# Hegemony

## Sea Basing (Neg)

### Sea Basing CP 1NC

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

#### Sea basing solves hegemony – Allows for rapid forward deployment and global deterrence

Michael Perry, 2009, U.S. navy commander, “ Importance of Seabasing to Land Power Generation”, U.S. Army War College, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA508337&Location=U2&doc=GetTRDoc.pdf

Seabasing supports numerous aspects of America’s National Security, Defense and Military Strategies. This is best summarized by President George W. Bush recently declaring that the U.S. is “developing joint sea bases that will allow our forces to strike from floating platforms close to the action, instead of being dependent on land bases far from the fight.”36 In particular, U.S. National Defense Strategy relies upon the “ability to rapidly deploy and redeploy forces” as the “keystone” of U.S. National Military Strategy.37 Seabasing facilitates rapidly assembling and projecting the forces required to address any traditional, irregular, catastrophic and/or disruptive challenge and denies the sanctuary needed to plan attacks against the U.S. and develop weapons of mass destruction.38 This directly addresses national objectives regarding “strategic access” to “retain freedom of action,” “strengthening alliances and partnerships” and establishing “favorable security conditions.”39 Thus, Seabasing reassures our allies, helps deter and defeat potential adversaries, maximizes use of the “global commons” of the high seas, and ensures “timely generation and deployment of military forces” throughout the world.40 This approach to force design and planning “focuses less on a specific adversary” and more on flexibly responding to how an “adversary might fight” at a nearly unlimited number of locations.41 Thus, the extremely flexible capabilities of Seabasing 11 are ideally aligned with the extremely flexible requirements of the National Security, Defense and Military Strategies of the United States.

### Solvency 2NC

#### Sea basing solves hegemony-

#### Leverages our best military asset to boost flexibility and reduce response times

Michael Perry, 2009, U.S. navy commander, “ Importance of Seabasing to Land Power Generation”, U.S. Army War College, 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, Sebasing 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

#### Generates a multiplier effect for land power

Michael Perry, 2009, U.S. navy commander, “ Importance of Seabasing to Land Power Generation”, U.S. Army War College, 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, 21 both civilian and military, because it can achieve political purpose in a manner which most other joint capabilities cannot match.”

#### Meets the demands of modern warfare

DSBTF (Defense Science Board Task Force), 2003, a committee of civilian experts appointed to advise the U.S. Department of Defense on scientific and technical matters, “ Defense Science Board Task Force on Sea Basing”, Department of Defense, http://www.acq.osd.mil/dsb/reports/ADA429002.pdf

Forcible entry from the sea has played an essential role in virtually every major U.S. military operation, from the “shores of Tripoli,” to the Mexican War, the Civil War, the Spanish American War, World War II and the Korean War. Sea-based operations, practiced by both the Army and Marines, have undergone continuous evolution, culminating in the amphibious assaults that played a decisive role in the European and Pacific theaters in World War II and in Korea. The geography of the United States, as an island power with the need to project military power across two great oceans, has made amphibious warfare a core competence in the American way of war. With the end of the Cold War, the world has entered a period of uncertainty. The United States has national interests in many of the world’s potential areas of conflict. It must have the capability to project its military power to deal with a full range of military contingencies. Over the past eight years the Defense Science Board has conducted a series of studies on the tactics, logistics and technology of land warfare in the post Cold War era. Its recommendations have emphasized light, rapidly deployable, maneuver forces supported by remote fires—in other words, the replacement of mass by responsive, precision firepower and maneuver. Others have foreseen a similar future where brigades perform functions that once required corps or divisions.1 These scenarios of future war rest on having intermediate staging bases in or near the theater of operations to support troops, logistics and combat fire support. Recent events in Kosovo, Afghanistan, and Iraq have underlined, however, that the availability of such bases is, more often than not, uncertain due to physical or political factors that delay, limit or prevent their use. Moreover, modern weaponry, such as precision. Seabases, while certainly not immune from attack, can provide the United States with a capability suited to future military needs: most likely areas of future conflict are within reach of the sea. Seabases are mobile, complicating adversary defense operations and providing options for U.S. military forces. Seabases are sovereign, not subject to alliance vagaries, and seabases can be scaled to support activities larger than brigade-sized operations. Forcible entry from modern seabases, however, represents a substantially greater challenge than the amphibious operations of World War II and Korea. Large-scale amphibious assaults across beaches will face increasingly difficult challenges in the future. Instead, forces will initially leapfrog beaches. They will employ air and precision surface assault to penetrate and drive far inland to secure a lodgment, and then move to directly attack military objectives. At present, naval surface fire support lacks the reach and precision to support such movement inland. Thus, combat fire support must come from organic artillery and aircraft. The weight and volume of logistics required to support such inland forces will require high volume, heavy lift air capabilities, at least until U.S. forces have made the shore safe for resupply.

#### Creates force independence

Robert E. Harkavy, 2005, Penn State Political Science Proffesor, “Thinking about Basing”, U.S. Naval War College and Gale Group, http://www.clas.ufl.edu/users/zselden/Course%20Readings/Harkavy.pdf

The United States has been reshaping its global presence to deal with new threats, emanating from sometimes new sources, in a very fluid and complex global environment. It is positioning itself according to new geopolitical emphases (arcs of crisis, African oil fields, etc.) and also in line with its own "transformation"--an emphasis on smaller, lighter, more mobile forces. There is a clear shift away from the residual Cold War global presence, marked by heavy forces stationed where they would be expected to fight--in Central Europe and Korea. The upshot of the scenarios themselves, the comparative costs involved, the necessity to retain military personnel and attend to their families' needs, and a desire to lower the intrusiveness of the U.S. presence and infringement on other nations' sense of sovereignty is that global presence is being seen in terms of trade-offs. The traditional option is forward presence/basing; a new possibility is sea basing; both political and new technological realities, however, increasingly allow for resort to basing military operations in the continental United States (Conus) itself. The latter two broad options are, of course, linked.

But the third, Sea Basing, is considered by many in the Department of Defense to be the most transformational of the three ideas. It envisions putting a substantial Marine Corps ground force on shore and sustaining it from ships at sea rather than from a land base. Thus, the Navy and Marine Corps could conduct amphibious assaults (including "forcible-entry" operations, like those conducted on Japanese-held Pacific islands during World War II) without needing to seize the enemy territory to build a base or to get permission from a nearby country to use an existing base. Supporters argue that sea basing would therefore allow U.S. forces to operate overseas more independently, flexibly, and quickly. (32)

#### We control uniqueness – Sea basing must be implemented to project and sustain our power

Work – Robert, United States Under Security of Navy, distinguished graduate of the Naval Reserve Officers Training Course at the University of Illinois – 2006 – “Reposturing the Force” Naval War College Newport Papers - http://andrewserickson.files.wordpress.com/2008/09/a\_place\_and\_a\_base\_guam\_and\_the\_american\_presence\_in\_east\_asia.pdf

This Sea-Based Transport Fleet, while ideally suited to the strategic conditions of the¶ Cold War, is woefully inadequate for the emerging conditions and challenges of the Joint¶ Expeditionary Era. The U.S. military and its allies are fighting a persistent, global irregular war in which repositioning and support of scarce ground forces is as important as it¶ was in World War II. They are also faced with the possibility of confronting regional adversaries with nuclear weapons, which may be used to coerce regional neighbors into denying access to U.S. forces and to threaten fixed theater points of entry. Moreover, they¶ confront the prospect of increasingly powerful littoral defenses or A2/AD networks using¶ conventional guided weapons, which will require sustained operations from the sea in order to conduct progressive roll-back and theater break-in operations. Finally, the U.S.¶ military may be tasked to provide logistics support to joint forces operating ashore to a¶ degree not required since World War II. All of these circumstances call for the recreation¶ of operationally independent, sea-based fire, maneuver, and logistics forces.¶ It would thus be most accurate to say that “sea basing” is an idea whose time has come¶ again. With deference to Admiral Clark, it hardly seems likely that the future Navy will¶ support joint combat power from the sea “to a greater extent” than it did during World¶ War II or Korea. However, it is certainly true that it will need to be able to project and¶ sustain joint combat power from the sea to a far greater degree than was necessary in¶ the Cold War. Therefore, the former CNO was exactly right to conclude that thinking¶ about sea basing and how it should shape the future Navy should be the first priority¶ for DoN strategists, planners, and fleet platform architects.

### Solv – “Hegemony” XT

#### Sea Basing will help America become a 21st Century hegemon

Henning – Mark, Commander in the US Navy, works in US Army Way College in Pennsylvania – 2005 – <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA432391> “US Navy Transformation: Sea Basing as Sea Power 21 Prototype” USAWC

In summary, this strategic research paper has presented differing perspectives on what has been argued as Sea Power 21's most transformational pillar, Sea Basing. From a naval perspective, Sea Basing is a capability inherent in the Navy’s vision of future joint warfare; however, transformation requires tough choices and the current operating concept requires greater Army and Air Force input. From an expeditionary perspective, Sea Basing is a fundamental requirement to transform the Marine Corps’s vision of future joint warfare and only minor refinements are needed to the current operating concept. From a land power perspective, Sea Basing is an important capability in future joint warfare but the current operating concept has major logistics challenges that must first be overcome if it is to support Army and Air Force units. From a joint perspective, Sea Basing is an important component of the revised global force posture for future joint warfare, and therefore, the joint staff is moving forward in their development of the Sea Basing Joint Integrating Concept. The perspective from the scientific community is that Sea Basing is technically feasible with focused research and development but significant achievements in operational capability are unlikely by 2015. As a result of these differing perspectives, Congressional budget and maritime industrial planners have expressed concern over the disparity between the Navy’s Sea Basing vision, shipbuilding plans, and budget inputs. Throughout this research paper, it has been argued that an incremental, evolutionary approach to Sea Basing is appropriate as the U.S. Navy transitions from its role as a Cold War Superpower to a 21st century Hegemon. Critiques from military leaders as well as historical perspectives all validate a Sea Basing requirement. Proposed programs based on Sea Power 21's Sea Basing vision are a risky investment: "a bridge too far" in terms of time, technology, joint interoperability and money. Recent experiences in Sea Basing demonstrate that low risk alternatives exist today and suggest that simpler, cheaper ways and means may provide an adequate solution to the problem of how to transform the U.S. Navy while winning the GWOT. Experience gained through fleet exercises, theater security cooperation, and future ad hoc operations are required; a critical eye should be maintained for future windows of opportunity where technology, resources, and operational doctrine converge to enable a truly, revolutionary transformation.

### Solv – Quick Response XT

#### Sea basing sovles quick, flexible response times

Barnard – Richard, official editor in chief, specifically for the Navy League of the United States – 04, “Sea Basing Concept Promises a Revolution in Power Projection”, <http://www.navyleague.org/sea_power/jun_04_10.php>

The sea base is scalable to each mission, capable of fast deployment and able to operate independently of in-theater ports or air bases. It must be able to sustain a fighting force 2,000 miles from the nearest friendly base. The Defense Science Board’s (DSB) August 2003 report, “Sea Basing,” states that, “Special operations forces, soldiers and Marines would assemble, together with their equipment, on the sea base to match the mission’s needs. … It entails the projection of land forces substantially beyond the beachhead …[and support] of such forces for prolonged periods.” At the Navy League’s Sea-Air-Space Exposition in Washington, D.C., in April, Hanlon said Rumsfeld had directed all of the services to find ways “to go faster, farther and deeper than we’ve ever done before.” Vice Adm. John B. Nathman, deputy chief of naval operations for warfare requirements and programs, described Rumsfeld’s dictate as “a 10-30-30” strategy under which the services would deploy to a world hot spot within 10 days, defeat an enemy in 30 days and be ready to fight again in another 30 days. Hanlon noted that “whatever we do in the future is going to be a joint fight,” and that the maneuver and speed now expected of joint forces will be easier to achieve because they no longer will be tied to their iron mountain of materiel. “We’ll be able to access things very rapidly from our sea base, take what we need, do our mission and get out of there.”

#### Quick response key to maintaining heg

DOD, 03, Department of Defense, August 2003, “Defense Science Board on Sea Basing” http://www.acq.osd.mil/dsb/reports/ADA429002.pdf

As the picture of the future strategic landscape emerges, it will be difficult to predict whether the U.S. military will have to focus on humanitarian efforts in the future like Somalia,peacekeeping in Europe, fighting a regional hegemon or deterring a country from becoming a nuclear power in our uncertain global security environment. U.S. security strategists cannot foresee the future and determine who will strike U.S. interests, where they will occur or where the U.S. may have to intervene militarily. The term may is significant because if diplomacy fails, the presence of substantial U.S. military power located within striking distance, and its threatened use, may be sufficient in averting a crisis. Threats to U.S. security will almost certainly emanate from non-state actors or rogue regimes located within the Gap, and most likely, they will be located within the littorals. The U.S. will need to respond quickly if deterrence and diplomacy fail, and if the threat is grave enough, preemption may be necessary. Additionally, as economic globalization continues, there will be those countries that feel they are not getting their fair share of the world’s wealth. Any or all of these scenarios will require a force that can arrive “on scene” within days if not hours, provide forcible-entry capability, defend itself, and remain a visible forward presence of U.S. national interests. Sea basing can provide the solutions for all of these diverse scenarios, proving its value in both the political and military realms. While other military employment options are always available to the JFC, none provide the range of military options or quick response offered by a sea based force. Sea basing 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. It can provide a forcible-entry capability that can arrive on location, within days in most cases, providing virtual immediate crisis response, and remain on site if necessary. Sea basing provides a new course for U.S. national security strategy by offering flexibility, mobility, sovereignty and decisive combat power packaged in a world where bases and access cannot be guaranteed.59 It is an evolutionary concept that fully supports the security requirements as set forth in the National Security Strategy. The U.S. should pursue Sea Basing as a capability with strategic relevance and place it at the core of its National Military Strategy.

### Solv – A2: Asymmetric Threats

#### Seabasing is impervious to unconventional threats and US sea power would dominate conventional challenges anyway

Colonel Christopher Mayette, United States Marine Corps, 3-26-09, “SEABASING: A STRATEGY FOR THE 21ST CENTURY?”, Strategy Research Project. http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA500880

Inherent in the mobility of the sea base is an increased level of force protection against many of the common lower end threats. While the “political and security climate in some locations proposed for the U.S. forward bases could require a disproportionate amount of manpower be dedicated to local security requirements,” the sea base derives much of its security from its physical location. 21 Most irregular warfare or unconventional adversaries would need to strike at forces while they were operating ashore. The sea base itself is secure from random small arms fires, mortar fire, car bombs and attacks of that nature. In order to strike at a sea base over the horizon, adversaries would require sophisticated intelligence and surveillance assets as well as sophisticated strike capabilities such as missiles, mines, submarines or a fleet capable of challenging U.S. naval superiority. These sophisticated capabilities do pose a significant threat to the sea base. Nevertheless, these more conventional threats occur in areas where the U.S. can draw on a sizeable naval and technological advantage compared to most adversaries.

#### Key to check terrorists and asymmetric threats

Kate Brannen, Associate Editor @ Inside the Army, 1-11-10, “Army: Seabasing A Critical Capability”. http://www.thegnomesociety.com/2010/01/army-seabasing-critical-capability.html

According to McMaster, the renewed focus on seabasing is linked to the changing threat landscape. ³We now have to worry about industrialized nations, but we have to really worry about the least industrialized nations because our enemies, especially transnational terrorist organizations, they use safe havens as support bases and they typically [are] in lawless areas -- underdeveloped areas in terms of governance and also in terms of infrastructure,² he said. ³So for us to be able to go into those areas, we need different kinds of capabilities.² The increasing rate at which enemies can acquire advanced technologies makes developing a seabasing capability a more urgent need, said McMaster. Recent conflicts highlight the types of capabilities that may soon be developed by potential adversaries, he added. ³There have been some snapshots or harbingers of the future -- in the 2006 Lebanon conflict in connection with dispersed forces using complex terrain to launch rocket attacks into Israel,² he said. ³But what if those rockets were long-range ballistic missiles with a greater degree of accuracy? Well, what that would mean is as we establish staging bases and logistical bases and so forth that those would be vulnerable, maybe, to long-range enemy capabilities.² ³Again, 2006 is an example of this, where you had a non-state actor with a pretty advanced capability of shore-to-ship missiles,² he said.

### Solv – A2: 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.

#### Deployable in less than ten years

Indian Express, 5-4-2009, “All at sea,” http://www.indianexpress.com/news/all-at-sea/454035/1

Basing troops and equipment on foreign soil is fraught with difficulty. Even friendly countries can cut up rough at crucial moments, as America found when Turkey restricted the use of its territory and airspace during the invasion of Iraq in 2003. In an occupied country the situation is worse, as a base is a magnet for attacks. Nor can you always put your base where you need it. If a country does not want to host it, and cannot be bribed to, that-short of invasion-is that. But no one owns the high seas, and partisans rarely have access to serious naval power. So America, still the world's only superpower and thus the one with most need for foreign bases, is investigating the idea of building military bases on the ocean. They would, in effect, be composed of parts that can be rearranged like giant Lego bricks. The armed forces could assemble them when needed, add to them, subtract from them and eventually dismantle them when they are no longer required-and all without leaving a trace. Constructing such bases is a formidable technological challenge. Not only do you have to provide quarters for servicemen, but you also have to handle, store and retrieve large amounts of supplies and weapons without access to dockside cranes. Shuffling the containers carrying these, so that those needed immediately are accessible, is akin to solving a moving-block puzzle where the blocks weigh many tonnes each. But America seems committed to the idea, and the first seabases should be deployable within a decade.

The US is developing Seabasing and it will be longterm

General Michael W Hagee, Commandant of the Marine Corps, 3/10/2004, FDCH Testimony

In the near-term, the Marine Corps' top priorities are to maintain our high state of readiness and to provide capable forces that meet the demanding needs of the Unified Combatant Commanders in order to prosecute the Global War On Terrorism in support of the Nation. For the long-term, the Marine Corps and Navy are committed to developing a Seabasing capability that will provide a critical joint competency for assuring access and projecting power that will greatly improve the security of the United States. The marked increase in our warfighting capability will be apparent as we introduce new systems such as the MV-22 Osprey, the Expeditionary Fighting Vehicle, the Joint Strike Fighter, and the Lightweight 155mm howitzer into our force structure, using them to enhance the already potent combat power of our Marine Air-Ground Task Forces as integral elements of our Nation's joint force.

Seabasing will be available in 2015

States News Service, November 11/4, 2004

A recently completed joint co-sponsored experiment explored joint seabasing capabilities that will be available in the 2015 timeframe. Sea Viking 04 (SV04), a two-week U.S. Joint Forces Command and Marine Corps co-sponsored experiment, which ended on Oct. 29, examined how to best project joint force power ashore relying heavily on a joint seabase, according to Navy Cmdr. Mike Taylor, a USJFCOM joint context wargame planner. "Seabasing offers a lot of flexibility that you don't have with fixed bases ashore," said Taylor who explained that the roughly 200 Army, Navy, Air Force, Marines and coalition service experiment participants brought their seabasing concepts and objectives to the simulated future experimentation scenario. Some experiment objectives included: refining joint forcible entry concepts and joint force projection and sustainment concepts better understanding the distributed collaborative information environment. According to a Pentagon joint forcible entry study, the definition for joint forcible entry is "a designated area in a hostile or potentially hostile territory that, when seized and held, makes the continuous landing of troops and materiel possible and provides maneuver space for subsequent operations." Both a common operational picture and a collaborative information environment compose the backbone for successful seabasing including deployment and sustainment, said Taylor. Coordinating logistics for a hundred ships, thousands of airplanes, and many more service members is complicated and experiment participants, including participants from Australia and the United Kingdom came together at the USJFCOM Joint Experimentation (J9) facility and used data-sharing technology within a collaborative information environment, such as a shared point portal service to distribute pertinent information. Service members from Sweden, Canada, Germany, and France also observed with the experiment. "Everyone wants to know where's the fuel, where's the beans, and where's the bullets," said Taylor in reference to the importance of updating logistics information in a collaborative joint/coalition environment. Many ideas for the experiment came from lessons learned in Iraq and Afghanistan, Taylor noted. During the experiment, analysts were able to see when players were speaking with military and non-military entities, allowing for a more complex analysis of seabasing processes that needed to be refined, according to Taylor. "It's better to see where we need work during experimentation rather than in real-world operations," said Taylor. "Next year, we are taking what we learn in Sea Viking - about seabasing command and control and employ it in Unified Course 05 (UC 05)," the USJFCOM/Navy co-sponsored wargame, said Taylor.

### Solv – A2: Vulnerable

#### Sea Basing solves vulnerability

Lord – Carnes, Editor for the Naval War College – 2006 – Reposturing the Force”, Naval War College Newport Papers, <http://andrewserickson.files.wordpress.com/2008/09/a_place_and_a_base_guam_and_the_american_presence_in_east_asia.pdf> “

Finally, there is the alternative—if indeed it is one—of “sea basing.” Sea basing as a doctrinal term of art has gained currency over the last several years as one of the three “pillars” of the U.S. Navy’s vision document “Seapower 21.” As suggested earlier, the idea of sea basing is not altogether new; it has its roots in the amphibious warfare doctrine of the Marine Corps and in the Navy’s feats of power projection and sea-based logistics support across the Pacific in World War II. Much remains unclear about the current sea-basing concept, particularly its overall scope and its implications for the Composite Default screen design and procurement of future naval platforms. What is clearly new about it, however, is the (implicit or explicit) claim that it will radically increase the ability of U.S. naval and joint forces to operate, and to project power to considerable distances ashore, independently of land bases in friendly countries. Robert Work provides a detailed analysis of sea basing as currently understood, both in a broad strategic context and with reference to the evolution of recent thinking within the Navy and Marine Corps on this subject. While supportive in general of the rediscovery of the sea-basing concept, Work is critical of some of the arguments that have been used in its behalf—for example, the virtually axiomatic claim that a sea base would be less vulnerable than land bases to a competently armed adversary. He is also critical of many of the features of the emerging sea-basing construct, with its emphasis on rapidity of deployment and support of major combat operations, and he cautions about potential costs. According to Work, the utility of sea basing in smaller-scale, irregular conflict scenarios, especially those associated with counterterrorist missions, has been unduly neglected. Work provides a vision for a “sea-based power projection fleet” designed to contribute to both major combat operations and global irregular war, and he sketches a comprehensive, fiscally constrained architecture for such a fleet. In doing so, he breaks much new ground and opens a wide-ranging, long-overdue debate on these issues.

### Solv – A2: Allied Cooperation

#### **Seabasing allows us to flexibly cooperate with allies**

Work – Robert, United States Under Security of Navy, distinguished graduate of the Naval Reserve Officers Training Course at the University of Illinois – 2006 – “Reposturing the Force” Naval War College Newsport Papers - http://andrewserickson.files.wordpress.com/2008/09/a\_place\_and\_a\_base\_guam\_and\_the\_american\_presence\_in\_east\_asia.pdf

It would thus be most accurate to say that “sea basing” is an idea whose time has come¶ again. With deference to Admiral Clark, it hardly seems likely that the future Navy will¶ support joint combat power from the sea “to a greater extent” than it did during World¶ War II or Korea. However, it is certainly true that it will need to be able to project and¶ sustain joint combat power from the sea to a far greater degree than was necessary in¶ the Cold War. Therefore, the former CNO was exactly right to conclude that thinking¶ about sea basing and how it should shape the future Navy should be the first priority¶ for DoN strategists, planners, and fleet platform architects.¶ As a starting point, the Navy should resurrect the idea of a Sea-Based Power-Projection¶ Fleet with three distinct components: a Sea-Based Strike Fleet, consisting of aviation¶ power-projection platforms and VLS-equipped surface combatants and submarines; a¶ sea-based expeditionary maneuver fleet, designed to exploit the sea as a broad maneuver¶ space and to mount combined-arms attacks from the sea; and a mobile Logistics Sea¶ Base, including both combat and mobile logistics forces. While each of these three components plays a critical role in the Sea-Based Power-Projection Fleet, the remainder of¶ this chapter will focus on the future requirements for sea-based expeditionary maneuver.¶ Said another way, it will concentrate on the steps needed to transform today’s Sea-Based¶ Transport Fleet into a flexible and effective Sea-Based Expeditionary Maneuver Fleet.

### A2: Econ k Heg

#### The economy does not determine hegemony – prefer military indicators

Dr. Robert Farley – U Kentucky Diplomacy and International Commerce assistant professor – 3/7/12, Over the Horizon: The Future of American Hegemony, WPR, http://www.worldpoliticsreview.com/articles/11696/over-the-horizon-the-future-of-american-hegemony

How might we know that the American Century has actually ended? Shifts in hegemony rarely come with a herald; even when the U.S. was at its most dominant in 1945, the shape of the future was hardly clear. Indeed, the United States surpassed the United Kingdom in economic power -- and in latent military power -- around the turn of the 20th century, yet no one claims that the American Century began in 1900, or that British hegemony ended when the GDP numbers turned south. Indeed, while the United States surely played a pre-eminent role in global politics after 1945, the existence of the Soviet Union put a wide swath of the globe off limits to direct U.S. influence. In military terms, we are still many years from a replay of the kind of global military and ideological competition that characterized the Cold War, even if we accept worst-case assumptions about China’s growth and belligerence. ¶ The rise of China and India seems inevitable, and it is quite likely that both will exceed the total GDP of the United States before the end of the 21st century. However, the rise of Japan and Europe relative to the U.S. seemed inevitable 25 years ago. Moreover, while the rise of China and India might introduce uncertainty, economic power does not translate automatically into military and political influence. Recall again that the United States possessed the world’s largest economy for some 40 years before “its” century is supposed to have begun. The U.S. also benefitted from advantages that neither China nor India currently enjoy, such as a relatively high per capita GDP and a secure geographic position. Even if the United States holds only a plurality of global military and economic power, it still may remain the most influential state in the world. Russia, China, Japan and India will have more to fear from one another than from the United States, allowing the U.S. to play a critical balancing role. Moreover, the United States has weathered the financial crisis better than some, particularly the European Union. And while China and India have maintained robust growth during the past five years, social, economic and political cracks may be emerging.

### A2: Power Projection Not Key

#### Power projection key to heg – New threat landscape just makes this more true

Kate Brannen, Associate Editor @ Inside the Army, 1-11-10, “Army: Seabasing A Critical Capability”. http://www.thegnomesociety.com/2010/01/army-seabasing-critical-capability.html

To counter this, joint forces will have to work in close cooperation, said McMaster, adding, ³we see an increasing role for joint land forces -- Marine Corps and Army -- to help maintain or preserve freedom of movement and action in those domains.² ³And the Army¹s role in doing that would be to counter the enemy¹s ability to place their capabilities outside of our surveillance and precision strike capabilities and weapon systems,² he said. ³It¹s really a land force that could conduct effective reconnaissance in close terrain and difficult terrain, initially oriented on confirming or denying the presence of the enemy and then transitioning to offensive operations and employing joint capabilities to destroy that enemy force and then go to what we call an area security operation to deny the enemy the ability to use that terrain so we can maintain our own freedom of movement and access in the aerospace and maritime domains.² TRADOC is working with the other services on these concepts. There is a joint capabilities document under development, he said, and a joint capabilities-based assessment under way. The services are working to refine these concepts to ensure ³as we do this capabilities-based assessment, it rests on the strongest conceptual foundation that it can.² McMaster stressed the importance of this expeditionary capability to the Army¹s future. ³It¹s critical to our national security to have the capability to deploy rapidly into these least industrialized, austere environments that don¹t have a lot of mature infrastructure and to deploy a force that can immediately operate effectively with adequate mobility and combined arms capability -- combination of fires, maneuver, all the things you need to be an effective combat force,² said McMaster.

### Agenda Politics NB – A2: Unpopular

#### Defense still a sacred cow

William Brainigin and Walter Pincus, staff writers for the Washington Post, 1-27-2011, “Defense budget cuts come under fire from lawmakers,” Washington Post, http://www.washingtonpost.com/wp-dyn/content/article/2011/01/26/AR2011012607768.html

A day after President Obama pressed Congress for spending reductions in his State of the Union address, House Republicans and Democrats challenged some of Defense Secretary Robert M. Gates's plans to cut $78 billion from the Pentagon budget over the next five years. At the opening hearing of the House Armed Services Committee on Wednesday, the new Republican chairman, Rep. Howard P. "Buck" McKeon (Calif.), said that while he agrees with Gates "that we must scrutinize defense programs to ensure we are getting the most bang for our buck and concentrating our limited resources on the highest-priority programs . . . I will not support initiatives that will leave our military less capable and less able to fight." Deputy Defense Secretary William J. Lynn III told the committee that over the past six months, the services had achieved Gates's goal of saving $100 billion over the next five years by reducing excess spending and ending programs such as the Marines' amphibious landing craft. The savings are to be applied toward each service's operating expenses and spent on weapons deemed necessary. In addition, at the direction of the White House, the services have projected $78 billion more in cuts in overall Pentagon spending in the five years beginning in 2012. McKeon took issue with those reductions, saying the military services are not allowed to reallocate savings derived from shrinking the size of the Army and Marine Corps.

#### Strong lobbies support defense-spending

US State News, 9-13-09, “MILLENNIUM DEVELOPMENT GOALS, NOT MILITARY SPENDING, MUST BE AT HEART OF NATIONAL SECURITY, SPEAKERS TELL DPI/NGO CONFERENCE ROUND TABLE”. Lexis.

During the ensuing question-and-answer period, one participant asked if the United States was ready to reduce military spending as a precondition for increased security, peace and development, as called for in Article 26 of the United Nations Charter. Another expressed concern over militarism in Chile, which had experienced its own "9/11" in 1973, when a military coup led by Augusto Pinochet ousted the President. Several non-governmental organization representatives said they were moved by Ms. Anaya's statement, and supported her call for justice for impoverished, disadvantaged people who had fallen into a life of crime and violence. One asked about the process of forgiveness, and its link to global security. Several participants asked how quality education could be achieved in Mexico and elsewhere. In response, Ms. Berrigan said it was in fact possible for the United States to reduce its military budget. In April, there had been some rearranging at the United States Pentagon, which was looking at weapons systems that were no longer relevant to national security and military concerns. A proposal to cut military expenditures by 25 per cent had been made, but there was disagreement over where to cut spending. Cutting spending required political will and not bowing to pressure from the strong lobby in Washington, D.C., of weapons manufacturers. The United States and other countries had much to learn from countries like Costa Rica that did not have a military budget, but had achieved national security.

#### Efficiency is key – Bipartisan support if the counterplan offsets inefficient programs

Post-Standard Syracuse, 5-24-09, “GILLIBRAND ADDS CNY BACKERS TO STOP PRIMARY FIGHT”. Lexis.

President Barack Obama's invite list to the White House took on a decidedly Central New York appearance this past week. The president invited Maffei to join him at bill signing ceremonies twice during the week, while also extending a hand across the aisle to host Rep. John McHugh, R-Pierrepont Manor. McHugh was part of a more intimate group of only five members of the House and Senate Armed Services committees who joined Obama on Friday morning at the White House Rose Garden. McHugh could be seen on national television broadcasts, standing in a prominent spot behind Obama's right shoulder as the president signed the Weapon Systems Acquisition Reform Act of 2009. The legislation, which passed Congress with broad bipartisan support, is aimed at cutting wasteful and inefficient spending on defense projects. McHugh, as the ranking Republican on the House Armed Services Committee, played a crucial role in passing the bill.

## Sea Basing – Aff Answers

### Solvency – Heg

#### Seabasing can’t respond to new threats and trades off with other military capabilities

Tangredi, Sam J - regional director of the planning consulting firm Strategic Insight Ltd / retired U.S. Navy captain – 10/1/11, SEA BASING: Concept, Issues, and Recommendations, Publication: Naval War College Review, <http://www.readperiodicals.com/201110/2441210281.html#b>

Whether sea basing can replace land bases, or at least dependence on land bases, raises bureaucratic issues within DoD that contribute to the reluctance to commit to joint sea basing. For one thing, a greater commitment to sea basing— along with a qualitative or quantitative reduction in overseas land bases—might cause allies and partners to question American commitment to mutual defense. To some extent, however, it is a question of foresight. If the future of American war fighting consists of pacifying terror-supporting insurgent groups within landlocked countries or continuing the use of quick-striking SOF forces supported by land-based tactical aviation (including unmanned aerial vehicles flown from the continental United States), investment in sea basing would not seem a priority.22 At times this seems to be Secretary Gates’s view, but not always. 23 If future wars are going to be dominated by ever more precise global strike from the continental United States—which would seem to be the U.S. Air Force’s preferred future—sea basing would also seem a low priority. However, if the future involves a range of regional crises in which the United States wishes to retain direct influence, there is a lot to commend sea basing as a primary instrument. As antiaccess capabilities of potential opponents expand, the survival of regional land bases becomes problematic. The exact locations of these bases are well known; they can be struck repeatedly by ballisticmissiles relying solely on preprogrammed coordinates. But prioritizing sea basing could also mean a future defense posture in which overall DoD force structure is predominantly maritime. Relying primarily on naval assets as the foundation of most joint force regional basing could be seen as a defeat for jointness—which is still largely considered in DoD to mean proportional shares of the pie for all services (and major defense agencies).This is a formula that theGates Pentagondid not break, and as defense cuts are imposed on major acquisition programs, it is likely that they will affect the services roughly equally. Although the developing planning related to the “Air/Sea Battle” operational concept would seem to be bringing Air Force–Navy cooperation to a peak, the potential for competition for resources between sea basing and global strike in a flat defense budget is obvious. At the same time, the Air Force is not keen to admit the vulnerability of its long-term regional bases, which are presumed to be TANGREDI 35 required if land-based tactical aviation is to be effectively applied to a regional contingency. The Army has an interest in resupplying its forces—presumably already on the ground—by sea, but it has no interest in becoming a secondmarine corps. Until May 2011, the Army’s focus—with program leadership by the Department of the Navy—was the development of the Joint High Speed Vessel (JHSV), a ferry-based logistics catamaran built by Austal USA. The JHSV,which is not considered combat survivable, is designed for high-speed insertion of troops in “‘soft power’ missions—responding to natural disasters, providing humanitarian assistance, conducting port visits and training partner military forces, among others.”24 InMay, the Army transferred its share of the JHSV program to the Navy. Under these circumstances, sea-basing proponents might emphasize supplementing regional bases rather than replacing them. But in a flat or shrinking defense budget, “supplementing” any capability would likely be seen as a luxury.

#### Seabasing fails – costly and inflexible

Robert E. Harkavy, Professor of Political Science at Pennsylvania State University, 2006, “Thinking about Basing,” http://www.clas.ufl.edu/users/zselden/Course%20Readings/Harkavy.pdf

The CBO report briefly discusses four arguments against sea basing, whether on a modest or major scale. (36) Those arguments are the possible inability of even maximal sea-basing schemes to deal with large-scale military operations, such as in Iraq in 1990-91 and 2003; the vulnerability of sea bases to attack from ballistic and cruise missiles, maybe even greater than that of less concentrated land bases; the seeming unlikelihood that the United States would attempt large scale amphibious operations when it has not done so since the Korean War; and the expense of all the new ships and connectors needed. Though the third argument may be specious--this is what sea basing is all about, the projected lesser availability of land bases in an ambiguously evolving global political climate--but the other three are serious. For instance, the sea-basing force envisioned by the CBO for 2035 could cost seventy to ninety billion dollars over that period. Such numbers would dwarf the current non-Egypt/Israel security assistance budgets, raising the prospect of trade-offs between them and sea basing.

### Solvency – No Tech

#### Sea Basing will fail – we don’t have the technology

Henning – Mark, Commander in the US Navy, works in US Army Way College in Pennsylvania – 2005 – “US Navy Transformation: Sea Basing as Sea Power 21 Prototype,” USAWC <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA432391>

In summary, this strategic research paper has presented differing perspectives on what has been argued as Sea Power 21's most transformational pillar, Sea Basing. From a naval perspective, Sea Basing is a capability inherent in the Navy’s vision of future joint warfare; however, transformation requires tough choices and the current operating concept requires greater Army and Air Force input. From an expeditionary perspective, Sea Basing is a fundamental requirement to transform the Marine Corps’s vision of future joint warfare and only minor refinements are needed to the current operating concept. From a land power perspective, Sea Basing is an important capability in future joint warfare but the current operating concept has major logistics challenges that must first be overcome if it is to support Army and Air Force units. From a joint perspective, Sea Basing is an important component of the revised global force posture for future joint warfare, and therefore, the joint staff is moving forward in their development of the Sea Basing Joint Integrating Concept. The perspective from the scientific community is that Sea Basing is technically feasible with focused research and development but significant achievements in operational capability are unlikely by 2015. As a result of these differing perspectives, Congressional budget and maritime industrial planners have expressed concern over the disparity between the Navy’s Sea Basing vision, shipbuilding plans, and budget inputs. Throughout this research paper, it has been argued that an incremental, evolutionary approach to Sea Basing is appropriate as the U.S. Navy transitions from its role as a Cold War Superpower to a 21st century Hegemon. Critiques from military leaders as well as historical perspectives all validate a Sea Basing requirement. Proposed programs based on Sea Power 21's Sea Basing vision are a risky investment: "a bridge too far" in terms of time, technology, joint interoperability and money. Recent experiences in Sea Basing demonstrate that low risk alternatives exist today and suggest that simpler, cheaper ways and means may provide an adequate solution to the problem of how to transform the U.S. Navy while winning the GWOT. Experience gained through fleet exercises, theater security cooperation, and future ad hoc operations are required; a critical eye should be maintained for future windows of opportunity where technology, resources, and operational doctrine converge to enable a truly, revolutionary transformation.

#### Designs for seabasing capabilities don’t even exist-and can’t support full combat operations

Amol M Sabnis, Lt Cdr, Indian Navy, 2004, “Concept of Sea Basing and its Effect on Indo -US Relations: The Way Ahead,” online: http://dodreports.com/pdf/ada520272.pdf

Sea Basing as a concept is bound to develop further and take a more concrete form. At the very least, it will involve the presence of a large number of US ships in various parts of the world. These forward-deployed ships will give the capability for the US to immediately deploy its forces in any region of the world. Sea basing will give the capability to deploy personnel up to brigade strength according to the magnitude of the crisis. It will also speed up the tempo of operations ashore, give the US the capability to sustain operations for a longer duration than present and permit re-constitution and re-deployment of forces. The shortcoming of sea basing is that it will not be able to support a full combat operation of the magnitude of Operation Iraqi Freedom without host nation support. Yet, the current capabilities of ships and aircraft are inadequate to meet the demands of sea basing. Future designs will have to cater for these requirements. Mobile Offshore Bases or semi-submersible platforms may be an integral part of the sea base. However, these concepts will have to further develop before they can turn into reality. Sea Basing is an incremental concept and it does not appear to have any fixed deadlines as of now. Considering the current capabilities vis-à-vis the future capabilities, the concept will take at least fifteen more years to mature into a full-fledged system.

### Solvency – Allied Coop

#### Transition to seabasing freaks out our allies

Sam Tangredi, regional director of Strategic Insight Ltd. And author of numerous articles on strategy and defense policy, Autumn 2011, “Sea Basing: Concepts, Issues, and Recommendations,” Naval War College Review, Vol. 64, No. 4 http://www.usnwc.edu/getattachment/d49d4281-7790-435d-9b3f-c7df59fb1544/Sea-Basing--Concept,-Issues,-and-Recommendations

Whether sea basing can replace land bases, or at least dependence on land bases, raises bureaucratic issues within DoD that contribute to the reluctance to commit to joint sea basing. For one thing, a greater commitment to sea basing— along with a qualitative or quantitative reduction in overseas land bases—might cause allies and partners to question American commitment to mutual defense. To some extent, however, it is a question of foresight. If the future of American war fighting consists of pacifying terror-supporting insurgent groups within landlocked countries or continuing the use of quick-striking SOF forces supported by land-based tactical aviation (including unmanned aerial vehicles flown from the continental United States), investment in sea basing would not seem a priority. 22 At times this seems to be Secretary Gates’s view, but not always. 23 If future wars are going to be dominated by ever more precise global strike from the continental United States—which would seem to be the U.S. Air Force’s preferred future—sea basing would also seem a low priority.

### Links to Agenda Politics

#### Causes fights

Sam Tangredi, regional director of Strategic Insight Ltd. And author of numerous articles on strategy and defense policy, Autumn 2011, “Sea Basing: Concepts, Issues, and Recommendations,” Naval War College Review, Vol. 64, No. 4 http://www.usnwc.edu/getattachment/d49d4281-7790-435d-9b3f-c7df59fb1544/Sea-Basing--Concept,-Issues,-and-Recommendations

However, tighter resource constraints usually bring out the worst in organizational rivalries and bureaucratic politics; a clash among sea basing, global strike, planning for future wars like the wars we are in, recapitalizing or “resetting” land forces, and expanding special-operations capabilities seems inevitable. Under the current Pentagon leadership and the economic constraints facing the U.S. government, such a clash would likely find sea basing on the short end.

# Warming

## Carbon Tax (Neg)

### Carbon Tax CP 1NC

#### Text: The United States Federal Government should implement a revenue-neutral carbon tax.

#### A carbon-tax is the only way to reduce emissions – corrects incentives and creates spill-over effects

Carbon Tax Center ’10 “Why a Carbon Tax?”, Carbon Tax Center: Pricing Carbon Efficiently and Equitably, March 3, <http://www.carbontax.org/introduction/#no-tax-increase>

The rationale for a carbon tax is simple: the levels of CO2 already in the Earth’s atmosphere and being added daily are destabilizing established climate patterns and threatening the ecosystems on which we and other living beings depend. Very large and rapid reductions in the United States’ and other nations’ carbon emissions are essential to avoid runaway climate change and avert resulting severe weather events, inundation of coastal areas, spread of diseases, failure of agriculture and water supply, infrastructure destruction, forced migrations, political upheavals and international conflict. A carbon tax must be the central mechanism for reducing carbon emissions. Currently, the prices of gasoline, electricity and fuels in general include none of the costs associated with devastating climate change. This omission suppresses incentives to develop and deploy carbon-reducing measures such as energy efficiency (e.g., high-mileage cars and high-efficiency heaters and air conditioners), renewable energy (e.g., wind turbines, solar panels), low-carbon fuels (e.g., biofuels from high-cellulose plants), and conservation-based behavior such as bicycling, recycling and overall mindfulness toward energy consumption. Conversely, taxing fuels according to their carbon content will infuse these incentives at every link in the chain of decision and action — from individuals’ choices and uses of vehicles, appliances, and housing, to businesses’ choices of new product design, capital investment and facilities location, and governments’ choices in regulatory policy, land use and taxation. A carbon tax won’t stop global climate change by itself — other, synergistic actions are required as well. But without a carbon tax, even the most aggressive regulatory regime (e.g., high-mileage cars) and “enlightened” subsidies (e.g., tax credits for efficiency and renewables) will fall woefully short of the necessary reductions in carbon burning and emissions.

### Solvency – Emissions/Warming

#### Note: There are more cards in the Hoya-Spartan Adv CP file. This is not a 2nc block but some additional cards; integrate them into one file.

#### Carbon Tax solves econ and warming, B. C. proves

Bauman and Hsu, 12, [Yoram Bauman](http://www.standupeconomist.com/), an environmental economist, is a fellow at Sightline Institute in Seattle. [Shi-Ling Hsu](http://www.law.fsu.edu/faculty/shsu.html), a law professor at Florida State University, is the author of “The Case for a Carbon Tax.” 7/4/12, http://www.nytimes.com/2012/07/05/opinion/a-carbon-tax-sensible-for-all.html?\_r=1

ON Sunday, the best climate policy in the world got even better: British Columbia’s carbon tax — a tax on the carbon content of all fossil fuels burned in the province — increased from $25 to $30 per metric ton of carbon dioxide, making it more expensive to pollute.¶ This was good news not only for the environment but for nearly everyone who pays taxes in British Columbia, because the carbon tax is used to reduce taxes for individuals and businesses. Thanks to this tax swap, British Columbia has lowered its corporate income tax rate to 10 percent from 12 percent, a rate that is among the lowest in the Group of 8 wealthy nations. Personal income taxes for people earning less than $119,000 per year are now the lowest in Canada, and there are targeted rebates for low-income and rural households.¶ The only bad news is that this is the last increase scheduled in British Columbia. In our view, the reason is simple: the province is waiting for the rest of North America to catch up so that its tax system will not become unbalanced or put energy-intensive industries at a competitive disadvantage.¶ The United States should jump at the chance to adopt a similar revenue-neutral tax swap. It’s an opportunity to reduce existing taxes, clean up the environment and increase personal freedom and energy security.¶ Let’s start with the economics. Substituting a carbon tax for some of our current taxes — on payroll, on investment, on businesses and on workers — is a no-brainer. Why tax good things when you can tax bad things, like emissions? The idea has support from economists across the political spectrum, from Arthur B. Laffer and N. Gregory Mankiw on the right to Peter Orszag and Joseph E. Stiglitz on the left. That’s because economists know that a carbon tax swap can reduce the economic drag created by our current tax system and increase long-run growth by nudging the economy away from consumption and borrowing and toward saving and investment.¶ Of course, carbon taxes also lower carbon emissions. Economic theory suggests that putting a price on pollution reduces emissions more affordably and more effectively than any other measure. This conclusion is supported by empirical evidence from previous market-based policies, like those in the 1990 amendments to the Clean Air Act that targeted sulfur dioxide emissions. British Columbia’s carbon tax is only four years old, but preliminary data show that greenhouse gas emissions are down 4.5 percent even as population and gross domestic product have been growing. Sales of motor gasoline have fallen by 2 percent since 2007, compared with a 5 percent increase for Canada as a whole.¶ What would a British Columbia-style carbon tax look like in the United States? According to our calculations, a British Columbia-style $30 carbon tax would generate about $145 billion a year in the United States. That could be used to reduce individual and corporate income taxes by 10 percent, and afterward there would still be $35 billion left over. If recent budget deals are any guide, Congress might choose to set aside half of that remainder to reduce estate taxes (to please Republicans) and the other half to offset the impacts of higher fuel and electricity prices resulting from the carbon tax on low-income households through refundable tax credits or a targeted reduction in payroll taxes (to please Democrats).¶ Revenue from a carbon tax would most likely decline over time as Americans reduce their carbon emissions, but for many years to come it could pay for big reductions in existing taxes. It would also promote energy conservation and steer investment into clean technology and other productive economic activities.¶ Lastly, the carbon tax would actually give Americans more control over how much they pay in taxes. Households and businesses could reduce their carbon tax payments simply by reducing their use of fossil fuels. Americans would trim their carbon footprints — and their tax burdens — by investing in energy efficiency at home and at work, switching to less-polluting vehicles and pursuing countless other innovations. All of this would be driven not by government mandates but by Adam Smith’s invisible hand.¶ A carbon tax makes sense whether you are a Republican or a Democrat, a climate change skeptic or a believer, a conservative or a conservationist (or both). We can move past the partisan fireworks over global warming by turning British Columbia’s carbon tax into a made-in-America solution.

#### Carbon tax substantially reduces emissions and gets other nations on board

Handley ’09 James Handley, chemical engineer and attorney who previously worked in the private sector and for the Environmental Protection Agency, March 11, “Imagine: A Harmonized, Global CO2 Tax”, Carbon Tax Center, http://www.carbontax.org/blogarchives/2009/03/11/imagine-a-harmonized-global-co2-tax/

In their seminal report last February, “Policy Options for Reduction of CO2 Emissions,” Peter Orszag (now Budget Director) and Terry Dinan of the Congressional Budget Office meticulously compared cap-and-trade with carbon tax options. They concluded that a carbon tax would reduce emissions five times more efficiently, primarily because of price volatility under a fixed cap. CBO had no difficulty “imagining a harmonized global carbon tax.” Chapter 3 of the Orszag-Dinan report, “International Consistency Considerations,” describes straightforward ways to harmonize carbon taxes. If nations choose different carbon tax rates, border tax adjustments permitted under World Trade Organization rules authorize higher-taxing nations to enact tariffs to equalize tax rates on imported products to the same levels applied to similar domestically-produced products. Indeed, Rep. John Larson’s new carbon tax bill employs precisely this strategy. In effect, the U.S. would collect and retain the revenue generated by equalizing carbon taxes on products imported from countries that haven’t enacted their own or whose carbon tax rate is lower than ours. That will provide a powerful incentive for our trading partners to follow our lead. In contrast, under cap-and-trade, harmonization would require determining the implicit carbon price in a system where carbon prices are hidden and fluctuating. The CBO report observed, “Linking cap-and-trade programs would… entail additional challenges beyond those associated with harmonizing a tax on CO2.” The report noted, for example, that linked cap-and-trade programs could create perverse incentives for countries to choose less stringent caps so they could become net suppliers of low-cost allowances. Or, the report continued, if a country that did not allow borrowing future allowances linked with a country that did, firms in both countries would have access to borrowed allowances. CBO concluded that “[O]ther flexible design features — such as banking, offsets, and a safety valve — would be available to all firms in a linked system should any one country allow its firms to comply in those ways.” In short, national cap-and-trade systems would be nearly impossible to harmonize globally because different countries are likely to enact cap-and-trade systems with differing features that when linked would tend to defeat or de-stabilize each other. On the other hand, harmonization of domestic carbon taxes using border adjustments is a familiar and straightforward process for international trade and tax law experts under WTO.

#### Carbon Tax is the Most Effective way to Solve Emissions with many Benefits

Handley, 12 Book Review: The Case for a Carbon Tax, by Shi-Ling Hsu, James Handley, 7/6/12 http://www.carbontax.org/blogarchives/2012/07/06/book-review-the-case-for-a-carbon-tax-by-shi-ling-hsu/

“The Case For A Carbon Tax” (Island Press, 2011, 233 pp) brings to mind Hans Christian Andersen’s “ugly duckling” story. The word “tax” screams “cost” to most people, and so the beauty of a carbon pollution tax isn’t apparent on first glance. Prof. Hsu reveals the beauty as he shows why a gradually-rising carbon tax is the least costly and most effective policy for curbing the pollution driving global warming, and how enacting such a tax can usher in a new era of clean energy and efficiency.¶ Trained in engineering, law and economics, Shi-Ling Hsu, a law professor who has just moved from the University of British Columbia to Florida State University, deftly marshals a multi-disciplinary “case” for a carbon tax. He opens by describing and comparing the four main climate policy tools: subsidies, regulations, cap-and-trade, and carbon taxes. Then he briskly articulates ten arguments for a carbon tax, emphasizing economic efficiency and the advantages of basing a coordinated international system on a simple, transparent tax.¶ Hsu is especially strong in rebuttal, answering the arguments against carbon taxes, including the oft-repeated assertion that a carbon tax is politically impossible. He dissects psychological “hang-ups” that have kept the public and elected officials from embracing carbon taxes. Hsu points to British Columbia’s enactment and implementation of North America’s first carbon pollution tax, arguing that it is broadly supported because its revenue is used to reduce taxes for individuals and businesses. As Hsu and Yoram Bauman wrote this week in their New York Times op-ed, “The Most Sensible Tax of All“:¶ On Sunday, the best climate policy in the world got even better: British Columbia’s carbon tax — a tax on the carbon content of all fossil fuels burned in the province — increased from $25 to $30 per metric ton of carbon dioxide, making it more expensive to pollute. This was good news not only for the environment but for nearly everyone who pays taxes in British Columbia, because the carbon tax is used to reduce taxes for individuals and businesses. Thanks to this tax swap, British Columbia has lowered its corporate income tax rate to 10 percent from 12 percent, a rate that is among the lowest in the Group of 8 wealthy nations. Personal income taxes for people earning less than $119,000 per year are now the lowest in Canada, and there are targeted rebates for low-income and rural households.¶ Hsu crisply articulates the theory of Pigouvian taxes — the idea of taxing pollution rather than productive activity. But he sidesteps the thorny question of how high to set a carbon tax and how rapidly to increase it. And he does not mention the potential efficiency advantages of using carbon tax revenues to reduce other taxes such as taxes on work and thereby use climate policy to improve overall economic well-being. (Economists call that a “double dividend.”) He notes that while British Columbia’s carbon tax is revenue-neutral, the regressive effects of carbon taxes can be addressed by a wide variety of other mechanisms, leaving substantial revenue for cash-strapped governments, as recent reports and a new book by the International Monetary Fund have stressed.¶ Hsu delves into the limitations of EPA regulations, which he shows cannot create the broad incentives for innovation and planning needed to drive carbon eminssions way down:¶ A [carbon] tax, by imposing a cost on every single ton of pollutant, constantly engages the polluter with the task of reducing her pollution tax bill. By contrast, a command and control scheme that mandates a one shot, irrevocable installation of pollution control equipment allows for the polluter to stop thinking about pollution reduction. Why, if compliance is achieved, should the polluter look for other ways to reduce?¶ There are further problems, too: EPA can too easily be persuaded or intimidated by industry into granting exemptions and relaxing standards. Hsu also glosses over the enormous effort that would be required to write and enforce permits for each of the thousands of point sources of CO2. One has to wonder where and how the already-stretched EPA (and state environmental agencies) would find funding for such a massive undertaking.¶ Hsu neatly unveils the hidden high cost of taxpayer-funded subsidies of renewables and supposed low-carbon fuels. Subsidies, along with regulations and cap-and-trade with offsets, are attractive to the public and Congress despite serious limitations on their effectiveness, because their costs are largely hidden. Not only is Congress notoriously ineffective at picking technology winners, but subsidies create “lock-in” to incumbent technologies and businesses, foreclosing opportunities to spur innovation. In contrast, as Hsu shows, a carbon pollution tax’s laser focus on CO2 pollution creates incentives for all low-carbon alternatives, leaving specific technology decisions to engineers rather than politicians.¶ Cap-and-trade with offsets seems to be Hsu’s choice for second-best policy; it allows flexibility and could result in a “price on carbon” pollution, albeit one that is indirect and subject to price volatility. Happily, Hsu debunks the notion of “emissions certainty” that was used to sell cap-and-trade, by pointing out that for a “stock” pollutant such as CO2 that persists in the atmosphere for a century, the objective must be cumulative rather than annual reductions. Even year-to-year “emissions certainty” is vitiated in the European Emissions Trading System by provisions allowing borrowing and banking of allowances as well as by voluminous offsets. Carbon prices there have remained so low that recent analyses have concluded that industrial facilities will have little incentive to reduce their emissions through at least 2020.¶ Hsu points out the hidden costs that cap-and-trade would impose on consumers, profiting the financial sector and purveyors of offsets. His most egregious example: Chinese refrigerant manufacturers who garnered far more revenue from offsets awarded for destroying their greenhouse gas byproducts than from the sale of their underlying products. As documented by UN and GAO reports, the carbon market paid about 100 times more for the installation of emissions reducing equipment (an HCFC 23 incinerator) than the price of the equipment. The Chinese refrigerant manufacturer and the investors in the offset project reaped those windfalls, contradicting claims about the efficiency of cap-and-trade.¶ As Hsu illustrates, evaluating and verifying offset projects is staggeringly difficult. Applications for hundreds of different project types are submitted to a single U.N. panel with little capacity to evaluate “additionality” — to determine whether projects would have occurred in the absence of offset funding. Stanford University law professor and offset expert Michael Wara estimates that 30-50% of offset projects in the U.N. systems should not have been awarded credit, a fraction so large as to overwhelm any claim of “emissions certainty” under a cap with offsets.¶ Hsu concludes that linking cap-and-trade internationally would offer constant opportunities for mischief and arbitrage. In contrast, under a tax every country would have an incentive to scrupulously monitor emissions in order to collect the revenue. Moreover, the transparency of a carbon tax offers potential for international linkage via World Trade Organization sanctioned Border Tax Adjustments. WTO rules were built around a consumption tax — the European Union’s Value Added Tax; Hsu suggests that a carbon tax should similarly be supportable under WTO rules. But he seems to understate the capacity of Border Tax Adjustments to protect domestic energy-intensive industry while offering a growing monetary incentive to trading partners to enact their own carbon taxes.¶ Finally, Hsu’s discussion of the psychology of carbon taxes adds a dimension that we haven’t seen elsewhere. As behavioral economists like Daniel Kahneman have shown, we humans tend to underestimate the benefits of avoiding future harms while overestimating the cost to avoid them. And when a harm isn’t clearly identified with a specific person or persons, we have difficulty feeling concern. One child trapped in a well evokes national interest and empathy, but because we can’t see or name the millions who might drown or starve because of climate instability, we refuse to bear the near-term price of avoiding catastrophe. And we are easily misled into thinking that policies whose price is hidden, such as subsidies, regulations or cap-and-trade with offsets, are preferable to a carbon tax. Hsu proposes that polls disclose the cost of all policy alternatives in order to fairly gauge public opinion.¶ Hsu has managed the difficult task of writing a book that is at once readable and authoritative, comprehensive and concise in its “case” for the most broadly effective, least-bureaucratic and least-costly approach to the climate crisis: a gradually-rising carbon pollution tax. We highly recommend “The Case For A Carbon Tax” to either the novice or the experienced reader who is looking for a single source to get either them up to speed or give them further insight on effective climate policy.

#### Carbon Tax has been Extremely Successful and Effective

Place and Bauman, 12 , ERIC DE PLACE AND YORAM BAUMAN Yoram Bauman, an environmental economist, is a fellow at Sightline Institute, a regional sustainability research centre in Seattle.¶ Eric de Place directs Sightline Institute’s energy policy program. 7/9/12, the Sun, Washington, Oregon should take cue from B.C.’s carbon tax, http://www.vancouversun.com/business/economy/Washington+Oregon+should+take+from+carbon/6908073/story.html

It’s been a rough year for climate solutions in Canada. Prime Minister Stephen Harper officially pulled the plug on Canada’s participation in the Kyoto accord last December. The move was all the more discouraging for being largely symbolic: Canada’s greenhouse gas emissions trends are nowhere close to achieving the reductions called for by the agreement. Meanwhile, coal mining and oil extraction are on the rise in Western Canada.¶ Even British Columbia’s carbon tax — arguably the world’s best climate policy — seems at risk of stalling out.¶ Yet on the occasion of the carbon tax’s fourth birthday — and final scheduled increase — British Columbians have reason for good cheer.¶ With apologies to Shakespeare, we come not to bury the carbon tax but to praise it.¶ From our vantage point south of the border, the carbon tax is a smash hit. It’s not perfect, but it is a working model of a “tax shift” — the sensible idea of taxing things we don’t want (like pollution) and un-taxing things that we do want (like income). It’s an idea that is gaining support in B.C.’s West Coast neighbours, Oregon and Washington.¶ Many economists agree that putting a higher price on carbon is the most effective strategy for combating climate change. Since B.C.’s carbon tax was introduced, gasoline consumption per capita in the province has dropped by 4.5 per cent, more than anywhere else in Canada. This modest short-term reduction will lead to more significant long-term reductions as households and businesses invest in more energy-efficient cars, homes, workplaces and lifestyles.¶ Plus, B.C.’s carbon tax shift is partly to thank for an income tax that is the lowest in the country, and a corporate income tax rate that remains among the lowest in the G7. Lower-income and rural residents receive tax rebates, and some simple tweaks to the tax would ensure greater fairness and equity going forward.¶ Skeptics would do well to remember that ending the carbon tax would mean cutting government services or, more likely, just taxing something else — probably something B.C.’s residents and businesses would rather not tax. For an example of how not to structure taxes, the province need not look far.¶ Washington state’s tax system is an unravelling disaster. Sales taxes reach as high as 9.5 per cent, helping to create the most regressive tax system in the United States. And our start-up-killing business tax, which taxes gross receipts rather than profits, is roundly detested by the state’s business community. If Washington were to import B.C.’s common-sense carbon tax shift, it would be a vast improvement to the tax system. Alternatively, Washington could use some of the carbon tax revenue to address multibillion-dollar shortfalls in core government services like education and transportation.¶ B.C. is leading the way, but that doesn’t mean the province is alone. On July 1, the day B.C. increased its carbon tax for the final time, Australia also inaugurated a carbon tax shift. Meanwhile, California will launch its new cap-and-trade program Jan. 1.¶ It would be understandable if Canadians have given up hope that Americans will ever get our act together to address global warming. But the American public seems to be ahead of Washington, D.C., and the mainstream U.S. media. In fact, a poll conducted by Yale and George Mason University in November 2011 found that fully 65 per cent of Americans support a modest revenue-neutral carbon tax, including a majority of Republicans.¶ Public opinion is likely to become even more favourable to carbon pricing in the near future. Climate change will get more attention as the economy recovers from the financial crisis, global temperatures continue to rise and the Intergovernmental Panel on Climate Change releases new scientific assessments in 2013 and 2014.¶ British Columbia has blazed the path forward. It’s up to Oregon and Washington to complete a regional bloc of smart climate policy in the Northwest — and British Columbians should take pride in their leadership.

#### Carbon Tax is Fast Acting

Monitor, 12, Monitor Editorial, Time for U.S. to tax carbon emissions, 7/12/12 <http://www.concordmonitor.com/article/341381/time-for-us-to-tax-carbon> emissions?SESS14b045f33a8e7eac97e5786e0724f0ef=google

Anthony Thomas was an externality. So were Sherry Garrett and Ann Narcisse. They are among at least 18 Chicago residents whose deaths in recent days were attributed to the heat wave that has baked middle America this summer.¶ Externalities are costs - or benefits - that are not paid by the producers or consumers of a product but by society. No one can trace a path between the carbon dioxide emitted by a polluter, the added warming of the planet that it caused, and the hot air in the last breath taken by a heat wave's victim. It's possible that, even if human activity wasn't changing the climate, the heat waves would have occurred anyway. But the links between carbon emissions and the weird and worsening weather keep getting stronger.¶ Fortunately, many nations are making a major effort to combat climate change. The United States and its crippled Congress aren't.¶ On July 1, Australia's government imposed a tax on carbon emissions by major polluters equivalent to $23.50 U.S. dollars per ton. Also this month, British Columbia raised its tax on carbon emissions from $25 to $30 per metric ton. The Canadian province instituted the tax in 2008 as a way to reduce both carbon emissions and the tax burden on individuals and businesses. It began at $10 and increased by $5 every year until it reached its current $30 cap.¶ European and Scandinavian nations have taxed carbon emissions for years. Even China, where environmental concerns have not exactly been front and center, plans to institute a carbon tax in 2015. The United States, which is the world's No. 2 carbon-emitting nation after China, should lead, not follow on this issue, and institute a carbon tax of its own next year.¶ Economist Yoram Bauman and law professor Shi-Ling Hsu, writing in The New York Times, applauded British Columbia's carbon tax system and explained how a similar system could work in the United States. In British Columbia, in just four years, the tax reduced carbon dioxide emissions by 4.5 percent and raised enough money to lower the corporate tax rate from 12 percent to 10 percent. Taxes on personal income for those earning less than $119,000 went down as well, and low-income residents get rebates to offset the increased cost to consumers attributed to the tax.¶ "Substituting a carbon tax for some of our current taxes - on payroll, on investment, on businesses and on workers - is a no-brainer. Why tax good things when you can tax bad things, like emissions?" Bauman and Hsu wrote.¶ A $30 carbon tax in the United States would raise roughly $145 billion per year, enough to reduce corporate and individual income taxes by 10 percent and still leave $35 billion to spare, Bauman and Hsu concluded. That money could be used any number of ways, from subsidizing alternative energy and energy efficiency programs to reducing the deficit.¶ There would also be a voluntary component to the carbon tax, which electric utilities, oil and gas companies and others would pass on. Consumers could reduce their carbon tax bill by switching to a renewable fuel, biking instead of driving to work, insulating their homes and taking other steps to curb energy use.¶ A carbon tax would make polluters pay for doing a bad thing, emitting a greenhouse gas that warms the planet. Through lower taxes, it would reward people for doing good things: earning, saving and investing. A bill to institute a national carbon tax will almost certainly come before the next Congress. When it does, New Hampshire's congressional delegation should unite in support of it.

#### Carbon Tax is Cost Effective and Benefits Everyone

Colebatch, 12, Tim Colebatch is The Age’s economic editor, The economists got it right, that's the truth, 7/3/12 http://www.smh.com.au/opinion/politics/the-economists-got-it-right-thats-the-truth-20120702-21d7q.html

¶ I'VE come to think we should take more notice of economists. You might see them as impractical nerds. But look back over our long debate on how to tackle climate change, and one thing stands out: the economists got it right, the politicians got it wrong.¶ Last year the Economic Society of Australia surveyed its members on 46 policy issues. On some, it found economists evenly divided: on the merits of the NBN, for example, or whether Australia should promote nuclear power, whether patients should pay more of their health bills, and whether the GST should be lifted so income tax and company tax can be reduced.¶ Labor's cost-benefit rules are far from comprehensive, but they're better than none. ¶ ¶ But on other issues economic opinion is clear cut. Top of the list is whether taxpayers' money should be spent on big infrastructure projects without an independent publicly released cost-benefit analysis first to check the project stacks up. The survey found 85 per cent of economists want cost-benefit studies to be mandatory. (Who doesn't? Politicians.)¶ Surprisingly, the second most clear-cut response was on climate change: 79 per cent of economists agreed that price-based mechanisms - a carbon tax, subsidies or an emissions trading scheme - are a better way to tackle climate change than using direct regulation.¶ Advertisement ¶ Tony Abbott has an economics degree but, being Tony, I doubt that he's a paid-up member of the union; he probably didn't take part. But after his insistence that the NBN be subject to a cost-benefit analysis, we might have hoped that he would apply the same rule to his own policies. Alas, not so.¶ On Saturday, Abbott pledged to spend $4 billion of our money on three showpiece road projects, with no requirement that they pass a cost-benefit analysis. His Melbourne project was the East-West Link, which failed a cost-benefit analysis when proposed in 2008.¶ The Gillard government is now paying for the Baillieu government to try to come up with a business case for a revised plan. If it does, fine. But surely our money should not be used to pay for projects that cost more than they're worth.¶ Labor's cost-benefit rules are far from comprehensive, but they're better than none. It matters because the start of any new government is a chance to improve the rules - or make them worse. Abbott is signalling that, under his government, cost-benefit equations won't matter. Politics will rule.¶ The start of a carbon price is a rare victory for the economists, and the biggest reform by the Rudd/Gillard governments. It culminates a process that began a decade or so ago when Peter Costello, Alexander Downer and David Kemp took a joint submission to cabinet proposing a price on carbon emissions. John Howard rejected it at the time, but finally took it to the 2007 election as policy.¶ It should not be a left/right issue and, in most of the world, it isn't. Go to Britain, Germany, Sweden, the Netherlands, South Korea or New Zealand, and you will find Abbott's counterparts there are just as committed to carbon pricing as Julia Gillard is. (Britain's Tory PM David Cameron wrote to Gillard last year to congratulate her on the carbon tax, praising it as ''a strong and clear signal'' to the rest of the world.)¶ Abbott will destroy it, but future Australian governments, left and right, will bring back carbon pricing, because it is the cheapest, most effective way to tackle global warming, which, if left unchecked, could do immense damage to our world.¶ A carbon price works because it gives business and individuals an incentive to cut greenhouse gas emissions. Despite the Coalition's claims, it is not an economy-wide tax - if it were, it would be far bigger. Rather, it is a tax on emissions from electricity, gas and emissions-intensive industries. It will cost households $10 a week, $5 in electricity and gas bills - if we do nothing.¶ But the beauty of this tax is that you can avoid it, by using less electricity and gas. Of all the options to cut emissions, it pushes us towards making our use of energy more efficient.¶ There are many ways to do this: turning the thermostat down a degree or so, or the aircon up; replacing energy guzzlers such as plasma TVs or halogen lights with energy-efficient alternatives; just turning switches off. You pay that $5 a week only if you do nothing to adapt.¶ It's a decentralised, democratic way to reduce emissions: we choose how to do it, in ways that preserve profits and living standards. Treasury and the Productivity Commission had been nudging the Howard government to do it for years. They were right, and had Howard responded in time, it might have been as uncontroversial here as it was in Europe or New Zealand.¶ Instead, both sides derailed us into bad policies and point-scoring. If energy efficiency is the cheap way to cut emissions, putting solar panels on our roofs and paying excessive prices for the power they generate is one of the most expensive. We've finally realised that now, but the economists warned us from the start.¶ The politicians gave us gimmicky programs that cost us heaps, but put off the low-cost solution. Both sides used the issue to divide us, rather than unite us behind making a modest but effective start to tackling this potential crisis.¶ ¶

#### Carbon tax is the most efficient way to slow warming

Gardner ’08, Timothy Gardner, Energy and Environment Correspondent for Reuters, Carbon tax seen as best way to slow global warming, Reuters, <http://www.reuters.com/article/2008/10/09/us-climate-finance-sachs-idUSTRE4988X020081009>

Cap and trade has emerged as the dominant attempt to slow global warming. Global deals in permits to emit greenhouse gas emissions have hit nearly $65 billion a year. The European Union, under the Kyoto Protocol, has embraced cap and trade since 2005 and voluntary markets have developed in the United States, the developed world's top carbon polluter. But a straight carbon tax on energy production -- at an oil wellhead or refinery for instance -- would be simpler and cheaper than putting a cap on tens of thousands of polluters, Jeffrey Sachs, a special advisor to the U.N. secretary general and director of the Earth Institute at Columbia University told a panel on Thursday. As the world prepares to form a successor agreement to the Kyoto Protocol by the end of next year, focus is sharpening on how well cap and trade markets are fighting emissions. Carbon taxes would quickly cut emissions across all sectors of the economy, including vehicles and manufacturing, said Sachs. It could also be more efficient than spreading the trade of permits across the financial system. "Having a lot of people engineer financial instruments for carbon when there are much more direct ways to do this strikes me as not really a great investment," Sachs said. "I'm also not so keen on sending our best and brightest off to do more financial engineering," he said. "I think the kind of (financial) meltdown we have right is a little bit of an example of how we've taken a generation of young people and put them in tasks that don't really solve social problems." Yvo de Boer, the U.N. climate chief, told the panel he doubted voters in the United States and other countries would accept new taxes. Sachs admitted that the United States is "neurotic" about new taxes, but said they would be the best way to fund research and development and subsidies for big low-carbon energy projects such as nuclear plants and transmission systems to bring solar power from the Southwest and wind power from the Great Plains states to cities on the coasts. Sachs criticized one of the mainstays of climate trade that has developed in the European Union. Under the Kyoto Protocol the Clean Development Mechanism allows rich countries to offset their carbon footprints by investing in clean energy projects like small wind farms or hydroelectric dams in developing countries. "Things like the CDM are just unfortunately very marginal small tools that aren't going to change the broad framework of how energy is produced and how technology is developed and distributed," said Sachs. De Boer said the CDM has met its goals but that a range of tools could be developed to improve it. Investments could be widened, for instance, to improve whole sectors of developing countries, such as mass transit systems in large cities.

### Solvency – Dependence

#### Solves oil dependence by boosting natural gas use and domestic oil drilling

Houser ’11, Trevor Houser works at Peterson Institute for International Economics, American Eyes on Australia's Carbon Tax, PIIE, Op-ed in the Australian Financial Review, July 12, 2011, <http://www.iie.com/publications/opeds/oped.cfm?ResearchID=1873>

A carbon tax has long been the favorite tool among economists for reducing greenhouse gas emissions. Imposing a tax on something that reduces welfare (like pollution) can allow policymakers to reduce taxes on things that increase welfare (like employment, investment or innovation). And it’s not just liberal economists that find a carbon tax attractive. Gregory Mankiw, Chairman of the Council of Economic Advisors under George W. Bush and Douglas Holtz-Eakin, senior economic advisor to Senator John McCain during the 2008 Presidential Campaign, have both argued the merits of taxing carbon and using the revenue to cut economically distorting corporate and payroll taxes. It’s the deficit reduction potential of a carbon tax that could give US climate policy a new lease on life. This economic logic has elicited support from some leading Republican politicians as well. Most notable is Senator Lisa Murkowski of Alaska (the highest ranking Senate Republican on energy policy issues) who, while opposing efforts by the Environmental Protection Agency to regulate greenhouse gas emissions, has publically supported a carbon tax. She is joined by ExxonMobil chief executive Rex Tillerson, who argues the economic certainty that comes with a carbon tax is more important than the environmental certainty you get with cap-and-trade. And for Americans increasingly concerned with the security of the country’s energy supply, a carbon tax could yield some unexpected benefits. A colleague and I recently analyzed all leading energy security proposals currently bouncing around Washington—from vehicle efficiency standards to expanded offshore oil drilling. And we threw a carbon tax in just for fun. To our surprise the carbon tax did more to reduce US dependence on foreign oil than almost any other proposal because it both reduced oil demand and increased domestic supply. The latter occurs thanks to a) an increase in natural gas liquids production, an oil substitute pumped alongside the natural gas used to replace coal-fired power plants, and b) CO2 captured from remaining coal-fired power plants used to coax more oil out of older domestic wells.

### Elections NB – A2: Unpopular

#### A revenue-neutral carbon tax is popular – true for majorities in BOTH parties

Handley ’11 James Handley, chemical engineer and attorney who previously worked in the private sector and for the Environmental Protection Agency, Majority in U.S. Support Revenue-Neutral Carbon Tax, Carbon Tax Center: Pricing Carbon Efficiently and Equitably, <http://www.carbontax.org/blogarchives/2011/12/02/majority-in-u-s-support-revenue-neutral-carbon-tax/>, 12/2/11

Sixty-five percent of Americans now support a modest revenue-neutral carbon tax to reduce pollution and create jobs, according to a survey of one thousand American adults conducted jointly last month by the Yale Project on Climate Communication and the George Mason University Center for Climate Change Communication. This is the first poll we have seen showing that a majority of Americans support a carbon tax. Majority support for a carbon tax spanned the political spectrum in the Yale-George Mason poll, with 51% of self-identified Republicans, 69% of independents and 77% of Democrats supporting a carbon tax with revenue returned as lower taxes. The survey found 60% support for a $10/ton CO2 tax if revenue is returned by reducing income taxes. (The pollsters helpfully noted that $10/ton CO2 equates to around 10 cents per gallon of gasoline.) That support slipped to 49% if revenue is returned via annual checks to families, with each family receiving the same amount. The apparent preference for an income tax shift over a “dividend” runs counter to the view that voters are more likely to embrace direct checks than tax shifts. The survey did not poll on monthly checks, nor on the payroll tax shift approach backed by many economists and embodied in Rep. John Larson’s carbon tax bill. In the poll, 70% of respondents rated global warming as a high priority for the President and Congress, suggesting that reality in the form of this year’s record-breaking 14 weather-related disasters in the U.S. may be affecting public opinion more than the constant drumbeat of industry-funded climate science denial. Greater funding for research on renewable energy was supported by an overwhelming 78% of respondents, with greenhouse gas regulation supported by 63%, slightly less than the 65% support for a carbon tax. The survey also found that 70% of respondents oppose fossil fuel subsidies, including a whopping 80% opposition among independent voters. The Carbon Tax Center has long urged polling organizations to query voters on revenue-neutral carbon taxes, in order to test opinions on carbon taxes apart from anti-government sentiments. The strong public support for a revenue-neutral carbon tax evidenced by this groundbreaking survey suggests we are on the right track.

#### More ev.

Pike, 11, Cara Pike, Founder and Director of the Social Capital Project, <http://www.climateaccess.org/blog/cap-not-trade-study-shows-support-carbon-tax>, November 22nd, 2011, “Cap not trade study shows support carbon tax”

According to Public Support for Climate & Energy Policies in November 2011, produced by the Yale Project on Climate Change Communication and the George Mason University Center for Climate Change Communication, there is strong majority public support (65%) in the United States for revenue-neural carbon taxes, particularly when these taxes “help create jobs and decrease pollution.” As with most climate-related issues, support is higher with Democrats; however, even a majority of Republications (51%) can get behind revenue-neutral taxes.

### Elections NB – A2: Popular

#### Public pays no attention to the CP – they aren’t worried about warming

Eric Schulzke, 7/10/12, Deseret News writer, North American oil, gas reserves put global warming on defense, http://www.deseretnews.com/article/865558803/North-American-oil-gas-reserves-put-global-warming-on-defense.html

Global warming is slipping as a policy emphasis among American voters. According to a recent poll by the Washington Post and Stanford university, "Just 18 percent of those polled name it as their top environmental concern. That compares with 33 percent who said so in 2007, amid publicity about a major U.N. climate report and Al Gore’s Oscar-winning documentary about global warming. Today, 29 percent identify water and air pollution as the world’s most pressing environmental issue. "The Natural Resources Defense Council sees burgeoning oil exploitation as a leap backward in the battle to control carbon emissions. Referring Canada's proposal to route an oil pipeline through the U.S. heartland, the NRDC blog recently asserted that building the pipeline "would hinder progress to combating global warming."¶

### Agenda Politics NB – A2: Unpopular

#### Obama won’t have to push the CP – even oil lobbyists and leading Republicans like the CP

Houser ’11, Trevor Houser works at Peterson Institute for International Economics, American Eyes on Australia's Carbon Tax, PIIE, Op-ed in the Australian Financial Review, July 12, 2011, <http://www.iie.com/publications/opeds/oped.cfm?ResearchID=1873>

A carbon tax has long been the favorite tool among economists for reducing greenhouse gas emissions. Imposing a tax on something that reduces welfare (like pollution) can allow policymakers to reduce taxes on things that increase welfare (like employment, investment or innovation). And it’s not just liberal economists that find a carbon tax attractive. Gregory Mankiw, Chairman of the Council of Economic Advisors under George W. Bush and Douglas Holtz-Eakin, senior economic advisor to Senator John McCain during the 2008 Presidential Campaign, have both argued the merits of taxing carbon and using the revenue to cut economically distorting corporate and payroll taxes. It’s the deficit reduction potential of a carbon tax that could give US climate policy a new lease on life. This economic logic has elicited support from some leading Republican politicians as well. Most notable is Senator Lisa Murkowski of Alaska (the highest ranking Senate Republican on energy policy issues) who, while opposing efforts by the Environmental Protection Agency to regulate greenhouse gas emissions, has publically supported a carbon tax. She is joined by ExxonMobil chief executive Rex Tillerson, who argues the economic certainty that comes with a carbon tax is more important than the environmental certainty you get with cap-and-trade. And for Americans increasingly concerned with the security of the country’s energy supply, a carbon tax could yield some unexpected benefits. A colleague and I recently analyzed all leading energy security proposals currently bouncing around Washington—from vehicle efficiency standards to expanded offshore oil drilling. And we threw a carbon tax in just for fun. To our surprise the carbon tax did more to reduce US dependence on foreign oil than almost any other proposal because it both reduced oil demand and increased domestic supply. The latter occurs thanks to a) an increase in natural gas liquids production, an oil substitute pumped alongside the natural gas used to replace coal-fired power plants, and b) CO2 captured from remaining coal-fired power plants used to coax more oil out of older domestic wells.

#### CP has bipartisan support

Handley ’09 James Handley, chemical engineer and attorney who previously worked in the private sector and for the Environmental Protection Agency, March 11, “Imagine: A Harmonized, Global CO2 Tax”, Carbon Tax Center, http://www.carbontax.org/blogarchives/2009/03/11/imagine-a-harmonized-global-co2-tax/

Political Feasiblity: Gore also lamented that “our political system has special difficulty considering a carbon tax even if it is revenue neutral.” He has a point. After decades of anti-tax propaganda from the likes of Grover Norquist, Congress is understandably inclined to hide carbon pricing under a name like “cap-and-trade.” But when that first cap-and-trade price spike hits a public that was sold cap-and-trade as the un-tax, won’t its superficial naming advantage evaporate like morning dew? Will “cap-and-trade” still sound better than “revenue-neutral carbon tax” when we’re stuck with a slow, complex, costly and ineffective system? Moreover, unlike cap-and-trade, a national carbon tax is showing signs of bipartisan support. One reason is that a carbon tax dispenses with the protracted drafting and wrangling inherent in cap-and-trade. British Columbia implemented its carbon tax in five months.

#### Carbon tax is bipartisan

Romm ’12, Senior Fellow at American Progress, editor of climate progress, and holds a Ph.D. in physics from MIT (Joe, Bipartisan Support Grows for Carbon Price as Part of Debt Deal, Climate Progress, February 24th, http://thinkprogress.org/climate/2012/02/24/431830/bipartisan-support-carbon-price-debt-deal/)

At the end of this year, the United States will confront a trifecta of difficult fiscal challenges: The Bush tax cuts will be set to expire; the defense budget and spending on civilian programs will face a $110 billion sequester; and a new extension of the federal debt limit will be looming. At the same time, the evidence will be clearer than ever that urgent action is needed to protect our nation and the world from irreversible climate change. The overwhelming scientific consensus will have grown even stronger. And if 2011 is a harbinger of our future, record-breaking droughts and storms will have again afflicted our nation — at immense cost in lives and property damage. These fiscal and environmental problems may appear unrelated. But as a bipartisan group of current and former members of Congress, we want to propose a new idea: These seemingly intractable challenges are easier to address together than separately…. If budgeting is ultimately about choices, enacting a policy that reduces dangerous air pollution while providing hundreds of billions of dollars in debt relief should be a no-brainer. No other policy would do as much for our economy, our security and our future as putting a price on carbon. That’s the opening of a bipartisan Washington Post op-ed on how a price on carbon could immediately help America address two of its biggest long-term problems, global warming and the national debt. The authors: Democrats Henry A. Waxman and Edward J. Markey represent California’s 30th District and Massachusetts’s 7th District, respectively, in the House of Representatives. Republicans Sherwood Boehlert and Wayne Gilchrest formerly represented New York and Maryland districts, respectively, in the House. As I first reported last May, a “high and rising price for carbon pollution has emerged as a credible deficit reduction strategy.” Then in July, I pointed out, ”The only plausible scenario now for seriously addressing US greenhouse gas emissions in a way that would enable a global deal and give us some chance of averting catastrophic multiple, simultaneous climate impacts is for a serious carbon price to be part of the post-2012-election budget deal.” Now 4 members of Congress, 2 Ds and 2 Rs, have stated the obvious: Since higher revenues must be part of any grand bargain to address the debt, a price on pollution makes the most sense. And yes, Yes, I’m aware the two Republicans ain’t in Congress any more. Ya gotta start somewhere! Here is more of their argument: The best approach would be to use a market mechanism such as the sale of carbon allowances or a fee on carbon pollution to lower emissions and increase revenue. Using these policies, the United States could raise $200 billion or more over 10 years and trillions of dollars by 2050 while cutting carbon emissions by 17 percent by 2020 and 80 percent by 2050, providing transition assistance to affected industries, and supporting investments in clean-energy technologies. Such a policy would have enormous benefits beyond its fiscal contributions. As the National Research Council of the National Academy of Sciences concluded last year, “The risks associated with doing business as usual are a much greater concern than the risks associated with engaging in strong response efforts.” Inaction on climate means more intense and frequent heat waves, more droughts, more flooding and more loss of coastline. Delaying action just until the end of the decade will quadruple costs to the global economy, according to the International Energy Agency.

## Carbon Tax – Aff Answers

### Solvency

#### Note: There are more cards in the Hoya-Spartan Adv CP file. This is not a 2nc block but some additional cards; integrate them into one file.

#### CP causes more emissions from the developing world

Elliott et al ’12 research scientist and fellow at University of Chicago Computation Institute, Ian Foster, Sam Kortum, Gita Khun Jush, Todd Munson, David Weisbach, February 27, The University of Chicago and Argonne National Laboratory, “Unilateral Carbon Taxes, Border Tax Adjustments and Carbon Leakage”, INSTITUTE FOR LAW AND ECONOMICS WORKING PAPER NO. 600 (2D Series), page 3 http://ssrn.com/abstract=2072696

While there are a number of important motivations for this approach, there are two central concerns. The first is whether a carbon price that exempts developing nations can sufficiently reduce global emissions. The developing world is expected to be a major source of emissions in the future. Even if the developed world were to cut its emissions drastically, atmospheric carbon dioxide would not be stabilized by this action alone. The second concern is that if only developed nations impose carbon controls, emissions in the developing world might go up, offsetting any reductions, in a phenomenon known as carbon leakage. Carbon leakage is thought to arise for two reasons. First, if only a subset of nations impose controls on emissions of carbon dioxide, energy-intensive production may flee to regions without controls. Second, if nations with carbon controls use fewer fossil fuels, the price of fossil fuels may go down, resulting in more use in other regions. Carbon leakage has the potential to defeat the purpose of having carbon controls, inefficiently shift the location of production and energy use, and create domestic political challenges.

### Solvency – Turns Econ

#### A carbon tax would hurt the economy – businesses can’t expand.

Johnson ’12 policy research associate at Americans for Tax Reform, June 14, “Kissing Cousins and Carbon Taxes”, Americans for Tax Reform, http://www.atr.org/kissing-cousins-carbon-taxes-a6970

Testifying in front of the Senate Finance Committee on tax and energy issues, Harvard’s Dr. Dale Jorgenson proposed a tax increase on fossil fuels equivalent to a 1.5 percent increase in federal revenues as a percent of GDP. Chairman Baucus asked if the increase is a “cousin” to a carbon tax and Dr. Jorgenson replied “a kissing cousin.” Defending the tax increase as a way to reduce consumption of carbon based fuels; Dr. Jorgenson claimed such a tax would be most effective if heavily weighted towards coal—this sounds like a carbon tax to us. A carbon tax harms American industries and consumers at a time when businesses need access to cheap energy sources so they can grow our way out of the Great Recession. The Energy Information Agency estimated that coal, oil and natural gas represent 83 percent of US energy sources as of 2010. The same study found that 76 percent of commercial and residential energy consumption and 41 percent of industrial consumption comes from natural gas while petroleum, as expected, represents 94 percent of transportation energy consumption. Additionally, 92 percent of coal produced in this country goes to electrical power generation—power plants designed to sell electricity to the public to heat and cool our homes. Raising taxes on oil, coal and natural gas drives up costs for everyone and prevents businesses from expanding. Dr. Jorgenson claimed a carbon tax will raise revenues and reduce consumption of fossil fuels, but ignored the negative effects this has on economic growth. When the government taxes something we get less of it so hoping to increase revenues and reduce consumption of fossil fuels with a carbon tax seems like faulty logic to us. This is the same logic behind cigarette taxes designed to curb smoking and raise revenue—the government wants to tax your cake and eat it too.

### A2: Carbon Tax K Warming

#### Even if a carbon tax is necessary to solve warming, it is insufficient without the plan – and a carbon tax is inevitable

Geman, 12, Left-right climate group quietly weighing proposals for carbon tax, Ben Geman, 7/12/12, <http://thehill.com/blogs/e2-wire/e2-wire/237651-left-right-climate-group-quietly-weighs-carbon-tax-ideas>

Inglis on Wednesday announced that he’s leading a new program at George Mason University called the “Energy and Enterprise Initiative,” which will provide a platform for what he calls conservative ways to address climate change.¶ He told the online magazine Grist that there may be a political opening in a few years, calling the effort a “long play.”¶ “We think it’s 2015, 2016 before anything happens. After the next midterm. Either a new Republican president will, under market pressure, say to the country that we need a grand bargain to bring down rates and broaden the base, and a great way to do that is to shift off of taxing income and toward taxing CO2,” he said.¶ “Or it’s a second term for President Obama and the same market pressure pushing Congress and the president to do something,” Inglis said.

### Links to Elections – Unpopular

#### Carbon Tax is publicly and politically unpopular

Climate Lab, 09 Climate Lab is a website that is dedicated to information about climate change, “Carbon Tax” http://climatelab.org/Carbon\_tax

Even supporters of a carbon tax admit that there are barriers to implementing a carbon tax, particularly on a national and international level.

Carbon tax is politically unpopular in the United States**.** There are some politicians who are concerned with resistance from their constituencies and are worried that it would upset voters. Policy makers are also concerned that higher gas taxes would raise revenue but do little to curb pollution. On the other hand, the public is also worried the abuse of the tax revenue. Carbon Tax could become a revenue grab by desperate governments, that they create artificial winners and losers in the economy and that, if they are not at least done in step with other countries, they will simply drive jobs and business offshore to cheaper locales

### Links to Agenda Politics – Unpopular

#### Links to politics – climate debate is politicized and unpopular

Freedman ’11, Andrew Freedman is a senior science writer for Climate Central, Congress turns a blind eye to climate science, Washington Post, April 12th, 2011, http://www.washingtonpost.com/blogs/capital-weather-gang/post/congress-turns-a-blind-eye-to-climate-science/2011/04/12/AFxAqQQD\_blog.html)

Last week was a bewildering one for those who recognize the abundance of compelling scientific evidence showing that the climate is changing mainly due to human activities and that these changes pose risks to human health and welfare. While the news cycle was dominated by the down-to-the-wire budget negotiations in Washington, ongoing unrest in the Middle East, the nuclear crisis in Japan, a major congressional debate on climate change regulations took place in the House (and Senate) that vividly demonstrated how far off the rails we’ve gone in public discourse of climate science and policy. Let me state right off the bat that I tend to shy away from directly discussing politics in this column, instead sticking to scientific developments in the sprawling and fascinating field of climate research. At the same time, I recognize that climate science has become so politicized that it’s impossible to steer clear of politics entirely. This is understandable considering that many of the potential solutions to climate change could involve major policy changes, from federal regulations of emissions from cars, trucks, and power plants to a carbon tax on gasoline. The controversy surrounding the science is largely a front for concerns over potential regulation, as is vividly demonstrated in the book, “Merchants of Doubt”, by Naomi Oreskes and Eric Conway. With the passage on April 6 of a bill that would stop the U.S. EPA’s regulations of greenhouse gases from moving forward, the House of Representatives signaled in crystal clear legislative language that it flat out does not believe that manmade climate change is a real phenomenon that poses risks to Americans’ health and welfare. I say this because, during the debate on the EPA measure (which failed in the Senate and was not attached to the 11th hour budget agreement), the House held a separate vote on an amendment which for the first time put all Members on record about whether they agree with the scientific evidence showing that the global climate is warming, and this warming is likely due in part to human activities. This vote was as close to a climate science litmus test as you’re ever going to get.

#### Causes huge fights over tax increases

Geman, 12, Left-right climate group quietly weighing proposals for carbon tax, Ben Geman, The Hill, 7/12/12, <http://thehill.com/blogs/e2-wire/e2-wire/237651-left-right-climate-group-quietly-weighs-carbon-tax-ideas>

Lewis, a senior fellow with CEI, criticized the talks and took aim at efforts by former congressman Bob Inglis (R-S.C.) to promote a carbon tax.¶ ¶ “The GOP’s only clear product differentiator — and most durable political asset — is its reputation as the no tax increase party. The Inglis and AEI initiatives, if successful, would destroy this asset,” Lewis wrote.¶ ¶ Proposals for a carbon tax face very long odds politically, at least for now. With carbon taxes — or tax increases in general — viewed as non-starters in conservative circles, AEI has been tight-lipped about the meeting, which was the subject of a story Wednesday in Greenwire. ¶ ¶ “In recent years, AEI has been accused of being both in the pocket of energy companies and organizing to advocate a carbon tax. Neither is true," AEI said in a statement to E2-Wire ."AEI has been, and will continue to be, an intellectually curious place, where products aren’t influenced by interested parties, and ideas from all are welcome in seeking solutions for difficult public policy problems.”

## OTEC (Neg)

### OTEC CP 1NC

#### Text: The United States federal government should fully fund research, development, and implementation of Ocean Thermal Energy Conversion technology.

#### OTEC is awesome, reverses warming trends and replaces carbon emissions

Paul Curto, DDF in Fluid Dynamics from von Karman Institute for Fluid Dynamics, MPhil in physics of fluids and plasmas from Yale University, BS Aerospace and MS mechanical engineering University of Arizona, 11-7-2008, “Ocean Thermal Energy” http://push.pickensplan.com/profile/DrPaulACurto

Ocean Thermal Energy Conversion (OTEC) is by far the most balanced means to face the challenge of global warming. It is also the one that requires the greatest investment to meet its potential. It is the only answer that will save us from Armageddon. The Applied Physics Laboratory at Johns Hopkins University was one of its earliest proponents. Given modern materials and design techniques, we should be able to build grazing OTEC plants that may become economical with just a few production units, based upon anhydrous ammonia as the hydrogen carrier. The grazing OTEC plants would produce anhydrous ammonia while surfing the oceans for hot spots to curry heat for their power plants. (BTW there are ammonia pipelines in Indiana and other midwest states today for fertilizer distribution). Ammonia is the second-most predominant chemical manufactured in the world. Since the volumetric energy density of ammonia is three times that of liquid hydrogen, and ammonia combustion can be exceptionally efficient (about the same as burning diesel fuel in turbodiesels), it may be true that a hydrogen economy based upon OTEC and ammonia may be close at hand. The overall replacement of transportable carbon fuels by OTEC-based ammonia is estimated at 100 million barrels of oil per day equivalent over about 40 years if we move to a hydrogen economy. Along with other technologies, carbon fuels could be replaced in roughly 80% of all applications. OTEC is a true triple threat against global warming. It is the only technology that acts to directly reduce the temperature of the ocean (it was estimated one degree Fahrenheit reduction every twenty years for 10,000 250 MWe plants in '77), eliminates carbon emissions, and increases carbon dioxide absorption (cooler water absorbs more CO2) at the same time. It generates fuel that is portable and efficient, electricity for coastal areas if it is moored, and possibly food from the nutrients brought up from the ocean floor. It creates jobs, perhaps millions of them, if it is the serious contender for the future multi-trillion-dollar energy economy.

### Ext – Solves Warming

#### OTEC solves warming,

Maria Bechtel and Erik Netz, 1997, “OTEC - Ocean Thermal Energy Conversion”

One of the most critical problems of the next century will certainly be global warming. OTEC is unique among all energy generation the technologies in that not only does it generate no carbon dioxide whatsoever, but it actually counteracts the effects of fossil fuel use. OTEC involves bringing up mineral-rich water from the depths of the oceans. This water will promote growth of photosynthetic phytoplankton. These organisms will absorb carbon dioxide from the atmosphere into their bodies, and when they die, or when the animals, which eat them, die, the carbon dioxide will be sequestered in the depths of the oceans. The effect is not small. Each 100-megawatt OTEC plant will cause the absorption of an amount of carbon dioxide equivalent to that produce by fossil fuel power plant of roughly the same capacity. No other energy technology ever imagined can do this. OTEC plants construction, with laying pipes in coastal waters may cause localised damage to reefs and near-shore marine ecosystems.

#### OTEC replaces fossil fuels, and reverses warming

Harry Braun, 9-20-2002, Chairman of the Hydrogen Political Action Committee, “OTEC CAN SAVE THE OCEANS”

It follows that all of the impending environmental problems that will result if those remaining fossil fuels are extracted, shipped and burned could be avoided. Moreover, Professor Zener calculated that even if 100 percent of the world's energy needs were provided by OTEC systems, and even assuming the entire world was consuming energy at the rate that the U.S. does, the surface temperature of the tropical oceans would only be lowered by less than one degree Centigrade. Given the current concerns regarding global warming, this slight drop in ocean temperatures could another important by-product of the large-scale deployment of OTEC systems.

### Ext – Solves Competitiveness

#### There is enough energy stored in the thermal gradients of the oceans to power the earth.

Joseph C. Huang Senior Scientist for the National Oceanic and Atmospheric Administration, Hans J. Krock Professor of Ocean &. Resources Engineering, University of Hawaii and Stephen K. Oney, PhD. and executive vice present of OCEES July 2003 “Revisit Ocean Thermal Energy Conversion System” http://www.springerlink.com/content/n864l3217156h045/fulltext.pdf

The ocean covers more than 70.8% of the surface of the earth. A nearly equal fraction of the solar energy intercepted by the earth falls onto the ocean surface. The sun irradiates and releases an output of 380 million billion billion Watts (3.8 × 1026 Watts) and about 175 million billion (1.75 × 1017Watts) reaches the earth. Figure 1 shows the annual earth solar energy fluxes in percentile normalized by the annual total radiated solar energy that reaches the earth. However, not all these energy fluxes can be transformed into useful form of energy under present available technologies. The current world total energy consumption, as indicated in the lower right of Figure 1, is about only five thousandth of one percent (0.005%) of the solar energy flux reaching the earth. It is estimated that the amount of thermal energy absorbed in the oceans, on an annual basis, is equivalent to at least 1000 times the total amount of energy presently consumed by human beings over the world (Vega 1995). If only one percent of the solar energy flux in the equatorial zone is extracted from the thermal potential capacity in the ocean alone, it can provide hundreds of times more energy than the total current consumption of electricity. Due to the huge volume and high heat capacity of oceanic water, some rough calculations reveal that all the energies together in the atmosphere, including kinetic energy in hurricanes and other storms, are less than the thermal energy in the surface layer at a two and half meter depth in the ocean.

### Alt Energy Popular

#### Alternative energy is popular – prominent supporters

Stephen Power, WSJ, 11-3-2010, “US Weighs Funding for Renewable Energy Projects”, http://online.wsj.com/article/SB10001424052748703506904575592843603174132.html?mod=googlenews\_wsj

The memo written by Mr. Obama's senior advisers suggests the president "consider working with Congress to reprogram" the remaining $2.5 billion to pay for an extension of a separate federal program that allows renewable energy developers to convert the tax credits they get for such projects into cash grants. The memo says the grant program "has been much more effective" and is "likely to have a more significant impact on renewable energy investment" than the loan guarantees. The grant program expires at the end of the year. But the memo warns that "failing to make progress on renewables [sic] loan guarantees could upset the Hill (Sen. Bingaman, Speaker Pelosi)"—a reference to Senate Energy and Natural Resources Committee Chairman Jeff Bingaman (D., N.M.) and the outgoing House Speaker Nancy Pelosi (D., Calif.). Both have strongly championed the use of federal loan guarantees to boost alternative energy projects. Mr. Bingaman "views [the program] as 'his program,' [and] would strongly oppose" taking money away from it, the memo says. A spokesman for Mr. Bingaman said the senator would "not be happy" if the administration tried to take money out of the loan guarantee program, but added that Mr. Bingaman isn't the only lawmaker who strongly supports the program. "We've been frustrated and a little disappointed that the administration has used this program as an ATM machine," the spokesman added. A spokesman for Ms. Pelosi said the Speaker's "longstanding support for this initiative is well known."

#### Counterplan is popular in congress

Northwest Public Power Association 11-1-2006 [The West Coast and ocean renewable energy, Washington D.C. Report, http://www.accessmylibrary.com/coms2/summary\_0286-28797375\_ITM, November 1, 2006]

Congress, regulators, and the ocean renewable energy industry have all been ramping up activity over the last 18 months to accommodate increased interest in converting the ocean's energy to renewable power. While ocean technologies have been improving over the years, increased political interest in developing new renewable energy resources and reducing domestic dependence on foreign energy sources is giving the industry a boost. This signals a change in attitude for the potential of ocean energy as it was dealt a significant blow in the 1970s, setting back development and innovation for decade.

### Alt Energy Unpopular

#### Energy policy is politically unpopular

John D Podesta August 2003, VISITING PROFESSOR OF LAW AT GEORGETOWN

UNIVERSITY LAW CENTER “The Future of Energy Policy” Foreign Affairs

Unfortunately, energy policymaking in the United States in recent years has been neither decisive nor strategic. U.S. energy policy is reminiscent of Mark Twain's quip about the weather: everyone talks about it, but no one does anything. This inertia has deep roots. Vested interests -- in the oil, utility, and transportation industries, for example -- have been powerful economic and political players, protecting the status quo and brooking little interference from the outside. Similarl y, the environmental lobby has proved itself able to block proposals it opposes but less successful in advancing initiatives it favors. As a consequence, little progress has been made toward breaking the gridlock.

### OTEC – No Link (Politics)

#### Bureaucratic issues prevent, not congress

Becca Freedman, 6-12-2008, Political Analyst for Harvard Political Review, An Alternative Source Heats Up, Examining the Future of Ocean Thermal Energy Conversion http://hprsite.squarespace.com/an-alternative-source-heats-up/,

Even environmentalists have impeded OTEC’s development. According to Penney, people do not want to see OTEC plants when they look at the ocean. When they see a disruption of the pristine marine landscape, they think pollution. Given the risks, costs, and uncertain popularity of OTEC, it seems unlikely that federal support for OTEC is forthcoming. Jim Anderson, co-founder of Sea Solar Power Inc., a company specializing in OTEC technology, told the HPR, “Years ago in the ’80s, there was a small [governmental] program for OTEC and it was abandoned…That philosophy has carried forth to this day. There are a few people in the Department of Energy who have blocked government funding for this. It’s not the Democrats, not the Republicans. It’s a bureaucratic issue.”

### AT: OTEC Bad

#### Warming outweighs risks of turns. Be skeptical of their turns, OTEC just enhances a natural process.

Roger Highfield, Science Editor for the telegraph (UK) – 9-26-2007- “James Lovelock's plan to pump ocean water to stop climate change”- Online- http://www.telegraph.co.uk/earth/main.jhtml?xml=/earth/2007/09/26/sciwater126.xml

"The Earth is fast becoming a hotter planet than anything yet experienced by humans," they write, explaining that natural processes that would normally regulate climate are being driven to amplify warming, so that higher temperatures can, for example, stimulate the release of more methane from wetlands and amplify the warming. "Such feedbacks, as well as the inertia of the Earth system and that of our response, make it doubtful that any of the well-intentioned technical or social schemes for carbon dieting will restore the status quo. "We need a fundamental cure for the pathology of global heating. Emergency treatment could come from stimulating the Earth's capacity to cure itself." Scientists have put forward several proposals to reduce the amount of solar radiation that reaches the planet's surface, including the use of light-reflecting sulphate particles in the atmosphere and installing mirrors in orbit around the planet. Using radical techniques to "engineer" Earth's climate by blocking sunlight could cool our overheated planet but present great risks that could well worsen global warming should they fail or be discontinued, warned one recent study by Ken Caldeira of the Carnegie Institution's Department of Global Ecology. "Geoengineering schemes have been proposed as a cheap fix that could let us have our cake and eat it, too. But geoengineering schemes are not well understood. Our study shows that planet-sized geoengineering means planet-sized risks." However, Dr Rapley said in response: "The attraction of this approach is that the dangers of "unexpected consequences" are low, because we are advocating stimulating and enhancing an entirely natural process."

## OTEC – Aff Answers

### Solvnecy

#### OTEC is unfeasible – only a few hundred sites worldwide

U.S Department of Energy, 10-20-2010, “Ocean Thermal Energy Conversion,” Energy Efficiency & Renewable Energy, http://www.energysavers.gov/renewable\_energy/ocean/index.cfm/mytopic=50010

OTEC power plants require substantial capital investment upfront. OTEC researchers believe private sector firms probably will be unwilling to make the enormous initial investment required to build large-scale plants until the price of fossil fuels increases dramatically or until national governments provide financial incentives. Another factor hindering the commercialization of OTEC is that there are only a few hundred land-based sites in the tropics where deep-ocean water is close enough to shore to make OTEC plants feasible.

#### No investment for OTEC – still too risky and expensive

Becca Friedman, Harvard Political Review, 6-17-2008, “Examining the future of Ocean Thermal Energy Conversion,” Ocean Energy Council, http://www.oceanenergycouncil.com/index.php/OTEC-News/Examining-the-future-of-Ocean-Thermal-Energy-Conversion.html

Despite the sound science, a fully functioning OTEC prototype has yet to be developed. The high costs of building even a model pose the main barrier. Although piecemeal experiments have proven the effectiveness of the individual components, a large-scale plant has never been built. Luis Vega of the Pacific International Center for High Technology Research estimated in an OTEC summary presentation that a commercial-size five-megawatt OTEC plant could cost from 80 to 100 million dollars over five years. According to Terry Penney, the Technology Manager at the National Renewable Energy Laboratory, the combination of cost and risk is OTEC’s main liability. “We’ve talked to inventors and other constituents over the years, and it’s still a matter of huge capital investment and a huge risk, and there are many [alternate forms of energy] that are less risky that could produce power with the same certainty,” Penney told the HPR.

#### OTEC can’t solve – weather

Becca Friedman, Harvard Political Review, 6-17-2008, “Examining the future of Ocean Thermal Energy Conversion,” Ocean Energy Council, http://www.oceanenergycouncil.com/index.php/OTEC-News/Examining-the-future-of-Ocean-Thermal-Energy-Conversion.html

Moreover, OTEC is highly vulnerable to the elements in the marine environment. Big storms or a hurricane like Katrina could completely disrupt energy production by mangling the OTEC plants. Were a country completely dependent on oceanic energy, severe weather could be debilitating. In addition, there is a risk that the salt water surrounding an OTEC plant would cause the machinery to “rust or corrode” or “fill up with seaweed or mud,” according to a National Renewable Energy Laboratory spokesman.

# Economy/Competitiveness

#### Note: There is some card overlap between the H1B and the EB counterplans, because both increase immigration of skilled workers. I have chosen to put the same card in multiple places rather than make you go fish around in other sections. The main difference between H1B and EB visas is the length of stay – H1B’s are temporary (6 years) while EB’s give immigrants green cards (permanent residency). EB visas probably solve better but are more likely to link to brain drain and other “immigration bad” DAs.

## H1B Visas (Neg)

### H1B CP 1NC

#### Text: The United States Federal Government should increase the cap on H-1B Visas to 195,000.

#### Solves competitiveness and economy - increases innovation, talent, and job creation

David Bier 6/17/12, - immigration policy analyst at the Competitive Enterprise Institute- “H1-B Visa Quotas Greatly Restrain Small Business Expansion”; Forbes Magazine; http://www.forbes.com/sites/realspin/2012/06/17/h1-b-visa-quotas-greatly-restrain-small-business-expansion/

U.S. Citizenship and Immigration Services (CIS) announced this week that it had filled its annual H-1B visa quota for foreign high-skilled workers. The announcement comes about five months earlier than last year, signaling that U.S. businesses are expanding again. But many companies must now wait until next year to attempt to hire needed talent. This constraint is slowing their renewed growth, while unfairly disadvantaging small businesses that lack the resources necessary to navigate America’s complex immigration code.¶ As America’s technology and service-based economy has expanded over the last decade, its demand for high-skilled labor has increased greatly. Global competition requires access to the world’s best talent. Yet during this same period, Congress has allowed the H-1B quota for high-skilled workers to drop in half—from 195,000 in 2001 to 85,000 today. In 2006, the quota was tapped in less than two months. In 2008, it vanished in less than a day—nearly 125,000 applications were received in just two days.¶ Market-driven demand grew while government-controlled supply shrank. “In most years,” the Government Accountability Office found last year, “demand for new H-1B workers exceeded the cap.” This mismatch is further exacerbated by fees and regulations that prevent businesses, particularly small firms, from even applying. One company estimated the cost of the H-1B and green card process at $16,000. More than sixty percent of small businesses surveyed by the GAO “incurred significant business costs resulting from petitions denied due to the cap, delays in processing H-1B petitions, and other costs.”¶ H-1B regulations advantage large companies because they can absorb application costs and afford more qualified consultants. Complicated forms and regulations—and the imperative of speed and accuracy—force most businesses to hire experts for $3,000 for a single applicant. Multinational companies surveyed by the GAO “were generally able to hire their preferred candidates because the firms were skilled at navigating the immigration system.” This legal inequity places start-ups and small firms at a disadvantage.¶ “Some companies would not want to be bothered with foreign students because it would require a lawyer to do all the paperwork,” Elias Shiu, a professor at the University of Iowa’s department of statistics and actuarial science, told The Des Moines Register earlier this year. International students constitute more than sixty percent of Shiu’s department, like many science, engineering, and technology departments at other universities. Yet finding jobs for these highly-qualified workers in the U.S. is almost impossible due to H-1B regulations.¶ Not only can big players navigate the system better than small firms, they often manage to avoid it completely. Large firms like Principal can afford to have actuary offices in China and Brazil. Similarly, Microsoft recently opened offices in Vancouver to make use of Canada’s more expeditious immigration system for foreign software designers. Not only is stimulating off-shoring bad policy, it is unfair to small U.S. competitors who cannot afford offices overseas to avoid visa constraints.¶ Multinational firms do not always need to leave the U.S. to hire the workers they want—they can also use an L-1 visa to bring workers from their foreign offices to a U.S. site for up to seven years, or they can use a B-1 visa to conduct short-term activities like holding business conferences. While these options are unavailable to most small firms and start-ups, the best response to such inequality isn’t to restrain multinationals, but to open competition for all American businesses by eliminating H-1B restrictions.¶ Highly-skilled foreign workers do not “take jobs”—they make jobs. H-1B applications fell dramatically during the recession because companies use H-1B visas not to replace Americans during downtimes, but to recruit workers during expansion. A 2009 National Foundation for American Policy study found that every H-1B request is correlated with five new jobs at major firms and more than seven jobs at firms with less than 5,000 employees. H-1B restrictions slow this expansion and hurt economic growth.¶ Immigration quotas and restrictions are fundamentally unfair and stand in the way of America’s future prosperity. Increasing the H-1B quota would constitute progress. But better yet, abolishing the quota system and H-1B constraints entirely would not only allow more highly-skilled workers to come, but also make America’s immigration system fair for small competitors. Fairer competition would increase innovation, entrepreneurship, and job creation, benefiting all Americans.¶

#### Prerequisite to the aff – The high-skilled worker shortage undercuts infrastructure projects

Ratzenberger 7-31-10 [John, inventor, entrepreneur and board member of the Foundation for Fair Civil Justice, “Skilled workers key to state, national economies,” http://newsok.com/skilled-workers-key-to-state-national-economies/article/3480964]

A cultural shift has taken place in America that's tragically made the skilled worker a thing of the past. Our media has glorified celebrity at the expense of our nation's basic needs, and America will reap the whirlwind within the next two decades. At stake is nothing less than our long-term economic vitality and national security. Let's start with infrastructure - bridges, roads, water and sewer systems. America is dangerously close to failures that will result in loss of life and are already resulting in loss of economic competitiveness. In many cases, currently funded infrastructure projects cannot move forward due to lack of skilled workers. For example, a national shortage of 500,000 welders has resulted in delays or cancellations of many key projects. Expand that out over the entire economy and we have a massive crisis on our hands. By 2012, there will be a 3 million skilled worker shortfall in our nation, according to the U.S. Department of Labor. In Oklahoma, which has had solid energy and manufacturing industries, top companies have difficulty finding adequate skilled workers to fill positions. The average age of American skilled workers is 55, which means the bulk of our skilled worker base will retire in the next decade. There are not enough skilled workers to replace them and maintain the nation's competitive global position. In my interviews with employers across the nation, I hear the same story: Business owners are desperate for skilled workers. Many are reaching out to local schools to attract young people into the trades. Despite the offer of good pay and benefits, the noble skills that involve working with your hands and mind don't hold the same appeal as they did in decades past. Some businesses are considering moving their operations (and jobs) overseas. We're experiencing the loss of the once-vaunted edge that America enjoyed. From aviation to energy, our national security is at risk. In order to maintain the world's most sophisticated military, we must produce systems, parts and hardware in America. Without domestic manufacturing operations, critical component work has been moved offshore as a stop-gap measure. The lens through which I view the world is simple: The manual arts always take precedence over the fine arts. Remember, someone had to build the ceiling before Michelangelo could go to work. Negative images of skilled workers - what I call "essential workers" - pervade our culture. The truth is, high-profile athletes and entertainers are non-essential. If all the celebrities like me disappeared overnight, it would be sad, but the world would continue with little disruption. But if plumbers, electricians, welders, carpenters, lathe operators, truck drivers and other "essentials" disappeared, our country would grind to a halt.

### 2NC Solvency – Economy

#### Raising the cap on H1B visas solves the economy-

#### Outsourcing – H1B’s bring jobs back onshore

James **Sherk and** Diem **Nguyen 9-** Heritage Foundation Center for Data Analysis for Labor Policy; Douglas Research Assistant and Sarah Allison Center for Foreign Policy Studies; , “Restricting H-1B Visas Is Bad for Business and the Economy”; http://www.heritage.org/research/reports/2009/05/restricting-h-1b-visas-is-bad-for-business-and-the-economy

American employers cannot find enough highly skilled workers to fill essential positions. There are not enough American workers with advanced skills in computer, engineering, and mathematical occupations to perform the work that many high-tech companies need. This shortage of skilled labor has forced many companies to outsource operations abroad. Raising the cap on H-1B visas for skilled workers would allow American businesses to expand operations here in the United States, creating more jobs and higher wages for American workers. Increasing the H-1B cap would also raise significant tax revenue from highly skilled and highly paid workers. Heritage Foundation calculations show that raising the cap to 195,000 visas would increase revenues by a total of nearly $69 billion over eight years. Unlike tax increases, this would be an economically beneficial source of revenue for PAYGO offsets. (The pay-as-you-go rule mandates that any new congressional spending or tax changes must not add to the federal deficit; any new costs must be offset with money from existing funds.) Congress should therefore act now to raise the cap on visas for highly skilled workers.

#### Job generation- Increasing cap to 195,000 solves

James **Sherk and** Diem **Nguyen 9-** Heritage Foundation Center for Data Analysis for Labor Policy; Douglas Research Assistant and Sarah Allison Center for Foreign Policy Studies; , “Restricting H-1B Visas Is Bad for Business and the Economy”; http://www.heritage.org/research/reports/2009/05/restricting-h-1b-visas-is-bad-for-business-and-the-economy

Reports have indicated that Senators Chuck Grassley (R-IA) and Dick Durbin (D-IL) plan to introduce a bill that would limit the ability of companies to hire H-1B employees.[1] Arguing that H-1B visa recipients are a threat to American workers, their proposal would add new layers of regulation and procedures making it more difficult for companies to hire foreigners. This argument is misguided. Given the current economic climate, handcuffing employers from hiring talented workers will hurt--not help--the economy, further delaying the ability of businesses to restart the national economic engine. In order to grow the American economy and support the American workforce, Congress should expand and improve the H-1B visa program. Unfounded Fears of the H-1B Current law restricts the H-1B visa to highly skilled foreigners who have an undergraduate degree or higher. Each year, the federal government allows 65,000 visas to be issued, with an additional 20,000 visas for people who have masters degrees or higher. The visas are granted to individuals who have been offered employment in the United States. It is valid for three years and can be renewed once for an additional three years. Many believe H-1B workers merely compete with Americans looking for work. They are wrong. The U.S. workforce is not a "zero-sum game." One hired H-1B worker does not mean an American is out of a job. In fact, the National Foundation for American Policy found that employers hired four new American workers for each new H-1B employee they hire. Additionally, hiring H-1B employees does not lower the wages of American workers. Current law requires that when employers apply for H-1B visas, they must attest that they will pay the visa recipient the same wage they would pay an American with similar skill sets. Rather than limiting the ability of employers to hire H-1B workers by adding more rules and restrictions, Congress should ensure the federal government exercises appropriate oversight in enforcing current laws. Closing the Doors on H-1B Preventing companies from hiring foreign workers harms the U.S. economy's ability to rapidly adapt to marketplace demands. Companies must be able to hire persons best suited to fill positions based on their skill sets--not their nationality. People have varying skill sets unrelated to their country of residence. Simply requiring companies to hire Americans means that the company may not get the best qualified person or even the individual with the right set of professional skills to do the job. The federal government should not be making personnel decisions for American businesses. Keeping the Visa Successful Adding regulations to the H-1B program would be a serious setback to U.S. visa policy and would only end up hurting the U.S. economy. Instead, Congress should Return the cap to the 2001 quota of 195,000 visas a year. Make the program flexible. If the visa quota is met the year before, the cap should be automatically increased by a preset amount legislated by Congress. In addition, unused visas should be recaptured and used the following year. Create interoperable databases. Making sure the Department of Labor and the Department of Homeland Security databases are interoperable will help minimize the number of fraudulent cases. Increase oversight. The federal government should keep employers who have hired H-1B employees accountable to the program rules. Random site visits should be conducted to ensure employers are following the rules. By improving and expanding the H-1B visa program, Congress can ensure that American businesses have the workforces necessary for further economic growth.

#### Innovation- it’s key to a rebound

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

Despite the clearly positive impact that immigrants can have in reviving the U.S. economy, the government has already begun instituting protectionist policies, most notably with the Grassley Sanders amendment to the American Recovery and Reinvestment Act of 2009. ‘ Section 1611 of the new law restricts the ability of companies receiving Troubled Asset Relief Program (TARP) funding from hiring 11-113 workers except under certain conditions.’49 Most notably, banks and other financial institutions are now barred from hiring H-1B workers unless they have offered those positions first to equally qualified U.S. workers.’5° Therefore, employers receiving TARP assistance must now comply with LCA attestations previously imposed only on H-1B dependent employers)” The Economist has also argued that “[r]estricting the immigration of highly skilled workers” in the stimulus plan “will hurt America’s ability to innovate” and revive the economy)5 TARP restrictions will only hinder the country’s ability to more efficiently dig out of this crisis. Furthermore, President Obama has stated that part of the solution to the economic crisis will come from our investment in science, research, and technology.’53 This will “lead to new medical breakthroughs, new discoveries, and entire new industries.” Immigrants are disproportionately represented in the field of research and their innovative ideas can potentially create jobs and jumpstart the economy.’55 However, because the government only issues 65,000 H- lB temporary visas each year, the United States cannot properly spend the billions of dollars allocated to scientific research in the stimulus plan because there are not enough highly skilled workers to take advantage of the allotted funds) While education reform may eventually provide the United States with a native labor force capable of meeting the demand for highly skilled workers in the science, technology, engineering, or mathematics (STEM) fields, such changes will not take place for some time. The United States must continue to usher in highly skilled foreign labor to use the stimulus funding effectively and help renew its commitment to groundbreaking research. Reforming the immigration scheme to remove backlogs and quotas in immigrant visas while allowing more highly skilled foreign professionals to contribute their innovative ideas and unique backgrounds will allow the United States to spearhead the kind of research and development needed to strengthen the fundamentals of the economy and bring it out of recession. Most importantly, however, the United States must avoid the urge to hide behind protectionist policies and prevent immigrants from being able to make a valuable contribution. In doing so, the United States will rise out of this economic crisis and secure the long-term economic future of this country.

1. **Reverse brain drain**

**Case et all, 11**,Steve Case-Revolution CEO, John Doerr-Partner of Kleiner Perkins Caufield & Byers ; Paul Otellini- Intel Corporation CEO, and Sheryl Sandberg, Facebook COO, all members of the President’s Council on Jobs and Competitiveness; “America needs a 21st century immigration policy”; May 19, 2011; Reuters, <http://blogs.reuters.com/great-debate/2011/05/19/america-needs-a-21st-century-immigration-policy/>)

President Obama’s recent focus on immigration highlights America’s “broken” system and its impact on our economy. Fixing it requires Republicans and Democrats to show political courage and implement reforms to expand and strengthen the American economy. As members of the President’s Council on Jobs and Competitiveness, we share his deep concern that our nation’s ability to compete economically is being damaged by the two parties battling over immigration laws and policies. To some, **the link between immigration reform and economic growth may be surprising.** To America’s most innovative industries, it is a link we know is fundamental. The global economy means companies that drive U.S. job creation and economic growth are in a worldwide competition for talent. While other countries are aggressively creating policies and incentives to attract a highly educated workforce, America has stagnated. Once a magnet for the world’s top minds, America now faces a “reverse brain drain” and is no longer the first choice for many entrepreneurs creating new companies and jobs. America needs a pro-growth immigration system that works for U.S. workers and employers in today’s global economy. And we need it now.

#### We control uniqueness – Economic crisis is looming due to workforce deficiencies

#### Babyboomer retirement

Evan Nolan, JD Candidate Georgetown University Law Center, Fall 2009, “Picking Up After The Baby Boomers: Can Immigrants Carry The Load?,” 24 Geo. Immigr. L.J. 77, Lexis

The landscape of the U.S. labor market is set to change dramatically in the next several decades. The largest generation in the history of our nation is preparing to retire. The Baby Boomer generation will exit the workforce in significant numbers over the next twenty to thirty years. n1 Behind them, the Baby Boomers leave arguably the greatest period of workforce productivity ever accomplished. Unfortunately, the achievements may be second thoughts to the pending crises that the retiring generation will also leave behind them. In the next couple years, the oldest of that generation will reach the age of sixty-five and begin thinking about retirement. The oldest of the Baby Boomer generation has already filed for Social Security benefits. n2 Over the next twenty years, more than seventy million Americans will follow. Subsequent generations have not sustained the growth of the Baby Boomers and will not have the capacity to fill the workforce void or pay for their parents' retirement. n3 The current financial crisis only darkens the forecast. The Baby Boomer retirement could potentially cause two major economic crises: an "entitlement crisis" and a "workforce crisis." n4 The entitlement crisis involves the growing discrepancy between revenue from payroll taxes and the federal expenditures on Social Security, Medicare, and other social aid, particularly for retirees who have paid their dues. A potentially debilitating workforce crisis would also ensue when millions set to retire from a labor force that is already seeing declines in growth. n5 Dowell Myers and other social scientists have sought to turn this awful predicament into opportunity, by throwing open the doors to immigration. n6 [\*78] They suggest that by liberalizing immigration policies, the influx of immigrants would "significantly mitigate" the entitlement and workforce crises, and the "illegal" stigma attached to millions of unauthorized immigrants would be removed. n7 These immigrants could legally join the American workforce, filling the void left by Baby Boomers and contributing to the Social Security coffers through taxes. n8 The economic benefits of immigration, and even "permitting" undocumented workers, are clear. n9 Expanding the workforce, and subsequently the economy, helps promote GDP growth and provides an answer to the Baby Boomer crises.

#### STEM worker shortage

Jacob Funk Kirkegaard, research fellow at the Peterson Institute for International Economics, 7-1-2008, “US High-Skilled Immigration Policy: A Self-Inflicted Wound,” Peterson Institute for International Economics, http://www.iie.com/publications/papers/paper.cfm?ResearchID=972

America rose to global economic prominence, superpower status, and victory in the Cold War on the shoulders of the most highly skilled workforce in the world. However, America's global "skills leadership" is now under challenge. An increasingly vicious combination of long-term trends in the form of retiring baby boomers and stagnating US educational attainment, combined with increasingly restrictive laws on high-skilled immigration increasingly undermines the US position. This will seriously jeopardize long-term economic growth opportunities, especially for US high-tech sectors. Aging US baby boomers were the best-educated workers in the world when they entered the workforce 30-some years ago. Building on visionary policies like the GI Bill of 1944, college-level graduation rates for US baby boomers reached almost 40 percent during this period, far exceeding graduation rates of 20 to 25 percent enjoyed by contemporary British, French, German, or Japanese baby boom generations in the late 1960s and 1970s. The year 2008 is the first in which Americans born after World War II can retire with public pensions—hence, the loss of large numbers of well-educated baby boomers will be more severely felt in the United States than among other major industrialized economies. Another long-term worry is the stagnation seen in the average educational attainment of Americans in recent decades. Almost unique in the Organization for Economic Cooperation and Development (OECD), the tertiary-level graduation rates among present-day US labor market entrants, aged 25 to 34, is the same as that of their baby boomer parents, aged 55 to 64—stuck below 40 percent. Hence, there's a risk in coming years that as many high-skilled Americans will retire as will enter the workforce. The century-long continuous compositional skills improvement of America's workforce may soon end. Moreover, while America failed to continue to improve broad educational standards during the last 30 years, the rest of the world has not stood still. Today, over 50 percent of young Canadians, Japanese, and Koreans obtain tertiary education representing a vast educational advancement relative to their parents' generation. American labor market entrants today barely make the global skills top-10 list. As a direct result, for the first time in generations, the US risks becoming less skill-abundant than an increasing number of its global economic competitors (see figure 11). US and Canadian baby boomers, aged 55 to 64, were indeed the "brightest kids on the global trading block," when they entered the workforce and rapidly globalizing marketplace. Thus baby boomers were ready to take advantage of trade liberalization and the opening of global markets during the last part of the 20th century, far less true for today's American youth. Policymakers cannot stop the graying of the US population or the imminent retirement of baby boomers. Similarly, successful overhaul of the US education sector could only begin to reverse more than 30 years of educational stagnation over the long term. Improving the education system is hardly a realistic or quick solution to forestalling broad skill shortages in the US economy over the next decade. US policymakers can only hope to counter these long-term phenomena in a timely manner by reforming high-skilled immigration policies and facilitating the continued and increasingly economically necessary inflow of high-skilled workers from abroad. Instead, US high-skilled immigration policies have in recent years become tangibly more restrictive—waylaid by wider congressional gridlock on immigration and political emphasis on indiscriminate enforcement. This restrictiveness is relative to earlier periods in US history and, more importantly, other industrialized countries today. In April 2008, for instance, about half of 163,000 US businesses wishing to hire a foreign high-skilled worker on H-1B visas were denied this opportunity by the annual quota of 85,000 available visas2 (65,000 plus 20,000 available to foreign graduates with advanced degrees from US universities). The immigration policy undermines the economic characteristics—entrepreneurial vitality and mastery of new advanced technologies—that make the United States the envy of the world. Just like Google, eBay, and Yahoo, more than half of engineering and technology companies founded in Silicon Valley from 1995 to 2005 had at least one foreign-born founder.3 More than a third of US venture capital–backed technology firms report shifting investments and jobs outside the country due to restrictive regulation,4 and America's largest, most competitive companies cannot get visas for foreign high-skilled workers they want to hire. Meanwhile, contours of the global battlefield for talent are rapidly changing. The recent proposal for an EU "Blue Card" would allow high-skilled workers from outside the European Union to work in multiple EU countries, just one example of a new trend across the OECD. Affected by more rapid population aging than the United States, other OECD countries aggressively work to liberalize their high-skilled immigration laws, while simultaneously tightening regulation of low-skilled and humanitarian-based immigration. Ironically, the other nations frequently copy US policies, particularly those that attract and retain foreign students. Equally worrisome for the United States, the top countries of origin for high-skilled migrants—fast-growing China and India—offer incentives for skilled workers to return home. In 2007, China launched its "green passage" initiative, aimed at luring back tens of thousands of acclaimed overseas Chinese scientists, engineers, and executives with promises of guaranteed university places for their children, exemption from household-residence registration—or hokou—requirements, and tax benefits.5 The United States—historically the world's country of choice for foreign high-skilled workers—has the most to lose from any change in these human-capital flows. While the rest of the rich world has caught up in welcoming high-skilled foreigners, the United States could soon struggle to attract global talent. With the skill-base of the US workforce declining at an accelerating pace relative to the rest of the world, America in the 21st century will need foreign high-skilled workers more than ever. At stake is the ability of the US economy to thrive in the global marketplace.

### 2NC Solvency – Competitiveness

#### Admitting highly skilled workers boosts US competitiveness

Marshall Fitz, Director of Immigration Policy at the Center for American Progress 12-2009, “Prosperous immigrants, Prosperous Americans,” Center for American Progress, http://www.americanprogress.org/issues/2009/12/pdf/highskilled\_immigrants.pdf

Reforming our high-skilled immigration system will stimulate innovation, enhance competitiveness, and help cultivate a flexible, highly-skilled U.S. workforce while protecting U.S. workers from globalization’s destabilizing effects. Our economy has benefitted enormously from being able to tap the international pool of human capital.5 Arbitrary limitations on our ability to continue doing so are ultimately self-defeating: Companies will lose out to their competitors making them less profitable, less productive, and less able to grow; or they will move their operations abroad with all the attendant negative economic consequences. And the federal treasury loses tens of billions of dollars in tax revenues by restricting the opportunities for high-skilled foreign workers to remain in the United States.6

#### We control uniqueness – There’s massive workforce shortage looming – visa change is key to restoring US competitiveness

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

America is facing a demographic tsunami. The aging of the population will have a profound impact on the federal budget, the workforce, and the housing market. The response to these perils will determine if the United States continues to be a global leader in the 21st century capable of supporting high economic growth and a rising standard of living. Immigration will play a vital role in confronting the challenges posed by an aging society and keeping three promises at the heart of our economic success: a secure retirement for seniors; an ample and competent workforce for employers; and a healthy housing market for families. Policy makers cannot afford to view immigration and the retirement of baby boomers as two separate phenomena. We must evaluate our immigration needs in light of the pending massive movement of a significant portion of the population out of the labor pool and housing market and into government funded entitlement programs. Keeping our bedrock promises will require new blood from beyond our borders. Immigrants can significantly mitigate the three crises. By firmly grasping the implications of the graying of America we can develop a practical immigration policy that meets the nation’s future needs and enhances our resilience against powerful demographic and economic forces that threaten our global standing and competitiveness.

#### And it’s key to competitiveness

Jonathan G. Goodrich, March 2008, “Immigration in the Twenty-First Century,” 42 U. Rich. L. Rev. 975, ln

In multiple ways, immigration, whether temporary or permanent, provides for economic growth. Economists estimate that at a minimum America's foreign-born population adds $ 12 billion to the economy by working, consuming, investing, and paying taxes. n97 Despite claims to the contrary, the costs associated with immigration do not outweigh these economic benefits. n98 Moreover, [\*987] immigration enhances the competitiveness of the United States in today's global economy by allowing multinational corporations to integrate their operations and recruit skills from a global labor force. n99 At both ends of the occupational spectrum, however, family-focused, security-centric immigration laws prevent U.S. businesses from hiring necessary workers. n100 For cashiers and computer scientists, for those that build homes and for those that build robots, U.S immigration policies are an impediment to, rather than a facilitator of, economic progress. Several factors influence economic growth, including labor force expansion, technology, education, entrepreneurship, and research. n101 Two closely watched factors are a country's productivity rate and its labor growth. n102 Due to a baby-boomer generation on the verge of mass retirement, n103 a declining U.S. fertility rate, n104 and a country at near full employment, economists predict that satisfactory economic expansion will not come from increased productivity. n105 Thus, continued economic success must rely upon a growing labor force. n106 The immigration polices that are now in place, however, prevent that growth from occurring. In addition to immigration's economic implications, living in a post-9/11 world means that security concerns are now also intertwined with immigration policy. But overly broad security measures disregard important economic considerations and result in [\*988] unintended and negative consequences on actual security. Millions of low-skilled workers illegally come to the United States and live in near anonymity in order to fill available jobs - many of which are both vital to the economy and the country's infrastructure. Millions of high-skilled workers cannot come to the United States; yet, as President Bush explained, "science and technology [are] essential to the defense of the Nation and the health of our economy." n107 Increasingly, American companies have to rely on foreign businesses in key technological areas. n108 Moreover, the remittances that noncitizens send back to their native countries create strategic ties for the United States and provide an indirect form of international aid. n109 This benefits American security by reducing the lack of education and poverty that often breeds terrorism. n110 Full of rhetoric, however, Congress's current black and white approach to immigration fails to promote either the economy or security of the United States.

#### Solves global competitiveness- more talent

Santiago A. Cueto 6/26/12, International Business Law Advisor and head of Cueto Law Group Firm, “How to make America More Competitive, First, Abolish the H1-B Visa Quota”-International Business Law Advisor: Insights on International Litigation and Transactions, http://www.internationalbusinesslawadvisor.com/2012/06/articles/random-thoughts-and-observatio/h1-b-visa/

As an international attorney based in Miami, I field lots of questions from both foreign and domestic companies looking to hire foreign workers for skilled positions available in our region.¶ And that’s hardly a surprise– there are hundreds of foreign based multinational companies operating in our region including Embraer, Telefonica, Bacardi and Komatsu.¶ The primary mechanism by which foreign workers are hired by these companies is through the H-1B temporary visas. These visas are typically the only practical way for a skilled foreign national to work long-term in the United States.¶ That’s why I was disappointed to learn that companies in Florida–or anywhere in the U.S.– won’t be able to hire anyone on a new H-1B visa until April, 2013.¶ This is because the U.S. Citizenship and Immigration Services just announced that it reached the statutory cap for Hi-B visas for the current fiscal year.¶ While it will still be possible for those already in H-1B status to change jobs to another employer or for someone to obtain a new H-1B visa to work at a university or nonprofit research institute (and other limited exceptions) all new H1-B applications will be rejected for the next 15 months.¶ The moratorium on issuing H1-B visas could not have come at a worse time. America is struggling to get back on its feet after suffering through the most severe fiscal crisis since the Great Depression.¶ Eliminating multinational companies from hiring highly skilled labor will only make the U.S. less competitive and prolong an already glacially paced recovery.¶ As one Forbes Capital Flows commenter noted in the article H1-B Visa Quotas Greatly Restrain Small Business Expansion:¶ Global competition requires access to the world’s best talent. Yet during this same period, Congress has allowed the H-1B quota for high-skilled workers to drop in half—from 195,000 in 2001 to 85,000 today. In 2006, the quota was tapped in less than two months. In 2008, it vanished in less than a day—nearly 125,000 applications were received in just two days.¶ The article further notes that:¶ A 2009 National Foundation for American Policy study found that every H-1B request is correlated with five new jobs at major firms and more than seven jobs at firms with less than 5,000 employees. H-1B restrictions slow this expansion and hurt economic growth.¶ As the article makes clear, immigration quotas and restrictions are fundamentally unfair and stand in the way of America’s future prosperity.¶ The only fair thing to do is to abolish the H-1B quota.¶ Doing so would benefit all Americans and result increased innovation, entrepreneurship, and job creation.

#### Boosting high-skilled immigration restores US competitiveness

Darrel M. West, vice president and director of Governance Studies and founding director of the Center for Technology Innovation at Brookings Institute, 2010, Brain Gain: Rethinking U.S. Immigration Policy

The most important challenge is to develop a new narrative that defines immigration as a brain gain that improves economic competitiveness and national innovation. A focus on brains and competitiveness would help America overcome past deficiencies in immigration policy and help the country meet the economic and innovation challenges of the twenty-first century.’ There is considerable evidence that the United States is falling behind on innovation. An analysis of patents granted shows that the long-term U.S. dominance has come to an end. In 1999 American scientists were granted 90,000 patents, compared with 70,000 for those from all other countries. In 2009, for the first time in recent years, non-U.S. innovators earned more patents (around 96,000) than did Americans (93,000). one-third of the American workforce holds science or technology positions. That is slightly less than the 34 percent figure for Germany and the Netherlands hut is higher than the 28 percent in Canada and France. Looking at another measure, the U.S. government spends only 2.8 percent of its GDP on public research and development. That is less than the 4.3 percent spent by Sweden, 3.1 percent by Japan, and 3.0 percent by South Korea hut is more than is spent by Germany (2.5 percent), France (2.2 per cent), Canada (1 .9 percent), or England (1 .9 percent). Europe as a whole devotes 1.9 percent of its total GDP to research and development, while industrialized nations spend around 2.3 percent.’

**Immigration Key- spur innovation and competitiveness**

David **Park** 3/23/**12**, Jobs Creation Alliance Founder/Creator, “Immigration Reform is key to Job Creation”, US News and World Report, http://www.usnews.com/opinion/blogs/economic-intelligence/2012/03/23/immigration-reform-is-key-to-job-creation

As America continues to look for more jobs Washington can't seem to come up with an answer. We've heard solutions from policy wonks, politicians, and academics, but rarely from people who have first-hand experience actually creating jobs. The voice of the small business owner is faintly being heard, but I'm not so sure our friends on Capitol Hill are listening. There is continual talk about destructive regulations and burdensome red tape, but very little discussion over specific policies and regulations that are so burdensome and in need of reform. Well, here's one from a job creator: immigration.¶ Immigration reform is key to spurring innovation and getting the economy back on track. I'm a small business owner who realizes the role legal immigrants play in creating new jobs. As founder and CEO of a boutique merchant bank, I've started or acquired nearly 30 small and midsize companies, creating hundreds of jobs for Americans across the country. I am also an immigrant and an example of how highly-skilled immigrants educated in the United States can drive job creation right here at home. ¶ Employment-based immigration provides ways for highly skilled immigrants to come to the United States on either a permanent or temporary visa and contribute to our economy. I came to the United States at the age of six because my parents wanted me to have the opportunity to live the American Dream. While at that time, immigration law was by no means lax, the window of legal immigration opportunity has been closing more and more as the process gets bogged down in the bureaucratic morass. The sad truth is, America's dysfunctional immigration law doesn't hurt the would-be immigrants as much as it cripples our nation's competitiveness and prospect for future prosperity and job growth.¶

### Solv – Hegemony

#### Highly skilled immigration makes heg sustainable and effective

Joseph Nye, Harvard University Distinguished Service Professor and Sultan of Oman Professor of International Relations at Harvard Kennedy School, Nov. 2010, “The Future of American Power: Dominance and Decline in Perspective,” Foreign Affiars, Nov/Dec

Some argue that the United States suffers from "imperial overstretch," but so far, the facts do not fit that theory. On the contrary, defense and foreign affairs expenditures have declined as a share of GDP over the past several decades. Nonetheless, the United States could decline not because of imperial overstretch but because of domestic underreach. Rome rotted from within, and some observers, noting the sourness of current U.S. politics, project that the United States will lose its ability to influence world events because of domestic battles over culture, the collapse of its political institutions, and economic stagnation. This possibility cannot be ruled out, but the trends are not as clear as the current gloomy mood suggests. Although the United States has many social problems--and always has--they do not seem to be getting worse in any linear manner. Some of these problems are even improving, such as rates of crime, divorce, and teenage pregnancy. Although there are culture wars over issues such as same-sex marriage and abortion, polls show an overall increase in tolerance. Civil society is robust, and church attendance is high, at 42 percent. The country's past cultural battles, over immigration, slavery, evolution, temperance, McCarthyism, and civil rights, were arguably more serious than any of today's. A graver concern would be if the country turned inward and seriously curtailed immigration. With its current levels of immigration, the United States is one of the few developed countries that may avoid demographic decline and keep its share of world population, but this could change if xenophobia or reactions to terrorism closed its borders. The percentage of foreign-born residents in the United States reached its twentieth-century peak, 14.7 percent, in 1910. Today, 11.7 percent of U.S. residents are foreign born, but in 2009, 50 percent of Americans favored decreasing immigration, up from 39 percent in 2008. The economic recession has only aggravated the problem. Although too rapid a rate of immigration can cause social problems, over the long term, immigration strengthens U.S. power. Today, the United States is the world's third most populous country; 50 years from now, it is likely to still be third (after India and China). Not only is this relevant to economic power, but given that nearly all developed countries are aging and face the burden of providing for the older generation, immigration could help reduce the sharpness of the resulting policy problem. In addition, there is a strong correlation between the number of H-1B visas and the number of patents filed in the United States. In 1998, Chinese- and Indian-born engineers were running one-quarter of Silicon Valley's high-tech businesses, and in 2005, immigrants were found to have helped start one of every four American technology start-ups over the previous decade. Equally important are the benefits of immigration for the United States' soft power. Attracted by the upward mobility of American immigrants, people want to come to the United States. The United States is a magnet, and many people can envisage themselves as Americans. Many successful Americans look like people in other countries. Rather than diluting hard and soft power, immigration enhances both. When Singapore's Lee Kuan Yew concludes that China will not surpass the United States as the leading power of the twenty-first century, he cites the ability of the United States to attract the best and brightest from the rest of the world and meld them into a diverse culture of creativity. China has a larger population to recruit from domestically, but in his view, its Sinocentric culture will make it less creative than the United States, which can draw on the whole world.

#### Highly skilled immigrants are vital to US leadership

Ed Hooper, staff writer, 4-28-2010, “Politics Trumping Visa Reform,” Huffington Post, http://www.huffingtonpost.com/ed-hooper/politics-trumping-visa-re\_b\_555596.html

National organizations estimate more than 37 percent of PhDs in science and engineering awarded by colleges and universities each year go to foreign-born students. While most are reportedly staying according to a 2007 study, experts say those numbers are likely to nosedive in the next report. Undoubtedly the U.S. produces great home-grown engineers and scientists, but a formidable number of immigrants have brought revolutionary advances in sciences and technologies to American shores. Croatian immigrant Nikola Tesla made the national electrical grid possible with his invention of a coil. Russian immigrant and aviation pioneer Igor Sikorsky invented the helicopter. German immigrant Albert Einstein and Italian immigrant Enrico Fermi helped usher in the atomic sciences. Hungarian immigrant John von Neumann pioneered the digital age that made computers possible. And, if Werner von Braun hadn't surrendered to the 44th Infantry Division in World War II Berlin, Americans wouldn't have had a space program. These immigrants helped form the backbone of U.S. leadership in science and technology that sustained this nation on the world's stage for the last 100 years. This is one case where the U.S. needs history to repeat itself. The unique business model that drives competitiveness between private and government laboratories in a capitalist system has been the propellant that maintains the U.S. as the world's leader in science and technology. From Silicon Valley to Oak Ridge, the greatest tool American-based companies have is their historical ability to bring in talented foreign minds without hassle to research, start new businesses and teach at colleges or universities. And it must be preserved.

#### Highly skilled immigrants are key to US leadership and military superiority

Doris Meissner, former Commissioner of the US Immigration and Naturalization Service (INS) and Senior Fellow at the Migration Policy Institute, Deborah w. Meyers, Demetrios g. Papademetriou and Michael Fix, Summer 2007, “Immigration and America's Future: A New Chapter,” 5 Geo. J.L. & Pub. Pol'y 473, Lexis

Immigration helps the United States maintain its leadership in science and technological innovation, which has traditionally been a foundation of American economic power and performance. Some of the world's most talented people are attracted to the United States for schooling, work, and freedom. The attraction often springs from the American higher education system, which [\*477] provides an unrivalled teaching and research infrastructure. Seventeen of the top twenty universities considered to be the best in the world are located in the United States. n22 This higher education system sustains U.S. leadership in the global marketplace and undergirds U.S. superiority in critical national security sectors such as defense and intelligence. Science and engineering specialties are particularly essential to national security and economic success, and here immigrants play a substantial role. While 12% of the population and 14% of the workforce were foreign-born in 2003, a quarter of all college-educated workers in science and engineering occupations were foreign-born; 40% of scientists and engineers holding doctoral degrees were foreign-born; and a majority of doctorate holders in computer science, electrical engineering, civil engineering, and mechanical engineering were foreign-born. n23 In 2005, graduate enrollments in engineering were 48% foreign-born temporary residents; in the physical sciences, they were 40%. n24 In contrast, the two largest graduate fields chosen by native-born students are education and public administration. n25 In the 2006 State of the Union address, President Bush announced the American Competitiveness Initiative, an ambitious math and science education program that funds increased training to maintain American leadership in innovation. n26 At the same time, foreign students and professionals will continue to play a key role in maintaining the country's edge in the global economy. And, given the global nature of science and technology research and development, workers in these careers will likely always be mobile and international. Effective, predictable, and welcoming immigration regimes are becoming important factors in a newly competitive global environment. The United States thus has a strong interest in building an immigration system that provides opportunities for the highly skilled and their families to travel, work, and live here.

### Solv – Green Tech

#### Highly skilled immigrants are key to developing the US alternative energy industry

Jeff Joseph, A Senior Partner at the Joseph Law Firm, “Immigration: They Key to a Booming, Green Economy,” 6-25-2010, http://josephlawfirm.blogspot.com/2010/06/immigration-key-to-booming-green.html

If there is one thing on which economists, analysts, and researchers seem to agree, it is this: Immigration is essential to keeping American business at the top of the international business market, especially in the energy and engineering sectors. Indeed, even some politicians, such as New York’s Mayor Michael Bloomberg and Senators John Kerry (D-MA) and Richard Lugar (R-IN), have recognized the important role immigration has to play in American business. According to Mayor Bloomberg, “Our immigration policy is national suicide. I can’t think of any ways to destroy this country quite as direct and impactful as our immigration policy. We educate the best and the brightest and then we don’t give them a green card. We want to create jobs and we won’t let entrepreneurs from around the world come here.” It is for that reason that Senators Kerry and Lugar have introduced the Startup Visa Act. The Startup Visa Act proposes legislation that would modify the EB-5 Visa to increase job creation and America’s international business competitive edge. Immigrant entrepreneurs who are creating new businesses would be able to obtain visas, so long as there is investment capital from within the U.S. of at least $100,000 and equity financing of at least $250,000. A new Migrant Policy Institute Report, The Impact of Immigrants in Recession and Economic Expansion, found that “immigration unambiguously improves employment, productivity and income,” although it does require some short-term adjustments, such as job training or new technology. Despite common conceptions among Americans, immigration does not reduce Americans’ employment rates over the long-term (ten years). But it does increase Americans’ productivity and the average income over the same period. In fact, immigration between 1990 and 2006 is credited with a 2.9% wage increase among American workers. Still, immigration during a recession can have short-term, negative effects, but those effects dissipate fairly quickly, within seven years at most. In contrast, immigration during economic growth periods has an immediate, positive effect, creating enough jobs to leave Americans’ jobs completely untouched. Darrell M. West, author of a new book, Brain Gain: Rethinking U.S. Immigration Policy (Brookings Institution Press, 2010), points out that many of America’s greatest scientists, inventors, educators, and entrepreneurs came to the United States as immigrants. He asserts that the U.S. must establish an increased open-door policy to attract unique foreign talent in the fields of energy, information technology, and international commerce. In a review of the book, Mayor Bloomberg recognizes that “the most important step we can take to strengthen America’s long-term economic health is passing comprehensive immigration reform. For America to compete in the 21st Century, we need to be able to attract—and keep—the world’s best, brightest, and hardest working.” And this seems to be particularly important in the green energy field. A recent report published by the Immigration Policy Center of the American Immigraiton Council, authored by Richard T. Herman and Robert L. Smith, Why Immigration Can Drive the Green Economy, discusses how the connection between immigration and the development and commercialization of alternative fuel sources is rarely discussed among policymakers. Yet it is this very connection that will help the United States lead the way towards cleaner, less expensive energy. Although policymakers imagine that the development of renewable energy will create hundreds of thousands of jobs, most fail to understand that much of the clean-energy talent remains abroad. Thus, experts urge that expanding our own clean-energy industry will require working with people overseas, in countries that have been pursuing alternative fuel sources for several decades already. Unfortunately, tough immigration restrictions make this type of foreign collaboration difficult, if not impossible.

#### Even without foreign founders – there aren’t enough workers to sustain domestic clean tech companies

Norman C. Plotkin, immigration attorney and partner at Jackson & Hertogs LLP, 3-16-2009, “Time to plan for the H-1B visa filing deadline,” http://cleantech.com/news/4270/time-plan-h-1b-visa-filing-deadline

Clean technology companies in the U.S. may find themselves in the unusual position of receiving federal stimulus funding while at the same time not being able to hire and retain key employees. The economic downturn has stopped many employers across all industries from making new hires, but cleantech companies are gearing up for even greater hiring to meet the challenges of our changing economy. However, many of the best potential hires will be foreign nationals who require employment authorization issued by U.S. Citizenship & Immigration Services (USCIS) to legally work in the U.S. Many times the most appropriate visa for these workers is the H-1B visa. The H-1B nonimmigrant visa is for highly skilled workers and is one of the few visas available to foreign scientists and engineers to work for U.S. companies. The predicament is that H-1B visas are not always available. Strict annual quotas have meant that many more H-1B visas have been requested in each of the last few years than available numbers. What this means for cleantech companies is that they in particular may be barred from hiring key personnel because of strict reductions in visa numbers. Since most cleantech companies are startups, they may not be prepared to deal with this hiring issue because they do not have the infrastructure in human resources to make them aware of the restrictions. For individuals who have not already been counted against the annual H-1B cap, there is only a short window in which to file H-1B visa petitions: between April 1 and 7, 2009. Given the relative youth of cleantech, cleantech companies are particularly vulnerable to being shut out by the H-1B cap. How many F-1 students (recent Masters and PhD candidates) has your company hired in the past year? If you even have one, you should be looking at a long term solution to keeping the F-1 student on board. What are your hiring needs going into the balance of the calendar year?

### Solv – STEM Shortage XT

#### US economic leadership is collapsing now because of the STEM gap

Marvin Cetron, president of forecasing international Ltd and Oven Davies, science analyst and former senior editor of Omni magazine, 8-2010, “Trends Shaping Tomorrow's World forces in the natural and Institutional environment,” The Futurist, Vol. 44, No. 4

The United States is losing its scientific and technical leadership to other countries. \* "The scientific and technical building blocks of our economic leadership are eroding at a time when many other nations are gathering strength," the National Academy of Sciences warns. "Although many people assume that the United States will always be a world leader in science and technology, this may not continue to be the case inasmuch as great minds and ideas exist throughout the world. We fear the abruptness with which a lead in science and technology can be lost--and the difficulty of recovering a lead once lost, if indeed it can be regained at all." \* According to the National Science Board, R&D spending grows by 6% per year in the United States, on average. China spends 20% more on R&D each year. \* China is now second to the United States in the number of research articles its scientists publish each year and gaining rapidly. \* In patents earned each year, Americans are now in sixth place and falling. \* Military research now absorbs much of the money that once supported basic science. Since 2000, U.S. federal spending on defense research has risen an average of 7.4% per year, compared with only 4.5% for civilian research. The Defense Advanced Research Projects Agency has been legendary for its support of "blue sky" research that led to dramatic technical advances, including the creation of the Internet. Today it focuses increasingly on immediate military needs and low-risk development efforts. \* More than half of American scientists and engineers are nearing retirement. At the rate American students are entering these fields, the retirees cannot be replaced except by recruiting foreign scientists. According to the National Academy of Engineering, the United States produces only about 7% of the world's engineers. Only 6% of American undergraduates are engineering majors, compared with 12% in Europe and 40% in China. Of the doctoral degrees in science awarded by American universities, about 30% go to foreign students. In engineering, it is 60%. \* By inhibiting stem-cell research, cloning, and other specialties, the United States has made itself less attractive to cutting-edge biomedical scientists. The United Kingdom is capitalizing on this to become the world's leader in stem-cell research. In the process, it is reversing the brain drain that once brought top British scientists to the United States. More than 70 leading American biomedical researchers have moved to the U.K. along with many less noted colleagues. Latin America also has been receiving scientific emigres from the United States. \* About 25% of America's science and engineering workforce are immigrants, including nearly half of those with doctoral degrees. During the 15 years ending in 2007, one-third of the American scientists receiving Nobel Prizes were foreign-born. \* According to Purdue University President Martin Jischke, more than 90% of all scientists and engineers in the world live in Asia. Assessment and Implications: If this trend is not reversed, it will begin to undermine the U.S. economy and shift both economic and political power to other lands. According to some estimates, about half of the improvement in the American standard of living is directly attributable to research and development carried out by scientists and engineers. Demand to import foreign scientists and engineers on H-1b visas also will continue to grow. Publicity about the H-1b program, and about the offshoring of R&D to company divisions and consulting labs in Asia, in turn will discourage American students from entering technical fields. This has already been blamed for shrinking student rolls in computer science. In 2005, China for the first time exported more IT and communications goods ($180 million) than the United States ($145 million). Its lead has grown each year since then.

### Solv – Boomer Retirement XT

#### Highly skilled labor shortage coming – baby boomer retirement

Jeb Bush, former governor of Florida, Edward Alden, Bernard L. Schwartz senior fellow at the Council on Foreign Relations, specializing in U.S. competitiveness, and Thomas F. McLarty III, former White House Chief of Staff for US President Bill Clinton, 2009, “U.S. Immigration Policy,” Council on Foreign Relations, www.cfr.org/content/publications/attachments/Immigration\_TFR63.pdf

The Task Force believes that the costs of losing preeminence in attracting talented immigrants would be very high. The United States has hit a plateau in the numbers of American students graduating with advanced degrees, particularly in scientific and technical fields. Indeed, the number of science and engineering PhDs earned by U.S. citizens has fallen by more than 20 percent in the past decade. 23 The United States will face an accelerating shortage of highly skilled workers as the bulk of the baby boom generation starts heading into retirement. In 2006, there were more holders of master’s, professional, and doctoral degrees among the age fifty-five to fifty-nine cohort, which is nearing retirement, than among the thirty to thirty-four cohort. More worrisome, this stagnation in the educational achievement levels of Americans has come at a time when many other countries—South Korea, Canada, Japan, France, Spain, and others—have continued to expand the share of their populations receiving higher education.

#### Immigration key to mitigate the coming baby boomer retirement

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

What would these same citizens say about the three perils of our aging society? Many may not be thinking about it or considering what lies ahead. Given the substantial ways in which immigrants can help us meet our coming challenges, it is time to rethink whether immigrants are a burden or whether they might be a benefit. There are times when new blood could be much desired. The United States is currently facing a painful, yet short-term economic downturn. The aging of our society, as expressed by the ballooning senior ratio and the impending retirement of the baby boomers, represents a singular event with severe implications for longterm economic growth and prosperity. Immigration will play a critical role as we seek to confront this epic challenge. The next president and congress will have to deal with immigration reform and the retirement of the baby boomers. In order to deal effectively with both they must not be viewed separately. As policy makers address fixing our broken immigration system, they must be cognizant of the perils presented by the retirement of the boomers and the vital role of a rational and forward-looking immigration policy for mitigating these threats and making America more resilient.

### Solv – Outsourcing XT

#### Low H-1B Visas Cap outsource work and skilled foreigners

NFAP 08- National Foundation for American Policy- 2008, “H1B Visas and Job Creation,” pg. 2, <http://www.nfap.com/pdf/080311h1b.pdf>

Preventing companies from hiring ¶ foreign nationals by maintaining the current low limit on H-1B visas is likely to produce the unintended ¶ consequence of pushing more work to other countries. When asked, “Which of the following your company has ¶ done in response to the lack of H-1B visas to fill positions in the U.S.?” 65 percent of the companies said they ¶ “Hired more people (or outsourced work) outside the United States.” This is significant in that even if those ¶ companies responding to the survey are heavier users of H-1B visas it means that these are the companies most ¶ likely to hire outside the United States in response to an insufficient supply of skilled visas for foreign nationals.¶

### A2: Cap not Filled

#### Visa cap reached mid year

PTI 12, Press Trust of India reporter, June 14, 2012, “First time in years, cap on H1B visa reached”, The Times of India: United States, http://articles.timesofindia.indiatimes.com/2012-06-14/us/32234919\_1\_specialty-occupation-petitions-cap-subject-petitions-cap-on-h1b-visa

WASHINGTON: For the first time in several years, the Congressionally mandated 65,000 H-1 B work visas, the most sought after by Indian professionals in the US, has reached its cap.¶ "USCIS announced today that it has received a sufficient number of H-1 B petitions to reach the statutory cap of 65,000 for fiscal year (FY) 2013. June 11 was the final receipt date for new H-1 B specialty occupation petitions requesting an employment start date in FY 2013," an official statement said.¶ In the past few years, it either crossed over to next year or the cap was reached later in the year. It is noteworthy that the cap has been reached mid-year in particular during the recent economic crisis.

### A2: Wages

**H-1B Visa workers do NOT steal jobs**

**Immigration Policy Center 11**, Immigration Policy Center; American Immigration Council; "The US Economy Still Needs Highly Skilled Foreign Workers”; 3/2011, [www.immigrationpolicy.org/just-facts/us-economy-still-needs-highly-skilled-foreign-workers/](http://www.immigrationpolicy.org/just-facts/us-economy-still-needs-highly-skilled-foreign-workers/))

H-1B workers don’t “steal” jobs from U.S. workers. H-1B visas are issued to temporary, “nonimmigrant” workers in “specialty occupations.” As described by the Congressional Research Service, a “specialty occupation” is one “requiring theoretical and practical application of a body of highly specialized knowledge in a field of human endeavor including, but not limited to, architecture, engineering, mathematics, physical sciences, social sciences, medicine and health, education, law, accounting, business specialties, theology, and the arts, and requiring the attainment of a bachelor’s degree or its equivalent as a minimum.” Under the H-1B program, the U.S. Department of Labor (DOL) is tasked with ensuring that H-1B workers “do not displace or adversely affect wages or working conditions of U.S. workers.” To this end, each employer seeking to hire an H-1B worker is required to file a Labor Condition Application (LCA) with DOL in which “the employer must attest that the firm will pay the nonimmigrant the greater of the actual compensation paid other employees in the same job or the prevailing compensation for that occupation; the firm will provide working conditions for the nonimmigrant that do not cause the working conditions of the other employees to be adversely affected; and that there is no applicable strike or lockout.” If DOL certifies the employer’s LCA, the employer can file a petition with U.S. Citizenship and Immigration Services on behalf of a potential H-1B worker, who must demonstrate that he or she has “the requisite education and work experience” for the job. If approved, the H-1B worker is authorized to work for the U.S. employer for up three years, with one renewal allowed, for a maximum stay of six years.

### A2: Brain Drain

#### H-1B Workers return home

Mandira Banerjee 09- News Reporter for News America Media - 2009, "Hanging in Balance"; Khabar; [www.khabar.com/magazine/cover-story/Hanging\_In\_Balance.aspx/](http://www.khabar.com/magazine/cover-story/Hanging_In_Balance.aspx/))

Vivek Wadhwa describes the return of H-1B workers to their home countries as a reverse brain drain. “Most students and skilled temporary workers who come to the United States want to stay—but we’re leaving these potential immigrants little choice but to return home.” In non-technology fields, getting an H-1B is more challenging. Durga, who was searching for a job last year, was told by a recruiter in Chicago that the clients “won’t want to touch her with a bargepole because she needed an H1-B visa to work for them.” So she moved to New York, where “it has been easier moving on to a better position.” The major issue with H-1B visas is that it is tied to an employer. So, in many ways, H-1B workers are at the mercy of their employer-sponsors. If they are fired or choose to quit, they must return to their native countries. They can't change jobs unless the old and new employers agree. “There was a situation in 2001 where my then-employer gave me two months’ notice to find another job since they were cutting costs and had to let people go. It was a little nerve-wracking until I found my next job,” says Shankar (H-1Bees), who now has a green card. Durga, too, feels restricted by the visa situation. “I feel like I am leashed to a post and always straining at it. If I didn’t need a work permit, I would have been able to move into a field that better suits my temperament and my long-term goals.”

#### CP is best – causes reverse Brain Drain- Immigrants return home and bring talent back

MICHELLE HIRSCH 5/14/2012, The Fiscal Times’ Economics and tax policy for Washington, D.C. Bureau; “US Educated Immigrants Return to Their Homelands”; The Fiscal Times;

<http://www.thefiscaltimes.com/Articles/2012/05/14/US-Educated-Immigrants-Return-to-Their-Homelands.aspx#page1>

Demographers were stunned last month when new data revealed a trend reversal: immigrants are no longer flocking to the U.S., and some have made a U-turn and returned home. Data from the Internal Revenue Service show that 1,800 people, mostly living abroad, either renounced their U.S. citizenship or handed in their green cards—more than the total number of people who did so in 2007, 2008, and 2009 combined. A few made the choice to avoid paying U.S. taxes on income earned abroad, but others are seeking greener pastures in the global economy. ¶ ¶ ¶ With the U.S. facing a shortage of skilled workers, the wave of immigrants who are turning their backs on America is foreboding. A growing population of highly-educated Americans and foreign nationals educated in the states are less committed to living and working in the U.S., preferring to return to their homelands, many of which are emerging economies.¶ “It’s only really come to light in the last year or two, but we’re noticing a pattern of highly-skilled children of foreign-born U.S. immigrants leaving the U.S. for the countries where their parents were born,” said Madeleine Sumption, a policy analyst at the Migration Policy Institute. Sumption says the trend is strong in China, India and Brazil where dramatic economic growth over the last decade has opened up opportunities for entrepreneurship and led U.S. multinationals to hire overseas employees with western educations. “We’re putting together a picture of what’s happening partly from data and partly from anecdotal evidence since it’s a relatively new phenomenon.”¶ Entrepreneurship experts say a combination of booming developing economies, a still-soft U.S. economy, and difficulty obtaining green cards is driving foreign-born U.S. students who in past years would have remained in the U.S. on temporary visas to move home. ¶ “Some of the sheen has come off the U.S. economy as the place to make your fortune—especially if you’re from another country and have a U.S. education,” said Robert Litan, vice president of research and policy at the Kauffman Foundation. “They know all the hot things that are going in the United States, and see a real opportunity to replicate them or do something similar in their home country that doesn’t have it.” ¶ According to data from the Brazilian government, U.S. applications for permanent work visas in Brazil rose 77 percent between 2008 and 2011, and temporary visas rose 36 percent during that time. ¶ China and India have not released those same statistics, though other data point to growing numbers of American-educated individuals choosing to move to those countries. The Chinese Ministry of Education estimates that the number of Chinese living overseas who returned to China more-than tripled between 2007 and 2010 from 44,000 to 135,000. ¶

#### No Brain Drain- foreigners go back

Stacy Nguyen 11, Editor of Northwestern Asian Weekly, “New Program aimed at slowing U.S.’s brain drain”, The Northwest Asian Weekly, 10/28/2011, http://www.nwasianweekly.com/2011/10/new-program-aimed-at-slowing-u-s-%E2%80%99s-brain-drain/

Each year, many American employers, including Microsoft’s Bill Gates, lobby Congress to lift the H1B cap, stating that it is too restrictive and companies cannot hire the workers they need.¶ “We heard from the entrepreneurs in the community and they articulated a concern that there are not adequate avenues for the best and brightest students who come here to the U.S. for education to remain here in the U.S. to use the skills and knowledge they have gained for the good of this country,” said USCIS Director Alejandro Mayorkas in a conference call. “What we see is an exodus instead. We educate and we train, and because the access is not available to them, they leave and they contribute to other countries.”

### Agenda Politics NB – A2: Unpopular

#### CP is popular- strong and broad constituencies and congressional support

Patrick Thibodeau, Computerworld, 3-15-08 Five reasons why the H-1B visa cap will increase, http://blogs.computerworld.com/five\_reasons\_why\_the\_h\_1b\_visa\_cap\_will\_increase?page=23

There is grass root support for the H-1B visa A major use of H-1B visas is to help facilitate offshore outsourcing and even in this downturn outsourcing will continue to grow. That’s the broad outlook by industry analysts. The pressure for visas remains. But the H-1B visa has a very broad, grass root constituency that extends beyond the tech sector. In the 2007 fiscal year, nearly 20,000 companies, academic institutions, hospitals, public schools and others received only one H-1B visa. These organizations send emails as well. Four: The H-1B lottery is a big problem for tech firms The forecasted demand for H-1B visas is going to force the U.S. Citizenship and Immigration Service (USCIS) to hand out visas via a random lottery for the fiscal year 2009 that starts Oct 1. For the 2008 fiscal year, the USCIS received more than 123,000 visa petitions in two days for the 65,000 cap. Despite that number, the odds were still good that a petition would be approved in its lottery. The USCIS put all those visa petitions in a hat and selected about 100,000, rejecting the rest. The selection process works like college admission: The USCIS accepts more petitions then it has slots and expects a certain number of these applications to be withdrawn or disqualified. But this year there seems to be broad consensus that the number of visa petitions will exceed last year's total, and companies may face visa odds of two-to-one or higher. This makes the outlook for getting a visa very unpredictable and unacceptable to tech groups, which are now pushing for a cap increase with special urgency. But here is an important point to keep in mind: The people who receive visas under the 65,000 cap are more likely to only have a bachelor degree. They are the worker bees. The U.S. has a separate H-1B visa cap of 20,000 for foreign nationals who graduate with advance degrees from U.S. universities. But there was no lottery for these graduates because there was no sudden rush in demand. The USCIS filled those petitions on a first-come, first serve basis until April 30 that year. That may change this year. Five: Congressional support for visa Lawmakers have moved the cap up and down before and they will do it again. Congress will increase the cap this year or next and may make it retroactive as well. Had an immigration bill been approved last year the cap would have been 115,000. The open question is whether the H-1B visa will be reformed as part of a cap increase. Dick Durbin (D-Ill.) and Chuck Grassley (R-Iowa) last year pushed for a reform that set a limit on how the visa is used. One rule set a limit that no more than 50 percent of the U.S.-based employees at a company using H-1B workers can be visa holders. It was a measure aimed at making the India offshore firms a little less nimble and raising it as a trade issue for India.

#### Democrats and Republicans support increasing the caps of H1B visas

Roy Mark, InternetNews Reporter 05-11-07 http://www.internetnews.com/bus-news/article.php/3671211/Bills-Would-Expand-H1-B-Visa-Quotas.htm]

Bills to expand H1-B visas are stacking up like cordwood in Congress. A favorite among the technology industry, H1-B visas allow U.S. companies to sponsor foreign born U.S. graduates in science, engineering and math for up to six years of U.S. employment. In the wake of last week's announcement that the 2008 allotment of 85,000 H1-B visas was expended after only one day, Sen. John Cornyn (R-Tex.) reintroduced Tuesday his Securing Knowledge, Innovation and Leadership (SKIL) bill. The legislation would exempt from the H1-B visa quotas U.S. educated foreign workers with advanced degrees in math, science, technology and engineering fields. The bill would also create a market-based H-1B cap, expanding or decreasing depending on demand. Last month, U.S. Reps. Reps. Luis Gutierrez (D-Ill.) and Jeff Flake (R-Ariz.) introduced the Security Through Regularized Immigration and a Vibrant Economy Act of 2007 (STRIVE), which would expand the current H1-B cap of 65,000 to 115,000. Under the bill, the cap would jump to 180,000 in any year after the 115,000 limit is reached.

#### H-1B opponents have no clout

Patrick Thibodeau, Computerworld, “Five reasons why the H-1B visa cap will increase” 03-15-08. http://blogs.computerworld.com/five\_reasons\_why\_the\_h\_1b\_visa\_cap\_will\_increase

H-1B opponents have no clout If H-1B visas weren’t part of the larger immigration reform issue in Congress, the H-1B cap would have been increased long ago. The opponents have been piggybacking on the broader immigration debate and they know it. But the H-1B opposition is in decline even as the debate grows more intense. Five years ago, tech workers in Connecticut – many working or connected to the financial services industry (the first industry to really embrace offshoring) – organized a lobbying group, the Organization for the Rights of American Workers (TORAW). By 2003, Connecticut's congressional reps had introduced several bills – all affecting the H-1B issue. The legislation went nowhere, but Connecticut tech workers proved that an organized effort can have impact. It’s all part of history now. TORAW has disbanded, out of money and members. The broader base of opponents are alert, well connected and can fire off thoughtful, well researched emails to lawmakers at an instant, but TORAW is illustrative of the anemic state of the opposition. Opponents lack lobbying muscle in Washington. Two: The Gates effect Bill Gates is, obviously, a powerful proponent of the H-1B visa. But where is the opposition’s star power? Lou Dobbs isn’t it. The Programmers Guild has been effective in raising issues, but the real heavy weight organization, with true lobbying ability, is the IEEE-USA, and it has scaled back its opposition to H-1B visas. This group has staked out a position focused on visa reform and improving access to permanent residency, the Green Cards. The IEEE-USA was once more direct about the impact of the H-1B visa: In 2004, when the cap was scaled back to 65,000 the IEEE-USA pointed out: The number of unemployed U.S. high-tech professionals dropped sharply from the first quarter of 2004 to the third quarter. The decline mirrors the reinstatement of the H-1B visa cap to its historical level of 65,000 in Fiscal Year 2004 from 195,000 in FY 03. That was a strong message to send to Congress. But the IEEE-USA also represents many academic institutions that depend on the H-1B visas. Although universities are exempted from the cap, foreign enrollments may suffer if students feel they have little chance of remaining in the U.S. longterm. Universities also have strong ties to tech companies. It is probably safe to say that the IEEE-USA, as an organization, is getting pulled in different directions.

#### H-1B lobbies dominate the opposition

Rob Sanchez, Computerworld, “Five reasons why the H-1B visa cap will increase” 03-15-08. http://blogs.computerworld.com/five\_reasons\_why\_the\_h\_1b\_visa\_cap\_will\_increase

Opposition to H-1B is almost non-existent except for a few unhappy technical workers that have been victimized by the flood of cheap foreign labor into the U.S. So far techies and other types of workers affected by H-1B such as teachers and nurses have been unwilling or unable to organize – and none of them cooperate across career boundaries. Most opposition groups have either withered or shut down due to lack of public support. Employers and a scattering of immigration support groups have shown no such reluctance to organize and actively lobby Congress -- and they are being heard. Ironically many engineers and programmers don’t believe an H-1B increase is possible because they arrogantly believe that Congress is somehow afraid of them. Considering their lack of participation in politics that kind of narcissistic thinking could be fatal to their careers. The best hope that H-1B increases won’t happen is that Congress continues its reputation as “Do Nothing”. Unfortunately with the pressure and enticements Bill Gates just offered them they have every reason to “do something” this time around. So far it looks like a very one sided battle in which only one voice is being heard. Techies are going to lose this battle if they don't quickly get their acts together, and judging by the fact that H-1B has been in place for over 18 years, there is little reason for optimism.

## H1B – Aff Answers

### Solvency

#### Immigrants cant solve the coming economic crises

Evan Nolan, JD Candidate Georgetown University Law Center, Fall 2009, “Picking Up After The Baby Boomers: Can Immigrants Carry The Load?,” 24 Geo. Immigr. L.J. 77, Lexis

The general suggestion recently put forth by social scientists promotes liberalization of immigration laws as a response to resolving the imminent crises of the Baby Boomer retirement. n110 They believe that an influx of immigrants could fill the void in the U.S. workforce left behind by the retiring Baby Boomers and help pick up part of the tab for the Baby Boomers' Social Security and Medicare benefits. I recognize that the Baby Boomer crises may provide excellent justification for opening the doors to more liberalized immigration policies. However, it is essential to understand how small of an impact these immigrants could make on solving the pending workforce and entitlement crises, and I point out where they fall short. Such policy decisions may help resolve the immigration debate, for now, but they still leave the Baby Boomer retirement issues relatively unresolved. Many hope that immigration reform can be at least one of the answers in resolving, or at least alleviating the pressures of the pending entitlement and workforce crises. Myers insists in the title of his work that "immigration reform can help America prosper in the face of the baby boomer retirement." n111 He points out that immigration reform may help slow the rapidly rising senior ratio and help pay for the Baby Boomers' retirement, because immigrants tend to be younger and have even higher workforce participation rates than native workers. n112 Though Myers refrains from offering specific suggestions for immigration reform, others have suggested loosening the strict requirements for high skill-level visas n113 and withdrawing the harsh restrictions and penalties on "illegal" immigrants. n114 Myers addresses the entitlement crisis by suggesting that immigrants and, over time, their American school-educated children will be able to help bear [\*92] the weight of the Social Security and Medicare burdens. n115 By liberalizing immigration laws, more immigrants could legally join the tax-paying American workforce. The tax payments of these immigrants and their children, once they start working, will help pay for the retirement of the Baby Boomers. However, this approach falls short for three reasons. First, the additional tax revenue that immigrants would produce through their employment would fall drastically short of anything resembling an answer to the entitlement crisis. A quick look at the current immigration situation, which permits a significant number of undocumented workers already, reveals how far off an answer is now. In 2005, undocumented immigrants paid $ 9 billion in Social Security and Medicare taxes. n116 Yet, the federal budget outlays for Social Security and Medicare totaled over $ 800 billion. n117 The undocumented workforce makes up five percent of the American workforce, and anywhere from one-half to three-quarters of the undocumented workforce contributes to Social Security and Medicare taxes. n118 Yet, their tax payments amount to only one percent of the Social Security and Medicare expenditures, and this is before any Baby Boomers have retired. A significant number of illegal immigrants already contribute their income to Social Security taxes, and this revenue still comes no where close to meeting the current needs of Social Security, let alone the future needs of the Baby Boomers. Allowing even more immigrants to enter America and the workforce would be a move in the right direction. But such a policy would require an unrealistic number of immigrants to meet the needs of the Baby Boomers, as demonstrated by the current, vast discrepancy between Social Security revenues and expenditures. Second, growing the U.S. workforce by liberalizing immigration laws would require legalizing the "illegal" immigration. Doing so would just complicate the problem both in the short and long term. Immediately, millions of undocumented workers would be entitled to social benefits to which they currently do not have access. After years of contributing to Social Security and Medicare taxes, as many currently do, they would eventually be able to collect Social Security and Medicare themselves as they reach retirement, exacerbating the problem. The Social Security system is not a Ponzi scheme to which more and more people should be added to help pay others off. This leads to the final shortfall: the creation of disincentives. Because immigration reform is pulled into the Social Security debate, even more Americans may be less likely to favor such immigration reform if it means [\*93] the formerly "illegal" immigrants will suddenly be entitled to benefits they had previously been precluded from collecting. Those who followed the rules will likely oppose liberalizing the immigration laws in favor of those whose "illegal" activity would be instantly rewarded. Next, Myers turns to the workforce crisis. Here, he acknowledges the immigrants' share of the growth in the American workforce. "[Immigration] has accounted for a large share of the growth: 23.8% of workforce growth in the 1980s, 39.6% of the 1990s, and 54.2% of 2000-07." n119 Though the numbers look good, it is merely a present day snapshot, and does not offer much suggestion for the pending workforce crisis. The implication that immigrants are capable of filling the Baby Boomer void again suffers three significant shortfalls. First, the number of immigrants necessary to move to the United States to fill the void is likely unavailable. When the Baby Boomers retire, the workforce demand may increase, but the supply of available immigrants to join the workforce will likely be unable to keep pace. Immigration numbers are still increasing, but at a much lower rate than in previous years. n120 Baby Boomers will be exiting the workforce in much higher numbers. In the last twenty-seven years, the foreign-born workforce increased from seven million to twenty-four million. n121 With more than seventy million Baby Boomers settling into retirement over the next twenty-seven years, the immigration rate would need to triple before it filled any significant part of the void. The home countries of our current immigrants may not have enough people to support such an expansion of emigration. The second problem with invoking immigration reform to fill the workforce void of retiring Baby Boomers involves an age discrepancy. Immigrant workers tend to be young. n122 The Baby Boomers are retiring from more experienced positions. The current workforce lacks the numbers to fill those spots and inexperienced immigrants would need years of work and time for advancement before they were qualified to step into those roles. The final shortfall involves a discrepancy in skill levels, but should not be confused with experience, or the age discrepancy described above. Skill levels, as indicated by education, differ significantly between native workers and most of the immigrants that have been migrating to the United States for work. The immigrants, who include low-skilled workers in high proportions, are being asked to replace the Baby Boomer generation, which includes a relatively high proportion of highly-skilled workers. Overall average skill level across the U.S. workforce would fall, and productivity would likely fall along with it. Certainly, the United States could loosen the restrictions and [\*94] improve the incentives for attracting more highly-skilled foreign workers. Unfortunately, this sub-market is complicated with "natural" restrictions, such as requiring bar passage for lawyers, passing the boards for doctors and nurses, and other kinds of certifications for highly-skilled jobs. Such restrictions might deter an otherwise qualified candidate from immigrating to the United States. And there is likely little support for waiving many of these self-imposed restrictions.

#### Raising the cap is insufficient- only green cards solve workforce shortage

Cromwell J.D. Candidate Brooklyn ‘9

(Courtney L.-, Spring, Brooklyn Journal of Corporate, Financial & Commerical Law, “Friend of Foe of the U.S. Labor Market: Why Congress Should Raise or Eliminate the H1-B Visa Cap”, 3 Brook. J. Corp. Fin. & Com. L. 455, Lexis)

Proponents of the H-1B visa argue that the visa cap threatens to set the United States behind in innovation and science and actually increases layoffs of U.S. workers because it encourages off-shoring. 190 If employers in the United States cannot hire foreign workers with the experience and training required, "then companies who are trying to remain globally competitive are left with only one solution: shifting those operations offshore." 191 Many U.S. companies "concede that the uncertainty created by Congress' inability to provide a reliable mechanism to hire skilled professionals has encouraged placing more human resources outside the United States to avoid being subject to legislative winds." 192

While the practice of off-shoring began mainly with the working class, commonly with apparel workers, and then moved into areas like customer service (as with American Express), a number of IT industry leaders such as IBM have begun the practice of off-shoring some of their technical support positions and software jobs. 193 Companies are finding that "knowledge-based endeavors," such as technical support positions and software jobs, "require relatively little overhead costs beyond a basic telecommunications infrastructure." 194 Moreover, information-based productive activities involve far less complex issues of coordination by virtue of the ability of [\*476] work products to "move unencumbered by the limits of time and space as bits and pixels in global communication networks." 195

Most recently, Microsoft Corp. announced the plan to open a large software development center in Vancouver to enable it to "recruit and retain highly skilled people affected by immigration issues in the [United States]." 196 The stated benefits for companies engaging in off-shoring are plentiful and include cheaper labor (which benefits consumers), economic efficiency and the ability to bring new job opportunities to third world nations. 197 However, off-shoring has many disadvantages including the loss of American jobs, which forces more people into unemployment and hurts the U.S. economy. 198 Other disadvantages include the risk of abuse of workers in foreign countries who are forced to work for low wages 199 and most relevant, the risk of the United States "losing its leading role in innovation." 200 If the cap remains low, then foreigners who make up a significant portion of U.S. university science graduates, and "who have been extremely helpful to U.S. technological success" will no longer be able to come to the United States with their creative and innovative ideas, 201 thus depriving the United States of the vital brain power needed to remain a leading intellectual influence in the global realm.

As more and more U.S.-educated foreign students are forced to leave the United States after graduation for lack of available visas, they return to their home countries, which become "attractive locales for off-shoring." 202

n202 Yang, supra note 51, at 154. But see Wadhwa et al., America's New Immigrant Entrepreneurs, supra note 172, at 2. Adding to the off-shoring problem is that "the number of skilled workers waiting for visas [green cards] is significantly larger than the number that can be admitted to the United States. This imbalance creates the potential for a sizeable reverse brain-drain from the United States to the skilled workers' home countries." Id. Therefore, it can be argued that increasing the visa cap for H-1B workers, who will eventually seek permanent residence status in the United States, without also increasing the limit on employment-based immigration, will still worsen the backlog on permanent residence applications and thus will not prevent knowledge-based H-1B workers from returning back to their countries of origin after their six-year terms are expired if they cannot obtain green cards. Under these facts, increasing the H-1B visa cap alone will not likely solve the off-shoring problem. See also Scott Duke Harris, Now Playing in Immigration Politics, the 'Reverse Brain Drain', SAN JOSE MERCURY NEWS, Aug. 22, 2007 ("The tight cap on permanent visas may force entrepreneurs back home to create rival companies in China, India and elsewhere. To avoid the possibility of a 'reverse brain drain,' they urged immigration reform to allow skilled immigrants to stay, thus protecting the U.S. competitive advantage.").

### A2: Skills Shortage

#### No skills shortage

Harold Salzman, PHD, Senior Research Associate, the Urban Institute, 11-6-2007, “Globalization of R&D and Innovation: Implications for U.S. STEM Workforce and Policy,” Submitted to the Subcommittee on Technology and Innovation of the Committee on Science and Technology, http://www.urban.org/UploadedPDF/901129\_salzman\_stem\_workforce.pdf

Where’s the Problem? Hiring Difficulties versus Labor Market Shortages and Perceptions about the Future of Science and Engineering It is generally asserted, without much evidence, that education deficits are responsible for the difficulty employers experience in hiring. It is important to distinguish between the problems an employer may have hiring the people he or she wants and an actual shortage of workers or potential workers. Although there may, in fact, be a labor market shortage, all the evidence cited in various policy reports is entirely individual employer accounts of problems in hiring. The industries most vocal about labor market shortages and the need to import workers may be voicing unrealistic expectations of desired work experience more than deficiencies in the skills or education of a new hire, or just dissatisfaction with the cost of labor. In previous research (Lynn and Salzman 2002), we found that managers in engineering and technology firms do not claim a shortage of applicants, nor do they complain about applicants with poor math and science skills or education. They do often note difficulty in finding workers with desired experience, specific technical skills, or a sufficient number of “brilliant” workers in the pool.8 The complaint, quite often, appears to be one of unrealistic expectations, as unwittingly illustrated in a recent BusinessWeek (2007) article on labor shortages. In this article, a company president described the current labor shortage as follows: “There are certain professions where skills are in such demand that even average or below-average people can get hired.” It is difficult to consider an inability to only hire above-average workers a labor market shortage. Complaints also reflect firms’ dissatisfaction about the need to train new entrants; often at issue is whether firms or education institutions should shoulder the costs of training new hires.

### A2: Labor Shortage

#### No labor shortage – flawed data and industry lies.

T. D. Clark, Staff writer for Industry Market Trends, 11-21-2006, “Labor Shortage: Fact or Fiction?” http://news.thomasnet.com/IMT/archives/2006/11/qualified\_labor\_shortage\_debate\_fact\_or\_faction.html

Doomsayers rely on such demographic data, as well as employment projections from the U.S. Bureau of Labor Statistics (BLS), to determine that as early as 2010 there won't be enough workers available to staff the nation's jobs. But such predictions often are flawed or fail to take into account a full view of the facts. Perhaps more intriguing: …by 2012, there will be 3.3 million fewer workers than jobs. But there are numerous flaws with that math. Most significantly, the two data sets involved, both of which are supplied by BLS, are derived from different sources and cannot be compared accurately. To subtract one from the other is to make an apples-and-oranges comparison that is invalid and misleading. There are a slew of other examples in the cover story debunking the BLS, but even without all these mitigating factors, the number of available workers still will exceed the number of jobs, according to the HR Magazine analysis. Then again, a piece from The Seattle Times earlier this month has the ability to send the labor shortage debate into a tailspin once again, with immigration as the catalyst. Stephen Anthony, president of the Fort Worth Building and Construction Trades Council, a network of union groups, said illegal immigrant welders have kept wages down for U.S. workers. Union welders earn on average $23 an hour, while nonunion welders generally earn about $12 an hour in the Fort Worth area, he said. Yet Steven Camarota, director of research for the Center for Immigration Studies, a Washington, D.C.-based group that opposes illegal immigration, is skeptical. "Any industry you care to name, you will generally find that the employer says, 'We can't find anybody,'" he said. "What they really mean is, 'Given what we want to pay, we can't find anybody.' And that's the kicker." Are select employers and the BLS full of, ahem, BS? Are they creating a false sense of panic as it relates to labor shortages in order to acquire workers willing to work for income less than they're worth? Well, perhaps we should toss in some more statistics to complicate the debate further. This month, the Small Business Times had the lowdown on some figures released by the National Federation of Independent Business (NFIB) based on a survey of small businesses. "An historically high 63.3 percent of the adult population has a job, and the unemployment rate [was] 4.4 percent in October," said NFIB chief economist William Dunkelberg. "This does not sound like a labor market with deficient labor demand, but it's showing clear signs of a mismatch between supply and demand, with clear shortages of qualified workers." That's qualified workers. Hmm, so, 1) highly skilled/qualified workers 2) willing to work for less than their worth? Sounds just like the problems IMT hears from engineers on a fairly frequent basis. One of our readers recently touched on both factors: What does exist is a shortage of educated, skilled, motivated people who are willing to work for small dollars, few or no benefits, in positions offering little advancement potential. Employers want to get by very cheaply, so instead of hiring an experienced individual who knows the technology, they'll haul a guy off the plant floor and make do with him, paying him very small dollars. I've seen this done repeatedly in corporations whose names you would recognize. According to The Associated Press (via Leading the Charge), the purported shortage is felt the greatest in the energy and power sector, where there may soon be a shortage of workers who operate power plant equipment and repair power lines. A handful of schools aim to correct the problem by offering power industry training, and utility companies have started "aggressively seeking out colleges to create more." "Every day we delay hiring people, another 40-year veteran is retiring and won't be there to pass along valuable experience," said Jim Hunter, director of the International Brotherhood of Electrical Workers utility department. While labor shortages in the utilities sector might appear more sincere, there is still plenty of other compelling information out there claiming that the labor shortage debate carries little merit and is even a hoax. The news and comments posted at the Inside Recruiting blog, for instance, perpetuate these beliefs; meanwhile, the blog even serves up a recent reader poll, the results of which indicate that not everyone is on board with the labor shortage estimates currently circulating. The most critical piece that has come across our desks on the labor shortage scare is derived from The American Economic Alert in an article entitled "The Labor Shortage Hoax," by Alan Tonelson, a Research Fellow at the U.S. Business & Industry Educational Foundation and the author of "The Race to the Bottom: Why a Worldwide Worker Surplus and Uncontrolled Free Trade are Sinking American Living Standards." In his analysis, Tonelson tears into recent labor shortage stats and studies with the ferocity of a pit bull, even taking on the likes of Deloitte regarding a study the company did for the National Association of Manufacturers (NAM): To put it mildly, NAM should ask for its money back. Only 10 percent of the 8,000 companies contacted by Deloitte replied, and as Wall Street Journal columnist David Wessel noted, lots of self-selection surely was at work. Specifically, employers not perceiving any shortages probably were much less likely to bother responding than those that did. But that's only the beginning of Tonelson's criticism: Deloitte ignored a major irony that practically shouts out from the results: Although the consulting firm recommended that companies spend at least three percent of their payrolls on employee training, it found that fully three-quarters of all respondents fell short of this threshold. Does this sound like the behavior of firms that value trained workers and are desperate to secure them? Clearly, the validity and accuracy of labor shortage data is questionable. And the myriad of factors that play into the debate, whether retiring baby boomers, illegal or even legal immigrants, offshore outsourcing or fewer upcoming engineers all seem to feed the flames of this hot-button topic from different and seemingly unrelated angles. It's a debate that will surely continue — but so long as outspoken pundits and everyday workers continue to voice their displeasure with sloppy data and unnecessary panic, a labor shortage capable of bringing the U.S. economy to its knees is about as likely as John Kerry becoming a successful stand-up comic.

### Wages DA

#### CP Decreases American Jobs- companies replacing with H1-B immigrants

Phyllis Schlafly 12, columnist for Town Hall Daily and author of Feminist Fantasies, “H1-B Visas Take American Jobs”, Town Hall, 3/20/12, http://townhall.com/columnists/phyllisschlafly/2012/03/20/h1b\_visas\_take\_american\_jobs

When President Obama was participating in a live video chat, Jennifer Wedel asked him, "Why does the government continue to issue and extend H-1B visas when there are tons of Americans just like my husband with no job?" Her husband is a semiconductor engineer who was laid off three years ago and is still unable to find an engineering job.¶ We all would like the answer to that question.¶ The U.S. Census Bureau reports that, counting only U.S.-born individuals, there are 101,000 with an engineering degree who are unemployed, another 244,000 who are not working or not looking for work and therefore not counted in unemployment statistics, and an additional 1.47 million who have an engineering degree but are not working as an engineer.¶ Obama's answer to Wedel sounded like he had been well briefed by the big corporation lobbyists. He even expressed bewilderment that any U.S. high-tech engineer could be out of work because industry executives tell him there is an unfilled "huge demand" for engineers.¶ Obama said, "H-1Bs should be reserved only for those companies who say they cannot find somebody in that particular field." Yes, indeed, they should. But in fact, they are not.¶ Created in 1990, the H-1B program was designed for employers to import foreign H-1B workers to fill various high-tech jobs only when Americans could not be found, and the law was supposed to make it illegal for an employer to replace an American with an H-1B worker. However, the big corporation lobbyists succeeded in fuzzying up the law so there is now no effective rule to prevent employers from firing American jobholders and replacing them with H-1B aliens.¶ Big companies prefer H-1B workers because they can pay them significantly less than Americans, never have to give them a raise or promotion, and have the unilateral power to deport them. H-1B workers don't dare to complain about working conditions or unpaid long hours, and they can't quit to take a better job.¶ Most H-1B workers are imported for entry-level jobs and trained by experienced U.S. workers who are then laid off. This process has introduced a new expression and acronym into the English language -- DYOG: Dig Your Own Grave.¶ One senator understands this problem: Sen. Chuck Grassley, R-Iowa. In a letter to the president last month, he pointed out how Obama's response to Jennifer Wedel shows he is only regurgitating the corporation lobbyists' sales talk with their phony mantra that "there are better and brighter people abroad."¶

### Links to Agenda Politics

#### Congress hates the CP – don’t want to do immigration policy in an election year

Patrick Thibodeau 6/12/12, ComputerWorld Reporter, “With H-1B cap reached, Congress has three options. Here's how Congress may deal with tech industry proposals after the H-1B cap is reached quickly this year.” June 12, 2012 http://www.computerworld.com/s/article/9228021/With\_H\_1B\_cap\_reached\_Congress\_has\_three\_options\_

Computerworld - The H-1B cap for next year was reached this week, completing the annual petition process at the fastest pace since the start of the 'great recession.¶ ¶ The quick pace may prompt Congress to act on new legislation to appease the tech industry and its demands for access to foreign workers. It has several options, including some that do not include a controversial direct cap increase.¶ ¶ The U.S. Citizenship and Immigration Service announced Monday that the cap of 85,000 H-1B visas was met on Monday, just two months after the start of petition submissions on April 1. The federal government's fiscal year begins Oct. 1.¶ ¶ The list below shows how quickly the cap was reached in recent years. The government starts accepting petitions each year on April 1.FY 2013, cap reached: June 11, 2012.¶ FY 2012, cap reached: Nov. 22, 2011.¶ FY 2011, cap reached: Jan. 26, 2011.¶ FY 2010, cap reached: Dec. 21, 2009.¶ FY 2009, cap reached: April 7, 2008. (One week after the U.S. started accepting petitions.)¶ The fast pace of reaching the cap this year will likely trigger some calls for an increase in H-1B visas, though Congress is unlikely to act in an election year.

## EB Visas

### EB Visas CP 1NC

#### Text: The United States Federal Government should exempt certain highly skilled workers from employment-based visa limits, reform the per-country quota system for immigrant visas, and recapture unused immigrant visas to ease the burden on oversubscribed categories.

#### Expanding employment based visas is the vital internal link to economic growth – no other policy measure comes close

Tim Kane, senior fellow at Heritage and Robert Litan, VP for research at the Kauffman Foundation, 4-30-2010, “knowledge economy immigration: a priority for u.s. growth policy,” http://www.kauffman.org/uploadedFiles/Knowledge\_Economy\_Immigration\_Policy\_4-30-09.pdf

There are countless policy improvements that can enhance economic growth in the United States—policies that will create jobs in the private sector, enhance wages, and fundamentally improve the health and welfare of the people. In this year when an economic recession is a pressing concern for a new Congress and Administration, attention is focused on fiscal and monetary policies, but the environment for legal and institutional policy reform is ripe as well. Of all the policies that could be changed, probably none would have a greater positive impact on long-term economic growth than removing barriers to the immigration of highly skilled and highly educated individuals. Nearly all reform proposals have natural advocates who are active in lobbying the Congress. In contrast, knowledge economy immigration reform does not have a natural advocacy group to petition the government. Past immigrants who are now citizens have no personal stake in such reform and foreign interests (including immigrants) are unable to press their case with U.S. government leaders for legal reform. Furthermore, the benefits of high-skill immigration are predominantly widespread positive externalities, so no single constituency benefits enough to advocate on behalf of immigrants. Making the situation more difficult, legal knowledge economy migration is easily confused with “illegal immigration” and the larger issue of immigration reform in the United States, which is dominated by concerns over low-skill migrants from Latin America. This predicament is unfortunate, and in these times when the economy is contracting rather than growing, something that must change. While debate, even among the experts, continues about the net economic and social impact of low-skill immigrants, the case for expanded immigration of highly skilled immigrants, or those seeking higher skills, is overwhelming. In this essay we outline both the economics and politics supporting the expanded immigration of skilled foreign immigrants, as well as those seeking skills. In so doing, we offer some concrete, common sense recommendations for welcoming more immigrants who are waiting to contribute to the growth of our increasingly knowledge-based economy. The Benefits of Knowledge Economy Immigration For the past two decades, the U.S. has been home to about half of all immigrants in developed countries who have more than a high-school education, maintaining a lead in the global competition for talent. However, in the wake of tougher scrutiny of immigrants in our post-9/11 world, the U.S. faces increasing competition for human talent from other countries. America still has two key advantages in this race for talent: its universities, which continue to rank among the world’s best, and the world’s largest, most technologically advanced economy, which still is hospitable to entrepreneurial activity. Immigrants have taken advantage of these opportunities to an unusual degree. According to research from Arlene Holen, "Over the five years 20032007, 143,391 bachelor’s degrees were granted in STEM fields in the United States to non-resident aliens, 255,267 master’s degrees, and 49,532 doctoral degrees." She further estimated that nearly 200,000 of these science, technology, engineering, or math (STEM) graduates would have stayed and worked in the U.S. but for constraints by the federal government that required them to leave. And so the American economy has lost out on the multiple benefits generated by knowledge economy immigrants, five of which are described here: First, immigrants are responsible for a disproportionate number of successful high-growth companies. Among technology and engineering companies started in the U.S. during the 1995-2005 period, 25 percent had at least one immigrant key founder according to a 2007 study by Vivek Wadhwa of Duke University and his co-authors. In Silicon Valley, over 50 percent of the startups in that period had at least one immigrant key founder.1 Second, immigrant-founded companies generate jobs for native Americans. Amar Bhidé’s 2008 study (described in his book The Venturesome Economy) of 106 U.S. venture-backed businesses found that some “60 percent of the founding teams included immigrants.”2 Bhidé notes that the ratio of immigrants to natives declines as companies mature, indicating immigrants are creating opportunities for U.S. workers born here. The evidence bears this out. In 2006, the National Venture Capital Association (NVCA) estimated that since 1990 venture-backed firms owned by immigrants have created more than 400,000 jobs and collectively represented a market capitalization of roughly $500 billion.3 Third, immigrants to the United States are responsible for a disproportionate number of inventions. Foreign nationals account for 25 percent of international patent applications filed from the U.S.4 Fourth, contrary to the perception among some, skilled immigrants are not displacing native Americans in the U.S. market. Entrepreneurs widely report that perhaps the most significant constraint on their ventures’ growth is the difficulty finding and attracting highly skilled workers.5 Indeed, by failing to attract and retain skilled knowledge workers from abroad, we will reduce jobs available for native Americans. If we can’t be successful in attracting foreign workers here, U.S.-based firms will have stronger incentives to locate new facilities or move existing ones off-shore in order to employ foreign, high-skill workers in their home countries.6 Better to bring those workers here, and thus keep U.S.-based facilities and the jobs they create at home. Fifth, high-skilled immigrants have a positive impact on the federal budget. Preliminary analysis by Arlene Holen of the Technology Policy Institute7 finds that the gross loss of federal revenues from two groups—foreign graduates and H1-B workers—who were required to leave the U.S. during 2003-2007 was $2.7 to $3.6 billion and $4.5 to $6.2 billion respectively. These estimates are only for the losses that have already occurred. The lost opportunity representing migrants who have never been able to enter the U.S. may be several multiples higher. Moreover, Holen’s estimates do not take account of the long-term boost to our GDP and the growth in federal revenues from encouraging the permanent migration of skilled foreign residents or foreign residents who come to this country to obtain those skills and use them to start and grow new enterprises. Legal Barriers to Knowledge Economy Immigration Immigration into the U.S. adds significantly to the size of the U.S. labor force and is one of the signature differences between the relatively high rates of economic growth and demographic health of the United States relative to other advanced economies, notably those in Europe. In testimony before Congress in May 2007, Peter Orszag, then director of the Congressional Budget Office (and now Director of the Office of Management and Budget) said, “In 2006, 23 million workers—one in seven workers in the United States—were foreign born, and half had arrived since 1990. During the past decade, foreign-born workers accounted for half of the growth of the U.S. labor force.”

#### And it’s key to competitiveness

Jonathan G. Goodrich, March 2008, “Immigration in the Twenty-First Century,” 42 U. Rich. L. Rev. 975, ln

In multiple ways, immigration, whether temporary or permanent, provides for economic growth. Economists estimate that at a minimum America's foreign-born population adds $ 12 billion to the economy by working, consuming, investing, and paying taxes. n97 Despite claims to the contrary, the costs associated with immigration do not outweigh these economic benefits. n98 Moreover, [\*987] immigration enhances the competitiveness of the United States in today's global economy by allowing multinational corporations to integrate their operations and recruit skills from a global labor force. n99 At both ends of the occupational spectrum, however, family-focused, security-centric immigration laws prevent U.S. businesses from hiring necessary workers. n100 For cashiers and computer scientists, for those that build homes and for those that build robots, U.S immigration policies are an impediment to, rather than a facilitator of, economic progress. Several factors influence economic growth, including labor force expansion, technology, education, entrepreneurship, and research. n101 Two closely watched factors are a country's productivity rate and its labor growth. n102 Due to a baby-boomer generation on the verge of mass retirement, n103 a declining U.S. fertility rate, n104 and a country at near full employment, economists predict that satisfactory economic expansion will not come from increased productivity. n105 Thus, continued economic success must rely upon a growing labor force. n106 The immigration polices that are now in place, however, prevent that growth from occurring. In addition to immigration's economic implications, living in a post-9/11 world means that security concerns are now also intertwined with immigration policy. But overly broad security measures disregard important economic considerations and result in [\*988] unintended and negative consequences on actual security. Millions of low-skilled workers illegally come to the United States and live in near anonymity in order to fill available jobs - many of which are both vital to the economy and the country's infrastructure. Millions of high-skilled workers cannot come to the United States; yet, as President Bush explained, "science and technology [are] essential to the defense of the Nation and the health of our economy." n107 Increasingly, American companies have to rely on foreign businesses in key technological areas. n108 Moreover, the remittances that noncitizens send back to their native countries create strategic ties for the United States and provide an indirect form of international aid. n109 This benefits American security by reducing the lack of education and poverty that often breeds terrorism. n110 Full of rhetoric, however, Congress's current black and white approach to immigration fails to promote either the economy or security of the United States.

#### Prerequisite to the aff – The high-skilled worker shortage undercuts infrastructure projects

Ratzenberger 7-31-10 [John, inventor, entrepreneur and board member of the Foundation for Fair Civil Justice, “Skilled workers key to state, national economies,” http://newsok.com/skilled-workers-key-to-state-national-economies/article/3480964]

A cultural shift has taken place in America that's tragically made the skilled worker a thing of the past. Our media has glorified celebrity at the expense of our nation's basic needs, and America will reap the whirlwind within the next two decades. At stake is nothing less than our long-term economic vitality and national security. Let's start with infrastructure - bridges, roads, water and sewer systems. America is dangerously close to failures that will result in loss of life and are already resulting in loss of economic competitiveness. In many cases, currently funded infrastructure projects cannot move forward due to lack of skilled workers. For example, a national shortage of 500,000 welders has resulted in delays or cancellations of many key projects. Expand that out over the entire economy and we have a massive crisis on our hands. By 2012, there will be a 3 million skilled worker shortfall in our nation, according to the U.S. Department of Labor. In Oklahoma, which has had solid energy and manufacturing industries, top companies have difficulty finding adequate skilled workers to fill positions. The average age of American skilled workers is 55, which means the bulk of our skilled worker base will retire in the next decade. There are not enough skilled workers to replace them and maintain the nation's competitive global position. In my interviews with employers across the nation, I hear the same story: Business owners are desperate for skilled workers. Many are reaching out to local schools to attract young people into the trades. Despite the offer of good pay and benefits, the noble skills that involve working with your hands and mind don't hold the same appeal as they did in decades past. Some businesses are considering moving their operations (and jobs) overseas. We're experiencing the loss of the once-vaunted edge that America enjoyed. From aviation to energy, our national security is at risk. In order to maintain the world's most sophisticated military, we must produce systems, parts and hardware in America. Without domestic manufacturing operations, critical component work has been moved offshore as a stop-gap measure. The lens through which I view the world is simple: The manual arts always take precedence over the fine arts. Remember, someone had to build the ceiling before Michelangelo could go to work. Negative images of skilled workers - what I call "essential workers" - pervade our culture. The truth is, high-profile athletes and entertainers are non-essential. If all the celebrities like me disappeared overnight, it would be sad, but the world would continue with little disruption. But if plumbers, electricians, welders, carpenters, lathe operators, truck drivers and other "essentials" disappeared, our country would grind to a halt.

### 2NC Solvency – Economy

#### Raising the cap on EB visas solves the economy-

#### Innovation

Fareed Zakaria, editor of Newsweek International, 10-21-2010, “How to Restore the American Dream,” TIME, http://www.time.com/time/nation/article/0,8599,2026776-3,00.html

Shift from consumption to investment. Fundamentally, America needs to move from consumption to investment. Everyone agrees that the best way to create good jobs in the U.S. is to create new industries and companies and to innovate within old ones. This means large investments in research, technology and development. As a society, this needs to become our strongest focus. (See how the future of work is changing.) Despite substantial increases and important new projects under the Obama Administration, the federal government is still not spending as much on R&D as a percentage of GDP as it did in the 1950s. I would argue that it should be spending twice that level, which would be 6% of GDP. In the 1950s, the U.S. had a huge manufacturing base that could absorb millions of semiskilled workers. Today, manufacturing is a small part of the economy and faces intense global competition. The only good jobs that will stay in the U.S. are jobs related to knowledge and innovation. Additionally, in the 1950s, America was the only research lab in town, accounting for the vast majority of global scientific spending. Today, countries around the world are entering the arena. Two weeks ago, South Korea — a country of just 50 million people! — announced plans to invest $35 billion in renewable-energy projects. We should pay for this with a 5% national sales tax — call it an American innovation tax — which would be partly offset by a small reduction in income taxes. This would have the twin benefits of tamping down consumption and yielding some additional funds. All the proceeds from the tax should be focused on future generations, because we need to invest massively in growth. (Comment on this story.) The often overlooked aspect of investment is investment in people. America has been able to create the future in large measure because it has tapped into the energies and work of immigrants. It has managed to invest in human capital by taking smart, motivated people from around the globe, educating them in the planet's best higher-education system and then unleashing them in a dynamic economy. In this crucial realm, the U.S. is now disinvesting. After training the world's best and brightest — often at public expense — we don't find ways to make sure they stay here by giving them a green card but rather insist that they leave and take their knowledge to another country, where they will invent, inspire, build and pay taxes. Every year, we send tens of thousands of the smartest Indians and Chinese back home, which is a great investment — in the future of those countries.

#### Skilled labor

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

Comprehensive reform of the immigration scheme must also tackle the problems of the employment-based immigrant visa system. Backlogs and quotas are a huge burden on the United States’ ability to attract highly qualified foreign workers and keep them here. This article proposes three substantive changes to the employment-based scheme: (1) exempt certain highly skilled workers from employment-based visa limits; (2) reform the per- country quota system for immigrant visas; and (3) recapture unused immigrant visas to ease the burden on oversubscribed categories. To revitalize and strengthen the U.S. economy, it is necessary to recruit the best and brightest foreign workers. These are the immigrants who will complement the native labor force, stimulate innovation and production, and create jobs for Americans. While these workers typically arrive in the United States through the H-1B visa program, the majority of them will attempt to obtain permanent residency while they are here. To end the current recession and strengthen the U.S. economy, Congress must begin by simplifying the process for immigrant workers. This is why Congress should exempt certain high- priority workers in fields of great importance from the employment-visa quota and preference category system. The employment-visa exemption would apply primarily to immigrants with advanced degrees in STEM fields that are crucial to this country’s attempt at economic recovery. The CIR Bill of 2006 also suggested this mechanism, exempting from the immigrant visa scheme aliens with certain advanced degrees in the STEM fields that had been working the previous three years in the United States as nonimmigrants.’79 When necessary, the Department of Labor can also exempt immigrants that work in fields of critical shortage.’ The Department of Labor should have little difficulty identifying fields of critical shortage through employment surveys and monitoring fields that traditionally suffer from shortages of native labor. However, critical shortages vary from time to time and should not be part of the permanent cap-exempt structure) Other bills have suggested creating a new category of immigrant visas for STEM professionals rather than an exemption. An exemption, however, is preferable. A new visa category would not go far enough to revitalize the economy—it would still be subject to the quota system, resulting in oversubscription. Highly skilled workers who are already working in the United States should be encouraged to make a commitment to the United States by becoming permanent residents and eventually citizens. Immigration policy must prioritize long-term interests, which means attracting and retaining highly skilled workers so that they can continue to contribute to the economy. The per-country quota system that prevents the government from effectively issuing immigrant visas to those who want them must be reformed. The quota system has always been the subject of much contention, even dating back to the enactment of the original immigration & Nationality Act in i9S2) The current law allows only approximately 9,800 individuals from any country to obtain an employment-based immigrant visa each year.’ This creates a remarkably inefficient immigration scheme that profoundly inhibits the nation’s ability to retain the immigrants it needs to compete in the global economy. 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.

1. **Reverse brain drain**

**Case et all, 11**,Steve Case-Revolution CEO, John Doerr-Partner of Kleiner Perkins Caufield & Byers ; Paul Otellini- Intel Corporation CEO, and Sheryl Sandberg, Facebook COO, all members of the President’s Council on Jobs and Competitiveness; “America needs a 21st century immigration policy”; May 19, 2011; Reuters, <http://blogs.reuters.com/great-debate/2011/05/19/america-needs-a-21st-century-immigration-policy/>)

President Obama’s recent focus on immigration highlights America’s “broken” system and its impact on our economy. Fixing it requires Republicans and Democrats to show political courage and implement reforms to expand and strengthen the American economy. As members of the President’s Council on Jobs and Competitiveness, we share his deep concern that our nation’s ability to compete economically is being damaged by the two parties battling over immigration laws and policies. To some, **the link between immigration reform and economic growth may be surprising.** To America’s most innovative industries, it is a link we know is fundamental. The global economy means companies that drive U.S. job creation and economic growth are in a worldwide competition for talent. While other countries are aggressively creating policies and incentives to attract a highly educated workforce, America has stagnated. Once a magnet for the world’s top minds, America now faces a “reverse brain drain” and is no longer the first choice for many entrepreneurs creating new companies and jobs. America needs a pro-growth immigration system that works for U.S. workers and employers in today’s global economy. And we need it now.

#### We control uniqueness – Economic crisis is looming due to workforce deficiencies

#### Babyboomer retirement

Evan Nolan, JD Candidate Georgetown University Law Center, Fall 2009, “Picking Up After The Baby Boomers: Can Immigrants Carry The Load?,” 24 Geo. Immigr. L.J. 77, Lexis

The landscape of the U.S. labor market is set to change dramatically in the next several decades. The largest generation in the history of our nation is preparing to retire. The Baby Boomer generation will exit the workforce in significant numbers over the next twenty to thirty years. n1 Behind them, the Baby Boomers leave arguably the greatest period of workforce productivity ever accomplished. Unfortunately, the achievements may be second thoughts to the pending crises that the retiring generation will also leave behind them. In the next couple years, the oldest of that generation will reach the age of sixty-five and begin thinking about retirement. The oldest of the Baby Boomer generation has already filed for Social Security benefits. n2 Over the next twenty years, more than seventy million Americans will follow. Subsequent generations have not sustained the growth of the Baby Boomers and will not have the capacity to fill the workforce void or pay for their parents' retirement. n3 The current financial crisis only darkens the forecast. The Baby Boomer retirement could potentially cause two major economic crises: an "entitlement crisis" and a "workforce crisis." n4 The entitlement crisis involves the growing discrepancy between revenue from payroll taxes and the federal expenditures on Social Security, Medicare, and other social aid, particularly for retirees who have paid their dues. A potentially debilitating workforce crisis would also ensue when millions set to retire from a labor force that is already seeing declines in growth. n5 Dowell Myers and other social scientists have sought to turn this awful predicament into opportunity, by throwing open the doors to immigration. n6 [\*78] They suggest that by liberalizing immigration policies, the influx of immigrants would "significantly mitigate" the entitlement and workforce crises, and the "illegal" stigma attached to millions of unauthorized immigrants would be removed. n7 These immigrants could legally join the American workforce, filling the void left by Baby Boomers and contributing to the Social Security coffers through taxes. n8 The economic benefits of immigration, and even "permitting" undocumented workers, are clear. n9 Expanding the workforce, and subsequently the economy, helps promote GDP growth and provides an answer to the Baby Boomer crises.

#### STEM worker shortage

Jacob Funk Kirkegaard, research fellow at the Peterson Institute for International Economics, 7-1-2008, “US High-Skilled Immigration Policy: A Self-Inflicted Wound,” Peterson Institute for International Economics, http://www.iie.com/publications/papers/paper.cfm?ResearchID=972

America rose to global economic prominence, superpower status, and victory in the Cold War on the shoulders of the most highly skilled workforce in the world. However, America's global "skills leadership" is now under challenge. An increasingly vicious combination of long-term trends in the form of retiring baby boomers and stagnating US educational attainment, combined with increasingly restrictive laws on high-skilled immigration increasingly undermines the US position. This will seriously jeopardize long-term economic growth opportunities, especially for US high-tech sectors. Aging US baby boomers were the best-educated workers in the world when they entered the workforce 30-some years ago. Building on visionary policies like the GI Bill of 1944, college-level graduation rates for US baby boomers reached almost 40 percent during this period, far exceeding graduation rates of 20 to 25 percent enjoyed by contemporary British, French, German, or Japanese baby boom generations in the late 1960s and 1970s. The year 2008 is the first in which Americans born after World War II can retire with public pensions—hence, the loss of large numbers of well-educated baby boomers will be more severely felt in the United States than among other major industrialized economies. Another long-term worry is the stagnation seen in the average educational attainment of Americans in recent decades. Almost unique in the Organization for Economic Cooperation and Development (OECD), the tertiary-level graduation rates among present-day US labor market entrants, aged 25 to 34, is the same as that of their baby boomer parents, aged 55 to 64—stuck below 40 percent. Hence, there's a risk in coming years that as many high-skilled Americans will retire as will enter the workforce. The century-long continuous compositional skills improvement of America's workforce may soon end. Moreover, while America failed to continue to improve broad educational standards during the last 30 years, the rest of the world has not stood still. Today, over 50 percent of young Canadians, Japanese, and Koreans obtain tertiary education representing a vast educational advancement relative to their parents' generation. American labor market entrants today barely make the global skills top-10 list. As a direct result, for the first time in generations, the US risks becoming less skill-abundant than an increasing number of its global economic competitors (see figure 11). US and Canadian baby boomers, aged 55 to 64, were indeed the "brightest kids on the global trading block," when they entered the workforce and rapidly globalizing marketplace. Thus baby boomers were ready to take advantage of trade liberalization and the opening of global markets during the last part of the 20th century, far less true for today's American youth. Policymakers cannot stop the graying of the US population or the imminent retirement of baby boomers. Similarly, successful overhaul of the US education sector could only begin to reverse more than 30 years of educational stagnation over the long term. Improving the education system is hardly a realistic or quick solution to forestalling broad skill shortages in the US economy over the next decade. US policymakers can only hope to counter these long-term phenomena in a timely manner by reforming high-skilled immigration policies and facilitating the continued and increasingly economically necessary inflow of high-skilled workers from abroad. Instead, US high-skilled immigration policies have in recent years become tangibly more restrictive—waylaid by wider congressional gridlock on immigration and political emphasis on indiscriminate enforcement. This restrictiveness is relative to earlier periods in US history and, more importantly, other industrialized countries today. In April 2008, for instance, about half of 163,000 US businesses wishing to hire a foreign high-skilled worker on H-1B visas were denied this opportunity by the annual quota of 85,000 available visas2 (65,000 plus 20,000 available to foreign graduates with advanced degrees from US universities). The immigration policy undermines the economic characteristics—entrepreneurial vitality and mastery of new advanced technologies—that make the United States the envy of the world. Just like Google, eBay, and Yahoo, more than half of engineering and technology companies founded in Silicon Valley from 1995 to 2005 had at least one foreign-born founder.3 More than a third of US venture capital–backed technology firms report shifting investments and jobs outside the country due to restrictive regulation,4 and America's largest, most competitive companies cannot get visas for foreign high-skilled workers they want to hire. Meanwhile, contours of the global battlefield for talent are rapidly changing. The recent proposal for an EU "Blue Card" would allow high-skilled workers from outside the European Union to work in multiple EU countries, just one example of a new trend across the OECD. Affected by more rapid population aging than the United States, other OECD countries aggressively work to liberalize their high-skilled immigration laws, while simultaneously tightening regulation of low-skilled and humanitarian-based immigration. Ironically, the other nations frequently copy US policies, particularly those that attract and retain foreign students. Equally worrisome for the United States, the top countries of origin for high-skilled migrants—fast-growing China and India—offer incentives for skilled workers to return home. In 2007, China launched its "green passage" initiative, aimed at luring back tens of thousands of acclaimed overseas Chinese scientists, engineers, and executives with promises of guaranteed university places for their children, exemption from household-residence registration—or hokou—requirements, and tax benefits.5 The United States—historically the world's country of choice for foreign high-skilled workers—has the most to lose from any change in these human-capital flows. While the rest of the rich world has caught up in welcoming high-skilled foreigners, the United States could soon struggle to attract global talent. With the skill-base of the US workforce declining at an accelerating pace relative to the rest of the world, America in the 21st century will need foreign high-skilled workers more than ever. At stake is the ability of the US economy to thrive in the global marketplace.

### 2NC Solvency – Competitiveness

#### Immigrant entrepreneurship is key to sustaining a growth differential – tech is key

David Hart, director of the center for science and technology policy at George mason university, Zoltan Acs, director of the center for entrepreneurship and public policy at George Mason University, and Spencer Tracy, head of the national policy research council, 7-2009, “High-tech Immigrant Entrepreneurship in the United States,” Small Business Administration

A vigorous high-technology sector is vital to sustain U.S. prosperity in the 21st century. The new products, services, and business models that the high-tech sector generates differentiate this nation’s output from that of the rest of the world and enable capital accumulation, wage gains, and productivity growth. A high level of entrepreneurship, by which we mean the founding of new businesses, makes the high-tech sector vigorous. High-tech entrepreneurs, by which we mean the founders of new high-tech businesses, take risks that managers of existing high-tech businesses choose not to take and recognize opportunities that they fail to spot. High-tech entrepreneurship requires a rare combination of inclinations, capabilities, and resources. Half of new businesses fail within five years (Shane 2008), so founders must be optimistic, but also capable of weathering severe challenges. Because the opportunities in high-tech sectors blend together technological and market factors, individual entrepreneurs and founding teams in these sectors typically combine technical expertise rooted in formal education with market savvy that flows from extensive business experience. They must also be able to tap quickly and effectively into networks of customers, suppliers, expertise, finance, and talent as business opportunities ripen. Foreign-born individuals play an important role in U.S. high-tech entrepreneurship. By virtue of having left their native land, they may have entrepreneurial inclinations. Their 7 large presence in American higher education and the U.S. labor force, especially science and engineering disciplines and occupations, equips them with valuable knowledge that bears on high-tech innovation. Their outsider status may allow them, in some cases, to recognize “out-of-the box” opportunities that native-born individuals with similar knowledge and skills do not perceive. These capabilities may be linked to unique entrepreneurial resources, such as access to partners, customers, and suppliers in their countries of origin. In this study, we quantify the role of immigrants2 in high-tech entrepreneurship in a nationally representative sample of rapidly growing “high-impact” companies (HICs). This class of companies drives job creation and aggregate growth in the United States. We find that, while most previous studies have overstated the role of immigrants in high-tech entrepreneurship, it is nonetheless very important. For instance, about 16% of the companies in our sample had at least one foreign-born entrepreneur among their founding teams, and these high-tech companies display better performance in some respects than high-tech companies in our sample whose founders were all native-born. We also provide a profile of high-tech immigrant entrepreneurs. The vast majority are strongly rooted in the United States. Most of them received their highest educational degree here and have become citizens.

#### We control uniqueness – There’s massive workforce shortage looming – visa change is key to restoring US competitiveness

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

America is facing a demographic tsunami. The aging of the population will have a profound impact on the federal budget, the workforce, and the housing market. The response to these perils will determine if the United States continues to be a global leader in the 21st century capable of supporting high economic growth and a rising standard of living. Immigration will play a vital role in confronting the challenges posed by an aging society and keeping three promises at the heart of our economic success: a secure retirement for seniors; an ample and competent workforce for employers; and a healthy housing market for families. Policy makers cannot afford to view immigration and the retirement of baby boomers as two separate phenomena. We must evaluate our immigration needs in light of the pending massive movement of a significant portion of the population out of the labor pool and housing market and into government funded entitlement programs. Keeping our bedrock promises will require new blood from beyond our borders. Immigrants can significantly mitigate the three crises. By firmly grasping the implications of the graying of America we can develop a practical immigration policy that meets the nation’s future needs and enhances our resilience against powerful demographic and economic forces that threaten our global standing and competitiveness.

#### Admitting highly skilled workers boosts US competitiveness

Marshall Fitz, Director of Immigration Policy at the Center for American Progress 12-2009, “Prosperous immigrants, Prosperous Americans,” Center for American Progress, http://www.americanprogress.org/issues/2009/12/pdf/highskilled\_immigrants.pdf

Reforming our high-skilled immigration system will stimulate innovation, enhance competitiveness, and help cultivate a flexible, highly-skilled U.S. workforce while protecting U.S. workers from globalization’s destabilizing effects. Our economy has benefitted enormously from being able to tap the international pool of human capital.5 Arbitrary limitations on our ability to continue doing so are ultimately self-defeating: Companies will lose out to their competitors making them less profitable, less productive, and less able to grow; or they will move their operations abroad with all the attendant negative economic consequences. And the federal treasury loses tens of billions of dollars in tax revenues by restricting the opportunities for high-skilled foreign workers to remain in the United States.6

#### Boosting high-skilled immigration restores US competitiveness

Darrel M. West, vice president and director of Governance Studies and founding director of the Center for Technology Innovation at Brookings Institute, 2010, Brain Gain: Rethinking U.S. Immigration Policy

The most important challenge is to develop a new narrative that defines immigration as a brain gain that improves economic competitiveness and national innovation. A focus on brains and competitiveness would help America overcome past deficiencies in immigration policy and help the country meet the economic and innovation challenges of the twenty-first century.’ There is considerable evidence that the United States is falling behind on innovation. An analysis of patents granted shows that the long-term U.S. dominance has come to an end. In 1999 American scientists were granted 90,000 patents, compared with 70,000 for those from all other countries. In 2009, for the first time in recent years, non-U.S. innovators earned more patents (around 96,000) than did Americans (93,000). one-third of the American workforce holds science or technology positions. That is slightly less than the 34 percent figure for Germany and the Netherlands hut is higher than the 28 percent in Canada and France. Looking at another measure, the U.S. government spends only 2.8 percent of its GDP on public research and development. That is less than the 4.3 percent spent by Sweden, 3.1 percent by Japan, and 3.0 percent by South Korea hut is more than is spent by Germany (2.5 percent), France (2.2 per cent), Canada (1 .9 percent), or England (1 .9 percent). Europe as a whole devotes 1.9 percent of its total GDP to research and development, while industrialized nations spend around 2.3 percent.’

### Solv – Economic Leadership

#### Only the plan signals commitment to economic leadership -- key to visa demand

John Pearson, director of the Bechtel International Center at Stanford University, 6-12-2008, “Need for Green Cards for Skilled Workers,” CQ Congressional Testimony

Other countries are recognizing the value of educating the next generation of world leaders and attracting the world’s scientific, technological, and intellectual elite. U.S. immigration law and policy have not yet effectively been adapted to the era of globalization. My own institution is witness to this, but it is not alone. Even so, the best and the brightest still want to come here. We should welcome them by creating a clearer path to green card status for them that is not tied to unnecessarily low caps on the green cards available annually. In a global job market, employers look for the talent they need wherever they can find it, and students and highly talented workers look for the places to study and work that offer them the most opportunity. This means that options for employment after graduation are integral to attracting bright and talented international students. Employment prospects are now a part of their calculus in deciding of where to study, work, and live. Not all students who arrive to study in the U.S. wish to remain; some have commitments to their home country. But others discover their potential in the environment of U.S. higher education and their career and life goals are changed. It is no secret that U.S. immigration law makes it difficult for international students to work after graduating, even from the most prestigious U.S. higher education institutions. The annual H-1B cap lottery is reported internationally, highlighting that the entire annual allotment is depleted in a day or two. But the truth behind the overwhelming demand for H-1Bs is that many if not most of the applicants would rather be applying for a green card, but are unable to do so because of backlogs and delays. It is fair to say that many employers would also like to be able to make some of these students permanent employees sooner, rather than later. It does not make sense that in a global competition for highly educated and talented workers, we turn away the graduates from our colleges and universities. This is doubly true for those graduating with Master’s degrees and Ph.Ds. When they leave the United States, they go to work in other countries for companies that often directly compete with American companies. What better way to capture the world’s best and brightest who want to become part of our nation than to make it easier for them to remain to contribute to American economic and scientific leadership after they graduate from U.S. universities? Our ability to remain competitive and build our innovation- and knowledge-based economy requires that our laws reflect the reality of the global market for talent for international students and highly educated workers. Creating a clearer path to green card status for graduates from U.S. colleges and universities, in STEM subjects, would be a serious step in showing that we have a commitment to continuing to be the leader in international education and in industry. Madam Chairman, appended to my testimony is NAFSA’s 2006 report, Restoring U.S. Competitiveness for International Students and Scholars, which I ask to be included in the record.

### Solv – Hegemony

#### Highly skilled immigration makes heg sustainable and effective

Joseph Nye, Harvard University Distinguished Service Professor and Sultan of Oman Professor of International Relations at Harvard Kennedy School, Nov. 2010, “The Future of American Power: Dominance and Decline in Perspective,” Foreign Affiars, Nov/Dec

Some argue that the United States suffers from "imperial overstretch," but so far, the facts do not fit that theory. On the contrary, defense and foreign affairs expenditures have declined as a share of GDP over the past several decades. Nonetheless, the United States could decline not because of imperial overstretch but because of domestic underreach. Rome rotted from within, and some observers, noting the sourness of current U.S. politics, project that the United States will lose its ability to influence world events because of domestic battles over culture, the collapse of its political institutions, and economic stagnation. This possibility cannot be ruled out, but the trends are not as clear as the current gloomy mood suggests. Although the United States has many social problems--and always has--they do not seem to be getting worse in any linear manner. Some of these problems are even improving, such as rates of crime, divorce, and teenage pregnancy. Although there are culture wars over issues such as same-sex marriage and abortion, polls show an overall increase in tolerance. Civil society is robust, and church attendance is high, at 42 percent. The country's past cultural battles, over immigration, slavery, evolution, temperance, McCarthyism, and civil rights, were arguably more serious than any of today's. A graver concern would be if the country turned inward and seriously curtailed immigration. With its current levels of immigration, the United States is one of the few developed countries that may avoid demographic decline and keep its share of world population, but this could change if xenophobia or reactions to terrorism closed its borders. The percentage of foreign-born residents in the United States reached its twentieth-century peak, 14.7 percent, in 1910. Today, 11.7 percent of U.S. residents are foreign born, but in 2009, 50 percent of Americans favored decreasing immigration, up from 39 percent in 2008. The economic recession has only aggravated the problem. Although too rapid a rate of immigration can cause social problems, over the long term, immigration strengthens U.S. power. Today, the United States is the world's third most populous country; 50 years from now, it is likely to still be third (after India and China). Not only is this relevant to economic power, but given that nearly all developed countries are aging and face the burden of providing for the older generation, immigration could help reduce the sharpness of the resulting policy problem. In addition, there is a strong correlation between the number of H-1B visas and the number of patents filed in the United States. In 1998, Chinese- and Indian-born engineers were running one-quarter of Silicon Valley's high-tech businesses, and in 2005, immigrants were found to have helped start one of every four American technology start-ups over the previous decade. Equally important are the benefits of immigration for the United States' soft power. Attracted by the upward mobility of American immigrants, people want to come to the United States. The United States is a magnet, and many people can envisage themselves as Americans. Many successful Americans look like people in other countries. Rather than diluting hard and soft power, immigration enhances both. When Singapore's Lee Kuan Yew concludes that China will not surpass the United States as the leading power of the twenty-first century, he cites the ability of the United States to attract the best and brightest from the rest of the world and meld them into a diverse culture of creativity. China has a larger population to recruit from domestically, but in his view, its Sinocentric culture will make it less creative than the United States, which can draw on the whole world.

#### The employment based visa process deters highly skilled applicants – compromising US leadership

NAFSA, Association of International Educators, 6-2006, “Restoring US Competitiveness,” http://www.nafsa.org/resourcelibrary/default.aspx?id=9169

What is most alarming is that, for the first time, the United States seems to be losing its status as the destination of choice for international students. For a variety of reasons that go beyond education and recruitment policy, the United States has lost the allure it once had. It is no longer seen as being as attractive a country to the rest of the world, and that has profound implications not only for international students, but for U.S. leadership and security. The picture for international scholars and researchers is not much better. Although the number of international scholars at U.S. doctoral degree-granting institutions increased in the academic year 2004–05 after two years of decline, according to the Institute of International Education, the near-universal perception of the nation’s leading scientific associations is that their international members increasingly feel that the process of gaining entry to the United States is not worth the trouble.

#### Highly skilled immigrants are vital to US leadership

Ed Hooper, staff writer, 4-28-2010, “Politics Trumping Visa Reform,” Huffington Post, http://www.huffingtonpost.com/ed-hooper/politics-trumping-visa-re\_b\_555596.html

National organizations estimate more than 37 percent of PhDs in science and engineering awarded by colleges and universities each year go to foreign-born students. While most are reportedly staying according to a 2007 study, experts say those numbers are likely to nosedive in the next report. Undoubtedly the U.S. produces great home-grown engineers and scientists, but a formidable number of immigrants have brought revolutionary advances in sciences and technologies to American shores. Croatian immigrant Nikola Tesla made the national electrical grid possible with his invention of a coil. Russian immigrant and aviation pioneer Igor Sikorsky invented the helicopter. German immigrant Albert Einstein and Italian immigrant Enrico Fermi helped usher in the atomic sciences. Hungarian immigrant John von Neumann pioneered the digital age that made computers possible. And, if Werner von Braun hadn't surrendered to the 44th Infantry Division in World War II Berlin, Americans wouldn't have had a space program. These immigrants helped form the backbone of U.S. leadership in science and technology that sustained this nation on the world's stage for the last 100 years. This is one case where the U.S. needs history to repeat itself. The unique business model that drives competitiveness between private and government laboratories in a capitalist system has been the propellant that maintains the U.S. as the world's leader in science and technology. From Silicon Valley to Oak Ridge, the greatest tool American-based companies have is their historical ability to bring in talented foreign minds without hassle to research, start new businesses and teach at colleges or universities. And it must be preserved.

#### Highly skilled immigrants are key to US leadership and military superiority

Doris Meissner, former Commissioner of the US Immigration and Naturalization Service (INS) and Senior Fellow at the Migration Policy Institute, Deborah w. Meyers, Demetrios g. Papademetriou and Michael Fix, Summer 2007, “Immigration and America's Future: A New Chapter,” 5 Geo. J.L. & Pub. Pol'y 473, Lexis

Immigration helps the United States maintain its leadership in science and technological innovation, which has traditionally been a foundation of American economic power and performance. Some of the world's most talented people are attracted to the United States for schooling, work, and freedom. The attraction often springs from the American higher education system, which [\*477] provides an unrivalled teaching and research infrastructure. Seventeen of the top twenty universities considered to be the best in the world are located in the United States. n22 This higher education system sustains U.S. leadership in the global marketplace and undergirds U.S. superiority in critical national security sectors such as defense and intelligence. Science and engineering specialties are particularly essential to national security and economic success, and here immigrants play a substantial role. While 12% of the population and 14% of the workforce were foreign-born in 2003, a quarter of all college-educated workers in science and engineering occupations were foreign-born; 40% of scientists and engineers holding doctoral degrees were foreign-born; and a majority of doctorate holders in computer science, electrical engineering, civil engineering, and mechanical engineering were foreign-born. n23 In 2005, graduate enrollments in engineering were 48% foreign-born temporary residents; in the physical sciences, they were 40%. n24 In contrast, the two largest graduate fields chosen by native-born students are education and public administration. n25 In the 2006 State of the Union address, President Bush announced the American Competitiveness Initiative, an ambitious math and science education program that funds increased training to maintain American leadership in innovation. n26 At the same time, foreign students and professionals will continue to play a key role in maintaining the country's edge in the global economy. And, given the global nature of science and technology research and development, workers in these careers will likely always be mobile and international. Effective, predictable, and welcoming immigration regimes are becoming important factors in a newly competitive global environment. The United States thus has a strong interest in building an immigration system that provides opportunities for the highly skilled and their families to travel, work, and live here.

### Solv- Green Tech

#### Highly skilled immigrants are key to developing the US alternative energy industry

Jeff Joseph, A Senior Partner at the Joseph Law Firm, “Immigration: They Key to a Booming, Green Economy,” 6-25-2010, http://josephlawfirm.blogspot.com/2010/06/immigration-key-to-booming-green.html

If there is one thing on which economists, analysts, and researchers seem to agree, it is this: Immigration is essential to keeping American business at the top of the international business market, especially in the energy and engineering sectors. Indeed, even some politicians, such as New York’s Mayor Michael Bloomberg and Senators John Kerry (D-MA) and Richard Lugar (R-IN), have recognized the important role immigration has to play in American business. According to Mayor Bloomberg, “Our immigration policy is national suicide. I can’t think of any ways to destroy this country quite as direct and impactful as our immigration policy. We educate the best and the brightest and then we don’t give them a green card. We want to create jobs and we won’t let entrepreneurs from around the world come here.” It is for that reason that Senators Kerry and Lugar have introduced the Startup Visa Act. The Startup Visa Act proposes legislation that would modify the EB-5 Visa to increase job creation and America’s international business competitive edge. Immigrant entrepreneurs who are creating new businesses would be able to obtain visas, so long as there is investment capital from within the U.S. of at least $100,000 and equity financing of at least $250,000. A new Migrant Policy Institute Report, The Impact of Immigrants in Recession and Economic Expansion, found that “immigration unambiguously improves employment, productivity and income,” although it does require some short-term adjustments, such as job training or new technology. Despite common conceptions among Americans, immigration does not reduce Americans’ employment rates over the long-term (ten years). But it does increase Americans’ productivity and the average income over the same period. In fact, immigration between 1990 and 2006 is credited with a 2.9% wage increase among American workers. Still, immigration during a recession can have short-term, negative effects, but those effects dissipate fairly quickly, within seven years at most. In contrast, immigration during economic growth periods has an immediate, positive effect, creating enough jobs to leave Americans’ jobs completely untouched. Darrell M. West, author of a new book, Brain Gain: Rethinking U.S. Immigration Policy (Brookings Institution Press, 2010), points out that many of America’s greatest scientists, inventors, educators, and entrepreneurs came to the United States as immigrants. He asserts that the U.S. must establish an increased open-door policy to attract unique foreign talent in the fields of energy, information technology, and international commerce. In a review of the book, Mayor Bloomberg recognizes that “the most important step we can take to strengthen America’s long-term economic health is passing comprehensive immigration reform. For America to compete in the 21st Century, we need to be able to attract—and keep—the world’s best, brightest, and hardest working.” And this seems to be particularly important in the green energy field. A recent report published by the Immigration Policy Center of the American Immigraiton Council, authored by Richard T. Herman and Robert L. Smith, Why Immigration Can Drive the Green Economy, discusses how the connection between immigration and the development and commercialization of alternative fuel sources is rarely discussed among policymakers. Yet it is this very connection that will help the United States lead the way towards cleaner, less expensive energy. Although policymakers imagine that the development of renewable energy will create hundreds of thousands of jobs, most fail to understand that much of the clean-energy talent remains abroad. Thus, experts urge that expanding our own clean-energy industry will require working with people overseas, in countries that have been pursuing alternative fuel sources for several decades already. Unfortunately, tough immigration restrictions make this type of foreign collaboration difficult, if not impossible.

#### Even without foreign founders – there aren’t enough workers to sustain domestic clean tech companies

Norman C. Plotkin, immigration attorney and partner at Jackson & Hertogs LLP, 3-16-2009, “Time to plan for the H-1B visa filing deadline,” http://cleantech.com/news/4270/time-plan-h-1b-visa-filing-deadline

Clean technology companies in the U.S. may find themselves in the unusual position of receiving federal stimulus funding while at the same time not being able to hire and retain key employees. The economic downturn has stopped many employers across all industries from making new hires, but cleantech companies are gearing up for even greater hiring to meet the challenges of our changing economy. However, many of the best potential hires will be foreign nationals who require employment authorization issued by U.S. Citizenship & Immigration Services (USCIS) to legally work in the U.S. Many times the most appropriate visa for these workers is the H-1B visa. The H-1B nonimmigrant visa is for highly skilled workers and is one of the few visas available to foreign scientists and engineers to work for U.S. companies. The predicament is that H-1B visas are not always available. Strict annual quotas have meant that many more H-1B visas have been requested in each of the last few years than available numbers. What this means for cleantech companies is that they in particular may be barred from hiring key personnel because of strict reductions in visa numbers. Since most cleantech companies are startups, they may not be prepared to deal with this hiring issue because they do not have the infrastructure in human resources to make them aware of the restrictions. For individuals who have not already been counted against the annual H-1B cap, there is only a short window in which to file H-1B visa petitions: between April 1 and 7, 2009. Given the relative youth of cleantech, cleantech companies are particularly vulnerable to being shut out by the H-1B cap. How many F-1 students (recent Masters and PhD candidates) has your company hired in the past year? If you even have one, you should be looking at a long term solution to keeping the F-1 student on board. What are your hiring needs going into the balance of the calendar year?

### Solv – STEM Shortage XT

#### US economic leadership is collapsing now because of the STEM gap

Marvin Cetron, president of forecasing international Ltd and Oven Davies, science analyst and former senior editor of Omni magazine, 8-2010, “Trends Shaping Tomorrow's World forces in the natural and Institutional environment,” The Futurist, Vol. 44, No. 4

The United States is losing its scientific and technical leadership to other countries. \* "The scientific and technical building blocks of our economic leadership are eroding at a time when many other nations are gathering strength," the National Academy of Sciences warns. "Although many people assume that the United States will always be a world leader in science and technology, this may not continue to be the case inasmuch as great minds and ideas exist throughout the world. We fear the abruptness with which a lead in science and technology can be lost--and the difficulty of recovering a lead once lost, if indeed it can be regained at all." \* According to the National Science Board, R&D spending grows by 6% per year in the United States, on average. China spends 20% more on R&D each year. \* China is now second to the United States in the number of research articles its scientists publish each year and gaining rapidly. \* In patents earned each year, Americans are now in sixth place and falling. \* Military research now absorbs much of the money that once supported basic science. Since 2000, U.S. federal spending on defense research has risen an average of 7.4% per year, compared with only 4.5% for civilian research. The Defense Advanced Research Projects Agency has been legendary for its support of "blue sky" research that led to dramatic technical advances, including the creation of the Internet. Today it focuses increasingly on immediate military needs and low-risk development efforts. \* More than half of American scientists and engineers are nearing retirement. At the rate American students are entering these fields, the retirees cannot be replaced except by recruiting foreign scientists. According to the National Academy of Engineering, the United States produces only about 7% of the world's engineers. Only 6% of American undergraduates are engineering majors, compared with 12% in Europe and 40% in China. Of the doctoral degrees in science awarded by American universities, about 30% go to foreign students. In engineering, it is 60%. \* By inhibiting stem-cell research, cloning, and other specialties, the United States has made itself less attractive to cutting-edge biomedical scientists. The United Kingdom is capitalizing on this to become the world's leader in stem-cell research. In the process, it is reversing the brain drain that once brought top British scientists to the United States. More than 70 leading American biomedical researchers have moved to the U.K. along with many less noted colleagues. Latin America also has been receiving scientific emigres from the United States. \* About 25% of America's science and engineering workforce are immigrants, including nearly half of those with doctoral degrees. During the 15 years ending in 2007, one-third of the American scientists receiving Nobel Prizes were foreign-born. \* According to Purdue University President Martin Jischke, more than 90% of all scientists and engineers in the world live in Asia. Assessment and Implications: If this trend is not reversed, it will begin to undermine the U.S. economy and shift both economic and political power to other lands. According to some estimates, about half of the improvement in the American standard of living is directly attributable to research and development carried out by scientists and engineers. Demand to import foreign scientists and engineers on H-1b visas also will continue to grow. Publicity about the H-1b program, and about the offshoring of R&D to company divisions and consulting labs in Asia, in turn will discourage American students from entering technical fields. This has already been blamed for shrinking student rolls in computer science. In 2005, China for the first time exported more IT and communications goods ($180 million) than the United States ($145 million). Its lead has grown each year since then.

### Solv – Boomer Retirement XT

#### Highly skilled labor shortage coming – baby boomer retirement

Jeb Bush, former governor of Florida, Edward Alden, Bernard L. Schwartz senior fellow at the Council on Foreign Relations, specializing in U.S. competitiveness, and Thomas F. McLarty III, former White House Chief of Staff for US President Bill Clinton, 2009, “U.S. Immigration Policy,” Council on Foreign Relations, www.cfr.org/content/publications/attachments/Immigration\_TFR63.pdf

The Task Force believes that the costs of losing preeminence in attracting talented immigrants would be very high. The United States has hit a plateau in the numbers of American students graduating with advanced degrees, particularly in scientific and technical fields. Indeed, the number of science and engineering PhDs earned by U.S. citizens has fallen by more than 20 percent in the past decade. 23 The United States will face an accelerating shortage of highly skilled workers as the bulk of the baby boom generation starts heading into retirement. In 2006, there were more holders of master’s, professional, and doctoral degrees among the age fifty-five to fifty-nine cohort, which is nearing retirement, than among the thirty to thirty-four cohort. More worrisome, this stagnation in the educational achievement levels of Americans has come at a time when many other countries—South Korea, Canada, Japan, France, Spain, and others—have continued to expand the share of their populations receiving higher education.

#### Immigration key to mitigate the coming baby boomer retirement

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

What would these same citizens say about the three perils of our aging society? Many may not be thinking about it or considering what lies ahead. Given the substantial ways in which immigrants can help us meet our coming challenges, it is time to rethink whether immigrants are a burden or whether they might be a benefit. There are times when new blood could be much desired. The United States is currently facing a painful, yet short-term economic downturn. The aging of our society, as expressed by the ballooning senior ratio and the impending retirement of the baby boomers, represents a singular event with severe implications for longterm economic growth and prosperity. Immigration will play a critical role as we seek to confront this epic challenge. The next president and congress will have to deal with immigration reform and the retirement of the baby boomers. In order to deal effectively with both they must not be viewed separately. As policy makers address fixing our broken immigration system, they must be cognizant of the perils presented by the retirement of the boomers and the vital role of a rational and forward-looking immigration policy for mitigating these threats and making America more resilient.

### Agenda Politics NB – A2: Unpopular

#### No backlash to permanent legal immigration increases – dems and reps don’t care.

Washington Watcher, 4-20-2010, “Legal Immigration Increased (YES—INCREASED!) During The Recession,” http://www.vdare.com/washington\_watcher/100420\_legal\_immigration.htm

DHS has not yet released its figures for temporary workers or illegal aliens. The few Democrats and left wing groups who make any opposition to immigration usually focus their attention to temporary workers, while conservatives limit their opposition to illegal immigration. But the fact is that legal permanent immigration is by far the most important category of immigration to reduce. While illegal aliens can get amnesty, and "temporary" workers often end up staying here permanently—with anchor babies exacerbating both problems—both groups in theory will eventually be out of the country. Legal Permanent Residents, in contrast, are here, displacing American workers and using taxpayer-funded services, for good.

#### Permanent immigration increases popular

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

Representative Zoe Lofgren (D-CA) and Senators Barbara Boxer (D-CA) and Judd Gregg (R-NH) have expressed interest in putting off a legislative fight on H-1B visas and instead first achieving consensus on raising the quotas for employment-based green cards. Even though H-1B visa holders are not the indentured servants alleged by critics, everyone agrees that green card holders eventually enjoy the exact same labor mobility as U.S. professionals, so cries of unfair competition ring more hollowly.

#### Green cards are bipart

Huma Khan, staff writer, 4-21-2010, “'Shooting Itself in the Foot': Is U.S. Turning Away Entrepreneurs?,” ABC News,http://abcnews.go.com/Politics/Business/economic-job-growth-driven-foreign-enterpreneurs-argue/story?id=10428413&page=2

foreign-enterpreneurs-argue/story?id=10428413&page=2

The bipartisan framework for immigration reform drafted by Sens. Chuck Schumer, D-N.Y., and Lindsey Graham, R-S.C., proposes that certain immigrants who are receiving degrees in fields like math, science, engineering and technology receive a green card immediately upon their graduation, instead of having to get an H1B visa through an employer. A comprehensive immigration bill drafted by Rep. Luis Gutierrez, D-Ill., expands green cards for skilled immigrants and seeks to cut the backlog that goes into processing these visas. In February, Sens. John Kerry, D-Mass., and Richard Lugar, R-Ind., introduced the Start Up Visa Act of 2010. The bill would allow immigrant entrepreneurs to receive a two-year visa if he or she can show that a qualified U.S. investor is willing to dedicate a minimum of $250,000 to their start-up venture.

## EB – Aff Answers

### Solvency

#### Immigrants cant solve the coming economic crises

Evan Nolan, JD Candidate Georgetown University Law Center, Fall 2009, “Picking Up After The Baby Boomers: Can Immigrants Carry The Load?,” 24 Geo. Immigr. L.J. 77, Lexis

The general suggestion recently put forth by social scientists promotes liberalization of immigration laws as a response to resolving the imminent crises of the Baby Boomer retirement. n110 They believe that an influx of immigrants could fill the void in the U.S. workforce left behind by the retiring Baby Boomers and help pick up part of the tab for the Baby Boomers' Social Security and Medicare benefits. I recognize that the Baby Boomer crises may provide excellent justification for opening the doors to more liberalized immigration policies. However, it is essential to understand how small of an impact these immigrants could make on solving the pending workforce and entitlement crises, and I point out where they fall short. Such policy decisions may help resolve the immigration debate, for now, but they still leave the Baby Boomer retirement issues relatively unresolved. Many hope that immigration reform can be at least one of the answers in resolving, or at least alleviating the pressures of the pending entitlement and workforce crises. Myers insists in the title of his work that "immigration reform can help America prosper in the face of the baby boomer retirement." n111 He points out that immigration reform may help slow the rapidly rising senior ratio and help pay for the Baby Boomers' retirement, because immigrants tend to be younger and have even higher workforce participation rates than native workers. n112 Though Myers refrains from offering specific suggestions for immigration reform, others have suggested loosening the strict requirements for high skill-level visas n113 and withdrawing the harsh restrictions and penalties on "illegal" immigrants. n114 Myers addresses the entitlement crisis by suggesting that immigrants and, over time, their American school-educated children will be able to help bear [\*92] the weight of the Social Security and Medicare burdens. n115 By liberalizing immigration laws, more immigrants could legally join the tax-paying American workforce. The tax payments of these immigrants and their children, once they start working, will help pay for the retirement of the Baby Boomers. However, this approach falls short for three reasons. First, the additional tax revenue that immigrants would produce through their employment would fall drastically short of anything resembling an answer to the entitlement crisis. A quick look at the current immigration situation, which permits a significant number of undocumented workers already, reveals how far off an answer is now. In 2005, undocumented immigrants paid $ 9 billion in Social Security and Medicare taxes. n116 Yet, the federal budget outlays for Social Security and Medicare totaled over $ 800 billion. n117 The undocumented workforce makes up five percent of the American workforce, and anywhere from one-half to three-quarters of the undocumented workforce contributes to Social Security and Medicare taxes. n118 Yet, their tax payments amount to only one percent of the Social Security and Medicare expenditures, and this is before any Baby Boomers have retired. A significant number of illegal immigrants already contribute their income to Social Security taxes, and this revenue still comes no where close to meeting the current needs of Social Security, let alone the future needs of the Baby Boomers. Allowing even more immigrants to enter America and the workforce would be a move in the right direction. But such a policy would require an unrealistic number of immigrants to meet the needs of the Baby Boomers, as demonstrated by the current, vast discrepancy between Social Security revenues and expenditures. Second, growing the U.S. workforce by liberalizing immigration laws would require legalizing the "illegal" immigration. Doing so would just complicate the problem both in the short and long term. Immediately, millions of undocumented workers would be entitled to social benefits to which they currently do not have access. After years of contributing to Social Security and Medicare taxes, as many currently do, they would eventually be able to collect Social Security and Medicare themselves as they reach retirement, exacerbating the problem. The Social Security system is not a Ponzi scheme to which more and more people should be added to help pay others off. This leads to the final shortfall: the creation of disincentives. Because immigration reform is pulled into the Social Security debate, even more Americans may be less likely to favor such immigration reform if it means [\*93] the formerly "illegal" immigrants will suddenly be entitled to benefits they had previously been precluded from collecting. Those who followed the rules will likely oppose liberalizing the immigration laws in favor of those whose "illegal" activity would be instantly rewarded. Next, Myers turns to the workforce crisis. Here, he acknowledges the immigrants' share of the growth in the American workforce. "[Immigration] has accounted for a large share of the growth: 23.8% of workforce growth in the 1980s, 39.6% of the 1990s, and 54.2% of 2000-07." n119 Though the numbers look good, it is merely a present day snapshot, and does not offer much suggestion for the pending workforce crisis. The implication that immigrants are capable of filling the Baby Boomer void again suffers three significant shortfalls. First, the number of immigrants necessary to move to the United States to fill the void is likely unavailable. When the Baby Boomers retire, the workforce demand may increase, but the supply of available immigrants to join the workforce will likely be unable to keep pace. Immigration numbers are still increasing, but at a much lower rate than in previous years. n120 Baby Boomers will be exiting the workforce in much higher numbers. In the last twenty-seven years, the foreign-born workforce increased from seven million to twenty-four million. n121 With more than seventy million Baby Boomers settling into retirement over the next twenty-seven years, the immigration rate would need to triple before it filled any significant part of the void. The home countries of our current immigrants may not have enough people to support such an expansion of emigration. The second problem with invoking immigration reform to fill the workforce void of retiring Baby Boomers involves an age discrepancy. Immigrant workers tend to be young. n122 The Baby Boomers are retiring from more experienced positions. The current workforce lacks the numbers to fill those spots and inexperienced immigrants would need years of work and time for advancement before they were qualified to step into those roles. The final shortfall involves a discrepancy in skill levels, but should not be confused with experience, or the age discrepancy described above. Skill levels, as indicated by education, differ significantly between native workers and most of the immigrants that have been migrating to the United States for work. The immigrants, who include low-skilled workers in high proportions, are being asked to replace the Baby Boomer generation, which includes a relatively high proportion of highly-skilled workers. Overall average skill level across the U.S. workforce would fall, and productivity would likely fall along with it. Certainly, the United States could loosen the restrictions and [\*94] improve the incentives for attracting more highly-skilled foreign workers. Unfortunately, this sub-market is complicated with "natural" restrictions, such as requiring bar passage for lawyers, passing the boards for doctors and nurses, and other kinds of certifications for highly-skilled jobs. Such restrictions might deter an otherwise qualified candidate from immigrating to the United States. And there is likely little support for waiving many of these self-imposed restrictions.

### A2: Skills Shortage

#### No skills shortage

Harold Salzman, PHD, Senior Research Associate, the Urban Institute, 11-6-2007, “Globalization of R&D and Innovation: Implications for U.S. STEM Workforce and Policy,” Submitted to the Subcommittee on Technology and Innovation of the Committee on Science and Technology, http://www.urban.org/UploadedPDF/901129\_salzman\_stem\_workforce.pdf

Where’s the Problem? Hiring Difficulties versus Labor Market Shortages and Perceptions about the Future of Science and Engineering It is generally asserted, without much evidence, that education deficits are responsible for the difficulty employers experience in hiring. It is important to distinguish between the problems an employer may have hiring the people he or she wants and an actual shortage of workers or potential workers. Although there may, in fact, be a labor market shortage, all the evidence cited in various policy reports is entirely individual employer accounts of problems in hiring. The industries most vocal about labor market shortages and the need to import workers may be voicing unrealistic expectations of desired work experience more than deficiencies in the skills or education of a new hire, or just dissatisfaction with the cost of labor. In previous research (Lynn and Salzman 2002), we found that managers in engineering and technology firms do not claim a shortage of applicants, nor do they complain about applicants with poor math and science skills or education. They do often note difficulty in finding workers with desired experience, specific technical skills, or a sufficient number of “brilliant” workers in the pool.8 The complaint, quite often, appears to be one of unrealistic expectations, as unwittingly illustrated in a recent BusinessWeek (2007) article on labor shortages. In this article, a company president described the current labor shortage as follows: “There are certain professions where skills are in such demand that even average or below-average people can get hired.” It is difficult to consider an inability to only hire above-average workers a labor market shortage. Complaints also reflect firms’ dissatisfaction about the need to train new entrants; often at issue is whether firms or education institutions should shoulder the costs of training new hires.

### A2: Labor Shortage

#### No labor shortage – flawed data and industry lies.

T. D. Clark, Staff writer for Industry Market Trends, 11-21-2006, “Labor Shortage: Fact or Fiction?” http://news.thomasnet.com/IMT/archives/2006/11/qualified\_labor\_shortage\_debate\_fact\_or\_faction.html

Doomsayers rely on such demographic data, as well as employment projections from the U.S. Bureau of Labor Statistics (BLS), to determine that as early as 2010 there won't be enough workers available to staff the nation's jobs. But such predictions often are flawed or fail to take into account a full view of the facts. Perhaps more intriguing: …by 2012, there will be 3.3 million fewer workers than jobs. But there are numerous flaws with that math. Most significantly, the two data sets involved, both of which are supplied by BLS, are derived from different sources and cannot be compared accurately. To subtract one from the other is to make an apples-and-oranges comparison that is invalid and misleading. There are a slew of other examples in the cover story debunking the BLS, but even without all these mitigating factors, the number of available workers still will exceed the number of jobs, according to the HR Magazine analysis. Then again, a piece from The Seattle Times earlier this month has the ability to send the labor shortage debate into a tailspin once again, with immigration as the catalyst. Stephen Anthony, president of the Fort Worth Building and Construction Trades Council, a network of union groups, said illegal immigrant welders have kept wages down for U.S. workers. Union welders earn on average $23 an hour, while nonunion welders generally earn about $12 an hour in the Fort Worth area, he said. Yet Steven Camarota, director of research for the Center for Immigration Studies, a Washington, D.C.-based group that opposes illegal immigration, is skeptical. "Any industry you care to name, you will generally find that the employer says, 'We can't find anybody,'" he said. "What they really mean is, 'Given what we want to pay, we can't find anybody.' And that's the kicker." Are select employers and the BLS full of, ahem, BS? Are they creating a false sense of panic as it relates to labor shortages in order to acquire workers willing to work for income less than they're worth? Well, perhaps we should toss in some more statistics to complicate the debate further. This month, the Small Business Times had the lowdown on some figures released by the National Federation of Independent Business (NFIB) based on a survey of small businesses. "An historically high 63.3 percent of the adult population has a job, and the unemployment rate [was] 4.4 percent in October," said NFIB chief economist William Dunkelberg. "This does not sound like a labor market with deficient labor demand, but it's showing clear signs of a mismatch between supply and demand, with clear shortages of qualified workers." That's qualified workers. Hmm, so, 1) highly skilled/qualified workers 2) willing to work for less than their worth? Sounds just like the problems IMT hears from engineers on a fairly frequent basis. One of our readers recently touched on both factors: What does exist is a shortage of educated, skilled, motivated people who are willing to work for small dollars, few or no benefits, in positions offering little advancement potential. Employers want to get by very cheaply, so instead of hiring an experienced individual who knows the technology, they'll haul a guy off the plant floor and make do with him, paying him very small dollars. I've seen this done repeatedly in corporations whose names you would recognize. According to The Associated Press (via Leading the Charge), the purported shortage is felt the greatest in the energy and power sector, where there may soon be a shortage of workers who operate power plant equipment and repair power lines. A handful of schools aim to correct the problem by offering power industry training, and utility companies have started "aggressively seeking out colleges to create more." "Every day we delay hiring people, another 40-year veteran is retiring and won't be there to pass along valuable experience," said Jim Hunter, director of the International Brotherhood of Electrical Workers utility department. While labor shortages in the utilities sector might appear more sincere, there is still plenty of other compelling information out there claiming that the labor shortage debate carries little merit and is even a hoax. The news and comments posted at the Inside Recruiting blog, for instance, perpetuate these beliefs; meanwhile, the blog even serves up a recent reader poll, the results of which indicate that not everyone is on board with the labor shortage estimates currently circulating. The most critical piece that has come across our desks on the labor shortage scare is derived from The American Economic Alert in an article entitled "The Labor Shortage Hoax," by Alan Tonelson, a Research Fellow at the U.S. Business & Industry Educational Foundation and the author of "The Race to the Bottom: Why a Worldwide Worker Surplus and Uncontrolled Free Trade are Sinking American Living Standards." In his analysis, Tonelson tears into recent labor shortage stats and studies with the ferocity of a pit bull, even taking on the likes of Deloitte regarding a study the company did for the National Association of Manufacturers (NAM): To put it mildly, NAM should ask for its money back. Only 10 percent of the 8,000 companies contacted by Deloitte replied, and as Wall Street Journal columnist David Wessel noted, lots of self-selection surely was at work. Specifically, employers not perceiving any shortages probably were much less likely to bother responding than those that did. But that's only the beginning of Tonelson's criticism: Deloitte ignored a major irony that practically shouts out from the results: Although the consulting firm recommended that companies spend at least three percent of their payrolls on employee training, it found that fully three-quarters of all respondents fell short of this threshold. Does this sound like the behavior of firms that value trained workers and are desperate to secure them? Clearly, the validity and accuracy of labor shortage data is questionable. And the myriad of factors that play into the debate, whether retiring baby boomers, illegal or even legal immigrants, offshore outsourcing or fewer upcoming engineers all seem to feed the flames of this hot-button topic from different and seemingly unrelated angles. It's a debate that will surely continue — but so long as outspoken pundits and everyday workers continue to voice their displeasure with sloppy data and unnecessary panic, a labor shortage capable of bringing the U.S. economy to its knees is about as likely as John Kerry becoming a successful stand-up comic.

### Links to Agenda Politics

#### The polarization of the immigration debate has poisoned the political waters for EBs

Yantis 8-1

(John-, Arizona Republic, “Tech companies seek to increase cap on visas for foreign-born skilled workers”, http://www.azcentral.com/business/articles/2010/08/01/20100801biz-tech-companies-seek-increase-cap-visas-foreign-born-skilled-workers-0801.html

A polarizing national debate on immigration isn't helping technology companies that have been trying for years to persuade Congress to change laws concerning foreign-born workers.

Specialty-jobs visas are often used by U.S. tech firms to hire foreign-born engineers and other workers with specific skills. But the number of visas issued annually is much too small, industry leaders say. The companies worry that as business picks up, they will be forced to turn away prime talent that could boost their company's research and development and performance.

Efforts to raise a 65,000-person annual cap on H-1B employment visas for foreign nationals and a parallel push to get them green cards swiftly are being overshadowed by a political debate that has nothing to do with ensuring cutting-edge companies can hire the best talent for specialty jobs, advocates say.

"We've been beating the drum hard on this issue for a long time, and lawmakers understand the argument," said Peter Cleveland, Intel Corp. vice president for global public policy. "Part of the problem is the general population has a view about immigrants, and we're trying to educate and explain the enormous value these highly trained immigrants provide."

#### Expanding EB visa’s is enormously unpopular- democrats can’t find single republican senator to support it

Chichoni, Lawyer at EBG, 10

(4/23, A controversial immigration reform bill could help the nanotechnology industry, http://www.lexology.com/library/detail.aspx?g=30722a03-770c-4257-895f-3c9907d48966)

Senators Schumer and Graham's comprehensive immigration reform bill provides some hope by proposing to allow foreign nationals who receive advanced degrees from U.S. universities to be exempted from green card caps. With thousands of science and engineering students set to graduate next month, this issue is as timely as ever.

Dim prospects for passage

Although not perfect, this bill contains important features that could be deemed crucial to fix many of the ailments in our immigration system. President Obama and Senate Democrats have clearly signaled that they support this bill and will continue to push for its passage this year. However, the crucially needed second Republican to co-sponsor the bill is nowhere to be found. Rumors abound that most of the Republicans who were expected to join in this effort are either no longer willing to support the bill or still undecided. Because this bill is not only comprehensive, but also controversial, at least from a political perspective, as of today, it does not seem to have the support necessary to ensure its passage.

# Oil Dependence

## Building Codes (Neg)

### Building Codes CP 1NC

#### Text: The state governments should implement and enforce energy efficiency building codes modeled on California’s building codes.

#### Efficient building codes solve better – gains in transportation efficiency are inevitable

Joan Indiana Rigdon – Nov 2008, Grad of UC Berkeley journalism school, former writer for Wall Street Journal, “Oil: The Never-Ending Crisis,” Washington Lawyer, http://www.dcbar.org/for\_lawyers/resources/publications/washington\_lawyer/november\_2008/oil\_crisis.cfm

Unsexy Building Codes Much of the public debate about energy and greenhouse gas emissions is centered on automobiles, a focus which Bookbinder believes is misplaced.¶ “Transportation will solve itself,” he says, explaining that higher fuel-efficiency standards, combined with new biofuels that are not derived from food, as well as new technologies including plug-in hybrids, ultimately will drive down demand for oil and greenhouse gas emissions.¶ Instead, he says, policymakers could have a much bigger impact on the country’s foreign oil dependence and greenhouse gas emissions by adopting energy-saving commercial building codes. California’s per capita consumption of electricity is among the lowest in the nation, Bookbinder says, because the state enacted strict commercial building codes that regulate lighting, heating, cooling, and power transmission, following the oil shocks of the 1970s.¶ Better commercial building codes would easily trump any savings from residential use of alternative energy, Bookbinder adds. Getting even just one state to upgrade its building codes “is worth more than every Tom, Dick, and Harry running out to put a windmill on their roof,” he says.

\*\*Note: “David Bookbinder, chief climate counsel for the Sierra Club, the nation’s leader in grassroots environmental litigation.”

### Solvency – Dependence

#### Changing building codes is key – locks in efficiency and reduces oil dependence

US Department of Energy, 18 May 2011, “Why Building Energy Codes?” US DOE, http://www.energycodes.gov/why\_codes/

Buildings fundamentally have an impact on people's lives, economic well-being, and the United States' dependence on foreign oil, national security and the health of the planet. In the United States, residential and commercial buildings together use more energy and emit more carbon dioxide than either the industrial or transportation section Buildings use 39% of our total energy, two-thirds of our electricity, and one-eighth of our water. In light of these fundamental environmental issues, and the increasing cost of energy and our current economic challenges, building energy efficiency is a key component of sound public policy.¶ ¶ Because the efficiency with which a home, factory or office building will use energy is determined in part by decisions made far in advance of the actual use of that energy, the network of incentives and disincentives regarding energy choices is complex. Choosing less energy efficient methods of materials may save money upfront, but or result in increased energy costs for the occupant of that building far in the future. This long term impacts of the choices and consequences results in a unique role for government in setting and enforcing building codes and standards, promoting improvements, and collecting and disseminating information regarding new technologies and best practices.

#### Codes solve oil dependency

US DOE, Feb 2010, “Building Energy Codes 101”, DOE, pg. 1, http://www.energycodes.gov/becu/documents/BECU\_Codes\_101\_Intro.pdfC4W9rQHt44WzBw&usg=AFQjCNEUSbRtasIqaARmb7iYka\_ITA5Plg&sig2=SYLV4jQLTCB6T2BAZKMhfg

The effects of energy use in buildings are nationwide, worldwide, and varied. Having a fundamental impact on¶ people’s lives, these effects include the economic well-being¶ of the nation, the United States’ dependence on foreign oil, and national security. On an individual basis, even human¶ health can be affected by building energy use when rising¶ energy costs render a conditioned, comfortable, healthy¶ indoor environment unaffordable. On a larger scale, carbon¶ emissions, which are directly tied to building energy use,¶ affect the health of our planet. Some sobering statistics help drive home¶ the reality of building energy use:¶ » Nearly 5 million commercial buildings and 115 million¶ residential households in the United States consume¶ nearly 40 percent of the nation’s total primary energy1¶ » Buildings consume 70 percent of electricity in the¶ United States2¶ » In 2007, carbon dioxide (CO2) emissions attributable¶ to lighting, heating, cooling, cooking, refrigeration,¶ water heating, and other building services totaled¶ 2517 million metric tons3 – this is 40 percent of the¶ U.S. total and 8 percent of the global total. What can be done to curb the significant and ever-growing impact of building energy use? The adoption and enforcement of more stringent building energy codes in communities across the country is a critical component. This document provides a basic introduction to¶ the many aspects of building energy codes, including their:¶ » Benefits in terms of the current energy, economic, and¶ environmental challenges facing our world today¶ » Challenges in terms of adoption, implementation,¶ compliance, and enforcement¶ » Development processes led by the International Codes¶ Council (ICC) and American Society of Heating,¶ Refrigerating and Air-Conditioning Engineers¶ (ASHRAE)¶ » Adoption and incorporation into building design and¶ construction by states and jurisdictions¶ » Enforcement at the state and local level.

#### Energy codes key to solve oil dependence

NASEO (National Association of State Energy Officials) 1/24/12 - <http://www.naseo.org/codes/documents/NASEO_Board_Resolution_Supporting_Utility_Credit_for_Codes.pdf>, AP

WHEREAS, homes and commercial buildings are America’s largest energy-consuming sector – together ¶ using over 40 percent of the nation’s energy, two-thirds of our electricity consumption, one-eighth of our ¶ water use, and responsible for almost 40% of our carbon dioxide emissions¶ 1¶ ; and ¶ WHEREAS, reducing building energy consumption is an important objective for our country; and ¶ WHEREAS, studies show that these energy efficiency improvements enhance the affordability, security, ¶ comfort, and health and safety of home ownership by generating net positive cash flow for homeowners; ¶ and¶ WHEREAS, building energy codes help safeguard commercial owners and tenants from long-term ¶ financial burdens that can result from short-term design and construction decisions and can afford ¶ protection from energy price volatility; and¶ WHEREAS, energy-efficient buildings provide energy, economic, and environmental benefits for many ¶ years, and enhance our national security by reducing our dependence on foreign oil; and¶ WHEREAS, building energy codes are a key component of a sustainable future for our country; and¶ WHEREAS, building energy codes set minimum requirements for energy-efficient design and ¶ construction of new and renovated buildings that impact energy use and emissions over the decades-long¶ lifetimes of the buildings.

#### Codes reduce oil dependence

US DOE, Feb 2010, “Building Energy Codes 101”, DOE, pg. 25, http://www.energycodes.gov/becu/documents/BECU\_Codes\_101\_Intro.pdfC4W9rQHt44WzBw&usg=AFQjCNEUSbRtasIqaARmb7iYka\_ITA5Plg&sig2=SYLV4jQLTCB6T2BAZKMhfg

Building energy codes can play a key role in reducing building¶ energy costs, our nation’s reliance on foreign oil, and carbon¶ emissions as well as in increasing the comfort of our homes and¶ offices. Though the building energy codes world is not without¶ its challenges, the benefits far outweigh the barriers. Crafted in¶ open public forums, all stakeholders and interested and affected¶ parties are welcome to participate in the building energy codes¶ development processes. And the processes used to update both¶ the IECC and ASHRAE 90.1 are designed to make sure the¶ interests of varied stakeholders are considered, including those¶ pertaining to industry, of importance to building scientists, and¶ affecting financial viability. Building energy codes are readily¶ available for states and jurisdictions to adopt, and a broad range¶ of enforcement and compliance tools are available to help policy¶ makers, designers, builders, and the enforcement community¶ successfully implement building energy codes. Building energy codes are a baseline of energy efficiency that constantly drive beyond-code programs to improve. As code cycles iterate from¶ one to the next, today’s beyond-code programs become the¶ baseline of tomorrow. Ultimately, the energy codes community¶ will converge on its true goal—buildings with zero energy use.

#### Codes solve emissions and oil dependence

Clayton, Krystin, owner of Green House Effects, a company that seeks to better the environment by offering practical sustainability consulting to interested and committed businesses and individuals, 22 October 2010, Examiner, http://tinyurl.com/83rk88n

Manufacturers and vendors alike need to be aware that as there is more and more of a push on energy conservation in the United States, more and more products and construction techniques may become obsolete and actually prohibited by well-meaning engineers who may not be thinking long range or big picture. In a similar manner, as green building codes become widely adopted, the outlawing of products and equipment will become a bigger issue. Isn’t it admirable to create code that saves energy thus reduces greenhouse gas emissions and reduces our dependence on foreign oil? Yes indeed, and if we are to provide a solution that addresses both of those issues (that is using energy efficiently for comfort or convenience and obtaining energy independence), it will be necessary to advocate and promote the technologies that have the most promise to achieve both of those goals to win the separate but equally important wars on energy waste and foreign oil dependence.

### Solvency – A2: No Oil In Buildings

#### Many buildings still use petroleum products for heat – new codes can reduce oil dependence

Ann Bordetsky et al – Natural Resources Defense Council – Feb 2005, SECURING AMERICA Solving Our Oil Dependence Through Innovation, <http://www.nrdc.org/air/transportation/oilsecurity/plan.pdf>, http://www.nrdc.org/air/transportation/oilsecurity/plan.pdf

Oil-heated homes. Petroleum products remain an important source of heating energy in homes.¶ According to the EIA, approximately 8 million residences continue to burn fuel oil, liquefied petroleum¶ gases (LPG), propane, and kerosene for space and water heating. 60 Cost-effective home improvements to¶ space and water heating systems such as insulating walls, ceilings and pipes, sealing drafts and especially¶ sealing ducts, installing new windows, upgrading thermostats; updating furnaces; replacing old clothes¶ washers and dishwashers with new efficient models; and replacing water heaters can reduce heating oil use¶ by 30 percent or more.¶ We should promote residential energy savings with a focus on oil heat to help reduce the nation’s oil¶ dependence by adopting stringent efficiency standards for house and apartment building boilers and¶ furnaces; by adopting performance-based tax incentives for home retrofits and for efficient water heaters;¶ and by updating codes for new buildings. Together these measures can save 100,000 barrel of oil per day in¶ 2015. We should promote residential weatherization and other energy saving programs to help achieve the¶ national oil savings commitment.¶

#### Many buildings use oil for heat

David G. Victor, John Deutch, and James R. Schlesinger, Deutch: Chair of the Task Force, Institute Professor at MIT, Undersecretary of Energy, Deputy Secretary of Defense, Director of Central Intelligence. Victor: Project Director of the Task Force, Director of the Program on Energy and Sustainable Development at Stanford University, Adjunct Senior Fellow for Science and Technology at the Council on Foreign Relations. Schlesinger: Former Secretary of Defense, First Secretary of Energy Chair of the Task Force, 12 October 2006 “National Security Consequences of U.S Oil Dependency”, Council on Foreign Relations, pg. 46, http://tinyurl.com/7at36cu

While recognizing that there will be no significant early relief, the United States needs to begin now to adopt technologies and processes that allow for the use of fuels other than those based on petroleum, in particular those alternative fuels that reduce the negative consequences that come from the country’s reliance on imported petroleum. For example, oil is still used for space heating of buildings in some regions;¶ however, those buildings could be heated by natural gas directly or,¶ for larger buildings, by efficient cogeneration of electricity and space heating. Cars and other light vehicles could be fueled with increasingly larger fractions of biomass-derived liquids (such as ethanol), and vehicles¶ can be fueled by compressed natural gas. Light duty vehicles could be powered increasingly over time by electricity rather than gasoline or diesel fuel. The current generation of hybrid-electric vehicles may be¶ supplanted by ‘‘plug-in hybrids,’’ which allow some fraction of the¶ mileage to be powered by electricity that is charged from the grid,¶ perhaps leading to an eventual transition to fully electric vehicles.13

### Solvency – Economy/Warming

#### Investment in energy efficiency insulates the economy from price shocks and protects the environment

EPA and DOE, this plan has been developed by more than 50 leading organizations, 17 Aug 2006, “National Action Plan for Energy Efficiency” pg. 5, http://www.epa.gov/cleanenergy/energy-programs/suca/resources.html

Energy efficiency reduces the level of U.S. per capita energy consumption, thus decreasing the vulnerability of the economy and individual consumers to energy price disruptions from natural disasters and attacks on domestic and international energy supplies and infrastructure. In addition, energy efficiency can be used to reduce the overall system peak demand or the peak demand in targeted load areas with limited generating or transport capability. Reducing peak demand improves system reliability and reduces the potential for unplanned brownouts or black-outs, which can have large adverse economic consequences.¶ utilities, and other organizations can build. Experience shows that energy efficiency programs can lower customer energy bills; cost less than, and help defer, new energy infrastructure; provide energy savings to consumers; improve the environment; and spur local economic development (see box on Benefits of Energy Efficiency). Significant opportunities for energy efficiency are likely to continue to be available at low costs in the future. State and regional studies have found that adoption of economically attractive, but as yet untapped, energy efficiency could yield more than 20 percent savings in total electricity demand nationwide by 2025. Depending on the underlying load growth, these savings could help cut load growth by half or more compared to current forecasts (Nadel et al., 2004; SWEEP, 2002; NEEP, 2005; NWPCC, 2005; WGA, 2006). Similarly, savings from direct use of natural gas could provide a 50 percent or greater reduction in natural gas demand growth (Nadel et al., 2004).¶ Capturing this energy efficiency resource would offer substantial economic and environmental benefits across the country. Widespread application of energy efficiency programs that already exist in some regions could deliver a large part of these potential savings.9 Extrapolating the results from existing programs to the entire country would yield annual energy bill savings of nearly $20 billion, with net societal benefits of more than $250 billion over the next 10 to 15 years. This scenario could defer the need for 20,000 megawatts (MW), or 40 new 500MW power plants, as well as reduce U.S. emissions from energy production and use by more than 200 million tons of carbon dioxide (CO2), 50,000 tons of SO2, and 40,000 tons of NOx annually.10 These significant economic and environmental benefits can be achieved relatively quickly because energy efficiency programs can be developed and implemented within several years. Additional policies and programs are required to help capture these potential benefits and address our substantial underinvestment in energy efficiency as a nation. An important indicator of this underinvestment is that the level of funding across the country for organized efficiency programs is currently less than $2 billion per year while it would require about 4 times today’s funding levels to achieve the economic and environment benefits presented above.

#### States should build energy codes—solves energy, environment, and economy

EPA and DOE, this plan has been developed by more than 50 leading organizations, 17 Aug 2006, “Building Codes for Energy Efficiency” pg. 2-3, http://www.epa.gov/cleanenergy/energy-programs/suca/resources.html

Building energy codes provide states and municipalities across the country a range of energy, environmental, and economic benefits. Highlights from several jurisdictions are summarized below and in Table 1. Energy benefits of building codes include saving on energy bills, reducing peak energy demand, and improving system reliability. For example, California’s building standards have helped save businesses and residents more than $15.8 billion in electricity and natural gas costs since 1975, and these savings are expected to climb to $59 billion by¶ 2011 (CEC, 2003). When fully implemented,¶ the state’s new 2005¶ building efficiency standards are¶ expected to yield peak energy use¶ reductions of 180 megawatts (MW)¶ annually—enough electricity to power¶ 180,000 average-sized California¶ homes (Motamedi et al., 2004).¶ According to the U.S. Department of Energy (DOE), if all states adopted and fully implemented American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard¶ 90.1-1999, a model energy code for commercial buildings, then building owners and tenants would lower their¶ utility bills by $110 million the first¶ year and save $5.7 billion over 10¶ years. The country would save 16 trillion British thermal units (Btu) of energy that first year and almost 800 trillion Btu cumulatively over 10 years.¶ The magnitude of each state’s savings¶ depends on many factors: the efficiency¶ of its current building practices; the stringency of the code it adopts;¶ its population, climate, and building¶ construction activity; and the effectiveness¶ of code training and¶ enforcement (DOE, 2007).States and municipalities are also¶ finding that energy codes can¶ improve the environment by reducing¶ air pollution and greenhouse gases.¶ For example, the New York Energy¶ Conservation Construction Code is¶ estimated to reduce carbon dioxide¶ (CO2) emissions by more than¶ 500,000 tons annually and sulfur¶ dioxide (SO2) by nearly 500 tons per¶ year (DOE, 2002). Similarly, the 2001¶ Texas Building Energy Performance¶ Standards are projected to reduce¶ nitrogen oxide (NOX) emissions¶ statewide by more than 2 tons each¶ “peak” day and more than 1 ton¶ each average day, which helps the¶ state meet Clean Air Act requirements¶ for non-attainment areas¶ (Haberl et al., 2003). Building energy codes can also help¶ grow the economy. States and municipalities¶ benefit from greater¶ investment in energy-efficient capital¶ equipment and new jobs installing¶ equipment and monitoring building¶ compliance. While spending on¶ energy services typically sends money¶ out of state, dollars saved from efficiency¶ tend to be re-spent locally¶ (Kushler et al., 2005; Weitz 2005a).¶ Codes become even more cost-effective¶ during periods of high heating¶ and cooling fuel prices.¶ At the building level, the “payback¶ period” on any increase in upfront costs¶ is typically short. A Nevada study estimated¶ that upgrading the energy¶ efficiency of commercial buildings to¶ comply with the code would cost about¶ $1.60 per square foot but would result¶ in $0.68 per square foot of energy bill¶ savings per year, meaning a simple¶ payback of about 2.4 years (Geller et¶ al., 2005). Similarly, it is estimated that while a new home built to the International Energy Conservation Code (IECC) in Phoenix, Arizona, will cost an average of $1,517 more than a home built without the code, the difference will be repaid to homebuyers in 3.9 years (based on simple payback). The life-cycle cost savings associated with improved energy efficiency from adopting the IECC is $11,228 per home (Kinney et. al., 2003). While the upfront costs of code compliance can be recouped over short payback periods, the savings do not always accrue to the entity paying the initial compliance costs. This “split incentive” occurs when a developer or builder sees higher costs that are repaid over time to the building owner or occupants.

#### States must build codes now—environmental and economic gains

US Department of Energy, 18 May 2011, “Why Building Energy Codes?” US DOE, http://www.energycodes.gov/why\_codes/

New buildings, while they represent just over 1% of the total building stock in a given year, are important because they represent a unique chance to effect energy efficiency; keeping in mind that building energy codes also apply to retrofitting of existing buildings. Once a new building is constructed, it is very expensive and often impossible to achieve the energy efficiency that can be economically built in at the time of construction. Since buildings will be in existence for decades if not centuries this is an opportunity that we cannot afford to lose and had we done a more robust job in the past, retrofitting of existing buildings would not be as critical today. It is vital to make energy efficiency a fundamental part of the building design and construction process and energy codes are an effective way to achieve this goal and ensure energy efficiency is a component of all buildings. States have the lead to make this happen.¶ Research shows that contemporary energy codes could save about 330 Trillion BTU by 2030, almost 2% of total current residential energy consumption. There would also be comparable savings in consumer energy bills, air pollution and greenhouse gas emissions. Those savings help the state economy by putting more money is consumer's pockets and reducing environmental costs to the state and its industry.¶ This Program supports energy code development, adoption, implementation, and compliance initiatives at the national, state and local level and is estimated to generate energy cost savings of more than $2.5 billion per year. Since the inception of the Program 20 years ago accumulated energy savings has been more than 1.5 quads and cost savings to consumers has been more than $14 billion. These savings have resulted primarily from the Program's activities that accelerate the adoption of building energy codes by and within the states and that improve code compliance by means of various software tools and other types of training and technical support.

#### Government action will help the economy

EPA and DOE, this plan has been developed by more than 50 leading organizations, 17 Aug 2006, “National Action Plan for Energy Efficiency” pg. 3, http://www.epa.gov/cleanenergy/energy-programs/suca/resources.html

Greater investment in energy efficiency helps build jobs and improve state economies. Energy efficiency users often redirect their bill savings toward other activities that increase local and national employment, with a higher employment impact than if the money had been spent to purchase energy (Kushler et al., 2005; NYSERDA, 2004). Many energy efficiency programs create construction and installation jobs, with multiplier impacts on employment and local economies. Local investments in energy efficiency can offset imports from out-of-state, improving the state balance of trade. Lastly, energy efficiency investments usually create long-lasting infrastructure changes to building, equipment and appliance stocks, creating long-term property improvements that deliver long-term economic value (Innovest, 2002).

### Solvency – Economy

#### Energy codes create jobs

NASEO (National Association of State Energy Officials) 3/23/11 - <https://www.naseo.org/codes/documents/NASEO-BCAP-State_Benefits_from_Codes.pdf>, AP

Building Energy Codes Create Jobs and Save Money and Energy¶ ¶ Setting new standards for energy efficiency through building codes expands and sustains a growing market for energy ¶ audits, retrofits, and weatherization--creating a wide-range of new green jobs. ¶ Just as importantly, adopting and enforcing current model codes can save consumers and businesses money on their ¶ energy bills. Consumers can spend money saved from reduced energy bills on other goods and services, and businesses ¶ can transfer free-up capital to other areas, such as production, investment, and employee retention. In both cases, ¶ building codes can positively impact the economic health of your state. ¶ Today, ASHRAE Standard 90.1-2007 and the 2009 International Energy Conservation Code (IECC) are the national model ¶ energy codes, and each is updated on a three-year cycle. Moving from current practice to the 2009 IECC for new homes ¶ would result in a national weighted average incremental cost of $818.72 per new home. ¶ The annual energy savings per home would be $243.37 on average, meaning the simple payback for homeowners would ¶ occur in 3.36 years. If the 2009 IECC were adopted and enforced nationwide, a typical new homeowner would see an ¶ annual energy cost savings of nearly 15%. Accrued energy savings mitigates the need for constructing expensive new ¶ utility power plants and decreases the strain on aging infrastructure.

#### New state energy codes good for econ

US **DOE** (Department of Energy) 5/18/**11** “Why Building Energy Codes?”, <http://www.energycodes.gov/why_codes/>, AP

New buildings, while they represent just over 1% of the total building stock in a given year, are important because they represent a unique chance to effect energy efficiency; keeping in mind that building energy codes also apply to retrofitting of existing buildings. Once a new building is constructed, it is very expensive and often impossible to achieve the energy efficiency that can be economically built in at the time of construction. Since buildings will be in existence for decades if not centuries this is an opportunity that we cannot afford to lose and had we done a more robust job in the past, retrofitting of existing buildings would not be as critical today. It is vital to make energy efficiency a fundamental part of the building design and construction process and energy codes are an effective way to achieve this goal and ensure energy efficiency is a component of all buildings. States have the lead to make this happen.¶ Research shows that contemporary energy codes could save about 330 Trillion BTU by 2030, almost 2% of total current residential energy consumption. There would also be comparable savings in consumer energy bills, air pollution and greenhouse gas emissions. Those savings help the state economy by putting more money is consumer's pockets and reducing environmental costs to the state and its industry.¶ This Program supports energy code development, adoption, implementation, and compliance initiatives at the national, state and local level and is estimated to generate energy cost savings of more than $2.5 billion per year. Since the inception of the Program 20 years ago accumulated energy savings has been more than 1.5 quads and cost savings to consumers has been more than $14 billion. These savings have resulted primarily from the Program's activities that accelerate the adoption of building energy codes by and within the states and that improve code compliance by means of various software tools and other types of training and technical support.

#### Energy codes key to solve econ

NASEO (National Association of State Energy Officials) 1/24/12 - <http://www.naseo.org/codes/documents/NASEO_Board_Resolution_Supporting_Utility_Credit_for_Codes.pdf>, AP

WHEREAS, homes and commercial buildings are America’s largest energy-consuming sector – together ¶ using over 40 percent of the nation’s energy, two-thirds of our electricity consumption, one-eighth of our ¶ water use, and responsible for almost 40% of our carbon dioxide emissions¶ 1¶ ; and ¶ WHEREAS, reducing building energy consumption is an important objective for our country; and ¶ WHEREAS, studies show that these energy efficiency improvements enhance the affordability, security, ¶ comfort, and health and safety of home ownership by generating net positive cash flow for homeowners; ¶ and¶ WHEREAS, building energy codes help safeguard commercial owners and tenants from long-term ¶ financial burdens that can result from short-term design and construction decisions and can afford ¶ protection from energy price volatility; and¶ WHEREAS, energy-efficient buildings provide energy, economic, and environmental benefits for many ¶ years, and enhance our national security by reducing our dependence on foreign oil; and¶ WHEREAS, building energy codes are a key component of a sustainable future for our country; and¶ WHEREAS, building energy codes set minimum requirements for energy-efficient design and ¶ construction of new and renovated buildings that impact energy use and emissions over the decades-long¶ lifetimes of the buildings; and ¶ WHEREAS, building energy codes make our daily lives better by improving indoor air quality and ¶ public health, promoting environmentally-friendly behaviors such as recycling and generating less waste ¶ and providing a more comfortable and productive work environment; and ¶ WHEREAS, building energy codes help drive the development, deployment, and innovation of new ¶ building technologies and design strategies; and¶ WHEREAS, more education, training and awareness continue to be needed at the local level on the tools, ¶ applications, best practices and support materials for greater building energy code adoption, ¶ implementation and compliance; and¶ WHEREAS, building energy codes decrease the impact and peak load of buildings, helping to lessen the ¶ stress on the electricity grid system, which increases grid reliability.

### Solvency – Warming

#### Better building codes solve emissions

Department of Energy – May 2010, “Building Energy Codes 101”, http://www.energycodes.gov/becu/documents/BECU\_Codes\_101\_Slide\_Notes.pdf

Energy use in buildings makes up a very significant piece of the pie. Thus, it has a direct impact on the greatest challenges of our time, including:

• Economic well-being for individuals, businesses, and governments

• Dependence on foreign oil and national security

• Global climate change.

Even human health is at stake—for many families, rising energy costs make it unaffordable to sustain a comfortable, conditioned indoor environment.

Some sobering statistics help drive home the reality of building energy use:

• Nearly 5 million commercial buildings and 115 million residential households in the United States consume over 40 percent of the nation’s total primary energy

• Buildings consume 70 percent of electricity in the United States

• In 2007, carbon dioxide emissions attributable to lighting, heating, cooling, cooking, refrigeration, water heating, and other building services totaled 2517 million metric tons—40 percent of the U.S. total and 8 percent of the global total.

Clearly, building energy use must be addressed to protect the interests of individual consumers, our nation, and the world. Building energy codes are a critical component of the effort to curb the ever-growing impacts of building energy use.

But why codes?

Building energy codes set minimum efficiency boundaries that bring about vital, tangible benefits.

Not surprisingly, better codes mean better benefits. Recent research shows that if building energy codes\* were upgraded to be 30 to 50 percent more stringent, adopted among states, and effectively implemented, excellent progress would be made in the areas of energy consumption, cost savings, and CO2 emissions reduction:

• Reduced energy consumption—by approximately 0.5-quadrillion Btu per year by 2015, and 3.5-quadrillion Btu per year by 2030. This is equivalent to the power generated by 260 medium power plants.

• Rising cost savings—more than $4 billion per year back in homeowners’ pockets by 2015, a figure that could rise to over $30 billion per year by 2030. Even accounting for increased up-front efficiency investment costs, net benefits are quite significant.

• Reduced CO2 emissions—by roughly 3 percent in terms of the projected national CO2 emissions in 2030.

#### Energy codes key to solve econ

NASEO (National Association of State Energy Officials) 1/24/12 - <http://www.naseo.org/codes/documents/NASEO_Board_Resolution_Supporting_Utility_Credit_for_Codes.pdf>, AP

WHEREAS, homes and commercial buildings are America’s largest energy-consuming sector – together ¶ using over 40 percent of the nation’s energy, two-thirds of our electricity consumption, one-eighth of our ¶ water use, and responsible for almost 40% of our carbon dioxide emissions¶ 1¶ ; and ¶ WHEREAS, reducing building energy consumption is an important objective for our country; and ¶ WHEREAS, studies show that these energy efficiency improvements enhance the affordability, security, ¶ comfort, and health and safety of home ownership by generating net positive cash flow for homeowners; ¶ and¶ WHEREAS, building energy codes help safeguard commercial owners and tenants from long-term ¶ financial burdens that can result from short-term design and construction decisions and can afford ¶ protection from energy price volatility; and¶ WHEREAS, energy-efficient buildings provide energy, economic, and environmental benefits for many ¶ years, and enhance our national security by reducing our dependence on foreign oil; and¶ WHEREAS, building energy codes are a key component of a sustainable future for our country; and¶ WHEREAS, building energy codes set minimum requirements for energy-efficient design and ¶ construction of new and renovated buildings that impact energy use and emissions over the decades-long¶ lifetimes of the buildings; and ¶ WHEREAS, building energy codes make our daily lives better by improving indoor air quality and ¶ public health, promoting environmentally-friendly behaviors such as recycling and generating less waste ¶ and providing a more comfortable and productive work environment; and ¶ WHEREAS, building energy codes help drive the development, deployment, and innovation of new ¶ building technologies and design strategies; and¶ WHEREAS, more education, training and awareness continue to be needed at the local level on the tools, ¶ applications, best practices and support materials for greater building energy code adoption, ¶ implementation and compliance; and¶ WHEREAS, building energy codes decrease the impact and peak load of buildings, helping to lessen the ¶ stress on the electricity grid system, which increases grid reliability.

#### Energy codes key to solve warming

**Environment Texas Research and Policy Center 3/8**/12, “Building a Better America: Reducing Pollution and Saving Money with Efficiency”, <http://www.environmenttexas.org/sites/environment/files/reports/TXE_buildingreport_online.pdf>, AP

We can save money and help solve global warming by reducing the amount of energy we use, including in the buildings where we live and work every day. More than 40 percent of our energy — and 10 percent of all the energy used in the world — goes toward powering America’s buildings. But today’s high-efficiency homes and buildings prove that we have the technology and skills to drastically improve the efficiency of our buildings while simultaneously improving their comfort and affordability.¶ If we apply those lessons to all buildings, we can reduce energy use in our homes and workplaces by a quarter, lowering global warming pollution from buildings 30 percent by 2030.¶ Actions taken by local, state and federal governments and by the private sector have already led to major gains in the energy performance of buildings. The Energy Information Administration (EIA)’s projections of energy use per square foot in our buildings go down every year. Energy intensity projections in the commercial and residential sectors have gone down 10 percent, and projections accounting for the use of best available technology go even further — up to 30 percent better than we predicted just a handful of years ago. But we can and we must improve, implementing an aggressive two-part strategy that sets bold efficiency standards for new buildings and encourages investments in energy-efficiency improvements in the buildings we already have.¶ This report analyzes the effects of meeting bold efficiency goals and provides state-by-state data on the economic and environmental benefits as compared to a business- as-usual scenario. The policies needed to meet those goals are outlined in the report and we highlight forward-thinking cities and states where these policies are already making a difference for home and business-owners.¶ Taking decisive action to improve the energy performance of our buildings through a combination of policy and public and private investments would go a long way toward reducing our nation’s energy use:¶ • Cutting natural gas and fuel oil consumption in buildings by over 20 percent each by 2030.¶ • Cutting total energy use in our existing building stock 30 percent by 2030.¶ • Newly constructed buildings will consume 50 percent less energy in 2020 and 75 percent less energy in 2030 than new construction did in 2008.¶ Thanks to this reduction in energy use, Americans will reap great financial benefits as a result of lowered energy expenditures:¶ • Electricity bills will decline by 34 percent by 2030, saving households an annual average of $450 on residential energy bills compared to what they pay today.¶ • Heating oil and natural gas bills will decline in every state.¶ And, better, more energy-efficient buildings will reduce our global warming emissions.¶ • Global warming pollution from buildings will fall 11 percent by 2020, with that reduction increasing to 30 percent by 2030.¶ • By 2030, the cumulative avoided emissions will total 696 million metric tons of carbon dioxide, the equivalent of shutting down more than 150 coal-fired power plants in two decades.¶ Achieving these benefits will require strong policies that promote energy efficiency and educate builders, building-owners and renters about the energy performance of buildings, including:¶ • Adoption of strong building energy codes targeting reductions in energy use versus today’s average homes and commercial buildings. The codes should target 50 percent reductions by 2020 and 75 percent by 2030. We will also need strong commitments from cities and other stakeholders: a goal of achieving zero net energy buildings — buildings that produce as much energy as they consume — by 2030, and incentives to increase distributed renewable energy generation.¶ • An aggressive program of energy efficiency retrofits sufficient to reduce energy consumption by 30 percent in households and 50 percent in commercial facilities by 2030, including financing programs like Property Assessed Clean Energy, on-bill financing, weatherization programs, utility-funded incentive programs and public private partnerships.¶ • Adoption of strategies to increase transparency and develop consumer demand for energy-efficient apartments, homes and businesses, including energy use disclosure and incorporation of efficiency measures into the real estate appraisal process.¶ • Adoption of strong energy efficiency standards for household appliances and commercial equipment used in buildings.

**Building codes key to solve warming**

Kate **Galbraith** 5/21/**09** – Energy Expert, New York Times Writer – “The Race for Better Building Codes”, New York Times, <http://green.blogs.nytimes.com/2009/05/21/the-race-for-better-building-codes/>, AP

Creating stricter building codes can help fight global warming, experts say.¶ Buildings account for more than one-third of national energy use and 30 percent of greenhouse gas emissions, according to the Environmental Protection Agency and the U.S. Green Building Council.¶ Experts say that there is an easy way to reduce that number: tightening up building codes, so that they require more effective insulation and other improvements.

### A2: State Spending DA

#### More efficient codes save money and boost the economy

Department of Energy – May 18, 2011, “Building Energy Codes Program,” http://www.energycodes.gov/why\_codes/

New buildings, while they represent just over 1% of the total building stock in a given year, are important because they represent a unique chance to effect energy efficiency; keeping in mind that building energy codes also apply to retrofitting of existing buildings. Once a new building is constructed, it is very expensive and often impossible to achieve the energy efficiency that can be economically built in at the time of construction. Since buildings will be in existence for decades if not centuries this is an opportunity that we cannot afford to lose and had we done a more robust job in the past, retrofitting of existing buildings would not be as critical today. It is vital to make energy efficiency a fundamental part of the building design and construction process and energy codes are an effective way to achieve this goal and ensure energy efficiency is a component of all buildings. States have the lead to make this happen.¶ Research shows that contemporary energy codes could save about 330 Trillion BTU by 2030, almost 2% of total current residential energy consumption. There would also be comparable savings in consumer energy bills, air pollution and greenhouse gas emissions. Those savings help the state economy by putting more money is consumer's pockets and reducing environmental costs to the state and its industry.¶ This Program supports energy code development, adoption, implementation, and compliance initiatives at the national, state and local level and is estimated to generate energy cost savings of more than $2.5 billion per year. Since the inception of the Program 20 years ago accumulated energy savings has been more than 1.5 quads and cost savings to consumers has been more than $14 billion. These savings have resulted primarily from the Program's activities that accelerate the adoption of building energy codes by and within the states and that improve code compliance by means of various software tools and other types of training and technical support.

### FYI – How States Adopt Energy Codes

#### States adopt codes through legislative or regulatory action – federal changes are not binding

US DOE, Feb 2010, “Building Energy Codes 101”, DOE, pg. 11, http://www.energycodes.gov/becu/documents/BECU\_Codes\_101\_Intro.pdfC4W9rQHt44WzBw&usg=AFQjCNEUSbRtasIqaARmb7iYka\_ITA5Plg&sig2=SYLV4jQLTCB6T2BAZKMhfg

Adoption of energy codes can occur directly through legislative action or by regulatory action through agencies authorized by¶ the legislative body to oversee the development and adoption¶ of codes. When adoption is accomplished through legislation,¶ a committee may be appointed to provide recommendations¶ and/or draft the legislation. When adoption occurs through a¶ regulatory process, states and local governments often appoint¶ an advisory body comprising representatives of the design,¶ building construction, and enforcement communities. This¶ advisory panel recommends revisions that should be considered¶ for adoption. In basing their recommendations on model¶ energy codes, the advisory panel considers modifications to the¶ model codes to account for local preferences and construction¶ practices. The panel also may serve as a source of information¶ during the adoption process. Their recommendations then enter¶ a public review process.¶

Overview of the adoption process

The code adoption process generally includes the following steps

(note that the details of the adoption process vary depending on

whether the energy code is adopted by legislation, regulation, or

a local government):

1. A change is initiated by a legislative or regulatory

agency with the authority to promulgate energy codes.

Interested or affected parties also may initiate a

change. An advisory body typically is convened and

will recommend a new energy code or revisions to an

existing energy code.

2. The proposal undergoes a public review process

consistent with the legislative or regulatory process

under which the code is being considered. Public review

options include publishing a notice in key publications,

filing notices of intent, or holding public hearings.

Interested and affected parties are invited to submit

written or oral comments.

3. The results of the review process are incorporated

into the proposal, and the final legislation or

regulation is prepared for approval.

4. The approving authority reviews the legislation

or regulation. Revisions may be submitted to the

designated authority for final approval or for filing.

5. After being filed or approved, the code becomes

effective, usually on some specified future date.

This delay creates a grace period that allows

those regulated to become familiar with any new

requirements. The period between adoption and

effective date typically varies from 30 days to six

months.

Timing the adoption and revision of state

and local codes

Some states adopt or revise energy codes in concert with

the publication of a new edition of new codes, such as the

ICC Codes or ASHRAE Standard. This may occur either

through a legislative or regulatory process, or when the state

regulation or legislation refers to “the most recent edition,”

in which case the adoption will simply occur automatically

without formal action. The effective date of a new adoption

can also be tied to the publication date of an energy standard

or model energy code, e.g., “This regulation shall take effect

one month from publication of the adopted model energy

code.”

Other states review the new editions on a case-by-case

basis to consider adoption, without a designated time

line for adoption.

## Building Codes – Aff Answers

### Solvency

#### Codes are too hard to enforce – fiat can’t solve

Department of Energy – May 2010, “Building Energy Codes 101”, http://www.energycodes.gov/becu/documents/BECU\_Codes\_101\_Slide\_Notes.pdf

Despite these clear benefits, the road to achieving them is challenging.

To be effective, building energy codes must first be painstakingly developed, then go through a complex, coordinated process that includes code adoption, implementation, compliance, and enforcement by states and other jurisdictions.

One example of a code challenge is that code adoption is not automatic in most states. Without statewide adoption, local jurisdictions are left without state guidance or resources, and builders on the ground can face a confusing patchwork of codes across their region. Adding complication, the challenges of implementation, compliance, and enforcement vary with different jurisdictions; lack of both training and manpower are often cited as roadblocks to proper enforcement.

As with any aspect of building codes, plan review and inspections take time, and this must be accounted for in department staffing. Training is also critical across the design, building, and enforcement communities. Not only is there a need for understanding new code language, but new construction techniques, materials, and technologies must also be considered and learned.

#### CP doesn’t solve training, awareness, and regulation issues

Minjoo Lee - Bucknell University – 9/4/11, Improving Building Energy Efficiency: Adoption, Enforcement, and Compliance with Energy Standards and Codes, WISE and ASHARE, http://www.wise-intern.org/journal/2011/documents/MinjooPaper.pdf

Following standards and codes is the most cost-effective way to increase building energy efficiency because it requires implementation of existing minimum benchmarks. There is a strong linkage between adoption, enforcement, and compliance that makes each process equally important. Unfortunately, there are barriers to each process. There is not enough urgency in adoption of energy codes, not enough regulation on measuring compliance, inconsistent structure of training for code officials, misconception that all energy efficient buildings demand high upfront costs, a lack of awareness and interest of the public, and a lack of cooperation from building owners themselves.

#### Only solves a fraction of the national target

Ann **Bordetsky et al** Roland Hwang, Anne Korin, Deron Lovaas, Luke Tonachel February **05** – National Resources Defense Council - SECURING AMERICA: Solving Our Oil Dependence Through Innovation”, NRDC (National Resources Defense Council), <http://www.nrdc.org/air/transportation/oilsecurity/plan.pdf>, AP

Approximately one-third of U.S. oil demand is consumed in industrial manufacturing plants, airplanes, ¶ and residential homes. Efficiency gains in these sectors can save America more than 300,000 barrels per ¶ day in 2015 or 12 percent of the 2.5 millions barrels per day national target.

#### Transportation matters more and codes fail

International Energy Agency – 2012, Enabling low-carbon end-use: Increased energy efficiency, electrification and power sector decarbonisation, http://www.iea.org/media/etp/Factsheet%20ETP%202012%20-%20End%20Use%20Sector.pdf

The industry, building (including residential and services sub-sector) and transport sectors account for a great majority of final energy consumption. To achieve ETP 2012’s 2°C Scenario (2DS), which gives the world an 80% chance of keeping average global temperature rise below 2°C compared to pre-industrial levels, these sectors must couple increase use of decarbonised electricity as well as improve energy efficiency, cutting their own total CO2 emissions by more than 20% before 2050, even as the power sector reduces its emissions by 80%.

 The 2DS calls for the building sector to reduce total CO2 emissions by more than 60% by 2050. Because buildings can stand for more than 100 years, actions cannot be limited to tighter controls on new construction, but must also include existing stock.

 Total energy savings in the buildings sector in the 2DS, compared to the 4DS, amounts to 33 EJ in 2050. About 70% of buildings’ potential savings between the 4DS and 2DS are in the residential sub-sector and residential space heating alone amounts to 22% of the total savings in the buildings sector.

 Additional investment needed to realise the 2DS is estimated to be USD 11.5 trillion: USD 7.5 trillion in the residential sub-sector and USD 4.0 trillion in the services sub-sector. This investment is required to ensure that new buildings meet more stringent building codes, to refurbish around 60% of the OECD building stock still standing in 2050 to low-energy standards, and for additional investments in heat pumps, solar thermal systems, co-generation systems, lighting systems and appliances. In the residential sub-sector, improvements in building shells account for almost half of the incremental investment needs; in the services sub-sector, around 40% of all investment is required for this purpose.

 Implementation of best available technologies (BATs) in the industry sector could reduce energy consumption by 20% from today’s level, one of the least-cost options to reduce energy consumption and emissions in industry. Optimising inefficient motors and related drive systems typically increases their efficiency by 20% to 25%. Given the ubiquitous use of motors in industry, this could reduce global electricity demand by as much as 7%.

 But efficiency alone will not be sufficient to offset strong growth in industrial demand, so industry must adopt new technologies, such as smelting reduction, separation membranes, advanced catalysis, black liquor gasification, and carbon capture and storage (CCS), are needed to achieve significant emissions reduction.

 The transport sector uses more than 52% of the oil extracted now, and that share has been increasingly constantly over the last decades because of oil’s high energy density cost-competitiveness compared with most alternative fuels. In the short term, improved fuel economy of today’s internal combustion engine (ICE) in cars and trucks (and efficiency improvements in other transport modes) can deliver the largest fuel savings and CO2 emissions reduction. After 2030 and by 2050, the 2DS calls for sales of battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs) to reach 50% for cars and light-duty trucks.

 Under favourable conditions, hydrogen fuel-cell vehicles could represent close to 20% of annual vehicle sales in 2050. The success of such vehicles depends on the wider use of hydrogen in the economy, as well as on the development of sustainable production methods, the efficiency of hydrogen as a storage medium (compared to competing solutions) and the capacity to finance the necessary infrastructure deployment.

 Biofuels will play an increasingly important role in decarbonising the remaining internal combustion automobiles as well as ships and aircraft, since liquid fuels used by these modes will represent more than 75% of energy used in transport in 2050.

### State Spending DA – Link

#### The state must fund the programs

EPA and DOE, this plan has been developed by more than 50 leading organizations, 17 Aug 2006, “National Action Plan for Energy Efficiency” pg. 5, http://www.epa.gov/cleanenergy/energy-programs/suca/resources.html

Energy efficiency programs require consistent and long-term funding to effectively compete with energy supply options. Efforts are necessary to establish this consistent long-term funding. A variety of mechanisms have been, and can be, used based on state, utility, and other stakeholder interests. It is important to ensure that the efficiency programs’ providers have sufficient long-term funding to recover program costs and implement the energy efficiency measures that have been demonstrated to be available and cost effective. A number of states are now linking program funding to the achievement of energy savings.¶ Modify policies to align utility incentives with the delivery of cost-effective energy efficiency and modify ratemaking practices to promote energy efficiency investments. Successful energy efficiency programs would be promoted by aligning utility incentives in a manner that encourages the delivery of energy efficiency as part of a balanced portfolio of supply, demand, and transmission investments. Historically, regulatory policies governing utilities have more commonly compensated utilities for building infrastructure (e.g., power plants, transmission lines, pipelines) and selling energy, while discouraging energy efficiency, even when the energy-saving measures might cost less. Within the existing regulatory processes, utilities, regulators, and stakeholders have a number of opportunities to create the incentives for energy efficiency investments by utilities and customers. A variety of mechanisms have already been used. For example, parties can decide to provide incentives for energy efficiency similar to utility incentives for new infrastructure investments, provide rewards for prudent management of energy efficiency programs, and incorporate energy efficiency as an important area of consideration within rate design. Rate design offers opportunities to encourage customers to invest in efficiency where they find it to be cost effective and participate in new programs that provide innovative technologies (e.g., smart meters) to help customers control their energy costs.

## Biofuels (Neg)

### Biofuels CP 1NC

#### Test: The United States Federal Government should provide tax credits the development and production of advanced biofuels.

#### Federal tax credits for advanced biofuels key to solve dependency

Jim Collins – President of DuPont Industrial Biosciences – 3/16/12, Biofuels Key to Energy & Economic Policy, Energy Experts Blog, National Journal, <http://energy.nationaljournal.com/2012/03/should-government-subsidize-en.php>

Now that gas prices are hovering close to $4 a gallon, reflecting both underlying global supply demand dynamics and the fears of a supply disruption in the Middle East, we are again reminded why it is good government policy to invest in alternatives to the petroleum fuels that the US transportation sector is dependent upon.

The availability and cost of transportation fuels are core to our energy security and economic growth. Acknowledging the risks of that dependence, the US military is moving aggressively to drive advanced biofuels. We believe that Congress should continue to drive this technology as well. Extending the tax credits that are important for the deployment of the first plants that will produce cellulosic ethanol and other advanced biofuels in the U.S is an appropriate policy tool to get these first plants on line. These tax credits help alleviate the risk that is inherent with commercializing new technologies such as advanced biofuels, which can require large investments and long-time horizons. Once this first generation of plants are up and running, it will be up to us and others to succeed or fail in the marketplace based on the merits of our technologies and execution.

Already, DuPont has invested millions of dollars in advanced biofuels research and development. We are now operating a demonstration plant in Vonore, Tenn., that is producing cellulosic biofuel from corn stover, providing fuel for fleet vehicles at the University of Tennessee. In the second half of 2012, DuPont will break ground on a commercial-scale biorefinery in Nevada, Iowa, that will produce 27.5 million gallons of cellulosic ethanol annually—one of the first to be built in the U.S. Once we produce at commercial scale, we will license these technologies widely, providing expanded economic opportunities for current growers and speeding the rate of advanced biofuels production.

U.S. policy support for biofuels has already helped to encourage private investments in the ethanol industry, which last year grew to produce nearly 14 billion gallons, easily meeting the “renewable fuel” portion of the RFS and exporting record volumes of ethanol to other countries, while at the same time eliminating 485 million barrels of imported oil and contributing more than $33 billion in crop revenue to US farmers, (according to Feb. 2012 report produced by Environmental Economics for the Renewable Fuels Association, “Contribution of the Ethanol Industry to the Economy of the United States”).

It will still take time to ramp up production of cellulosic ethanol to match the volume achieved today by corn ethanol, but we cannot afford to halt the progress just as the train is leaving the station. Relying solely on US domestic fossil fuel production will not be sufficient to offset the growing global demand and geopolitical risks that will continue to create volatility and upward price pressures on transportation fuel prices.

This is why we need a strong collaborative partnership between business investment and government support for advanced biofuels.

### 2NC Solvency – Dependence

#### Advanced biofuels solve oil dependence

Nathanael Greene et al., director of NRDC's renewable energy policy program, December 2004, Growing¶ Energy¶ How Biofuels Can¶ Help End America’s¶ Oil Dependence, National Resources Defense Council, pg. 5, http://www.nrdc.org/air/energy/biofuels/biofuels.pdf

America’s oil dependence threatens our national security, economy, and environment.¶ We consume 25 percent of the world’s total oil production, but we have¶ 3 percent of its known reserves. We spend tens of billions of dollars each year to¶ import oil from some of the most unstable regions of the world. This costly habit¶ endangers our health: America’s cars, trucks, and buses account for 27 percent of¶ U.S. global warming pollution, as well as soot and smog that damage human lungs.¶ The United States does not have to rely on oil to drive our economy and quality of¶ life. We can replace much of our oil with biofuels—fuels made from plant materials¶ grown by American farmers. These fuels, especially those known as cellulosic biofuels,¶ can be cost-competitive with gasoline and diesel, and allow us to invest our¶ energy dollars at home. They can also slash global warming emissions, improve air¶ quality, reduce soil erosion, and expand wildlife habitat.¶ If we follow an aggressive plan to develop cellulosic biofuels between now and 2015,¶ America could produce the equivalent of nearly 7.9 million barrels of oil per day by 2050.¶ That is equal to more than 50 percent of our current total oil use in the transportation¶ sector and more than three times as much as we import from the Persian Gulf alone.¶ In combination with improved fuel efficiency in cars and smart growth planning¶ in our towns and cities, biofuels can free America from foreign oil in a cost-effective¶ and environmentally safe way:

By 2025, producing the crops to make these fuels could provide farmers with profits

of more than $5 billion per year.

Biofuels could be cheaper than gasoline and diesel, saving us about $20 billion per

year on fuel costs by 2050.

Biofuels could reduce our greenhouse gas emissions by 1.7 billion tons per year—

equal to more than 80 percent of transportation-related emissions and 22 percent of

total emissions in 2002.

#### Advanced biofuels solve oil dependence

Michael Pacheco PH.D, Director of the National Bioenergy Center and National Renewable Energy Laboratory, 24 May 2006, “How Biofuels Can Help Reduce Dependence on Foreign Oil” NREL, pg. 2, http://www.nrel.gov/biomass/pdfs/pacheco\_testimony.pdf

The Department of Agriculture and the Department of Energy recently looked at the question of whether the nation’s biomass resource could foster a biofuels industry large enough to meet a significant portion of our nation’s future fuel needs. The report, now commonly referred to as “The Billion Ton Study,” for the first time confirmed that the U.S. could yield more than a billion tons of biomass annually for energy needs. And, importantly, we could do this without negatively affecting the nation’s ongoing needs for food or fiber. This is significant because the 1.3 billion tons of biomass that was forecasted contains as much energy as 3.5 billion barrels of oil.

Let me provide some perspective on that. This 3.5 billion barrels is about 60% of the 6 billion-plus barrels of oil the U.S. consumes each year. Domestically, the United States, including Alaska, currently produces about 2 billion barrels of oil per year. That’s only 67 percent of the potential we see from biomass. U.S. oil production peaked in the early 1970s at the same level of production, about 3.5 billion barrels per year. The U.S. has never produced more than 3.5 billion barrels a year of oil.

#### Incentivizing advanced biofuels solves dependence – boosts oil displacement

Brian Murray – Dir. Economic Analysis, Nicholas Institute for Environmental Policy Solutions @ Duke – 5/11/12, Advances Needed for Biofuels to Succeed, Energy Experts Blog, National journal, http://energy.nationaljournal.com/2012/05/the-nexus-between-biofuels-ene.php

If biofuels are to become an effective instrument for energy and environmental improvement, more effort should be focused on creating the scientific and technological breakthroughs necessary to allow advanced biofuels to compete.

Today policy to expand domestic liquid biofuels has three underlying goals:

1. Lessen dependence on foreign oil

2. Increase rural incomes

3. Reduce greenhouse gas emissions

Current policy, dominated by the expanded production and use of corn-based ethanol, has a modest effect on the first goal, a substantive effect on the second, and virtually no effect on the third.

Biofuels do directly reduce imports of petroleum. For every gallon of ethanol produced, there is displacement of gasoline use—though less than 1:1, given different energy content per gallon. And some displacement does seem to be occurring. The Energy Information Administration (EIA) reports most recent growth in United States consumption of motor fuels was met by increased use of diesel and biofuels. There are mitigating factors, however.

Biofuel (ethanol) is but a small part of the domestic use fuel mix accounting for roughly 6 percent of overall use in 2011, and thus has limited leverage over imports. This leverage grows if biofuel’s share of the mix grwos, as is scheduled under the Renewable Fuels Standard (RFS) leading up to 2022. Second, there are complex market feedback effects that can counter the direct effects of gasoline displacement. A recent study by economists at the University of Missouri published in the journal Energy Policy shows ethanol subsidies, such as the recently expired Volumteric Ethanol Excise Tax Credit (VEETC) tax credits, can actually reduce gas prices and cause an offsetting increase in consumption, much like the well-known rebound effect with fuel efficiency standards. This weakens the displacement of gasoline and oil imports.

To its credit, expanded use of corn-based ethanol has boosted the income of corn producers—approximately 30 percent of the U.S. corn crop is now used in ethanol production. Corn prices have roughly doubled since 2007, when the ethanol expansion took off. Other contributing factors to this boost exist as well; including higher energy input costs and increased global demand. Most economic studies attribute some, though not all, of the price rise to ethanol mandates. Other crop prices have risen too. This is due, in part, to growers switching crops—soybean to corn for example—to meet the expanded demand for the latter and placing price pressure on the former. Livestock producers, food processors, and consumers face higher input costs and thus bear some burden from this expansion. So the distributional effects within agricultural markets are considerable.

The greenhouse gas effects of biofuels are controversial, especially with corn-based ethanol. The U.S. Environmental Protection Agency’s analysis of the RFS2 indicated a small reduction in GHG emissions from corn-based ethanol use and larger reductions from advanced varieties such as cellulosic ethanol. Subsequent research, including our own (http://nicholasinstitute.duke.edu/climate/policydesign/net-global-effects-of-alternative-u.s.-biofuel-mandates) , suggests more modest greenhouse gas effects from ethanol, even a greenhouse gas increase in some cases. The big uncertain factor in all this is how much of the emissions effect from ethanol expansion is due to indirect land use change (ILUC), including that in other countries who convert land (and generate emissions) to meet the additional demands for biofuel feedstock. The range of ILUC estimates is wide and very sensitive to assumptions about the extent of the market and the characteristics of the land being affected.

Considering all these factors, success of biofuel policy in the U.S. is a mixed bag. It has helped raise the income of certain farmers, but put price pressure on others. In addition, it has had a modest effect on oil imports, and been nearly a wash when it comes to reducing greenhouse gases.

For biofuels to succeed, beyond merely raising the incomes of certain producers, may depend on the penetration of advanced biofuels that do not draw from the food supply. These biofuels would not require large amounts of land to produce, and have a sufficiently higher energy content. This is recognized in policies such as the RFS2, which requires a majority of the fuels mandate to come from cellulosic and other advanced biofuels in the future. But progress in this area is slow and more research and development focused on making these advanced biofuels contend in the marketplace is needed.

### Solv – Environment

#### Biofuel saves the environment-80% less greenhouse gases

US EnviroFuels.com, 2011, “Benefits” United States EnviroFuels, http://www.usenvirofuels.com/benefits.shtml

Advanced Biofuel ethanol is one of the best tools we have to fight air pollution from automobiles. Why? Because Advanced Biofuel ethanol contains 35 percent oxygen. Adding oxygen to gasoline results in more complete fuel combustion, thereby reducing harmful tailpipe emissions.¶ The addition of oxygen to gasoline by blending with ethanol improves internal engine fuel combustion, and reduces tailpipe pollutants such as carbon monoxide, volatile organic compounds, and particulate matter. When ethanol is mixed at the 10% level with gasoline (E10) the total fuel mix is more efficient, has better combustibility and translates into cleaner automotive tailpipe emissions, reduced smog formation, and improvement in the quality of the ambient air shed. Furthermore, ethanol is miscible with water (water soluble), non-toxic, clean burning, contains no sulphur, nitrogen or heavy metals, and completely biodegradable. So if you accidentally spill some, there is no need to worry about poisoning the ground or water.¶ An extensive life cycle analysis of the Highlands EnviroFuels project revealed that the facility will produce Advanced Biofuel resulting in an 80% reduction in greenhouse gas emissions versus the manufacturing of gasoline from oil.

#### Biofuels key to the environment

Nathanael Greene et al., director of NRDC's renewable energy policy program, December 2004, Growing¶ Energy¶ How Biofuels Can¶ Help End America’s¶ Oil Dependence, National Resources Defense Council, pg. 16, http://www.nrdc.org/air/energy/biofuels/biofuels.pdf

Biofuels can help clean up the environment¶ At every stage—from growing the crops to burning biofuels—cellulosic biofuels can¶ provide important environmental advantages if we reward environmental performance¶ sufficiently. The bulk of these advantages would come from reducing our dependency¶ on oil, but many also would come from growing a crop such as switchgrass that has¶ a dramatically smaller environmental footprint than traditional row crops.¶ The potential environmental benefits of greatly reducing our oil dependence¶ through an aggressive package of fuel efficiency and biofuels are enormous.

### Solv – Economy

#### Advanced biofuel solves warming and the economy

Annegrethe Jakobsen, Senior Public Affairs Manager, 26 Jan 2012“Advanced biofuels could create millions of jobs while greening the economy”, The Energy Collective, http://tinyurl.com/7xtalp5

The socioeconomic prospects of deploying advanced biofuels go well beyond energy security. The report shows that the eight regions analyzed have the potential to diversify farmers’ income, generate revenues ranging from $1 trillion to $4.4 trillion between today and 2050 and create millions of jobs.¶ For example, advanced biofuels could create up to 2.9 million jobs in China, 1.4 million jobs in the USA, and around 1 million in Brazil. The impact on climate change would also be reduced considering advanced biofuels emit 80 percent less greenhouse gas than ethanol.¶ During the session at Davos where the study was launched, Novozymes' CEO pointed out that at a time when everyone is striving to create jobs to secure our economic future and finding a sustainable way to produce energy, this study shows the benefits of a transition towards sustainable biofuels and bioproducts based on agricultural residues. It also strongly signals that policy incentives will result in great payback to society.

### Incentives Solve

#### More incentives key

Environmental News Service – 10/11/11, Cellulosic Ethanol Production Far Behind Renewable Fuel Standard, http://www.ens-newswire.com/ens/oct2011/2011-10-11-093.html

The United States is not likely to reach cellulosic ethanol production mandates spelled out in the federal Renewable Fuel Standard by 2022 unless "innovative technologies are developed or policies change," says a new congressionally-requested report from the National Research Council.¶ Cellulosic ethanol is a biofuel produced from wood, grasses, or the non-edible parts of plants, such as corncobs or citrus peels. The report says a cloud of "uncertainty" surrounds environmental and economic benefits expected to result from use of this biofuel.¶ "The Renewable Fuel Standard may be an ineffective policy for reducing global greenhouse gas emissions," said Ingrid Burke, co-chair of the NRC panel that issued the report and a botany professor at the University of Wyoming.¶ In 2005, Congress enacted the Renewable Fuel Standard as part of the Energy Policy Act and amended it in the 2007 Energy Independence and Security Act. The aim of the RFS is to encourage development of biofuels, lower dependence on foreign oil, and reduce greenhouse gas emissions.¶ The law mandates that by 2022 the United States must produce 16 billion gallons of cellulosic biofuels, along with 15 billion gallons of conventional corn-based ethanol, one billion gallons of biodiesel, and four billion gallons of advanced biofuels.¶ While production of ethanol and biodiesel already exceed the mandate, no commercial cellulosic biofuels plants exist and technologies are at demonstration scale.¶ Several industrial-scale cellulosic ethanol plants are being built in the United States, including an Abengoa bioenergy biomass plant in Kansas expected to start production in 2013, and an expansion of Poet's conventional ethanol plant in Iowa.¶ Project Liberty will be Poet's first commercial-scale, cellulosic ethanol plant. Scheduled to begin operations in 2013, it is expected to produce 25 million gallons of ethanol per year from corncobs, leaves and husks, provided by Iowa farmers. In September, Poet received final approval for a $105 million loan guarantee for Project Liberty issued through the U.S. Department of Energy's Loan programs Office.¶ But this year cellulosic biofuel output is likely to be 6.6 million gallons, far below the RFS target for 2011 of 250 million gallons, the report points out.¶ The corn ethanol industry has been developing for 30 years, said Wallace Tyner, NRC panel co-chair and an agricultural economics professor at Purdue University. "We have more than 200 corn ethanol plants producing more than 14 billion gallons today. We have only 11 years to reach even higher numbers for cellulosic biofuels."¶ The report finds that although biofuels hold potential for providing net environmental benefits compared with using petroleum-based fuels, specific environmental outcomes from increasing biofuels production to meet the renewable fuel consumption mandate cannot be guaranteed.¶ The type of feedstocks produced, management practices used, land-use changes that feedstock production might require, and such site-specific details as prior land use and regional water availability will determine the mandate's environmental effects, the report says.¶ Biofuels production has been shown to have both positive and negative effects on water quality, soil, and biodiversity. But air-quality modeling suggests that production and use of ethanol to displace gasoline is likely to increase air pollutants such as particulate matter, ozone, and sulfur oxides.¶ In addition, published estimates of water use over the life cycle of corn-grain ethanol are higher than petroleum-based fuels.¶ Renewable fuels advocates criticized the NRC committee for is narrow focus and said a broader view of the entire industry is required to accurately evaluate the likelihood of cellulosic biofuel to meet the mandated requirements.¶ "Global demand for energy continues to escalate yet this report chooses to focus with laser-like precision on the perceived shortcomings of conventional and next-generation biofuels. Instead, we should be comparing the relative costs and benefits of all future energy options," said Renewable Fuels Association Vice President Geoff Cooper, who testified before the National Research Council committee tasked with drafting the report.¶ "Biofuels are increasingly displacing and delaying the need for marginal sources of petroleum - like Canadian tar sands and shale oil - that come with extreme environmental and economic costs," said Cooper. "American ethanol production continues to evolve, reducing water and energy requirements while producing increasing amounts of fuel and livestock feed."¶ The report does recognize some of the improvements in biofuels production, said Cooper, but "it also rehashes many of the well-worn criticisms that have been discredited time and again."¶ As for the report's key finding, Cooper said the Renewable Fuels Association shares the committee's view that commercializing advanced and cellulosic ethanol technologies will require more policy certainty and a recommitment to reducing oil import dependency.¶ The RFA has long called for an extension of cellulosic ethanol tax incentives and a repeal of decades-old subsidies for the oil industry, totaling at least $4 billion a year in direct benefits.¶ Advanced Ethanol Council Executive Director Brooke Coleman, too, was critical of the report. "The most glaring problem is the Council analyzed the ongoing development of the biofuels industry in a vacuum, as if these fuels are not displacing the marginal barrel of oil, which comes at great economic and environmental cost to the consumer. Congress was seeking a sober analysis of the RFS, and regrettably, this is not it."¶ "The idea that the RFS may not be an effective strategy to mitigate greenhouse gas emissions is regrettable given the published science on the subject," said Coleman. "Even with land use change considerations, advanced biofuels are the lowest carbon fuels being developed in the marketplace; far and away less carbon intensive than electricity, natural gas and even hydrogen fuel cells."

#### Federal incentives are key to creating emerging renewable fuel markets

David G. Victor, John Deutch, and James R. Schlesinger, Deutch: Chair of the Task Force, Institute Professor at MIT, Undersecretary of Energy, Deputy Secretary of Defense, Director of Central Intelligence. Victor: Project Director of the Task Force, Director of the Program on Energy and Sustainable Development at Stanford University, Adjunct Senior Fellow for Science and Technology at the Council on Foreign Relations. Schlesinger: Former Secretary of Defense, First Secretary of Energy Chair of the Task Force, 12 October 2006 “National Security Consequences of U.S Oil Dependency”, Council on Foreign Relations, pg. 46, http://tinyurl.com/7at36cu

Achieving the above four objectives will require the development and¶ deployment of new technologies at commercial scale. The high price of oil is a strong incentive to the private sector to make the investments needed to develop and deploy new technologies. This innovative activity will range from entrepreneurial start-up companies to venture capital funds to large energy and chemical companies. The targets for innovation will include both demand and supply technologies and all fuels from renewables to oil. Just in the past two years, hundreds of¶ start-up companies have been founded in areas from biofuels to batteries.¶ In addition, large oil and chemical companies have launched development¶ projects on biomass, shale, and coal-to-liquids. Research activity¶ has increased dramatically in the nation’s universities and laboratories.¶ These private investments are likely to yield some fruit on their¶ own. However, the pace of the private sector progress depends on a complementary program of federal energy technology research, development, and demonstration projects. The reason is that investment in new energy technologies is made by private sector firms in response to their assessment of future market conditions, which include the expected price of oil, environmental regulations, and government incentives such as tax credits or attractive financing. But, for a variety of¶ reasons, private firms do not take into account the full range of national¶ benefits that come from investment in energy technology R&D.15¶ Private investment will fall short of what is needed, and there is a role¶ for government support of R&D toward the other broad goals for¶ domestic energy policy (increasing energy efficiency, facilitating switching¶ away from oil, increasing the supply of oil from both foreign and¶ domestic sources, and allowing for a more secure and capable energy¶ infrastructure). The Department of Energy (DOE) has responsibility for most of¶ the federal RD&D effort but other agencies also sponsor and perform¶ relevant work. The appropriate mix of RD&D by government agencies,¶ universities, research labs, and private corporations can be debated,¶ as can the proper mix of research, development, and demonstration¶ 15Among the many reasons why private firms do not invest inR&Dat a level commensurate¶ with the large benefits that R&D offers to society: intellectual property rights are incomplete,¶ particularly for long-term R&D; energy technology advances often have important spillovers¶ to other technologies that might not benefit the firms doing the R&D; and, absent credible policy commitments and economic incentives, firms cannot expect to capture the national security and environmental benefits of their new technology investments.¶ However, the Task Force is critical of the continuing U.S.¶ federal RD&D effort; it is fragmented, unfocused, and tries to be all¶ things to all people. More investment in new energy technologies on the supply and demand side of energy markets is needed as part of a long-term energy policy strategy if the United States is to adequately manage the transition away from a petroleum-based economy.

### Agenda Politics NB – A2: Unpopular

#### Obama doesn’t push the CP – lobbies take the hit

Biofuels Journal – 6/12/12, ACE, Environmental, and Advanced Biofuel Groups Urge Congress to Protect RFS and Extend Cellulosic Tax Provisions, http://www.biofuelsjournal.com/articles/ACE\_\_Environmental\_\_and\_Advanced\_biofuel\_Groups\_Urge\_Congress\_to\_Protect\_RFS\_and\_Extend\_Cellulosic\_Tax\_Provisions-123658.html

In a letter to Senate Majority Leader Harry Reid, Senate Minority Leader Mitch McConnell, Speaker John Boehner and House Minority Leader Nancy Pelosi, leading environmental, science and advanced biofuels advocates joined with the American Coalition for Ethanol (ACE) June 12 urging Congress to protect the Renewable Fuel Standard (RFS) and extend expiring tax incentives for cellulosic biofuels.¶ The letter, signed by ACE, the Advanced Ethanol Council (AEC), the Union of Concerned Scientists (UCS), the Natural Resources Defense Council (NRDC), the Great Plains Institute, the Environmental and Energy Study Institute (EESI), the Institute for Agriculture and Trade Policy, the Advanced Biofuels Association and the Biotechnology Industry Association (BIO), comes in the midst of a series of investigatory hearings on the RFS in the Senate and another hearing today in the Senate Finance Committee on energy tax reform.¶ Specifically, the letter calls on Congress to leave the RFS unchanged, stating that "[a]ny effort to open up the RFS would send a chilling signal to a sector where decades-old policies and incentives continue to push investment dollars to the incumbent petroleum industry."¶ The group calls the RFS a “cornerstone” of the emerging advanced biofuels industry in the United States.¶ The letter also calls on Congress to extend existing tax incentives for cellulosic biofuels – both the Producer Tax Credit and Accelerated Depreciation – while it continues to deliberate on more comprehensive tax reform.¶ "We support ongoing efforts to more comprehensively reform energy tax policy to level the playing field between incumbent industries and cleaner alternatives and enhance U.S. competitiveness in the global $2.4 trillion clean energy marketplace,” the letter states.¶ The group letter adds that “[a] reformed tax policy should reflect 21st century energy challenges by complementing the RFS, rewarding environmental performance and driving innovation."¶

## Biofuels – Aff Answers

### Solvency – Incentives Fail

#### Government incentives can’t get cellulose onto the market – empirics prove and we don’t have the infrastructure

TAYLOR SMITH - Policy Analyst for The Heartland Institute – 1/7/12, Cellulosic Ethanol Continues to Prove Superficiality of Renewable Energy Subsidies, http://blog.heartland.org/2012/01/cellulosic-ethanol-continues-to-prove-superficiality-of-renewable-energy-subsidies/

In the 2006 State of the Union address, President Bush promised the nation that he will use taxpayer funds to develop cellulosic fuels (fuel made from grass, woodchips, or other plant material) to power our cars by 2012.¶ In 2007, Speaker of the House Nancy Pelosi and her fellow members of Congress were big believers in cellulosic ethanol and subsequently mandated that the following quantities be produced. You might wonder how Congress could do that when no facility, no technology, and no idea how to make commercially viable cellulosic ethanol existed. These facts were apparently brushed aside as unworthy considerations, as is the tendency with facts regarding legislation labeled with the words “energy independence.”¶ For the first mandate, the Environmental Protection Agency (EPA) stated that the bulk of the 100 million gallons would come from two companies in particular, Cello Energy and Range Fuels.¶ Cello Energy failed to meet their end of the supply bargain, having been told they were responsible to produce 70 million gallons of cellulosic ethanol before they had built their first plant. When they didn’t come even close to meeting that target they subsequently lied about it. In 2009, they were taken to court and accused of fraud; by 2010 they had declared bankruptcy.¶ As for Range Fuels, they received much hype after claiming in 2007 that they would be the first company to build a commercially viable cellulosic plant in Georgia. In the process, they received a $76 million grant from President Bush’s Department of Energy and an additional $6 million from the State of Georgia. When 2008 ended and still no plant, President Obama’s Department of Agriculture threw in a whopping $80 million loan. By 2009, former Range Fuels CEO Mitch Mandich publicly stated that nobody had figured out how to commercially produce cellulosic ethanol.¶ That public announcement combined with Cello Energy just months away from cleaning out their office pressured EPA to lower the 2010 target from 100 million gallons to a mere 6.6 million. Range Fuels would go on to produce four million gallons of methanol.¶ For those counting, that’s $162 million of taxpayer money, already more than the cost Range Fuels estimated to create this wonder-fuel and accomplish everything the media hyped about. What taxpayers got in return were four million gallons of a biofuel that’s been around for decades.¶ Wednesday, the Atlanta Journal reported that Range Fuels was sold to another biofuel-maker at a fire-sale price, with the taxpayer funds going unrecouped.¶ Sam Shelton, director of research programs at Georgia Tech’s Strategic Energy Institute, was long skeptical of Range Fuels’ plans and technology.¶ “It was too damn big a risk for an apparently unproven technology and the due diligence I personally performed on Range would not entice me to invest in it,” Shelton said Wednesday.¶ How one man’s due diligence manages to be superior to the U.S. legislative process still no one knows.¶ Today, oil companies are still required to buy cellulosic ethanol to blend it with conventional gasoline or purchase waiver credits for not using it. Since oil companies cannot buy something that doesn’t exist they are forced to buy these waiver credits, essentially paying the government for failing to comply to their lack of due diligence.¶ As with any business, these costs are passed to the consumer. So if nothing else, the end result of your tax money was not “energy independence,” but higher gas prices.¶ Last month, the Wall Street Journal reported despite these failures, the subsidies continue to roll in:¶ In August 2011 the Obama Administration funded a $510 million program in partnership with the Navy to produce advanced biofuels for the military. In September the feds loaned $134 million to Abengoa Bioenergy to build a cellulosic plant in Kansas. The optimistic forecast is that this plant will produce about 23 million barrels a year—a fraction of what Washington promised in 2006. In September the Department of Energy provided POET, which advertises itself as the “world’s largest ethanol producer,” a $105 million loan guarantee for cellulosic.¶ **Why do subsidies continue unabated if cellulosic ethanol has been nothing but a disaster?** Manhattan Institute Senior Fellow Robert Bryce stated in his book, Power Hungry, that no matter how many times it does fail, enthusiasts always promise that its viability is just right around the corner, ready to rescue the nation from “dependence on foreign oil.” Of course the catch always being “given enough money.”¶ Consider this quote made by American inventor Thomas Midgley to the Society of Automotive Engineers, spoken in 1921:¶ From our cellulose waste products on the farm such as straw, corn-stalks, corn cobs and all similar sorts of material we throw away, we can get, by present known methods, enough alcohol to run our automotive equipment in the Unites States.¶ The only problem was the fuel cost about $2 per gallon to produce, about $24 per gallon in current money. Now consider another quote made almost three years ago, by U.S. Energy Secretary Steven Chu in an article for Newsweek:¶ We will continue to need high-energy-density fuels for years to come. But we can develop new liquid biofuels that will be direct replacements for gasoline and diesel fuel. These will be next-generation biofuels made from high-energy grasses such as miscanthus and from agricultural wastes.¶ Despite $1.5 billion of subsidies and grants from the Bush and Obama administrations, not much has advanced since Midgley’s time. But Chu and other renewable energy apologists have praised these efforts (at least Obama’s). Calling dependency on oil “dangerous and short-sighted.”¶ While Daniel Yergin’s essay, There Will Be Oil, became popular for explaining how maximum oil output and the ensuing catastrophe has been right around the corner – for over a century. It should be no coincidence that cellulosic ethanol has been advocated as a near-breakthrough substitute for nearly a century as well. This is likely to continue since it has proven to be a great money-making strategy for fledgling producers even if they don’t produce a drop of viable cellulosic ethanol and oil production thrives.¶ But what gets overlooked when oil-dependence is referred to as “short-sighted” is the irony that a non-viable product which hasn’t existed anywhere but in the dreams of those in Washington, is being advocated in favor of what hundreds of millions of people who make up the marketplace determine is the most practical, viable form of energy.¶ For example, a study on alternative automotive energy solutions done by a Colorado-based energy consulting firm suggests that a singular focus on producing cellulosic ethanol in a commercially viable form obscures the huge operational demands that will ensue from trying to displace our transportation energy with a low-power density fuel.¶ Consider displacing 10% of current transportation energy with the yet-to-exist commercially viable cellulosic ethanol, and the following obstacles.

1) 15% of our cropland currently under cultivation re-purposed for biomass production. Roughly the size of Oklahoma. According to Bryce, that pinches America’s ability to grow food. Less American-grown food means higher prices, adversely affecting the poor the most.

2) The infrastructure required to meet the demands of biomass production on this large of scale is currently non-existent, and would require a billion-dollar-effort from the U.S. Farming Sector to make the tractors and processing material viable. With no guarantees it would even be worth it since the long fermentation periods of switchgrass would make preventing contamination impossible.

Also, environmental problems…

3) It would take 146 gallons of water to produce one gallon of cellulosic ethanol. Compared to five gallons of water for one gallon of conventional gasoline.

4) Production of cellulosic ethanol would also result in more than one-and-a-half times the CO2 emissions of conventional gasoline.

Politicians who are undeterred by the poor history of renewable energy subsidies should recognize that products with no economic merit cannot be force-fed into the market or it will be spit back out each and every time. If a product was truly profitable, then free individuals would have independently launched that industry long before it crossed the mind of any lawmaker, as was the case with every other great achievement in history. Government attempts to accelerate the process and the resulting backfires will surely put off the day a great renewable energy breakthrough is achieved.

#### Incentives for advanced biofuels fail – 1.5 billion still hasn’t produced results

Wall Street Journal – 12/14/11, The Cellulosic Ethanol Debacle, http://online.wsj.com/article\_email/SB10001424052970204012004577072470158115782-lMyQjAxMTAxMDEwMzExNDMyWj.html?mod=wsj\_share\_email\_bot

Years before the Obama Administration dumped $70 billion into solar and wind energy and battery operated cars, and long before anyone heard of Solyndra, President Bush launched his own version of a green energy revolution. The future he saw was biofuels. In addition to showering billions of dollars on corn ethanol, Mr. Bush assured the nation that by 2012 cars and trucks could be powered by cellulosic fuels from switch grass and other plant life.¶ To launch this wonder-fuel industry, the feds under Mr. Bush and President Obama have pumped at least $1.5 billion of grants and loan subsidies to fledgling producers. Mr. Bush signed an energy bill in 2007 that established a tax credit of $1.01 per gallon produced.¶ Most important, the Nancy Pelosi Congress passed and Mr. Bush signed a law imposing mandates on oil companies to blend cellulosic fuel into conventional gasoline. This guaranteed producers a market. In 2010 the mandate was 100 million barrels, rising to 250 million in 2011 and 500 million in 2012. By the end of this decade the requirements leap to 10.5 billion gallons a year.¶ When these mandates were established, no companies produced commercially viable cellulosic fuel. But the dream was: If you mandate and subsidize it, someone will build it.¶ Guess what? Nobody has. Despite the taxpayer enticements, this year cellulosic fuel production won't be 250 million or even 25 million gallons. Last year the Environmental Protection Agency, which has the authority to revise the mandates, quietly reduced the 2011 requirement by 243.4 million gallons to a mere 6.6 million. Some critics suggest that even much of that 6.6 million isn't true cellulosic fuel.¶ The EPA has already announced that the 2012 mandate of 500 million gallons is unattainable, so it is again expected to lower the mandate to fewer than 12 million gallons for next year.¶ One reason the mandates can't be met is the half-dozen or so companies that received the first round of subsidies to produce cellulosic fuel never got off the ground. Some 70 million gallons, or 70% of the cellulosic supply to meet the 2010 mandate, was supposed to come from Alabama-based Cello Energy. Incredibly, those projections were made before Cello had built its plant to produce the fuel and before the technology was proven to work.¶ In 2009 a jury in a civil fraud case ruled that Cello had lied about how much cellulosic fuel it could produce. Some of the fuel that Cello showed to investors was derived from petroleum, not plants. The firm produced little biofuel and in October 2010 it declared bankruptcy.¶ It gets worse. Because there was no cellulosic fuel available, oil companies have had to purchase "waiver credits"—for failing to comply with a mandate to buy a product that doesn't exist. In 2010 and this year, the EPA has forced oil companies to pay about $10 million for these credits. Since these costs are eventually passed on to consumers, the biofuels mandate is an invisible tax paid at the gas pump.¶ And for what? An October 2011 report on biofuels by the National Academy of Sciences concluded that the mandates "may be an ineffective way to reduce global greenhouse gas emissions." Because production is so low, advanced cellulosic fuels also do very little to reduce U.S. dependence on foreign oil. The report notes that "currently, no commercially viable biorefineries exist for converting cellulosic biomass to fuel."¶ Why? Because of what the National Academy report calls "the high cost of producing cellulosic biofuels compared with petroleum-based fuels, and uncertainties in future biofuel markets." The report does say that technological breakthroughs could make cellulosic fuels cost-competitive in the future, but that same leap of faith has driven subsidies to alternative energy for 40 years.¶ Still, the subsidies roll on. In August 2011 the Obama Administration funded a $510 million program in partnership with the Navy to produce advanced biofuels for the military. In September the feds loaned $134 million to Abengoa Bioenergy to build a cellulosic plant in Kansas. The optimistic forecast is that this plant will produce about 23 million barrels a year—a fraction of what Washington promised in 2006. In September the Department of Energy provided POET, which advertises itself as the "world's largest ethanol producer," a $105 million loan guarantee for cellulosic.¶ ¶ To recap: Congress subsidized a product that didn't exist, mandated its purchase though it still didn't exist, is punishing oil companies for not buying the product that doesn't exist, and is now doubling down on the subsidies in the hope that someday it might exist. We'd call this the march of folly, but that's unfair to fools.

### Solvency – Dependence

#### Advanced Biofuels too costly and too slow to be competitive

Reuters, International News Agency, 5 October 2011, “U.S. unlikely to hit advanced biofuel goal, study says”, CNET, http://tinyurl.com/7astndj

The United States will likely fail to reach its long-term mandate for making advanced ethanol from trees, grasses, and crop waste unless producers innovate significantly, a scientific advisory group said yesterday.¶ The National Research Council's comments are the latest sign that backers of alternative fuels must wait longer for "next-generation" ethanol. Touted as the motor fuel of the future, it has struggled with high production costs and other setbacks.¶ "Absent major technological innovation or policy changes, the...mandated consumption of 16 billion gallons of ethanol-equivalent cellulosic biofuels is unlikely to be met in 2022," a study by the council said, referring to long-term targets in U.S. law for the biofuel.¶ The study, which drew challenges from the U.S. agriculture secretary and industry groups, also said cellulosic fuel without subsidies would be feasible only with oil above $190 a barrel, far higher than the current level near $80.¶ The council, part of the U.S. National Academy of Sciences which offers scientific advice under a congressional charter, said the U.S. mandate for renewable fuels may be an ineffective policy for reducing greenhouse gas emissions.¶ The report itself may not hurt near-term investment in cellulosic production, but the weak economy will, said Pavel Molchanov, an analyst at financial services company Raymond James and Associates.¶ "There's no disputing that in this kind of economy with credit markets tight, it's definitely not easy for advanced biofuel developers to raise large amounts of capital," he said.¶ Fuel of the future?¶ In June, the Environmental Protection Agency slashed for the second year running its proposed near-term mandate for cellulosic production set by Congress in 2007 under then-President George W. Bush.¶ The federal government and producers say the fuel is a way to reduce imports of foreign oil and cut emissions of gases blamed for warming the planet. Next-generation ethanol has also been seen as a way to cap the growth of using corn to make fuel, which has been blamed for pushing up food prices.¶ Companies aiming to make cellulosic ethanol or provide enzymes that break down its feedstocks include DuPont's Genecor, Abengoa Bioenergy, Qteros, and Novozymes A/S. Despite years of work, there are not yet any commercial-scale plants to make cellulosic ethanol.

#### Advanced biofuels uncompetitive

The National Academies, 4 October 2011, “Certain Biofuel Mandates Unlikely to Be Met by 2022¶ Unless New Technologies, Policies Developed”, The National Academies, http://tinyurl.com/7hz8xye

Key barriers to achieving the renewable fuel mandate are the high cost of producing cellulosic biofuels compared with petroleum-based fuels and uncertainties in future biofuel markets, the report finds. Biofuel production is contingent on subsidies, the nature of the mandate, and similar policies. Although the mandate guarantees a market for the cellulosic biofuels produced, even at costs considerably higher than fossil fuels, uncertainties in enforcement and implementation of the mandated levels affect investors' confidence and discourage investment. To reduce costs of biofuels, the committee suggested carrying out research and development to improve feedstock yield and increasing the conversion yield from biomass to fuels.

#### Advanced biofuels not competitive-too slow, high costs, no investor confidence

Reuters, International news agency, 25 July 2011, “Cellulosic-ethanol industry struggles to take off”, CNET, http://tinyurl.com/bueqxyf

The great promise of a car fuel made from cheap, clean-burning prairie grass or wood chips--and not from expensive corn that feeds the world--is more mirage than reality.¶ Despite years of research, testing, and some hype, the next-generation ethanol industry is far from the commercial success envisioned by President George W. Bush in 2006, when he pledged so-called cellulosic biofuels would be "practical and competitive" by 2012.¶ Instead the only real alternative to traditional gasoline is ethanol made from corn, a fuel environmentalists say is not green at all because of the energy-intensive nature of modern farming.¶ Critics say it is a failure of government policy, not science, that the U.S. is still so dependent on corn for its biofuels. Washington has backtracked on cellulosic-ethanol production targets and failed to provide assurances to investors that the sector would be subsidized over the long term.¶ While there are dozens of pilot and demonstration cellulosic-ethanol projects around the country, the groundwork for the first commercial plants is only now getting under way.¶ Battered by recession, funding remains scarce for $100-million-plus plants needed for commercial-scale production so cellulosic can compete against cheaper ethanol-based corn.¶ "The earliest you're going to see efficient cellulosic ethanol is five years," said Richard Brock, president of Brock Associates, an advisory firm in Milwaukee.¶ For the industry to take off, investors need to be reassured that Congress will extend a cellulosic-production tax credit for several years and cellulosic-output targets will be big enough to encourage blenders to lock in future capacity.¶ "It would certainly increase volumes at a faster rate than what we've seen in the last couple of years," said Mac Statton, biofuels analyst with the Energy Department's forecasting arm.¶ Gasoline in the United States is blended with up to 15 percent ethanol, which helps reduce oil imports.¶ In the short term, however, the cellulosic industry's slow growth will make little difference to either America's addiction to foreign crude oil or the strains on corn supplies that critics claim have pushed up food prices.¶ Cellulosic-biofuels production was supposed to reach 500 million gallons next year under federal mandates that rise each year until it eventually passes corn-based ethanol output.¶ But no cellulosic production is expected this year and it may grow to only a few million gallons next year.¶ Because the cellulosic industry is not able to meet the production goals mandated by Congress, the Environmental Protection Agency has the authority to lower them.¶ That's what the agency did this month for the third straight year when it proposed lowering the original half-billion-gallon target for 2012 to between 3.6 million and 15.7 million gallons. EPA issues the final target in November.¶ The Energy Department doesn't expect cellulosic output to reach its first 1 billion gallons until 2018. Congress, under its mandates, wants 7 billion gallons that year.¶ The industry has made great progress in bringing down the production costs of cellulosic ethanol from $5 to $6 a gallon a decade ago to as low as $2.50. However, the first cellulosic plants are expensive to build and will add to that $2.50 cost, putting cellulosic slightly above corn ethanol's cost.

### Solvency – Warming

#### Advanced Biofuels are bad for the environment

Gerard Wynn, Senior Environmental Markets Correspondent and Timothy Gardner, Energy and Environment Correspondent, 22 October 2009, “Advanced biofuels will stoke global warming –study”, Reuters, http://www.reuters.com/article/2009/10/22/idUSN2225048

LONDON/WASHINGTON, Oct 22 (Reuters) - A new generation of biofuels, meant to be a low-carbon alternative, will on average emit more carbon dioxide than burning gasoline over the next few decades, a study published in Science found on Thursday.¶ Governments and companies are pouring billions of research dollars into advanced fuels made from wood and grass, meant to cut carbon emissions compared with gasoline, and not compete with food as corn-based biofuels do now.¶ But such advanced, "cellulosic" biofuels will actually lead to higher carbon emissions than gasoline per unit of energy, averaged over the 2000-2030 time period, the study found.¶ That is because the land required to plant fast-growing poplar trees and tropical grasses would displace food crops, and so drive deforestation to create more farmland, a powerful source of carbon emissions.¶ Biofuel crops also require nitrogen fertilizers, a source of two greenhouse gases: carbon dioxide (CO2) and the more powerful nitrous oxide.¶ "In the near-term I think, irrespective of how you go about the cellulosic biofuels program, you're going to have greenhouse gas emissions exacerbating the climate change problem," said lead author, Jerry Melillo, from the U.S. Marine Biological Laboratory.¶ U.S. ethanol industry group the Renewable Fuels Association said biofuels are by definition emissions neutral because their tailpipe carbon output is absorbed by growing plants.¶ Without steps to protect forests and cut fertilizer use, gasoline out-performs biofuels from 2000-2050 as well.¶ The paper did not mean cellulosic biofuels had no place.¶ "It is not an obvious and easy win without thinking very carefully about the problem," said Melillo. "We have to think very carefully about both short and long-term consequences."¶ A related study, also published in the journal Science on Thursday, said the United Nations had exaggerated carbon savings from biofuels and biomass, in a mistake copied by the European Union in its cap and trade law, by ignoring deforestation and other land use changes.¶ The mistake was carried into U.S. climate legislation as well, and would worsen as governments put a price on carbon, driving more biofuel use, it said.

#### Biofuels have the same effect on the environment as fossil fuels

David Bradley, Technical editor for the Royal Society of Chemistry but the article focuses on the studies of Mark Jakobson (a qualified environmental expert and professor at Stanford), 2 September 2009, “Biofuels vs. Fossil Fuels”, ScienceBase, http://tinyurl.com/kt8d2j

Biofuels are not much better than fossil fuels in terms of the impact on atmospheric pollution levels and effects on climate change, according to Mark Jacobson professor of civil and environmental engineering at Stanford University. This is especially true when making claims about the sustainability of biofuels in comparison with hydrogen fuel cells and battery-driven electric vehicles charged up using solar, wind, tidal or other truly renewable energy sources.¶ To quote from his web page, the main goal of Jacobson’s research is to…¶ …understand physical, chemical, and dynamical processes in the atmosphere better in order to address atmospheric problems, such as climate change and urban air pollution, with improved scientific insight and more accurate predictive tools. He also evaluates the atmospheric effects of proposed solutions to climate change and air pollution, examines resource availability of renewable energies, and studies optimal methods of combining renewables.¶ In order to accomplish these important goals Jacobson has developed and applied various models to simulate gas, aerosol, cloud, radiative, and land/ocean-surface processes that could give scientists and engineers a much more overarching perspective on the climate than other simpler models.¶ Jacobson points out that the use of biofuels, particularly ethanol, has expanded in the last few years, although in South America biofuels have been popular and successful for decades. This more recent and rapid expansion of biofuel use in transport across North America and elsewhere is based on the notion that by replacing fossil fuels with biofuels we may somehow ameliorate global warming and air pollution. After all, he growing plants absorb carbon dioxide from the atmosphere, they are then converted into biofuels, which are burned in modified vehicle internal combustion engines, which releases the carbon dioxide into the atmosphere again, where it is used by the next generation of biofuel crop plants to grow and so on.

#### Biofuels contribute to global warming

Ashley Phillips, Senior Producer at ABC News, 7 Feb 2008, “Biofuel: Bad for the Environment?” ABC News, http://tinyurl.com/7z3oqjx

"Any biofuel that causes the clearing of natural ecosystems will increase global warming," he continued.¶ In the Princeton study, which was led by Timothy Searchinger, a German Marshall Fund fellow and a researcher at Princeton University, numbers told a striking story.¶ Past data that has outlined the benefits of biofuels didn't include the issues surrounding the impact of land use and the carbon released into the air as a result, both studies said.¶ Using models that calculated carbon emissions in various countries, the Princeton researchers found that the production of corn-based ethanol nearly doubles greenhouse emissions over 30 years and increases greenhouse gasses for 167 years. Similarly, biofuels made from switchgrass, if grown on land originally intended for corn, increase carbon emissions by 50 percent.¶ "By excluding emissions from land-use change, most previous accountings were one-sided," the researchers wrote. "Because they counted the carbon benefits of using land for biofuels but not the carbon costs – the carbon storage and sequestration sacrificed by diverting land from its existing uses."¶ "Twenty percent of CO2 emissions come from land use change and deforestation," Searchinger said. "We're simply transferring the problem ... from the fossil fuel side to the land-use side" when we produce biofuel.¶ Researchers in the Nature Conservancy study, which has been going on since March 2007, found nearly identical results. In this study, researchers compared the amount of carbon in the air in natural ecosystems and crop land around the world.¶ "There is three times as much carbon in the plants and soil as there in the air," Fargione said. "This is a globally significant concern that is dramatically contributing to global warming."

### Links to Agenda Politics

#### Causes fights in Congress – won’t even do it for the military

DARIN VON RUDEN – The Chippewa Herald – 7/9/12, Von Ruden: Congress short-sighted in military’s access to advanced biofuels, http://chippewa.com/news/opinion/columns/von-ruden-congress-short-sighted-in-military-s-access-to/article\_793ec182-c9fc-11e1-a290-0019bb2963f4.html

Unfortunately, the U.S. Senate and House of Representatives have recently made moves to prevent the Department of Defense from purchasing advanced biofuels, in a misguided attempt to save the few extra cents per gallon that biofuels cost over petroleum-based fuels. This strategy is penny-wise but pound-foolish.