# 2nc Conditionality Good - short (0:30)

**Our interpretation is that the negative gets three conditional world**

**Prefer it—**

**1. Offense**

**a. Neg Flex- key to let the neg shape their strategy- or else everyone would go 3-3**

**b. 2AC strategic thinking- thinking about what arguments to read is critical to developing, real world critical thinking**

**c. Education-breadth outweighs because it incentivizes out of round research**

**2. Defense**

**a. condo forces better 1ac writing, it forces preempts that solve time skew**

**b. dispo or unconditionally forces debates down to core generics with impact - that kills topic education**

**c. condo has diminishing returns every conditional world trades off with case arguments we get to make**

**d. Permutations check- each is conditional world -skews our strat too**

No nuclear power expansion now – claims of a renaissance are overblown

**Becker, 7/23/12** [Becker is chairman of the Koeberg Alert Alliance, “PETER BECKER: Nuclear industry ‘rebirth’ is instead stillborn”, <http://www.businessday.co.za/articles/Content.aspx?id=176811>]

THE nuclear power industry is deeply troubled, with little cause for optimism. There is growing worldwide public resistance to nuclear power stations, US President Barack Obama has terminated government subsidies for nuclear power, and Germany and Switzerland have committed to shutting down all their reactors. While the renewable energy industry has seen dramatic growth and constantly falling costs, the nuclear industry grapples with spiralling costs, the seemingly intractable waste-disposal issue, and the huge economic and human costs of the Fukushima nuclear disaster in Japan. We have heard from the nuclear lobby that a "nuclear renaissance" is just around the corner and, as evidence of this, we are told 65 reactors are "under construction" worldwide. Examination of this list reveals some interesting details. The International Atomic Energy Association maintains a database of all commercial reactors, the Power Reactor Information System (PRIS). In March this year, it listed 65 reactors as "under construction". It is instructive to look at the number of years some of these have been "under construction". For example, Lungmen 1 and 2 in China were begun in 1997 and have so far taken 15 years to build. In the Slovak Republic, construction of Mochovce 3 and 4 was started in 1987, making 25 years so far. For Atucha 2 in Argentina, it’s 31 years. Moving from the disappointing to the ludicrous, Watts Bar 2 in the US has been "under construction" since 1972. It is likely these long-delayed projects will eventually be cancelled, and almost certainly they will never be an economic success. Even if they are ever completed, the designs will be frighteningly outdated and their safety features unlikely to satisfy current regulatory requirements or public concerns. It is therefore disingenuous to include these in a list of "success stories" about nuclear power. Eliminating the reactors that have been "under construction" for 15 years or more reduces the list of 65 to 52. Another item in the PRIS data is the estimated start-up year. It is interesting that for many of these reactors across South Korea, India, France, Brazil and China, the PRIS database does not list an estimated start-up year. It is unusual, to say the least, for a construction project to have no estimated completion date. This can be interpreted as either a lack of commitment to the project or a sign that problems have arisen that will delay construction. These can hardly be considered success stories and eliminating them from the list of 52 reactors leaves just 10 reactors. Of these 10, most are in pairs and they are spread over six different nuclear plants. And of these plants, only two (Vogtle in the US and Flamville in France) are in the West. What is more, Vogtle is likely to be the last nuclear plant built in the US and was viable only because of subsidies from the Bush administration. Another statistic offered by the World Nuclear Association is that nuclear power is being "considered" by 45 countries that do not currently use it. At first glance, this seems to be impressive evidence of the nuclear "renaissance". However, any country that is considering using nuclear power is, by definition of the word "considering", also considering not using it. An analysis of the 45 countries reveals interesting examples. It includes Namibia and Mongolia, which both consume about 3000GWh a year. A small nuclear power station such as Koeberg, if operated at 80% capacity, would produce more than 12000 GWh a year. Is it likely any country will pay for generating capacity that will produce more than four times the electricity they need? Including these countries in the "considering" list is a distortion of the facts by the World Nuclear Association, perhaps born of a desperation to conceal the decline of the industry. Nuclear power plants are very long-term commitments. It is therefore important to have a healthy global nuclear industry in place so that services such as maintenance, spare parts, decontamination after a leak, plant decommissioning and waste handling are available at reasonable prices when they are required, decades from now. The sad truth is that even according to the optimistic International Atomic Energy Agency data from the PRIS data, the number of reactors on which construction was started fell 75% from 2010 to last year, and again 75% from last year to this year. Far from a renaissance, this is a catastrophic collapse. SA would do well to wait a few years to see if this trend reverses before locking itself into the nuclear energy option.

**Timing link- nuclear power can’t be deployed in time to solve climate change but it delays funding for short term solutions**

**Roche\* 7 – \***Site editor, no direct author given, but N02 Nuclear Power.org is a site created and run by Pete Roche who is an energy consultant based in Edinburgh and policy adviser to the Scottish Nuclear Free Local Authorities, and the National Steering Committee of [UK NFLA](http://nfznsc.gn.apc.org/). Pete was co-founder of the Scottish Campaign to Resist the Atomic Menace (SCRAM), he has represented Greenpeace at international meetings and is active in several other areas relating to environmental protection and nuclear power [http://www.no2nuclearpower.org.uk/reports/Opportunity\_Costs\_Nuclear.pdf, January 2007 “Opportunity Costs of Nuclear Power]

Timing To tackle climate change the speed with which carbon abatement measures can be introduced is also important. The construction of nuclear power stations will have a long lead-time. During the period when reactors are being constructed, capital is tied up and therefore unavailable for investing in alternative carbon abatement techniques. Because nuclear investments are also inherently slower to deploy, then such investments also retard carbon displacement. Delivering a kilowatt-hour from a new nuclear power station costs at least three times as much as saving one through efficiency measures. Thus every dollar spent on efficiency would displace three times more coal than a dollar spent on new reactors. But, perhaps more importantly, the savings from spending on efficiency can go into effect much more quickly, because it takes so long to build reactors. (2) The UK Association for the Conservation of Energy, for example, says that the most optimistic assumption is that one new nuclear power plant could be operating in the UK by 2020, delivering perhaps just over one million tonnes of carbon saving. In contrast energy efficiency "could save around 25 million tonnes of carbon through cost-effective energy efficiency measures" by that date. (3) In 2004, decentralised low- and no-carbon generation added 28GW of capacity worldwide – six times more than nuclear power, with three times more extra output. (4) This was achieved despite nuclear power’s generally higher subsidies per kWh and its far easier access to the grid. Decentralised energy can be installed quickly without needing complex regulatory processes. Despite moves around the globe to speed up regulatory approval of new reactors it is hard to imagine how this balance of speed could ever shift in favor of nuclear power. New reactors take a long time to build are delay-prone, complex, and contentious technology, and one a single major accident or terrorist attack could scuttle nuclear stations virtually everywhere.

**Don’t solve warming –takes too long and cant build enough reactors**

**Smith, 11** [Gar, environmental journalist, He is the former editor of Earth Island Journal, and currently edits Earth Island Institute's weekly "eco-zine" The-Edge. NUCLEAR ROULETTE: THE CASE AGAINST A NUCLEAR RENAISSANCEhttp://ifg.org/pdf/Nuclear\_Roulette\_book.pdf]

More than 200 new reactors have been proposed around the world but not enough reactors can be built fast enough to replace the world’s vanishing fossil fuel resources.2 Even if nuclear output could be tripled by 2050 (which seems unlikely in light of the industry’s record to date), this would only lower greenhouse emissions by 25 to 40 billion annual tons—12.5 to 20 percent of the reductions needed to stabilize the climate.3 The International Energy Agency estimates that renewables and efficiency measures could produce ten times these savings by 2050. The IEA estimates that cutting CO2 emissions in half by mid-century would require building 1,400 new 1,000-MW reactors—32 new reactors every year. But since it usually takes about 10 years from groundbreaking to atom-smashing, these reactors could not be constructed fast enough to prevent an irreversible “tipping” of world climate. This hardly seems feasible since the industry has only managed to bring 30 new reactors on-line over the past ten years. Of the 35 reactors the IEA listed as “under construction” in mid-2008, a third of these had been “under construction” for 20 years or longer. Some may never be completed. By contrast, a 1.5 MW wind turbine can be installed in a single day and can be operational 4 | The Watts Bar-1 reactor, 60 miles southwest of Knoxville, Tennesee, took 24 years to build. NUCLEAR REGULATORY COMMISSION in two weeks.4 Still, the pace of nuclear construction has picked up lately. In 2010, the number of reactor projects underway had ballooned to 66—with most located in China (27) and Russia (11). And it’s not just a matter of designing and building new reactors.The construction of 1,400 new nuclear reactors also would require building 15 new uranium enrichment plants, 50 new reprocessing plants and 14 new waste storage sites—a deal-breaker since the sole proposed U.S. storage site at Yucca Mountain is apparently dead .The cost of this additional nuclear infrastructure has been estimated at $3 trillion.5 Moreover, since the operating lifetime of these new reactors would still be a mere 40 years, even if new construction was practical, quick and affordable, it would only “solve” the global-warming problem for another 40 years, at which point the plants would need to be decommissioned.

#### Nuclear leadership is impossible -- US arsenal creates hypocrisy and international resentment.

Perkovich, ‘8

[George, vice president for studies and director of the Nonproliferation Program at the Carnegie Endowment for International Peace, “Abolishing Nuclear Weapons: Why the United States Should Lead,” October, http://www.carnegieendowment.org/files/abolishing\_nuclear\_weapons.pdf]

This Brief summarizes four security interests that would be served by making the longterm project of abolishing nuclear weapons a central purpose of U.S. policy: preventing proliferation; preventing nuclear terrorism; reducing toward zero the unique threat of nuclear annihilation; and fostering optimism regarding U.S. global leadership. Each of these objectives can be (and has been) pursued without the larger purpose of eliminating nuclear weapons. However, the chances of success will steadily diminish if the few nuclear-armed states try to perpetuate a discriminatory order based on haves and have-nots and if they enforce it firmly against some states and hollowly against others. Such inequity breeds noncooperation and resistance when what is needed now is cooperation to prevent proliferation, nuclear terrorism, and the failure of deterrence. Why should everyone cooperate in enforcing a system that looks like it was designed to favor just a few?

#### Institutional inertia prevents any international leadership.

#### Wellen, ‘9

[Russ, a Scholars & Rogues blogger and a Foreign Policy In Focus contributor, 1-12, “Abdicating U.S. Nonproliferation Leadership,” Foreign Policy In Focus]

This is merely the last item in a list of leadership failures. Under the Bush administration, the United States has maintained much of its nuclear arsenal on hair-trigger alert, refused to renounce first-use, and sought to develop a new generation of nuclear weapons. Also, we've signed a preliminary deal to station interceptor missiles in Poland. Ostensibly intended as a defense against Iranian missiles, it's perceived as a threat by Russia, which reacted by moving missiles of its own to its border with Poland. It's natural to assume that the momentum behind these policies will decline with the Bush administration. But in reality, the engine of nuclear proliferation is a perpetual motion machine: Militaristic think tanks never stop generating strategies and networking. The think tank that's most active promoting nuclear weapons, as well as missile defense, is the National Institute of Public Policy. A product of the Reagan years, NIPP and its President, Keith Payne, later produced a study titled "Rationale and Requirements for Nuclear Forces and Arms Control," which served as a blueprint for the Bush administration's 2002 Nuclear Posture Review. But in the years between Reagan’s and George W. Bush’s presidencies, organizations like the Smith Richardson Foundation provided NIPP with grants that enabled it to continue its work advocating missile defense and withdrawal from the Anti-Ballistic Missile Treaty. It still does. Following closely is the Center for Security Policy (CSP), headed by Frank Gaffney, the hard-right ideologue whose columns scorch the Web. During the last Democratic administration, it circulated a famous letter signed by neocons far and wide urging former President Bill Clinton to attack Iraq. It also played key roles in the two Rumsfeld Commissions (one promoted missile defense; the other, space weapons), and was instrumental in abolishing the government's Arms Control and Disarmament Agency. Meanwhile, the conservative Heritage Foundation is trying to generate buzz for a documentary it's releasing early in 2009 entitled 33 Minutes, which is intended to promote (or scare viewers into acquiescing to) missile defense. Finally, in a recent interview, William Kristol intimated that the Democrats' rise to power might call for a new PNAC. The original Project for a New American Century, founded by Kristol and Robert Kagan during the Clinton years, called for the United States, dominant since the demise of the Cold War, to become a "benevolent hegemony" via, when necessary, the preemptive use of force. Also, in a recurrent conservative theme, PNAC condemned arms controllers for concentrating on getting rid of weapons, rather than the regimes that possessed them. Disarmament in Name Alone The studies, papers, and articles militaristic think tanks and individuals produce are critical for their efforts to undermine arms control while advocating weapons systems. In a policy brief for the Carnegie Endowment for International Peace entitled "Abolishing Nuclear Weapons: Why the United States Should Lead," George Perkovich wrote that, in recent years, U.S. officials "sometimes invoke lawyerly arguments either to dispute the nature of the disarmament obligation under the NPT or to argue that it is being met." A perfect example is a piece by Christopher Ford, the Bush administration's special representative for nuclear nonproliferation — until, that is, he recently resigned and himself joined a militaristic think tank, the Hudson Institute. Published by the Nonproliferation Review in November 2007 — oddly enough, the organ of an arms control organization — "Debating Disarmament: Interpreting Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons" is basically a handbook of the objections conservatives have to the NPT and treaties in general, as well as their techniques for sabotaging them. With a new Democratic president, one might be inclined to dismiss such concerns. But the tricks conservatives use to defend a Republican president for dragging his feet on nonproliferation, as well as obstructing it, are the same they will use to cast an administration that dares to be sympathetic to the NPT as soft on security.

### 2nc overview

**Counterplan solves 100% of the case, the only evidence they have is about why incentives are key to reach cost parity they have no evidence that those incentives should be guaranteed and extended beyond that. Once the tech reaches cost parity incentives aren’t needed because the tech is already competitive.**

**Even if they win that the tech normally wouldn’t be competitive either way that doesn’t assume the cp, 1nc hayward evidence indicates that including termination of incentives cause companies to innovate and lower prices so that they stay afloat after incentives are removed causes better tech than the aff and widespread adoption.**

### 2nc CP solvency

#### Performance-based incentives solve without picking winners – substantially boosts innovation more than the plan

**Jenkins, 12** – Director of Energy and Climate Policy at the Breakthrough Institute (Jesse, Congressional Testimony before the Senate Committee on Energy and Natural Resources, 5/22, <http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=31b79a1a-83a0-4ae6-8c80-30fe754ad0ea>)

Several policies could be structured to meet these criteria, including:

• Competitive deployment incentives could be created for various clean tech segments of similar maturity, with incentives for each segment falling steadily over time to demand and reward continual innovation and price improvements.20

• Steadily improving performance‐based standards could create both market demand and spur consistent technology improvement.21

• “Top-runner” programs competitively establish performance standards or financial incentive levels based on the leading industry performers in each market segment, forcing other firms to steadily innovate to stay competitive in the market.22

• Demanding federal procurement opportunities could be created to drive both market opportunities and ensure steady improvement of each successive generation of product, particularly when advanced energy technology products align with strategic military needs.23

• Reverse auction incentives could be established for varying technologies to drive industry competition and innovation.24

If structured to adhere to these criteria, a new era of advanced energy deployment policies will neither select “winners and losers” a priori, nor create permanently subsidized industries. Rather, these policies will provide opportunity for all emerging advanced energy technologies to demonstrate progress in price and performance, foster competitive markets within a diverse energy portfolio, and put these segments on track to full subsidy independence.

#### The CP’s cost reduction conditions pressure companies to innovate – this is the only way to ensure continued innovation and making new energy competitive. Otherwise, natural gas will out-compete the plan despite the incentives, causing a market bust

**Jenkins et al, 12** - Director of Energy and Climate Policy at the Breakthrough Institute (Jesse, “Beyond Boom & Bust: PUTTING CLEAN TECH ON A PATH TO SUBSIDY INDEPENDENCE” April,

<http://assets.nationaljournal.com/Beyond%20Boom%20and%20Bust_Embargoed_4_17.pdfhttp://assets.nationaljournal.com/Beyond%20Boom%20and%20Bust_Embargoed_4_17.pdf>)

These and other clean energy technologies, however, must continue to improve substantially. Costs overall remain higher than fossil competitors, and as the emergence of low-cost shale gas demonstrates, the energy sources that clean technologies are competing against are not standing still. After three decades of private and public-sector collaboration to develop cost-effective technologies to extract natural gas from shale deposits, the “shale revolution” has unlocked large new supplies of domestic natural gas and slashed spot market prices to one-fifth of the peak levels reached in 2008. 85 Solar, wind, nuclear and other zero-carbon energy must now redouble efforts to reduce costs to stay competitive in North American electricity markets (see Part 2 above).

Fortunately, energy technology experts at the International Energy Agency 86 point to numerous remaining technical opportunities to achieve significant cost reductions and performance improvements across a range of clean tech segments, from wind and solar power to enhanced geothermal energy systems, advanced nuclear designs, and improved vehicle technologies and fuels. Successful competition with fossil fuels is possible in the near- to medium-term—the steady process of innovation is the key.

Still, the reality is that until technological innovation and cost declines can secure independence from ongoing subsidy, clean tech segments will remain continually imperiled by the threat of subsidy expiration and political uncertainty. Meanwhile, public tolerance for significant energy subsidies or the internalization of higher prices for energy is limited. 87 If clean energy technologies scale up without corresponding declines in price, this limited tolerance will eventually be expended, leading to another market bust. This means that the simple, perpetual extension of today’s clean energy subsidies and policies, with its somewhat passive approach to innovation, offers no sustainable path beyond a cycle of clean tech boom and bust.

It is true that the federal government has historically devoted greater total subsidies to fossil energy sources than to clean energy sources 88—a fact that changed only recently with the large temporary increase in federal clean tech spending documented in this report 89—and that fossil sectors continue to enjoy subsidies to this day. It is long-past time to end subsidies for mature fossil energy technologies as well. If subsidies for clean tech sectors must phase out as these sectors mature, there is little rationale for perpetual subsidization of well-established fossil energy production methods and technologies.

At the same time, subsidies for clean tech markets in the United States are many times greater than US fossil fuel subsidies when considered per unit of energy generated, meaning that the wholesale termination of all energy subsidies would not automatically make clean energy technologies cost competitive.

Policy makers who may disagree about the appropriate role of government in the energy sector should therefore seek neither across the board cuts to energy subsidies nor their simple maintenance. Rather, they must engage in serious-minded, innovation-centered reform.

For their part, clean tech companies and investors would do well to lead this energy policy reform effort. While many clean tech entrepreneurs deserve credit for achieving innovation and technology improvements under existing subsidy regimes that should better reward their efforts, others have obtained subsidies without facing pressure to reduce costs or improve performance. Embracing innovation-focused policy reform will ensure US firms are well positioned to outcompete international challengers, as well. Simple deployment subsidies or policies to create demand, for example, still allow foreign competitors to undercut domestic manufacturers and seize larger and larger market shares, as Chinese solar PV companies have proven in the last three years. 90 Only steady innovation can keep US firms at the leading edge of clean tech sectors, and a supportive policy regime will be essential.

Businesses and policy makers alike must therefore understand that the true economic rewards in clean energy industries will come not from producing technology for subsidy-created markets that vacillate wildly with the public mood and the political cycle but rather by producing cheap and reliable clean energy technologies that can compete on cost with both international competitors and conventional fossil fuels.

The coming collapse of US clean tech policies thus presents a critical opportunity for intelligent energy policy reform. With the US clean energy policy system set to be effectively wiped clean in the coming years, American business and policy makers must now unite to craft a coordinated new set of limited but direct federal strategies optimized to drive innovation and make clean energy subsidy independent over time. With such a strategy in place, the United States also has the potential to successfully make clean energy technologies cheap enough for widespread export to energy-hungry markets throughout the world.

#### Star this evidence – it directly compares the CP’s solvency to the plan. Increasing incentives alone leads to technological stagnation – conditioning incentives on performance will drive innovation and will spur Moore’s law in the energy sector

**Stepp, 12 -** Senior Policy Analyst with the Information Technology and Innovation Foundation (ITIF) specializing in climate change and clean energy policy (Matthew, “Clean Tech Headed for Stagnation,”, 5/14, <http://theenergycollective.com/node/84873>)

But even if much of this funding continues, the nascent clean tech industry is on a potential path of stagnation. In absence of long-term, significantly larger subsidies (which are politically unlikely), government support for clean energy R&D are central to developing and deploying competitive clean tech. In other words, clean tech growth nationwide (and globally) will be determined not by subsidies, but by innovation that can lead to technologies that are better and cheaper than fossil fuels.

Yet, our policy choices often don’t reflect this reality. According to ITIF’s Energy Innovation Tracker, the U.S. is investing roughly $6 billion in clean energy R&D in FY2012 – on average a third what leading experts think the U.S. should be investing. In fact, the bulk of the federal government’s historic investment in clean energy – nearly three quarters of the $150 billion – is going to the deployment of existing technologies that are not cost-competitive with fossil fuel sources of energy. While these deployment incentives expand domestic supply chains and are spurring incremental innovations, the policies are acting like blunt force tools propping up lower-risk technologies while playing little role in incenting innovation and technologies to put clean energy on a path to subsidy independence. By not orienting the significant federal investment in clean tech towards spurring innovation while grossly underfunding R&D, the U.S. is failing to jump start and accelerate the clean tech innovations needed to create a robust, long-term sustainable industry. Even if the expiring tax incentives are extended as is, the long-term stagnation of the industry will still occur due to a lack of innovation. If we want a global clean tech revolution driven by the marketplace, we need to bring the equivalent of “Moore’s law” (the prediction that computing power would double every 24 months while costs would fall by half) to clean energy. Nothing less will work.

But it’s not too late to avert both the short-term clean tech bust and long-term innovation stagnation if federal policymakers and clean energy advocates truly make innovation less like empty rhetoric and more its core goal. This means fully funding key clean energy innovation R&D programs even in a time of budget austerity. Consistent support for innovation is absolutely necessary – just ask the fossil fuel industry which continues to reap the benefits of a century’s worth of government largesse deficits or not – and cutting innovation programs does more harm than good to the deficit and economy.

Policymakers must also reform clean tech deployment subsidies to link early stage tech development with commercialization. Simply extending expiring or expired subsidies and tax incentives are simply not enough and will only continue to marginally grow the industry. It’s surely not a long-term solution to continue deploying technologies carte blanche even if they don’t hold the promise of competitiveness. A group re-think on clean tech subsidy programs is critical. It’s for “smart” deployment policies that work to pull transformative innovations, rather than just extend incremental innovations of costly energy technologies.

### AT: Perm – do both

**Doesn’t solve- providing the plan’s guarantee of incentives cancels out any benefit to conditioning separate incentives based on cost. The plan’s guarantee eliminates any reason the industry would have to reform because they get the plan regardless of whatever measures they take to become cost competitive- that’s Jenkins and Hayward – the credibility of the condition depends upon the possibility of termination**

#### All of our solvency turns are disads to the permutation – diminishing subsidies conditioned on performance are vital to innovation

**Jenkins, 12** – Director of Energy and Climate Policy at the Breakthrough Institute (Jesse, Congressional Testimony before the Senate Committee on Energy and Natural Resources, 5/22, <http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=31b79a1a-83a0-4ae6-8c80-30fe754ad0ea>)

Whatever form it takes, a new suite of advanced energy deployment policies must simultaneously drive market demand and continual innovation.

By and large, today’s energy subsidies do not do enough to support America’s innovators, and they have not yet succeeded in driving down the costs of advanced energy technologies far enough to compete with conventional fuels. For example:

• Many of today’s clean energy subsidies are focused primarily on supporting the deployment of existing energy technologies at current prices, and most provide no clear pathway to subsidy independence. The federal renewable electricity PTC, for example, has provided the same level of subsidy to wind power since initial enactment in 1992. Subsidy levels increase each year at the rate of inflation, keeping per MWh subsidy levels constant in real dollar terms and providing no clear incentive for continual cost declines or pathway to eventual subsidy independence.

• If not designed with care, deployment policies can also lock out more promising but higher risk technologies from markets, slowing their development. This is a challenge in particular for the renewable portfolio standard and clean energy standard policies given serious consideration by this Committee. These policies typically encourage deployment of the lowest-cost qualifying energy technology available—generally wind power or biomass, or in the case of a proposed CES, natural gas-fired plants. Yet if designed in this manner, RPS or CES policies may do little to drive down the price of other advanced energy technologies, such as solar or advanced nuclear reactor designs, that may have higher costs now but hold the potential to become much cheaper in the long-run.

• Intermittent and haphazard policy support can also wreak havoc with the business confidence necessary for the long-term investments required to develop new and improved products. The PTC for wind power, for example, was first enacted in 1992, but has since expired three times, and has been renewed a total of seven times, often with less than a month to spare before pending expiration. Other clean tech subsidies, including key tax credits for solar, biofuels, energy efficient products, and other segments have experienced similarly erratic expirations. The market effects are chilling, and many private firms are forced to focus principally on ramping-up production for subsidized markets while they last, rather than pioneering next-generation designs and manufacturing processes for the long-term. The intermittent nature of many advanced energy support policies thus slows the pace of innovation in these sectors and actually prolongs the amount of time these sectors remain reliant on public subsidy.

The United States can do better than this. Deployment subsidies and policies should be reformed and designed from the beginning to better support innovative U.S. firms and reward companies for developing, producing, and improving advanced technologies that can ultimately compete on price with both fossil fuels and international competitors alike. Each dollar of federal support today should be optimized to move maturing advanced energy technology sectors towards eventual subsidy independence as soon as possible.

### AT: Perm – do the CP

**1. Severs the plan – the plan provides incentives even if recipients don’t take measures to implement cost reduction. There isn’t an explicit termination clause in the plan, and it isn’t conditioned on cost competitiveness. An explicit termination clause must be offered at the outset – that’s Jenkins and Hayward, and there is no possible interpretation of the plan as written that does that**

**Any interpretation that allows them to interpret the way the incentive that they give outside of the vaccum of the plan text is a voting issue because it makes them conditional and allows them to spike all mechanism or cp based offense.**

#### 2. Normal means for energy incentives is that they are unconditional – they’re flat and must increase each year to adjust for inflation

**Jenkins et al, 12** - Director of Energy and Climate Policy at the Breakthrough Institute (Jesse, “Beyond Boom & Bust: PUTTING CLEAN TECH ON A PATH TO SUBSIDY INDEPENDENCE” April,

<http://assets.nationaljournal.com/Beyond%20Boom%20and%20Bust_Embargoed_4_17.pdfhttp://assets.nationaljournal.com/Beyond%20Boom%20and%20Bust_Embargoed_4_17.pdf>)

Reducing the cost of clean energy technologies will require continuous innovation and improvement even after technologies are commercialized and launched into the marketplace. Yet, by and large, today’s energy subsidies do not do enough to support America’s innovators, and they have not yet succeeded in driving down the costs of clean energy far enough to compete with fossil fuels. The government, however, has a long history of successfully driving innovation and price declines in emerging technologies by acting as a demanding customer to spur the early commercialization, largescale deployment, and steady improvement of cutting-edge technology. 91

Unfortunately, clean tech deployment policies today often closely resemble crop supports, offering a flat production subsidy for any clean energy produced, rather than the demanding military procurement policies that delivered steady improvements and the eventual mass-adoption of everything from radios, microchips, and jet engines, to gas turbines, lasers, and computers. 92

Many of today’s clean energy subsidies are focused primarily on supporting the deployment of existing energy technologies at current prices, and most provide no clear pathway to subsidy independence. The federal renewable electricity PTC, for example, has provided the same level of subsidy to wind power and closed-loop biomass-fueled power plants since initial enactment in 1992 and to geothermal and other qualifying renewable electricity sources since 2004, when it was first extended to them. Subsidy levels increase each year at the rate of inflation, keeping per MWh subsidy levels constant in real dollar terms and providing no clear incentive for continual cost declines or pathway to eventual subsidy independence.

If not designed with care, deployment policies can also lock out more promising but higher risk technologies from markets, slowing their development. Renewable portfolio standards, for example, which require utilities to purchase a certain percentage of electricity generation from renewable sources, encourage deployment of the lowest-cost renewable energy technology available—generally wind power or biomass. But they do little to drive down the price of other, clean energy technologies, such as solar or advanced nuclear power designs, that may have higher costs now but hold the potential to become much cheaper in the long-run. 93

The intermittent and haphazard nature of US energy policy also wreaks havoc with the business confidence necessary for the long-term investments required to develop new and improved products. 94 The PTC for wind power, for example, was first enacted in 1992, but has since expired three times, and has been renewed a total of seven times, often with less than a month to spare before pending expiration. Other clean tech subsidies, including key tax credits for solar, biofuels, energy efficient products, and other segments have experienced similarly erratic expirations. The market effects are chilling, and many private firms are forced to focus principally on ramping-up production for subsidized markets while they last, rather than pioneering next-generation designs and manufacturing processes for the long-term.

In the worst cases, maintaining lucrative, blunt subsidies over prolonged periods can even create a disincentive for firms to innovate 95 or can support “dead end” technologies that have no viable path to long-term competitiveness. 96

**3. the CP radically alters the normal means of incentives- it decreases the incentive every year, instead of increasing it – it takes the opposite direction of implementation the plan does.**

**4. Prefer our theory of competition to allow debates over normal means of implementing incentives:**

**a. the alternative is vague plans that bypasses all topic literature over the design and implementation of incentive programs. Allowing a permutation means the aff will never have to research the particulars incentive design and implementation**

**b. this kills topic education – the specifics of incentive design are vital to debates over their effectiveness**

**Arvizu, 7** - Director National Renewable Energy Laboratory (Dan, CQ Congressional Testimony, “ENCOURAGING SOLAR ENERGY,” 6/19, lexis

We applaud the Committee for its continuing examination of solar and other sources of renewable electricity and fuels. If we are to ensure the nation receives the full range of benefits that renewable energy technologies can provide, we will need a carefully balanced blend of new technology, market acceptance and government policies. It is not a question of whether to rely solely on the market, or on new research, or on government action, as we work to solve our energy problems. To accelerate deployment of renewable energy technologies, we need to effectively combine all three. It's also crucial that this mix of technology, markets and policies be crafted so that each works in conjunction with the others. The reality is that distinct renewable energy technologies - be they solar photovoltaic, solar thermal, wind, biomass power, biofuels or geothermal - are in different places in terms of their economics, technological maturity and market acceptance. While a broad range of policies are needed to spur on these varied technologies, the specifics of policies and incentives to be enacted ideally must be tailored to fit the unique requirements of each of the systems and devices we are seeking to deploy.

**c. it crushes negative ground and shields ridiculous affirmative solvency claims from scrutiny – avoiding these debates means you should vote neg on presumption because the aff is unlikely to solve**

**Azurin 8** [Rene B., Business World, "Strategic Perspective: Renewable Energy Barriers," February 7th, Lexis]

Chatting at the just-concluded Energy Summit with the very charming Dr. Nandita Mongia, regional coordinator for the Energy Program for Poverty Reduction in Asia and the Pacific of the UNDP, I learned that Indonesia mobilizes funding for renewable energy for the poor through taxes on fossil fuels. That, to me, is an example of a logical public finance policy: Penalize, through taxes, what you wish to discourage and use the funds raised to help develop what you wish to encourage. It is also a manifestation of a strategic perspective, the kind of system-wide thinking and long-run view we need to see exhibited by more of our own government's finance and economic managers. One of the things our highest officials sometimes seem to be unconscious of is a principle I drum repeatedly into the minds of my strategy students: Outcomes are the product of the prevailing structure of incentives; if you want a particular outcome, you must first design the incentive system to lead to it. Exhortations and directives without an accompanying incentive structure consistent with the desired outcomes are no more than expressions of wishful thinking.The exhortations are simply ignored and the directives simply make people waste time and, uh, energy inventing ways to avoid complying while vigorously pretending to be absolutely, completely in favor of the announced action. Filipinos are particularly creative in this regard.

We say - or, more precisely, our public officials say - that the country's energy strategy should be to develop more renewable and alternative energy sources - solar, wind, geothermal, ocean, hydro, biomass - that, because they are indigenous and climate friendly, will reduce our country's dependence on imported fossil fuels that pollute our environment. Currently (according to Department of Energy figures), power plants using renewable energy have an installed capacity of 5,260 megawatts, or 33.5% of total power generating capacity in the country. This is broken down into hydro (3,257 MW), geothermal (1,978 MW), and wind (25 MW). The DOE, according to the hardworking director of DOE's Energy Utilization Bureau, Mr. Mario Marasigan, launched in August 2003 an aggressive Renewable Energy Policy Framework that targeted the doubling of renewable energy capacity by 2013. This proposed Renewable Energy Bill, says Mr. Marasigan, will "provide incentives and remove some major market and financial barriers to renewable energy development [and] should create a better investment environment for private proponents." Unfortunately, the bill remains stuck in Congress. A workshop participant wryly commented that congressional energy is naturally directed more toward increasing congressional pork barrel allocations than achieving energy independence for the country.

The principal barrier to renewable energy development is the fact that the energy it produces is still generally more costly than the energy produced by conventional fossil fuels. One estimate indicates that electric power from renewable or alternative fuels is 25% to 50% more expensive than electric power from oil or coal. The higher costs stem in large measure from the site-specific nature of renewable energy projects - you cannot set up a windmill farm where there is no wind or a mini-hydro plant where there is no water - which leads to high construction costs and, later, high transmission costs. Moreover, the modern imported technologies required to build efficient renewable energy plants are hardly cheap.

This is why the structure of incentives needs to be modified as proposed in the RE Bill. The RE Bill provides for the usual tax-break incentives but complement these with the setting up of an RE Trust Fund that can finance research and development, help pay for preparatory studies, and provide loan guarantee facilities. Non-fiscal, market development-directed incentives are also provided, like the mandating of a 1% bio-diesel mix which increases to 2% by 2009, and a 5% bio-ethanol gasoline blend in 2009 which increases to 10% by 2011. Similarly, for electric utilities, it will be mandated that the electric power produced from renewable energy sources must constitute 7% to 12% of the total electric power mix and, further, that such power must be dispatched as soon as it is made available.

#### d.Process education is more important than substance on this topic – implementation is the KEY ISSUE in energy policy

**Nolan, 11** - Associate Professor of Law and Dispute Resolution Program Director, Vermont Law School (Seth, “Negotiating the Wind: A Framework to Engage Citizens in Siting Wind Turbines” Negotiating the Wind: A Framework to Engage Citizens in Siting Wind Turbines, SSRN)

Despite demonstrated need and available technology, the promise of wind energy has yet to live up to its potential. As a society, we see the benefits of renewable sources of energy but struggle to implement our vision through siting of new facilities. In some instances, this gap results from opposition caused by applicants’ and regulators’ emphasis (read: overemphasis) on the substance rather than the process of decision-making. Applicants often enter an approval process expecting that doling out concessions will adequately address citizen opposition. The resulting opposition is often as much a product of what was proposed as how it was proposed.210 Attending to procedural needs as well as substantive needs can offer some solace to weary and suspicious citizens and provide the substrate on which a satisfactory solution can be reached.

#### Severs “should” – it means “must” and requires immediate legal effect

**Summers 94** (Justice – Oklahoma Supreme Court, “Kelsey v. Dollarsaver Food Warehouse of Durant”, 1994 OK 123, 11-8, http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn13)

¶4 The legal question to be resolved by the court is whether the word "should"[13](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287" \l "marker3fn13) in the May 18 order connotes futurity or may be deemed a ruling *in praesenti*.[14](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287" \l "marker3fn14) The answer to this query is not to be divined from rules of grammar;[15](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287" \l "marker3fn15) it must be governed by the age-old practice culture of legal professionals and its immemorial language usage. To determine if the omission (from the critical May 18 entry) of the turgid phrase, "and the same hereby is", (1) makes it an in futuro ruling - i.e., an expression of what the judge will or would do at a later stage - or (2) constitutes an in in praesenti resolution of a disputed law issue, the trial judge's intent must be garnered from the four corners of the entire record.[16](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287" \l "marker3fn16)

[CONTINUES – TO FOOTNOTE]

[13](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker2fn13) "*Should*" not only is used as a "present indicative" synonymous with *ought* but also is the past tense of "shall" with various shades of meaning not always easy to analyze. See 57 C.J. Shall § 9, Judgments § 121 (1932). O. JESPERSEN, GROWTH AND STRUCTURE OF THE ENGLISH LANGUAGE (1984); St. Louis & S.F.R. Co. v. Brown, 45 Okl. 143, 144 P. 1075, 1080-81 (1914). For a more detailed explanation, see the Partridge quotation infra note 15. Certain contexts mandate a construction of the term "should" as more than merely indicating preference or desirability. Brown, supra at 1080-81 (jury instructions stating that jurors "should" reduce the amount of damages in proportion to the amount of contributory negligence of the plaintiff was held to imply an *obligation* *and to be more than advisory*); Carrigan v. California Horse Racing Board, 60 Wash. App. 79, [802 P.2d 813](http://www.oscn.net/applications/oscn/deliverdocument.asp?box1=802&box2=P.2D&box3=813) (1990) (one of the Rules of Appellate Procedure requiring that a party "should devote a section of the brief to the request for the fee or expenses" was interpreted to mean that a party is under an *obligation* to include the requested segment); State v. Rack, 318 S.W.2d 211, 215 (Mo. 1958) ("should" would mean the same as "shall" or "must" when used in an instruction to the jury which tells the triers they "should disregard false testimony"). [14](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker2fn14) *In praesenti* means literally "at the present time." BLACK'S LAW DICTIONARY 792 (6th Ed. 1990). In legal parlance the phrase denotes that which in law is *presently* or *immediately effective*, as opposed to something that *will* or *would* become effective *in the future [in futurol*]. See Van Wyck v. Knevals, [106 U.S. 360](http://www.oscn.net/applications/oscn/deliverdocument.asp?box1=106&box2=U.S.&box3=360), 365, 1 S.Ct. 336, 337, 27 L.Ed. 201 (1882).

#### Severs substantially

**Words and Phrases** 19**64** (40 W&P 759) (this edition of W&P is out of print; the page number no longer matches up to the current edition and I was unable to find the card in the new edition. However, this card is also available on google books, Judicial and statutory definitions of words and phrases, Volume 8, p. 7329)

The words “outward, open, actual, visible, substantial, and exclusive,” in connection with a change of possession, mean substantially the same thing. They mean not concealed; not hidden; exposed to view; free from concealment, dissimulation, reserve, or disguise; in full existence; denoting that which not merely can be, but is opposed to potential, apparent, constructive, and imaginary; veritable; genuine; certain; absolute; **real at present time**, as a matter of fact, not merely nominal; opposed to form; actually existing; true; not including admitting, or pertaining to any others; undivided; sole; opposed to inclusive. Bass v. Pease, 79 Ill. App. 308, 318.

**Severance is a voting issue – no counterplan would ever be competitive if it were legitimate, it destroys all neg ground**

### AT: Certainty key

#### Plan links more – the CP establishes a more predictable framework

**Trabish, 12** – edits NewEnergy News (Herman, “TODAY’S STUDY: THE BACKING NEW ENERGY IS GETTING AND THE BACKING IT NEEDS” 5/7, <http://newenergynews.blogspot.com/2012/05/todays-study-backing-new-energy-is.html>)

g Cost competitiveness is achievable, but until technological innovation and cost declines can secure independence from ongoing subsidy, clean tech segments will remain continually imperiled by the threat of policy expiration and political uncertainty. Continual improvement in price and performance is thus the only real pathway beyond the cycle of clean tech boom and bust.

### 2nc heg overview

**Disad outweighs the risk of a solvency deficit- collapse of competitiveness eviscerates hegemony- that is the only thing keeping in check our rivals and nationalistic rivalries- those escalate to nuclear war and extinction**

**Heg is a controlling impact- deters any sort of conflict escalation functions as impact defense to their impacts**

**Faster timeframe- the net benefit is based on investor confidence collapse comes quickly, and spreads globally**

**Turns the aff-**

### 2nc link

**1nc sweezey evidence- continual subsidies give no incentive to innovate they will never have to compete on a level playing field- this collapses investor confidence and bursts the energy bubble**

### 2nc solvency overview

**Their incentives strategy fails**

**a). kills innovation and cost competitiveness if their project is inevitably supported there’s no incentive to innovate or reach market parity- means that their project won’t spread and only the cp solves. Also diverts capital from other parts of the market which**

**b). aff perpetuates the energy bubble – overreaches what the industry can do collapses investment which hinders investment and implementation of the aff**

**c). we don’t need to win that our solvency turns hurt implementation just that the cp’s strategy is in some way better than the aff.**

**d). no offense- government doesn’t have access to information necessary to make competent decisions and subsidy placement is politically motivated even if in theory subsidies could work**

### 2nc – government fails

#### Accurately predicting the viability of energy technologies in advance is empirically impossible

**Morris, 12** – Deputy Director of the Climate and Energy Economics Project at Brookings (Adele, CLEAN ENERGY: REVISITING THE CHALLENGES OF INDUSTRIAL POLICY, 6/4, <http://www.brookings.edu/~/media/research/files/papers/2012/6/04%20clean%20energy%20morris%20nivola%20schultze/04_clean_energy_morris_nivola_schultze.pdf>)

All of which leads us to examine a little more fully the practical difficulties facing policymakers in the real world of American government as they struggle to choose and sustain the right enterprises.

Identifying plausible candidates might be a more dependable process if the commercial prospects of emerging technologies could be accurately predicted. Too often, however, the predictions have foundered. Decades ago the government launched robust programs to develop nuclear breeder reactors and to facilitate synthetic fuels.

These did not appear to be fanciful schemes in the contexts of their times. But they proved to be premised on unreliable forecasts. In the first instance, experts were anticipating continued explosive growth of domestic demand for electricity. (Instead, demand, especially for baseload capacity, settled onto a much slower trajectory.) In the second, the forecasters assumed that the price of petroleum would not plunge far below $40 a barrel, over $100 a barrel in today’s money. (Instead, it collapsed by the mid-1980s.) Similar unexpected twists have bedeviled attempts to foretell the potential market for various forms of cleaner energy. When prices tumble, as they do periodically, the government’s best-laid plans get stranded.

The caprice of the marketplace frustrates energy planning. So does the fact that public decisions regarding which producers to favor are all but impossible to insulate from political pressures. For the sake of argument, let us suppose that technocrats in highly competent government agencies were able to foresee and then objectively compare the lead-times for commercializing the multiple options under consideration. With that knowledge, one might think, only the most viable green businesses would be tapped to receive public funds. The power of the purse, however, lies with Congress—and the irresistible temptation there is to distribute resources widely and often injudiciously, not to concentrate them on just a few worthy targets.

#### This is a fundamental flaw with the aff that causes error replication

**Gordon, 8** - professor emeritus of mineral economics at the Pennsylvania State University (Richard, “The Case against Government Intervention in Energy Markets Revisited Once Again” CATO Policy Analysis, 12/1, <http://www.cato.org/pubs/pas/pa-628.pdf>)

Many politicians and pundits are panicked over the existing state of the oil and gasoline markets. Disregarding past experience, these parties advocate massive intervention in those markets, which would only serve to repeat and extend previous errors. These interventionists propose solutions to nonexistent problems.

This Policy Analysis reviews the academic literature relevant to these matters and argues that the prevailing policy proposals are premised on a misunderstanding of energy economics and market realities. The interventionists do not distinguish between problems that government can remedy and those that it cannot. They ignore lessons that should have been learned from past experience. They embrace at best second- and third-best remedies rather than first-best remedies for the alleged problems. Moreover, they ignore the extreme difficulty associated with ensuring efficient policy response even when it seems to be theoretically warranted.

Fear of oil imports is premised on pernicious myths that have long distorted energy policy. The U.S. defense posture probably would not be altered by reducing the extent to which oil is imported from troublesome regions. Fears about a near-term peak in global oil production are unwarranted, and government cannot help markets to respond properly even if the alarm proved correct. Market actors will produce the capital necessary for needed investments; no “Marshall Plans” are necessary. Price signals will efficiently order consumer behavior; energy-consumption mandates are therefore both unwise and unnecessary. Finally, more caution is needed regarding the case for public action to address global warming.

The omnipresent calls for more aggressive energy diplomacy are misguided. Economic theory validated by historical experience implies that the diplomatic initiatives are exercises in futility because they seek to divert countries from the wealth maximization that is their goal. Similarly, the search for favorable access to crude oil is futile. Despite their popularity, rules to force reductions in energy use lack economic justification. Attacks on American oil companies and speculators seek to shift blame to those subject to U.S. government control from the uncontrollable foreign oil-producing governments that are truly to blame.

### Cronyism Turn

#### Turn – cronyism – the plan causes corruption that trades-off with market competition

**Boskin, 12** - professor of economics at Stanford and a senior fellow at the Hoover Institution (Michael, Wall Street Journal, 2/15, “Washington's Knack for Picking Losers”, <http://online.wsj.com/article/SB10001424052970204883304577221630318169656.html>)

Like the mythical monster Hydra—who grew two heads every time Hercules cut one off—President Obama, in both his State of the Union address and his new budget, has defiantly doubled down on his brand of industrial policy, the usually ill-advised attempt by governments to promote particular industries, companies and technologies at the expense of broad, evenhanded competition.

Despite his record of picking losers—witness the failed "clean energy" projects Solyndra, Ener1 and Beacon Power—Mr. Obama appears determined to continue pushing his brew of federal spending, regulations, mandates, special waivers, loan guarantees, subsidies and tax breaks for companies he deems worthy.

Favoring key constituencies with taxpayer money appeals to politicians, who can claim to be helping the overall economy, but it usually does far more harm than good. It crowds out valuable competing investment efforts financed by private investors, and it warps decisions by bureaucratic diktats susceptible to political cronyism. Former Obama adviser Larry Summers echoed most economists' view when he warned the administration against federal loan guarantees to Solyndra, writing in a 2009 email that "the government is a crappy venture capitalist."

Markets function well when the returns are received and the risks borne by private owners. There are, of course, exceptions: Governments have a responsibility to fund defense R&D and other forms of pre-competitive, generic R&D—e.g., basic science and technology from nanoscience to batteries—but only when they pass rigorous cost-benefit tests and maintain a level playing field among alternative commercial applications.

For example, the computer-linking technology that created the Internet was funded by the Defense Department for defense purposes. But, like numerous defense technologies, it wound up with commercially valuable civilian applications. Yet it would be foolish for the government to subsidize a particular search engine or social-networking platform.

The previous peak for U.S. industrial policy was in the 1970s and 1980s, when many Democrats wanted to emulate the then-growing Japanese economy by managing trade and directing specific technology and investment outcomes. Japanese subsidies mostly went to old industries like agriculture, mining and heavy manufacturing. We now know that this misallocation of capital was one of the main reasons for Japan's stagnation over the past two decades.

Industrial-policy fever waned after the 1980s but never died. President George W. Bush expanded ethanol mandates and pushed hydrogen cars. Hydrogen's use for transportation must still overcome combustibility concerns, or we'll be driving mini-Hindenburgs. The Bush and Obama administrations bet big on ethanol and other biofuels, providing subsidies that distorted the global market for corn. The federal government was forced to drop its cellulosic ethanol quota by 97% last year because of a lack of viable biorefineries—and the quota still wasn't met.

Even under optimistic projections, heavily subsidized wind and solar would each amount to a tiny fraction of global energy by 2030 and thus cannot be the main answer to energy-security or environmental problems. The short-run focus of most Department of Energy funding misses the main strategic imperative: We need alternatives that can scale to significance long-term without subsidies, and we need a lot more North American oil and gas in the meantime.

Mr. Obama is spending immense sums for subsidies to particular industries and technologies, almost $40 billion for clean-energy programs alone (some, appropriately, for pre-competitive generic technology.) Yet a large number of prominent venture-capital funds are devoted to alternative-energy providers. They should be competing with each other and with the technologies they seek to replace—not for government handouts.

### Displacement Turn

#### Turn- displacement- The aff causes a net trades-off with private capital- kills investment

Green, 12 – resident scholar at the American Enterprise Institute (Kenneth, “Government Is a Lousy Venture Capitalist”, 2/24, <http://www.american.com/archive/2012/february/government-is-a-lousy-venture-capitalist>)

2) Displacement is not addition. Studies show that government “investment” in applied research and development does not add new money to the pot, it displaces private capital, and does so disproportionally. When government steps in, it displaces more money than it throws in the pot.

Again, Kealey sums it up well using a study by the OECD:

Furthermore, regressions including separate variables for business-performed R&D and that performed by other institutions (mainly public research institutes) suggest that it is the former that drives the positive association between total R&D intensity and output growth... The negative results for public R&D are surprising and deserve some qualification. Taken at face value, they suggest publicly performed R&D crowds out resources that could be alternatively used by the private sector, including private R&D. There is some evidence of this effect in studies that have looked in detail at the role of different forms of R&D and the interaction between them. (p.19)

Kealey’s own research agrees:

Moreover, the OECD does not stand alone: at least two other researchers, Walter Park of the Department of Economics at the American University at Washington, D.C., and myself, have found—by similar surveys of OECD data—similarly damaging effects of the government funding of research and development.

Government, like a really bad surgeon, sings the praises of patients it heals and buries those it mangles, quietly when it can, and loudly blaming others when it can’t. As Frédéric Bastiat explained some 150 years ago, economic actions have both seen and unseen consequences. Fans of industrial policy are keen to point out the seen, and never countenance the unseen waste and opportunity costs.