# Case

#### Nuclear power plants won’t decrease property values.

Been ‘93

Vicki Been Associate Professor of Law, New York University School of Law WHAT'S FAIRNESS GOT TO DO WITH IT? \* ENVIRONMENTAL JUSTICE AND THE SITING OF LOCALLY UNDESIRABLE LAND USES 78 Cornell L. Rev. 10011993

A second, less theoretical, answer to the mobility objection is that no solid factual foundation exists for the assertion that a LULU lowers surrounding property values significantly. Evidence regarding the impact of LULUs on neighboring property values is quite mixed. n108 Several studies show that hazardous waste sites have a [\*1021] statistically significant adverse impact on neighboring property values, n109 while other studies have found little or no evidence of adverse impact. n110 Furthermore, the evidence regarding the effect that nuclear power plants and nuclear waste transport routes and storage sites have on neighboring property values tends to indicate that such LULUs do not significantly depress neighboring property [\*1022] values. n111 Additionally, studies of the property value impacts of municipal solid waste incinerators and landfills are inconclusive. n112 The majority of studies about the effects that social service LULUs have on surrounding property values reveal no significant detrimental impact on surrounding property values, n113 or neighborhood [\*1023] demographics. n114 Even community correctional facilities have not been shown to decrease neighboring property values. n115 Therefore, the current evidence does not establish that the fair siting of LULUs will cause a sufficient decrease in property values n116 to encourage the reappearance of disproportionate siting patterns. n117 [\*1024]

# Ban Nuclear CP

**Perm: Do both.**

**1. Not textually competitive: plan endorses but doesn’t mandate new plants be built which means the government can technically offer loan guarantees for a power that they have banned.**

**2. Not functionally competitive: if no new plants get built in the status quo there is no functional competition. Their net benefits are all internal to why nuclear power is bad which a perm solves for.**

**The CP can’t solve the aff:**

**We are not a nuclear power bad aff: We criticize the decision making process used to site current nuclear power plants. If we win any reason why this process investigation is important then the aff is preferable to the CP.**

**Loan Guarantees Key: only loan guarantees overcome siting problems due to land cost and opposition- Lazarus says incentives key to solve.**

**The Banning mindset is bad: Be skeptical of the mindset that we can wish away the problems with nuclear power.**

**1. Process Focus DA: their net benefits assume a series of complex environmental justice factors that disadvantaged populations face as a result of environmental decisions involved in nuclear power. Focusing on that decision is key to addressing environmental justice concerns – they can’t solve the aff or their net benefit.**

Lazarus ‘94

Richard J. Lazarus Professor of Law, Washington University, St. Louis, Missouri SYMPOSIUM: DISTRIBUTION IN ENVIRONMENTAL JUSTICE: IS THERE A MIDDLE GROUND? 9 St. John's J.L. Comm. 481 SPRING, 1994

Environmental justice takes into account the fact that the environmental protection laws that are supposed to redress pollution  [\*484]  distribute benefits and they distribute harms. They distribute benefits in terms of jobs. [n9](http://www.lexisnexis.com/lnacui2api/frame.do?reloadEntirePage=true&rand=1348092433463&returnToKey=20_T15567066851&parent=docview&target=results_DocumentContent&tokenKey=rsh-23.419864.6629958623" \l "n9) They distribute harms in terms of lost jobs, but they also distribute benefits in terms of improved environmental quality. And they distribute harms in terms by shifting environmental risks. [n10](http://www.lexisnexis.com/lnacui2api/frame.do?reloadEntirePage=true&rand=1348092433463&returnToKey=20_T15567066851&parent=docview&target=results_DocumentContent&tokenKey=rsh-23.419864.6629958623" \l "n10) Environmental laws do not eliminate all risks. They reduce them and they move them. [n11](http://www.lexisnexis.com/lnacui2api/frame.do?reloadEntirePage=true&rand=1348092433463&returnToKey=20_T15567066851&parent=docview&target=results_DocumentContent&tokenKey=rsh-23.419864.6629958623" \l "n11) They change their location. They change their physical status.

What environmental justice is all about is an explicit accounting of the distributional factors. Not just focusing on allocation efficiency and allowing distribution to occur by default. But instead, to think about and focus on distribution and its distinct public policy implications. What happens to those benefits and burdens in the first instance? Environmental justice, and why it is so significant for those like myself who have been involved in environmental law over the years, is that environmental justice challenges us to rethink our settled premises and threshold assumptions. It forcibly challenges the assumption that environmental law is about allocational efficiency and is not at all concerned about distributional fairness.

**2. Coal DA: Banning nuclear ensures coal will fill in and primarily in low income areas – only forces confrontation about siting decisions and risk. You have to believe nuclear is worse than coal to vote for the CP.**

Cerafici ‘9

Tamar Jergensen Cerafici is an attorney whose practice focuses on the intersections between environmental and nuclear law. 40 Years and Counting: Relicensing the First Generation of Nuclear Power Plants: Is New Always Better? The Case for License Renewal in the Next Generation 26 Pace Envtl. L. Rev. 391 Summer 2009

The question of environmental impacts of replacement energy sources is a thorny one. A nuclear plant generally produces over 1,000 MW of [\*413] electricity and operates at about 90% capacity on about 1,000 acres of land, or two square miles. Accordingly, a NRC assessment usually reviews the energy sources needed to replace the capacity of the plant as well as the land use problems that arise when a replacement source is contemplated. As a general rule, the NRC has found that replacement of the existing nuclear facility would result in unacceptable environmental impacts. For instance, new coal-fired facilities will require large land areas, as well as railroad spurs and other infrastructure development such as transmission lines and rights-of-way. There are adverse impacts from coal mining, and from operational pollution. Construction and operation will have ecological and social impacts, and will affect water resources as well. Finally, coal waste would also pose long-term negative effects. n79 Natural gas facilities may have less impact than coal, because of the technology and fuel source, but the adverse impacts of this energy source are still greater than those from an existing nuclear power plant. Renewable energy sources are also available, but the NRC has generally found that these resources are either insufficiently developed to replace the huge capacity of the existing facility, or simply lack the replacement capacity. In such cases, the NRC usually reviews combinations of renewable energy sources. Some creative options include wind, solar, and baseload sources such as natural gas or coal-fired facilities. Where more than one reactor is on site some alternatives suggest continued operation of one unit along with wind and solar. But these combinations must also consider the impacts of the renewable source, particularly in terms of land use and availability. For example, most wind facilities operate at very low capacity; any replacement project would require a very large commitment of land and resources. Moreover, opposition to large wind farms has been strong nationwide, and NRC has doubted the likelihood of a large wind facility being constructed as a partial replacement for the lost nuclear capacity. Solar facilities are likewise intermittently useful, and are also land use intensive. [\*414]

**Coal is worse for poor communities.**

**Appalachian voices 12** <http://appvoices.org/end-mountaintop-removal/community/>

Communities near mountaintop removal sites frequently experience contamination of their drinking water supplies. The Environmental Protection Agency (EPA) notes that [iron and manganese concentrations surpass drinking water guidelines](http://www.epa.gov/Region3/mtntop/pdf/mtm-vf_fpeis_full-document.pdf) in at least 40% of wells in the Appalachian Plateau, and in about 70% of the wells near reclaimed surface coal mines of the region.¶ In a 2003 [Draft Programmatic Environmental Impact Statement](http://www.epa.gov/region3/mtntop/eis2003.htm), the EPA reports that “stream chemistry monitoring efforts show significant increases in[conductivity](http://en.wikipedia.org/wiki/Properties_of_water#Electrical_conductivity), [hardness](http://en.wikipedia.org/wiki/Water_hardness), [sulfate](http://en.wikipedia.org/wiki/Sulfate), and [selenium](http://en.wikipedia.org/wiki/Selenium#Toxicity)concentrations downstream of [mountaintop removal] operations.” These contaminated headwaters are the origin of drinking water resources for millions of people in major downstream American cities.¶ Coal slurry, a byproduct of washing and processing coal with water and chemicals, is highly toxic and can leach into groundwater supplies. Up to sixty different chemicals are used to wash coal, not to mention the heavy metals naturally present in the coal.¶ In Prenter Hollow, West Virginia, over 300 residents are suing nine coal companies for water contamination from coal slurry injected in abandoned underground mine shafts. Residents believe that the contaminated water is causing major health issues [sometimes causing deaths](http://www.appvoices.org/index.php?/frontporch/blogposts/boone_county_wv_residents_sue_coal_companies/).¶ The New York Times ran an [article about Clean Water Act violations](http://www.nytimes.com/2009/09/13/us/13water.html) that highlighted the town of Prenter:¶ Medical professionals in the area say residents show unusually high rates of health problems. A survey of more than 100 residents conducted by a nurse hired by Mrs. Hall-Massey’s lawyer indicated that as many as 30 percent of people in this area have had their gallbladders removed, and as many as half the residents have significant tooth enamel damage, chronic stomach problems and other illnesses. That research was confirmed through interviews with residents.¶ Clean water is a commodity to which all Americans should have access, and Appalachian coal mining communities are constantly denied this precious resource.¶ The forceful blasting required by mountaintop removal often occurs close to residential dwellings at all times of the day. Communities are blanketed in dust and rocks of all sizes, known as flyrock, which can be the size of large boulders. Water wells and building foundations are commonly cracked, significantly depreciating the value of resident’s homes, which is oftentimes a family’s most substantial asset.¶ Deaths and direct damage can sometimes occur with fly rock. Late one evening, on August 20, 2004, a bulldozer pushed a boulder weighing half a ton from a mountaintop removal site in Appalachia, Virginia. The boulder crashed into the side of a residence, [crushing 3 year-old Jeremy Davidson in his sleep](http://www.roanoke.com/news/nrv/mountaintop/wb/71870).¶ Communities near mountaintop removal mining sites are often subject to powerful flash floods. Without trees on steep mountain and valley fill slopes, rainfall quickly becomes dangerous.¶ Some of the most recent flash-flooding occurred in Mingo County in southern West Virginia in May 2009. This was the 19th flood in 11 years to hit Mingo County and surrounding areas of southern West Virginia’s coalfields.¶ Massey Energy has mountaintop mines along about five miles of Gilbert Creek. Mounts’ daughter believes her damage, on Pickering Creek, came from runoff from Massey’s Frasure Creek mine, which had begun work in her area. Across from Mounts’own home, a narrow gully turned into a roaring river for two days after the storm.¶ Dr. Johnathon Phillips of the University of Kentucky [notes](http://cat.inist.fr/?aModele=afficheN&cpsidt=15435701): “There is a clear risk of increased flooding (greater runoff production and less surface flow detention) following [mountaintop removal and valley fill] operations.”¶ Coal sludge is a toxic byproduct of separating coal from rock, and is held in massive, notoriously leaky impoundments. According to the US Geologic Survey, sludge contains dangerous heavy metals including: antimony, beryllium, cadmium, chlorine, chromium, cobalt, lead, manganese, nickel, selenium, arsenic and mercury.¶ If an impoundment fails, entire communities can be wiped out in a matter of minutes – buried beneath a wave of this toxic sludge. In 1972, an impoundment failed in West Virginia’s Buffalo Creek Hollow, killing 118 downstream residents and leaving over 4,000 homeless. According to the [West Virginia Division of Culture & History](http://www.wvculture.org/history/buffcreek/bctitle.html), (WVDCH) a 15-20 foot wave leveled town after town, moving an estimated 7 feet per second.¶ In 2000, an impoundment failed in Martin County, Kentucky, spilling more than 300 million gallons of toxic sludge into tributaries of the Big Sandy River. The disaster—nearly 30 times larger than the Exxon Valdez spill— killed virtually all aquatic life for 70 miles downstream. The U.S. Environmental Protection Agency called it the worst environmental disaster east of the Mississippi.¶ As of 2000, there were more than [500 slurry impoundments across the Appalachian coalfields](http://ngm.nationalgeographic.com/2006/03/mountain-mining/mitchell-text).¶ ¶ Many mountaintop removal companies show a disturbing level of disregard for the safety and well-being of local communities. Marsh Fork Elementary in Sundial, West Virginia is located 400 yards downslope from Massey Energy’s enormous Shumate Impoundment, which holds [2.8 billion gallons of toxic coal sludge](http://www.coalimpoundment.org/locate/impoundment.asp?impoundment_id=1211-WV04-40154-02) behind a 385-foot-high earthen dam, making it one of West Virginia’s largest impoundments.¶ Should the dam of the Shumate Impoundment fail, a bullhorn would sound, and Marsh Fork Elementary School’s 230 children would have [less than 5 minutes](http://www.coalimpoundment.org/EmergencyPlans/1211-WV04-40154-02.pdf) to evacuate before the sludge-laden waters rise six feet. The maps above show the evacuation area below the impoundment and the approximate depth to which the toxic sludge would eventually rise – 15 feet at the school.¶ **Brushy Fork Impoundment**¶The Brushy Fork Impoundment in Coal River Valley, W.Va is the largest of its kind in the Western Hemisphere, rising 954 feet and holding a remarkable [8.2 billion gallons of toxic sludge](http://www.coalimpoundment.org/locate/impoundment.asp?impoundment_id=1211-WV04-40234-02). According to owner Massey Energy’s own estimations, at least 998 people would lose their lives if the dam were to fail. A wall of toxic sludge water 50 feet high would hit the town of Whitesville, [just five miles away](http://www.coalimpoundment.org/EmergencyPlans/1211-WV04-40234-02.pdf).¶

#### 3. Decomissioning: The site for the plant will become a radioactive waste dump keeping the risk and contamination in the very communities it is always in.

#### Nuclear Monitor ‘00

NUCLEAR MONITOR SPECIAL EDITION: February 2000 DECOMMISSIONING THE NUCLEAR POWER INDUSTRY: RUBBLE, RUBBLE, TOIL AND TROUBLE [https://docs.google.com/viewer?a=v&q=cache:9UQchfgNrI4J:www.nirs.org/reactorwatch/decomissioning/decommonitorspecialedition.pdf](https://docs.google.com/viewer?a=v&q=cache:9UQchfgNrI4J:www.nirs.org/reactorwatch/decomissioning/decommonitorspecialedition.pdf+&hl=en&gl=us&pid=bl&srcid=ADGEEShMV2Es9FL6pDt19CTul2pv16dWBFuJQb7jCK-EMM8klOEEE7Q6Zv2P5yNQWgiHurABaJ_8fwBrSusz1qjmUHVBSIB0iqkEUPVRAPd-TtFGT_NBDRwE2kZuu9P2_gyh_pbkquSr&sig=AHIEtbTj2sw8MfB6RlvJVDXxi31LyPzT4w)

In an effort to reduce decommissioning costs and potentially skim millions of dollars off of decommissioning funds, the industry is strategizing new techniques for dismantling or entombing the large concrete reactor containment buildings and managing its nuclear waste. One example is being explored by the Maine Yankee Atomic Power Company for the decommissioning of the Maine Yankee nuclear station in Wiscasset, Maine where the utility has proposed to “rubblize” the reactor building. “Rubblization” is described as the partial decontamination and demolition of radioactively contaminated buildings at nuclear power stations. The interior concrete surfaces are only partially decontaminated and the entire structure (concrete, steel re-enforcement bar and other materials) is then razed to grade level into the foundation hole. The burial site is then covered over with a soil cap. Essentially, the utility is proposing that a so-called “low-level” radioactive waste dump can now be grandfathered on the former reactor site under an operational reactor license without any of the state and federal regulation and permitting processes. The decommissioning utilities will provide an analysis that can “assure” that no ground water movement will occur through the radioactive burial site providing a potential transport mechanism and potential radioactive exposure to the public and environment. The utilities will provide a “dose model” to “assure” the community that the radioactive site will pose no health risks to the present and future community. This analysis will also “assure” that no future human activity will disturb the site resulting in radioactive releases and exposures. Because of the hazardous life of the radionuclides generated during the operation of the nuclear power station, such “assurances” will need to stand a measure of time on the order of tens, hundreds and even hundreds of millions of years has for the various radionuclides that will contaminate the rubble. Iodine-129 has radioactive half-life of 16 million years and a hazardous life of 160 million years. Despite the “assurances,” the nuclear utilities fail to point out that both Maine Yankee and Connecticut Yankee, once their license is terminated under 10 CFR Part 50.82, will no longer be responsible or liable for the radioactive site. The liability for any associated environmental or public health problems arising from such a de facto radioactive dump becomes an open question. In fact, the two federal agencies responsible for public and environmental protection from nuclear power, Environmental Protection Agency and the NRC, have failed to come to agreement on a residual radioactivity standard for a license termination of a nuclear power plant decommissioning site. EPA continues to hold out for a 4 to 15 millirem per year limit on groundwater contamination while NRC insists on releasing a site within a range of 25 millirems up to 500 millirems per year from all pathways. It is of significant concern that the proposal to rubblize and bury contaminated buildings onsite is proceeding toward NRC approval with such a dispute and no memorandum of understanding between the two federal agencies. The rubblization process is in fact a serious abrogation of law and environmental policy as currently evidenced by Maine and Connecticut legislation mandating that there will be no “low-level” radioactive waste site in those states without voter and legislative approval respectively.

**4. Dialogue DA- banning nuclear ends the discussion or at least remains complicit in the siting decisions of the status quo that perpetuate energy apartheid. That dialogue is key to ensuring minorities have a voice in the decision making process – a diversity of views is the best way to curb the worst horrors of nuclear weapons decisions and nuclear power – their disad impacts are more likely and worse in the status quo than post the aff. That’s our Anthony in 95 card.**

**Banning is the same as tech and science solves arguments: They criticize people who assume science and tech are the panacea for nuclear power ills while they assume that just getting rid of nuclear power will address the harms they isolate in their Net benefits. Both mindsets ignore the decisions and processes that make it possible to disadvantage particular populations and environments.**

# States

#### Perm do both –

#### Not textually competitive – plan doesn’t preclude state funding for nuclear power

#### Not functionally competitive: states can supplement federal incentives

#### The CP can’t solve the aff:

#### Distancing DA- utilizing the logic of net benefits is an act of neoliberal distancing- the neg is stuck to this risk calculus if its their only justification for a different policy option- they’re trying to remove all of the risk associated with federal action and dumping it onto the states- federal government should take responsibility for the effects of its nuclear policy

#### Enforcement DA- States, especially racist ones, will cheat and only marginally enforce to attract business interests

Graham ’98 (Mary, Brookings Institute, “Environmental Protection & the States: ""Race to the Bottom"" or ""Race to the Bottom Line""?” Winter, <http://www.brookings.edu/research/articles/1998/12/winter-environment-graham>, TGA)

To call attention to these changes is not to deny that state and local governments face tough trade-offs, that businesses often lobby to weaken environmental rules, or that some polluters still try to beat the system. Hiring inspectors to enforce the law or buying land to protect a watershed is expensive and must vie for limited state funds with improving schools, building roads, and paying for Medicaid and welfare. Environmental issues continue to be contentious because they often do pit jobs against cleaner air or more conservation, and sometimes both choices offer economic benefits. When stakes are high, business, labor, homeowners, and other groups will fight for their interests. And, of course, there will always be cheaters.¶ Thirty years ago, the assumption that there was a race to the bottom among the states was important because Congress was debating the need for a national framework of environmental protection. That question is now settled. Mainstream Democrats and Republicans agree that air pollution, water pollution, and other environmental problems that cross state lines should continue to be controlled by federal rules. Because most of our daily attention is drawn to hard-fought battles at the perimeter of government authority, it is easy to forget that we have witnessed an exceptional event in the past three decades: the successful introduction of a new theme in national policy.¶ Today, the question of whether states shortchange environmental protection to attract business is important for different reasons. First, we have reached a turning point in national environmental policy in which some readjustment of federal and state roles is inevitable. Thanks in part to the considerable success of national laws aimed at controlling major sources of pollution and encouraging conservation on large tracts of federal land, public attention is now turning to problems that are harder to solve from Washington. The next generation of environmental policies will tackle widely scattered sources of pollution and conservation opportunities that affect farms and housing developments as well as forests and meadows.

#### That cheating allows injustice to take hold in siting decisions. Don’t view the solvency deficit debate in utilitarian terms – that framework has traditionally been used in policy making decisions to make decisions that render populations invisible.

Gauna ‘98

Eileen Gauna Professor of Law, Southwestern University School of Law. ARTICLE: The Environmental Justice Misfit: Public Participation and the Paradigm Paradox 17 Stan. Envtl. L.J. 3 January, 1998

Consider the difficulties with such an approach. Some writers have argued that our general preferences are closely tied to wealth maximization. [n169](http://www.lexisnexis.com/lnacui2api/frame.do?reloadEntirePage=true&rand=1348092171717&returnToKey=20_T15567043931&parent=docview&target=results_DocumentContent&tokenKey=rsh-23.583864.2788017498" \l "n169) The implication that follows from this assumption is that environmental justice is not included in a more general mix of aggregated preferences. [n170](http://www.lexisnexis.com/lnacui2api/frame.do?reloadEntirePage=true&rand=1348092171717&returnToKey=20_T15567043931&parent=docview&target=results_DocumentContent&tokenKey=rsh-23.583864.2788017498" \l "n170) If what we want is environmental protection on the cheap, then the best way to achieve it is through injustice. It is more economical to place environmental risk-generating activities in areas where land is cheaper and where the residents, lacking political influence, are less likely to successfully oppose the siting. [n171](http://www.lexisnexis.com/lnacui2api/frame.do?reloadEntirePage=true&rand=1348092171717&returnToKey=20_T15567043931&parent=docview&target=results_DocumentContent&tokenKey=rsh-23.583864.2788017498" \l "n171) After siting, fines for noncompliance are likely to be lower in low income communities and communities of  [\*41]  color. [n172](http://www.lexisnexis.com/lnacui2api/frame.do?reloadEntirePage=true&rand=1348092171717&returnToKey=20_T15567043931&parent=docview&target=results_DocumentContent&tokenKey=rsh-23.583864.2788017498" \l "n172) Moreover, if the area is subsequently contaminated, listing on the National Priorities List (NPL) takes longer and clean-up requirements are likely to be less stringent in poor, racial minority, and ethnic communities. [n173](http://www.lexisnexis.com/lnacui2api/frame.do?reloadEntirePage=true&rand=1348092171717&returnToKey=20_T15567043931&parent=docview&target=results_DocumentContent&tokenKey=rsh-23.583864.2788017498" \l "n173) It appears, then, that environmental inequity is economically efficient, [n174](http://www.lexisnexis.com/lnacui2api/frame.do?reloadEntirePage=true&rand=1348092171717&returnToKey=20_T15567043931&parent=docview&target=results_DocumentContent&tokenKey=rsh-23.583864.2788017498" \l "n174) at least over the short run. As such, inequity could be viewed as a preference inherent in utilitarianism.Once this proposition is established, poverty-related environmental inequities might be within the realm of acceptable preferences. [n175](http://www.lexisnexis.com/lnacui2api/frame.do?reloadEntirePage=true&rand=1348092171717&returnToKey=20_T15567043931&parent=docview&target=results_DocumentContent&tokenKey=rsh-23.583864.2788017498" \l "n175) Race-related environmental inequities receive potential redress only as constitutional or civil rights claims, a shield of rights protecting racial and ethnic minorities from majoritarian preferences. [n176](http://www.lexisnexis.com/lnacui2api/frame.do?reloadEntirePage=true&rand=1348092171717&returnToKey=20_T15567043931&parent=docview&target=results_DocumentContent&tokenKey=rsh-23.583864.2788017498" \l "n176) Unfortunately, traditional civil rights claims have been unsuccessful because of the inability to prove discriminatory intent and the presence of non-racial (economic) explanations for siting decisions suspected of being racially motivated. [n177](http://www.lexisnexis.com/lnacui2api/frame.do?reloadEntirePage=true&rand=1348092171717&returnToKey=20_T15567043931&parent=docview&target=results_DocumentContent&tokenKey=rsh-23.583864.2788017498" \l "n177) Consequently, unless legislation is enacted that imposes consideration of environmental justice concerns, [n178](http://www.lexisnexis.com/lnacui2api/frame.do?reloadEntirePage=true&rand=1348092171717&returnToKey=20_T15567043931&parent=docview&target=results_DocumentContent&tokenKey=rsh-23.583864.2788017498" \l "n178) so as to confer on environmental justice the status of a collective preference, environmental justice will not be a legitimate stakeholder interest because it is inconsistent with an economically optimal distribution of benefits and burdens.

#### Federal funding key:

**Way too expensive for states- Obama has asked for over 100 billion.**

**Mosche 09** (Sony Ben-Mosche, Energy Law Journal, http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&ved=0CCIQFjAA&url=http%3A%2F%2Fwww.lw.com%2FthoughtLeadership%2Ffinancing-the-nuclear-renaissance-in-california&ei=okNwUOfuOarK0AHimYHYDQ&usg=AFQjCNF-TqH\_QJQlbBKg9k1lCAA-EglM9g)

Moreover, the sheer magnitude of debt needed to finance a multi-billion dollar reactor will likely require multiple tranches of debt designed to tap different markets in order to raise sufficient capital.22 Each tranche of debt will price construction and other risks relative to its return and expect sponsor or government support to mitigate any risk in excess of its risk profile. Some studies analyzing projected costs of construction of new nuclear power facilities indicate that due to high capital costs and cost recovery, without federal incentives and with all else remaining equal, nuclear power cannot be economically competitive with other forms of energy such as coal or natural gas.23 These simple facts alone drive an obvious conclusion: the historic single-tranche, simple lockbox project finance model, which has served renewable energy projects in the wind, solar, geothermal, ethanol, biofuel, and related spaces so well, simply will not work for new nuclear power projects without substantial customizing. The incentive structures designed to promote renewables, which are predicated on this simple project finance model and serve as the basis for many of the government subsidies that have been proposed for nuclear power, should also be substantially rethought or customized for nuclear power in order to achieve the greatest efficiency possible.2

## PTX

#### (Nixon) we use our superpower status and neoliberal heg to bully people into doing what we want. That’s bad.

#### Mulitpolarity is inevitable – trying to retain hegemony ensures a war-filled transition

Christopher Layne (Associate Professor in the Bush School of Government and Public Service at Texas A&M University) 2006 “The Peace of Illusions” p 190

Advocates of hegemony claim that it is illusory to think that the United States can retract its military power safely from Eurasia. The answer to this assertion is that the risks and costs of American grand strategy are growing, and the strategy is not likely to work much longer in any event. As other states—notably China—rapidly close the gap, U.S. hegemony is fated to end in the next decade or two regardless of U.S. efforts to prolong it. At the same time, understandable doubts about the credibility of U.S. security guarantees are driving creeping re-nationalization by America's Eurasian allies, which, in turn, is leading to a reversion to multipolarity. In this changing geopolitical context, the costs of trying to hold on to hegemony are high and going to become higher. Rather than fostering peace and stability in Eurasia, America's military commitments abroad have become a source of insecurity for the United States, because they carry the risk of entrapping the United States in great power Eurasian wars.

#### Heg collapse doesn’t cause great power wars – conflicts would be small and managable

Richard Haas (president of the Council on Foreign Relations, former director of policy planning for the Department of State, former vice president and director of foreign policy studies at the Brookings Institution, the Sol M. Linowitz visiting professor of international studies at Hamilton College, a senior associate at the Carnegie Endowment for International Peace, a lecturer in public policy at Harvard University’s John F. Kennedy School of Government, and a research associate at the International Institute for Strategic Studies) April 2008 “Ask the Expert: What Comes After Unipolarity?” <http://www.cfr.org/publication/16063/ask_the_expert.html>

Does a non polar world increase or reduce the chances of another world war? Will nuclear deterrence continue to prevent a large scale conflict? Sivananda Rajaram, UK Richard Haass: I believe the chance of a world war, i.e., one involving the major powers of the day, is remote and likely to stay that way. This reflects more than anything else the absence of disputes or goals that could lead to such a conflict. Nuclear deterrence might be a contributing factor in the sense that no conceivable dispute among the major powers would justify any use of nuclear weapons, but again, I believe the fundamental reason great power relations are relatively good is that all hold a stake in sustaining an international order that supports trade and financial flows and avoids large-scale conflict. The danger in a nonpolar world is not global conflict as we feared during the Cold War but smaller but still highly costly conflicts involving terrorist groups, militias, rogue states, etc.

#### **Attempts to maintain heg lead to intervention and nuclear war.**

Maass 10, Richard, Hamilton University undergrad writer, Insights Vol.4 No. 1, “Nuclear Proliferation and Declining US Hegemony”

Allison’s ideas seem sound in theory, but cannot be applied in practice. Proliferation is inevitable, and its effects will ultimately deteriorate U.S. hegemony. The world could very plausibly witness the proliferation of five or ten new nuclear states within the next few decades. As more states acquire nuclear instruments, the U.S. will be forced to further change its policies and adapt to a multi-lateral nuclear theater. Proliferation places conventionally weaker states in a better bargaining position with the United States, forcing the U.S. into a position of acquiescence. A multilateral nuclear theater poses too many issues for the United States to resolve unilaterally. States such as North Korea and Pakistan refuse U.S. intervention; North Korea even withdrew from the 1994 Agreed Framework and “may have diverted fissile material for nuclear weaponry”(US Department of Defense, 2001). Though riddled with domestic instability and stricken by insurgency, Pakistan refuses U.S. aid in directly securing its nuclear sites and continues to hide their locations. Russia’s control over its vast nuclear arsenal slowly diminishes with time, increasing the likelihood that terrorist groups may seize a weapon. To continue as the sole hegemon, the U.S. inevitably must violate national sovereignty to promote its interests. Infringement on states’ rights would only escalate tensions, eventually leading to conflict. In order to fight a multi-front war on such a large scale, the U.S. needs to radically change its policies. Regardless, the U.S. cannot continue to project power in the manner it has done since the collapse of the Soviet Union. Steve Sagan is right in asserting that more is worse regarding the spread of nuclear weapons. The U.S. no longer will be the sole international hegemon; rather it will merely be the first among states equally capable of instigating the ultimate catastrophe.

#### **US power projection fuels terrorist recruitment**

Innocent and Carpenter 9

[Malou, foreign policy analyst at Cato who focuses on Afghanistan and Pakistan, and Ted, vice president for defense and foreign policy studies at Cato, “Escaping the Graveyard of Empires: A Strategy to Exit Afghanistan,”<http://www.cato.org/pubs/wtpapers/escaping-graveyard-empires-strategy-exit-afghanistan.pdf>]

**Contrary to the claims that we should use the U.S. military to** stabilize the region and **reduce the threat of terrorism**, a 2008 study by the **RAND** Corporation **found** that **U.S. policies** emphasizing the use of force **tend to create new terrorists**. In “How Terrorist Groups End: Lessons for Countering al Qai’da,” Seth Jones and Martin Libicki argue that the U.S. military “should generally resist being drawn into combat operations in Muslim societies, since [a U**.S. military] presence is likely to increase terrorist recruitment**.” 22 Some policymakers claim the war is worth waging because terrorists flourish in failed states. But that argument cannot account for terrorists who thrive in centralized states that have the sovereignty to reject external interference. 23 That is one reason why militants find sanctuary in neighboring, nucleararmed Pakistan. In this respect, and perhaps most important, is the belief that our presence in the region helps Pakistan, when in fact the seemingly open-ended **U.S. presence in Afghanistan risks creating worse problems for Pakistan. Amassing troops in Afghanistan feeds the perception of a foreign occupation, spawning more terrorist recruits** for Pakistani militias and thus placing undue stress on an already weakened nation. Christian Science Monitor correspondent Anand Gopal finds, “In late 2007, as many as 27 groups merged to form an umbrella Taliban movement, the Tehreek-e-Taliban, under guerrilla leader Baitullah Mehsud.” He continues, “Three of the most powerful, once-feuding commanders—Mr. Mehsud and Maulavi Nazeer of South Waziristan and Hafiz Gul Behadur of North Waziristan—formed an alliance in response to US airstrikes.” 24 America’s presence has already caused major problems for the government in Islamabad, which is deeply unpopular for many reasons, including its alignment with U.S. policies. 25 There are also indications that it has raised tensions in Uzbekistan and other Central Asian countries. **For Islamic militants throughout the region, the U.S. occupation of Afghanistan— like the occupation of Iraq—is an increasingly potent recruiting tool. Only by prolonging our military presence do we allow the Taliban,** Gulbuddin Hekmatyar’s Hizb-e Islami, the Haqqani network, and even Pakistani Taliban militants **to reframe the conflict and their position within it as a legitimate defense against a foreign occupation.** In this respect, policymakers should recognize that not everyone willing to resist U.S. intervention is necessarily an enemy of the United States. Most importantly, we must understand that not every Islamic fundamentalist is a radical Islamist, let alone one who is hell-bent on launching a terrorist attack against the American homeland.

#### **US obsession with military control and security leads to confrontation. The Aff’s desire to control how other countries handle nuclear power is just an extension of this superpower syndrome.**

Lifton ‘3

(Robert Jay, Distinguished Professor Emeritus of Psychiatry and Psychology, The City University of New York, Superpower Syndrome, pgs. 8-11)

More than that, 9/11 is not over. We are still in it. While writing this book, I have become aware of the ways in which I, too, am a survivor of 9/11-not in the sense of having been directly victimized by the attacks but because like all Americans, I was exposed to the intense death- related imagery of a suicidal assault on my country. Those televised images had a near-apocalyptic aura for almost everyone. Hence the immediate reference to the space where the two towers collapsed as "Ground Zero," a term previously reserved for the hypocenter of a nuclear explosion. This continuing sense of disaster places me in quite a different relationship to my subject than in my previous studies. True, most of them focused on relatively recent occurrences whose effects were very much still with us. But, Vietnam aside (and in that work I was on another continent, many thousand miles from the war in question), I was looking at them retrospectively. It is impossible as yet to look at 9/11 in retrospect. Its active reverberations are everywhere. We remain in thralldom to what happened on that day. The dynamic of 9/11 dominates American thought and our current national life. Our invasion of Iraq reflects the web of deception that the Bush administration, through its "war on terrorism," has woven around the events of that September morning. By all objective evidence Iraq had nothing to do with 9/11, but as Secretary of Defense Donald Rumsfeld suggested on the day after the attacks, the broad definition of that "war" would require us to invade Iraq. At that moment, Iraq rose to the surface from the deeper dreams and visions of our leaders- and so the moment became one of opportunity. To facilitate that policy our leaders then either made, or encouraged by innuendo, the false claim that Iraq was indeed implicated in 9/11, and by the time of the invasion about 50 percent of Americans had come to believe that falsehood. A deception on such a large scale could only occur because Americans remained genuinely fearful of terrorist attacks even more lethal than 9/11, and because that fear, that sense of vulnerability, could be manipulated to support larger and more ambitious policy aims. It became possible to redirect the fear from Osama bin Laden to another hated Middle Eastern figure, Saddam Hussein, to the point where the two became virtually interchangeable. If anything, American fear of another 9/11 has been intensified by the "successful" invasion and so remains available for use in other situations. September 11 was a triumphant moment for Islamist fanatics-and a profoundly humiliating one for the leaders of the American superpower, who early on decided that their response would be "war" and a specifically American war at that. They then rejected a measured international response to terrorism, offered specifically by the secretary general of the United Nations, a response that would have included the use of force in focused ways short of war, to hunt down the terrorists and bring them to justice, while mobilizing the enormous outpouring of sympathy for our country expressed throughout the world. Instead, this administration chose to respond unilaterally with the rhetoric of war, making it clear that we alone would decide what levels of military force to apply and who to apply it to, accepting no restraints in the process. In that and other ways we have responded apocalyptically to an apocalyptic challenge. We have embarked on a series of wars-first in Afghanistan, then in Iraq, with suggestions of additional targeted countries in the offing- because we have viewed the amorphous terrorist enemy as evil and dangerous. But our own amorphously extreme response feeds a larger dynamic of apocalyptic violence, even as it constructs a twenty-first-century version of American empire. That prospective empire is confusing to the world, to Americans, and perhaps even to those who espouse it. It does not follow prior imperial models of keeping an extensive bureaucracy in place in subject countries and thereby ruling territories extending over much of the earth. Instead, we press toward a kind of control from a distance: mobile forays of military subjugation with subsequent governmental arrangements unclear. Crucial to this kind of fluid world control is our dominating war machine, backed by no less dominant nuclear stockpiles. Such an arrangement can lend itself to efforts at the remote control of history. Any such project, however, becomes enmeshed in fantasy, in dreams of imposing an omnipotent will on others, and in the urge to control history itself. Driven by superpower syndrome, such visions of domination and control can prove catastrophic when, as

## Russian Oil

#### Russia’s economy doomed to failure – SQ can’t solve for corruption and lack of diversity.

MICHAEL **SCHUMAN** 7-5-**12** [Schuman writes about Asia and global economic issues as a correspondent for TIME in Beijing, China. In his 16 years as a journalist in Asia, he has reported from a dozen countries, he has a B.A. in Asian history and political science from the University of Pennsylvania and a master of international affairs from Columbia. <http://business.time.com/2012/07/05/why-vladimir-putin-needs-higher-oil-prices/>]

This cuts to the heart of a problem we have highlighted before – namely that Russia is now much more dependent on high and rising oil prices than in the past… The fact that the share of ‘permanent’ spending (e.g. on salaries and pensions) has increased…creates additional problems should oil prices drop back (and is also a concern from the perspective of medium-term growth)…The present growth model looks unsustainable unless oil prices remain at or above $120pb.**¶** The only way out of the trap is to decrease Russia’s dependence on oil. That will require a much higher rate of investment, and especially private sector investment, to develop new industries and create better jobs. Improving the poor investment climate, however, will take a long list of reforms, which include fixing inefficient state enterprises, allowing greater competition, stopping the state from crowding out the private sector, and fighting widespread corruption. Putin himself has repeatedly advocated for just such reforms, as he did in a speech at the St Petersburg International Economic Forum in June:¶ “We are well aware of serious long-term and medium-term challenges for our economy. The economy is still not properly diversified. Much of the added value is created in commodities sectors. There is a high proportion of non-competitive old plants and the level of Russia’s dependence on oil prices remains high. We must reduce the dangerously high [budget] deficit if oil revenues are not taken into account. This…is the Achilles’ heel of our economy…We understand very well that we must offer investors exclusive conditions to compete for these investments, so that the investors ultimately choose Russia. This is why we feel creating an investment climate that is not just favorable, but truly better and more competitive, is a key issue in state policy…Today I want to reaffirm our principled position: the state will gradually withdraw from a variety of industries and assets…Unfortunately corruption is without exaggeration the biggest threat to our development. The risks are even worse than the fluctuation of oil prices.”

#### Nuclear power does not compete with oil – they show little overlap with market.

Toth and Rogner, ‘6

(Ferenc (Senior Energy Economist in the IAEA's Planning and Economic Studies Section) and Hans-Holger (Section Head, Planning and Economic Studies Section at the IAEA), “Oil and nuclear power: Past, present, and future”, Energy Economics 28, 2006, pg. 22, RSR)

While the past expansion of nuclear energy occurred to the detriment of oil in the power sector, this is no longer the case today and highly unlikely to reoccur in the future. The respective market structures in which nuclear and oil operate now display little overlap and an expansion of nuclear power would not impinge on oil sales to power generation. Nuclear supplies base load to large grid-integrated markets where oil provides some peak supply, back-up capacity, small-scale and non-grid applications. Oil’s main markets are the low energy demand intensity rural and remote areas usually with little or no grid integration. In an environmentally unconstrained future, nuclear power competes primarily against coal and possibly natural gas, depending on how closely natural gas prices track oil market prices and whether or not gas infrastructures are in place. However, current trends towards electricity market liberalization relying more on private sector shareholder value maximization create economic barriers to the expansion of present-day nuclear plants because of their high up-front capital costs and long amortization periods. In the absence of public policy support and/or the emergence of innovative reactor designs that lower the costs and further improve operating safety, nuclear power’s market share might indeed follow a downward trajectory. Yet there is some evidence to the contrary. The order of the new Olkiluoto reactor in Finland is based on several studies, each confirming that nuclear generation is the best economic option to satisfy increasing demand for electricity (WNA, 2004).

#### Despite Improvements Russia’s Military too Weak to Fight a War with U.S.

Menon 7

Rajan Menon is a professor of international relations at Lehigh University and a fellow at the New America Foundation. The Leader-Post (Regina, Saskatchewan) June 8, 2007 Friday.\

The Cold War was also a contest of raw power. With its gargantuan budget, the Soviet military machine was a formidable foe. But now, Russia's defence expenditures come to only about eight per cent of America's; in dollar terms, the Pentagon spends almost three-fourths the value of Russia's yearly GNP. Much of Russia's arsenal is aging and shopworn; its conscripts are demoralized, poorly paid and ill-equipped. Russia can bully weak neighbours, but unlike the Red Army, its military does not menace Europe and it lacks a global reach. Recent increases in its defence spending and the testing of a new ICBM should not obscure these weaknesses.

#### No relationship between nuke and oil

Toth 2006 (Ferenc L. Toth, senior energy economist with the Planning and Economic Studies Section in the Department of Nuclear Energy at IAEA, Hans-Holger Rogner, head of Planning and Economic Studies at IAEA, “Oil and nuclear power: Past, present, and future,” IAEA, http://www.iaea.org/OurWork/ST/NE/Pess/assets/oil+np\_toth+rogner0106.pdf)

The current relationship between nuclear power and oil has become distinctly different than it was a few decades ago. At the onset of the 21st century, nuclear and oil for electricity generation are targeting different electricity market segments with little overlap in the longer run. Oil for electricity generation in most industrialized countries serves, where not barred for environmental reasons, more the function of the disposal of residual oil for which no other applications can be found. However, advanced refineries converting larger portions of the barrel into premium products and stringent environmental regulation constrain the use of residual oil for power generation. Other uses of oil products include peak supply, back-up fuel, and dispersed non-grid generation. These markets have been relative captive for oil but this may change in the future with the advent of fuel cells. Since nuclear power has no role to play in these captive markets, growth prospects for oil are unaffected by a nuclear presence in the electricity generating market.

#### SMRs key to chemical industry

Solan 2010 (David Solan, Director, Energy Policy Institute, Associate Director, Center for Advanced Energy Studies, Assistant Professor of Public Policy and Administration at Boise State University, June 2010, “ECONOMIC AND EMPLOYMENT IMPACTS OF SMALL MODULAR NUCLEAR REACTORS,” Energy Policy Institute, http://www.nuclearcompetitiveness.org/images/EPI\_SMR\_ReportJune2010.pdf)

Process Heat for Industrial Applications and District Heating. SMRs can be used to provide heat over temperature ranges from 100 to 200 degrees centigrade to over 800 degrees centigrade, depending on the design of the SMR and the technology used in it. During the production of electricity, more than half of the heat generated is rejected at low temperature. This residual heat is usable for various industrial applications. Higher temperature process heat can be used for a variety of industrial applications, such as the production of glass, plastics, steel, and ammonia (Office of Nuclear Energy, 2009). In addition concepts for producing carbon-neutral synthetic fuels and chemicals, often propose the coupling of systems, including nuclear, for a source of carbon-free heat and hydrogen needed in their processes (Los Alamos National Laboratory, 2008). Given the modularity of SMRs, these reactors offer advantages in areas or applications where heat is needed but where the large heat output and expense of a large nuclear reactor makes its application impractical.

#### Extinction

CEN 1999 (Chemical and Engineering News, December 6, 1999, “Millennium Special Report,” Vol. 77, No. 49, online)

The pace of change in today's world is truly incomprehensible. Science is advancing on all fronts, particularly chemistry and biology working together as they never have before to understand life in general and human beings in particular at a breathtaking pace. Technology ranging from computers and the Internet to medical devices to genetic engineering to nanotechnology is transforming our world and our existence in it. It is, in fact, a fool's mission to predict where science and technology will take us in the coming decade, let alone the coming century. We can say with finality only this: We don't know. We do know, however, that we face enormous challenges, we 6 billion humans who now inhabit Earth. In its 1998 revision of world population estimates and projections, the United Nations anticipates a world population in 2050 of 7.3 billion to 10.7 billion, with a "medium-fertility projection," considered the most likely, indicating a world population of 8.9 billion people in 2050. According to the UN, fertility now stands at 2.7 births per woman, down from 5 births per woman in the early 1950s. And fertility rates are declining in all regions of the world. That's good news. But people are living a lot longer. That is certainly good news for the individuals who are living longer, but it also poses challenges for health care and social services the world over. The 1998 UN report estimates for the first time the number of octogenarians, nonagenarians, and centenarians living today and projected for 2050. The numbers are startling. In 1998, 66 million people were aged 80 or older, about one of every 100 persons. That number is expected to increase sixfold by 2050 to reach 370 million people, or one in every 24 persons. By 2050, more than 2.2 million people will be 100 years old or older! Here is the fundamental challenge we face: The world's growing and aging population must be fed and clothed and housed and transported in ways that do not perpetuate the environmental devastation wrought by the first waves of industrialization of the 19th and 20th centuries. As we increase our output of goods and services, as we increase our consumption of energy, as we meet the imperative of raising the standard of living for the poorest among us, we must learn to carry out our economic activities sustainably. There are optimists out there, C&EN readers among them, who believe that the history of civilization is a long string of technological triumphs of humans over the limits of nature. In this view, the idea of a "carrying capacity" for Earth—a limit to the number of humans Earth's resources can support—is a fiction because technological advances will continuously obviate previously perceived limits. This view has historical merit. Dire predictions made in the 1960s about the exhaustion of resources ranging from petroleum to chromium to fresh water by the end of the 1980s or 1990s have proven utterly wrong. While I do not count myself as one of the technological pessimists who see technology as a mixed blessing at best and an unmitigated evil at worst, I do not count myself among the technological optimists either. There are environmental challenges of transcendent complexity that I fear may overcome us and our Earth before technological progress can come to our rescue. Global climate change, the accelerating destruction of terrestrial and oceanic habitats, the catastrophic loss of species across the plant and animal kingdoms—these are problems that are not obviously amenable to straightforward technological solutions. But I know this, too: Science and technology have brought us to where we are, and only science and technology, coupled with innovative social and economic thinking, can take us to where we need to be in the coming millennium. Chemists, chemistry, and the chemical industry—what we at C&EN call the chemical enterprise—will play central roles in addressing these challenges. The first section of this Special Report is a series called "Millennial Musings" in which a wide variety of representatives from the chemical enterprise share their thoughts about the future of our science and industry. The five essays that follow explore the contributions the chemical enterprise is making right now to ensure that we will successfully meet the challenges of the 21st century. The essays do not attempt to predict the future. Taken as a whole, they do not pretend to be a comprehensive examination of the efforts of our science and our industry to tackle the challenges I've outlined above. Rather, they paint, in broad brush strokes, a portrait of scientists, engineers, and business managers struggling to make a vital contribution to humanity's future.