# 1NC

## 1

#### Nuclear PRODUCTION must be for the PURPOSE of energy generation

International Atomic Energy Agency 7

<http://www-pub.iaea.org/MTCD/publications/PDF/Pub1290_web.pdf>

 Under the terms of Article III of its Statute, the IAEA is authorized to establish or adopt standards of safety for protection of health and minimization of danger to life and property, and to provide for the application of these standards. The publications by means of which the IAEA establishes standards are issued in the IAEA Safety Standards Series. This series covers nuclear safety, radiation safety, transport safety and waste safety, and also general safety (i.e. all these areas of safety). The publication categories in the series are Safety Fundamentals, Safety Requirements and Safety Guides.

 The process of inducing radioactivity.􀁌 Most commonly used to refer to the induction of radioactivity in moderators, coolants, and structural and shielding materials, caused by irradiation with neutrons.􀁌 The BSS definition — “The production of radionuclides by irradiation.” [1] —is technically adequate; however, the term ‘production’ gives a connotation that this is being done intentionally rather than, as is normally the case,incidentally.

All demonstration gets class 104 licenses – that’s research, not production

Matuzan and Walker 85

 Controlling the Atom:

The Beginnings of Nuclear Regulation, 1946-1962

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 Sections of the 1954 act reflected the state of the technology by establishing two classes of licenses for atomic facilities. One section authorized the AEC to issue commercial or "class 103" licenses (after the section number in the law) whenever it had determined that a facility had been "sufficiently developed to be of practical value for industrial or commercial purposes." Since the agency and the Joint Committee interpreted "practical value" to mean that atomic facilities had to be judged eco- nomically competitive with other energy sources, issuance of class-103 licenses was postponed until the industry had passed through its research and development phase.33 Instead, early power reactor facilities received "class-104" licenses un- der the terms of section 104. Reactors used in medical therapy, university research, and power demonstration came under this category. A key phrase authorized reactor licenses that would lead to the "demonstra- tion of the practical value . . . for industrial or commercial purposes." Class-104 licenses, then, covered all power reactors used during the developmental period until the industry could find a design that would eventually meet the "practical value" criterion of a class-103 commercial license. Furthermore, section 104 specifically instructed the AEC to im- pose the minimum amount of regulation on a licensee consistent with the public health and safety. In other words, a class-104 license indicated that the government wanted to encourage the new industry to undertake research and development under minimum regulation that would lead to major advances in power-reactor technology.34

Limits and precision – research reactors are both formally and technically distinct. There are HUNDREDS of types

World Nuclear Assocation 10

http://www.world-nuclear.org/info/inf61.html

 The World Nuclear Association (WNA), formerly the Uranium Institute, is an international organization that promotes nuclear power and supports the many companies that comprise the global nuclear industry. Its members come from all parts of the nuclear fuel cycle, including uranium mining, uranium conversion, uranium enrichment, nuclear fuel fabrication, plant manufacture, transport, and the disposition of used nuclear fuel as well as electricity generation itself [1]. Together, WNA members are responsible for 95% of the world's nuclear power outside of the U.S. [2] as well as the vast majority of world uranium, conversion and enrichment production.[3] The WNA says it aims to fulfill a dual role for its members: Facilitating their interaction on technical, commercial and policy matters and promoting wider public understanding of nuclear technology. [4] Accredited to the United Nations, the WNA is an independent, non-profit organization, funded primarily by membership subscriptions

Many of the world's nuclear reactors are used for research and training, materials testing, or the production of radioisotopes for medicine and industry. They are basically neutron factories.

These are much smaller than power reactors or those propelling ships, and many are on university campuses. There are about 240 such reactors operating, in 56 countries. Some operate with high-enriched uranium fuel, and international efforts are underway to substitute low-enriched fuel. Some radioisotope production also uses high-enriched uranium as target material for neutrons, and this is being phased out in favour of low-enriched uranium. Research reactors comprise a wide range of civil and commercial nuclear reactors which are generally not used for power generation. The term is used here to include test reactors, which are more powerful than most. The primary purpose of research reactors is to provide a neutron source for research and other purposes. Their output (neutron beams) can have different characteristics depending on use. They are small relative to power reactors whose primary function is to produce heat to make electricity. They are essentially net energy users. Their power is designated in megawatts (or kilowatts) thermal (MWth or MWt), but here we will use simply MW (or kW). Most range up to 100 MW, compared with 3000 MW (i.e. 1000 MWe) for a typical power reactor. In fact the total power of the world's 283 research reactors is little over 3000 MW.Research reactors are simpler than power reactors and operate at lower temperatures. They need far less fuel, and far less fission products build up as the fuel is used. On the other hand, their fuel requires more highly enriched uranium, typically up to 20% U-235, although some older ones use 93% U-235. They also have a very high power density in the core, which requires special design features. Like power reactors, the core needs cooling, though only the higher-powered test reactors need forced cooling. Usually a moderator is required to slow down the neutrons and enhance fission. As neutron production is their main function, most research reactors also need a reflector to reduce neutron loss from the core.As of October 2011 the IAEA database showed that there were 241 operational research reactors (92 of them in developing countries), 3 under construction, 202 shut down (plus 13 temporary) and 211 decommissioned.Types of research reactors There is a much wider array of designs in use for research reactors than for power reactors, where 80% of the world's plants are of just two similar types. They also have different operating modes, producing energy which may be steady or pulsed.A common design (67 units) is the pool type reactor, where the core is a cluster of fuel elements sitting in a large pool of water. Among the fuel elements are control rods and empty channels for experimental materials. Each element comprises several (e.g. 18) curved aluminium-clad fuel plates in a vertical box. The water both moderates and cools the reactor, and graphite or beryllium is generally used for the reflector, although other materials may also be used. Apertures to access the neutron beams are set in the wall of the pool. Tank type research reactors (32 units) are similar, except that cooling is more active.The TRIGA reactor is another common design (40 units). The core consists of 60-100 cylindrical fuel elements about 36 mm diameter with aluminium cladding enclosing a mixture of uranium fuel and zirconium hydride (as moderator). It sits in a pool of water and generally uses graphite or beryllium as a reflector. This kind of reactor can safely be pulsed to very high power levels (e.g. 25,000 MW) for fractions of a second. Its fuel gives the TRIGA a very strong negative temperature coefficient, and the rapid increase in power is quickly cut short by a negative reactivity effect of the hydride moderator.Other designs are moderated by heavy water (12 units) or graphite. A few are fast reactors, which require no moderator and can use a mixture of uranium and plutonium as fuel. Homogenous type reactors have a core comprising a solution of uranium salts as a liquid, contained in a tank about 300 mm diameter. The simple design made them popular early on, but only five are now operating.Research reactors have a wide range of uses, including analysis and testing of materials, and production of radioisotopes. Their capabilities are applied in many fields, within the nuclear industry as well as in fusion research, environmental science, advanced materials development, drug design and nuclear medicine.The IAEA lists several categories of broadly classified research reactors. They include 60 critical assemblies (usually zero power), 23 test reactors, 37 training facilities, two prototypes and even one producing electricity. But most (160) are largely for research, although some may also produce radioisotopes. As expensive scientific facilities, they tend to be multi-purpose, and many have been operating for more than 30 years.A total of over 670 research and test reactors has been built worldwide, 227 of these in the USA and 97 in the former Soviet Union. In the USA, 193 were commissioned in 1950s and 1960s.

## 2

#### Financial incentives must be targeted at energy generation

O’Brien, Minister of State, Department for Energy and Climate Change, UK Parliament, 11/18/’8

(Mike, “Clause 20 — Terms and conditions,” <http://www.theyworkforyou.com/debate/?id=2008-11-18b.159.3>)

I have quite a lot still to say, so I shall try to give as full a reply, and as brief, as possible. Amendment (b) to Lords amendment No. 42 suggests we replace the term "financial incentives" in proposed new subsection (2)(a) with "payment". The use of the term "financial incentives" clarifies that the general purpose of the scheme is to incentivise low-carbon electricity generation through financial incentives, as opposed to other means such as a regulatory obligation or barrier-busting support, such as help with the planning system. We believe that such clarity is helpful in setting out beyond any doubt the primary purpose of the scheme. However, to give additional reassurances about our intentions, I would point to the powers under proposed new subsection (3) that specifies the term "payment" in all the key provisions that will establish the scheme. In others words, it is explicit that we are dealing with payments to small-scale generators. What is proposed will be a real feed-in tariff scheme.

#### R&D isn’t tied to energy production—plan is an indirect incentive

EIA, Energy Information Administration, Office of Energy Markets and End Use, U.S. DOE, ‘92

(“Federal Energy Subsidies: Direct and Indirect Interventions in Energy Markets,” ftp://tonto.eia.doe.gov/service/emeu9202.pdf)

Research and development. The budgetary cost of Government-funded research and development (R&D) is easy to measure. Determining the extent to which Government energy R&D is a subsidy is more problematic: often it takes the form of a direct payment to producers or consumers, but the payment is not tied to the production or consumption of energy in the present. If successful, Federal-applied R&D will affect future energy prices and costs, and so could be considered an indirect subsidy.

#### Vote Neg—tons of bidirectional mechanisms impact energy tech in ways that could increase production—only direct financial disbursements for increased production create a predictable and manageable topic

EIA, Energy Information Administration, Office of Energy Markets and End Use, U.S. DOE, ‘92

(“Federal Energy Subsidies: Direct and Indirect Interventions in Energy Markets,” ftp://tonto.eia.doe.gov/service/emeu9202.pdf)

In some sense, most Federal policies have the potential to affect energy markets. Policies supporting economic stability or economic growth have energy market consequences; so also do Government policies supporting highway development or affordable housing. The interaction between any of these policies and energy market outcomes may be worthy of study. However, energy impacts of such policies would be incidental to their primary purpose and are not examined here. Instead, this report focuses on Government actions whose prima facie purpose is to affect energy market outcomes, whether through financial incentives, regulation, public enterprise, or research and development.

## 3

#### The aff’s invocation of death impacts is necrophilia, a blind obsession with body counts that ends in extinction. Vote neg to reject death impacts—this is a gateway issue—if they win death impacts are good, the rest of the 1NC applies—we won’t cross-apply to prove links

Erich **Fromm 64**, PhD in sociology from Heidelberg in 1922, psychology prof at MSU in the 60’s, “Creators and Destroyers”, The Saturday Review, New York (04. January 1964), pp. 22-25

People are aware of the possibility of nuclear war; they are aware of the destruction such a war could bring with it--and yet they seemingly make no effort to avoid it. Most of us are puzzled by this behavior because we start out from the premise that people love life and fear death. Perhaps we should be less puzzled if we questioned this premise. Maybe there are many people who are indifferent to life and many others who do not love life but who do love death. There is an orientation which we may call love of life (biophilia); it is the normal orientation among healthy persons. But there is also to be found in others a deep attraction to death which, following Unamuno's classic speech made at the University of Salamanca (1938), I call necrophilia. It is the attitude which a Franco general, Millán Astray, expressed in the slogan "Long live death, thus provoking Unamuno’s protest against this "necrophilous and senseless cry." Who is a necrophilous person? He is one who is attracted to and fascinated by all that is not alive, to all that is dead; to corpses, to decay, to feces, to dirt. Necrophiles are those people who love to talk about sickness, burials, death. They come to life precisely when they can talk about death. A clear example of the pure necrophilous type was Hitler. He was fascinated by destruction, and the smell of death was sweet to him. While in the years of success it may have appeared that he wanted only to destroy those whom he considered his enemies, the days of the Götterdämmerung at the end showed that his deepest satisfaction lay in witnessing total and absolute destruction: that of the German people, of those around him, and of himself. The necrophilous dwell in the past, never in the future. Their feelings are essentially sentimental; that is, they nurse the memory of feelings which they had yesterday--or believe that they had. They are cold, distant, devotees of "law and order." Their values are precisely the reverse of the values we connect with normal life; not life, but death excites and satisfies them. If one wants to understand the influence of men like Hitler and Stalin, it lies precisely in their unlimited capacity and willingness to kill. For this they' were loved by the necrophiles. Of the rest, many were afraid of them and so preferred to admire, rather than to be aware of, their fear. Many others did not sense the necrophilous quality of these leaders and saw in them the builders, saviors, good fathers. If the necrophilous leaders had not pretended that they were builders and protectors, the number of people attracted to them would hardly have been sufficient to help them seize power, and the number of those repelled by them would probably soon have led to their downfall. While life is characterized by growth in a structured, functional manner, the necrophilous principle is all that which does not grow, that which is mechanical. The necrophilous person is driven by the desire to transform the organic into the inorganic, to approach life mechanically, as if all living persons were things. All living processes, feelings, and thoughts are transformed into things. Memory, rather than experience--having, rather than being--are what counts. The necrophilous person can relate to an object--a flower or a person--only if he possesses it; hence, a threat to his possession is a threat to himself; if he loses possession he loses contact with the world. That is why we find the paradoxical reaction that he would rather lose life than possession, even though, by losing life, he who possesses has ceased to exist. He loves control, and in the act of controlling he kills life. He is deeply afraid of life, because it is disorderly and uncontrollable by its very nature. The woman who wrongly claims to be the mother of the child in the story of Solomon's judgment is typical of this tendency; she would rather have a properly divided dead child than lose a living one. To the necrophilous person justice means correct division, and they are willing to kill or die for the sake of what they call, justice. "Law and order" for them are idols, and everything that threatens law and order is felt as a satanic attack against their supreme values. The necrophilous person is attracted to darkness and night. In mythology and poetry (as well as in dreams) he is attracted to caves, or to the depth of the ocean, or depicted as being blind. (The trolls in Ibsen's Peer Gynt are a good example.) All that is away from or directed against life attracts him. He wants to return to the darkness {23} of the womb, to the past of inorganic or subhuman existence. He is essentially oriented to the past, not to the future, which he hates and fears. Related to this is his craving for certainty. But life is never certain, never predictable, never controllable; in order to make life controllable, it must be transformed into death; death, indeed, is the only thing about life that is certain to him. The necrophilous person can often be recognized by his looks and his gestures. He is cold, his skin looks dead, and often he has an expression on his face as though he were smelling a bad odor. (This expression could be clearly seen in Hitler's face.) He is orderly and obsessive. This aspect of the necrophilous person has been demonstrated to the world in the figure of Eichmann. Eichmann was fascinated by order and death. His supreme values were obedience and the proper functioning of the organization. He transported Jews as he would have transported coal. That they were human beings was hardly within the field of his vision; hence, even the problem of his having hated or not hated his victims is irrelevant. He was the perfect bureaucrat who had transformed all life into the administration of things. But examples of the necrophilous character are by no means to be found only among the inquisitors, the Hitlers and the Eichmanns. There are any number of individuals who do not have the opportunity and the power to kill, vet whose necrophilia expresses itself in other and (superficially seen) more harmless ways. An example is the mother who will always be interested in her child's sickness, in his failures, in dark prognoses for the future; at the same time she will not be impressed by a favorable change nor respond to her child's joy, nor will she notice anything new that is growing within him. We might find that her dreams deal with sickness, death, corpses, blood. She does not harm the child in any obvious way, yet she may slowly strangle the child's joy of life, his faith--in growth, and eventually infect him with her own necrophilous orientation. My description may have given the impression that all the features mentioned here are necessarily found in the necrophilous person. It is true that such divergent features as the wish to kill, the worship of force, the attraction to death and dirt, sadism, the wish to transform the organic into the inorganic through "order" are all part of the same basic orientation. Yet so far as individuals are concerned, there are considerable differences with respect to the strength of these respective trends. Any one of the features mentioned here may be more pronounced in one person than in another. Furthermore, the degree to which a person is necrophilous in comparison with his biophilous aspects and the degree to which a person is aware of necrophilous tendencies and rationalizes them vary considerably from person to person. Yet the concept of the necrophilous type is by no means an abstraction or summary of various disparate behavior trends. Necrophilia constitutes a fundamental orientation; it is the one answer to life that is in complete opposition to life; it is the most morbid and the most dangerous among the orientations to life of which man is capable. It is true perversion; while living, not life but death is loved--not growth, but destruction. The necrophilous person, if he dares to be aware of what he feels, expresses the motto of his life when he says: "Long live death!" The opposite of the necrophilous orientation is the biophilous one; its essence is love of life in contrast to love of death. Like necrophilia, biophilia is not constituted by a single trait but represents a total orientation, an entire way of being. It is manifested in a person's bodily processes, in his emotions, in his thoughts, in his gestures; the biophilous orientation expresses itself in the whole man. The person who fully loves life is attracted by the process of life in all spheres. He prefers to construct, rather than to retain. He is capable of wondering, and he prefers to see something new to the security of finding the old confirmed. He loves the adventure of living more than he does certainty. His approach to life is functional rather than mechanical. He sees the whole rather than only the parts, structures rather than summations. He wants to mold and to influence by love, by reason, by his example--not by force, by cutting things apart, by the bureaucratic manner of administering people as if they were things. He enjoys life and all its manifestations, rather than mere excitement. Biophilic ethics has its own principle of good and evil. Good is all that serves life; evil is all that serves death. Good is reverence for life (this is the main thesis of Albert Schweitzer, one of the great representatives of the love of life--both in his writings and in his person), and all that enhances life. Evil is all that stifles life, narrows it down, {24} cuts it into pieces. Thus it is from the standpoint of life-ethics that the Bible mentions as the central sin of the Hebrews: "Because thou didst not serve thy Lord with joy and gladness of heart in the abundance of all things." The conscience of the biophilous person is not one of forcing oneself to refrain from evil and to do good. It is not the superego described by .Freud, a strict taskmaster employing sadism against oneself for the sake of virtue. The biophilous conscience is motivated by its attraction to life and joy; the moral effort consists in strengthening the life loving side in oneself. For this reasons the biophile does not dwell in remorse and guilt, which are, after all, only aspects of self-loathing and sadness. He turns quickly to life and attempts to do good. Spinoza's Ethics is a striking example of biophilic morality. "Pleasure," he says, "in itself is not bad but good; contrariwise, pain in itself is bad." And in the same spirit: "A free man thinks of death least of all things; and his wisdom is a meditation not of death but of life." Love of life underlies the various versions of humanistic philosophy. In various conceptual forms these philosophies are in the same vein as Spinoza's; they express the principle that the same man loves life; that man's aim in life is to be attracted by all that is alive and to separate himself from all that is dead and mechanical. The dichotomy of biophilia-necrophilia is the same as Freud's life-and-death instinct. I believe, as Freud did, that this is the most fundamental polarity that exists. However, there is one important difference. Freud assumes that the striving toward death and toward life are two biologically given tendencies inherent in all living substance that their respective strengths are relatively constant, and that there is only one alternative within the operation of the death instinct--namely, that it can be directed against the outside world or against oneself. In contrast to these assumptions I believe that necrophilia is not a normal biological tendency, but a pathological phenomenon--in fact, the most malignant pathology that exists in mail. What are we, the people of the United States today, with respect to necrophilia and biophilia? Undoubtedly our spiritual tradition is one of love of life. And not only this. Was there ever a culture with more love of "fun" and excitement, or with greater opportunities for the majority to enjoy fun and excitement? But even if this is so, fun and excitement is not the same as joy and love of life; perhaps underneath there is indifference to life, or attraction to death? To answer this question we must consider the nature of our bureaucratized, industrial, mass civilization. Our approach to life becomes increasingly mechanical. The aim of social efforts is to produce things, and. in the process of idolatry of things we transform ourselves into commodities. The question here is not whether they are treated nicely and are well fed (things, too, can be treated nicely); the question is whether people are things or living beings. People love mechanical gadgets more than living beings. The approach to man is intellectualabstract. One is interested in people as objects, in their common properties, in the statistical rules of mass behavior, not in living individuals. All this goes together with the increasing role of bureaucratic methods. In giant centers of production, giant cities, giant countries, men are administered as if they were things; men and their administrators are transformed into things, and they obey the law of things. In a bureaucratically organized and centralized industrialism, men's tastes are manipulated so that they consume maximally and in predictable and profitable directions. Their intelligence and character become standardized by the ever-increasing use of tests, which select the mediocre and unadventurous over the original and daring. Indeed, the bureaucratic-industrial civilization that has been victorious in Europe and North America has created a new type of man. He has been described as the "organization man" and as homo consumens. He is in addition the homo mechanicus. By this I mean a "gadget man," deeply attracted to all that is mechanical and inclined against all that is alive. It is, of course, true that man's biological and physiological equipment provides him with such strong sexual impulses that even the homo mechanicus still has sexual desires and looks for women. But there is no doubt that the gadget man's interest in women is diminishing. A New Yorker cartoon pointed to this very amusingly: a sales girl trying to sell a certain brand of perfume to a young female customer recommends it by remarking, "It smells like a new sports car." Indeed, any observer of men's behavior today will confirm that this cartoon is more than a clever joke. There are apparently a great number of men who are more interested in sports-cars, television and radio sets, space travel, and any number of gadgets than they are in women, love, nature, food; who are more stimulated by the manipulation of non-organic, mechanical things than by life. Their attitude toward a woman is like that toward a car: you push the button and watch it race. It is not even too farfetched to assume that homo mechanicus has more pride in and is more fascinated by, devices that can kill millions of people across a distance of several thousands of miles within minutes than he is frightened and depressed by the possibility of such mass destruction. Homo mechanicus still likes sex {25} and drink. But all these pleasures are sought for in the frame of reference of the mechanical and the unalive. He expects that there must be a button which, if pushed, brings happiness, love, pleasure. (Many go to a psychoanalyst under the illusion that he can teach them to find the button.) The homo mechanicus becomes more and more interested in the manipulation of machines, rather than in the participation in and response to life. Hence he becomes indifferent to life, fascinated by the mechanical, and eventually attracted by death and total destruction. This affinity between the love of destruction and the love of the mechanical may well have been expressed for the first time in Marinetti's Futurist Manifesto (1909). "A roaring motor-car, which looks as though running on a shrapnel is more beautiful than the Victory of Samothrace. … We wish to glorify war--the only health-giver of the world-militarism, patriotism, the destructive arm of the Anarchist, the beautiful Ideas that kill the contempt for woman." Briefly then, intellectualization, quantification, abstractification, bureaucratization, and reification--the very characteristics of modern industrial society--when applied to people rather than to things are not the principles of life but those of mechanics. People living in such a system must necessarily become indifferent to life, even attracted to death. They are not aware of this. They take the thrills of excitement for the joys of life and live under the illusion that they are very much alive when they only have many things to own and to use. The lack of protest against nuclear war and the discussion of our "atomologists" of the balance sheet of total or half-total destruction show how far we have already gone into the "valley of the shadow of death."1 To speak of the necrophilous quality of our industrial civilization does not imply that industrial production as such is necessarily contrary to the principles of life. The question is whether the principles of social organization and of life are subordinated to those of mechanization, or whether the principles of life are the dominant ones. Obviously, the industrialized world has not found thus far an answer, to the question posed here: How is it possible to create a humanist industrialism as against the bureaucratic mass industrialism that rules our lives today? The danger of nuclear war is so grave that man may arrive at a new barbarism before he has even a chance to find the road to a humanist industrialism. Yet not all hope is lost; hence we might ask ourselves whether the hypothesis developed here could in any way contribute to finding peaceful solutions. I believe it might be useful in several ways. First of all, an awareness of our pathological situation, while not yet a cure, is nevertheless a first step. If more people became aware of the difference between love of life and love of death, if they became aware that they themselves are already far gone in the direction of indifference or of necrophilia, this shock alone could produce new and healthy reactions. Furthermore, the sensitivity toward those who recommend death might be increased. Many might see through the pious rationalizations of the death lovers and change their admiration for them to disgust. Beyond this, our hypothesis would suggest one thing to those concerned with peace and survival: that every effort must be made to weaken the attraction of death and to strengthen the attraction of life. Why not declare that there is only one truly dangerous subversion, the subversion of life? Why do not those who represent the traditions of religion and humanism speak up and say that there is no deadlier sin than love for death and contempt for life? Why not encourage our best brains--scientists, artists, educators--to make suggestions on how to arouse and stimulate love for life as opposed to love for gadgets? I know love for gadgets brings profits to the corporations, while love for life requires fewer things and hence is less profitable. Maybe it is too late. Maybe the neutron bomb, which leaves entire cities intact, but without life, is to be the symbol of our civilization. But again, those of us who love life will not cease the struggle against necrophilia.

## 4

#### Obama will solve fiscal cliff in the lame duck

Marcus, staff writer for the Washington Post, 10/27/2012

(Ruth, “How will fiscal cliff get fixed? It depends on who wins,” http://azstarnet.com/news/opinion/how-will-fiscal-cliff-get-fixed-it-depends-on-who/article\_32ad6002-981e-52fd-abbb-597f60771dec.html)

Betting on Congress to do something - anything - is, as Samuel Johnson said of second marriages, the triumph of hope over experience. Betting on a lame-duck Congress to do anything of consequence is even more foolhardy.

Yet the Congress that limped back to town after the 2010 election was surprisingly fruitful. It extended expiring tax cuts, lifted the ban on gays in the military, and ratified a nuclear arms treaty.

**Could the 2012 lame duck be similarly productive?** **I'm uncharacteristically optimistic** - especially if President Obama is re-elected.

This is not a partisan assessment. Congress' primary post-election task will be to screech to a halt **before plunging off the fiscal cliff** of expiring tax cuts and looming budgetary sequester.

If Mitt Romney is elected, the well-honed instinct of Congress will be to do what it does best: punt. Romney has already said he would not want to see the lame-duck session try to craft some kind of grand bargain on taxes and spending.

Rather, he would prefer a reprieve of some months - extending the tax cuts, postponing the sequester - to come up with his own plan. Would an exiting Obama really veto an extension? Would he have the remaining juice to force a bargain? It's hard to see either happening.

Can-kicking in the event of a Romney victory is the safest bet, and in some ways the fairest outcome. The voters will have spoken. Let the new president and the new Congress deal with the problem.

**The calculus is different if Obama is re-elected**. The composition of Congress probably won't change much; if anything, Republicans are apt to have a narrower House majority, providing **an incentive for cooperation** while the GOP retains greater leverage.

There are four pieces of evidence to support this admittedly rosy scenario:

First, a bipartisan group of senators has been working intensively to craft a deal along the lines suggested by the Simpson-Bowles debt commission, a stew of revenue increases, tax reform, spending cuts and entitlement changes.

Second, **the administration has been working on a parallel track**, **with a debt-reduction plan to be unveiled soon after Election Day**. **Obama almost made it to the mountaintop once before** with Speaker John Boehner. Whatever the reasons that deal unraveled - did Obama chicken out? did Boehner balk? - both men see a budget deal as a legacy moment.

#### Plan kills Obama

Petroleum Intelligence Weekly, 1/9/12, Obama Plays Safe on Energy Policy, Lexis

With less than a year to go **until he faces re-election**, US President Barack **Obama is trying to avoid controversial energy policy decisions**, postponing the finalization of restrictions on oil refinery and power plant emissions and delaying the approval of a major crude pipeline project. The president’s caution will prolong the status quo on issues where the industry both opposes and supports the administration’s plans, and also illustrates what's at stake for energy policy depending on whether or not Obama is given another four years in office. Most of Obama's original campaign **pledges on promoting alternatives to fossil fuels** and tackling climate change **have not passed muster with Congress**, most notably an ambitious plan for national carbon controls, a subsequent toned-down clean energy standard floated after the carbon legislation failed, and repeated efforts to repeal $30 billion-$40 billion worth of oil industry tax deductions over 10 years ( PIW May9'11 ). The one exception has been the passage of $90 billion in clean energy funding as part of an economic stimulus bill passed early in Obama's term, but **the White House has been unable to repeat** this **success in other energy policy areas** ( PIW Feb.23'09 ).

#### Successful Obama honeymoon is make or break for the economy

Newman, chief business correspondent for U.S. News & World Report, 10/26/2012

(Rick, “The Fiscal Cliff Masks an Improving Economy,” http://www.usnews.com/news/blogs/rick-newman/2012/10/26/the-fiscal-cliff-masks-an-improving-economy)

If President Barack Obama wins a second term, he may **enjoy the kind of honeymoon he didn't get the first time around**. And if Republican challenger Mitt Romney wins, he may wonder why Obama got all that gray hair.

At the moment, economists, politicos and pundits are obsessed with the looming election, to be followed by a tense lame-duck session in which Congress and the president must figure out what to do about the "fiscal cliff." If all of the tax hikes and spending cuts set to go into effect at the end of the year actually do, **it could torpedo economic growth and cause another recession**. Congress could also delay those big decisions or dicker indefinitely, **with the economy shackled to political ineptitude**.

But if Congress does its job, and legislates some kind of compromise, the prospects for the economy could brighten considerably in 2013. "Assuming the fiscal cliff is resolved in a relatively benign manner, a post-resolution rebound is likely," Bank of America Merrill Lynch advised in a recent report. There are several reasons for optimism:

Housing seems to have turned around for good. After a six-year housing bust, prices seemed to have stopped falling in most markets, and mortgage rates remain near record lows. A variety of indicators show that real estate agents, home builders and even buyers are increasingly bullish. That could turn housing from a drag on the economy into a driver of growth. "The odds are strong that housing will resume its long-absent role as a key contributor to GDP growth," says Bernard Baumohl, chief global economist of the Economic Outlook Group.

Consumers are surprisingly upbeat. Confidence surveys show an unusual divergence between business leaders, who have been getting gloomier, and ordinary people, who have been feeling better. The gap might exist because business leaders get paid to worry about problems like the fiscal cliff and the European debt crisis, while regular people may be tuning out such worries. If the economy manages to bypass the cliff, rising consumer confidence could generate a kind of self-sustaining lift.

Car sales are robust. Auto sales have become one of the stronger segments of the economy, despite higher gas prices and a weak job market. That suggests a few important things: Credit is loosening up, including subprime lending; many consumers feel confident enough to make big purchases; and the Federal Reserve's low-interest-rate policy may actually be working, at least in the car market.

Business spending is poised to pick up. CEOs have increasingly voiced their concern over political gridlock in Washington, deferring plans to invest or hire. That's probably slowing the economy today, which partly explains anemic growth of just 2 percent. But that might also indicate pent-up demand. "Corporations have accumulated profits and increased cash, suggesting they are primed for greater investment," according to Merrill Lynch. And with nearly $2 trillion of cash on hand, corporations have the means to administer quite a jolt to the economy, if their leaders choose to.

#### Extinction

Kemp 10

Geoffrey Kemp, Director of Regional Strategic Programs at The Nixon Center, served in the White House under Ronald Reagan, special assistant to the president for national security affairs and senior director for Near East and South Asian affairs on the National Security Council Staff, Former Director, Middle East Arms Control Project at the Carnegie Endowment for International Peace, 2010, The East Moves West: India, China, and Asia’s Growing Presence in the Middle East, p. 233-4

The second scenario, called Mayhem and Chaos, is the opposite of the first scenario; everything that can go wrong does go wrong. The world economic situation weakens rather than strengthens, and India, China, and Japan suffer a major reduction in their growth rates, further weakening the global economy. As a result, energy demand falls and the price of fossil fuels plummets, leading to a financial crisis for the energy-producing states, which are forced to cut back dramatically on expansion programs and social welfare. That in turn leads to political unrest: and nurtures different radical groups, including, but not limited to, Islamic extremists. The internal stability of some countries is challenged, and there are more “failed states.” Most serious is the collapse of the democratic government in Pakistan and its takeover by Muslim extremists, who then take possession of a large number of nuclear weapons. The danger of war between India and Pakistan increases significantly. Iran, always worried about an extremist Pakistan, expands and weaponizes its nuclear program. That further enhances nuclear proliferation in the Middle East, with Saudi Arabia, Turkey, and Egypt joining Israel and Iran as nuclear states. Under these circumstances, the potential for nuclear terrorism increases, and the possibility of a nuclear terrorist attack in either the Western world or in the oil-producing states may lead to a further devastating collapse of the world economic market, with a tsunami-like impact on stability. In this scenario, major disruptions can be expected, with dire consequences for two-thirds of the planet’s population.

## 5

#### Obama narrowly ahead in Ohio and it will determine the election—mobilizing voters and winning independents key—votes can still switch based on issues

Koff, 10/28

(Plain Dealer Washington Bureau Chief, Ohio Presidential Poll: Presidential race in battleground Ohio is dead even

http://www.cleveland.com/open/index.ssf/2012/10/ohio\_presidential\_poll.html)

Without winning Ohio, it will be hard for either candidate to amass the electoral votes necessary for the presidency. It hasn't been done in 52 years. "Absent any more twists and turns, a remarkable presidential campaign may end with the campaign that executes the best ground game, narrowly delivering Ohio for the next president of the United States," said Eric Rademacher, co-director of the University of Cincinnati's Institute for Policy Research. The institute conducted the poll for a consortium that includes The Plain Dealer, Columbus Dispatch, Cincinnati Enquirer and other newspapers. In this and a number of recent polls, Romney tightened or closed the lead that Obama had coming out of the Democratic convention and into the candidates' debates in early October. In the previous Ohio Newspaper Poll, released Sept. 23, Obama had a five-point lead over his challenger. But **the odds still may be in Obama's favor, according to several other polls released last week**. A CNN poll in Ohio had Obama leading Romney by four points. A Time magazine poll in the state showed Obama beating Romney by five. Yet a Rasmussen Reports poll in Ohio had the race tied. In several other battleground states, including Virginia and Florida, the October momentum has moved Romney slightly ahead of of Obama, although still in the range of a statistical tie, according to polling averages tracked by the website Real Clear Politics. The same trend has occurred in national polls. But national popularity does not crown the winner. It takes winning a majority of the nation's 538 electoral votes. Factoring for states in each candidate's column already – New York for Obama, for instance, Utah for Romney – that leaves the election's outcome in the hands of a small group of states including Ohio, Wisconsin and Iowa. Florida, Virginia and Colorado could still swing the pendulum one way or the other, but **Ohio is widely acknowledged as the ultimate prize.** Political scientists and analysts say it would be very hard to win 270 electoral votes, a bare majority, without Ohio and its 18 electoral votes that go to the victor. Since 1860, when Abraham Lincoln won, every Republican who won the presidency has done so with the help of Ohio. And John F. Kennedy was the last Democrat who won the presidency without taking Ohio. That was in 1960. Obama lost ground in a variety of polls after his languid performance in the first candidates' debate on Oct. 3. Romney appeared confident and commanding. The presidential candidates have debated twice more since then, and their running mates debated once. A majority in the new Ohio Newspaper Poll, 62 percent, said that the debates would not make a difference in their vote, while a sizeable minority, 23 percent, said the presidential debates would make them more likely to vote for Romney. A large share of the voters answering that way, however, were self-identified Republicans. The poll's responses in general showed strong partisan tendencies – 93 percent of voters who said they were Democrats said they would vote for Obama, and 94 percent who said they were Republicans said they would vote for Romney. This suggests the debates may have validated more opinions than changed them. The poll of 1,015 likely voters, reached by land lines and cell phones, was conducted between Oct. 18 and Oct. 23. A number of respondents were called before the final presidential debate on Oct. 22. The last debate, however, did not appear to have a strong winner or loser and did not move the numbers significantly in other polls taken later in the week. The Ohio Newspaper Poll had a margin of error of plus or minus 3.1 percentage points. Nearly one-fifth of respondents indicated they had already voted. Obama and Democrats have been aggressive in urging supporters to vote early. Obama voted early himself, in his home state of Illinois. That likely explains Obama's big lead over Romney, 63 to 36, among early voters. More Democrats than Republicans said in the poll that they will definitely vote or have already voted. Some, though not all, Republican officials have not disputed the early Obama voting lead but characterize it as a tactical choice with dwindling returns. The Republican National Committee said in a blog post late last week that while Democrats have been persuading their loyal voters to go to the polls early, Republicans are lining up "low-propensity voters," or those who do not vote as regularly, to join legions of other Republicans who will make their selections on election day. Rich Beeson, Romney's national political director, and Scott Jennings, the campaign's state director, said separately in a memo on Thursday, "We have knocked on 21 times as many doors and made three times as many phone calls in Ohio compared to 2008. Sometime this week we'll knock on the two millionth door and make our sixth millionth voter contact since May." Furthermore, more Romney voters than Obama voters, 54-45, characterized themselves as "very enthusiastic" about this election, an indication of their strong desire for change at the White House. Men prefer Romney and his running mate, Paul Ryan, by a 12-point margin, while women prefer Obama and Vice President Joe Biden by 11 points, the poll showed. That's a change since late September, when Romney and Obama ran much closer among men, said Rademacher. Votes on Nov. 6, election day, are likely to follow Ohio's political-geographic traditions, according to this poll's results. Obama had a nine-point edge in Northeast Ohio, considered Ohio's Democratic sweet spot, while Romney had an 11-point lead in Southwest Ohio, a conservative region that Clevelanders often don't understand. In Central Ohio, a key region to watch on election night, Obama had a 4-point lead. Polls are a snapshot in time, and turnout in any region can change the race's outcome. If a candidate gets 60 percent of the vote in a county that normally gives 64 percent to that party, it can spell trouble. Still, polls this close to the election provide a valuable view of each candidate's strengths and weaknesses, not only on political geography but also on issues. And they can help voters understand why candidates are visiting their state so often and **focusing on specific issues or groups.** The Ohio Newspaper Poll queried likely voters on several issues: Fifty percent of voters said Obama would do the best job handling foreign policy, compared with 46 percent for Romney. Fifty-one percent said Romney would do the best job handling the economy, compared with 45 percent for Obama. Fifty-four percent of Democrats said the Obama administration's loans to the auto industry will make them more likely to vote for the incumbent, while only 3 percent of Republicans gave that response – and 39 percent of them said it would make them less likely to support him. The largest share of Republicans, 57 percent, said the auto loans would make no difference in deciding for or against Obama. Fifty-four percent of all likely voters said Romney's controversial comments about Democratic voters and people dependent on government help – his "47 percent" remarks – would make no difference in how they vote. Romney, according to video obtained by the magazine Mother Jones, said Obama's supporters represent 47 percent of the country who "believe that they are victims" and "entitled" to government assistance. But that, too, broke along party lines: 59 percent of Democrats said Romney's remarks made them more likely to vote for Obama. Conversely, more than one in four Republicans – 28 percent – said those remarks made them more likely to vote for Romney. **A key constituency in this election is independent voters**. Poll respondents who said they were independents represented a relatively small number in the poll: 96 likely voters, compared with 460 who said they were Democrats and 432 who said they were Republicans. That resulted in a high statistical margin of error, 10 percent, for independents. This makes it difficult to divine much meaning from poll questions that resulted in narrow answers, such as whether independents would vote for Obama or Romney if the election were held today. Independents gave the edge to Obama -- but by only 2 points, way too small to interpret because of the large margin of error. But **on issues**, the candidates' positions created a big enough split among independents to provide some insights – and they may help show where the key to this election lies, says Rademacher.

#### Pushing nuclear energy is unpopular with coal voters—they view it as a threat to their job

Tucker, 12

(8/24, Columnist-American Spectator, Nuclear's Dilemma: Few Jobs, Just Energy

http://spectator.org/archives/2012/08/24/nuclears-dilemma-few-jobs-just)

Obama defends green energy, Romney coal, because that's where the jobs are. Nuclear might as well not exist. Last week, Environmental Entrepreneurs, a trade group, announced that wind and solar projects around the country had created 34,409 new jobs around the country in the second quarter of 2012, with high concentrations in California, Michigan, Ohio, Florida, and Colorado. GOP presidential candidate Mitt Romney immediately countered this by visiting Ohio's coal country, promising to protect the industry from the Obama Administration' "War on Coal." Not to be outdone, President Obama was off to Iowa where he even won the support of Republican Governor Terry Branstad in urging Congress to renew the production tax credit so that the wind industry can create even more jobs. So the great Presidential battle over the future of energy is shaping up -- which can create more jobs, coal or wind? What about nuclear, which might also be said to have a potential role in the nation's energy future? Well, nuclear energy **has one great weakness. It doesn't create many jobs**. All it creates is lots of energy. And in the contest for which form of energy can employ the most people, that doesn't seem to count for much at all. Let it be said first that the other players missing in action here are gas and oil. New drilling techniques for shale gas and tight oil are now creating more jobs and useful energy than all the other technologies combined. Production from the Marcellus Shale in Pennsylvania and Ohio is up 82 percent over last year. North Dakota's Bakken shale has created the lowest unemployment rate in the nation. Oklahoma gas fields are complaining they can't find enough workers. Any healthy, working-age male could head for any of these states and find themselves making close to a six-figure income. But all this is happening in the private sector so it doesn't draw much attention in presidential campaigns. Most of the Marcellus shale lies under private lands so -- blessedly -- it can be done without federal interference. Only New York State has stopped the show -- which is just another reason why upstate New York, if separated from New York City, ranks as the second-poorest state in the nation behind only Mississippi. What attracts politicians to coal and wind is that they involve the federal government. The EPA is on a campaign to close down 10 percent of the nation's coal plants and so Romney can win votes by promising to intervene. The President, on the other hand, continues his efforts to "harness the sun and the winds and the soil to fuel our cars and run our factories," as he put it in his Inaugural Address. Wind's production tax credit -- which makes it profitable to erect windmills even if they never produce a kilowatt of electricity -- will be extended into the foreseeable future. Corn ethanol, which now consumes 40 percent of the corn crop, will continue to be mandated, even though it is driving up world food prices and international officials are accusing us of starving the world's poor. (The EPA showed its defiance last week by announcing that sorghum, the nation's third largest crop, will also be converted into ethanol.) The military is being instructed to substitute biofuels for jet fuel, even though it will cost $59 a gallon. And with nearly half the land west of the Mississippi still owned by the federal government, the President is able to commission a 350-square-mile wind farm in Wyoming and several 20-square-mile solar plants in the Mojave Desert. All this will create jobs, jobs, jobs. So how does nuclear stack up against all this? Not very well. Take the matter of coal mining. There are an estimated 88,000 coal miners in this country working 1,300 coal mines, most of them in Pennsylvania, Ohio, West Virginia, and Kentucky. There are 400 mines in Kentucky alone. More than half a dozen states identify themselves as "coal states," with Indiana, Illinois, Tennessee, Alabama, Colorado, and Wyoming filling out the list. Montana, the state with the biggest coal reserves, hasn't really started developing them yet. To this must be added the jobs in the railroad industry. A 1,000-megawatt (MW) coal plant must be replenished by a 110-car coal train arriving at the plant every 30 hours. A fully loaded coal "unit" train now leaves the Powder River Basin in Wyoming every eight minutes. Coal constitutes almost half the freight aboard the railroads and it is a moot question as to whether the railroads really own the coal companies or the coal companies own the railroads. In any case, there are close to 200,000 railroad workers in the U.S., half of them dedicated to moving coal. Now compare this to the mining and transport needed to fuel a nuclear reactor. Because uranium has an energy density almost 3 million times that of coal, not much is required. The Uranium Producers Association reports there are 13 operating uranium mines in the country, employing 1,360 workers. The annual output of uranium mining would fill two railroad cars so no railroad traffic either. Actually, domestic uranium production has been depressed over the last two decades because of the Megatons-to-Megawatts program that has recycled 18,000 former Soviet warheads in the greatest swords-into-plowshares effort in history. (Never heard of it? I wonder why.) But the treaty ends in 2014 and domestic uranium production may increase a little. The Russians are now proposing to supply the entire world with uranium out of one mine in Siberia. Because uranium mining is such a small-scale operation, there are no "nuclear states." New Mexico's Pete Domenici was once the leading advocate in the Senate because of the presence of the Los Alamos and Sandia National Laboratories. His mantle has been picked up by Senator Lamar Alexander of Tennessee, who has Oak Ridge. But **nuclear has no real constituency in either state and plays very little in their politics.** Then there is the matter of enriching uranium and preparing it for use in reactors. That is done at the nation's only plant in Paducah, Kentucky, which employs 1,200 people. The U.S. Enrichment Corporation (USEC) is trying to replace it with a more modern facility in Piketon, Ohio, but that will employ about the same amount. How about transporting the fuel rods to the reactors? That requires a fleet of six trucks making the trip once every 18 months. Now compare all this with wind, an even bigger vote-getter. Each 45-story windmill produces about 2 MW, which means you need 500 of them to equal the capacity of a nuclear reactor. These have to be manufactured and trucked to remote sites across the country. You've probably seen them on the highway. Each windmill blade is half the length of a football field. But wind farms only produce electricity 20 percent of the time so you need five times that number to equal one 1000-MW nuclear plant. That's 2,500 45-story windmills, which translates into lots of manufacturing jobs, lots of transport, and lots of on-site construction. Wind is nothing if not labor intensive. The job requirements for solar are on the same scale. Each PV panel or highly polished mirror -- several square miles of them -- demands extensive manufacturing and high maintenance. If they are located in the desert, solar facilities are going to require constant cleaning and polishing so they do not become covered with dirt and lose their efficiency. We may have to employ half of Mexico to do the job. That means even more votes on the way. Where nuclear does create jobs is in the construction and operation of reactors. Building a new plant will employ 5,000 construction workers over five years, probably double or triple the number required for coal or wind. Forbes just published an article saying that a 1000-MW reactor creates 500 highly skilled operating positions while coal produces 220 less-skilled jobs, wind 90 and natural gas only 60. But these jobs are highly localized. Bisconti research has found that support for nuclear regularly exceeds 80 percent in towns where reactors are located but the benefits do not spread to neighboring areas. The town of Vernon, population 2,000, which hosts Vermont Yankee, is almost 100 percent in favor of keeping the reactor operating. But its interests are swamped by 323,000 other Vermonters who see no benefits and think they can produce the same amount of energy by covering the Green Mountains with windmills. The only way in which nuclear really "creates job" is in providing clean, cheap electricity to make other manufacturing operations profitable. Tennessee has refashioned itself into a major auto manufacturing state, hosting both Nissan and Volkswagen's U.S. headquarters and creating 100,000 ancillary jobs, partly by capitalizing on nuclear electricity from the Tennessee Valley Authority. IBM, Vermont's largest employer, has threatened to leave the state if it loses the cheap power of Vermont Yankee. No, **when it comes to marshaling the votes of thousands of coal miners** or railroad employees or windmill manufacturers, **nuclear definitely fails the test**. All it produces is lots of clean, cheap energy.

#### Obama will win the election by holding Ohio—Romney’s only route to victory is cutting into his lead with coal voters

Cohn, 10/25

(Election Expert-The New Republic, “The Road to Victory in Ohio,” http://www.tnr.com/blog/electionate/109150/the-road-victory-in-ohio)

For the second time in eight years, the Buckeye State is poised to **offer the decisive electoral votes** to reelect an incumbent president. The polls show Obama with a lead of around 2 or 3 points, **enough to make him a favorite but not enough to assure victory**, especially since he remains beneath 49 percent of the vote. At first glance, Obama’s resilience in the Buckeye State seems to defy partisan history and demographics. It’s about the only state where Obama is doing so well where his chances depend on maintaining gains among white working-class voters who voted for Bush in 2004. But Obama’s success among African Americans and postgraduates has shifted the state toward Democrats, forcing Romney to compensate with white working class Kerry voters. And although there are clear opportunities for Romney to make gains in southern and southeastern Ohio, the Obama campaign’s strategy is **perfectly suited to deny him the gains he needs.** But Obama’s road to victory in Ohio starts with a strong showing among the African American voters that provided Bush with reelection eight years ago. It’s often overlooked just how much Obama gains over Kerry’s performance just by winning an outsized share of African Americans. According to the 2004 exit polls, Bush’s concerted efforts to appeal to African American voters—mainly on cultural issues—held Kerry to just 84 percent of the black vote. African American voters predictably swung decisively toward Obama, offering him 97 percent of the vote on Election Day with an additional point of black turnout. In 2004, Bush won Ohio by 118,000 votes, but Obama’s gains among African American voters are sufficient to erase Kerry’s deficit without any changes in the composition of the electorate. The exit polls show that approximately 550,000 African American voters cast ballots in Ohio and offered Kerry a margin of approximately 380,000 votes. If Kerry had won 97 percent of the black vote, as Obama did, then Kerry would have won black voters by a 530,000 vote margin. Thus, changes in black vote preference alone is sufficient to swing Ohio by 150,000 votes—enough to overcome Bush’s 118,000 vote victory. Obama makes additional gains from increased African American turnout. The 2008 exit polls showed African Americans increasing from 10 percent in 2004 to 11 percent in 2012, increasing his margin among African Americans by an additional 60,000 votes. If Obama can maintain elevated black turnout and support, he would transform Kerry’s 118,000 vote deficit into a 92,000 vote lead without persuading a single white Bush voter. These numbers aren’t exact, but they do show that Obama’s support among African Americans is enough to turn a lean-Republican state like Ohio into a true toss-up that might even tilt-Democratic without commensurate losses among white voters. Obama ultimately won by 262,000 voters in Ohio and many of his additional gains came from rural northwest Ohio and the Columbus metropolitan area. Like many other white, moderate, but traditionally Republican areas in the northwestern part of the country (think Indiana, northeast Wisconsin, North Dakota), Obama’s performance in many parts of rural northwest Ohio was the best by any Democrat since 1964. Obama’s gains in the relatively affluent and well-educated Columbus metropolitan area were similar to his gains in other post-industrial metropolitan areas like Raleigh, Washington, and Denver—Bush won Ohio’s postgraduate voters by 2 points in 2004, but Obama would win them by 10 points. These gains were felt most clearly in Columbus, where Obama netted an additional 65,000 votes over Kerry’s performance. Elsewhere in Ohio, Obama made relatively small gains with white voters and actually did worse than Kerry in the Mahoning and Ohio River valleys of southeastern Ohio. But these losses weren’t nearly enough to overcome Obama’s huge gains in northwest Ohio, Columbus, and among African Americans. Romney’s road to victory starts by undoing Obama’s gains in rural northwest Ohio, where Obama outperformed reasonable Democratic benchmarks by a substantial margin. But Obama seems likely to hold onto many of his gains Franklin County and African Americans, leaving Romney with a deficit in the state. Resurgent Republican enthusiasm can probably make up some ground, but Romney **would still need to persuade plenty of white** Kerry or Obama **voters to overcome persistent Democratic strength in Franklin County** and among African Americans, where Obama is all but assured to outperform Kerry’s total. Where can the Romney campaign make up ground among Kerry voters? **His best chance is the traditionally Democratic stretch of** southern and **southeastern Ohio**, where Democrats long held the allegiance of working class voters **tied to the coal industry**. If you’ve been wondering why Romney likes talking about coal so much, this is why: there are many socially conservative but Democratic-leaning voters in southeastern Ohio who have never especially liked the president and where the so-called ‘**war on coal’ is a pocket book issue**. If one excludes the northern cities of Akron, Canton, Youngstown, and Warren, the coal producing stretch of Ohio holds nearly 700,000 voters or about 12 percent of the Ohio electorate. Obama only won 45 percent of the vote in this traditionally Democratic but socially conservative region, but that still **leaves plenty of room for Romney to make additional gains**. If Romney could reduce Obama’s share of the vote to 40 percent, he would net 75,000 additional votes. Smaller gains across the rest of Ohio, where Obama picked up support over Kerry’s performance, could **plausibly put him over the top**. But coal country is not populous enough for anything short of big gains to flip the state. But Romney isn’t assured of the gains necessary to overcome Obama’s advantage in the big cities. In 2008, Obama performed poorly in the industrial northeastern part of Ohio, but it’s conceivable that he could match or even exceed his ’08 totals in places like Youngstown, where Obama did worse than Kerry and the auto-bailout and shale oil boom have rejuvenated a struggling manufacturing hub. The Obama campaign has attacked Romney for arguing that a Massachusetts coal plant “kills,” undermining Romney’s ability to completely exploit the so-called ‘war on coal.” And Obama’s broader strategy to depict Romney as an out of touch plutocrat bent on outsourcing middle class jobs resonates across eastern and southeastern Ohio. These populist and working class areas were once Democratic for a reason and the Obama campaign’s caricature of Romney helps remind them why. Romney will still do better than McCain in southern and southeast Ohio, but “better” isn’t enough, with Obama starting well above Kerry’s performance among African Americans and postgraduate voters around Columbus. **Absent a strong enough counter-veiling force**, Obama’s improvements among these two groups are sufficient to overcome Ohio’s traditional Republican-lean. To compensate, Romney needs to **run up the score among voters who have traditionally voted for Democrats in** southern and **southeast Ohio**, but the Obama campaign has **developed a messaging strategy** **perfectly suited to blocking his route to victory**. With twelve days to go, the polls show that the Obama campaign’s approach is succeeding.

#### Romney’s reaction to unpredictable crises makes nuclear war inevitable

Stein, former chairman of the American Society of Magazine Editors, predicted the run to the Iraq War in the New York Times, veteran of World War II, 10/19/2012

(Robert, http://ajliebling.blogspot.com/2012/10/doubts-about-romneys-nuclear-trigger.html)

**Doubts About Romney's Nuclear Trigger Finger**

At Harvard today scholars commemorate the 50th anniversary of the Cuban Missile Crisis, 13 days when the world held its breath in the shadow of a nuclear war that John F. Kennedy said could have led to “**ultimate destruction of the human race**.”

In interviews afterward, the President told me, “Too many people want to blow up the world...In Cuba, a lot of people thought we should take more drastic action. I think we did the right thing. More drastic action would have increased the possibility of nuclear exchange. The real question now is to meet conflicts year after year without having to escalate."

**Half a century later**, it still is and, even in the academic colloquy over the Missile Crisis, **doubts arise about the fitness of Mitt Romney to follow in JFK’s footsteps**.

“Of the two candidates this year,” **one Harvard scholar asks**, “does Obama or Romney have the better command of history, **coolness under pressure**, and good sense to make the right choice for all of us **when the next crisis occurs?**

“Obama has demonstrated some of these qualities in his adept isolation of Iran, his largely skillful handling of the Arab uprisings, and his bridge-building to allies and partners that has rebuilt U.S. credibility in Europe, especially.

“Romney’s big foreign policy speech...illuminated the challenge he has had in making an impact in foreign policy. His back-to-the-future evocation of American leadership seems right for the Cold War but not nearly sophisticated enough for our very different **21st-century world**.”

**As Mitt Romney blusters about confrontations with China**, **Iran and other adversaries**, his sound-bite posturing may be effective in debates, campaign ads and comic relief, but how safe would we be if he moved into the Oval Office?

Two years ago, in putting Tehran "on notice," President Obama invoked the carrot-and-stick formula JFK used and, just as Kennedy ignored military advice to "bomb Cuba back into the Stone Age," rejected the notion of "victory" in today's crisis.

"This isn't a football game," he said. "So I'm not interested in victory, I'm interested in solving the problem."

#### Obama win key to US-Russia relations

CSM 12

(“Obama asks Russia to cut him slack until reelection” By Fred Weir, Correspondent / March 26, 2012 , http://www.csmonitor.com/World/Europe/2012/0326/Obama-asks-Russia-to-cut-him-slack-until-reelection)

Russian experts say there's little doubt the Kremlin would like to see Obama re-elected. Official Moscow has been pleased by Obama's policy of "resetting" relations between Russia and the US, which resulted in the new START treaty and other cooperation breakthroughs after years of diplomatic chill while George W. Bush was president. The Russian media often covers Obama's lineup of Republican presidential challengers in tones of horror, and there seems to be a **consensus** among Russian pundits that **a Republican president would put a quick end to the Obama-era thaw in relations**. "The Republicans are active critics of Russia, and they are extremely negative toward Putin and his return to the presidency," says Dmitry Babich, a political columnist with the official RIA-Novosti news agency. "Democrats are perceived as more easygoing, more positive toward Russia and Putin." Speaking on the record in Seoul, Mr. Medvedev said the years since Obama came to power "were the best three years in the past decade of Russia-US relations.… I hope this mode of relations will maintain between the Russian Federation and the United States and between the leaders." During Putin's own election campaign, which produced a troubled victory earlier this month, he played heavily on anti-Western themes, including what he described as the US drive to attain "absolute invulnerability" at the expense of everyone else. But many Russian experts say that was mostly election rhetoric, and that in office Putin will seek greater cooperation and normal relations with the West. "Russian society is more anti-American than its leaders are," says Pavel Zolotaryov, deputy director of the official Institute of USA-Canada Studies in Moscow. "Leaders have to take popular moods into account. But it's an objective fact that the US and Russia have more points in common than they have serious differences. If Obama wins the election, it seems likely the reset will continue."

#### Great power wars

Blank 9

(Stephen, has served as the Strategic Studies Institute’s expert on the Soviet bloc and the post- Soviet world since 1989. Prior to that he was Associate Professor of Soviet Studies at the Center for Aerospace Doctrine, Research, and Education, Maxwell Air Force Base “PROSPECTS FOR RUSSO-AMERICAN COOPERATION IN HALTING NUCLEAR PROLIFERATION”, March, <http://www.strategicstudiesinstitute.army.mil/pdffiles/PUB892.pdf>)

Another reason for cooperation relates to the regional rivalries between Moscow and Washington (the same can apply as we shall see to Beijing). Today, as during the Cold War, we see intensifying regional rivalries between America and Russia throughout Asia from the Middle East to the Pacific Ocean. Both these states tend to support governments which have, by their proliferation activities, intensified tensions, e.g., America’s support for Pakistan and Russia’s earlier support for North Korea and present support for Iran. The reasons for this support often have to do with quite classical concepts of national interest which in Russia’s case relate to material interests, recovering its great power status, and checking American power. For example, Gleb Ivashentsov, then Director of the Second Asia Department of the Russian Foreign Ministry, told a Liechtenstein Colloquium on Iran in 2005 that, Iran today is probably the only country in the greater Middle East that, despite all of its internal and external difficulties, is steadily building up its economic, scientific, technological, and military capability (what about Israel?—author). Should this trend continue, Iran—with its seventy million population, which is fairly literate, compared to neighboring states, and ideologically consolidated, on the basis of islamic and nationalist values; with a highly intellectual elite; with more than 11 percent of the world’s oil and 18 percent of natural gas reserves; with more than 500,000 strong armed forces and with a strategic geographic position enabling it to control sea and land routes between Europe and Asia—is destined to emerge as a regional leader. This means that the Islamic Republic of Iran will be playing an increasing role in resolving problems not only in the Middle East and Persian Gulf area but also in such regions that are rather sensitive for Russia as Transcaucasia, Central Asia, and the Caspian region. This is why dialogue with Iran and partnership with it on a bilateral and regional as well as a broad international basis is objectively becoming one of the key tasks of Russia’s foreign policy.180 Unfortunately such support for regional partners, if not allies, often ends up (as in 1914) with the greater power being drawn into the smaller partner’s conflicts because it fears it cannot afford to lose its partner or ally to the other side. The result is often heightened conflict, and today those crises often revolve around proliferation. Thus when Israel bombed an alleged North Korean-built reactor in Syria in September 2007, it reflected what could happen when states like Syria and North Korea strike out on their own in the belief that they can rely on a protector like Moscow or in Israel’s case, Washington. As Yitzhak Shichor writes, Most likely, Pyongyang had failed to consult with either Moscow or Beijing prior to its decision to engage in some kind of “illicit” strategic or nuclear cooperation with Syria, although both may have become aware of this activity at a certain point of time. This failure reflects not only North Korea’s inflated nationalism but also its belief that whatever misunderstandings and disagreements it has with Russia and China—quite a few are known— both will continue their commitment and support and the same goes for Syria.181 Furthermore, as Shichor notes, such crises are likely because such states often have no other way to pursue their vital interests other than by interesting great powers in their survival. While such support may preserve these states, it hardly advances their overall cause of changing the status quo. “Unable to use diplomacy and not allowed to hold negotiations, apparently the only way open to settle their respective conflicts is by using threats, sponsoring terrorism, and building up the infrastructure for future violence.”182 If there were more effective great power cooperation on both regional security and nonproliferation, then the scope for such provocative behaviors would be correspondingly restricted. But since there is presently no such effective cooperation either on regional security or nonproliferation, Russia also values the Iranian connection because its support for an anti-American Iran helps Moscow restrain U.S. power in the Middle East, makes it a player or “great power” in the same region, and allows it to gain influence with other Gulf states who see it as having influence on Iran. Thus, during Putin’s Februry 2007 tour of Saudi Arabia, Jordan, and Qatar, he offered all these states major energy deals, arms sales, and even nuclear power, ostensibly for peaceful purposes, but in reality signifying his efforts and theirs to balance what they all realize is Iran’s refusal to stop its nuclear program and put it under effective IAEA supervision.183 In fact, Russia is offering up to 13 Arab states nuclear technologies of one sort or another. Russia is even launching Saudi satellites and undertaking major business initiatives with Saudi Arabia, even as it assists Iran’s space program.184 This posture once again reflects Russia’s wholly instrumental approach to questions of proliferation of nuclear technologies, discerning no real threat from the spread of nuclear power in the Middle East if it checks Iran and makes it remember who its patrons are. The many reports speculating about possible Saudi nuclear ambitions evidently have made little impression upon Putin and his subordinates.

## 6

#### SMRs collapse IAEA efficacy—impact is accidents

Edwin Lyman, Ph.D., Senior Scientist, Global Security Program Union of Concerned Scientists, 7/14/11, “An Examination of the Safety and Economics of Light Water Small Modular Reactors”, http://www.ucsusa.org/assets/documents/nuclear\_power/lyman-appropriations-subcom-7-14-11.pdf

Fukushima also demonstrated how rapidly a nuclear reactor accident can progress to a core meltdown if multiple safety systems are disabled. A well-planned and executed terrorist attack could cause damage comparable to or worse than the earthquake and tsunami that initiated the Fukushima crisis, potentially in even less time. And although Osama bin Laden is gone, the terrorist threat to domestic infrastructure may actually increase over time if al Qaeda seeks to retaliate. This is the wrong time to consider reducing security requirements for nuclear power plants, regardless of their size. However, SMR vendors have emphasized that reducing security staffing is critical for the economic viability of their projects. Christofer Mowry of B&W told the NRC in March that “whether SMRs get deployed in large numbers or not is going to come down to O&M [operations and maintenance]. And the biggest variable that we can attack directly ... is the security issue.” A Nuclear Energy Institute representative said in a presentation in June that “optimal security staffing levels [for SMRs] may appreciably differ from current levels.”

UCS is also concerned that reducing safety and security requirements for SMRs could facilitate their sale to utilities or other entities in the United States and abroad that do not have prior experience with nuclear power. Some SMR vendors argue that their technology is so safe that it can be deployed to remote areas, military bases, and countries in the developing world that have relatively low electric demand and no nuclear experience or emergency planning infrastructure. However, SMRs deployed in this manner could raise additional safety and security concerns compared to their deployment by established and experienced nuclear utilities.

The distributed deployment of small reactors would also put great strains on existing licensing and inspection resources. Nuclear reactors are qualitatively different from other types of generating facilities, not least because they require a much more extensive safety and security inspection regime. Similarly, deployment of individual small reactors at widely distributed and remote sites around the world would strain the resources of the International Atomic Energy Agency (IAEA) and its ability to adequately safeguard reactors to guard against proliferation, since IAEA inspectors would need to visit many more locations per installed megawatt around the world. Maintaining robust oversight over vast networks of SMRs around the world would be difficult, if feasible at all.

UCS believes that SMRs are only suitable for deployment where there is an established infrastructure to cope with emergencies, and if sufficient numbers of trained operator and security staff can be provided. It is unrealistic to assume the near-term availability of SMRs that are so safe they can be shipped around the world without the need to ensure the highest levels of competence and integrity of local regulatory authorities, plant operators, emergency planning organizations and security forces. Fukushima has demonstrated the importance of timely off-site response in the event of a severe accident, so the accessibility of reactors in remote locations also must be a prime consideration. Even within the U.S., small utilities with little or no experience in operating nuclear plants need to fully appreciate the unique challenges and responsibilities associated with nuclear power and should not expect that small modular reactors will provide any relief in this regard.

#### Extinction

Stephen Lendman, The Peoples Voice, 3/12/11, Nuclear Meltdown in Japan, www.thepeoplesvoice.org/TPV3/Voices.php/2011/03/13/nuclear-meltdown-in-japan

Reuters said the 1995 Kobe quake caused $100 billion in damage, up to then the most costly ever natural disaster. This time, from quake and tsunami damage alone, that figure will be dwarfed. Moreover, under a worst case core meltdown, all bets are off as the entire region and beyond will be threatened with permanent contamination, making the most affected areas unsafe to live in. On March 12, Stratfor Global Intelligence issued a "Red Alert: Nuclear Meltdown at Quake-Damaged Japanese Plant," saying: Fukushima Daiichi "nuclear power plant in Okuma, Japan, appears to have caused a reactor meltdown." Stratfor downplayed its seriousness, adding that such an event "does not necessarily mean a nuclear disaster," that already may have happened - the ultimate nightmare short of nuclear winter. According to Stratfor, "(A)s long as the reactor core, which is specifically designed to contain high levels of heat, pressure and radiation, remains intact, the melted fuel can be dealt with. If the (core's) breached but the containment facility built around (it) remains intact, the melted fuel can be....entombed within specialized concrete" as at Chernobyl in 1986. In fact, that disaster killed nearly one million people worldwide from nuclear radiation exposure. In their book titled, "Chernobyl: Consequences of the Catastrophe for People and the Environment," Alexey Yablokov, Vassily Nesterenko and Alexey Nesterenko said: "For the past 23 years, it has been clear that there is a danger greater than nuclear weapons concealed within nuclear power. Emissions from this one reactor exceeded a hundred-fold the radioactive contamination of the bombs dropped on Hiroshima and Nagasaki." "No citizen of any country can be assured that he or she can be protected from radioactive contamination. One nuclear reactor can pollute half the globe. Chernobyl fallout covers the entire Northern Hemisphere." Stratfor explained that if Fukushima's floor cracked, "it is highly likely that the melting fuel will burn through (its) containment system and enter the ground. This has never happened before," at least not reported. If now occurring, "containment goes from being merely dangerous, time consuming and expensive to nearly impossible," making the quake, aftershocks, and tsunamis seem mild by comparison. Potentially, millions of lives will be jeopardized. Japanese officials said Fukushima's reactor container wasn't breached. Stratfor and others said it was, making the potential calamity far worse than reported. Japan's Nuclear and Industrial Safety Agency (NISA) said the explosion at Fukushima's Saiichi No. 1 facility could only have been caused by a core meltdown. In fact, 3 or more reactors are affected or at risk. Events are fluid and developing, but remain very serious. The possibility of an extreme catastrophe can't be discounted. Moreover, independent nuclear safety analyst John Large told Al Jazeera that by venting radioactive steam from the inner reactor to the outer dome, a reaction may have occurred, causing the explosion. "When I look at the size of the explosion," he said, "it is my opinion that there could be a very large leak (because) fuel continues to generate heat." Already, Fukushima way exceeds Three Mile Island that experienced a partial core meltdown in Unit 2. Finally it was brought under control, but coverup and denial concealed full details until much later. According to anti-nuclear activist Harvey Wasserman, Japan's quake fallout may cause nuclear disaster, saying: "This is a very serious situation. If the cooling system fails (apparently it has at two or more plants), the super-heated radioactive fuel rods will melt, and (if so) you could conceivably have an explosion," that, in fact, occurred. As a result, massive radiation releases may follow, impacting the entire region. "It could be, literally, an apocalyptic event. The reactor could blow." If so, Russia, China, Korea and most parts of Western Asia will be affected. Many thousands will die, potentially millions under a worse case scenario, including far outside East Asia. Moreover, at least five reactors are at risk. Already, a 20-mile wide radius was evacuated. What happened in Japan can occur anywhere. Yet Obama's proposed budget includes $36 billion for new reactors, a shocking disregard for global safety. Calling Fukushima an "apocalyptic event," Wasserman said "(t)hese nuclear plants have to be shut," let alone budget billions for new ones. It's unthinkable, he said. If a similar disaster struck California, nuclear fallout would affect all America, Canada, Mexico, Central America, and parts of South America. Nuclear Power: A Technology from Hell Nuclear expert Helen Caldicott agrees, telling this writer by phone that a potential regional catastrophe is unfolding. Over 30 years ago, she warned of its inevitability. Her 2006 book titled, "Nuclear Power is Not the Answer" explained that contrary to government and industry propaganda, even during normal operations, nuclear power generation causes significant discharges of greenhouse gas emissions, as well as hundreds of thousands of curies of deadly radioactive gases and other radioactive elements into the environment every year. Moreover, nuclear plants are atom bomb factories. A 1000 megawatt reactor produces 500 pounds of plutonium annually. Only 10 are needed for a bomb able to devastate a large city, besides causing permanent radiation contamination. Nuclear Power not Cleaner and Greener Just the opposite, in fact. Although a nuclear power plant releases no carbon dioxide (CO2), the primary greenhouse gas, a vast infrastructure is required. Called the nuclear fuel cycle, it uses large amounts of fossil fuels. Each cycle stage exacerbates the problem, starting with the enormous cost of mining and milling uranium, needing fossil fuel to do it. How then to dispose of mill tailings, produced in the extraction process. It requires great amounts of greenhouse emitting fuels to remediate. Moreover, other nuclear cycle steps also use fossil fuels, including converting uranium to hexafluoride gas prior to enrichment, the enrichment process itself, and conversion of enriched uranium hexafluoride gas to fuel pellets. In addition, nuclear power plant construction, dismantling and cleanup at the end of their useful life require large amounts of energy. There's more, including contaminated cooling water, nuclear waste, its handling, transportation and disposal/storage, problems so far unresolved. Moreover, nuclear power costs and risks are so enormous that the industry couldn't exist without billions of government subsidized funding annually. The Unaddressed Human Toll from Normal Operations Affected are uranium miners, industry workers, and potentially everyone living close to nuclear reactors that routinely emit harmful radioactive releases daily, harming human health over time, causing illness and early death. The link between radiation exposure and disease is irrefutable, depending only on the amount of cumulative exposure over time, Caldicott saying: "If a regulatory gene is biochemically altered by radiation exposure, the cell will begin to incubate cancer, during a 'latent period of carcinogenesis,' lasting from two to sixty years." In fact, a single gene mutation can prove fatal. No amount of radiation exposure is safe. Moreover, when combined with about 80,000 commonly used toxic chemicals and contaminated GMO foods and ingredients, it causes 80% of known cancers, putting everyone at risk everywhere. Further, the combined effects of allowable radiation exposure, uranium mining, milling operations, enrichment, and fuel fabrication can be devastating to those exposed. Besides the insoluble waste storage/disposal problem, nuclear accidents happen and catastrophic ones are inevitable. Inevitable Meltdowns Caldicott and other experts agree they're certain in one or more of the hundreds of reactors operating globally, many years after their scheduled shutdown dates unsafely. Combined with human error, imprudently minimizing operating costs, internal sabotage, or the effects of a high-magnitude quake and/or tsunami, an eventual catastrophe is certain. Aging plants alone, like Japan's Fukushima facility, pose unacceptable risks based on their record of near-misses and meltdowns, resulting from human error, old equipment, shoddy maintenance, and poor regulatory oversight. However, under optimum operating conditions, all nuclear plants are unsafe. Like any machine or facility, they're vulnerable to breakdowns, that if serious enough can cause enormous, possibly catastrophic, harm. Add nuclear war to the mix, also potentially inevitable according to some experts, by accident or intent, including Steven Starr saying: "Only a single failure of nuclear deterrence is required to start a nuclear war," the consequences of which "would be profound, potentially killing "tens of millions of people, and caus(ing) long-term, catastrophic disruptions of the global climate and massive destruction of Earth's protective ozone layer. The result would be a global nuclear famine that could kill up to one billion people." Worse still is nuclear winter, the ultimate nightmare, able to end all life if it happens. It's nuclear proliferation's unacceptable risk, a clear and present danger as long as nuclear weapons and commercial dependency exist.

## 7

#### The Executive branch of the United States should establish a blue-ribbon commission to examine the feasibility of acquiring small modular nuclear reactors on mission critical military installations in the United States and ask the commission to publish final recommendations.

#### Blue ribbon commission on SMRs is a necessary first-step to sustainable SMR use—must be prior and binding

Parthemore, 10

(Research Fellow-Center for a New American Security, 5/20, Nuclear Reactors on Military Bases May Be Risky http://www.rollcall.com/news/-46456-1.html)

On the other hand, opponents contend that sufficient numbers of military base personnel may not have the requisite training in nuclear reactor management, oversight and regulatory credentials to attend to reactors in the round-the-clock manner necessary. In most cases, additional qualified personnel and improved physical security and safety requirements would be needed. As with all nuclear power generation, materials proliferation, water usage, radioactive waste management and public opinion will also be major concerns. Most military bases also strive to be integrated into their surrounding communities, and, by our experience, many base officials consider integrated electric infrastructure an important point of connection between local and military needs. Concepts for nuclear energy generation solely to supply military bases must be sensitive to what public perceptions could be in the event of extended blackouts for surrounding communities. **Any legislation to consider the option of small nuclear reactors on military bases must include examination of these important concerns.** We recommend that this examination should be initially led by a blue ribbon commission, led by the Department of Energy and including relevant DOD officials who have been examining this option. **A blue ribbon commission, by conducting a thorough and transparent cost-benefit analysis** and examining the interests of all key stakeholders, is **a necessary first step in determining the viability of small nuclear reactors for** federal facilities, and especially for **military bases.** This commission would need to include a range of stakeholders and experts qualified — and trusted by the public — to design national policies that will address and balance these concerns (even if that entails not going down the path of installing nuclear reactors on military bases at a large scale). Academics, regulators, nuclear scientists, proliferation and waste safety experts, state officials, and the governmental and nongovernmental policy communities should all be represented. It should seek to consider the full expanse of relevant concerns, including what technologies or models are most appropriate, what locations would be ideal or off-limits, where the energy security needs are the highest (for example, at combatant command locations), and along what timeline nuclear generation would even come online. The question of a proper policy approach to the issue of locating small nuclear reactors on bases is heating up, especially as energy and climate change are increasingly important topics of public debate. It is time to set the stage for a national conversation on the most appropriate path for this technology. Ensuring national security interests and a cleaner energy future demands no less.

#### DOD SMR implementation with thorough review would spark immediate court challenges

Bishop, 12

(10/25, “Interview with Robert Bishop” General Counsel of the Nuclear Energy Institute (retired), Mr. Bishop graduated from the U.S. Naval Academy, with distinction, in 1964. He served in nuclear submarines in a variety of engineering and operating billets for six years, his final position being senior start-up test engineer during the construction of a fast attack nuclear submarine and commissioning Weapons Officer. He then joined a nuclear power plant design firm as a project engineer involved in the design, construction and licensing of commercial nuclear power plants. In 1974, he became the initial Director of Operations of the Connecticut Energy Agency, and he subsequently held a variety of energy policy related positions in Connecticut state government. He received his law degree, with honors, from the University of Connecticut School of Law in 1976, This interview was conducted via email on October 25, 2012 with questions being asked by Kevin Bertram. http://debateandtherealworld.com/article.php?id=4)

D+TRW: There are currently no designs for small modular reactors approved for small modular reactors. Would it even be possible for the Department of Defense to procure small modular reactors for use on military bases at this time? Bishop: There are a number of small modular reactor designs being developed. Once the designs are developed, and proven workable and able to meet applicable safety and national security requirements, they may well be viable for use in isolated locations, including military bases. D+TRW: Is it possible for the Department of Defense to enter into a power purchasing agreement (for power from small modular reactors) if the technology is not yet proven and commercially available and will not be for at least ten years? What would happen if the Department of Defense did so anyway? Bishop: The Department of Defense (DOD) could, and does, utilize its own generating facilities for the production of power for isolated stations. However, **DOD could not enter into a power purchase agreement for the power output of a facility which has not been designed or licensed to operate.** DOD is unlikely to do so for a facility, whether nuclear or any other source, whose safety and security has not been proven. DOD is also constrained by its legal authority (e.g., it cannot intrude on the commercial generation or transmission of electricity, absent a declaration of a national emergency). Finally, **a DOD decision to deploy an unproven technology would immediately be questioned by individual members of Congress, and Congressional hearings would soon result. DOD's decision would also surely, and immediately, be challenged in federal court.**

## advantage

Cyber war infeasible

Clark, MA candidate – Intelligence Studies @ American Military University, senior analyst – Chenega Federal Systems, 4/28/’12

(Paul, “The Risk of Disruption or Destruction of Critical U.S. Infrastructure by an Offensive Cyber Attack,” American Military University)

The Department of Homeland Security worries that our critical infrastructure and key resources (CIKR) may be exposed, both directly and indirectly, to multiple threats because of CIKR reliance on the global cyber infrastructure, an infrastructure that is under routine cyberattack by a “spectrum of malicious actors” (National Infrastructure Protection Plan 2009). CIKR in the extremely large and complex U.S. economy spans multiple sectors including agricultural, finance and banking, dams and water resources, public health and emergency services, military and defense, transportation and shipping, and energy (National Infrastructure Protection Plan 2009). The disruption and destruction of public and private infrastructure is part of warfare, without this infrastructure conflict cannot be sustained (Geers 2011). Cyber-attacks are desirable because they are considered to be a relatively “low cost and long range” weapon (Lewis 2010), but prior to the creation of Stuxnet, the first cyber-weapon, the ability to disrupt and destroy critical infrastructure through cyber-attack was theoretical. The movement of an offensive cyber-weapon from conceptual to actual has forced the United States to question whether offensive cyber-attacks are a significant threat that are able to disrupt or destroy CIKR to the level that national security is seriously degraded. It is important to understand the risk posed to national security by cyber-attacks to ensure that government responses are appropriate to the threat and balance security with privacy and civil liberty concerns. The risk posed to CIKR from cyber-attack can be evaluated by measuring the threat from cyber-attack against the vulnerability of a CIKR target and the consequences of CIKR disruption. As the only known cyber-weapon, Stuxnet has been **thoroughly analyzed** and **used as a model** for predicting future cyber-weapons. The U.S. electrical grid, a key component in the CIKR energy sector, is a target that has been analyzed for vulnerabilities and the consequences of disruption predicted – the electrical grid has been used in multiple attack scenarios including a classified scenario provided to the U.S. Congress in 2012 (Rohde 2012). Stuxnet will serve as the weapon and the U.S. electrical grid will serve as the target in this risk analysis that concludes that there is a low risk of disruption or destruction of critical infrastructure from a an offensive cyber-weapon because of the complexity of the attack path, the limited capability of non-state adversaries to develop cyber-weapons, and the existence of multiple methods of mitigating the cyber-attacks. To evaluate the threat posed by a Stuxnet-like cyber-weapon, the complexity of the weapon, the available attack vectors for the weapon, and the resilience of the weapon must be understood. The complexity – how difficult and expensive it was to create the weapon – identifies the relative cost and availability of the weapon; inexpensive and simple to build will be more prevalent than expensive and difficult to build. Attack vectors are the available methods of attack; the larger the number, the more severe the threat. For example, attack vectors for a cyberweapon may be email attachments, peer-to-peer applications, websites, and infected USB devices or compact discs. Finally, the resilience of the weapon determines its availability and affects its usefulness. A useful weapon is one that is resistant to disruption (resilient) and is therefore available and reliable. These concepts are seen in the AK-47 assault rifle – a simple, inexpensive, reliable and effective weapon – and carry over to information technology structures (Weitz 2012). The evaluation of Stuxnet identified malware that is “unusually complex and large” and required code written in multiple languages (Chen 2010) in order to complete a variety of specific functions contained in a “vast array” of components – **it is one of the most complex threats ever analyzed by Symantec** (Falliere, Murchu and Chien 2011). To be successful, Stuxnet required a **high** **level of technical knowledge across multiple disciplines**, a laboratory with the target equipment configured for testing, and a foreign intelligence capability to collect information on the target network and attack vectors (Kerr, Rollins and Theohary 2010). The malware also needed careful monitoring and maintenance because it could be easily disrupted; as a result Stuxnet was developed with a high degree of configurability and was upgraded multiple times in less than one year (Falliere, Murchu and Chien 2011). Once introduced into the network, the cyber-weapon then had to utilize four known vulnerabilities and four unknown vulnerabilities, known as zero-day exploits, in order to install itself and propagate across the target network (Falliere, Murchu and Chien 2011). Zero-day exploits are **incredibly difficult to find** and fewer than twelve out of the 12,000,000 pieces of malware discovered each year utilize zero-day exploits and this rarity makes them valuable, zero-days can fetch $50,000 to $500,000 each on the black market (Zetter 2011). The use of four rare exploits in a single piece of malware is “unprecedented” (Chen 2010). Along with the use of four unpublished exploits, Stuxnet also used the “first ever” programmable logic controller rootkit, a Windows rootkit, antivirus evasion techniques, intricate process injection routines, and other complex interfaces (Falliere, Murchu and Chien 2011) all **wrapped up in “layers of encryption** like Russian nesting dolls” (Zetter 2011) – including custom encryption algorithms (Karnouskos 2011). As the malware spread across the now-infected network it had to utilize additional vulnerabilities in proprietary Siemens industrial control software (ICS) and hardware used to control the equipment it was designed to sabotage. Some of these ICS vulnerabilities were published but some were unknown and **required such a high degree of inside knowledge** that there was speculation that a Siemens employee had been involved in the malware design (Kerr, Rollins and Theohary 2010). The unprecedented technical complexity of the Stuxnet cyber-weapon, along with the extensive technical and financial resources and foreign intelligence capabilities required for its development and deployment, indicates that the malware was likely developed by a nation-state (Kerr, Rollins and Theohary 2010). Stuxnet had very limited attack vectors. When a computer system is connected to the public Internet a host of attack vectors are available to the cyber-attacker (Institute for Security Technology Studies 2002). Web browser and browser plug-in vulnerabilities, cross-site scripting attacks, compromised email attachments, peer-to-peer applications, operating system and other application vulnerabilities are all vectors for the introduction of malware into an Internetconnected computer system. Networks that are not connected to the public internet are “air gapped,” a technical colloquialism to identify a physical separation between networks. Physical separation from the public Internet is a common safeguard for sensitive networks including classified U.S. government networks. If the target network is air gapped, infection can only occur through physical means – an infected disk or USB device that **must be physically introduced** into a possibly access controlled environment and connected to the air gapped network. The first step of the Stuxnet cyber-attack was to initially infect the target networks, a difficult task given the probable disconnected and well secured nature of the Iranian nuclear facilities. Stuxnet was introduced via a USB device to the target network, a method that suggests that the attackers were familiar with the configuration of the network and knew it was not connected to the public Internet (Chen 2010). This assessment is supported by two rare features in Stuxnet – having all necessary functionality for industrial sabotage fully embedded in the malware executable along with the ability to self-propagate and upgrade through a peer-to-peer method (Falliere, Murchu and Chien 2011). Developing an understanding of the target network configuration was a significant and daunting task based on Symantec’s assessment that Stuxnet repeatedly targeted a total of five different organizations over nearly one year (Falliere, Murchu and Chien 2011) with physical introduction via USB drive being the only available attack vector. The final factor in assessing the threat of a cyber-weapon is the resilience of the weapon. There are two primary factors that make Stuxnet **non-resilient**: the complexity of the weapon and the complexity of the target. Stuxnet was highly customized for sabotaging specific industrial systems (Karnouskos 2011) and needed a large number of very complex components and routines in order to increase its chance of success (Falliere, Murchu and Chien 2011). The **malware required eight vulnerabilities** in the Windows operating system **to succeed** and therefore would have failed if those vulnerabilities had been properly patched; four of the eight vulnerabilities were known to Microsoft and subject to elimination (Falliere, Murchu and Chien 2011). Stuxnet also required that two drivers be installed and required two stolen security certificates for installation (Falliere, Murchu and Chien 2011); driver installation would have failed if the stolen certificates had been revoked and marked as invalid. Finally, the configuration of systems is ever-changing as components are upgraded or replaced. There is no guarantee that the network that was mapped for vulnerabilities had not changed in the months, or years, it took to craft Stuxnet and successfully infect the target network. Had specific components of the target hardware changed – the targeted Siemens software or programmable logic controller – the attack would have failed. Threats are less of a threat when identified; this is why zero-day exploits are so valuable. Stuxnet went to great lengths to hide its existence from the target and utilized multiple rootkits, data manipulation routines, and virus avoidance techniques to stay undetected. The malware’s actions occurred only in memory to avoid leaving traces on disk, it masked its activities by running under legal programs, employed layers of encryption and code obfuscation, and uninstalled itself after a set period of time, all efforts to avoid detection because its authors knew that detection meant failure. As a result of the complexity of the malware, the changeable nature of the target network, and the chance of discovery, Stuxnet is not a resilient system. It is a fragile weapon that required an investment of time and money to constantly monitor, reconfigure, test and deploy over the course of a year. There is concern, with Stuxnet developed and available publicly, that the world is on the brink of a storm of highly sophisticated Stuxnet-derived cyber-weapons which can be used by hackers, organized criminals and terrorists (Chen 2010). As former counterterrorism advisor Richard Clarke describes it, there is concern that the technical brilliance of the United States “has created millions of potential monsters all over the world” (Rosenbaum 2012). Hyperbole aside, technical knowledge spreads. The techniques behind cyber-attacks are “constantly evolving and making use of lessons learned over time” (Institute for Security Technology Studies 2002) and the publication of the Stuxnet code may make it easier to copy the weapon (Kerr, Rollins and Theohary 2010). **However**, this is something of a zero-sum game because know**ledge works both ways** and cyber-security techniques are also evolving, and “understanding attack techniques more clearly is the first step toward increasing security” (Institute for Security Technology Studies 2002). Vulnerabilities are discovered and patched, intrusion detection and malware signatures are expanded and updated, and monitoring and analysis processes and methodologies are expanded and honed. Once the element of surprise is lost, weapons and tactics are less useful, this is the core of the argument that “uniquely surprising” **stratagems like Stuxnet are single-use**, like Pearl Harbor and the Trojan Horse, the “very success [of these attacks] precludes their repetition” (Mueller 2012). This paradigm has already been seen in the “son of Stuxnet” malware – named Duqu by its discoverers – that is based on the same modular code platform that created Stuxnet (Ragan 2011). With the techniques used by Stuxnet now known, other variants such as Duqu are being discovered and countered by security researchers (Laboratory of Cryptography and System Security 2011). It is obvious that the effort required to create, deploy, and maintain Stuxnet and its variants is massive and it is not clear that the rewards are worth the risk and effort. Given the location of initial infection and the number of infected systems in Iran (Falliere, Murchu and Chien 2011) it is believed that Iranian nuclear facilities were the target of the Stuxnet weapon. A significant amount of money and effort was invested in creating Stuxnet but yet the expected result – assuming that this was an attack that expected to damage production – was minimal at best. Iran claimed that Stuxnet caused only minor damage, probably at the Natanz enrichment facility, the Russian contractor Atomstroyeksport reported that no damage had occurred at the Bushehr facility, and an unidentified “senior diplomat” suggested that Iran was forced to shut down its centrifuge facility “for a few days” (Kerr, Rollins and Theohary 2010). Even the most optimistic estimates believe that Iran’s nuclear enrichment program was only delayed by months, or perhaps years (Rosenbaum 2012). The actual damage done by Stuxnet is not clear (Kerr, Rollins and Theohary 2010) and the primary damage appears to be to a higher number than average replacement of centrifuges at the Iran enrichment facility (Zetter 2011). Different targets may produce different results. The Iranian nuclear facility was a difficult target with limited attack vectors because of its isolation from the public Internet and restricted access to its facilities. What is the probability of a successful attack against the U.S. electrical grid and what are the potential consequences should this critical infrastructure be disrupted or destroyed? An attack against the electrical grid is a reasonable threat scenario since power systems are “a high priority target for military and insurgents” and there has been a trend towards utilizing commercial software and integrating utilities into the public Internet that has “increased vulnerability across the board” (Lewis 2010). Yet the increased vulnerabilities are mitigated by an increased detection and deterrent capability that has been “honed over many years of practical application” now that power systems are using standard, rather than proprietary and specialized, applications and components (Leita and Dacier 2012). The security of the electrical grid is also enhanced by increased awareness after a smart-grid hacking demonstration in 2009 and the identification of the Stuxnet malware in 2010; as a result the public and private sector are working together in an “unprecedented effort” to establish robust security guidelines and cyber security measures (Gohn and Wheelock 2010).

Cyberattacks nearly impossible – empirics and defenses solve

**Rid 12** (Thomas Rid, reader in war studies at King's College London, is author of "Cyber War Will Not Take Place" and co-author of "Cyber-Weapons.", March/April 2012, “Think Again: Cyberwar”, http://www.foreignpolicy.com/articles/2012/02/27/cyberwar?page=full)

"Cyberwar Is Already Upon Us." No way. "Cyberwar is coming!" John Arquilla and David Ronfeldt predicted in a celebrated Rand paper back in 1993. Since then, it seems to have arrived -- at least by the account of the U.S. military establishment, which is busy competing over who should get what share of the fight. Cyberspace is "a domain in which the Air Force flies and fights," Air Force Secretary Michael Wynne claimed in 2006. By 2012, William J. Lynn III, the deputy defense secretary at the time, was writing that cyberwar is "just as critical to military operations as land, sea, air, and space." In January, the Defense Department vowed to equip the U.S. armed forces for "conducting a combined arms campaign across all domains -- land, air, maritime, space, and cyberspace." Meanwhile, growing piles of books and articles explore the threats of cyberwarfare, cyberterrorism, and how to survive them. Time for a reality check: Cyberwar is still more hype than hazard. Consider the definition of an act of war: It has to be potentially violent, it has to be purposeful, and it has to be political. The cyberattacks we've seen so far, from Estonia to the Stuxnet virus, simply don't meet these criteria. Take the dubious story of a Soviet pipeline explosion back in 1982, much cited by cyberwar's true believers as the most destructive cyberattack ever. The account goes like this: In June 1982, a Siberian pipeline that the CIA had virtually booby-trapped with a so-called "logic bomb" exploded in a monumental fireball that could be seen from space. The U.S. Air Force estimated the explosion at 3 kilotons, equivalent to a small nuclear device. Targeting a Soviet pipeline linking gas fields in Siberia to European markets, the operation sabotaged the pipeline's control systems with software from a Canadian firm that the CIA had doctored with malicious code. No one died, according to Thomas Reed, a U.S. National Security Council aide at the time who revealed the incident in his 2004 book, At the Abyss; the only harm came to the Soviet economy. But did it really happen? After Reed's account came out, Vasily Pchelintsev, a former KGB head of the Tyumen region, where the alleged explosion supposedly took place, denied the story. There are also no media reports from 1982 that confirm such an explosion, though accidents and pipeline explosions in the Soviet Union were regularly reported in the early 1980s. Something likely did happen, but Reed's book is the only public mention of the incident and his account relied on a single document. Even after the CIA declassified a redacted version of Reed's source, a note on the so-called Farewell Dossier that describes the effort to provide the Soviet Union with defective technology, the agency did not confirm that such an explosion occurred. The available evidence on the Siberian pipeline blast is so thin that it shouldn't be counted as a proven case of a successful cyberattack. Most other commonly cited cases of cyberwar are even less remarkable. Take the attacks on Estonia in April 2007, which came in response to the controversial relocation of a Soviet war memorial, the Bronze Soldier. The well-wired country found itself at the receiving end of a massive distributed denial-of-service attack that emanated from up to 85,000 hijacked computers and lasted three weeks. The attacks reached a peak on May 9, when 58 Estonian websites were attacked at once and the online services of Estonia's largest bank were taken down. "What's the difference between a blockade of harbors or airports of sovereign states and the blockade of government institutions and newspaper websites?" asked Estonian Prime Minister Andrus Ansip. Despite his analogies, the attack was no act of war. It was certainly a nuisance and an emotional strike on the country, but the bank's actual network was not even penetrated; it went down for 90 minutes one day and two hours the next. The attack was not violent, it wasn't purposefully aimed at changing Estonia's behavior, and no political entity took credit for it. The same is true for the vast majority of cyberattacks on record. Indeed, there is no known cyberattack that has caused the loss of human life. No cyberoffense has ever injured a person or damaged a building. And if an act is not at least potentially violent, it's not an act of war. Separating war from physical violence makes it a metaphorical notion; it would mean that there is no way to distinguish between World War II, say, and the "wars" on obesity and cancer. Yet those ailments, unlike past examples of cyber "war," actually do kill people. "A Digital Pearl Harbor Is Only a Matter of Time." Keep waiting. U.S. Defense Secretary Leon Panetta delivered a stark warning last summer: "We could face a cyberattack that could be the equivalent of Pearl Harbor." Such alarmist predictions have been ricocheting inside the Beltway for the past two decades, and some scaremongers have even upped the ante by raising the alarm about a cyber 9/11. In his 2010 book, Cyber War, former White House counterterrorism czar Richard Clarke invokes the specter of nationwide power blackouts, planes falling out of the sky, trains derailing, refineries burning, pipelines exploding, poisonous gas clouds wafting, and satellites spinning out of orbit -- events that would make the 2001 attacks pale in comparison. But the empirical record is less hair-raising, even by the standards of the most drastic example available. Gen. Keith Alexander, head of U.S. Cyber Command (established in 2010 and now boasting a budget of more than $3 billion), shared his worst fears in an April 2011 speech at the University of Rhode Island: "What I'm concerned about are destructive attacks," Alexander said, "those that are coming." He then invoked a remarkable accident at Russia's Sayano-Shushenskaya hydroelectric plant to highlight the kind of damage a cyberattack might be able to cause. Shortly after midnight on Aug. 17, 2009, a 900-ton turbine was ripped out of its seat by a so-called "water hammer," a sudden surge in water pressure that then caused a transformer explosion. The turbine's unusually high vibrations had worn down the bolts that kept its cover in place, and an offline sensor failed to detect the malfunction. Seventy-five people died in the accident, energy prices in Russia rose, and rebuilding the plant is slated to cost $1.3 billion. Tough luck for the Russians, but here's what the head of Cyber Command didn't say: The ill-fated turbine had been malfunctioning for some time, and the plant's management was notoriously poor. On top of that, the key event that ultimately triggered the catastrophe seems to have been a fire at Bratsk power station, about 500 miles away. Because the energy supply from Bratsk dropped, authorities remotely increased the burden on the Sayano-Shushenskaya plant. The sudden spike overwhelmed the turbine, which was two months shy of reaching the end of its 30-year life cycle, sparking the catastrophe. If anything, the Sayano-Shushenskaya incident highlights how difficult a devastating attack would be to mount. The plant's washout was an accident at the end of a complicated and unique chain of events. Anticipating such vulnerabilities in advance is extraordinarily difficult even for insiders; creating comparable coincidences from cyberspace would be a daunting challenge at best for outsiders. If this is the most drastic incident Cyber Command can conjure up, perhaps it's time for everyone to take a deep breath. "Cyberattacks Are Becoming Easier." Just the opposite. U.S. Director of National Intelligence James R. Clapper warned last year that the volume of malicious software on American networks had more than tripled since 2009 and that more than 60,000 pieces of malware are now discovered every day. The United States, he said, is undergoing "a phenomenon known as 'convergence,' which amplifies the opportunity for disruptive cyberattacks, including against physical infrastructures." ("Digital convergence" is a snazzy term for a simple thing: more and more devices able to talk to each other, and formerly separate industries and activities able to work together.) Just because there's more malware, however, doesn't mean that attacks are becoming easier. In fact, potentially damaging or life-threatening cyberattacks should be more difficult to pull off. Why? Sensitive systems generally have built-in redundancy and safety systems, meaning an attacker's likely objective will not be to shut down a system, since merely forcing the shutdown of one control system, say a power plant, could trigger a backup and cause operators to start looking for the bug. To work as an effective weapon, malware would have to influence an active process -- but not bring it to a screeching halt. If the malicious activity extends over a lengthy period, it has to remain stealthy. That's a more difficult trick than hitting the virtual off-button. Take Stuxnet, the worm that sabotaged Iran's nuclear program in 2010. It didn't just crudely shut down the centrifuges at the Natanz nuclear facility; rather, the worm subtly manipulated the system. Stuxnet stealthily infiltrated the plant's networks, then hopped onto the protected control systems, intercepted input values from sensors, recorded these data, and then provided the legitimate controller code with pre-recorded fake input signals, according to researchers who have studied the worm. Its objective was not just to fool operators in a control room, but also to circumvent digital safety and monitoring systems so it could secretly manipulate the actual processes. Building and deploying Stuxnet required extremely detailed intelligence about the systems it was supposed to compromise, and the same will be true for other dangerous cyberweapons. Yes, "convergence," standardization, and sloppy defense of control-systems software could increase the risk of generic attacks, but the same trend has also caused defenses against the most coveted targets to improve steadily and has made reprogramming highly specific installations on legacy systems more complex, not less.

Grid is resilient and sustainable

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(Paul, “The Risk of Disruption or Destruction of Critical U.S. Infrastructure by an Offensive Cyber Attack,” American Military University)

In 2003, a simple physical breakdown occurred – trees shorted a power line and caused a

fault – that had a cascading effect and caused a power blackout across the Northeast (Lewis

2010). This singular occurrence has been used as evidence that the electrical grid is fragile and

subject to severe disruption through cyber-attack, a disruption that could cost billions of dollars,

brings business to a halt, and could even endanger lives – if compounded by other catastrophic

events (Brennan 2012). A power disruption the size of the 2003 blackout, the worst in American¶ history at that time (Minkel 2008), is a worst case scenario and used as an example of the¶ fragility of the U.S. energy grid. This perceived fragility is not real when viewed in the context¶ of the robustness of the electrical grid.¶ When asked about cyber-attacks against the electrical grid in April of 2012, the¶ intelligence chief of U.S. Cyber Command Rear Admiral Samuel Cox stated that an attack was¶ unlikely to succeed because of the “huge amounts of resiliency built into the [electrical] system¶ that makes that kind of catastrophic thing very difficult” (Capaccio 2012). This optimistic view¶ is supported by an electrical grid that has **proven to be robust in the face of large natural¶ catastrophes.** Complex systems like the electrical grid in the U.S. are prone to failures and the¶ U.S. grid fails frequently. Despite efforts to reduce the risk out power outages, the risk is always¶ present. Power outages that affect more than 50,000 people have occurred steadily over the last¶ 20 years at a rate of 12% annually and the frequency of large catastrophes remains relatively¶ high and outages the size of the 2003 blackout are predicted to occur every 25 years (Minkel¶ 2008). In a complex system that is always at risk of disruption, the effect is mitigated by policies¶ and procedures that are meant to restore services as quickly as possible. The most visible of these policies is the interstate Emergency Management Assistance Compact, a legally binding¶ agreement allowing combined resources to be quickly deployed in response to a catastrophic¶ disaster such as power outages following a severe hurricane (Kapucu, Augustin and Garayev¶ 2009).¶ The electrical grid suffers service interruptions regularly, it is a large and complex system¶ supporting the largest economy in the world, and yet commerce does not collapse (Lewis 2010).¶ **Despite blizzards, earthquakes, fires, and hurricanes** that cause blackouts, the economy is¶ affected but does not collapse and even after massive damage like that caused by Hurricane¶ Katrina, national security is not affected because U.S. military capability is not degraded (Lewis¶ 2010).¶ Cyber-security is an ever-increasing concern in an increasingly electronic and¶ interconnected world. Cyber-security is a high priority “economic and national security¶ challenge” (National Security Council n.d.) because cyber-attacks are expected to become the¶ top national security threat (Robert S. Mueller 2012). In response to the threat Congress is¶ crafting legislation to enhance cyber-security (Brito and Watkins 2012) and the Department of¶ Homeland Security budget for cyber-security has been significantly increased (U.S. Senate¶ Committee on Homeland Security and Governmental Affairs 2012).

**No accidental launch**

**Williscroft 10** (Six patrols on the *John Marshall* as a Sonar Technician, and four on the *Von Steuben* as an officer – a total of twenty-two submerged months. Navigator and Ops Officer on *Ortolan* & *Pigeon* – Submarine Rescue & Saturation Diving ships. Watch and Diving Officer on *Oceanographer* and *Surveyor*. “Accidental Nuclear War” http://www.argee.net/Thrawn%20Rickle/Thrawn%20Rickle%2032.htm)

Is there a realistic chance that we could have a nuclear war by accident? Could a ballistic submarine commander launch his missiles without specific presidential authorization? Could a few men conspire and successfully bypass built-in safety systems to launch nuclear weapons? The key word here is “realistic.” In the strictest sense, yes, these things are possible. But are they realistically possible? This question can best be answered by examining two interrelated questions. Is there a way to launch a nuclear weapon by accident? Can a specific accidental series of events take place—no matter how remote—that will result in the inevitable launch or detonation of a nuclear weapon? Can one individual working by himself or several individuals working in collusion bring about the deliberate launch or detonation of a nuclear weapon? We are protected from accidental launching of nuclear weapons by mechanical safeguards, and by carefully structured and controlled mandatory procedures that are always employed when working around nuclear weapons. Launching a nuclear weapon takes the specific simultaneous action of several designated individuals. System designers ensured that conditions necessary for a launch could not happen accidentally. For example, to launch a missile from a ballistic missile submarine, two individuals must insert keys into separate slots on separate decks within a few seconds of each other. Barring this, the system cannot physically launch a missile. There are additional safeguards built into the system that control computer hardware and software, and personnel controls that we will discuss later, but—in the final analysis—without the keys inserted as described, there can be no launch—it’s not physically possible. Because the time window for key insertion is less than that required for one individual to accomplish, it is physically impossible for a missile to be launched accidentally by one individual. Any launch must be deliberate. One can postulate a scenario wherein a technician bypasses these safeguards in order to effect a launch by himself. Technically, this is possible, but such a launch would be deliberate, not accidental. We will examine measures designed to prevent this in a later column. Maintenance procedures on nuclear weapons are very tightly controlled. In effect always is the “two-man rule.” This rule prohibits any individual from accessing nuclear weapons or their launch vehicles alone. Aside from obvious qualification requirements, two individuals must be present. No matter how familiar the two technicians may be with a specific system, each step in a maintenance procedure is first read by one technician, repeated by the second, acknowledged by the first (or corrected, if necessary), performed by the second, examined by the first, checked off by the first, and acknowledged by the second. This makes maintenance slow, but absolutely assures that no errors happen. Exactly the same procedure is followed every time an access cover is removed, a screw is turned, a weapon is moved, or a controlling publication is updated. Nothing, absolutely nothing is done without following the written guides exactly, always under two-man control. This even applies to guards. Where nuclear weapons are concerned, a minimum of two guards—always fully in sight of each other—stand duty. There is no realistic scenario wherein a nuclear missile can be accidentally launched...ever...under any circumstances...period!

Alt Cause – Solar Flares

Deborah Zabarenko, Environmentalist Writer, 12 [“Solar superstorm could knock out US power grid – experts,” Chicago Tribune, August 3, http://articles.chicagotribune.com/2012-08-03/news/sns-rt-us-solar-superstormbre8721k8-20120803\_1\_power-grid-geomagnetic-transformers]

WASHINGTON (Reuters) - U.S. weather has been lousy this year, with droughts, heat and killer storms. But a solar superstorm could be far worse.¶ A monster blast of geomagnetic particles from the sun could destroy 300 or more of the 2,100 high-voltage transformers that are the backbone of the U.S. electric grid, according to the National Academy of Sciences (NAS). Even a few hundred destroyed transformers could disable the entire interconnected system. There is impetus for a group of federal agencies to look for ways to prepare for such a storm this year as the sun moves into an active period called solar maximum, expected to peak in 2013.¶ Some U.S. experts estimate as much as a 7 percent chance of a superstorm in the next decade, which seems a slight risk, but the effects would be so wide-ranging - akin to a major meteorite strike - that it has drawn official concern.¶ Although the likelihood of this kind of geomagnetic storm, like a big hit from a space rock, is extremely low, its impact would be great. By comparison, the probability of a large meteorite hitting Earth is at some fraction of 1 percent.¶ Power blackouts can cause chaos, as they did briefly in India when more than 600 million people lost electricity for hours on two consecutive days in July. However, the kind of long-duration outage that might happen in the case of a massive solar storm would have more profound and costly effects.¶ There is disagreement on how costly the damage would be, but experts in the U.S. government and industry acknowledge it is a complex problem requiring a coordinated solution.¶ A report by the NAS estimated that about 365 high-voltage transformers in the continental United States are at risk of failure or permanent damage requiring replacement in the event of a solar superstorm.¶ The North American Electric Reliability Corporation, or NERC, which oversees North America's power grid, disputed the academy's estimate that hundreds of high-voltage transformers could be lost in a solar superstorm.¶ In a report earlier this year, NERC said a more likely result would be voltage collapse, which would take out power but not destroy transformers. Any power outage would be less protracted in that event.¶ NO POWER FOR A YEAR?¶ **The academy's report noted that replacements for transformers might not be available for a year or more, and the cost of damage in the first year after a storm could be as high as $2 trillion**. The most vulnerable areas are the eastern one-third of the country, from the Midwest to the East Coast, and the Northwest, as far east as Montana and Wyoming and as far south as California.¶ The national grid was built over decades to get energy at the lowest price from where it is generated to where it is used. A solar superstorm has the capacity to bring that network down, the academy's report said.

#### Data disproves hegemony impacts

Fettweis, 11

Christopher J. Fettweis, Department of Political Science, Tulane University, 9/26/11, Free Riding or Restraint? Examining European Grand Strategy, Comparative Strategy, 30:316–332, EBSCO

It is perhaps worth noting that there is no evidence to support a direct relationship between the relative level of U.S. activism and international stability. In fact, the limited data we do have suggest the opposite may be true. During the 1990s, the United States cut back on its defense spending fairly substantially. By 1998, the United States was spending $100 billion less on defense in real terms than it had in 1990.51 To internationalists, defense hawks and believers in hegemonic stability, this irresponsible “peace dividend” endangered both national and global security. “No serious analyst of American military capabilities,” argued Kristol and Kagan, “doubts that the defense budget has been cut much too far to meet America’s responsibilities to itself and to world peace.”52 On the other hand, if the pacific trends were not based upon U.S. hegemony but a strengthening norm against interstate war, one would not have expected an increase in global instability and violence.

The verdict from the past two decades is fairly plain: The world grew more peaceful while the United States cut its forces. No state seemed to believe that its security was endangered by a less-capable United States military, or at least none took any action that would suggest such a belief. No militaries were enhanced to address power vacuums, no security dilemmas drove insecurity or arms races, and no regional balancing occurred once the stabilizing presence of the U.S. military was diminished. The rest of the world acted as if the threat of international war was not a pressing concern, despite the reduction in U.S. capabilities. Most of all, the United States and its allies were no less safe. The incidence and magnitude of global conflict declined while the United States cut its military spending under President Clinton, and kept declining as the Bush Administration ramped the spending back up. No complex statistical analysis should be necessary to reach the conclusion that the two are unrelated.

Military spending figures by themselves are insufficient to disprove a connection between overall U.S. actions and international stability. Once again, one could presumably argue that spending is not the only or even the best indication of hegemony, and that it is instead U.S. foreign political and security commitments that maintain stability. Since neither was significantly altered during this period, instability should not have been expected. Alternately, advocates of hegemonic stability could believe that relative rather than absolute spending is decisive in bringing peace. Although the United States cut back on its spending during the 1990s, its relative advantage never wavered.

However, even if it is true that either U.S. commitments or relative spending account for global pacific trends, then at the very least stability can evidently be maintained at drastically lower levels of both. In other words, even if one can be allowed to argue in the alternative for a moment and suppose that there is in fact a level of engagement below which the United States cannot drop without increasing international disorder, a rational grand strategist would still recommend cutting back on engagement and spending until that level is determined. Grand strategic decisions are never final; continual adjustments can and must be made as time goes on. Basic logic suggests that the United States ought to spend the minimum amount of its blood and treasure while seeking the maximum return on its investment. And if the current era of stability is as stable as many believe it to be, no increase in conflict would ever occur irrespective of U.S. spending, which would save untold trillions for an increasingly debt-ridden nation.

It is also perhaps worth noting that if opposite trends had unfolded, if other states had reacted to news of cuts in U.S. defense spending with more aggressive or insecure behavior, then internationalists would surely argue that their expectations had been fulfilled. If increases in conflict would have been interpreted as proof of the wisdom of internationalist strategies, then logical consistency demands that the lack thereof should at least pose a problem. As it stands, the only evidence we have regarding the likely systemic reaction to a more restrained United States suggests that the current peaceful trends are unrelated to U.S. military spending. Evidently the rest of the world can operate quite effectively without the presence of a global policeman. Those who think otherwise base their view on faith alone.

#### No threat – weak leadership and no recent attacks

**Zenko and Cohen 12**, \*Fellow in the Center for Preventive Action at the Council on Foreign Relations, \*Fellow at the Century Foundation, (Micah and Michael, "Clear and Present Safety," March/April, Foreign Affairs, www.foreignaffairs.com/articles/137279/micah-zenko-and-michael-a-cohen/clear-and-present-safety

 NONE OF this is meant to suggest that the United States faces no major challenges today. Rather, the point is that the problems confronting the country are manageable and pose minimal risks to the lives of the overwhelming majority of Americans. None of them -- separately or in combination -- justifies the alarmist rhetoric of policymakers and politicians or should lead to the conclusion that Americans live in a dangerous world.

Take terrorism. Since 9/11, no security threat has been hyped more. Considering the horrors of that day, that is not surprising. But the result has been a level of fear that is completely out of proportion to both the capabilities of terrorist organizations and the United States' vulnerability. On 9/11, al Qaeda got tragically lucky. Since then, the United States has been preparing for the one percent chance (and likely even less) that it might get lucky again. But al Qaeda lost its safe haven after the U.S.-led invasion of Afghanistan in 2001, and further military, diplomatic, intelligence, and law enforcement efforts have decimated the organization, which has essentially lost whatever ability it once had to seriously threaten the United States.

According to U.S. officials, al Qaeda's leadership has been reduced to two top lieutenants: Ayman al-Zawahiri and his second-in-command, Abu Yahya al-Libi. Panetta has even said that the defeat of al Qaeda is "within reach." The near collapse of the original al Qaeda organization is one reason why, in the decade since 9/11, the U.S. homeland has not suffered any large-scale terrorist assaults. All subsequent attempts have failed or been thwarted, owing in part to the incompetence of their perpetrators. Although there are undoubtedly still some terrorists who wish to kill Americans, their dreams will likely continue to be frustrated by their own limitations and by the intelligence and law enforcement agencies of the United States and its allies.

Al-Qaeda is dead – attacks fail and ideology dead

**Bergen 12** (Peter Bergen, CNN national security analyst, is the author of "Manhunt: The Ten-Year Search for bin Laden, From 9/11 to Abbottabad.", 6/6/2012, "And now, only one senior al Qaeda leader left", edition.cnn.com/2012/06/05/opinion/bergen-al-qaeda-whos-left/index.html)

Washington (CNN) -- The news that Abu Yahya al-Libi, the No.2 leader of al Qaeda, is now confirmed to have been killed in a CIA drone strike in Pakistan's tribal region along the border with Afghanistan further underlines that the terrorist group that launched the 9/11 attacks is now more or less out of business. Under President Barack Obama, CIA drone strikes have killed 15 of the most important players in al Qaeda, according to a count maintained by the New America Foundation (a nonpartisan think tank where I am a director). Similarly, President George W. Bush also authorized drone strikes that killed 16 important al Qaeda operatives in Pakistan while he was in office. As a result, according to senior U.S. counterterrorism officials, there now remains only one leader of any consequence in al Qaeda and that is Ayman al-Zawahiri, the tetchy Egyptian surgeon who became the head of the group following the death of its founder, Osama bin Laden, in a U.S. Navy SEAL raid in Pakistan in May 2011. Zawahiri, presumably, is keenly aware of the fate of so many of his longtime colleagues in al Qaeda. He will be expending considerable energy not to end up on the business end of a missile fired by a CIA drone if he, too, is hiding in the Pakistani tribal regions where the drone strikes have been concentrated. Meanwhile, Zawahiri faces an almost **impossible task** to follow through on al Qaeda's main mission: attacking the United States, or failing that, one of its close allies. Al Qaeda hasn't conducted a successful attack in the West since the bombings on London's transportation system on July 7, 2005, and of course, the group hasn't succeeded in attacking the United States for more than a decade. There are, however, al Qaeda's regional affiliates still to contend with. The most virulent of those is the Yemen-based Al Qaeda in the Arabian Peninsula. It was AQAP that tried to bring down Northwest Flight 253 over Detroit on Christmas Day 2009 using a Nigerian recruit who had secreted a hard-to-detect bomb in his underwear, and it was AQAP that smuggled bombs in printer cartridges onto cargo planes bound for the U.S. in October 2010. Last month came news that a spy had penetrated AQAP and had retrieved a new generation of underwear bomb that the group's bomb maker had apparently recently designed to bring down a commercial jet. But all of AQAP's plots to bring down planes have had one thing in common: They failed. Some might say that that while al Qaeda the organization may be basically dead, its ideology continues to thrive and to inspire "lone wolves" to attack the United States. In fact, lone wolves inspired by jihadist ideology have managed to kill a total of 17 Americans in the United States since 9/11, according to a tally maintained by the New America Foundation. Meanwhile, 54 Americans are reported to be killed every year by lightning, according to the National Weather Service. In other words, to the average American, lightning is about 30 times more deadly than jihadist terrorism. Few Americans harbor irrational fears about being killed by a lightning bolt. Abu Yahya al-Libi's death on Monday should remind them that fear of al Qaeda in its present state is even more irrational.

## solvency

SMR incentives fail

Magwood, commissioner – NRC, 7/14/’11

(William, “ECONOMICS AND SAFETY OF MODULAR REACTORS; COMMITTEE: SENATE APPROPRIATIONS; SUBCOMMITTEE: ENERGY AND WATER DEVELOPMENT,” CQ Congressional Testimony)

That is not to say that SMRs are a new idea. The conceptual benefits of small reactors have been the subject of discussion and analysis for decades, and all the potential benefits I've mentioned have been considered in the past. The potential advantages of smaller reactors prompted the government to provide considerable financial support for the development of the mid- size, passive-safety reactors in the 1990s and to encourage the pursuit of the pebble-bed modular reactor in the early years of this century.

Both efforts proved unable to overcome the economic realities of building and operating nuclear power plants realities that tend to penalize small reactors and reward larger designs. Thus, instead of the AP-600 and 500 megawatt Simplified Boiling Water Reactor of the early 1990s, the market pushed vendors to increase the size of their designs; today, vendors offer Generation III+ technologies based on those smaller systems the 1100 megawatt AP- 1000 and the 1600 megawatt Economic Simplified Boiling Water Reactor.2

Around the turn of the century, both DOE and industry became interested in the Pebble Bed Modular Reactor, or PBMR. This was a small, high-temperature gas-cooled reactor with a generating capacity of about 165 megawatts. This technology captured considerable media attention after U.S. companies became involved in an effort to build a commercial pilot in South Africa. However, as the high costs of the project became apparent, commercial participants began to peel away and eventually the South African project was abandoned.

All small reactor technologies of the past failed to find a way to overcome the fact that the infrastructure required to safely operate a nuclear power reactor of any size is considerable. Tons of steel and concrete are needed to construct containment buildings. Control rod drives, steam generators, and other key systems are **hugely expensive** to design and build. A larger plant with greater electric generating capacity simply has an inherently superior opportunity to recover these large up-front costs over a reasonable period.

So why is today different from yesterday? The greatest difference is the fact that the technology has evolved significantly over the years. Having learned lessons from the development of Generation III+ technologies and from the failure of previous small reactors, today's SMR vendors clearly believe they have solved the riddle of small reactor economics. They are presenting novel design approaches that could lead to significant improvements in nuclear safety. For example, design concepts that I have seen thus far further advance the use of passive safety systems, applying gravity, natural circulation, and very large inventories of cooling water to reduce reliance on human intervention during an emergency. SMR designs also apply novel technologies such as integral pressure vessels that contain all major system components and use fewer and smaller pipes and pumps, thereby reducing the potential for a serious loss-of- coolant accident.

Very importantly, these new SMRs are much smaller than the systems designed in the 1990s; this choice was made to assure that they could be factory-built and shipped largely intact by rail for deployment. The ability to "manufacture" a reactor rather than "constructing" it on-site could prove to be a major advantage in terms of cost, schedule reliability, and even quality control.

But will innovations like these allow this new breed of SMRs to be successful? Maybe.

Many years of work remain for SMR vendors to refine their designs and allow for the development of realistic and reliable cost estimates. **This is much the same state of affairs that existed in** the **2002** time frame when DOE launched the Nuclear Power 2010 program to spur the development and certification of Generation III+ designs such as the AP-1000. At that time, the level of design completeness was insufficient to enable vendors to provide utilities with reliable cost and schedule estimates.

Low gas prices kill SMRs

McMahon, energy contributor – Forbes, 5/23/’12

(Jeff, <http://www.forbes.com/sites/jeffmcmahon/2012/05/23/small-modular-reactors-by-2022-but-no-market-for-them/>)

Small Modular Nuclear Reactors By 2022 -- But No Market For Them

The Department of Energy will spend $452 million—with a match from industry—over the next five years to guide two small modular reactor designs through the nuclear regulatory process by 2022. But cheap natural gas could freeze even small nuclear plants out of the energy market well beyond that date.

DOE accepted bids through Monday for companies to participate in the Small Modular Reactor program. A number of reactor manufacturers submitted bids, including NuScale Power and a collaboration that includes Westinghouse and General Dynamic.

“This would allow SMR technology to overcome the hurdle of NRC certification – the ‘gold standard’ of the international nuclear industry, and would help in the proper development of the NRC’s regulatory framework to deal with SMRs,” according to Paul Genoa, Senior Director of Policy Development at the Nuclear Energy Institute.

Genoa’s comments are recorded in a summary released today of a briefing given to Senate staff earlier this month on prospects for small modular reactors, which have been championed by the Obama Administration.

DOE defines reactors as SMRs if they generate less than 300 megawatts of power, sometimes as little as 25 MW, compared to conventional reactors which may produce more than 1,000 MW. Small modular reactors can be constructed in factories and installed underground, which improves containment and security but may hinder emergency access.

The same summary records doubt that SMRs can compete in a market increasingly dominated by cheap natural gas. Nuclear Consultant Philip Moor told Senate staff that SMRs can compete if natural gas costs $7 to $8 per million BTU—gas currently costs only $2 per MBTU—or if carbon taxes are implemented, a scenario political experts deem unlikely.

“Like Mr. Moor, Mr. Genoa also sees the economic feasibility of SMRs as the final challenge. With inexpensive natural gas prices and no carbon tax, **the economics don’t work** in the favor of SMRs,” according to the summary.

# 2NC

## offense

#### Incentives must be directly tied to energy production—their interpretation unlimits—allows incentives for any economic activity tangentially related to energy production

Tacoa-Vielma, counsellor – Trade in Services Division @ WTO, ‘3

(Jasmin, “ENERGY AND ENVIRONMENTAL SERVICES: Negotiating Objectives and Development Priorities,” unctad.org/en/docs/ditctncd20033\_en.pdf)

Another perceived deficiency relates to the fact that a variety of other services that intervene in the energy value-added chain (from production to sale to final consumers) are found in the whole range of services sectors on the list, e.g. research and development, engineering, construction, management consultancy, environmental, financial and distribution services. These services could be termed "energy-related services" because of their relevance, but not exclusivity, to the energy industry. It has been argued that such dispersion of “energy-related services” makes it difficult to determine existing commitments and to negotiate the totality of the services necessary for the energy industry; that would make sense from an economic viewpoint. However, this situation is not unique to the energy industry, as most economic activities or industries require a variety of services inputs that in many cases are designed or adapted for different end-uses. For example, there are engineering, financial or construction services especially tailored for the energy industry as well as for the telecom industry.4 Having an all-encompassing definition of the energy services sector would certainly facilitate considering the totality of services involved in the industry; however, that should not be equated to a guarantee of complete coverage by GATS commitments.

#### Allows small affs unrelated to the core of the topic

Selivanova, PhD international law – University of Berne, trade expert – Energy Charter Secretariat, Brussels, ‘7

(Yulia, “The WTO and Energy,” <http://ictsd.org/i/publications/129716/>)

There are several problems that are associated with definition of energy services. Firstly, some energy products can be considered either a good or a service (e.g. electricity).70 Furthermore, many services that form part of the energy production chain are in fact not core energy services. Examples of such services are construction, engineering, consulting, etc. There were discussions of merits to distinguish between core and non-core services.71 An activity would be considered as “core” if the service was an essential part of the chain of supply of the sector, i.e. without that service the sector would not be able to function (Tacoa-Vielma, 2003). Non-core services simply support the chain and are closely connected to the process. The problem with this distinction is where to draw the line between the two categories. What makes service an “essential” part of the energy production chain?

#### No overlimiting offense—energy financial incentives include a host of mechanisms—we just limit out policy incentives that encourage energy tech

Diehl, Junior Staff Member – Journal of Land, Resources & Environmental Law, JD – University of Utah, ‘7

(Rustin P., 27 J. Land Resources & Envtl. L. 345)

A. Available Incentives for Implementing Clean Renewables

Many studies have considered the benefits and achieved results of the available renewable energy financial incentives. While studies agree that these incentives are effectively promoting business integration of renewable energies, it is questionable whether the incentives encourage private adoption of renewable energy technology. n55 The incentives for implementing clean renewable power generation fall into two main categories: financial incentives and policy [\*354] incentives. These incentives can be provided at federal, state, and municipal levels.

A laundry list of financial incentives include: corporate equipment rebates, energy efficient mortgages, accelerated corporate depreciation schedules, corporate tax credits, corporate production incentives, corporate and personal tax exemptions, personal tax credits, federal grant programs, USDA renewable energy systems and energy efficiency improvements loan programs, green power purchasing or aggregation, corporate tax incentive, industry recruitment incentives, property tax incentives, state public benefit funds, and state sales tax incentives.

## Link—Power Purchasing

#### Guaranteed purchasing is a non-financial incentive

Czinkota 9

(Associate Professor at the McDonough School of Business at Georgetown University, Fundamentals of International Business, p. 69 – google books)

Incentives offered by policymakers to facilitate foreign investments are mainly of three types: fiscal, financial, and nonfinancial. **Fiscal incentives** are specific tax measures designed to attract foreign investors. They typically consist of special depreciation allowances, tax credits or rebates, special deductions for capital expenditures, tax holidays, and the reduction of tax burdens. **Financial incentives** offer special funding for the investor by providing, for example, land or buildings, loans, and loan guarantees. **Nonfinancial incentives** include guaranteed government purchases; special protection from competition through tariffs, import quotas, and local content requirements, and investments in infrastructure facilities.

#### Procurements are purchases that don’t motivate action – they just buy a technology that already exists

Nelson 93

(Edward W., Chairman – Payment Subcommittee in OPTN/UNOS Ethics Committee, “Financial Incentives for Organ Donation,” Organ Procurement and Transplantation Network, 6-30, http://optn.transplant.hrsa.gov/resources/bioethics.asp?index=4)

**Definition of Financial Incentives**  A definition of terms is **necessary prior to a discussion of the concept of financial incentives** for organ donation. First, financial incentives, as discussed here, do not mean additional monies spent for public or professional education or recognition and counseling of organ donor families. Because the concept of financial incentives fundamentally changes the process of organ procurement, it has been argued that the term "donor" is no longer applicable and would need to be replaced by a term such as 'vendor." The term "rewarded gifting" has been suggested and has been justly criticized as an oxymoron by those opposed to financial incentives and a despicable euphemism by those who promote this concept. Of greatest practical significance is the **distinction between "incentive" and "payment"** since a system of financial incentives may indeed be a viable option if, as interpreted by law, **"incentives" do not amount to "purchases"** and "donors" are therefore not transformed into 'vendors."

## at: webb

#### Webb is Canadian, which makes him stupid. But it also matters because their tax system is completely boned so his delineations of incentives makes no sense and is not precise

MacNevin, Tax Evaluation Division – Federal Department of Finance, ‘93

(Alex, 31 Alta. L. Rev. 539)

Not surprisingly, Mr. Webb's perspective is primarily legal in focus; he is concerned with what he views as deficiencies in legal structure and channels of legal authority and recourse. As an economist, I am not qualified to discuss the legal issues raised by Mr. Webb. However, his passing reference, in a related paper to be delivered at this conference, refers to the Auditor General's estimates that there are $41 billion and $28 billion in, respectively, direct expenditure incentives and tax expenditure incentives.1 Incentives are thus ultimately about money -- that is, who gets it, why, how, how much, what is the effect and how is this accounted for -- and therefore have important economic as well as legal dimensions. While Mr. Webb's paper deals with both expenditure and tax incentives, my comments concentrate on the latter, with which I am most familiar.

II. THE IDENTIFICATION OF TAX INCENTIVES

One fundamental problem with respect to accountability in the area of taxation arises because of difficulties in defining what is or is not a tax expenditure or a tax incentive. A central aspect of accountability relates to the seemingly simple basic requirement for documenting the amounts of money foregone through various incentives. Mr. Webb notes that information on the costs of tax incentives are reported only sporadically in tax expenditure accounts, the last of which was put out by the Minister of Finance in 1985. He also points out that tax incentives are removed from the normal budgeting and estimating procedures that apply to many other incentives on the expenditure side (which, incidentally, he views as generally deficient).

The infrequent release of tax expenditures (or, as they were called in the 1985 document, selective tax measures) tables may in part reflect the absence of a legal requirement that they be produced on a regular basis.2 They also, however, reflect significant conceptual difficulties encountered in constructing such accounts as well as prevailing concerns about the extent of their usefulness, including their interpretation. Difficulties in this regard were highlighted in a 1988 conference on tax expenditures and accountability in taxation that was jointly sponsored by the Department of Finance and the John Deutsch Institute of Queen's University.3

In the opinion of many of the public finance experts who participated in the conference, tax expenditures often cannot easily be distinguished from structural parameters of the tax system. Identification of tax incentives necessitates comparison of the actual tax system with an ideal "benchmark" tax system. This is entirely different from the case of direct expenditures where no comparable reference base is required. One practical difficulty confronting tax expenditure accounting is that any view about what the tax base should be is essentially a value judgement and hence will vary from individual to individual. The result is that items which may be viewed as tax expenditures under one particular benchmark tax system may not be viewed as such under another benchmark. For example, tax deductions for retirement savings plans are a tax expenditure under an annual income tax benchmark, but are not tax expenditures under lifetime income tax or consumption tax benchmarks. Since the federal tax system contains a mixture of elements of all three of these tax regimes, considerable difficulties in identifying tax expenditures exist.

Related additional complexities arise because an actual tax system can only approximate the desirable characteristics of any particular normative view as to what should be taxed. For example, while economists may be able to define fairly precisely what real economic income is over a particular period of time under an income tax base, it is impractical to design an income tax system that has the actual characteristics dictated by theory. The result of is that in some instances, it is not clear how a particular tax measure or group of related tax measures should be viewed under an actual tax system that is inevitably only an imperfect approximation of a chosen "benchmark" tax system.4

Many examples can be given to illustrate the difficulties that arise in this respect. For example, considerable uncertainty arises about how the various provisions relating to the taxation of capital gains should be treated for tax expenditure accounting purposes under an income tax regime that taxes nominal gains on a realization basis rather than real gains on an accrual basis. The integration of the personal and corporate income tax systems gives rise to other examples. Under a view that treats the integrated personal and corporated tax systems as the benchmark, the dividend tax credit is not a tax expenditure. Under one that treats the personal and corporate tax systems as separate benchmark systems, it is.

The tax expenditure treatment of cash accounting for farmers and fishermen provides another example. Economists are uncomfortable on tax principle grounds with the deductibility of expenditures on inventory because such expenditures merely reflect the transfer of one asset (cash) into another asset (inventory). Accrual accounting rules, which are required of other types of businesses, effectively result in unsold inventories being added back into income at the end of the year so that no deduction in the year is permitted. Past tax expenditure accounts have identified cash accounting as a tax expenditure, although it is far from obvious that, at least for full-time farmers and fishermen, cash accounting on balance results in lower tax liabilities over time or that from their perspective it is anything more than a peculiar tax wrinkle. It is notable that there is no dollar estimate of the value of cash accounting in previous tax expenditure accounts.

III. THE ACCOUNTABILITY OF TAX INCENTIVES

One common theme that emerged from the conference on tax expenditures and accountability was that, in light of the many difficulties in identifying tax expenditures, it might be desirable to present tax expenditure information from the perspective of a number of different normative benchmark systems. This would highlight aspects of the tax system from these different perspectives. It would, however, achieve this at the cost of considerable added complexity in interpreting the accounts, particularly to users of the accounts who were not tax experts. There may, therefore, be somewhat of a conflict between the usefulness of tax expenditure accounts in their role as an instrument of tax analysis versus their role as an accountability instrument where clarity and simplicity of presentation and interpretation have high priority. It may be possible to strike a compromise by, for example, ensuring that tax expenditure accounts clearly identify the key tax measures that most reasonably could be substituted for direct expenditure programs. This would facilitate comparisons of tax expenditures data with those for comparable programs on the direct expenditure side in the Public Accounts and thereby permit a more complete assessment of the incentives and subsidies applying to particular sectors, geographical regions, and so on. Such an approach would foster the accountability objective of "functional equivalence" identified by Mr. Webb.

Problems with compiling tax expenditures accounts are highlighted when the very structure of the tax system undergoes major changes, such as with the income tax reform of 1988 and with the introduction of the GST to replace the manufacturers sales tax. In such circumstances, presentation of tax expenditure information must be thoroughly reformulated to reflect the revised tax regimes and, indeed, the changing benchmark norms. This can give rise to problems of lack of continuity and comparability of data over time. As an additional practical matter, significant lags in the availability of taxation data may delay the release of tax expenditure tables that reflect the new regimes. There are two and three year lags for, respectively, personal income tax data and corporate income tax data.

Delays in the availability of taxation data are particularly problematic since it is typically much more difficult to forecast the ultimate cost of tax incentives than is the case for direct expenditure incentives. The main reason for this is that tax incentives are almost always open-ended while direct expenditure incentives are typically subject to an overall budget constraint. The total cost of a tax incentive thus depends entirely on the usually difficult to predict take-up response of taxpayers, which can give rise to considerable uncertainty in budgeting.5

There are thus significant difficulties with tax expenditure analysis even as an accounting device for providing estimates of the cost of individual tax measures. Judged by the other criteria identified above they are substantially more deficient since they provide no insight whatsoever into the questions of who benefits from tax incentives, why, and what are their effects. Analytical techniques, (such as full evaluations) in addition to accounting techniques, are required in order to provide a complete picture of both the cost and the efficacy of tax measures. I would note, however, that the problems in identifying tax expenditures, particularly in an environment of changing tax structures or norms, make it difficult to systematically evaluate tax expenditures or incentives on a routine cyclical basis as is done for direct expenditure programs.

The limitations of tax expenditures information naturally raise questions about the appropriate amount of scarce analytical resources that should be devoted to the preparation of tax expenditure tables, rather than to alternative or complementary tools of accountability such as in-depth studies of the rationale and cost-effectiveness of particular tax measures and related groupings of tax measures; irrespective of whether there is a consensus as to their tax expenditure status under any particular benchmark tax system. The Department of Finance has long wrestled with the practical difficulties and trade-offs involved in compiling tax expenditure data and other accountability information that is, on balance, most revealing with respect to the underlying structure of the tax system. The proceedings of the John Deutsch Conference indicate clearly that there are no easy solutions to the problems.

IV. CONCLUSION

As noted earlier, Mr. Webb also makes reference to the adequacy of current budgeting procedures for tax incentives. The problem of identifying and measuring tax incentives separately from the "normal" parameters of the tax system hints at the intimate relationship between tax expenditures or (tax incentives) policy and the more limited process of modifying and improving the tax system -- that is the strict design of tax policy. This latter process is a natural component of the government's routine budget procedures and is subject to well-known budget conventions. Procedures relating to the introduction or modification of tax incentives must therefore inevitably be conducted within that somewhat restrictive environment. Can improvements be made which reflect both the need for improved budgeting procedures for tax incentives and the unique environment in which tax measures are designed and modified? I am sure they can but I am considerably less sure that such procedures can be routinized through legislative structure or guidelines.

In summary, I fully support the general thrust of Mr. Webb's paper of the need for improved structures and instruments of accountability. In my view, however, the pursuit of that objective must be tempered by recognition of the significant practical obstacles that arise because of the unique characteristics of tax incentives.

#### Webb is broad

Woodside, professor of political studies – University of Guelph, ‘93

(Kenneth, 31 Alta. L. Rev. 536)

In his discussion of legal accountability, Kernaghan Webb focuses on the absence of the rule of law in many expenditure incentive programs administered by the federal government. Webb argues that many government incentive programs do not require that administrators openly account for their decisions. The flexibility given to officials through broad statutory grants of discretionary power undermines the legal accountability of their actions. Since financial incentives are regulatory in their impact, Webb suggests that they should be treated more like traditional regulatory instruments where the requirements of legal accountability are more strictly enforced. This paper is an excellent discussion of the shortcomings in legal accountability in the area of expenditure incentive programs. As well, the author recognizes the importance of financial restraint at this point in our nation's political development. In my commentary I would like to focus on two questions. First, does increased legal accountability necessarily result in greater political accountability? Second, why have our national governments not been more interested in increasing the legal accountability of these programs?

Webb's paper provides a fairly broad definition of incentives but largely focuses on those provided as expenditure subsidies. While "tax expenditures" are included in his definition, they are largely ignored in the analysis. A comparison of the extent of legal accountability in these two delivery systems suggests that the relationship between legal and political accountability is not necessarily a straightforward one. It is clear, for instance, that tax expenditures normally provide more legal accountability than expenditure incentives. Discretion on the part of administrators is more sharply constrained and avenues of appeal are more formally established in the tax system than they are in many expenditure incentive programs. Large numbers of professionals are handsomely rewarded for their expertise in understanding and manipulating these many tax rules. However a great many scholars are sharply critical of the lack of political accountability in the delivery of tax expenditures, especially when they are compared with expenditure incentives. (We will ignore the debate over the logic of the concept of tax expenditures and what constitutes the normal tax structure that tax expenditures deviate from in delivering their benefits.) Critics of tax expenditures attack their lack of public visibility: the difficulty governments have in establishing budgetary control over their use and the relative lack of scrutiny over the usage of these instruments. These failings all contribute to a diminished sense of political accountability in the delivery of tax expenditures.

## Interpretation

#### R&D only has potential incentive effects—plan just attempts to create tech for energy production—distinct from subsidies for energy production

Painuly, UNEP Collaborating Centre on Energy and Environment @ Risø National Laboratory, ‘1

(J.P., “Barriers to renewable energy penetration; a framework for analysis,” Renewable Energy Vol. 24, Issue 1, p. 73–89)

5. Measures to overcome barriers

It may not be possible to achieve technical potential but research and development can reduce the gap between techno-economic potential and technical potential. In most of the cases, the aim is to achieve or move closer to techno-economic potential.

Imperfections and distortions in the market coupled with unfavourable financial, institutional and regulatory environments imply that governmental intervention is not only desirable but also a must to promote RETs. The role of governments in technology transfer has been outlined in the IPCC special report on technology transfer [15], which is relevant for renewables too. The role includes generic actions to remove barriers, building human and institutional capacity, setting up research and development infrastructure, creating an enabling environment for investment, and providing information and mechanisms to promote RETs.

Policy approaches to achieve the techno-economic potential can either remove the barriers or create conditions where the market is forced to act, ignoring the barriers. The former normally works at the micro level addressing the barriers directly, and the latter mostly at macro level addressing the barriers indirectly. For example, setting up information centres, establishing codes and standards etc. address the barriers directly, whereas increasing energy prices through pollution taxation addresses the barriers indirectly.

The measures required to promote RETs thus follow from (a) identification of barriers through administration of questionnaires/interview of the stakeholders, and (b) feedback from stakeholders on the measures to overcome the barriers, obtained by extending the questionnaire/interview to include questions related to the possible measures. Finally, policy actions need to be designed and implemented to operationalise the measures identified to overcome the barriers. Some of the policy actions taken by various governments and implicit barrier removal measures in these are discussed below. Measures taken by IEA countries have been discussed in IEA [16] and [17]. Several possibilities may exist and the one that best suits a country should be chosen. Several of these measures have been explored by the Global Environment Facility (GEF) through support to RET projects in different countries (see [2] for details).

5.1. Energy sector liberalisation

This is a broad term encompassing several policy measures such as restructuring of the energy sector, opening up to introduce competition and removing other controls. Some examples of the specific policies are; creating separate entities for generation and distribution in the electricity sector, allowing private sector entry and diluting or removing controls on energy pricing, fuel use, fuel import, and capacity expansion etc. Institutional measures such as setting up independent regulatory bodies may be needed for success of these policy actions. The basic purpose of liberalisation is to increase efficiency of the energy sector through facilitating market competition. The initial impact of such measures may be unfavourable to RETs due to increased competitiveness. However, in the long term a liberalised energy market may provide a better environment for the healthy growth of RETs.

5.2. Guaranteed markets

Since renewable energy is not able to compete in the energy market with existing barriers, energy suppliers may be required by law to include a part of the energy from renewables in their supply mix. Examples of such measures are the Non-Fossil Fuel Obligation (NFFO) law in the UK, Electricity Feed Law (EFL) in Germany, and Renewable Portfolio Standard (RPS) in the US. The NFFO guarantees pre-determined electricity prices for competitively selected renewable energy projects. It promotes reduced cost of RETs due to competitive process for project selection. Any extra cost to the electricity companies is reimbursed by a small charge to all electricity consumers. Five NFFO orders have been issued since the law was passed in 1989. The costs of generating electricity under NFFO contracts have been halved; NFFO-5 contracts were at an average of 2.71 p/kWh compared with the average pool selling price of 2.60 p/kWh in 1998 [18]. NFFO has now been succeeded by the New & Renewable Energy Policy. EFL required electricity network operators to buy all the electricity from renewables at premium prices. In April 1998, the EFL was changed slightly and now utilities are not required to accept more than 5% of their total electricity from renewable sources. In February 2000, the EFL was replaced by the Renewable Energy Law, which provides a guaranteed price for electricity from renewables [19]. RPS requires each retail supplier of electricity to provide a specified percentage of renewable energy in its electricity supply portfolio. The obligations have been made tradable through renewable energy credits (RECs) with a view to introducing flexibility and reducing costs. A variation of these mechanisms is two-way metering, which is under consideration in some EU countries. In this, distributed electricity generation (generally at household level) can be used to meet own demand and surplus electricity can be fed back to the grid, allowing the household meter to run backwards. The buyback rate is thus 100% of the utility price [16]. Although these measures may improve economic efficiency of RETs, the impact in the short run is an increased cost of electricity.

5.3. Economic/financial incentives

Several governments provide capital subsidies for installation of renewable energy systems. However the capital subsidies need to have a defined phase out time frame to ensure efficiency improvements in RETs. For example, capital subsidies for wind energy in Denmark were phased out in 10 years time. Tax exemption, credit facilities and third party financing mechanisms are other measures in some IEA countries [16]. Incentive-based renewable energy programmes are in operation in several developing countries. The World Bank's renewable energy programmes in Indonesia (solar home system project), Sri Lanka, Laos etc. are incentive-based programmes. The ESMAP programme in Africa, sponsored by UNDP, World Bank and other donors is another example of use of financial incentives to promote renewable energy. Several developing countries such as India, China etc. have their own incentive-based renewable energy programmes. Developing countries such as Uganda, Zimbabwe etc. have also provided micro-credits to consumers through revolving funds.

5.4. Government investments

In countries where governments are major players in the energy sector, they have made national plans and strategies for promotion of RETs. Governments have also made investments through specialised agencies created for RET development.

5.5. Information and awareness campaigns

Several countries have initiated informative programmes to promote renewable energy. The stakeholders can be educated and supplied with the necessary tools to evaluate the RETs and design implementation. The campaigns are both general in nature as well as targetting specific RET product promotion.

5.6. Standards and regulations

Deregulation of the electricity industry to allow renewable energy producers access to the grid has been carried out in several countries. Regulatory measures to provide a guaranteed market for renewable energy have been taken, and standards formulated to boost confidence in RET products.

5.7. Institutional measures

Specialised agencies to plan and promote RETs have been created in several countries. Regulatory agencies have also been set up in response to the need for liberalisation of the energy sector. Other measures include promotion of energy service companies (ESCOs) that address several barriers such as lack of up-front financing, credit facilities, and technical knowledge.

5.8. Research and development

Since high cost is a major barrier to RET penetration, R&D programmes have been set up to make it more competitive. Long-term RET technology costs can be reduced through research.

5.9. Facilitating measures

Several facilitating measures have been taken by governments. These include financing for feasibility studies, planning and fixing targets for renewable energy contribution, resource assessment for RETs at national and regional levels, siting of renewable energy systems, technology demonstrations etc. Skill development through training in various aspects of RETs (such as technical, regulatory, managerial, financial skills etc.) has been arranged by some governments and also facilitated through GEF projects.

## at: reasonability

#### Reasonability is impossible – it’s arbitrary and undermines research and preparation

Resnick, assistant professor of political science – Yeshiva University, ‘1

(Evan, “Defining Engagement,” Journal of International Affairs, Vol. 54, Iss. 2)

In matters of national security, establishing a clear definition of terms is a precondition for effective policymaking. Decisionmakers who invoke critical terms in an erratic, ad hoc fashion risk alienating their constituencies. They also risk exacerbating misperceptions and hostility among those the policies target. Scholars who commit the same error undercut their ability to conduct valuable empirical research. Hence, if scholars and policymakers fail rigorously to define "engagement," they undermine the ability to build an effective foreign policy.

## 2nc solar flare

Solar maximum starts in 2013 – takes out the grid for months

Tracy 12

(Ryan – WSJ, “Here Comes the Sunstorm” May 14, 2012, <http://online.wsj.com/article/SB10001424052702303505504577404360076098508.html>)

The sun is expected to hit a peak eruption period in 2013, and while superstorms don't always occur in peak periods, some warn of a disaster. John Kappenman, a consultant and former power engineer who has spent decades researching the storms, says the modern power grid isn't hardened for the worst nature has to offer. He says **an extreme storm could cause blackouts lasting weeks or months, leaving major cities temporarily uninhabitable** and taking a massive economic toll. "This is arguably the largest natural-disaster scenario that the nation could face," said Mr. Kappenman. Mr. Kappenman has consulted for companies that make equipment to harden the grid. Others are more cautious in their predictions. "We need to carry out more detailed and more rigorous analysis before we know for sure," said Antti Pulkkinen, a physicist with the National Aeronautics and Space Administration, who is using supercomputers to build models of potential future solar storms based on data that have accumulated for decades. Most in the industry say that they don't think the consequences would be so severe but that a lesser event is conceivable and worth preparing for. In February, North American Electric Reliability Corp., a government-chartered entity that enforces national standards for the grid, said the likeliest consequence of a strong geomagnetic storm would be blackouts in the affected areas. The storms tend to have a greater impact in northern latitudes, in part because of the nature of Earth's magnetic field. The report said most transformers would stay online, so a blackout would likely last only hours or days. Officials of American Electric Power Co., AEP -1.07% the largest operator of transmission lines in the U.S., and Exelon Corp., EXC -0.58% one of the nation's largest power generators, have told regulators they are collecting data on what happens during solar storms to assess weak points. "We tend to know what is vulnerable, and we are acting on it," said Michael Heyeck, AEP's senior vice president for transmission. In a solar storm, charged particles flare from the sun and hurtle into space. When they collide with Earth, the electricity-transmission system acts like a jumbo antenna, picking up currents created when the particles interact with the planet's magnetic field. Those currents can cause wild voltage fluctuations, overheating **and** permanent damage to transformers**, which zip electricity around the grid**. The transformers weigh hundreds of tons each and aren't easily repaired or replaced.

Wipes out the grid

Mark **Martin**, CBN Writer, **12** [“Solar Superstorm Could Fry World's Electric Grids,” CBN News, March 24, http://www.cbn.com/cbnnews/healthscience/2012/March/Solar-Superstorm-Could-Fry-Worlds-Electric-Grids-/]

WASHINGTON -- The potential for no electric power, no communication, no water -- all caused by superstorms from the sun?¶ The world's scientists have their eyes on space these days, wondering if massive solar flares will seriously disrupt our way of life. A growing number of these storms could mean big problems for a world so heavily dependent on technology.¶ Scientists warn there's a dangerous side to the hypnotic glow of the Aurora Borealis or Northern Lights, especially if the colorful display shows up in more southerly locations.¶ "It was so bright that you could read newspapers at night by the glow of the Aurora Borealis," explained Dr. Peter Pry, executive director of the Task Force on National and Homeland Security.¶ In 1859, the Northern Lights could be seen from the equator, a sign of an extraordinarily powerful solar or geomagnetic storm, according to Pry.¶ The Carrington Event¶ Scientists named it the Carrington Event after Richard Carrington, an amateur astronomer who observed a "white light" flare on the sun.¶ A massive, bubble-shaped burst of plasma expanding outward from the sun, containing large amounts of superheated particles, is known as a coronal mass ejection or CME.¶ "There's more energy concentrated in this one spot than there is someplace else, and it's enough to breach the gravity field," Pry said.¶ CMEs have escaped the gravity field of the sun several times this year already, including the strong solar storm that drew so much attention in early March.¶ The solar wind carries the large, violent ejection of charged particles toward the earth at speeds of more than four million miles per hour. The resulting collision with the earth's magnetic field produces a geomagnetic storm.¶ In 1859, a solar superstorm disrupted the world's telegraph system, even causing fires at some telegraph stations.¶ In today's technology-driven world, an extreme radiation blast like that could disrupt spacecraft, satellites, GPS, airplane flights, and power grids.¶ "When you're dealing with currents large enough to create problems even for a simple telegraph network, that raises concerns for modern equipment. And in this case, it's really the transformers -- these big, very difficult to replace transformers that are the concern," Dr. Avi Schnurr, chief executive officer of the Electric Infrastructure Security Council, told CBN News.¶ "If an 1859 Carrington event happened today, it would collapse electric grids not just in the United States but across the entire planet," Pry added.¶ Pry and Schnurr say that would mean catastrophic consequences.¶ "Without the electric grid, well of course, there's no power. There's also no water. There's also no communications, no transportation, no medical care," Schnurr said.¶ "The financial system would be down. The environmental effects would be catastrophic at a level that we've never seen before," he elaborated.¶ Solutions to Solar Problem?¶ So what is the solution? How do we protect ourselves from a catastrophe in the event another solar superstorm strikes the earth like the one in 1859?¶ Should we build more hardware on the ground to block the impact or should there be greater forecasting techniques?¶ The answer depends on whom you ask.¶ Dr. Antti Pulkkinen is a solar scientist at the NASA Goddard Space Flight Center. NASA scientists at the center have developed state-of-the-art space weather forecasting techniques so people know when a "solar Katrina" is heading towards earth.¶ "We have seen quite an increase in terms of solar activity over the past couple of years exactly because of this approaching solar maximum," Pulkkinen told CBN News.¶ Roughly every 11 years, the sun enters a solar maximum phase. Scientists believe the next one will begin at the end of this year and last through 2013.¶ "I think that it's without a question that we are becoming more and more vulnerable to space weather, so this increasing understanding and the capability to forecast space weather is very timely right now," Pulkkinen said.¶ Electromagnetic Pulses¶ Other scientists say while cutting-edge research and forecasting are important, steps can be taken to fortify the electric grid.¶ "There is something called series capacitance which can be built into the grid," Schnurr explained. "This in fact was done in Quebec."¶ In 1989, a severe solar storm took only 90 seconds to wipe out power across the entire Canadian province of Quebec. It took up to two weeks for all electrical power to be restored.¶ Power industry leaders then took steps to protect the grid from dangerous electromagnetic pulses.¶ Schnurr said a more modern version of that protection could be built into grids today at a reasonable cost. New prototypes of so-called "current blockers" are one example.¶ Pry agreed and listed other ways to protect the electric grid.¶ "There are other things called surge arresters that can stop it," he said. "You can do things like build Faraday cages around transformers. A Faraday cage is just basically a metal box, and the pulse gets short-circuited."¶ Solar Superstorm Apocalypse?¶ Scientists like Pry and Schnurr believe solar superstorms could be apocalyptic.¶ However, the North American Electric Reliability Corporation, or NERC, disagrees.¶ It recently found that the most likely result from a severe solar storm would be the loss of reactive power. That might then lead to voltage instability, not the failure of a large number of transformers.¶ Scientists believe restoring power after a voltage collapse would only take hours or days, while replacing transformers could leave people in the dark for months, even years.¶ Pry called the NERC report "junk science" and said it puts the lives of millions in danger.¶ Mark Lauby, NERC's vice president, stands by the report.¶ "The results from the report are very open," Lauby told CBN News. "Anybody can get the open source code. They can look at the results in the report, and they can give us their views."¶ Scientists and engineers disagree on the magnitude of the impact of solar superstorms. Those who believe the consequences can be catastrophic hope protective measures are put in place before it's too late.

The impact occurs in 90 seconds – recovery is impossible

Examiner 9

(“2012 may bring the "perfect storm" - solar flares, systems collapse” April 1, 2009, pg online @ [http://www.examiner.com/exopolitics-in-seattle/2012-may-bring-the-perfect-storm-solar-flares-systems-collapse])

The modern electrical high-power grid magnifies the impact of solar flares. Since the grid is linked into major aspects of modern society, the effects of another Carrington event would be devastating. The National Academy of Sciences report states: “A severe space weather event in the US could induce ground currents that would knock out **300 key transformers within about 90 seconds**, cutting off the power for more than 130 million people.” The New Scientist states: “According to the NAS report, the impact of what it terms a "severe geomagnetic storm scenario" could be as high as $2 trillion. And that's just the first year after the storm. The NAS puts the recovery time at four to 10 years. **It is questionable whether the US would ever bounce back**.”

## 2nc infeasible

We don’t have to prove that a cyber attack is impossible, just that high costs will cause enemies to seek alternatives

Rid, reader in war studies – King's College London, and McBurney, professor – Agents and Intelligent Systems Group – Department of Informatics @ King's College, ‘12

(Thomas and Peter, “Cyber-Weapons,” *The RUSI Journal* Volume 157, Issue 1, p. 6-13)

A thorough conceptual analysis and a detailed examination of **the empirical record corroborates our hypothesis**: developing and deploying potentially destructive cyber-weapons against hardened targets will require significant resources, hard-to-get and highly specific target intelligence, and time to prepare, launch and execute an attack. Attacking secured targets would probably require the resources or the support of a state actor; terrorists are unlikely culprits of an equally unlikely cyber-9/11. The scant empirical record also suggests that the greatest benefit of cyber-weapons may be using them in conjunction with conventional or covert military strikes, as Israel did when it blinded the Syrian air defence in 2007. This leads to a second conclusion: the cost-benefit payoff of weaponised instruments of cyber-conflict may be far more questionable than generally assumed: target configurations are likely to be so specific that a powerful cyber-weapon may only be capable of hitting and acting on one single target, or very few targets at best. The equivalent would be a HARM missile that can only destroy one unique emitter, not a set of targets emitting at the same frequency. But in contrast to the missile – where only the seeker needs to be specifically reprogrammed and the general aviation and propulsion systems remain functional – the majority of modular components of a potent cyber-weapon, generic and specific, would have a rather short shelf-life after discovery.

Two findings contravene the debate's received wisdom. One insight concerns the dominance of the offence. Most weapons may be used defensively and offensively. But the information age, the argument goes since at least 1996, has ‘offence-dominant attributes’.37 A 2011 Pentagon report on cyberspace again stressed ‘the advantage currently enjoyed by the offense in cyberwarfare’.38 But when it comes to cyber-weapons, the offence has higher costs, a shorter shelf-life than the defence, and a very limited target set.39 All this **drastically reduces the coercive utility of cyber-attacks.** Any threat relies on the offender's credibility to attack, or to repeat a successful attack. Even if a potent cyber-weapon could be launched successfully once, it would be highly questionable if an attack, or even a salvo, could be repeated in order to achieve a political goal. At closer inspection cyber-weapons do not seem to favour the offence.

A second insight concerns the risk of electronic arms markets. One concern is that sophisticated malicious actors could resort to asymmetric methods, such as employing the services of criminal groups, rousing patriotic hackers, and potentially redeploying generic elements of known attack tools. Worse, more complex malware is likely to be structured in a modular fashion. Modular design could open up new business models for malware developers. In the car industry, for instance,40 modularity translates into a possibility of a more sophisticated division of labour. Competitors can work simultaneously on different parts of a more complex system. Modules could be sold on underground markets. But if our analysis is correct, potential arms markets pose a more limited risk: the highly specific target information and programming design needed for potent weapons is unlikely to be traded generically. To go back to our imperfect analogy: paintball pistols will continue to be commercially available, but probably not pre-programmed warheads of smart missiles.

Their authors conflate threats

Clark, MA candidate – Intelligence Studies @ American Military University, senior analyst – Chenega Federal Systems, 4/28/’12

(Paul, “The Risk of Disruption or Destruction of Critical U.S. Infrastructure by an Offensive Cyber Attack,” American Military University)

This increased focus on cyber-security has led to concern that the perceived risk is greater than the actual risk, a situation that has resulted in an imbalance between security and privacy and civil liberties (American Civil Liberties Union 2012). In 1993 a Rand Corporation paper predicted that “cyberwar is coming” and **twenty years later the prediction is the same** and critics argue that cyber-war is “more hype than hazard” (Rid 2012). A review of high profile cyberattacks shows that, with the exception of Stuxnet and the limited Israeli disruption of Syrian air defense networks, **most cyber-attacks are** categorized as **information theft,** network compromise, **or website defacement** (Lewis 2012). Even the high profile threat of an “Electronic Pearl Harbor” (Bronk 2009), despite being repeated by senior government officials like U.S. Defense Secretary Leon Panetta (Rid 2012) , has been found to be only a slight possibility (Wilson 2005). There is no doubt that cyber-security is important. Businesses recognize this importance and spent more than $80 billion on computer network security in 2011 (Johnson 2012) and the federal government is expected to be spending $10.5 billion per year by 2015 (Brito and Watkins 2012). This response is appropriate when data shows that the vast majority of cyber-attacks are focused on espionage and the theft of intellectual property. It is not clear why senior government officials and corporate executives focus on high-impact low-probability events and engage in “alarmist rhetoric” (Brito and Watkins 2011) that skews the public perception of risk and creates an atmosphere of fear. The danger of an inappropriate response in reaction to an inflated threat and prevalence of misinformation is exemplified by the politicized intelligence that led to the invasion of Iraq in 2003 (Brito and Watkins 2011). Understanding how information on the risk posed by cyber-attacks is poorly communicated and the public reaction to an increased perception of risk – fear – is important in identifying when the perceived risk is greater than the actual risk; when risk is more hype than threat. Critics of current cyber-security policy believe that **threats are being conflated**; this results in a threat appearing larger than it is (Brito and Watkins 2012). In essence, a wide variety of cyber-activity – political and social activity, criminal activity for profit, espionage, and offensive cyber-attack – are treated as presenting the same level of threat. There is a wide divide between easily mounted and easily defended denial of service attacks on public websites and high-potential cyber-weapons capable of severely disrupting or destroying critical infrastructure (Rid and McBurney 2012). The rise of automated tools that allow for low-level cyber-attacks to be easily mounted has caused a significant increase in the number of cyber-attacks, **a statistic often cited as proof of increased risk**, but qualified cyber-security organizations have discarded the number of cyber-attacks as a metric and consider it to be meaningless as a method of assessing the scope and effects of cyber-attacks (Wilson 2005). Without differentiating between generic malicious software and highly specialized and targeted offensive cyber-attacks, the risk of cyber-attacks on critical infrastructure systems like the electrical grid **cannot be properly assessed.**

They’re biased and engage in constant risk inflation

Brito, director – Technology Policy Program and senior research fellow – Mercatus Center @ George Mason University, and Watkins, research associate – Technology Policy Program and State and Local Policy Project @ GMU, 2/14/’12

(Jerry and Tate, “Wired Opinion: Cyberwar Is the New Yellowcake,” Wired Magazine)

Yet evidence to sustain such dire warnings is conspicuously absent. In many respects, rhetoric about cyber catastrophe resembles threat inflation we saw in the run-up to the Iraq War. And while Congress’ passing of comprehensive cybersecurity legislation wouldn’t lead to war, it could saddle us with an expensive and overreaching cyber-industrial complex. In 2002 the Bush administration sought to make the case that Iraq threatened its neighbors and the United States with weapons of mass destruction (WMD). By framing the issue in terms of WMD, the administration conflated the threats of nuclear, biological, and chemical weapons. The destructive power of biological and chemical weapons—while no doubt horrific—is minor compared to that of nuclear detonation. Conflating these threats, however, allowed the administration to link the unlikely but serious threat of a nuclear attack to the more likely but less serious threat posed by biological and chemical weapons. Similarly, proponents of regulation often conflate cyber threats. In his 2010 bestseller Cyber War, Richard Clarke warns that a cyberattack today could result in the collapse of the government’s classified and unclassified networks, the release of “lethal clouds of chlorine gas” from chemical plants, refinery fires and explosions across the country, midair collisions of 737s, train derailments, the destruction of major financial computer networks, suburban gas pipeline explosions, a nationwide power blackout, and satellites in space spinning out of control. He assures us that “these are not hypotheticals.” But the only verifiable evidence he presents relates to several well-known distributed denial of service (DDOS) attacks, and he admits that DDOS is a “primitive” form of attack **that would not pose a major threat** to national security. When Clarke ventures beyond DDOS attacks, his examples are easily debunked. To show that the electrical grid is vulnerable, for example, he suggests that the Northeast power blackout of 2003 was caused in part by the “Blaster” worm. But the 2004 final report of the joint U.S.-Canadian task force that investigated the blackout found that no virus, worm, or other malicious software contributed to the power failure. Clarke also points to a 2007 blackout in Brazil, which he says was the result of criminal hacking of the power system. Yet investigations have concluded that the power failure was the result of soot deposits on high-voltage insulators on transmission lines. Clarke’s readers would no doubt be as frightened at the prospect of a cyber attack as they might have been at the prospect of Iraq passing nuclear weapons to al Qaeda. Yet evidence that cyberattacks and cyberespionage are real and serious concerns **is not evidence that we face a grave risk of national catastrophe**, just as evidence of chemical or biological weapons is not evidence of the ability to launch a nuclear strike. The Bush administration claimed that Iraq was close to acquiring nuclear weapons but provided no verifiable evidence. The evidence they did provide—Iraq’s alleged pursuit of uranium “yellowcake” from Niger and its purchase of aluminum tubes allegedly meant for uranium enrichment centrifuges—was ultimately determined to be unfounded. Despite the lack of verifiable evidence to support the administration’s claims, the media tended to report them unquestioned. Initial reporting on the aluminum tubes claim, for example, came in the form of a front page New York Times article by Judith Miller and Michael Gordon that relied entirely on anonymous administration sources. Appearing on Meet the Press the same day the story was published, Vice President Dick Cheney answered a question about evidence of a reconstituted Iraqi nuclear program by stating that, while he couldn’t talk about classified information, The New York Times was reporting that Iraq was seeking to acquire aluminum tubes to build a centrifuge. In essence, the Bush administration was able to cite its own leak—with the added imprimatur of the Times—as a rationale for war. The media may be contributing to threat inflation today by uncritically reporting alarmist views of potential cyber threats. For example, a 2009 front page Wall Street Journal story reported that the U.S. power grid had been penetrated by Chinese and Russian hackers and laced with logic bombs. The article is often cited as evidence that the power grid is rigged to blow. Yet similar to Judith Miller’s Iraq WMD reporting, the only sources for the article’s claim that infrastructure has been compromised are anonymous U.S. intelligence officials. With little specificity about the alleged infiltrations, readers are left with no way to verify the claims. More alarmingly, when Sen. Susan Collins (R-Maine) took to the Senate floor to introduce the comprehensive cybersecurity bill that she co-authored with Sen. Joe Lieberman (I-Conn.), the evidence she cited to support a pressing need for regulation included this very Wall Street Journal story. **Washington teems with people who have a vested interest in conflating and inflating threats to our digital security.** The watchword, therefore, should be “trust but verify.” In his famous farewell address to the nation in 1961, President Dwight Eisenhower warned against the dangers of what he called the “military-industrial complex”: an excessively close nexus between the Pentagon, defense contractors, and elected officials that could lead to unnecessary expansion of the armed forces, superfluous military spending, and a breakdown of checks and balances within the policy making process. Eisenhower’s speech proved prescient. Cybersecurity is a big and booming industry. The U.S. government is expected to spend $10.5 billion a year on information security by 2015, and analysts have estimated the worldwide market to be as much as $140 billion a year. The Defense Department has said it is seeking more than $3.2 billion in cybersecurity funding for 2012. Lockheed Martin, Boeing, L-3 Communications, SAIC, and BAE Systems have all launched cybersecurity divisions in recent years. Other traditional defense contractors, such as Northrop Grumman, Raytheon, and ManTech International, have invested in information security products and services. We should be wary of proving Eisenhower right again in the cyber sphere. Before enacting sweeping changes to counter cyber threats, policy makers should clear the air with some simple steps. Stop the apocalyptic rhetoric. The alarmist scenarios dominating policy discourse may be good for the cybersecurity-industrial complex, but **they aren’t doing real security any favors.** Declassify evidence relating to cyber threats. Overclassification is a widely acknowledged problem, and declassification would allow the public to verify the threats rather than blindly trusting self-interested officials. Disentangle the disparate dangers that have been lumped together under the “cybersecurity” label. This must be done to determine who is best suited to address which threats. In cases of cybercrime and cyberespionage, for instance, private network owners may be best suited and have the best incentives to protect their own valuable data, information, and reputations.

Their authors are paid off

Hersh, contributor – The New Yorker, Pulitzer winner and 5-time George Polk Award winner, 11/1/’10

(Seymour M, “The Online Threat,” The New Yorker Annals of National Security)

A great deal of money is at stake. Cyber security is a major growth industry, and warnings from Clarke, McConnell, and others have helped to create what has become a military-cyber complex. The federal government currently spends between six and seven billion dollars annually for unclassified cyber-security work, and, it is estimated, an equal amount on the classified portion. In July, the Washington *Post* published a critical assessment of the unchecked growth of government intelligence agencies and private contractors. Benjamin Powell, who served as general counsel for three directors of the Office of National Intelligence, was quoted as saying of the cyber-security sector, “Sometimes there was an unfortunate attitude of bring your knives, your guns, your fists, and be fully prepared to defend your turf. . . . Because it’s funded, it’s hot and it’s sexy.”

Clarke is the chairman of Good Harbor Consulting, a strategic-planning firm that advises governments and companies on cyber security and other issues. (He says that more than ninety per cent of his company’s revenue comes from non-cyber-related work.) McConnell is now an executive vice-president of Booz Allen Hamilton, a major defense contractor. Two months after McConnell testified before the Senate, Booz Allen Hamilton landed a thirty-four-million-dollar cyber contract. It included fourteen million dollars to build a bunker for the Pentagon’s new Cyber Command.

American intelligence and security officials for the most part agree that the Chinese military, or, for that matter, an independent hacker, is theoretically capable of creating a degree of chaos inside America. But I was told by military, technical, and intelligence experts that these fears have been exaggerated, and are based on a fundamental confusion between cyber espionage and cyber war. Cyber espionage is the science of covertly capturing e-mail traffic, text messages, other electronic communications, and corporate data for the purpose of gathering national-security or commercial intelligence. Cyber war involves the penetration of foreign networks for the purpose of disrupting or dismantling those networks, and making them inoperable. (Some of those I spoke to made the point that China had demonstrated its mastery of cyber espionage in the EP-3E incident, but it did not make overt use of it to wage cyber war.) Blurring the distinction between cyber war and cyber espionage has been profitable for defense contractors—and dispiriting for privacy advocates.

Basic risk calculus demands you throw out their impact

Clark, MA candidate – Intelligence Studies @ American Military University, senior analyst – Chenega Federal Systems, 4/28/’12

(Paul, “The Risk of Disruption or Destruction of Critical U.S. Infrastructure by an Offensive Cyber Attack,” American Military University)

The Department of Homeland Security measures risk as the product of a threat, vulnerability to the threat, and seriousness of the consequences of a successful attack (Masse, ONeil and Rollins 2007). Using this formula, the analysis of the threat posed by the Stuxnet offensive cyber-attack, the vulnerability of the U.S. electrical grid, and the consequences of both the Stuxnet attack and disruption of the electrical grid shows that there is a low probability risk that a cyber-attack could severely disrupt or destroy the electrical component of critical sensitive infrastructure to the point that it would seriously degrade national security economically or militarily.

Countermeasures solve

**Zenko and Cohen 12** (Micah Zenko, Fellow in the Center for Preventive Action at the Council on Foreign Relations, and MIchael Cohen, Senior Fellow at the American Security Project, serves on the board of the National Security Network and has taught at Columbia University’s School of International and Public Affairs, served in the U.S. Department of State, former Senior Vice President at the strategic communications firm of Robinson, Lerer and Montgomery, bachelor’s degree in international relations from American University and a master’s degree from Columbia University, 3/14/2012, "Clear and Present Safety", yaleglobal.yale.edu/content/clear-and-present-safety)

A more recent bogeyman in national security debates is the threat of so-called cyberwar. Policymakers and pundits have been warning for more than a decade about an imminent “cyber–Pearl Harbor” or “cyber-9/11.” In June 2011, then Deputy Defense Secretary William Lynn said that “bits and bytes can be as threatening as bullets and bombs.” And in September 2011, Admiral Mike Mullen, then chairman of the Joint Chiefs of Staff, described cyberattacks as an “existential” threat that “actually can bring us to our knees.” Although the potential vulnerability of private businesses and government agencies to cyberattacks has increased, the alleged threat of cyberwarfare crumbles under scrutiny. No cyberattack has resulted in the loss of a single U.S. citizen’s life. Reports of “kinetic-like” cyberattacks, such as one on an Illinois water plant and a North Korean attack on U.S. government servers, have proved baseless. Pentagon networks are attacked thousands of times a day by individuals and foreign intelligence agencies; so, too, are servers in the private sector. But the vast majority of these attacks fail wherever adequate safeguards have been put in place. Certainly, none is even vaguely comparable to Pearl Harbor or 9/11, and most can be offset by commonsense prevention and mitigation efforts.

## their cyber cards

#### Reed concludes squo solves

Reed 10/11 John, Reports on the frontiers of cyber war and the latest in military technology for Killer Apps at Foreign Policy, "U.S. energy companies victims of potentially destructive cyber intrusions", 2012, killerapps.foreignpolicy.com/posts/2012/10/11/us\_energy\_companies\_victims\_of\_potentially\_destructive\_cyber\_attacks

Cyber security expert Eugene Kaspersky said two weeks ago that one of his greatest fears is someone reverse-engineering a sophisticated cyber weapon like Stuxnet -- a relatively easy task -- and he noted that Stuxnet itself passed through power plants on its way to Iran. "Stuxnet infected thousands of computer systems all around the globe, I know there were power plants infected by Stuxnet very far away from Iran," Kaspersky said.

**THEIR CARD ENDS**

While the utilities have been penetrated, Panetta said that the Defense Department, largely via the National Security Agency, is "acting aggressively to get ahead of this problem -- putting in place measures to stop cyber attacks dead in their tracks" under a whole-of-government effort.

The Department of Homeland Security, working with the Department of Energy, has the lead in responding to the attacks that Panetta disclosed tonight, senior defense officials told reporters during a background briefing about Panetta's speech. The Pentagon officials believe they know who was behind the attack but would not reveal who that may be. They did note however, that Russia, China, and increasingly, Iran have developed worrisome cyber capabilities. DHS officials were not available for comment.

No military cyberterror – DOD is way ahead of the hackers

Green 2

The Washington Monthly. Washington: Nov 2002. Vol. 34, Iss. 11; pg. 8, 6 pgs

JOSHUA GREEN is an editor of the Washington Monthly.

When ordinary people imagine cyberterrorism, they tend to think along Hollywood plot lines, doomsday scenarios in which terrorists hijack nuclear weapons, airliners, or military computers from halfway around the world. Given the colorful history of federal boondoggles-billion-dollar weapons systems that misfire, $600 toilet seats-that's an understandable concern. But, with few exceptions, it's not one that applies to preparedness for a cyberattack. "The government is miles ahead of the private sector when it comes to cybersecurity," says Michael Cheek, director of intelligence for Defense, a Virginia-based computer security company with government and private-sector clients. "Particularly the most sensitive military systems."

## ag

No resource wars – empirics

Salehyan 7

[Idean, assistant professor of political science - University of North Texas, “The new myth about climate change,” http://www.foreignpolicy.com/story/cms.php?story\_id=3922]

First, aside from a few anecdotes, there is little systematic empirical evidence that resource scarcity and changing environmental conditions lead to conflict. In fact, several studies have shown that an abundance of natural resources is more likely to contribute to conflict. Moreover, even as the planet has warmed, the number of civil wars and insurgencies has decreased dramatically. Data collected by researchers at Uppsala University and the International Peace Research Institute, Oslo shows a steep decline in the number of armed conflicts around the world. Between 1989 and 2002, some 100 armed conflicts came to an end, including the wars in Mozambique, Nicaragua, and Cambodia. If global warming causes conflict, we should not be witnessing this downward trend.

## at: russia/china

Russia and China can’t cyberattack the US – they only use it to crack down on their own populations

**Rid 12** (Thomas Rid, reader in war studies at King's College London, is author of "Cyber War Will Not Take Place" and co-author of "Cyber-Weapons.", March/April 2012, “Think Again: Cyberwar”, http://www.foreignpolicy.com/articles/2012/02/27/cyberwar?page=full)

"The West Is Falling Behind Russia and China." Yes, but not how you think. Russia and China are busy sharpening their cyberweapons and are already well steeped in using them. The Russian military clandestinely crippled Estonia's economy in 2007 and Georgia's government and banks in 2008. The People's Liberation Army's numerous Chinese cyberwarriors have long inserted "logic bombs" and "trapdoors" into America's critical infrastructure, lying dormant and ready to wreak havoc on the country's grid and bourse in case of a crisis. Both countries have access to technology, cash, and talent -- and have more room for malicious maneuvers than law-abiding Western democracies poised to fight cyberwar with one hand tied behind their backs. Or so the alarmists tell us. Reality looks quite different. Stuxnet, by far the most sophisticated cyberattack on record, was most likely a U.S.-Israeli operation. Yes, Russia and China have demonstrated significant skills in cyberespionage, but the fierceness of Eastern cyberwarriors and their coded weaponry is almost certainly overrated. When it comes to military-grade offensive attacks, America and Israel seem to be well ahead of the curve. Ironically, it's a different kind of cybersecurity that Russia and China may be more worried about. Why is it that those countries, along with such beacons of liberal democracy as Uzbekistan, have suggested that the United Nations establish an "international code of conduct" for cybersecurity? Cyberespionage was elegantly ignored in the suggested wording for the convention, as virtual break-ins at the Pentagon and Google remain a favorite official and corporate pastime of both countries. But what Western democracies see as constitutionally protected free speech in cyberspace, Moscow and Beijing regard as a new threat to their ability to control their citizens. Cybersecurity has a broader meaning in non-democracies: For them, the worst-case scenario is not collapsing power plants, but collapsing political power.b The social media-fueled Arab Spring has provided dictators with a case study in the need to patrol cyberspace not only for subversive code, but also for subversive ideas. The fall of Egypt's Hosni Mubarak and Libya's Muammar al-Qaddafi surely sent shivers down the spines of officials in Russia and China. No wonder the two countries asked for a code of conduct that helps combat activities that use communications technologies -- "including networks" (read: social networks) -- to undermine "political, economic and social stability." So Russia and China are ahead of the United States, but mostly in defining cybersecurity as the fight against subversive behavior. This is the true cyberwar they are fighting.

No risk of China attack – economic deterrence

Hersh, contributor – The New Yorker, Pulitzer winner and 5-time George Polk Award winner, 11/1/’10

(Seymour M, “The Online Threat,” The New Yorker Annals of National Security)

A defense contractor who is regarded as one of America’s most knowledgeable experts on Chinese military and cyber capabilities took exception to the phrase “cyber war.” “Yes, the Chinese would love to stick it to us,” the contractor told me. “They would love to transfer economic and business innovation from West to East. But cyber espionage is not cyber war.” He added, “People have been sloppy in their language. McConnell and Clarke have been pushing cyber war, but their evidentiary basis is weak.”

James Lewis, a senior fellow at the Center for Strategic and International Studies, who worked for the Departments of State and Commerce in the Clinton Administration, has written extensively on the huge economic costs due to cyber espionage from China and other countries, like Russia, whose hackers are closely linked to organized crime. Lewis, too, made a distinction between this and cyber war: “Current Chinese officials have told me that we’re not going to attack Wall Street, because we basically own it”—a reference to China’s holdings of nearly a trillion dollars in American securities—“and a cyber-war attack would do as much economic harm to us as to you.”

## 2nc grid stable

Prefer our evidence—grid is actively improving

Koerth-Baker, science editor – Boing Boing, columnist – NYT Magazine, electric grid expert, 8/3/’12

(Maggie, “Blackout: What's wrong with the American grid,” <http://boingboing.net/2012/08/03/blackout-whats-wrong-with-t.html>)

But this is about more than mere bad luck. The real causes of the 2003 blackout were fixable problems, and the good news is that, since then, we’ve made great strides in fixing them. The bad news, say some grid experts, is that we’re still not doing a great job of preparing our electric infrastructure for the future.¶ Let’s get one thing out of the way right up front: The North American electric grid is not one bad day away from the kind of catastrophic failures we saw in India this week. I’ve heard a lot of people speculating on this, but the **folks who know the grid** say that, while such a huge blackout is theoretically possible, it is also extremely unlikely. As Clark Gellings, a fellow at the Electric Power Research Institute put it, “An engineer will never say never,” but you should definitely not assume anything resembling an imminent threat at that scale. Remember, the blackouts this week cut power to half of all Indian electricity customers. Even the 2003 blackout—the largest blackout in North America ever—only affected about 15% of Americans.¶ We don’t know yet what, exactly, caused the Indian blackouts, but there are several key differences between their grid and our grid. India’s electricity is only weakly tied to the people who use it, Gellings told me. Most of the power plants are in the far north. Most of the population is in the far south. The power lines linking the two are neither robust nor numerous. That’s not a problem we have in North America.¶ Likewise, India has considerably more demand for electricity than it has supply. Even on a good day, there’s not enough electricity for all the people who want it, said Jeff Dagle, an engineer with the Pacific Northwest National Laboratory’s Advanced Power and Energy Systems research group. “They’re pushing their system much harder, to its limits,” he said. “If they have a problem, there’s less cushion to absorb it. Our system has rules that prevent us from dipping into our electric reserves on a day-to-day basis. So we have reserve power for emergencies.”

New tech means their 2003 example no longer applies

Koerth-Baker, science editor – Boing Boing, columnist – NYT Magazine, electric grid expert, 8/3/’12

(Maggie, “Blackout: What's wrong with the American grid,” <http://boingboing.net/2012/08/03/blackout-whats-wrong-with-t.html>)

In 2003, it took about 30 seconds for data about what was happening on the grid to be gathered, compiled, analyzed, and displayed in a way that grid controllers could use. That sounds pretty fast, until you consider the fact that changes on the grid happen much, much faster\*\*\*. If a power plant goes offline in Arizona, it can create a measurable effect in Canada in about a second. If your view of the grid is updated only every 30 seconds, you miss important details. After the 2003 blackout, grid experts went back and essentially replayed the whole thing in a computer modeling program. The idea was to try to get a better idea of where things went wrong and how a similar event could be prevented in the future. They found that, about an hour before the blackout, the grid was showing signs of stress that controllers didn’t see at the time, said Carl Imhoff, manager of the Energy and Environment Sector at PNNL. It wasn’t the controllers’ fault. They simply didn’t have the technology to see the big picture.¶ Fixing the Grid¶ Today, that technology exists. Phasor Measurement Units are kind of the opposite of sexy. Also known as PMUs, they’re just anonymous little boxes that sit on server racks in electrical substations. But phasors are linked into transmission lines. They see what’s happening on the line—how well supply and demand are balanced, whether voltage and frequency are stable and within the normal range. That’s just one point of data, recorded in one place. But a network of phasors can tell you a lot. It can show you, for instance, if the stability of the grid is changing as electricity moves from Cleveland to Columbus. And the **phasors process that information far more quickly.** Today, our grid can give controllers information about the big picture in less than 10 seconds. Researchers like Massoud Amin are working on getting that response time down to fewer than 3 seconds.¶ If we’d had a phasor network in 2003, grid controllers would have had that hour warning about the problem. There’s a good chance they’d have been able to fix it, or, at least, make the resulting blackout smaller and more localized.¶ When it comes to PMUs, 2003 was really a wake-up call. It led utilities and the government to team up to install a true phasor network throughout the United States. That effort is currently ongoing. In 2009 there were maybe 200 phasors in operation. By the end of 2013, there will be more than 1000 installed throughout this country. Over the last five years a partnership between federal Recovery Act funds and private industry dollars has invested $7.8 billion in upgrading the grid, Massoud Amin said.

Safeguards are strong

Donna Leinwand Leger, USA Today, 12 [“Blackout Like India's Unlikely in U.S., Experts Say,”, August 1, http://www.weather.com/news/india-blackout-unlikely-in-us-20120801]

WASHINGTON -- 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.¶ "On the whole, we have a more reliable electrical system with NERC," said Vancko, a former NERC official. "We have the safeguards, but we cannot say it can't happen here. It's the most complicated system in the world."

## 2nc ev comparison

Prefer our defense—reporting and academic work on critical infrastructure is prone to threat inflation

Sorebo, chief cybersecurity technologist and vice president – SAIC, consultant for the government and industry in cybersecurity and smart grid technology, MA – GW University, JD – Catholic U, 2/8/’10

(Gib, “The Many Shades of Project Grey Goose,” RSA Conference)

As I noted in my previous post about a recent 60 Minutes segment, we often rely on rumor and innuendo as the basis for journalism in critical infrastructure. If a current or former high-ranking public official says he heard something, then it must be true. Unfortunately, Project Grey Goose, whose stated objective was “to answer the question of whether there has been any successful hacker attacks against the power grid, both domestically and internationally,” falls victim to much of the same **fear, uncertainty, and doubt.** As in all media reports, there are factual bases for findings that exaggerated the true state of the electric grid. For example, their statement that “90% of the U.S. Department of Defense's (DOD) most critical assets are entirely dependent on the bulk power grid” is presumably taken from a Government Accountability Office (GAO) report noting that 85 percent of critical DoD assets rely on commercial electric power. However, the “entirely dependent” statement ignores the wide variety of backup generators that support these assets, and while not adequate, are nonetheless a significant contribution to the reliability of critical DoD assets. So rather than sounding the alarm that military bases, for the most part, do not have their own power plants, a better response would have been to suggest that the military expand the use of backup generators and micro-grid technology to augment commercial power as the GAO report does. Of course, that would not grab as many headlines.

Similarly, the Grey Goose Report note that “[m]ost Grid asset owners and operators have been historically resistant to report cyber attacks against their networks as well as make the necessary investments to upgrade and secure their networks.” While it may be true that incidents are underreported, the implication that the electricity industry is deficient compared to other industrial sectors is misleading or even wrong. Most companies do not report security incidents unless legally required to or to mitigate the harm to their customers, and even then the evidence of an intrusion and theft of data had better be definitive. Lost laptops and backup tapes are one thing. You cannot say they are within your control if they go missing. However, organizations in general have a horrible record of even detecting when a successful attack has occurred let alone what was taken. Like many industries, the electricity industry has struggled to pinpoint the source of many disruptions associated with their network infrastructure. **More often than not, the problems were inadvertent and not malicious.** We can certainly do better, and with technologies like Smart Grid, we have to. However, calling out the electricity industry for failures that we’ve all been subjected to is not very productive.

The other statements made about the vulnerabilities in the electricity sector are misleading. While North American Electric Reliability Corporation Critical Infrastructure Protection (NERC CIP) still does not apply to many aspects of the electrical grid for a variety of jurisdictional reasons, where it does apply, it is not voluntary, as the many utilities subjected to rigorous and painful audits can attest. The process may not be perfect, but utilities are being subjected to scrutiny. Moreover, anyone receiving stimulus grants under the Department of Energy’s Smart Grid grant program has to demonstrate a very rigorous approach to cyber security through the entire implementation life cycle.

Finally, the report cites a litany of vulnerabilities discovered in various Smart Grid devices such as meters and perpetuates speculation about the potential impact on the grid without considering compensating security controls. **Nowhere does the report cite names of vulnerable vendors** nor does it provide any information about whether these vulnerable products have actually been implemented. It’s like saying that tests on personal computers showed that they were vulnerable to attack without identifying the operating system or the applications running on the device.

Bias colors all of their evidence

Sorebo, chief cybersecurity technologist and vice president – SAIC, consultant for the government and industry in cybersecurity and smart grid technology, MA – GW University, JD – Catholic U, 11/11/’9

(Gib, “More FUD from the Mainstream Media?,” RSA Conference)

In reality, much of what passes as intelligence within the critical infrastructure sector about security events seems to be more based on rumor and innuendo rather than sound investigation. This is undoubtedly due in part to the fact that private sector operators who own most of the infrastructure are loathe to report such events, particularly when there is no obvious harm. One cannot fault journalists for reporting what they know. However, simply reporting that the Brazilian electric company disputes the claim or has no comment might imply that the full story is not being told. There are some real threats facing our critical infrastructure that are clearly in the public interest to be disclosed. However, such reporting, and ultimately efforts to fix the problem, loses its credibility if operators feel that any good faith efforts to report incidents will be met with exaggeration and grandstanding. The media does a decent job at rooting out corruption and disclosing matters of public concern without telling a one-sided story. One would hope that they don’t feel it is okay to skimp on their reporting duties when the subject is more obscure and less familiar to the general public. Those of us in the information security community should work to see that the full story is told whenever possible.

The methodology behind their ev is shady, at best!

Schneier, editor – Crypto-Gram, internationally renowned security technologist and author, contributor – NYT, Forbes, Guardian, Wired, Bulletin of the Atomic Scientists, 10/2/’7

(Bruce, “Staged Attack Causes Generator to Self-Destruct,” <http://www.schneier.com/blog/archives/2007/10/staged_attack_c.html>)

A government video shows the potential destruction caused by hackers seizing control of a crucial part of the U.S. electrical grid: an industrial turbine spinning wildly out of control until it becomes a smoking hulk and power shuts down.

The video, produced for the Homeland Security Department and obtained by The Associated Press on Wednesday, was marked "Official Use Only." It shows commands quietly triggered by simulated hackers having such a violent reaction that the enormous turbine shudders as pieces fly apart and it belches black-and-white smoke.

The video was produced for top U.S. policy makers by the Idaho National Laboratory, which has studied the little-understood risks to the specialized electronic equipment that operates power, water and chemical plants. Vice President Dick Cheney is among those who have watched the video, said one U.S. official, speaking on condition of anonymity because this official was not authorized to publicly discuss such high-level briefings.

More here. And the video is on CNN.com.

I haven't written much about SCADA security, except to say that I think the risk is overblown today but is getting more serious all the time -- and we need to deal with the security before it's too late. I didn't know quite what to make of the Idaho National Laboratory video; it seemed like hype, but I couldn't find any details. (The CNN headline, "Mouse click could plunge city into darkness, experts say," was definitely hype.)

Then, I received this anonymous e-mail:

I was one of the industry technical folks the DHS consulted in developing the "immediate and required" mitigation strategies for this problem.

They talked to several industry groups (mostly management not tech folks): electric, refining, chemical, and water. They ignored most of what we said but attached our names to the technical parts of the report

===MARKED===

 to make it look credible. We softened or eliminated quite a few sections that may have had relevance 20 years ago, such as war dialing attacks against modems.

The end product is a work order document from DHS which requires such things as background checks on people who have access to modems and logging their visits to sites with datacom equipment or control systems.

By the way -- they were unable to hurt the generator you see in the video but did destroy the shaft that drives it and the power unit. They triggered the event from 30 miles away! Then they **extrapolated the theory** that a malfunctioning generator can destroy not only generators at the power company but the power glitches on the grid would destroy motors many miles away on the electric grid that pump water or gasoline (through pipelines).

They kept everything very secret (all emails and reports encrypted, high security meetings in DC) until they produced a video and press release for CNN. There was huge concern by DHS that this vulnerability would become known to the bad guys -- yet now they release it to the world for their own career reasons. Beyond shameful.

Oh, and they did use a contractor for all the heavy lifting that went into writing/revising the required mitigations document. Could not even produce this work product on their own.

By the way, the vulnerability they hypothesize is completely bogus but I won't say more about the details. Gitmo is still too hot for me this time of year.

## 2nc no impact

#### Their laundry list of vague impacts is academic junk – conflicts can’t just emerge

Fettweis, 11

Christopher J. Fettweis, Department of Political Science, Tulane University, 9/26/11, Free Riding or Restraint? Examining European Grand Strategy, Comparative Strategy, 30:316–332, EBSCO

Assertions that without the combination of U.S. capabilities, presence and commitments instability would return to Europe and the Pacific Rim are usually rendered in rather vague language. If the United States were to decrease its commitments abroad, argued Robert Art, “the world will become a more dangerous place and, sooner or later, that will redound to America’s detriment.”53 From where would this danger arise? Who precisely would do the fighting, and over what issues? Without the United States, would Europe really descend into Hobbesian anarchy? Would the Japanese attack mainland China again, to see if they could fare better this time around? Would the Germans and French have another go at it? In other words, where exactly is hegemony is keeping the peace? With one exception, these questions are rarely addressed.

That exception is in the Pacific Rim. Some analysts fear that a de facto surrender of U.S. hegemony would lead to a rise of Chinese influence. Bradley Thayer worries that Chinese would become “the language of diplomacy, trade and commerce, transportation and navigation, the internet, world sport, and global culture,” and that Beijing would come to “dominate science and technology, in all its forms” to the extent that soon the world would witness a Chinese astronaut who not only travels to the Moon, but “plants the communist flag on Mars, and perhaps other planets in the future.”54 Indeed China is the only other major power that has increased its military spending since the end of the Cold War, even if it still is only about 2 percent of its GDP. Such levels of effort do not suggest a desire to compete with, much less supplant, the United States. The much-ballyhooed, decade-long military buildup has brought Chinese spending up to somewhere between one-tenth and one-fifth of the U.S. level. It is hardly clear that a restrained United States would invite Chinese regional, must less global, political expansion. Fortunately one need not ponder for too long the horrible specter of a red flag on Venus, since on the planet Earth, where war is no longer the dominant form of conflict resolution, the threats posed by even a rising China would not be terribly dire. The dangers contained in the terrestrial security environment are less severe than ever before.

Believers in the pacifying power of hegemony ought to keep in mind a rather basic tenet: When it comes to policymaking, specific threats are more significant than vague, unnamed dangers. Without specific risks, it is just as plausible to interpret U.S. presence as redundant, as overseeing a peace that has already arrived. Strategy should not be based upon vague images emerging from the dark reaches of the neoconservative imagination.

Overestimating Our Importance

One of the most basic insights of cognitive psychology provides the final reason to doubt the power of hegemonic stability: Rarely are our actions as consequential upon their behavior as we perceive them to be. A great deal of experimental evidence exists to support the notion that people (and therefore states) tend to overrate the degree to which their behavior is responsible for the actions of others. Robert Jervis has argued that two processes account for this overestimation, both of which would seem to be especially relevant in the U.S. case.55 First, believing that we are responsible for their actions gratifies our national ego (which is not small to begin with; the United States is exceptional in its exceptionalism). The hubris of the United States, long appreciated and noted, has only grown with the collapse of the Soviet Union.56 U.S. policymakers famously have comparatively little knowledge of—or interest in—events that occur outside of their own borders. If there is any state vulnerable to the overestimation of its importance due to the fundamental misunderstanding of the motivation of others, it would have to be the United States. Second, policymakers in the United States are far more familiar with our actions than they are with the decision-making processes of our allies. Try as we might, it is not possible to fully understand the threats, challenges, and opportunities that our allies see from their perspective. The European great powers have domestic politics as complex as ours, and they also have competent, capable strategists to chart their way forward. They react to many international forces, of which U.S. behavior is only one. Therefore, for any actor trying to make sense of the action of others, Jervis notes, “in the absence of strong evidence to the contrary, the most obvious and parsimonious explanation is that he was responsible.”57

It is natural, therefore, for U.S. policymakers and strategists to believe that the behavior of our allies (and rivals) is shaped largely by what Washington does. Presumably Americans are at least as susceptible to the overestimation of their ability as any other people, and perhaps more so. At the very least, political psychologists tell us, we are probably not as important to them as we think. The importance of U.S. hegemony in contributing to international stability is therefore almost certainly overrated.

In the end, one can never be sure why our major allies have not gone to, and do not even plan for, war. Like deterrence, the hegemonic stability theory rests on faith; it can only be falsified, never proven. It does not seem likely, however, that hegemony could fully account for twenty years of strategic decisions made in allied capitals if the international system were not already a remarkably peaceful place. Perhaps these states have no intention of fighting one another to begin with, and our commitments are redundant. European great powers may well have chosen strategic restraint because they feel that their security is all but assured, with or without the United States.

#### Even if heg is good, US wouldn’t deploy – offshore balancing and nukes solve the impact

Adams, Professor U.S. Foreign Policy Program – American University, Distinguished Fellow – Stimson Center, ‘11

(Gordon, “A Leaner and Meaner Defense,” *Foreign Affairs*, Vol. 90 Iss. 1, January/February)

Some people point to China as a successor to the Soviet Union and cite it as a reason why preventing and preparing for nuclear or large-scale conventional war should remain priority missions. They highlight the risk of a U.S.-Chinese conflict over Taiwan or the possibility that China will deny the U.S. military access to the western Pacific. Of course, China is a rising power that is making increasingly substantial investments in defense. But it is important not to overreact to this fact. Focusing on China's military capabilities ought not replace a broader strategy. As the United States determines how to engage China and how to protect its interests in Asia generally, it must balance the diplomatic, economic, and financial, as well as the military, elements of its policy. Most defense analysts estimate that China's military investments and capabilities are decades behind those of the United States, and there is very little evidence that China seeks a conventional conflict with the United States. There is substantial evidence that China's economic and financial policy is a more urgent problem for the United States, but one of the best ways for the United States to respond to that is to get its fiscal house in order.

The prospect of a major war with other states is even less plausible. Defense planning scenarios in the 1990s were built around the possibility of two conflicts. The one involving Iraq is now off the table. A conflict with North Korea was the second, but although that country's military is numerically impressive, South Korea's state-of-the-art armed forces can manage that challenge without needing the assistance of U.S. troops. The United States can now limit its contribution to strategic nuclear deterrence, air support, and offshore naval balancing in the region. The prospect of a conventional war with Iran is not credible. Iran's vast size, to say nothing of the probability that the population would be hostile to any U.S. presence there, means that anything more than U.S. air strikes and Special Forces operations targeting Iranian nuclear capabilities is unlikely.

Given the stakes, some hedging for these exceedingly low-probability risks is reasonable. But even a smaller U.S. force and budget than today's would be ample because many of these risks are less likely than ever and the United States' allies now enjoy unprecedented military and strategic advantages. § Marked 11:59 § The most vexing missions are those at the heart of the Quadrennial Defense Review: counterinsurgency, nation building, and the building of other countries' security sectors, among others. And these, alongside competition with China, are motivating Gates and other planners at the Pentagon, despite Gates' acknowledgment in this magazine last spring that "the United States is unlikely to repeat a mission on the scale of those in Afghanistan or Iraq anytime soon -- that is, forced regime change followed by nation building under fire." Such planned missions are based on a misguided premise: that the U.S. campaigns in Afghanistan and Iraq foreshadow the need for a large U.S. military force to increasingly intervene in failing states teeming with insurgents and terrorists. But Gates' effort to nonetheless tailor U.S. military capabilities to such tasks suggests that there is still significant support for them in the Pentagon. According to General George Casey, the army chief of staff, for example, the United States is in an "era of persistent conflict." Yet the United States is very unlikely to embark on another regime-change and nation-building mission in the next decade -- nor should it. Indeed, in the wake of its operations in Afghanistan and Iraq, the demand for the United States to act as global policeman will decline.

Pakistan is often cited as a state that might require such an intervention. Clearly, it is the case that Gates had in mind when he worried about "a nuclear-armed state [that] could collapse into chaos and criminality." But even if Pakistan collapsed, the U.S. government would probably not send in massive forces for fear of facing widespread popular opposition and an armed resistance in the more remote parts of the country. More likely, the U.S. government would resort to air power and Special Forces in order to secure Pakistan's nuclear arsenal. After the invasions of Afghanistan and Iraq, it is clear that U.S. forces are not suited to lengthy occupations, especially when they involve a stabilization mission, governance reform, and economic development.

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#### It’s October, and the loans are still on hold

**Nelson and Northey 9/24**/2012

(Gabriel, and Hannah, , EandE reporters, “DOE funding for small reactors languishes as parties clash on debt,” http://www.eenews.net/public/Greenwire/2012/09/24/3)

It's not just wind and solar projects that are waiting for federal help as Congress duels over the importance of putting taxpayer dollars on the line for cutting-edge energy projects.¶ Some of the nation's largest nuclear power companies are anxious to hear whether they will get a share of a $452 million pot from the Department of Energy for a new breed of reactors that the industry has labeled as a way to lessen the safety risks and construction costs of new nuclear power plants.¶ The grant program for these "small modular reactors," which was announced in January, would mark the official start of a major U.S. foray into the technology even as rising construction costs -- especially when compared to natural-gas-burning plants -- cause many power companies to shy away from nuclear plants.¶ DOE received four bids before the May 21 deadline from veteran reactor designers Westinghouse Electric Co. and Babcock & Wilcox Co., as well as relative newcomers Holtec International Inc. and NuScale Power LLC. Now the summer has ended with no announcement from DOE, even though the agency said it would name the winners two months ago.¶ As the self-imposed deadline passed, companies started hearing murmurs that a decision could come in September, or perhaps at the end of the year. To observers within the industry, it seems that election-year calculations may have sidelined the contest.¶ "The rumors are a'flying," said Paul Genoa, director of policy development at the Nuclear Energy Institute, in an interview last week. "All we can imagine is that this is now caught up in politics, and the campaign has to decide whether these things are good for them to announce, and how."¶ Small modular reactors do not seem to be lacking in political support. The nuclear lobby has historically courted both Democrats and Republicans and still sees itself as being in a strong position with key appropriators on both sides of the aisle.¶ Likewise, top energy officials in the Obama administration have hailed the promise of the new reactors, and they haven't shown any signs of a change of heart. DOE spokeswoman Jen Stutsman said last week that the department is still reviewing applications, but she did not say when a decision will be made.¶ "This is an important multiyear research and development effort, and we want to make sure we take the time during the review process to get the decision right," she wrote in an email.¶ That the grants haven't been given out during a taut campaign season, even as President Obama announces agency actions ranging from trade cases to creating new national monuments to make the case for his re-election, may be a sign that the reactors are ensnared in a broader feud over energy spending.¶ Grant recipients would develop reactor designs with an eye toward eventually turning those into pilot projects -- and the loan guarantees that these first-of-a-kind nuclear plants are using today to get financing would be blocked under the "No More Solyndras" bill that passed the House last week (Greenwire, Sept. 14).¶

#### Money was allocated in January 2012, and it’s small

World Nuclear Association, the international organization that promotes nuclear energy and supports the many companies that comprise the global nuclear industry, September 2012

(“U.S. Nuclear Power Policy,”

**In January 2012** DOE allocated **$452 million over five years** to help the design and licensing of **one or two** SMR designs through new cost-sharing arrangements with industry. This will support first-of-a-kind engineering, design certification and licensing. To that end, it issued a draft Funding Opportunity Announcement to solicit inputs from industry, for designs that have “the potential to be licensed by the NRC and achieve commercial operation by 2022.” (Small, compact reactors of up to 300 MWe in capacity have a number of potential advantages in terms of safety, construction and siting, as well as potential economic benefits. Smaller ones can be made in factories and transported by rail and road to generation sites, being added progressively as modules of a large plant, reducing both capital costs and construction times.) Westinghouse intends to apply for its own 225 MWe SMR, in conjunction with Ameren Missouri, as does Holtec in conjunction with NuHub for the SMR-160. Babcock & Wilcox's 125 MWe mPower supported by Bechtel and NuScale Power's 45 MWe design supported by Fluor are also in contention. The NRC is currently involved in pre-application discussion on both latter types in anticipation of design certification applications for the NuScale reactor, and for the mPower design - in 2013.

#### Plan is new spending – that’s a firestorm

Snider 12

(E&E reporter, 1/16, “Pentagon still can't define 'energy security,' much less achieve it,” <http://www.eenews.net/public/Greenwire/2012/01/16/1>)

But this is **not a good time** to be requesting money at the Pentagon. ¶ Military budget planners have spent the past year **carving** nearly **a half-trillion dollars in budget cuts**, while top brass have worn out the thesaurus' list of synonyms for "decimate" as they decry the damage that additional looming cuts would do to their forces and weapons. ¶ At the same time, no one has yet made the business case for investing in energy security. Current rules require that renewable energy and efficiency projects prove they will bring savings over the long run, even if they carry an added security benefit. In fact, because the Pentagon **operates on a five-year budget cycle**, projects that **pencil out to great investments over the long term** often get **turned down because they register to the budget as a near-term loss.** ¶ Microgrids are still in the pilot phase and the military has not yet decided what the business model will be for them. Because the technology would help energy managers use power more efficiently on a day-to-day basis, for instance by bringing unnecessary loads offline during peak demand times, some officials say microgrids may be able to create enough savings to pay for themselves. Not all of industry is convinced, though, and a group of business executives will be suggesting financial models to Robyn's office in a report this spring. ¶ Ultimately, many say the military is going to have to decide what "secure energy" is worth to it if it wants to fix its vulnerabilities. ¶ "Until someone establishes the value of energy security, I only have the business case to rely on, because right now the value of energy security is **apparently zero**," said Dan Nolan, a retired Army colonel who writes a defense energy blog. ¶ The Navy has made a rough attempt to do this for its Surface Warfare Center in Dahlgren, Va. Like many military installations, the base sits at the end of the power line. Last year it lost electricity 11 times. ¶ Capt. Kenneth Branch, the commander for Naval Facilities Engineering Command Washington, estimates that the two days the center was without power during Hurricane Irene this summer cost it $60,000. ¶ "That's just lost industrial productivity," he said, noting that the numbers helped him justify infrastructure investments. "I also spend a lot of money on my labor trying to figure what were the problems and get back up and online." ¶ A fuller accounting could also count the costs associated with backup generators, including labor required for maintenance, the price of buying and transporting fuel, and the risk of failure. ¶ Pentagon officials say they are beginning to think through some of these calculations, but nobody is sure yet whether extra money would follow. ¶ "If the military is really serious about this, are we going to have to spend some dedicated funds on energy security?" the Army's Kidd said. "I don't know the answer to that, but I think those are the questions we need to start to ask." ¶ Looking to Congress¶ Ultimately, the answers to those questions will come from Capitol Hill, where **lawmakers have been bitterly divided** on energy policy. ¶ Indeed, a **military energy** issue that has **become a symbol of the larger energy policy debate** was one of the final points to be resolved in last month's congressional budget deal. Republicans mounted an effort to exempt the military from a 2007 ban on purchasing fuels like liquefied coal that have a higher greenhouse gas content than traditional petroleum, but in the end they acquiesced, leaving the ban intact.

## dod shield

#### GOP frames energy shifts as forcing additional spending cuts in other areas

Davenport, 12

(7/13, “Obama Faces Tough Challenge in Virginia Over Energy,” National Journal, http://www.nationaljournal.com/politics/obama-faces-tough-challenge-in-virginia-over-energy-20120713

**But even here, Republicans** – including the Romney campaign – **have criticized Navy contracts to purchase biofuels that are more expensive than traditional fuels as the Pentagon prepares for spending cuts.**

Speaking on Thursday to reporters on behalf of the Romney campaign, Former Navy Secretary John Lehman said, **“If the president wants the taxpayer to subsidize alternative fuels, it shouldn’t be done on the Navy’s back.”**

#### Obama gets the blame

Los Angeles Times, 7-30-10, http://articles.latimes.com/2010/jul/30/nation/la-na-velcro-presidency-20100730

Reporting from Washington — If Ronald Reagan was the classic Teflon president, Barack Obama is made of Velcro.

Through two terms, Reagan eluded much of the responsibility for recession and foreign policy scandal. In less than two years, Obama has become ensnared in blame.

Hoping to better insulate Obama, White House aides have sought to give other Cabinet officials a higher profile and additional public exposure. They are also crafting new ways to explain the president's policies to a skeptical public.

But Obama remains the colossus of his administration — to a point where trouble anywhere in the world is often his to solve.

The president is on the hook to repair the Gulf Coast oil spill disaster, stabilize Afghanistan, help fix Greece's ailing economy and do right by Shirley Sherrod, the Agriculture Department official fired as a result of a misleading fragment of videotape.

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#### Obama maintains a clear lead---polls correct

Cohn, 10/27

(TNR Election Expert, “Daily Breakdown: Obama Maintains Lead In Ohio Polls With Ten Days To Go,” http://www.tnr.com/blog/electionate/109228/daily-breakdown-obama-maintains-lead-in-ohio-polls-ten-days-go)

With the debates fading in the rear view mirror and Election Day approaching quickly, the polls still show Obama ahead by a modest but meaningful and consistent margin in the Buckeye State. Yesterday, CNN/ORG showed Obama leading by 4 points in Ohio, coming on the heels of earlier polls by similar firms including interviews with cell phone voters by Time and SurveyUSA showing Obama ahead by 5 and 3, respectively. Even ARG and Purple Strategies—which have tended to produce better than average results for Romney—showed Obama leading by 2 points. In ARG’s case, that was a reversal from their initial post-debate survey, which was one of the few to ever show Romney ahead in the state. What’s most striking is the consistency of Obama’s advantage. Even though three relatively Romney-friendly surveys showed Obama falling behind by 1 point after the first presidential debate, only one partisan poll has shown Romney leading since October 10—and two of the initial three surveys to show Romney ahead have since shown Obama retaking the lead. I suspect that level of consistency won’t last through Election Day, since most averages show Obama ahead by 2 or 2.5 points in Ohio (I’d actually peg it at just 1.9, since I include partisan surveys). As a matter of probability, at least a few polls should show Romney ahead in such a close race. Of course, when that poll comes, I’m sure a wave of Democratic panic and Republican euphoria will overtake Twitter, so let’s just establish in advanced that such a result should be expected. Start getting excited or concerned once the polls start showing movement that can be distinguished from static. Romney’s chances dwindle to the risk of a systemic error in the polls if he can’t close the gap over the next ten days. Ask Michael Bennet or Harry Reid about whether that's possible, but one argument attempting to explain why one should expect systemic error in Ohio is that the polls are oversampling Ohio’s Democratic-leaning early voters, who have constituted as much as 40 percent of recent surveys, even though Michael McDonald’s invaluable US Elections Project’s Early Voting page shows that just 985,000 of Ohio’s voters have cast ballots—or about 18 percent of the 2008 electorate. But even though all but one recent Ohio poll shows a 2-5 point race, the same polls show early voters ranging from perhaps as low as 20 to 40 percent of the electorate. Although the Time breakdown is unweighted, they appear to show voters early voters around just 20 percent of the electorate, while today’s CNN poll showed early voters at 40 percent and found Obama up 4. This suggests that random sampling, not systemic bias, is influencing the results. After all, Rasmussen shows a tied race with 31 percent of the electorate voting early and voting for Obama by 32 points—they get it back to a tie by showing Romney doing far better among Election Day voters than anyone else. Of course, the average poll still shows early voters at 28 percent of the electorate, and that might seem too high. Part of the issue might be the 800,000 outstanding absentee ballots that have been sent to voters but haven’t yet been returned. Many of these voters may have “voted” in the presidential race by filling out their ballots, even if they haven’t returned the ballot. I don’t know how many Ohio voters would have filled out a ballot and say they voted before submitting it, but it’s worth noting that the polls usually ask “have you voted” without further elaboration. What percentage of the expected Ohio electorate has received ballots or voted in-person? 28 percent. Speaking from experience as a Washington State voter where elections are conducted almost entirely by mail in Washington, I can tell you that I have repeatedly told people that I “voted” in the presidential race since Tuesday, even though I completed my ballot yesterday still haven’t submitted it. After learning about this controversy, I asked a few fellow Washingtonians if they voted and they said yes. Then I asked whether they submitted their ballot, and all but one said no. So it’s possible. It’s also possible that the polls are actually just getting too many early voters. But even if they do, it doesn’t necessarily skew the polls. For instance, early voters might be overrepresented if early voters tend to be hardcore partisans and if hardcore partisans are more likely to respond to polls. But in this scenario, potential bias should influence every state and the national polls, not just Ohio, since bias would be due to the unrepresentative character of poll respondents, not early voters. For early voters to skew the polls, voters would need to be more likely to respond to a survey after voting than before. Is that possible? Perhaps, but there's not exactly much evidence and many alternative explanations.

#### No

Silver, 10/25

(“Oct. 24: In Polls, Romney’s Momentum Seems to Have Stopped,” http://fivethirtyeight.blogs.nytimes.com/2012/10/25/oct-24-in-polls-romneys-momentum-seems-to-have-stopped/#more-36636)

But there are other times when the notion of momentum is behind the curve — as it probably now is if applied to Mitt Romney’s polling. Mr. Romney clearly gained ground in the polls in the week or two after the Denver debate, putting himself in a much stronger overall position in the race. However, it seems that he is no longer doing so. Take Wednesday’s national tracking polls, for instance. (There are now eight of them published each day.) Mr. Romney gained ground in just one of the polls, an online poll conducted for Reuters by the polling organization Ipsos. He lost ground in five others, with President Obama improving his standing instead in those surveys. On average, Mr. Obama gained about one point between the eight polls. This is the closest that we’ve come in a week or so to one candidate clearly having “won” the day in the tracking polls — and it was Mr. Obama. The trend could also be spurious. If the race is steady, it’s not that hard for one candidate to gain ground in five of six polls (excluding the two that showed no movement on Wednesday) just based on chance alone. What isn’t very likely, however, is for one candidate to lose ground in five of six polls if the race is still moving toward him. In other words, we can debate whether Mr. Obama has a pinch of momentum or whether the race is instead flat, but it’s improbable that Mr. Romney would have a day like this if he still had momentum. The FiveThirtyEight model looks at a broader array of polls — including state polls — in order to gauge the overall trend in the race. Our “now-cast” also finds a slightly favorable trend for Mr. Obama over the course of the past 10 days or so. Mr. Romney’s position peaked in the “now-cast” on Friday, Oct. 12, at which point it estimated a virtual tie in the popular vote (Mr. Obama was the projected “winner” by 0.3 percentage points). As of Wednesday, however, Mr. Obama was 1.4 percentage points ahead in the “now-cast”, meaning that he may have regained about 1 percentage point of the 4 points or so that he lost after Denver. Mr. Obama’s chances of winning the Electoral College were up in the FiveThirtyEight forecast to 71 percent on Wednesday from 68.1 percent on Tuesday. It’s not yet clear how much of this, if any, has to do with the final presidential debate in Florida this Monday, which instant polls regarded Mr. Obama as having won. Instead, it’s been more of a slow and unsteady trajectory for him, with Mr. Obama often taking two steps forward but then one step back. It’s also not out of the question that the apparent trend just represents statistical noise. At the same time, there is more reason to take a potential change in the polls seriously if it is precipitated by a news event like the debate. The tracking polls that were released on Wednesday contained only one full day of interviews that postdated the Florida debate. If the debate moved the needle toward Mr. Obama, it should become more apparent in the coming days. The battleground state polls that came in on Wednesday were generally very close to our model’s current projections. For instance, there were three Ohio polls published on Wednesday; one showed a tied race there, while the other two showed Mr. Obama ahead by margins of two and five points.That’s pretty much what you’d expect to see out of a trio of Ohio polls if Mr. Obama’s lead there were about two points, which is where our model now has it. Some of the polls, especially the Time Magazine poll which had Mr. Obama five points ahead in Ohio, seemed to set off a lot of discussion on Twitter, as though people were surprised that Mr. Obama still held the lead there. But these polls are really nothing new. Since the Denver debate, Mr. Obama has held the lead in 16 Ohio polls against 6 for Mr. Romney. In Nevada, Mr. Obama has had the lead in 11 polls, to Mr. Romney’s 1. Mr. Obama has led in all polls of Wisconsin since the Denver debate, and he has had five poll leads in Iowa to one for Mr. Romney. Part of the confusion (and part of the reason behind the perception that Mr. Romney is still gaining ground in the race) may be because of the headlines that accompany polls. We’re still getting some polls trickling in where the most recent comparison is to a poll conducted before the Denver debate. We should expect Mr. Romney to gain ground relative to a poll conducted before Denver. (Mr. Romney may have lost a point or so off his bounce, but he has clearly not lost all of it). But it isn’t news when he does; Mr. Romney’s Denver gains had long ago become apparent, and priced into the various polling averages and forecast models. The question, rather, is whether Mr. Romney is gaining ground relative to the post-Denver polls — or if, as Wednesday’s polls seemed to imply, the race instead may have ticked back slightly toward Mr. Obama.

#### Romney in striking distance despite difficulties in Ohio

Laing, 10/25

(Columnist-The Hill, “Working-class voters could be the key to Romney's chances in Ohio,” http://thehill.com/blogs/ballot-box/presidential-races/264199-working-class-voters-are-key-to-romneys-chances-in-ohio)

Despite all that, Romney remains within striking distance in Ohio. The SurveyUSA poll released Tuesday shows Obama leading the state by just 3 points — within the margin of error — and the president’s lead has eroded significantly this month. Romney has worked diligently to rally Christian conservatives in the western part of the state, and seen his ground-level efforts boosted by Ralph Reed’s Faith and Freedom Coalition, which many credit for delivering Ohio for Bush in 2004. Democrats have battled back with their own “Souls to the Polls” program in African-American churches. The Republican nominee has also aggressively attacked Obama in commercials and on the stump over his handling of China in an attempt to peel away some of the manufacturing workers who are leaning toward the president. Aides to the Romney campaign express confidence that they have enough boots on the ground to counter Obama’s forces. “We’re running the most robust ground game that has ever been run by a Republican in Ohio,” Jennings said, adding that the GOP has already knocked on 21 times as many doors and made three times as many phone calls as the John McCain campaign did in 2008.

#### Race is razor-thin

Wyler, 10/26

(Columnist-Business Insider, “The Only Three States You Need To Watch This Election,” http://www.businessinsider.com/ohio-virginia-wisconsin-swing-states-election-2012-10)

Over the past week, there has been a lot of debate over whether Mitt Romney really has the momentum going into Election Day, or whether it is just a lot of spin that reporters have bought from the Romney campaign. The truth, as always, lies somewhere in the middle. Nationally, the race is still virtually tied, but since the first presidential debate, Romney has made big strides to close Obama's lead in key swing states, particularly in the Big Three — Ohio, Florida, and Virginia. It's not clear yet if Romney's momentum has subsided, but it seems fair to say that this is going to be a very close race across the electoral map. With less than two weeks to go until Election Day, the battle has narrowed to just eight states — Ohio, Florida, Virginia, Colorado, Iowa, Wisconsin, Nevada, and New Hampshire — whose combined 95 electoral college votes will determine which candidate stacks up the 270 votes needed to win the race. But not all of the swing states are created equal. Only a few states actually have the power to decide the election. Because of their recent polling and relative weight in the electoral college, these "tipping point states" — a term coined by New York Times polling guru Nate Silver — are the most likely to deliver the deciding vote that gets one of the candidates to the magic 270. These are the states to watch on election night. Here's a breakdown: 1. Ohio: The importance of Ohio in this year's election cannot be overstated. Silver puts the state's chances of tipping the election at a whopping 47%. Obama and Romney have basically moved to Ohio, and the campaigns have poured a combined $177 million into the state's airwaves. Presidential elections in Ohio have been incredibly close for the past two decades, and its safe to assume 2012 will be another nailbiter. Obama won Ohio with 51% of the vote in 2008 and maintains a slight advantage this year, but Romney has made steady gains in the polls this month. To win, the Republican nominee needs to drive down Obama's 2008 margins in the state's urban and suburban counties.

## link

#### Empirically—coal supporters fight tooth and nail against nuclear energy expansion

Adams, 10/8

(Experience working in nuclear industry for two decades, former submarine engineer officer & host and producer of The Atomic Show Podcast, “Pertaining to Fossil Fuel Industry Fighting Nuclear Using Propaganda,” http://deregulatetheatom.com/2012/10/pertaining-to-fossil-fuel-industry-fighting-nuclear-using-propaganda/

I agree that the Energy Reorganization Act was a coup de grace of antinuclear activism brought to all of us by a coalition of coal, oil, natural gas and their paid assistants that work under the cover of “Environmentalism”, but I do not believe that the fossil fuel industry has been resting on that foundation. (Did you know that Nader is an Arab-American whose first big break as a “consumer advocate” was to write a book that virtually stopped production of one of the first commercially successful small, fuel efficient cars ever designed in Detroit. Think about that for a moment.) **Nuclear will always be a threat to the wealth and power of the fossil fuel industry**. That is not because it will stop humans from beneficially using the wonderful properties of hydrocarbons, but because the false notion that energy fuel is scarce will disappear. BTUs will once again become cheap and disposable, people will be able to do more work, and the air and water will become cleaner. However, people will fight less and less over those BTUs, no one will even consider investing $45-$65 billion in Alaskan LNG projects, no one will get excited about drilling for oil in the Arctic (and even Antarctic), deep sea oil and gas will remain in place, and even tight shale gas will probably be thought of as something that our distant descendants might think about extracting if they really need some methane. Just think about how that situation will change the world power structure and you will recognize that there are people who can be our strong allies. We will need them because the people who will be the “losers” in that scenario hold a lot of chips now, and are gathering even more every single day. Their hand, however, is roughly equal to a couple of pairs of 7s and 8s while ours is more like a royal flush. We just have to hang in there so they cannot buy the pot. Rod Adams: One more thing – do you really think that the EPA is working against the interests of the most power parts of the fossil fuel industry? Do you think it is an accident that a highly efficient coal plant cannot quite meet the CO2 per kilowatt hour limit while a natural gas plant can – as long as the rules are written so that the methane released in the extraction and transmission process is ignored? David Owen: This is more like it. Thank you gentlemen and scholars. Robert Hargraves: I’m simply amazed at the current commercial, “… invested nearly 100 billion dollars in clean coal…” — an outright lie. John Kutsch: **the biggest push back** from Fossil fuel **has been from Coal.** The liquid fuels folks dont have any threat from THM SR and we have not heard from nat Gas , but they are too cheap to care right now anyways. The final thought is that you wont be using MSR for electricity you will use it for process heat – that gets some naysayers off our backs

## russia

Romney will react in line with campaign rhetoric and Russia will react aggressively

Adomanis 10/23/12

(Mark, international contributor @ Forbes, “How Will Mitt Romney Demonstrate 'Backbone' With Vladimir Putin?” http://www.forbes.com/sites/markadomanis/2012/10/23/how-will-mitt-romney-demonstrate-backbone-with-vladimir-putin/)

Now because the debate was poorly run there wasn’t any follow-up on Romney’s proposed backbone-centric Russia policy. But it naturally raises a number of questions, the most obvious of which is “how would the Russians respond?” It’s worth trying to think through what a more combative Russia policy would achieve and what sorts of unintended consequences it might have because, at least as far as I can tell, it’s one of the only areas of genuine disagreement between the two candidates and one of the few foreign policy changes we could realistically expect from a Romney administration.

Obama has been accused of being “soft” on Russia largely because of things he hasn’t done: he hasn’t signed, and has worked to delay passage of, the Sergei Magnitsky Rule of Law Accountability Act, he hasn’t aggressively responded to the recent expulsion of USAID, and he’s generally, though not entirely, refrained from criticizing Russian domestic policy. I think it’s fair to say that Romney would support passage of the Magnitsky bill, would aggressively respond to the closure of USAID (perhaps following David Satter’s advice of expelling a bunch of Russian diplomats), **and would generally take a** hawkish **and** unaccommodating **line.** Though Mitt Romney’s website is still pretty scant on the details of his proposed Russia policy, **I don’t think it’s** being **uncharitable or unrealistic to say that Romney is contemptuous of and dismissive towards Russia’s current regime and that** he would be much more aggressive in confronting Putin**.**

But the Russians aren’t automatons who have been programmed to behave in a specific way, they’re human actors who respond to external stimuli and changes in US policy. The fact that the Russians are more cooperative since the start of the “reset” isn’t some bizarre puzzle that needs to be explained, it’s exactly what we ought to expect. Russia’s limited cooperation with the United States over the past four years hasn’t been by default or because the Russians “had no other options,” it has occurred because the Russian political leadership calculated that Russian interests were best promoted via cooperation with the Obama administration. But this calculation could easily change, and it doesn’t take an active imagination to think of a scenario in which Russia responds to an aggressive Romney policy by doing something asinine like re-instating the S-300 sale to Iran.

I understand that Romney’s response during the debate wasn’t a detailed policy prescription and that it’s unrealistic to expect extreme levels of detail from off-the-cuff and unprepared statements delivered live on national television. **But the “backbone” comment is perfectly in keeping with Romney’s past statements on the issue**. Romney, and foreign policy hawks in general, take a strangely one-sided view of US-Russia relations, and tend to view it as an arena in which the US is the only party with any real agency. In this view the Russians cooperate on issues like Afghanistan and Iran “because they have to” and the US can afford to aggressively oppose other Russian policies without paying any cost. But that’s clearly not the case.

The Russian government has many interests but its first priority, like any government, is survival. If the **Russia**n government **concludes that its survival might be threatened by Romney’s policies** (and since Romney openly declares his intention of replacing the current government they wouldn’t be unreasonable in reaching such a conclusion) they will oppose those policies with every means at their disposal. Such an observation is hardly novel, but I’ve never seen anyone offer a coherent explanation of why the Russian government will continue to support Iran sanctions or the Northern Distribution Network in the face of aggressive attempts to weaken and marginalize it.

It’s his genuine beliefs – causes Russia to respond the same way

CIS Newswire 10/11/12

(“Romney does not learn from Bush Jr. mistakes - State Duma's Pushkov” Russia & CIS General Newswire)

State Duma Foreign Relations Committee Chairman Alexei Pushkov has called strongly anti-Russian the statements by U.S. Republican presidential candidate Mitt Romney.¶ "The foreign policy address of Mitt Romney to the Virginia Military Institute makes a dismal impression," Pushkov told reporters.¶ He said Romney's address reminded him of the foreign policy of George W. Bush.¶ "The wish of Romney to reinstate the foreign policy the United States had been holding for 70 years showed that neither he nor his circle have understood or learned anything, they made no conclusions from the failures of Bush Jr. in Iraq and Afghanistan, the Arab Spring uprisings and the modern global challenges," the Russian parliamentarian said.¶ "It is even worse if Romney's speech is not just right-conservative populism but also a reflection of his genuine beliefs. We have to say in that case that the presidential candidate does not correlate the present-day abilities of America with the policy he intends to implement," he said.¶ Pushkov thinks the United States is no longer capable of playing the role of a global leader demanded by Romney. It cannot do that because of the giant state debt, which exceeds the U.S. annual GDP, and a series of failures in Afghanistan and the Middle East.¶ "The intention to arm the Syrian opposition, to defer the pullout from Afghanistan and to show less flexibility and more backbone to Russian President Vladimir Putin will not help the U.S. regain its global leadership. It proves nothing but the determination of Romney to insist on repeating the mistakes the U.S. has already made. This policy will make these mistakes even worse," the parliamentarian presumed.¶ **He** also **said that the** practical **refusal to negotiate European missile defense with Russia was likely to trigger a Russian reaction**.¶ "**Romney is prepared to show more backbone, but** Moscow is prepared to do that, too**, especially in the fields where the U.S. needs the support of Russia.** We may also presume that the policy of Romney, if he becomes the president, will antagonize China and escalate tensions in the Arab world and the Middle East," Pushkov said.¶ He recalled the latest statement made by Egyptian President Muhammad Morsi during his visit to the United States. In Pushkov's words, Morsi said that the Arab world expected the U.S. to stop unilateral support to Israel harmful for the relations with the Arab world, real efforts towards the establishment of the Palestinian state, and respect of the Islamic world and traditions.¶ "It looks like Romney is going to pursue an opposite tactic," Pushkov suggested.¶ "The world attitude to the United States has worsened sharply over the past decade. George W. Bush hammered the first blow to the global reputation of America, and the policy of Romney if he wins the presidential election will hammer the second blow and it will be no less serious," he said.¶ In his desperate search for ways to regain the former "total supremacy" of the United States, Romney is looking for answers in a wrong place, Pushkov said.¶ "A better future of the United States is not a confrontation with Russia and China or a clash with the Islamic world. Obviously, Romney does not understand that," Pushkov said.¶ "Alas, the Romney address is not just election rhetoric; it is much more serious than that. U.S. circles which cannot imagine their country other than a world hegemony are still strong. But it is impossible to preserve this role, primarily, with the U.S. military might. Besides, that would be extremely dangerous for the Americans and the whole world," Pushkov said.¶ "The possible presidency of Romney would be one of the last convulsions of the American-style world, but those convulsions can cost too much to the Americans and all of us," the Russian parliamentarian added.

## relations

#### Low threshold

Levi 12

(David Meir, Prof of History @ San Jose State University and writes and lectures on Middle East topics, “Russia Wants Obama Re-Elected” May 11th, 2012, <http://frontpagemag.com/2012/david-meir-levi/russia-wants-obama-re-elected/>)

But according to the Wall Street Journal article, Russia’s alarming saber-rattling is really a façade to hide a “tacit agreement to put off serious talks until next year,” by which time Obama, if re-elected, could “clear the way for a deal” and work on Russia’s behalf against NATO to find ways to accommodate the Russian demands. The Russian presenter on Thursday was direct and unambiguous that **Russia prefers to work with Obama as a second-term president, and to cooperate with his vision of a “reset” in the USA- Russia relationship, rather than to joust with Romney whose election** they feel **will make things** “surely … **more difficult**.” So what the Russians have actually said is: if you want to keep the Russian bear from getting aggressive, elect Obama, not Romney. This is an unusually overt attempt by a foreign power to influence American elections, but it is not surprising since Romney has been harshly critical of Obama’s “reset” vision. The Wall Street Journal made the obvious connection between this impasse and the “hot mic” incident in March where Obama told Russian Prime Minister Medvedev to tell Russian soon-to-be President Vladimir Putin to temporarily back off regarding this issue since Obama would have “more flexibility” to deal with it after the November 6 elections. As reporters gathered for a news conference in Seoul, South Korea, Obama leaned over to his Russian counterpart. Without realizing a microphone was open, he said: “This is my last election and after my last election I have more flexibility,” …referring to his ability to reach a deal with Russia on missile defense. Medvedev replied: “I understand. I will transmit this information to Vladimir,” a reference to the incoming Russian president, Vladimir Putin. Obama attempted to weasel out of the implications of his gaffe by explaining to reporters in Korea that arms control negotiations are extremely complex and require bipartisan cooperation in the U.S.; so they cannot be a public issue just months before presidential and congressional elections. But “I don’t think it’s any surprise that you can’t start that a few months before a presidential and congressional elections in the United States,” simply does not address the core problem. His intention to hide his willingness to be flexible toward Russia about Russian demands couched in cold-war terminology relating to the possibility of nuclear war bespeak his awareness that these intentions will not be acceptable to the American voting public; and this is all the more reason to make them public. Romney said it was alarming that Obama was “looking for greater flexibility where he doesn’t have to answer to the American people in his relations with Russia … [Russia is] without question our No. 1 geopolitical foe. They fight every cause for the world’s worst actor. The idea that he has more flexibility in mind for Russia is very, very troubling indeed.” The New York Times version of this issue made no mention of the “hot mic” incident but did point out that Russian leaders have refused Obama’s request that the Kremlin pressure Syria’s Bashar al-Assad to comply with the UN’s cease-fire plans. The Times also noted that Obama himself stalled the progress of the NATO plans for the early warning and missile defense system because he sought a “reset” in the USA’s relationship with Russia, and Russian concerns about the NATO early warning system were a stumbling block to Obama’s plans. Obama’s willingness to be flexible toward the Russian demands may stem in part from the desire to co-opt the Kremlin into pressuring Assad; but it also seems clear that Obama, not knowing that he was speaking to Medvedev in front of a hot microphone, did not want to let the American electorate know of his intentions for flexibility toward Russia regarding the NATO missile defense system impasse. In other words, his flexibility toward Russia, if it were made public, might hinder his re-election. And the Russians are not ungrateful. Obama’s pay-back for his willingness to be flexible next year is Russia’s endorsement of his re-election by telling the world, at this conference, that if the USA elects Romney, there might be war with Russia.

## winners

#### Obama has support of environmental voters now

Rogers, 10/26

(Columnist-Mercury News, Obama and Romney on environmental issues: A Grand Canyon of difference, http://www.mercurynews.com/science/ci\_21858644/obama-and-romney-environmental-issues-grand-canyon-difference)

Since taking office, Obama has mostly sided with environmental groups, approving new regulations to limit pollution. Romney has criticized those actions as burdensome on industry and costly to consumers and taxpayers. On Romney's campaign website, there are policy positions for 26 major issues. "Environment" is not on the list. During the past four years, Obama has: Approved several major new air pollution laws, including strict limits on mercury pollution and smog that drifts between states. Doubled the gas mileage rules for cars, copying California's greenhouse gas standards to require the U.S. auto fleet to average 54.5 mpg within 12 years. Set the U.S. Environmental Protection Agency on course to require mandatory limits on greenhouse gases from new power plants by next year. Included $90 billion in the 2009 stimulus bill for energy projects, doubling wind and solar energy nationwide. Romney has opposed all of those measures. "I think the EPA has gotten completely out of control for a very simple reason," Romney said in an appearance on Fox News during the GOP primary fight. "It is a tool in the hands of the president to crush the private enterprise system, to crush our ability to have energy, whether it's oil, gas, coal or nuclear." Environmental groups say Obama did as much as he could, given opposition to new environmental rules from Republicans in Congress. "I'd give the president a B-plus -- and Romney an F," said Michael Brune, national executive director of the Sierra Club, based in San Francisco. "He hasn't even made an effort to discuss any strategy to clean up our air and water or use energy more efficiently." Obama has established four new national monuments, including one at Fort Ord in Monterey County. He tightened offshore oil-drilling rules after the BP blowout in the Gulf of Mexico. He defended the Clinton administration's "roadless rule" banning logging in millions of acres of national forests. And he appointed leading scientists to top posts, including Monterey Bay Aquarium Research Institute director Marcia McNutt to run the U.S. Geological Survey and Lawrence Berkeley Laboratory director Steven Chu as energy secretary.

Environmentalists oppose military nuclear expansion

Clausing, 2011

Jeri Clausing, 5-27-2011, AP, “Critics line up against plutonium lab,”

http://www.krqe.com/dpp/news/technology/critics-line-up-against-plutonium-lab-

ALBUQUERQUE (AP) - It's a familiar scene in New Mexico: Peace activists, environmentalists and scientists lining up to oppose expansions of the military and nuclear facilities that are a major economic engine for the state.

They were back in force this week, this time to oppose the "bomb factory," ''cash cow" and "jobs program for scientists" — their names for a $5.8 billion nuclear lab being designed to replace the 60-year-old lab at Los Alamos National Laboratories where scientists make and store the "pits," or cores, of the nation's nuclear bombs. It's a project that has been on the drawing board for nearly a decade, and one that won't be finished for at least another decade.

But it's back in the public spotlight, thanks to new study mapping earthquake danger in the area, a doubling of the facility's estimated cost and public outcry for caution in light of the nuclear disaster that followed the Japan earthquake and tsunami.

"The lesson of Fukushima is don't build nuclear reactors and nuclear facilities in unsafe geological areas," Dave McCoy, director of Citizen Action, said during a contentious hearing Monday where activists argued with officials enforcing a three-minute speaking limit.

While safety concerns are at the front and center of any nuclear debate, the deeper underlying controversy here centers around the more than 20-year-old efforts by anti-nuclear activists to scale back and force a change in the long-term mission for Los Alamos, which was founded during World War II to develop the world's first nuclear weapons.

"We've been working for a diversification of the mission ever since the end of the cold war in 1989," said Joni Arends of Concerned Citizens for Nuclear Safety, whose members attended the public hearings held last week in Albuquerque, Los Alamos, Espanola and Santa Fe.

"... If we are really moving toward a nuclear weapons-free world, the lab has an enormous amount of expertise that should be used in the field of non-proliferation and the rounding up of these materials."

Instead, critics charge, the lab is looking to beef up its nuclear bomb making capabilities with the new lab that they say would dramatically increase its nuclear bomb-making and storage capacities.

#### Environmental voters huge in Ohio—big youth turnout bloc

Dye, 9/30

(Energy Action Coalition Research Assistant, “Power Vote,” http://www.wearepowershift.org/blogs/power-vote-all-star-kate)

Zakee - What environmental and energy issues are young people working on in Ohio? Kate - **Young people are working on a huge range of environmental issues**, from Fracking to MTR and Power Vote to clean water issues. In Ohio we as students are focusing on Fracking. The industry is quickly invading our state and we are working diligently to stop it before the damage is irreversible. Zakee - How is Power Vote helping build the power of the movement in Ohio? Kate - Power Vote is helping build power in the movement by growing the movement. We are **getting new students involved** and informed through pledge cards and events across the country. Its also **building the movement by building the voter turn out**, we need to elect politicians who will listen to us and side with clean energy.

## heg

#### Obama key to drones and overall heg

Walt 12

(Stephen, Robert and Renée Belfer professor of international relations at Harvard University, “Why hawks should vote for Obama” February 14, 2012, http://walt.foreignpolicy.com/blog/2072)

If you are someone who is inclined to favor hawkish responses to foreign policy problems, then your choice for president should be Barack Obama. Not because Obama is especially hawkish himself, or interested in prolonging costly and failed commitments in Iraq or Afghanistan. For that matter, his administration is making a modest and fiscally necessary effort to slow the steady rise in Pentagon spending, and they seem to understand that war with Iran is a Very Bad Idea. (It is of course no accident that military action there is being promoted by the same folks who thought invading Iraq was a Very Good Idea. But I digress.)

So why should hawks vote for Obama? As Glenn Greenwald and Greg Sargent have argued most forcefully, it's because Obama can do hawkish things as a Democrat that a Republican could not (or at least not without facing lots of trouble on the home front). It's the flipside of the old "Nixon Goes to China" meme: Obama can do hawkish things without facing (much) criticism from the left, because he still retains their sympathy and because liberals and non-interventionists don't have a credible alternative (sorry, Ron Paul supporters). If someone like John McCain, Mitt Romney, Rick Santorum, Newt Gingrich or George W. Bush had spent the past few years escalating drone attacks, sending Special Forces into other countries to kill people without the local government's permission, prosecuting alleged leakers with great enthusiasm, and ratcheting up sanctions against Iran, without providing much information about exactly why and how we were doing all this, I suspect a lot of Democrats would have raised a stink about some of it. But not when it is the nice Mr. Obama that is doing these things.

#### Romney win causes economic collapse

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(Travis, Economists: Romney’s Economic Plan Fails to Deal With ‘Main Drags’ On U.S. Economy, 1/12/2012 Think Progress, p. <http://thinkprogress.org/economy/2012/01/12/403210/economists-romneys-draconian/>)

Former Massachusetts Gov. Mitt Romney’s (R) economic plan has become the centerpiece of his presidential campaign. Though his proposals are often vague, analyses of the plan shows that it would provide huge tax breaks for the wealthiest Americans while raising taxes on low-income families. And though Romney claims to be concerned about the federal budget deficit, his plan would add more than $6 trillion in deficits over 10 years. Romney, who touts his experience as a job creator, has suggested laying off thousands of public sector workers. He wants to slash vital programs for the poor and middle-classes, repeal the Affordable Care Act, and gut Medicare and Social Security. His embrace of the radical Cut, Cap, and Balance plan pushed by House Republicans would, in effect, shrink the federal government to pre-Ronald Reagan era sizes. But for all his talk about the plan on the campaign trail, economists surveyed by Reuters say Romney’s plan **likely wouldn’t deal with the main drags on the American economy**, while the cuts to vital programs would be “utterly draconian“: These steps would shrink the federal government’s role more than even former president Ronald Reagan managed 30 years ago when he turned many social programs over to the states. That scenario concerns liberal economists. “If applied, these fiscal measures would be utterly draconian. The attacks on Medicare and Social Security would throw large portions of the population into poverty,” said Jamie Galbraith, business professor at the University of Texas in Austin. Mainstream economists worry more that neither Romney nor his Republican opponents are addressing the main drag on the U.S. economy – weak demand from American consumers still weighed down by debt. Among the “main drags” highlighted in the Reuters piece is the housing crisis, which has placed “a big drag on consumer spending which drives two thirds of the U.S. economy.” But the GOP candidates have offered little in the way of solutions for the crisis, and Romney’s own prescription involves **letting the housing market hit rock bottom** — further damaging millions of homeowners. “Markets work,” Romney told moderators at a debate in November when asked what he would do to address the housing crisis. According to former Wall Street economist Thomas Gallagher, addressing demand should be at the top of the list when it comes to speeding the recovery. Instead, Romney is focused on budget deficits and tax reform — the types of austerity measures that are pushing Europe toward another recession. Perhaps that’s why a survey of economics professors found that the Republican proposals were so bad, they wouldn’t pass an Econ 101 class.