and weakened housing demand. This paper from eminent demographer Dowell Myers explores how the aging of the population, epitomized by the impending retirement of the baby boom generation, will be a watershed event with severe ramifications for our economy and the standard of living of all Americans. Dr. Myers observes how immigration can mitigate the adverse effects of this monumental demographic shift and make America more resilient in the face of this colossal challenge. The current housing crisis precipitated a major economic downturn that has roiled markets around the globe and caused much anxiety among Americans regarding their financial security. Likewise, aging boomers placing their homes on the market en masse could unhinge the housing market anew, with significant consequences for the economy. However, new arrivals from abroad eager and able to purchase homes could moderate the effects of such a circumstance. The U.S. has benefited immensely from its ability to confront massive challenges and emerge a stronger nation. As this paper illustrates, reforming our broken immigration system will be crucial to enhancing our resilience in the face of the demographic and economic challenges ahead.

#### Decline in skilled foreign immigrants seriously threatens the future of the US economy

Peter J. Landis, employment and business related immigration attorney, 7-10-2009, “Commentary: How U.S. Immigration Policy Hurts the U.S. Economy,” LawFirms.com News, http://www.lawfirms.com/news/immigration-law/immigration-policy-hurts-us-economoy.htm

A growing number of recent studies document what I have long suspected; rather than protecting U.S. workers, increasing restrictions on the legal immigration of foreign workers actually undermines the U.S. economy by hindering efforts to spur technological innovation and impairing America’s ability to compete in the global marketplace. Studies by the Harvard Business School, the National Foundation for American Policy, Peterson Institute of International Economics and the National Science Board demonstrate that highly skilled foreign workers actually create new employment opportunities for U.S. workers. A March 2009 Kaufman Foundation Study, on the other hand, shows that in recent years increasing numbers of highly skilled foreign workers in the U.S., often discouraged by the protracted process and long delays in obtaining lawful permanent resident status here, have been choosing to return to their home countries; an indication the U.S. is losing the world’s best and brightest to countries that compete with us in the global marketplace. When combined with clear and unambiguous census trends showing the aging of the U.S. population and a projected shortage of workers to replace the baby boomers who are beginning to retire, it is evident that our increasingly restrictive immigration policies seriously jeopardize our economy and put the U.S. at a significant competitive disadvantage.

#### Boosting high-skilled immigration is key to competitiveness

Seth Hoy, Research and Communications Associate at the Immigration Policy Center, 3-31-2010, “Immigration and the Future of American Innovation: Does America Need to Pump Up the Volume?,” Immigration Policy Center, http://immigrationimpact.com/2010/03/31/immigration-and-the-future-of-american-innovation-does-america-need-to-pump-up-the-volume/

It should come as no surprise to anyone following the global economy that when it comes to innovation and competition, America has lost that loving feeling. Numbers in key areas of innovation—percentage of patents issued, government funded research and venture capitalists’ investments—are all down. While some point a finger at a weaker economy, others look to poor domestic policy and increased global competition. Either way, American innovation is slowly fading on the global stage. In the Huffington Post this week, Arianna Huffington examined where the United States ranks in terms of global innovation and competition—dead last, according to the Information Technology and Innovation Foundation. The percentage of patents issued to Americans dropped (down 2.3% in 2009), government funded research is down (now 27% from 50% in 1979), and venture capitalists aren’t investing as much in the U.S. (down $12 billion in 2009 from $22 billion in 2008). Why? According to a report by the Boston Consulting Group, America is falling behind in several areas key to supporting innovation—work force quality and economic, immigration and infrastructure policies. The recent economic recession and the loss of our educational edge are also cited as reasons for America’s innovative decline. So how does America pump up the innovative volume? Huffington suggests that America needs to kick internet technology plans into high gear, invest in the green economy and revamp our broken immigration policy to allow more foreign-born entrepreneurs to start businesses in the U.S. and create American jobs. Huffington writes: Great ideas come from all over the world, and if we don’t welcome the people with those great ideas and make it easy for them to come here, they will go elsewhere. Indeed, they already are going elsewhere. Right now the U.S. has an immigration limit for skilled workers of 65,000, and an additional 20,000 slots for those with advanced degrees from U.S. universities. This kind of rigid cap doesn’t make sense in today’s world. The “visa process has been plagued with backlogs resulting from this quota,” says Jonathan Ortmans, a senior fellow at the Kauffman Foundation. “As a result, high-skilled immigrants are looking for opportunities elsewhere in an increasingly competitive global labor market, [and] taking their innovative ideas with them.” While the Start-Up Visa Act—a recent bipartisan bill proposed by Sens. John Kerry (D-MA) and Richard Lugar (R-IN) to “drive job creation and increase America’s global competiveness by helping immigrant entrepreneurs secure visas to the United States”—is a good start, it only goes so far in attracting the best and brightest talent from around the world.

#### The CP boosts high-skilled immigration

Ajay Malshe, Cornell Law School J.D.; Goodwin Procter Fellow at the Capital Area Immigrants’ Rights (CAIR) Coalition in Washington D.C, 2010, “From Obsolete to Essential: How Reforming Our Immigration Laws Can Stimulate and Strengthen the United States Economy,” 3 Alb. Gov't L. Rev. 358, HeinOnline

The simplest solution would be to eliminate the quota requirement and allow the government to issue immigrant visas to individuals regardless of their country of origin. This would be a more efficient method for awarding immigrant visas and would allow employers to retain their highly skilled employees without the fear of losing them to immigration backlogs. In fact, such a proposal was made in the High Skilled Per Country Level Elimination Act of 2008, which sought to eliminate immigrant visa quotas.’85 However, the quota system has been a part of our immigration scheme for some time now and Congress may be reluctant to eliminate it. As an alternative to eliminating the per-country quota, a staggered quota system could be used where quotas for immigrants from countries that possess a larger number of individuals seeking admission are higher than those for immigrants from countries where demand for immigrant visas is relatively low. Based on the State Department’s monthly Visa Bulletin, it is apparent that the demand for immigrant visas is higher for individuals from China, India, Mexico, and the Philippines than from other countries.’86 Congress should enact a higher quota for immigrants from these oversubscribed countries to eliminate backlogs and retrogressions. For countries with a low volume of individuals seeking immigrant visas to the United States, the quota can be lowered. Quotas can be adjusted on a yearly basis by the State Department, based on its projections of how many visas are being sought from each country. This approach is preferable to that taken in the CIR Bill of 2006, which sought to simply increase the quota across the board)87 A staggered system will be more attuned with U.S. economic needs and will maximize the efficiency of the immigrant visa scheme.

### EB Visa CP – Politics NB

#### The CP has critical bipartisan support – prefer our evidence, it assumes changed republican motivations

Stewart J. Lawrence, immigration policy specialist, 1-14-2011, “Is a Deal on Immigration Possible Before 2012?,” http://www.counterpunch.org/lawrence01142011.html

A second option is to punt on legalization and expanded enforcement altogether and to focus for now on visa reform - an issue on which there is already much greater bipartisan agreement. The two sides could agree to work on a bill that made it easier for foreign scientists and engineers to get work visas and to transition to legal residency. That would mean raising or even eliminating the current visa "cap" for high-skill workers (from its current, widely acknowledged to be inadequate level of 65,000) and changing the rules so that foreign-born students in US schools could become legal residents more quickly. The virtue of this approach is that it can be sold as a contribution to US global “competitiveness” - and a blow to China - and a step toward in reviving the depressed economy. While it means importing workers at a time of high joblessness, the workers are widely viewed as ones the country should have. That probably wouldn’t be the case if the visa reform debate were extended to unskilled workers, reviving the age-old polemics over the pros and cons of an economy-wide "guest worker program" which have torpedoed bipartisan initiatives on immigration reform in the past. The GOP far-right has long attacked a guest worker program as a spur to illegal immigration, while the left has viewed it as a system for indentured labor and super-exploitation, much like the infamous Bracero program of the 1950s and 1960s. The Washington Post recently editorialized in favor of focusing on a high-skill visa program, but significantly, said nothing about a guest worker program. The Post was merely reflecting the views of the US business community, especially the high-tech sector, as well as Senate moderates in both parties, including Sen. Lindsey Graham (R-SC) whose support would be critical to initiating such an effort. In short, the vaunted "deadlock" on immigration that many predicted would last through 2012 may not, in fact, last that long. Neither party can afford to be viewed as "obstructionist" on an issue that has proven to be the nation's thorniest and most volatile -but on which the public is demanding real action. In some ways, the tables have now turned: with the GOP running the House, it's finally in a position to set the agenda and to compel the Democrats to respond. And having made clear last week that the agenda is no longer one immediately guaranteed to inflame Latinos, and much of the nation - birthright citizenship - the Democrats must now prepare to parry with the GOP on workplace enforcement - and beyond. Of course, there's always the chance that the two parties may get distracted by other issues, and simply try to punt for two more years. But as the mid-term elections revealed, the do-nothing strategy carries real risks for both parties -- the Democrats especially. Republicans successfully exploited immigration as a “wedge” issue with white voters in key congressional districts, which helped them win the House. But they alienated some Latinos in California and the Southwest, and that clearly helped cost them the Senate. With 23 Senate Democrats up for re-election in 2012, compared to just 10 Republicans, senior Republican strategists have no intention of making that mistake again. Therefore, the best option for Democrats is for the President to get out in front on immigration as quickly as possible and to forge a modest deal that can steal the GOP's thunder. It won't be the whole “enchildada” - not even close. But by demonstrating that he's prepared to embrace the concerns of both parties, and indeed, stand up to his own base, in the short term, Obama may finally "win" with immigration - ensuring his own re-election, averting a further rightward slide, while setting the stage for an expanded legalization program after 2012. Given the current electoral math, that's probably the best the Democrats can hope for.

#### The CP has bipartisan support

Cyrus Mehta, graduate of Cambridge University and Columbia Law School, is the Managing Member of Cyrus D. Mehta & Associates, PLLC, 11-10-2010, “Silver Lining on Immigration After the November 2010 Mid-Term Elections”, http://www.ilw.com/articles/2010,1110-mehta.shtm

Let's hope that our pessimism is off the mark, although I admit that I might be dreaming given that Rep. King's anti-immiration rhetoric is shriller than most even among other enforcement oriented Republicans, http://bit.ly/a6S0ac. There might be common ground between the President, Democrats and Republicans to pass incremental measures, which is now the new mantra if anything can ever be achieved. The Economist also feels that it might be premature to write off any prospect for immigration reform, http://www.economist.com/node/17366155. Indeed, there is precedent for this. Some of the most innovative ameliorative immigration legislation such as the American Competitiveness in the 21st Century Act and the Child Status Protection Act got passed in a Republican controlled Congress. One common ground between the Administration and the new Congress, at least in the short term, is to work together to pass more business friendly immigration measures, such as more H-1B visas for skilled workers and an expansion in the employment-based preferences, with perhaps adding new categories for business entrepreneurs and those with advanced skills in the sciences and technology. Even Rep. King in the BusinessWeek article seems to be inclined to pass measures "for higher-skilled workers only if the potential employees meet criteria to boost the U.S. economy." All these proposals should be appealing to the new Republican leadership at the helm in the House who believe in the spirit of personal responsibility, hard work and enterprise, without relying on the government for a handout. Immigrants best exemplify this ideal. Finally, even though Republicans gained a lot in the mid-term elections, beware that an overtly anti-immigration agenda will see you go down in flames like Sharon Angle in Nevada who demonized immigrants in her election campaign commercials or Meg Whitman whose hypocritical attitude towards her immigrant nanny was telling on the voters, http://bit.ly/cZX2Zo . Indeed, it is likely that the reason why the Democrats still control the Senate is because of Latino voters who either rewarded or punished candidates based on their attitude towards immigrants. Barbara Boxer, as an example, was the recipient of this reward. In the past, one of the reasons for lack of support from Republican leaders, who traditionally supported immigration, was that the Democrats would take credit. This is no longer true after the recent Republican election gains. Now is the time for both the Democrats and the Republicans to work together in Congress, along with the President's support, to pass immigration friendly measures so that both parties can claim credit among voters in future election cycles.

#### EB Visa doesn’t link to politics

Adam Green, Two Bills. Two Choices: EB-5 and Startup Bills Now Before Congress, 6/18/2012 EB-5info.com, <http://info.eb5info.com/bid/144537/Two-Bills-Two-Choices-EB-5-and-Startup-Bills-Now-Before-Congress>

Two new bills now sit before Congress, and both of them could impact the effect of foreign capital – and foreign-born entrepreneurs – on US job creation. The first is Senator Patrick Leahy’s (D-VT) EB-5 bill, which would make the EB-5 visa program permanent. Co-sponsored by Senator Charles Grassley (R-IA), this bill would do precisely what its proponents have been pushing for over the last several years: end periodic Congressional re-authorization of the program and turn EB-5 into an enduring national fixture. Bipartisan support? It’s an ambitious effort, and Senator Leahy has made no bones about his support for it since well before last December’s Senate Judiciary Committee hearing on the EB-5 program. In that meeting, immigration attorney Robert Divine spoke on behalf of IIUSA and suggested that Congress make the program permanent sooner rather than later. If we let EB-5 “sunset” and face re-authorization in perpetuity, he argued, many investors will be afraid to invest in new projects lest the program expire as they make their long-term plans. A compelling argument, indeed, but the question is, will the bill actually pass? 2012 is an election year, of course. And we’re faced with a heavily divided legislature that can’t seem to agree very often. Let’s just hope that our elected representatives can find common ground on job creation – this is a bipartisan bill – and make something happen. This is the legislation that IIUSA, numerous regional centers, civic-minded immigration attorneys, and the larger EB-5 community have worked hard to put into place. Its passage would lead to more investment in this country, which means more new jobs for US citizens. And those things are hard for any politician to oppose, regardless of party affiliation.

#### D-VT bill, EB-5 is on the chopping block

Capitol Quotes, 5/30/12, Leahy introduces bill to permanently authorize job-creating EB-5 foreign investment program, The Mountain Times, <http://mountaintimes.info/news/breaking-news/2012/05/leahy-introduces-bill-to-permanently-authorize-job-creating-eb-5-foreign-investment-program/>

Senator Patrick Leahy (D-VT) introduced legislation Thursday, May 24 to make permanent the charter for a successful, job-creating immigrant visa program that has brought economic development and job growth to Vermont since 1997. After months of negotiation, the legislation introduced Thursday by Leahy will grant a permanent authorization to the EB-5 Immigrant Investor Regional Center program. Vermont's Regional Center has been a successful private-public partnership between the State of Vermont and several Vermont businesses. The bill introduced Thursday will also extend the voluntary E-Verify program, as well as two visa programs for religious workers and the so-called "Conrad 30," or rural doctors, visa. The bill is co-sponsored by the Senate Judiciary Committee's Ranking Member Senator Chuck Grassley (R-Iowa). "Vermont has been a model for the success of the EB-5 Regional Center Program, and I want to see that great success continue for Vermonters, and those who wish to pursue business opportunities in our great state" said Leahy. "I am grateful that Senator Grassley has worked with me to craft this legislation, and I am optimistic its introduction marks the beginning of a strong bipartisan effort to make these long-standing programs permanent. When enacted, the measure we introduce today will also pave the way for my efforts to improve and build upon the EB-5 Regional Center Program to ensure stability for investors and entrepreneurs, and to ensure that U.S. Citizenship and Immigration Services has the tools it needs to keep this program a strong, secure, and vital part of our economy." Leahy has successfully steered short-term extensions of the pilot program through Congress. The current authorization will expire in September 2012. Earlier this week, Leahy secured a three year extension of the programs during the Appropriations Committee's consideration of the Department of Homeland Security appropriations bill. Vermont's Regional Center was re-chartered in 2007. Two Vermont ski resorts, Jay Peak and Sugarbush, are active participants in the Regional Center pilot program and have been engaged in ambitious development projects. Other capital investment projects are in the works around the state. Vermont's Regional Center projects have drawn business and tourism to the state, fueling local economies and creating jobs. Since it was created in 1993, the regional center program has attracted more than a billion dollars in foreign investment to the United States, and created thousands of new domestic jobs - hundreds, in Vermont. There are now over 220 Regional Centers across the country, with new applications pending. The Regional Center program attracts foreign investors seeking legal permanent residency and a chance to invest in the American economy. Investors must pledge a minimum of $500,000 to a project within an approved regional center and independently apply for an EB-5 visa. If approved by U.S. Citizenship and Immigration Services (USCIS), foreign investors are granted a conditional two-year green card. After two years, the investor must provide proof that they have created at least ten jobs as a result of the investment and have met additional investment requirements set by USCIS. As a result of the program's popularity, additional applications are pending with USCIS to establish new Regional Centers in several states.

# Poverty Cards

### Poverty Cards

#### The Obama administration is working hard to reduce the number of people in poverty.

Joel Berg, A nationally recognized leader in the fields of hunger and food security, national and community service, March 2010, http://www.americanprogressaction.org/events/2010/03/wwpoverty.html/

“We have not achieved significant progress over the last 30 years” in reducing poverty, which “rises and falls” with the economy, said Reece Rushing, Director of Government Reform at the Center for American Progress Action Fund, at an event last Friday sponsored by the Center for American Progress’s Doing What Works project and the Half in Ten campaign. There are too many “unwarranted administrative hurdles” to benefits for families in need, but luckily the Obama administration wants to “experiment and innovate” to “expand programs that work,” and contract programs that don’t so that we may redirect funds to those who need it most, he added. Rushing moderated a panel discussion on reforming government antipoverty programs that featured [Joel Berg](http://www.americanprogressaction.org/events/2010/03/inf/BergJoel.html), executive director of the New York City Coalition Against Hunger and author of *All You Can Eat: How Hungry is America*; [Kimberley Chin](http://www.americanprogressaction.org/events/2010/03/inf/ChinKimberley.html), director of Maryland Hunger Solutions; and [Martha Coven](http://www.americanprogressaction.org/events/2010/03/inf/CovenMartha.html), special assistant to the president for mobility and opportunity at the White House Domestic Policy Council. The event also featured the release of a new [report](http://www.americanprogress.org/issues/2010/03/dww_hunger.html) by Berg. “Today, there are 49 million Americans living in households that can’t afford food,” Berg said, and one-third of those eligible for “benefits their tax dollars pay for” do not receive those benefits because of administrative and bureaucratic barriers. According to Berg’s report, there are more than “15 different nutrition assistance programs run by the U.S. Department of Agriculture alone, each of which have different eligibility requirements, application procedures, and physical locations that people must visit to apply.” This difficult maze discourages those who are entitled to these benefits from applying for them, and wastes billions of dollars in administrative and antifraud measures that cost more to implement than they save. It’s clear we need to make “the safety net we already have more accessible,” Coven said. The Obama administration “believes in building the evidence base” by aggregating program data to “better inform decision making” and figure out how to “fund what’s proven…and create a pipeline for promising practices” to deliver services efficiently and remove barriers, she said. For example, the Obama administration wants to revamp the federal poverty measure to provide a more “accurate reflection” of hardship in America and show us what we’re doing to alleviate that, Coven said. But “measuring better should not be a substitute for doing better,” Berg said. It is important to focus on innovative pilot projects, but many established programs already have “decades of evidence” such as the U.S. Department of Agriculture’s Special Supplemental Nutrition Program for Women, Infants and Children, or WIC, which currently serves [45 percent of all infants](http://www.fns.usda.gov/wic/aboutwic/wicataglance.htm) born in the United States, according to Berg. The problem Berg explained is that these programs’ information services are “the most antiquated in the country,” which hampers their coordination and implementation. It’s urgent that we change “the infrastructure” for these programs, said Chin. Current computer and procurement processes are not timely enough to provide the immediate assistance families in need. Moreover, it is too often the case that ambitious policies, announced at the federal or state level, fail to affect change because they are not actually implemented by direct service providers in the counties. Chin commented that, “On the ground, you kind of see a different story sometimes. We can have the best goals and policies,” but without the “nuts and bolts in place,” nothing will get done, Rushing explained. Berg’s report recommends the federal government “combine all these programs into one streamlined, seamless entitlement program available to all families at 185 percent of the poverty line or below. This means any family of three with a yearly income below $33,873 would be eligible.” Hunger costs our society roughly “$130 billion a year,” Berg said. Hungry workers are less productive, hungry students cannot focus, and it drains our health care system to help people who could have easily benefited from preventative programs. Berg believes we could fix this problem for a little more than $30 billion annually and put people on the path to “long-term assets development” and self-sufficiency. Reducing poverty reduces the burden on all of us. According to Coven, all Americans will recognize the benefits of “prevention” savings if they can see the “social returns.”

#### The Aff’s representations of “the poor” create a divide between us and the poor. This division draws a line between us and them, creating “the poor” as something other, different, and morally wrong.

Ruth Lister, member of The Department of Social Sciences and professor of Social Policy at Loughborough University, 2004, “Poverty” pgs 101-102

The notion of ‘the poor’ as Other is used here to signify the many ways in which ‘the poor are treated as different from the rest of society. The capital ‘O’ denotes its symbolic ‘eight. The notion of ‘Othering’ conveys how this is not all inherent state but an ongoing process animated by the ‘non-poor’. It is a dualistic process of differentiation and demarcation, by which the line is drawn between ‘us’ and ‘them’ — between the more and the less powerful — and through which social distance is established and maintained (Bercsford and Croft, 1995; Riggins, 1997). It is not a neutral line, for it is imbued with negative value judgements that construct ‘the poor’ variously as a source of moral contamination, a threat, an ‘undeserving’ economic burden, an object of pity or even as an exotic species. It is a process that takes place at different levels and in different fora: from everyday social relations through interaction with welfare officials and professionals to research, the media, the legal system and policy-making (Schram, 1995). Valerie Polakov, for example, describes how, in the US, schools, teacher training institutions and research institutes are all ‘implicated in the framing of poor children as other, and in institutionalizing the legitimacy of their otherness status’ (1993: 150, emphasis in original).

# Heg CPs

### 1NC Seabasing CP

#### The United States Federal Government should develop and implement a mobile Sea Basing naval capability as quickly as possible aimed at ensuring adequate United States forward deployment and power projection capabilities.

#### Seabasing solves heg

Commander Michael F. Perry, US Navy, 6-5-09, “IMPORTANCE OF SEABASING TO LAND POWER GENERATION”, USAWC PROGRAM RESEARCH. http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA508337&Location=U2&doc=GetTRDoc.pdf

This study reaches six conclusions regarding the importance and future of Seabasing. First, given America’s increasingly limited access to overseas bases, Seabasing is essential to land power generation and will likely become even more essential throughout the 21st Century. Specifically, land power is of little use without access to the internal lines of communication that it seeks to sever and control. Seabasing provides the most efficient and effective means of placing boots on the ground, particularly in the increasingly frequent case where modern air and seaports are unavailable due to underdevelopment, devastation or anticipated losses. Rather, Seabasing allows applying force directly to an objective from the relative security of the sea. Second, Corbett was right. The ultimate center of gravity of any opponent is its homeland and internal lines of communication. Sea and air power lack the direct and sustained influence required to achieve a decisive and lasting victory. Thus, historically, and for the foreseeable future, “imposing one’s will on an enemy involves threatening the integrity of his state” by “threatening or conducting an invasion of his homeland.”98 Such “gun boat diplomacy” works best when one clearly has the ways and means to impose a desired end. Seabasing allows Joint Force Commanders to rapidly mass and move land power around the periphery of a continental opponent and attack at the times and places of their choosing. This clearly communicates the ability of U.S. forces to rapidly respond anywhere in the world. Nothing could be more important to deterring aggression against the U.S. and its allies and supporting American foreign policy.99 Thus, Seabasing “is the most promising option available to national security planners, both civilian and military, because it can achieve political purpose in a manner which most other joint capabilities cannot match.”

### Seabasing CP – Solvency

#### Key to Power Projection – Global access, joint operations, and requisite component of Army and Air Force deployment

Commander Michael F. Perry, US Navy, 6-5-09, “IMPORTANCE OF SEABASING TO LAND POWER GENERATION”, USAWC PROGRAM RESEARCH. http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA508337&Location=U2&doc=GetTRDoc.pdf

The rise of the Soviet Navy during the Cold War presented a new peer competitor and slowed development of sea based support of land power generation. However, the fall of the Soviet Union has renewed interest in “Seabasing.” 3 Once again, the U.S. lacks a peer competitor on the high seas and must reconsider its relevance to national security. The primary difference is that Huntington’s advice has become even more relevant and important. In particular, Seabasing supports the National Security Strategies of the U.S. with mobile operational and logistics platforms that help offset the dramatic decline in U.S. access to overseas bases. These national security strategies require rapid access to potential Joint Operating Areas and deployment of follow-on forces as necessary to deter potential aggressors and execute and reinforce U.S. Foreign Policy. In response, Sebasing allows the U.S. Navy to project military power on short notice anywhere in the globe either unilaterally or in support of Joint and combined operations. This eliminates the need to support marginally democratic regimes for fear of losing access to overseas bases or forcibly seize or establish marginally useful expeditionary air and sea ports. Rather, Joint Force Commanders can apply force directly to an objective at the time and place of their choosing from the relative safety of the high seas. As a result, Seabasing has become a Joint Integrating Concept of great importance to all aspects of the U.S. Department of Defense. Specifically, Seabasing forms one of the “Pillars” of the “Sea Power 21” strategy to evolve the U.S. Navy from a “blue-water, war-at-sea” force to a “global joint operations” force, which is capable of confronting “regional and transnational dangers” on land as well as sea.4 Similarly, Seabasing is essential to transforming the U.S. Army and Air Force to a more responsive and truly joint force. Yet, over 50 years after Huntington first described its importance, the U.S. Navy and Department of Defense are still struggling to clearly define the goals and objectives of Seabasing and overcome the “mythology and misunderstanding” that has “stifled” its development.5 This study defines Seabasing and its relevance to the classic strategies of sea power as well as the current National Security Strategies and Joint Military Doctrine of the United States. As will be shown, Seabasing has become increasingly important to the land and air, as well as sea, services of the U.S. Department of Defense. In particular, Seabasing has become increasingly essential to land power due to the decreasing number of nations willing to grant the U.S. access to overseas bases. Finally, this study discusses the decisions and challenges that have slowed development of Seabasing and concludes that Seabasing can only be developed efficiently and effectively if progressed in a truly joint and organized fashion. At stake is the ability of the U.S. to deter aggression and reinforce its foreign policy with credible and timely threats to potential adversaries and offers of assistance to allies located throughout the world.

#### Seabasing is super awesome

G.J. Flynn, Lt. General USMC, 3-26-2009, “Seabasing,” http://www.quantico.usmc.mil/download.aspx?Path=./Uploads/Files/CDI\_Seabasing%20for%20the%20ROMO%2026%20Mar%2009.pdf

In March 2005 the new National Defense Strategy (NDS) emphasized “the importance of influencing events before challenges become more dangerous and less manageable.”17 It described how the United States faced a time of great uncertainty and had to address an array of current and potential adversaries who would likely use a combination of traditional, irregular, catastrophic and disruptive methods against us.18 It identified the need to enhance eight key operational capabilities, most of which appeared to make the case for a sea-based approach to joint operations. (These included: strengthening intelligence; protecting critical bases of operation; operating from the global commons; projecting and sustaining forces in distant anti-access environments; denying enemies sanctuary; conducting network-centric operations; improving proficiency against irregular challenges; and increasing capabilities of partners—international and domestic.)19 The NDS also espoused the necessity of revising our overseas force posture through a system of main operating bases, forward operating sites, cooperative security locations and, “In addition to these, joint sea- basing too holds promise for the broader transformation of our overseas military posture,” noting that “Prepositioned capabilities afloat are especially valuable.”20 Based on the guidance provided by the NDS, Marine Corps Operating Concepts for a Changing Security Environment (MOC) articulated an updated family of concepts. It noted: Operational Maneuver from the Sea is our conceptual foundation for littoral power projection. The concept of Seabasing advocates a means of rapidly deploying, employing and sustaining globally sourced forces in a manner that provides the President and the joint force commander additional political and military options for overcoming challenges posed by a changing security environment. Another concept, Distributed Operations, builds upon our warfighting philosophy and understanding of that environment to generate training, education, and equipment innovations that will prepare Marines for the challenges ahead...informed by Operational Maneuver from the Sea, and enabled by Seabasing and Distributed Operations...this volume describes Marine Corps forces that will be organized, based, trained and equipped for forward presence, security cooperation, counterterrorism, crisis response, forcible entry, prolonged operations and counterinsurgency.21 Assuming that naval force structure would not change appreciably in the near future but recognizing that the NDS required greater capacity for forward presence, security cooperation and counterterrorism, the MOC proposed additional sizing options for more integrated Navy-Marine Corps forces and associated shipping. These included more frequent use of special-purpose MAGTFs and Marine detachments afloat, along with various combinations of surface combatants, amphibious shipping, prepositioning ships, and high-speed vessels. Two sets of classified CONOPS, one occurring in 2015 and the other in 2025, were subsequently developed to illustrate each of the concepts in the MOC. These CONOPS used approved Defense Planning Scenarios that addressed a broad range of military operations. Even as the MOC was nearing completion, the Navy and Marine Corps began work on Naval Operations Concept 2006 (NOC 06). NOC 06 reflected the logic of the MOC and called for “more widely distributed forces to provide increased forward presence, security cooperation with an expanding set of international partners, preemption of non-traditional threats, and global response to crises in regions around the world where access might be difficult.”22 It described the challenge facing the Navy and Marine Corps as one of remaining “capable of traditional naval missions while simultaneously enhancing our ability to conduct non- traditional missions,” and posited that “U.S. Naval forces are adaptable and have utility across the spectrum of operations. By adaptively task- organizing current and emerging Navy and Marine Corps capabilities into closely integrated force packages tailored to the needs of the Combatant Commanders and their component commanders, we can enhance our capability and capacity to balance the varied and competing demands of the national strategy.” 23 Specifically, NOC 06 espoused seabasing as the means of supporting both expeditionary power projection and proactive security cooperation. With respect to the latter, it advocated the use of global fleet stations (GFS) as one manifestation of seabasing: GFS is a persistent sea base of operations from which to coordinate and employ adaptive force packages within a regional area of interest. Focusing primarily on Phase 0 (shaping) operations, Theater Security Cooperation, Global Maritime Awareness, and tasks associated specifically with the War on Terror, GFS offers a means to increase regional maritime security through the cooperative efforts of joint, inter-agency, and multinational partners, as well as Non-Governmental Organizations. Like all sea bases, the composition of a GFS depends on Combatant Commander requirements, the operating environment, and the mission.24 A second edition of the MOC was published in June 2007 in order to incorporate the 34th CMC’s planning guidance in the preface as well as to nest Chapter 1 more closely with NOC 06. Within a section titled “The Central Idea: Selective Distribution and Re-aggregation” Chapter 1 states: Employed in concert with the other elements of national power and an expanding set of multinational partners, U.S. Naval forces will contribute to denying transnational actors their freedom of movement and action, deterring state support of such actors, providing an effective counter to extremist ideology and winning the war of ideas. Concurrently, U.S. Naval forces must remain capable of deterring regional aggression by state actors, precluding operational/strategic surprise, and effectively responding to the unexpected. U.S. Naval forces will...provide a distributed, persistent, sea-based presence throughout the arc of instability to expand U.S. influence without the increased destabilization that can be the unintended consequences of a heavy footprint ashore. Leveraging our ability to operate from international waters, seabasing will provide both operational maneuver and assured access. Sea-based forces will establish and maintain military to military relationships to increase the number, capabilities, and capacities of our multinational partners. These operations will demonstrate U.S. commitment to such partnerships and provide a positive message by helping the local people to improve their security, infrastructure, economic opportunity, and living conditions. ...While these globally distributed forces will collectively constitute an economy of force operation, their ability to rapidly re-aggregate gives them the concurrent ability to act as a strategic reserve for crises and contingencies. U.S. Naval forces are likely to deploy in a given configuration, disperse to accomplish missions such as forward presence and security cooperation, and then be called upon to merge with other Navy, Marine Corps, joint, interagency or multinational elements to assume different missions such as crisis response or expeditionary power projection.25

#### Seabasing key to land power and air power is insufficient by itself

Commander Michael F. Perry, US Navy, 6-5-09, “IMPORTANCE OF SEABASING TO LAND POWER GENERATION”, USAWC PROGRAM RESEARCH. http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA508337&Location=U2&doc=GetTRDoc.pdf

Similarly, recent events in Kosovo, Afghanistan, and Iraq have demonstrated the limits of air and sea power without adequate land power. Simply put, naval blockades and air strikes influence and interdict, but rarely achieve decisive victory. On the contrary, U.S. ground forces destroy, occupy, exert lasting influence, and communicate he highest level of commitment and determination. “Thus, use of land power or potential use of land power” is typically “the decisive factor” in joint operations. 52 Seabasing reinforces land power with viable options that potential adversaries cannot overcome with anti-access strategies. For example, although the U.S. Army has historically deployed its forces by sea,53 it “has built much of its logistical doctrine with the underlying assumption that logistics bases must be present worldwide.”54 This is an increasingly invalid assumption given the increasing inability of the U.S. to safely station thousands of troops overseas. Rather, joint operations increasingly require rapid response to austere environments with little or no host nation support. In response, the Transformation Plan of the U.S. Army calls for fielding a relatively light “combat-capable brigade anywhere in the world in 96 hours, a division in 120 hours, and 5 divisions in 30 days.”55 Yet, the U.S. Army remains almost exclusively reliant upon the U.S. Air Force to for the rapid deployment of these forces. As a result, rapidly transporting a single medium Stryker Brigade would require securing a friendly aerial port of debarkation and nearly one-third of the C17 and C5 sorties of the U.S. Air Force over a period of 5 to 14 days. This timeline far exceeds the 4 days the U.S. Army desires and places unreasonable demands upon the U.S. Air Force. Thus, “Army officials now recognize that airlift alone will not be sufficient and that some combination of airlift and sealift will likely be used to deploy these brigades.”56 Finally, current U.S. Army plans for sealift and pre-positioned materials still require friendly sea ports of debarkation to handle its relatively large deep-draft ships. This leaves the Army tied to Seabasing could do much to address U.S. Army requirements for access to Joint Operating Areas and expediting deployment thereafter. This will likely involve restructuring the current Strategic Flotilla, pre-positioned stocks, and some Brigade Combat Teams of the U.S. Army to support in-stream joint reception, staging, and onward movement from Seabases.58 For example, the Army has achieved a 50% reduction in the deployment requirements of its Stryker Brigades.59 In addition, Seabasing will require heavy lift aircraft capable of delivering up to 20 tons directly to an objective located up to 240 nautical miles inland60 and Theater Aviation Sustainment Maintenance Facilities to provide the Air Cavalry of the U.S. Army with immediate access to depot level repairs.61

### Seabasing CP – AT: No Capability

#### Military is already developing seabasing – Empirically works

Douglas M. King, Colonel USMC, and John C. Berry, ret. Marine officer, 3rd Q 2008, “Seabasing: Expanding Access,” Joint Force Quarterly, http://www.quantico.usmc.mil/seabasing/resources/BSSB/Seabasing%20Article.pdf

The Navy and Marine Corps have been involved in a number of seabasing initiatives, both operational and programmatic, which have expanded into joint endeavors. The creation of Global Fleet Stations (GFS), for example, is an operational initiative designed to increase the capability and capacity for discrete, proactive activities as describe in the Naval Operations Concept 2006: “Focusing primarily on Phase 0 (shaping) operations, Theater Security Cooperation, Global Maritime Awareness, and tasks associated specifically with the War on Terror, GFS offers a means to increase regional maritime security through the cooperative efforts of joint, inter-agency, and multinational partners, as well as Non-Governmental Organizations. Like all sea bases, the composition of a GFS depends on Combatant Commander requirements, the operating environment, and the mission.”15 To date, GFS experiments have been conducted with our partners in South America and West Africa and have been deemed highly successful.