## 1NC – K

#### Nuclear industry fuels the power of the state and militarism enables social repression and control through the establishment of hierarchal social relationships and technology

Plumwood, 1984

[Val, Presenting to the social control conference @ Sydney, “The state and the expansion of nuclear technology.” Online, http://blogs.exeter.ac.uk/radicalideas/files/2010/11/Plumwood-1984-The-state-and-the-explanation-of-nuclear-technology-1.PDF] /Wyo-MB

The nuclear industry then has been largely state-developed, owned and promoted. We can't explain the phenomenon of its development, in the face of apparently major problems, risks and disadvantages, without seeing the state as having a crucial and largely independent role, independent that is of its more conventionally attributed role of protecting long-term capitalist interests.¶ Nuclear technology is not obviously in the interests of capital, although it does have numerous features which make it attractive for profit-making e.g. it is capital- intensive, large-scale, centralised and suitable for monopolisation. So of course are many other possible energy sources. But capital has required constant coaxing and reassurance to continue to participate, and the industry would apparently have become defunct some time ago if those mythical ft market forces had been allowed to prevail. Thus there have been no new orders for reactors in the U.S. since 1977, and the industry is in a financial mess even with the highly favourable conditions provided by the state. [2]¶ The industry does however seem to be highly suited to increasing the power of the state itself, both through its military connection, and through its contribution to overall technological, social and bureaucratic centralisation.¶ This seems to present a fairly clear case then where the state has operated with some relative autonomy in promoting a technology which appears to be in its own interests rather than primarily that of capital, and to be the chief promoter and beneficiary of the industry which capitalism has to be coaxed to support.¶ So far the data I have presented is consistent both with a sophisticated Marxist theory which allows some relative autonomy [3] to institutions such as the state, and with more traditional anarchist theories which see the state as the central organ of social repression and the production of hierarchical social relationships and associated technologies (this last a modern addition). There are however other factors which have to be taken into account to understand the kind of social control being exercised here, and which show that the state reduction model - the reduction of all significant factors to the state (or to some combination of state and capital) is too simple and has other defects as well. These factors show the need to press on beyond purely state or other reductive models and to develop a more pluralistic model of the operation of power which sees power as " a productive network which runs through the entire social body much more than as a negative instance whose function is repression". [4]

#### This technological control through nuclear power makes nuclear apocalypse inevitable through technological development—the tools that the state uses to monopolize centralized control and power lead to destruction of life

Hubbard, 1997

[Bryan, MA Thesis at Arizona state University, Nuclear criticism after the cold war: a rhetorical analysis of two contemporary atomic campaigns, 8-1-1997, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA327948] /Wyo-MB

Brummett (1989) notes the entelechial drive toward perfection at work in the rhetoric of nuclear weapons strategy. Hirschbein (1989) also saw the eventual progress of nuclear science enabling an "ersatz immortality -- immortalization through making a lasting monumental impact on history" (p. 167). This impulse to power is not new. Humanity has always feared death, seized the greatest power available to avoid death and then created rationalizations to romanticize death. Like other continuities flowing into the nuclear age, the drive toward perfection accelerates with nuclear knowledge and its accompanying industrial capacity. The drive toward perfection informs the other two continuities present in the nuclear age -- the desire to cut and control and a shared fascination with the apocalypse.¶ Since humanity became a problem-solving organism, it has strived to cut and control its environment in hopes of improving its strategic situation. Harris (1991) claimed the drive to control the environment involves an attempt to master energy. He¶ traced the search for energy through ancient times noting that the control of energy enabled the control not only of the environment but of its inhabiting organisms. As people became more organized and specialized, the control of energy became centralized. The modem experience of nuclear energy enables an acceleration of this process placing virtually unlimited power (energy) in the hands of an unprecedented few (Mumford, 1980). The tendency Harris observed is one continuity flowing through our current nuclear experiences. J. Burke and Omstein (1995) call this continuity the drive to cut and control.¶ This desire to cut and control nature makes human beings human and links our creativity and destructive capacities, our tool-using nature, and our problem-solving inclinations (J. Burke & Omstein, 1995). In The Chalice and The Blade: Our History, Our Future, Eisler (1988) sees the modem nuclear predicament as the logical perfection of ancient traditions which claim authority and legitimacy through the "power of the lethal Blade" (p. 184). She sees the current path of society set along a grim trajectory and says, "[a] dominator future is therefore, sooner or later, almost certainly also a future of global nuclear war -- and the end of all of humanity's problems and aspirations" (Eisler, p. 184). This trajectory for her originates thousands of years prior to the discovery of the atom. The cult of the blade originated in the "Initial Kurganization" of Old Europe from 4000-3500 B.C.E. according to Eisler (p. 250). The impulse to cut and control (J. Burke & Omstein, 1995) guides the development of humanity from its earliest tool-making days. The potential destructive power parallels the productive capacity of humanity's tools. This trajectory accelerates into the twentieth century creating a situation where,¶ according to Eisler, would-be totalitarians and their "faith in the power of the lethal Blade as the instrument of deliverance" (p. 184) become one source of today's nuclearism.

#### The alternative is to refuse nuclear power production in favor of the 1NC criticism.

#### And the alt solves—need analysis of power relationships embedded in nuclear knowledge and structures—key to resist centralized development of knowledge and power

Plumwood, 1984

[Val, Presenting to the social control conference @ Sydney, “The state and the expansion of nuclear technology.” Online, http://blogs.exeter.ac.uk/radicalideas/files/2010/11/Plumwood-1984-The-state-and-the-explanation-of-nuclear-technology-1.PDF] /Wyo-MB

What is clear from recent events in Australia is the importance of moving beyond a narrow, 'political' approach to the nuclear issue to one which is based on an analysis of the power structures embedded in it. This is important for the survival of the anti-nuclear movement as an important social force in Australia. The anti-nuclear movement in Australia has had great strength and by some criteria, great success. But the recent treatment of the issue at the hands of politicians illustrates vividly the ultimate bankruptcy of elite-oriented strategies for change based on appeals to decision-makers and working within a state and electoral framework. An inability to focus on alternative strategies will probably cause the death or serious weakening of the movement in the coming period of political confrontation, yet its demise as a widespread activist issue would be a serious loss. An alternative approach, stressing long-term strategies and institutional analysis, has great promise because the multiplicity of factors, critiques and sites of resistance to nuclear power gives the issue great potential. And such a social movement also has the ability to bring about or reinforce social awareness of the undemocratic character of social life and of the need for other sorts of fundamental changes in social relations, provided of course that the means adopted, for example, for working in groups, are themselves appropriate to these multiple goals and sufficiently challenging to day-to-day hierarchical social relationships and power structures e.g. sexist and racist ones. [9]¶ In this strategy then the critique of the role of the state is critical, but it must be combined with a critique of the wider power structure involved. What implications does this analysis have for anarchism itself? Does anarchism emerge as just another form of activism and critique, and anarchists as anti-state activists along with feminists as anti-patriarchy activists for example? This may seem quite threatening to many anarchists, since it threatens the claim to a more central or 'purer' position.¶ Such a view however ignores the relation between the different critiques - it assumes that they just coexist peacefully side-by-side as separate pieces of an overall puzzle, needing only to be assembled in their separate purity to providing a critique, not only of general power structures, but of the means and strategies adopted by other social movements. This concern with means and the stress on appropriate ways of pursuing other political goals, has been traditionally important in anarchist thought.¶ If anarchism is conceived, to a large extent at least, as involving another way of doing something else, of pursuing other social and political goals and effecting social changes in appropriate ways, rather than just as a utopian and unrealizable goal, disconnected from strategies and from other movements for social change, then there is an important relationship between anarchism and other social movements for change. Links with other activist groups become crucial, as does attention to the means by which particular resistances to particular forms of power are conducted. Stress on purity of anarchist doctrine, on 'keeping the hands clean' by not mixing it with less idealistic or utopian social movements must then be seen as sterile and self-defeating, and as removing this fertile area for achieving change. The real challenge to contemporary anarchism, conceived of as a general resistance to hierarchical and centralising structures, would then be in the struggle within movements for social change for appropriate non-hierarchical processes and to achieve alternative social relations, as well as for the adoption of non-centralising means for achieving particular social goals.¶ Anarchism in this picture has a crucial role to play for other social movements in maintaining the means/ends critique, and in promoting non-centralising and non state-strengthening strategies for other activist movements. Other social movements such as the anti-nuclear movement then provide a crucial 'field' for anarchism, which, to the extent that it is a general critique of power and of processes for achieving change, may still have some claim to a central (if not centralising or reductive) role.

## 1NC-CP

#### TEXT: The United States Department of Defense should offer procurement contracts funded through up-front appropriations for small modular nuclear reactors to be owned by the Department of Defense, and located on military bases in the United States that lack power purchase agreements for electricity generated by utility-owned small modular nuclear reactors.

#### The United States Federal Government should remove limitations on per-project allocations of operation and maintenance funding for bases with DOD-owned small modular reactors.

#### Solves the case---DOD procurement contracts accelerate SMR commercialization---spills over to widespread adoption

CSPO 10 – Consortium for Science, Policy and Outcomes, Arizona State University, June 2010, “FOUR POLICY PRINCIPLES FOR ENERGY INNOVATION & CLIMATE CHANGE: A SYNTHESIS,” http://www.catf.us/resources/publications/files/Synthesis.pdf

Government purchase of new technologies is a powerful way to accelerate innovation through increased demand (Principle 3a). We explore how this principle can be applied by considering how the DoD could purchase new nuclear reactor designs to meet electric power needs for DoD bases and operations.

Small modular nuclear power reactors (SMRs), which generate less than 300 MW of power (as compared to more typical reactors built in the 1000 MW range) are often listed as a potentially transformative energy technology. While typical traditional large-scale nuclear power plants can cost five to eight billion dollars, smaller nuclear reactors could be developed at smaller scale, thus not presenting a “bet the company” financial risk. SMRs could potentially be mass manufactured as standardized modules and then delivered to sites, which could significantly reduce costs per unit of installed capacity as compared to today’s large scale conventional reactor designs.
It is likely that some advanced reactors designs – including molten salt reactors and reactors utilizing thorium fuels – could be developed as SMRs. Each of these designs offers some combination of inherently safe operation, very little nuclear proliferation risk, relatively small nuclear waste management needs, very abundant domestic fuel resources, and high power densities – all of which are desirable attributes for significant expansion of nuclear energy.

Currently, several corporations have been developing small nuclear reactors. Table 2 lists several of these companies and their reactor power capacities, as well as an indication of the other types of reactor innovations that are being incorporated into the designs. Some of these technologies depend on the well-established light water reactor, while others use higher energy neutrons, coolants capable of higher temperature operation, and other innovative approaches. Some of these companies, such as NuScale, intend to be able to connect as many as 24 different nuclear modules together to form one larger nuclear power plant. In addition to the different power ranges described in Table 2, these reactors vary greatly in size, some being only 3 to 6 feet on each side, while the NuScale reactor is 60 feet long and 14 feet in diameter. Further, many of these reactors produce significant amounts of hightemperature heat, which can be harnessed for process heating, gas turbine generators, and other operations.

One major obstacle is to rapid commercialization and development are prolonged multi-year licensing times with the Nuclear Regulatory Commission. Currently, the NRC will not consider a reactor for licensing unless there is a power utility already prepared to purchase the device. Recent Senate legislation introduced by Senator Jeff Bingaman (D-NM) has pushed for DOE support in bringing down reactor costs and in helping to license and certify two reactor designs with the NRC. Some additional opportunities to facilitate the NRC licensing process for innovative small modular reactors would be to fund NRC to conduct participatory research to get ahead of potential license applications (this might require ~$100million/year) and potentially revise the current requirement that licensing fees cover nearly all NRC licensing review costs.

One option for accelerating SMR development and commercialization, would be for DOD to establish SMR procurement specifications (to include cost) and agree to purchase a sufficient amount of SMR’s to underwrite private sector SMR development. Of note here may be that DARPA recently (3/30/10) issued a “Request for Information (RFI) on Deployable Reactor Technologies for Generating Power and Logistic Fuels” 2 that specifies may features that would be highly desirable in an advanced commercial SMR. While other specifications including coproduction of mobility fuel are different than those of a commercial SMR power reactor, it is likely that a core reactor design meeting the DARPA inquiry specifications would be adaptable to commercial applications. While nuclear reactors purchased and used by DOD are potentially exempt from many NRC licensing requirements 3 , any reactor design resulting from a DOD procurement contract would need to proceed through NRC licensing before it could be commercially offered. Successful use of procured SMR’s for DOD purposes could provide the knowledge and operational experience needed to aid NRC licensing and it might be possible for the SMR contractor to begin licensing at some point in the SMR development process4.

Potential purchase of small modular nuclear reactors would be a powerful but proven way in which government procurement of new energy technologies could encourage innovation. Public procurement of other renewable energy technologies could be similarly important.

#### Net-benefit mechanics:

#### DOD reducing reliance on REC purchases now

FT 12 – Federal Times, 7/22/12, “Agencies buying energy credits to meet mandates,” http://www.federaltimes.com/article/20120722/FACILITIES02/307220006/Agencies-buying-energy-credits-meet-mandates

But some agencies are trying to buck the trend and reduce their reliance on RECs.

The Interior Department said it plans to build more renewable energy projects and purchase fewer RECs.

For example, the National Park Service plans to install solar panels on top of its visitor station at Assateague Island, in Berlin, Md.

“We anticipate a reduced reliance on RECs to meet mandated renewable energy goals,” spokesman Drew Malcomb said.

The Defense Department intends to buy fewer RECs and instead invest money in on-site projects.

“It takes money to buy RECs, and you are not creating any new capacity. You are just spending money to meet a goal,” Dorothy Robyn, deputy undersecretary of Defense for installations and environment, said in an interview.

Robyn is confident DoD will get there without paying for credits. “We are in a position to generate renewable energy on our own installations,” she said.

Pentagon spokeswoman Melinda Morgan said the department does not track how much it spends on credits each year.

In 2011, DoD decided to scale back its purchase of RECs, despite having a goal to obtain 5 percent of its facilities’ energy needs from renewable energy sources. It achieved only 3.1 percent after reducing its purchase of credits from 440,000 to 248,000 megawatt hours, Robyn said.

#### Energy obtained through alternative financing doesn’t count towards mandates that force DOD to increase reliance on renewables---causes renewable energy credit purchases to make up the difference

GAO 9 – Government Accountability Office, December 2009, “Defense Infrastructure: DOD Needs to Take Actions to Address Challenges in Meeting Federal Renewable Energy Goals,” <http://www.gao.gov/new.items/d10104.pdf>

As we explained earlier in this report, DOD expects to rely increasingly on alternative financing approaches to meet the renewable energy goals. For DOD to effectively implement these approaches, the department will require energy management staff who have the relevant expertise for implementing the approaches. However, because we found that the services and their installations’ staff often lack expertise in developing alternative financing approaches, DOD may by limited in its ability both to use these approaches to develop renewable energy projects and to do so in a manner that adequately protects the government’s financial resources committed to these approaches.

According to DOD officials, in most cases, private developers are generally interested in partnering with DOD in order to sell the projects’ unbundled energy or associated renewable energy certificates to a third party. These officials explained that the generally accepted business model for these types of approaches includes a renewable energy resource on or near DOD land that is harnessed by a project financed, built, and operated by thirdparty developer that then sells the unbundled energy to DOD or other customers and typically retains ownership of the project’s renewable energy certificates.48

However, under such approaches, DOD often would neither consume the renewable energy nor retain the renewable energy certificates. When DOD does not consume the renewable energy, a developer would provide some other form of compensation for the use of the renewable resource on DOD land. For example, in the largest renewable energy project on DOD land, DOD does not consume the energy but instead receives financial compensation based on the sale of the project’s energy. If DOD neither consumes the renewable energy nor retains the renewable energy certificates, a serious challenge may be posed to DOD’s ability to meet the renewable energy goals. That occurs because, according to DOE’s guidance on implementation of the 2005 Act and the 2007 Executive Order—guidance designed to preserve the integrity of the renewable energy certificate market—for an agency to count a project’s renewable energy toward these goals, the project must meet two requirements. First, the renewable energy must be produced and used on-site at a federal agency or the renewable energy must be produced by a project owned by a federal agency but installed on private property. Second, the agency must retain or replace the renewable energy certificates associated with the energy produced. In addition, as we discussed earlier, unlike DOE, DOD has not issued guidance that provides a clear explanation of its methodology for calculating progress toward the fiscal year 2025 goal under the 2007 Defense Authorization Act, including DOD’s definition of “consumption” and the treatment of renewable energy certificates in that context.

#### DOD ownership of the project solves the case and avoids REC purchases

Loni Silva 12, J.D., The George Washington University Law School, Summer 2012, “THE PROBLEMS WITH USING RENEWABLE ENERGY CERTIFICATES TO MEET FEDERAL RENEWABLE ENERGY REQUIREMENTS,” Public Contract Law Journal, Vol. 41, No. 4

The best way to address the problems with FEMP’s REC interpretation is to render the use of RECs to meet EPAct 2005 and EO 13423 obsolete. RECs should only be used as a short-term, stop-gap solution to meet the renewable energy requirements. 139 The long-term goal should be for agencies to consume bundled renewable energy produced on or near agency installations.

Consuming renewable energy would eliminate the current problems with FEMP’s REC interpretation. First, consuming renewable energy would eliminate the problem with best value because, unlike RECs, renewable energy responds to and fulﬁlls agencies’ actual energy needs. 140 For Joe, the energy manager, the ability to use renewable energy means that he would not need to spend part of his energy budget on a commodity that does not address his actual energy needs. 141

Second, consuming renewable energy would eliminate the problems with transparency and accountability. 142 Because the policies plainly require agencies to consume renewable energy, complying by consuming renewable energy, rather than purchasing RECs, would be transparent. 143 Moreover, because this method of compliance is transparent and allows a clear view of what the Government is doing in response to the requirements of the policies, it allows the Government to be held accountable. 144

Third, consuming renewable energy produced at on-site facilities would further the policies’ goal of developing on-site renewable energy facilities. 145 Having facilities on or near agency property would provide power to the installation in case the grid is attacked or fails. 146 It would also promote the energy independence, security, and sustainability of both the Federal Government and the nation as a whole by developing new renewable energy facilities. 147

Developing new renewable energy facilities on or near agency installations would allow agencies to consume renewable energy, rather than RECs. 148 Of course, not all locations are able to support a renewable energy facility. 149 However, because the policy requirements are agency-wide rather than installation speciﬁc, agencies can build facilities at installations with available land, increasing renewably energy production to compensate for installations where the lack of available land or other factors makes facility development impossible. 150

## 1NC D/A

#### REC reliance sends a signal of greenwashing

Auden Schendler 7, Vice President of sustainability at Aspen Skiing Company, October 2007, “When Being Green Backfires,” Harvard Business Review, Vol. 85, Issue 10

The danger in buying RECs is that the mainstream press has begun to challenge claims about their environmental value. Articles have appeared in publications including BusinessWeek and the Financial Times pointing out that most RECs don't actually offset emissions, and the skepticism is spreading across the Internet. Indeed, most RECs don't result in the creation of clean electricity, which would have been generated anyway, whether or not an REC was printed. As consumers become increasingly savvy about evaluating companies' environmental claims, businesses that tout REC purchases may expose themselves to charges of greenwashing.¶ A report released in 2006 by an environmental organization called Clean Air--Cool Planet was among the first to rigorously examine the environmental impact of RECs. The report found that while most RECs don't lead to carbon-emissions reductions, a minority do, by directly helping to finance, say, the construction of a new wind farm. Companies that buy RECs and want to avoid charges of greenwashing should seek out these higher-quality and more costly certificates, whose purchase directly and demonstrably helps reduce carbon emissions.¶ RECs, supporters argue, create a market mechanism that spurs the development of new wind, solar, and other green-electricity plants. As demand for RECs grows, their prices will rise, encouraging developers to build more renewable power facilities that can generate income through increasingly profitable sales of the certificates. Unfortunately, because there has been such a surplus of cheap RECs--and no easy way to distinguish between high- and low-quality offerings--the market mechanism has remained stalled for the most part. If companies, mindful of their reputations, reject inferior RECs and begin demanding quality ones, that could jump-start the production of renewable electricity and actually reduce carbon emissions. Corporate scrutiny and activism might even foster the development of a badly needed tool that could clean up the entire REC industry in one masterstroke: a third-party gold standard for REC quality.

#### Perception of greenwashing destroys the credibility of DOD leadership on clean energy---credible strategy’s key to global spillover of sustainable tech

Laura Horton 11, J.D., Golden Gate University School of Law, Spring 2011, “COMMENT: FUTURE FORCE SUSTAINABILITY: DEPARTMENT OF DEFENSE AND ENERGY EFFICIENCY IN A CHANGING CLIMATE,” Golden Gate University Environmental Law Journal, 4 Golden Gate U. Envtl. L.J. 303, p. lexis

As the world’s largest consumer of energy, the military has a long way to go if it intends to achieve energy efficiency goals set by the government and the DOD itself. However, not everyone is convinced that the military will follow through, considering its past environmental record. 153 This skepticism is valid in light of the growing impact climate change has had on the planet and the extent to which the military has contributed to GHG emissions. 154 In addition, mistrust of the DOD’s environmental record is warranted, since environmental damage from military activities still exists all over the United States 155

The suspect attitude toward military greening is akin to an attitude held by many concerning corporate “environmentalism” in the form of “greenwashing.” 156 The military is claiming to go “green,” and is indeed making strides in energy efficiency, while simultaneously increasing oil use by 1.5% annually through 2017. 157 Also, efficiency programs are limited to base installations and are not applied to tactical fleets, where much of the DOD’s fuel consumption occurs. 158 Furthermore, little is said in any of the aforementioned reports about the many exemptions the DOD sought from numerous environmental laws over the past eight years. 159 The military is accustomed to approaching environmental protection on its own terms and is giving mixed signals about how important energy efficiency will be in the near future. Consequently, there is a question as to how self-imposed standards such as voluntary compliance with federal energy efficiency standards, from which the DOD is otherwise exempt, will play out. 160 One example of the uncertainty of these programs can be found in a recent article in ClimateWire. 161 According to the article, the aforementioned spray foam insulation program has now been halted in the absence of advocacy for such programs. 162 The difficulty of relocating the foam tents and high disposal costs have led to the demise of spray foam use, and supporters are calling for a mandate to move forward with the project. 163 It is unclear whether the DOD will resume the program at all. The need for advocacy is especially important for the public to understand, because of the potential for new energy technology to transform the civilian marketplace as military technology finds its way into the public domain. 164

The military has begun to take the lead in energy efficiency, drive the civilian sector toward sustainable energy use, and push for “policy change to help make the necessary cultural shifts in how its people think about energy use and the decisions they make in all settings.” 165 The more seriously the military takes energy efficiency, the faster sustainable technology will reach the public. For that reason, progress on these efforts should be monitored and documented for the public to review. A history of military brush-offs of the importance of environmental protection does not lend itself to a campaign of global stewardship. In order to win the confidence of the public, the military must demonstrate a willingness to follow through with the programs it has set in place to lead alternative-energy development in the United States and the world.

#### U.S. leadership on the broader green tech transition solves extinction

Klarevas 9 –Louis Klarevas, Professor for Center for Global Affairs @ New York University, 12/15, “Securing American Primacy While Tackling Climate Change: Toward a National Strategy of Greengemony,” http://www.huffingtonpost.com/louis-klarevas/securing-american-primacy\_b\_393223.html

As national leaders from around the world are gathering in Copenhagen, Denmark, to attend the United Nations Climate Change Conference, the time is ripe to re-assess America's current energy policies - but within the larger framework of how a new approach on the environment will stave off global warming and shore up American primacy. By not addressing climate change more aggressively and creatively, the United States is squandering an opportunity to secure its **global primacy** for the next few generations to come. To do this, though, the U.S. must rely on innovation to help the world escape the coming environmental meltdown. Developing the key technologies that will save the planet from global warming will allow the U.S. to outmaneuver potential great power rivals seeking to replace it as the international system's hegemon. But the greening of American strategy must occur soon. The U.S., however, seems to be stuck in time, unable to move beyond oil-centric geo-politics in any meaningful way. Often, the gridlock is portrayed as a partisan difference, with Republicans resisting action and Democrats pleading for action. This, though, is an unfair characterization as there are numerous proactive Republicans and quite a few reticent Democrats. The real divide is instead one between realists and liberals. Students of realpolitik, which still heavily guides American foreign policy, largely discount environmental issues as they are not seen as advancing national interests in a way that generates relative power advantages vis-à-vis the other major powers in the system: Russia, China, Japan, India, and the European Union. ¶ Liberals, on the other hand, have recognized that global warming might very well become the greatest challenge ever faced by (hu)mankind. As such, their thinking often eschews narrowly defined national interests for the greater global good. This, though, ruffles elected officials whose sworn obligation is, above all, to protect and promote American national interests. What both sides need to understand is that by becoming a lean, mean, green fighting machine, the U.S. can actually bring together liberals and realists to advance a collective interest which benefits every nation, while at the same time, securing America's global primacy well into the future. To do so, the U.S. must re-invent itself as not just your traditional hegemon, but as history's first ever green hegemon. Hegemons are countries that dominate the international system - bailing out other countries in times of global crisis, establishing and maintaining the most important international institutions, and covering the costs that result from free-riding and cheating global obligations. Since 1945, that role has been the purview of the United States. Immediately after World War II, Europe and Asia laid in ruin, the global economy required resuscitation, the countries of the free world needed security guarantees, and the entire system longed for a multilateral forum where global concerns could be addressed. The U.S., emerging the least scathed by the systemic crisis of fascism's rise, stepped up to the challenge and established the postwar (and current) liberal order. But don't let the world "liberal" fool you. While many nations benefited from America's new-found hegemony, the U.S. was driven largely by "realist" selfish national interests. The liberal order first and foremost benefited the U.S. With the U.S. becoming bogged down in places like Afghanistan and Iraq, running a record national debt, and failing to shore up the dollar, the future of American hegemony now seems to be facing a serious contest: potential rivals - acting like sharks smelling blood in the water - wish to challenge the U.S. on a variety of fronts. This has led numerous commentators to forecast the U.S.'s imminent fall from grace. Not all hope is lost however. With the impending systemic crisis of global warming on the horizon, the U.S. again finds itself in a position to address a transnational problem in a way that will benefit both the international community collectively and the U.S. selfishly. The current problem is two-fold. First, the competition for oil is fueling animosities between the major powers. The geopolitics of oil has already emboldened Russia in its 'near abroad' and China in far-off places like Africa and Latin America. As oil is a limited natural resource, a nasty zero-sum contest could be looming on the horizon for the U.S. and its major power rivals - a contest which threatens American primacy and global stability. Second, converting fossil fuels like oil to run national economies is producing irreversible harm in the form of carbon dioxide emissions. So long as the global economy remains oil-dependent, greenhouse gases will continue to rise. Experts are predicting as much as a 60% increase in carbon dioxide emissions in the next twenty-five years. That likely means more devastating water shortages, droughts, forest fires, floods, and storms. In other words, if global competition for access to energy resources does not undermine international security, global warming will. And in either case, oil will be a culprit for the instability. Oil arguably has been the most precious energy resource of the last half-century. But "black gold" is so 20th century. The key resource for this century will be green gold - clean, environmentally-friendly energy like wind, solar, and hydrogen power. Climate change leaves no alternative. And the sooner we realize this, the better off we will be. What Washington must do in order to avoid the traps of petropolitics is to convert the U.S. into the world's first-ever green hegemon. For starters, the federal government must drastically increase investment in energy and environmental research and development (E&E R&D). This will require a serious sacrifice, committing upwards of $40 billion annually to E&E R&D - a far cry from the few billion dollars currently being spent. By promoting a new national project, the U.S. could develop new technologies that will assure it does not drown in a pool of oil. Some solutions are already well known, such as raising fuel standards for automobiles; improving public transportation networks; and expanding nuclear and wind power sources. Others, however, have not progressed much beyond the drawing board: batteries that can store massive amounts of solar (and possibly even wind) power; efficient and cost-effective photovoltaic cells, crop-fuels, and hydrogen-based fuels; and even fusion. Such innovations will not only provide alternatives to oil, they will also give the U.S. an edge in the global competition for hegemony. If the U.S. is able to produce technologies that allow modern, globalized societies to escape the oil trap, those nations will eventually have no choice but to adopt such technologies. And this will give the U.S. a tremendous economic boom, while simultaneously providing it with means of leverage that can be employed to keep potential foes in check. The bottom-line is that the U.S. needs to become green energy dominant as opposed to black energy independent.

## Desal

### 1NC – AT – Desalination Advantages

#### Nuclear desalination turns case- infiltrates fresh water aquifers, resulting in a net decrease in the amount of available freshwater AND it salinates soil, devastating agricultural production

IAEA, 2010

[International atomic energy agency study, Environmental impact assessment of nuclear desalination, <http://www-pub.iaea.org/MTCD/publications/PDF/te_1642_web.pdf>] /Wyo-MB

Although never applied in a nuclear desalination facility, indirect (subsurface) seawater ¶ intakes remain an option. From an environmental impact perspective, their greatest problem ¶ lies in possible fresh groundwater aquifer deterioration from seawater intrusion, if not well ¶ designed and constructed. Most commonly this happens by disturbing the flow balance that ¶ exists between waters with different salinity. When water is pumped out of a beach well, ¶ higher salinity water moves in the upper layers thus, for instance, enlarging the coastal ¶ brackish water zone where the fresh water is mixed with seawater. (Figure 10) Intake pipes positioned through aquifers present another potential danger due to possible leaks ¶ of seawater, which is why, for instance, this option was ruled out in advance for the ¶ desalination plant in Ashkelon, Israel [49]. Over time, increased salinity of the fresh aquifer ¶ water can lead to soil salinization and subsequently to floral deterioration including ¶ agricultural decline. Changes in the salinity stratification of the aquifer waters may also lead ¶ to lower quality of the desalination feedwater, affecting the performance of the desalination ¶ process. Finally, the initial disturbance due to construction may be higher when indirect ¶ intakes are applied, as seabed sediments are replaced or resuspended [25]. Their entrainment ¶ and impingement potential though, is negligible.

#### Nuclear desalination uniquely destroys marine biodiversity-requires larger water intake for cooling

IAEA, 2010

[International atomic energy agency study, Environmental impact assessment of nuclear desalination, <http://www-pub.iaea.org/MTCD/publications/PDF/te_1642_web.pdf> uwyo//amp]

Owing to the economic and logistic reasons which tend to dictate intake location as close as ¶ possible to the coastline, the predominant concern on affected areas is on coastal water ¶ habitats. These habitats are full of nutrients, brightly illuminated and warm, sited in the areas ¶ where most of the primary production¶ 3¶ is to be found, provided by phytoplankton. Corals, ¶ seagrass, seaweed, and other marine plants also provide food, in addition to oxygen and much ¶ needed habitat for other organisms. Such suitable conditions are the basis for the intricate ¶ marine life ecosystems consisting of myriad different benthic, nektic and planktonic ¶ communities (as spores, eggs, larvae, juvenile or adult individuals) in quantities dependant on ¶ the local eco-balance. ¶ Having in mind that seawater is a habitat rich in biodiversity, intake systems, especially the ¶ direct ones, become a matter of concern regarding their environmental impact. This impact is ¶ harder to identify and quantify compared to the discharge impact [28, 34]. There are two main ¶ pathways of environmental damage to marine organisms: entrainment and impingement. Both ¶ introduce an additional source of mortality in seawater habitats alongside natural mortality ¶ due to age, disease and predation [44]. ¶ Entrainment refers to organisms that have passed through the openings of the seawater intake ¶ screens and were drawn into the water manufacturing process. Due to the extreme pressures to ¶ which organisms will be subjected, collision with parts of the pump, high temperatures, as well as the biocides that are used to prevent biofouling (e.g. chlorine), entrainment is ¶ considered to be deadly for all organisms. ¶ Impingement occurs when marine life forms are trapped against the intake screens by the ¶ suction force and velocity of water. Experiencing starvation, exhaustion and asphyxiation, ¶ they do not necessarily succumb to either latent or immediate death. However, very often ¶ impingement does lethally affect marine organisms. If they do not die by injuries from the ¶ collision with the screen or suffocation while being trapped, there is a possibility that some ¶ life support function of these returned organisms will be damaged. If the organisms suffer ¶ from internal or external injuries that reduce their ability to move through the environment, ¶ and thus become an easier target for predation, their chances for survival can be significantly ¶ lower. More robust species of marine organisms can have higher impingement survival rates, ¶ but some species have a survival rate below 10% [45]. ¶ Impingement usually affects larger organisms. Fish, invertebrates, mammals, birds etc. can ¶ get trapped and killed on the intake screens, which is the real concern with impingement. For ¶ smaller organisms like phytoplankton and zooplankton, fish eggs and larvae, spores of kelp, ¶ seaweed and seagrass, entrainment is of higher concern (Figure 8). Depending on the size of ¶ the screen mesh, one or the other will have higher influence on the marine life. Of course ¶ there are technologies that have been applied with some success or currently are being tested ¶ as promising in reducing the impingement and entrainment effects. ¶ Nevertheless, water withdrawal as a marine impact factor cannot be ignored and intakes of ¶ nuclear desalination plants should be of great concern, especially when direct intakes for ¶ once-through cooling are involved. The main reason for this is that nuclear power plants ¶ require greater specific quantities of cooling water compared with other thermal plants ¶ (Table 3) [46] and hence higher specific entrainment and impingement rates should be ¶ expected.

#### Marine biodiversity key to the supportability of the biosphere- also key to check warming

BBB 2012

[Biodiversity, Bioinfomatics, Biotechnology, 07/23/2012, Marine microorganisms hold the key to life on earth, <http://www.microb3.eu/news/marine-microorganisms-hold-key-life-earth>, uwyo//amp]

New Marine Board position paper reveals the importance of marine microbial diversity for our environment and society and proposes concrete actions to guide future European research Few people realize that all life on earth evolved from microorganisms in the sea. Microorganisms, or microbes, are those organisms too small to be observed by the human eye and they are everywhere, often in huge numbers. Just one litre of coastal seawater contains up to a billion microbes including thousands of different types. Scientists have long recognized the importance of microbes, which form the basis of all food webs and drive the complex biogeochemical cycles which recycle key elements such as carbon and nitrogen. Given that the oceans account for more than 90% of the Earth’s biosphere - that portion of the earth able to support life - it is hardly surprising that marine microorganisms account for a large part of the total biomass of life on Earth. They also produce more than half of the entire global oxygen supply and, in doing so, use up a large proportion of human-generated CO2, a greenhouse gas that is accelerating global warming.

### 1NC – AT – Water Wars

#### No water wars – Economics of War, Tech Solving, Fosters Cooperation

Katz 11
[David Katz, Director of the Akirov Institute for Business and Environment at Tel Aviv University, February 2011, Vol. 11, No. 1, Pages 12-35, "Hydro-Political Hyperbole", http://www.mitpressjournals.org/doi/abs/10.1162/GLEP\_a\_00041?journalCode=glep, \\wyo-bb]

Proponents of water war scenarios often premise their dire conclusions on the fact that water is essential for life and non-substitutable.31 Yet water for basic needs represents a small share of total water use, even in arid countries.32 Economists and others point out that over 80 percent of world freshwater withdrawals are for the agricultural sector, a relatively low-value use and one in which large gains in efficiency could be made by changes in irrigation techniques and choice of crops. Thus, economic critiques of the water war hypothesis stress that the value of water that would be gained from military conflict is unlikely to outweigh the economic costs of military preparation and battle, much less the loss of life.33 Some authors have even questioned the empirical basis for the conclusion that freshwater is increasingly scarce,34 an assumption on which the water war hypothesis relies. Such a “cornucopian” view claims that people adapt to scarcity through improvements in technology, pricing, and efficiency—rendering water less scarce, not more so. Perhaps the strongest case against the likelihood of water wars is the lack of empirical evidence of precedents. Wolf found only one documented case of war explicitly over water, and this took place over 4500 years ago.35 Moreover, he could document only seven cases of acute conflict over water. Yoffe and colleagues also ªnd that armed conflict over water resources has been uncommon. 36 They found that cooperation was much more common than conflict, both globally and in all world regions except the Middle East/North Africa. This pattern may explain why only a limited number of case studies of water conflict are presented in the water wars literature. Analysts have criticized environmental security arguments that are based on case studies because such works tend to have no variation in the dependent variable.37 Many large sample statistical studies have attempted to address such shortcomings, however, in several cases these studies too have come under ªre. For instance, a number of large-sample statistical studies and correlations between water-related variables and conflict, however, few, if any, provide convincing support for causal relationships. Moreover, several studies found that water availability had no impact on the likelihood of either domestic or international conflict,38 including at least one study that attempted to replicate earlier studies that claimed to have found such correlations.39 Moreover, the results of several studies that do ªnd correlations between water and conflict are either not robust or are contrasted by other findings. For instance, Raleigh and Urdal and that the statistical significance of water scarcity variables is highly dependent on one or two observations, leading them to conclude that actual effects of water scarcity “are weak, negligible or insigniªcant.”40 Jensen and Gleditsch and that the results of Miguel and colleagues are less robust when using a recoding of the original dataset.41 Gleditsch and colleagues found that shared basins do predict an increased propensity for conflict, but found no correlation between conflict and drought, the number of river crossings, or the share of the basin upstream, leading them to state that “support for a scarcity theory of water conflict is somewhat ambiguous.”42

### AT: Central Asia

#### No Central Asian war – the SCO checks conflict

Maksutov in ‘6

 (Ruslan, Stockholm International Peace Research Institute, “The Shanghai Cooperation Organization: A Central Asian Perspective”, August, http://www.sipri.org/contents/worldsec/Ruslan.SCO.pdf/download)

As a starting point, it is fair to say that all Central Asian countries—as well as China and Russia—are interested in security cooperation within a multilateral framework, such as the SCO provides. For Central Asia this issue ranks in importance with that of economic development, given the explosive environment created locally by a mixture of external and internal threats. Central Asia is encircled by four of the world’s eight known nuclear weapon states (China, India, Russia and Pakistan), of which Pakistan has a poor nuclear non-proliferation profile and Afghanistan is a haven for terrorism and extremism. Socio-economic degradation in Central Asian states adds to the reasons for concern and makes obvious the interdependence between progress in security and in development. Some scholars argue that currently concealed tendencies evolving in various states of Central Asia—such as the wide-ranging social discontent with oppressive regimes in the region, and the growing risks of state collapse and economic decline—all conducive to the quick growth of radical religious movements, could have far-reaching implications for regional stability once they come more into the light. 41 At first sight, the instruments established by the SCO to fulfil its declared security- building objectives seem to match the needs that Central Asian states have defined against this background. While the existence of the SCO further reduces the already remote threat of conventional interstate war in the region, 42 it allows for a major and direct focus on the non-state, non-traditional and transnational threats that now loom so large by comparison.

### AT: New !

## DOD ADV

### 1NC – AT – DOD Grid/Islanding Advantage

#### 1st, squo solves--

#### A. DOD taking efforts to shield itself from grid outages now

GAO 9

[Government Accountability Office, “Defense Critical Infrastructure:” , http://www.gao.gov/assets/300/297169.html, \\wyo-bb]

DOD has taken some steps to assure the availability of its electrical power supplies by identifying and addressing the vulnerabilities and risks of its critical assets to electrical power disruptions. For example, from August 2005 through October 2008, DOD issued Defense Critical Infrastructure Program guidance for identifying critical assets, assessing their vulnerabilities, and making risk management decisions about those vulnerabilities. Also, as previously discussed, DOD has conducted DCIP vulnerability assessments on 14 of the 34 most critical assets and has scheduled assessments for 13 of the remaining assets, but it has not yet scheduled assessments for 5 of the non-DOD- owned most critical assets.[Footnote 56] The DCIP vulnerability assessments conducted so far have identified specific electrical power- related vulnerabilities to some of the critical assets, including vulnerabilities associated with the reliability of the assets' supporting commercial electrical power grid, the availability of backup electrical power supplies, and single points of failure in electrical power systems supporting the assets.[Footnote 57] Addressing the risks associated with these vulnerabilities--by remediating, mitigating, or accepting those risks--can help DOD assure the availability of electrical power to the critical assets. For example, at all 6 most critical assets we visited, the DOD asset owners have installed diesel- based electrical power generators as backup sources of electricity during electrical power disruptions. Other (non-DCIP) DOD mission assurance programs also have the potential to help DOD assure the availability of electrical power supplies to its most critical assets. For example, we found that Joint Service Integrated Vulnerability Assessments and similar vulnerability assessments from the military services, which have been conducted on some of the installations with critical assets for antiterrorism and force protection purposes, also have identified vulnerabilities related to electrical power. Furthermore, DOD also has taken steps to coordinate with other federal agencies, including DOE and DHS, as well as electrical industry organizations, and these steps may help to assure the supply of electricity to its critical assets. For example, to represent its concerns and interests on electricity, DOD participates in the Energy Government Coordinating Council. The council provides DOD and other federal agencies with a forum for sharing their concerns, comments, and questions on energy-related matters--including critical infrastructure protection--with DOE, which chairs the group.[Footnote 58] In another effort involving DOE, several DOD combatant commands--including U.S. European Command and U.S. Africa Command--have recently agreed to accept a DOE departmental representative to serve as an energy attaché to the commands. The DOE representatives will provide energy-related expertise to their respective commands, particularly with respect to the commands' energy-related planning activities and the security and reliability of the commands' energy infrastructure. DOD has also partnered with various federal agencies and industry organizations to further increase the assurance of electrical power. For example, DOD serves as co-chair of the federal Task Force on Electric Grid Vulnerability of the National Science and Technology Council's Committee on Homeland and National Security, which was established in January 2009 to identify research and development needs for electrical grid vulnerabilities and to coordinate with other federal agencies to address those needs.[Footnote 59] In addition, DOD officials are collaborating with a working group established by the Edison Electric Institute in early 2009 called the Energy Security Partnership Group. The group focuses on improving communications between DOD and its utilities and on identifying and removing barriers to the development of comprehensive energy security programs at DOD installations. Also, in July 2009, DOD participated in an interagency exercise cosponsored by DHS, DOE, and DOD called Secure Grid 2009, Electric Grid Tabletop Exercise, for which officials from DOD, DOE, DHS, the Federal Energy Regulatory Commission, the North American Electric Reliability Corporation, and the Edison Electric Institute, among others, jointly developed recommendations and potential responses to two scenarios involving theoretical physical and cyber-related attacks on U.S. electrical power grids. Our survey results confirm that some steps are being taken at various levels within DOD to improve the assurance of electrical power supplies to its most critical assets. For example, according to the survey and reports we reviewed, DOD conducted vulnerability and risk assessments involving electrical power on 24 of the most critical assets through a variety of DOD mission assurance reviews, including DCIP assessments, Joint Staff Integrated Vulnerability Assessments, combatant command assessments, DOD agency assessments, and local installation assessments. The survey results also indicate that secondary sources of electricity--such as uninterruptible power supply systems and diesel generators--provide some backup electrical power capabilities to almost all of the critical assets. In addition, according to the survey, asset owners and host installations for some of the critical assets whose vulnerabilities have been assessed have taken specific measures to address those vulnerabilities, such as eliminating single points of failure, developing electrical power disruption contingency plans, installing emergency electrical power generators, and increasing physical security measures around electrical power facilities.

### AT: Blackouts

#### No widespread blackouts in the US, system checks

Ledger 12

[Donna Leinwand Leger, “Energy experts say blackout like India's is unlikely in U.S.,” USA Today, 7/13/12, <http://usatoday30.usatoday.com/news/nation/story/2012-07-31/usa-india-power-outage/56622978/1> //uwyo-baj]

A massive, countrywide power failure like the one in India on Tuesday is "extremely unlikely" in the United States, energy experts say. In India, three of the country's government-operated power grids failed Tuesday, leaving 620 million people without electricity for several hours. The outage, the second in two days in the country of 1.21 billion people, is the world's biggest blackout on record. The U.S. electricity system is segmented into three parts with safeguards that prevent an outage in one system from tripping a blackout in another system, "making blackouts across the country extremely unlikely," Energy Department spokeswoman Keri Fulton said. Early reports from government officials in India say excessive demand knocked the country's power generators offline. Experts say India's industry and economy are growing faster than its electrical systems. Last year, the economy grew 7.8% and pushed energy needs higher, but electricity generation did not keep pace, government records show. "We are much, much less at risk for something like that happening here, especially from the perspective of demand exceeding supply," said Gregory Reed, a professor of electric power engineering at University of Pittsburgh. "We're much more sophisticated in our operations. Most of our issues have been from natural disasters." The U.S. generates more than enough electricity to meet demand and always have power in reserve, Reed said. "Fundamentally, it's a different world here," said Arshad Mansoor, senior vice president of the Electric Power Research Institute in Washington and an expert on power grids. "It's an order of magnitude more reliable here than in a developing country." Grid operators across the country analyze power usage and generation, factoring outside factors such as weather, in real time and can forecast power supply and demand hour by hour, Mansoor said. "In any large, complex interactive network, the chance of that interconnection breaking up is always there," Mansoor said. "You cannot take your eye off the ball for a minute." Widespread outages in the U.S. caused by weather are common. But the U.S. has also had system failures, said Ellen Vancko, senior energy adviser for the Union of Concerned Scientists, based in Washington. On Aug. 14, 2003, more than 50 million people in the Northeast and Canada lost power after a major U.S. grid collapsed. The problem began in Ohio when a transmission wire overheated and sagged into a tree that had grown too close to the line, Vancko said. That caused other power lines to overheat until so many lines failed that the system shut itself down, she said. "That was less a failure of technology and more a failure of people, a failure of people to follow the rules," Vancko said. "There were a whole bunch of lessons learned." In 2005, in response to an investigation of the blackout, Congress passed a law establishing the North American Electric Reliability Corporation (NERC) to enforce reliability standards for bulk electricity generation.