# Prices Cards

### 1NC

#### Electricity prices are dropping and will stay low

Dallas Burtraw, one of the nation’s foremost experts on environmental regulation in the electricity sector, and studies electricity restructuring, competition, and economic deregulation, “Falling Emissions and Falling Prices: Expectations for the Domestic Natural Gas Boom,” Common Resources, August 21, 2012, <http://common-resources.org/2012/falling-emissions-and-falling-prices-expectations-for-the-domestic-natural-gas-boom/>, accessed 10-25-2012.

Moreover, the boom in domestic natural gas production could have even more immediate affects for U.S. electricity consumers. The increased supply of gas is expected to lower natural gas prices and retail electricity prices over the next 20 years, according to a [new RFF Issue Brief](http://www.rff.org/Publications/Pages/PublicationDetails.aspx?PublicationID=22019). These price decreases are expected to be even larger if demand for electricity continues on a slow-growth trajectory brought on by the economic downturn and the increased use of energy efficiency. For example, RFF analysis found that delivered natural gas prices would have been almost 35% higher in 2020 if natural gas supply projections had matched the lower estimates released by the U.S. Energy Information Administration (EIA) in 2009. Instead, with an increased gas supply, consumers can expect to pay $4.9 per MMBtu for delivered natural gas in 2020 instead of $6.6 per MMBtu. These trends are even more exaggerated if demand for electricity were to increase to levels projected by the EIA just three years ago, in 2009.This decrease in natural gas prices is expected to translate into a decrease in retail electricity prices for most electricity customers in most years out to 2020. Compared to the world with the lower gas supply projections, average national electricity prices are expected to be almost 6% lower, falling from 9.25 cents to 8.75 cents per kilowatt-hour in 2020. Residential, commercial, and industrial customers are all expected to see a price decrease, with the largest price changes occurring in parts of the country that have competitive electricity markets. All of these prices decreases translate into real savings for most electricity customers. The savings are largest for commercial customers, who stand to save $33.9 Billion (real $2009) under the new gas supply projections in 2020. Residential customers also stand to save big, with estimates of $25.8 Billion (real $2009) in savings projected for 2020.

#### Offshore wind is uniquely expensive – intermittency, backups, transmission

Civitas, Institute for the Study of Civil Society, “Electricity ¶ Costs: The ¶ folly of windpower,” Ruth Lea, January 2012, <http://www.civitas.org.uk/economy/electricitycosts2012.pdf>, accessed 3-22-2013.

There are several estimates of the additional costs associated with wind-power. For example ¶ Parsons Brinckerhoff (PB) Power, in a report for the Royal Academy of Engineering (RAE), ¶ estimated in 2004 that stand-by costs could add around 45% to the costs for onshore wind ¶ and 30% to the costs for offshore wind.6¶ More recent and detailed estimates are provided in a paper by Colin Gibson, Power Network ¶ Director at the National Grid Group (1993-97),7¶ which are quoted in a recent paper by the ¶ Renewable Energy Foundation.8 Gibson’s cost estimates, the caveats on the accuracy of ¶ which are discussed in his paper, are shown in table 1 below. ¶ Gibson identifies three separate additional costs: 9¶  The Extra System Costs, which refer to the costs of fast response plant to address the ¶ intermittency, the uncontrolled variability, of wind in the operational timescale, i.e. in ¶ the very short term, or minutes or hours.10¶  The Planning Reserve, which refers to the need to maintain an under-utilized ¶ conventional fleet equivalent to peak load (plus a margin) to cover periods when output ¶ from the wind fleet falls to extremely low levels – in common parlance “when there’s ¶ little or no wind”. Gibson assumes a level of 8% of installed wind capacity.¶  Required Transmission, which describes the cost of grid needed to transport energy ¶ from wind sites to consumers. Wind farms tend to be situated in the north of the ¶ country in order to exploit higher wind speeds to improve load factors. But demand is ¶ weighted towards the south of the country. This exacerbates the existing north to south ¶ flow of power and brings forward requirements to reinforce the system. Incorporating the additional costs, and taking our two chosen Mott MacDonald cases as ¶ illustrations, the cost of onshore wind would become quite uneconomic and offshore wind ¶ even more absurdly expensive. Charts 4a and 4b show the effective generating costs ¶ including the additional costs. The costing of wind-power electricity generation is clearly very complex. But one conclusion ¶ can safely be drawn and that is that wind-power is expensive – especially offshore. Under ¶ these circumstances it seems unwise to be embarking on a huge programme of investment ¶ in wind generated electricity, especially when the country is facing grave economic ¶ challenges. This analysis also ignores the perceived environmental costs of wind-power, ¶ especially onshore wind turbines.

#### High energy prices jack up food prices – means drastic cuts in food aid

Tom Capehart, Specialist in Agricultural Policy¶ Resources, Science and Industry Division, and ¶ Joe Richardson¶ Specialist in Domestic Social Policy¶ Domestic Social Policy Division, “Food Price Inflation: Causes and Impacts,” Congressional Research Service, April 10, 2008, <http://assets.opencrs.com/rpts/RS22859_20080410.pdf>, accessed 10-25-2012.

Higher commodity and food prices reduce our ability to provide food aid to other¶ countries without additional appropriations. Food aid usually takes the form of basic food¶ grains such as wheat, sorghum, and corn, and vegetable oil — commodities critical to¶ developing-country diets. Since there is very little value added for these commodities,¶ shifts in prices translate directly into higher prices for food-insecure countries or reduced¶ food aid contributions per dollar spent. Also, higher energy costs have increased shipping¶ costs for both food purchases and food aid. Unlike some domestic nutrition programs,¶ foreign food aid is not adjusted to account for changing costs. After a long period of¶ declining food costs, developing countries are facing increased food import bills — for¶ some countries as high as 25% in 2007.¶ 13¶ The U.S. Agency for International Development (USAID) has indicated that rising¶ food and fuel prices would result in a significant reduction in emergency food aid.¶ According to press reports in March 2008, USAID expects a $200 million shortfall in¶ funding to meet emergency food aid needs. For FY2008, Congress appropriated $1.2¶ billion for P.L. 480 food aid, the same as FY2007. For FY2009, the President’s budget¶ again requested $1.2 billion. In six out of ten years since 1999, supplemental funding for¶ P.L. 480 Title II food aid has been appropriated.¶ Last year, the U.N. World Food Program (WFP) estimated it would need $2.9 billion¶ to cover 2008 food aid needs. Recent commodity, energy, and food cost increases have¶ boosted this estimate to $3.4 billion. According to the WFP, the current price increases¶ force the world’s poorest people to spend a larger proportion of their income on food.

#### Food price spikes cause insecurity that causes global resource wars that escalate to nuclear war

Michael Klare (professor of peace and world security studies at Hampshire College in Amherst, Mass) March 11, 2006 “The Coming Resource Wars” http://www.thirdworldtraveler.com/Oil\_watch/ComingResourceWars.html

It's official: the era of resource wars is upon us. In a major London address, British Defense Secretary John Reid warned that global climate change and dwindling natural resources are combining to increase the likelihood of violent conflict over land, water and energy. Climate change, he indicated, "will make scarce resources, clean water, viable agricultural land even scarcer" -- and this will "make the emergence of violent conflict more rather than less likely." Although not unprecedented, Reid's prediction of an upsurge in resource conflict is significant both because of his senior rank and the vehemence of his remarks. "The blunt truth is that the lack of water and agricultural land is a significant contributory factor to the tragic conflict we see unfolding in Darfur," he declared. "We should see this as a warning sign." Resource conflicts of this type are most likely to arise in the developing world, Reid indicated, but the more advanced and affluent countries are not likely to be spared the damaging and destabilizing effects of global climate change. With sea levels rising, water and energy becoming increasingly scarce and prime agricultural lands turning into deserts, internecine warfare over access to vital resources will become a global phenomenon. Reid's speech, delivered at the prestigious Chatham House in London (Britain's equivalent of the Council on Foreign Relations), is but the most recent expression of a growing trend in strategic circles to view environmental and resource effects -- rather than political orientation and ideology -- as the most potent source of armed conflict in the decades to come. With the world population rising, global consumption rates soaring, energy supplies rapidly disappearing and climate change eradicating valuable farmland, the stage is being set for persistent and worldwide struggles over vital resources. Religious and political strife will not disappear in this scenario, but rather will be channeled into contests over valuable sources of water, food and energy. Prior to Reid's address, the most significant expression of this outlook was a report prepared for the U.S. Department of Defense by a California-based consulting firm in October 2003. Entitled "An Abrupt Climate Change Scenario and Its Implications for United States National Security," the report warned that global climate change is more likely to result in sudden, cataclysmic environmental events than a gradual (and therefore manageable) rise in average temperatures. Such events could include a substantial increase in global sea levels, intense storms and hurricanes and continent-wide "dust bowl" effects. This would trigger pitched battles between the survivors of these effects for access to food, water, habitable land and energy supplies. "Violence and disruption stemming from the stresses created by abrupt changes in the climate pose a different type of threat to national security than we are accustomed to today," the 2003 report noted. "Military confrontation may be triggered by a desperate need for natural resources such as energy, food and water rather than by conflicts over ideology, religion or national honor." Until now, this mode of analysis has failed to command the attention of top American and British policymakers. For the most part, they insist that ideological and religious differences -- notably, the clash between values of tolerance and democracy on one hand and extremist forms of Islam on the other -- remain the main drivers of international conflict. But Reid's speech at Chatham House suggests that a major shift in strategic thinking may be under way. Environmental perils may soon dominate the world security agenda. This shift is due in part to the growing weight of evidence pointing to a significant human role in altering the planet's basic climate systems. Recent studies showing the rapid shrinkage of the polar ice caps, the accelerated melting of North American glaciers, the increased frequency of severe hurricanes and a number of other such effects all suggest that dramatic and potentially harmful changes to the global climate have begun to occur. More importantly, they conclude that human behavior -- most importantly, the burning of fossil fuels in factories, power plants, and motor vehicles -- is the most likely cause of these changes. This assessment may not have yet penetrated the White House and other bastions of head-in-the-sand thinking, but it is clearly gaining ground among scientists and thoughtful analysts around the world. For the most part, public discussion of global climate change has tended to describe its effects as an environmental problem -- as a threat to safe water, arable soil, temperate forests, certain species and so on. And, of course, climate change is a potent threat to the environment; in fact, the greatest threat imaginable. But viewing climate change as an environmental problem fails to do justice to the magnitude of the peril it poses. As Reid's speech and the 2003 Pentagon study make clear, the greatest danger posed by global climate change is not the degradation of ecosystems per se, but rather the disintegration of entire human societies, producing wholesale starvation, mass migrations and recurring conflict over resources. "As famine, disease, and weather-related disasters strike due to abrupt climate change," the Pentagon report notes, "many countries' needs will exceed their carrying capacity" -- that is, their ability to provide the minimum requirements for human survival. This "will create a sense of desperation, which is likely to lead to offensive aggression" against countries with a greater stock of vital resources. "Imagine eastern European countries, struggling to feed their populations with a falling supply of food, water, and energy, eyeing Russia, whose population is already in decline, for access to its grain, minerals, and energy supply." Similar scenarios will be replicated all across the planet, as those without the means to survival invade or migrate to those with greater abundance -- producing endless struggles between resource "haves" and "have-nots." It is this prospect, more than anything, that worries John Reid. In particular, he expressed concern over the inadequate capacity of poor and unstable countries to cope with the effects of climate change, and the resulting risk of state collapse, civil war and mass migration. "More than 300 million people in Africa currently lack access to safe water," he observed, and "climate change will worsen this dire situation" -- provoking more wars like Darfur. And even if these social disasters will occur primarily in the developing world, the wealthier countries will also be caught up in them, whether by participating in peacekeeping and humanitarian aid operations, by fending off unwanted migrants or by fighting for access to overseas supplies of food, oil, and minerals. When reading of these nightmarish scenarios, it is easy to conjure up images of desperate, starving people killing one another with knives, staves and clubs -- as was certainly often the case in the past, and could easily prove to be so again. But these scenarios also envision the use of more deadly weapons. "In this world of warring states," the 2003 Pentagon report predicted, "nuclear arms proliferation is inevitable." As oil and natural gas disappears, more and more countries will rely on nuclear power to meet their energy needs -- and this "will accelerate nuclear proliferation as countries develop enrichment and reprocessing capabilities to ensure their national security." Although speculative, these reports make one thing clear: when thinking about the calamitous effects of global climate change, we must emphasize its social and political consequences as much as its purely environmental effects. Drought, flooding and storms can kill us, and surely will -- but so will wars among the survivors of these catastrophes over what remains of food, water and shelter. As Reid's comments indicate, no society, however affluent, will escape involvement in these forms of conflict. We can respond to these predictions in one of two ways: by relying on fortifications and military force to provide some degree of advantage in the global struggle over resources, or by taking meaningful steps to reduce the risk of cataclysmic climate change. No doubt there will be many politicians and pundits -- especially in this country -- who will tout the superiority of the military option, emphasizing America's preponderance of strength. By fortifying our borders and sea-shores to keep out unwanted migrants and by fighting around the world for needed oil supplies, it will be argued, we can maintain our privileged standard of living for longer than other countries that are less well endowed with instruments of power. Maybe so. But the grueling, inconclusive war in Iraq and the failed national response to Hurricane Katrina show just how ineffectual such instruments can be when confronted with the harsh realities of an unforgiving world. And as the 2003 Pentagon report reminds us, "constant battles over diminishing resources" will "further reduce [resources] even beyond the climatic effects." Military superiority may provide an illusion of advantage in the coming struggles over vital resources, but it cannot protect us against the ravages of global climate change. Although we may be somewhat better off than the people in Haiti and Mexico, we, too, will suffer from storms, drought and flooding. As our overseas trading partners descend into chaos, our vital imports of food, raw materials and energy will disappear as well. True, we could establish military outposts in some of these places to ensure the continued flow of critical materials -- but the ever-increasing price in blood and treasure required to pay for this will eventually exceed our means and destroy us. Ultimately, our only hope of a safe and secure future lies in substantially reducing our emissions of greenhouse gases and working with the rest of the world to slow the pace of global climate change

## 2NC

#### Definitely a bigger impact – they have isolated scenarios but food shortages would affect everyone

CNN May 27, 2008 “Red Cross Raises Specter of Food Wars” http://edition.cnn.com/2008/WORLD/europe/05/27/food.war.warn.ap/index.html

The international Red Cross warned Tuesday of a possible surge in "food-related violence" because of soaring commodity prices that are increasing hunger around the world. art.panama.file.afp.gi.jpg Students protesting high prices clashed with riot police in Panama in May. Most of the debate so far on the food crisis has focused on boosting aid to poorer countries, said Jakob Kellenberger, president of the International Committee of the Red Cross. But, he said, "The second dimension is there is also the potential of food-related violence." Kellenberger, whose agency serves as the guardian of the Geneva Conventions on the rules of war, said fallout from price rises has sparked "situations of food violence," a reference to riots in Haiti, Egypt and Somalia. But he said the neutral ICRC would have to shoulder a big responsibility "when that violence reaches the level of an armed conflict," noting that the body already was delivering food to isolated or dangerous places where the U.N.'s World Food Program cannot operate. "You can imagine when you have countries where you have already an armed conflict, where you have already a high level of violence and you have at the same time a lot of poor and extremely vulnerable people," Kellenberger said. "The price level for them is not only a question of higher prices," he added in a news conference at the ICRC's Geneva headquarters. "It becomes a question of survival, of just having access to food."

#### And, Offshore infrastructure jacks up prices during construction because of CWIPS – fastest timeframe

HERMAN K. TRABISH, “Will Google’s Offshore Wind Transmission Be Slowed by Regulatory Red Tape?” Greentech, February 24, 2011, <http://www.greentechmedia.com/articles/read/will-googles-offshore-wind-transmission-be-slowed-by-regulatory-red-tape>, accessed

Offshore wind is coming to the Eastern Seaboard and the wires that take its electricity to the grid will earn a lot of money. The Atlantic Wind Connection (AWC) developer wants to build a $1.3 billion, 6-gigawatt capacity high voltage direct current (HVDC) seabed backbone line from New Jersey to Virginia that could serve 1.9 million homes and provide over 200,000 jobs. But companies with vested interests have begun objecting.¶ A request for rates from the Federal Energy Regulatory Commission (FERC), a normal first step for builders of new transmission, has turned into the first major hurdle for Atlantic Grid Development (AGD), led by independent transmission builder Trans-Elect and sponsored by Good Energies, Google, Inc., and Marubeni Corporation.¶ Objections have been filed with FERC by the region’s public and private utilities, rural electric cooperatives and offshore wind developers with ties to utilities and power market suppliers. Most have vested interests in existing sources of electricity generation and transmission capabilities that stand to be compromised if the AWC makes vast new sources of wind power available to the onshore grid.¶ Oceana, the world’s biggest ocean conservation group, filed a statement with FERC in support of the AWC. Supporting filings that the AWC’s incentive rate request be approved came from Fishermen’s Energy and APEX Offshore Wind, developers who are not affiliated with utilities and would therefore benefit from the AWC.¶ AWC opponents have questioned whether AGD should be filing for those incentive rates, though such rates are provided for in the Energy Policy Act of 2005. AGD will not let such questions slow it down.¶ “It is appropriate and necessary to grant the AWC Companies’ requested incentives,” AWC argued in its most recent FERC filing, because doing otherwise would “frustrate the extraordinary efforts of the Mid-Atlantic States, the Department of Interior (DOI) and the Department of Energy (DOE) to expedite large-scale offshore wind development.”¶ “It’s a normal filing,” Markian Melnyk, the AGD President, said. “It’s exactly what Congress intended when they passed that section of the Federal Power Act.” It was intended to encourage transmission projects “that would reduce congestion and improve reliability.” And that, Melnkyk said, “is what we’re proposing.”¶ Opponents’ filings with FERC, according to the AGD filing, have argued the transmission project would be a disservice to New Jersey ratepayers and “is too speculative to be granted incentives.”¶ “Some people have said we shouldn’t get any incentives until we have been properly vetted in the PJM transmission planning process,” Melnyk said, referring to the regional transmission organization (RTO) that will ultimately oversee the interconnection of the AWC to the grid. “What they don’t understand is that it’s really a two-step process,” Melnyk explained. “You go to FERC,” he said, “that’s Step A. Step B is you go to PJM.”¶ Incentives granted by FERC in Step A do not take effect, Melnyk said, until Step B is complete and PJM approves the project as practical and economic.¶ FERC’s mandate under the Federal Power Act requires it to consider “the benefits of a transmission project” including the need for renewables to meet state mandates. AWC noted in its most recent FERC filing that the “Mid-Atlantic States, DOI and DOE are working fervently to expedite the large-scale development of offshore wind.” There is, the AWC filing pointed out, “a demonstrable need for offshore wind generation to meet RPS standards” because eleven of the fourteen PJM states have renewable requirements and “meeting these state RPS requirements would require up to 25,000 MW of wind by 2015 and 50,000 MW by 2025.”¶ That the AWC developer is requesting rates that include federal incentives is appropriate, their filing contended, because “the AWC Companies face a multitude of significant regulatory, financial and technical risks in developing the AWC Project.”¶ Because of those challenges, AGD wants to use the construction work in progress (CWIP) plan, a decades-old cost-allocation construct allowing builders of power system infrastructure to slowly introduce charges to ratepayers who would benefit as they build.

#### Low electricity prices sustain U.S. manufacturing which is key to the economy – re-shoring, key industries

Perry 7/31/12 (Mark, Prof of Economics @ Univ. of Michigan, "America's Energy Jackpot: Industrial Natural Gas Prices Fall to the Lowest Level in Recent History," http://mjperry.blogspot.com/2012/07/americas-energy-jackpot-industrial.html)

Building petrochemical plants could suddenly become attractive in the United States. Manufacturers will "reshore" production to take advantage of low natural gas and electricity prices. Energy costs will be lower for a long time, giving a competitive advantage to companies that invest in America, and also helping American consumers who get hit hard when energy prices spike.¶ After years of bad economic news, the natural gas windfall is very good news. Let's make the most of it." ¶ The falling natural gas prices also make the predictions in this December 2011 study by PriceWaterhouseCoopers, "Shale gas: A renaissance in US manufacturing?"all the more likely: ¶ U.S. manufacturing companies (chemicals, metals and industrial) could employ approximately one million more workers by 2025 because of abundant, low-priced natural gas.¶ Lower feedstock and energy cost could help U.S. manufacturers reduce natural gas expenses by as much as $11.6 billion annually through 2025.¶ MP: As I have emphasized lately, America's ongoing shale-based energy revolution is one of the real bright spots in an otherwise somewhat gloomy economy, and provides one of the best reasons to be bullish about America's future. The shale revolution is creating thousands of well-paying, shovel-ready jobs in Texas, North Dakota and Ohio, and thousands of indirect jobs in industries that support the shale boom (sand, drilling equipment, transportation, infrastructure, steel pipe, restaurants, etc.). In addition, the abundant shale gas is driving down energy prices for industrial, commercial, residential and electricity-generating users, which frees up billions of dollars that can be spent on other goods and services throughout the economy, providing an energy-based stimulus to the economy. ¶ Cheap natural gas is also translating into cheaper electricity rates, as low-cost natural gas displaces coal. Further, cheap and abundant natural gas is sparking a manufacturing renaissance in energy-intensive industries like chemicals, fertilizers, and steel. And unlike renewable energies like solar and wind, the natural gas boom is happening without any taxpayer-funded grants, subsidies, credits and loans. Finally, we get an environmental bonus of lower CO2 emissions as natural gas replaces coal for electricity generation. Sure seems like a win, win, win, win situation to me.

### Uniqueness

#### Energy prices are low now –

#### Most recent analysis proves and coal will absorb any increases

Matt Day and Drew FitzGerald, “Natural-Gas Futures Touch 16-Month High,” WSJ, March 18, 2013, <http://online.wsj.com/article/BT-CO-20130318-711511.html>, accessed 3-22-2013.

That month, gas produced as much electricity as coal in the U.S. for the first time since the EIA began keeping records. But coal is becoming more competitive, analysts say.¶ The EIA expects U.S. electricity-sector gas demand to fall 7% this year as utilities burn more coal.¶ The Dow Jones U.S. Coal Index of mining company shares is up 13% in the last two weeks.¶ Depressed natural-gas prices over the past few years have helped keep a lid on the amount consumers pay for both gas-fired heating and electricity. U.S. retail electricity prices rose by an average of about 1% a year since 2010, according to the EIA. During the prior three years, costs rose by an average of 3.4% each year.¶ That could change if natural gas continues to surge. But for now, consumers shouldn't expect a spike in their energy costs, said Brian Habacivch, a senior vice president with Fellon-McCord, a Louisville, Ky., consulting firm that advises businesses and utilities on their energy purchases.

#### Natural gas increases would just mean cheap coal

Scott DiSavino, “U.S. utilities may return to coal as natgas prices rise,” Reuters, September 27, 2012, <http://in.reuters.com/article/2012/09/27/us-utilities-coal-gas-idINBRE88Q11S20120927>, accessed 10-25-2012.

The recent rise in U.S. natural gas prices and decline in coal prices is set to put a dent in demand for natural gas as some utilities resume using more coal to generate electricity.¶ A mild winter that left a huge amount of gas in inventory and record-high natural gas production pushed prices to 10-year lows in April, luring power companies away from coal.¶ But the spread between NYMEX Central Appalachian coal and Henry Hub natural gas futures on Thursday reached its widest in more than a year as gas prices rebounded from lows plumbed earlier this year, making gas less of a bargain.¶ The relative price difference on Thursday reached $1.25 per million British thermal units (mmBtu), according to Reuters data -- the widest since August 2011, which could be enough to discourage more use of natural gas in electricity generation.¶ Energy traders have said it costs about $1 per mmBtu to transport Eastern coal, so when natural gas prices are higher and the coal discount is over $1 per mmBtu, it starts to make economic sense to burn coal rather than natural gas.¶ If the coal-to-gas spread reaches $2 mmBtu (with gas $2 more expensive than coal) it would be the first time it was that wide since January 2011.¶ In April, natural gas, historically more expensive than coal, traded at a 10-year low of $1.902 due to oversupply, while coal fetched about $2.13, according to the Reuters data. The 22-cent discount was the lowest since 2001.¶ Since then, gas prices have rebounded to $3.28 per mmBtu, but coal, which is typically priced per ton, dipped to about $52 per short ton, or the gas price equivalent of $2.03 per mmBtu.¶ Some power plants are already moving back to coal, a trend set to increase with gas prices expected to continue rising ahead of the peak-demand winter heating season.¶ The biggest U.S. coal-fired power companies include units of American Electric Power Co Inc (AEP.N), Duke Energy Corp (DUK.N), Tennessee Valley Authority, Southern Co (SO.N), Xcel Energy Inc (XEL.N), NRG Energy Inc (NRG.N), GenOn Energy Inc (GEN.N) and FirstEnergy Corp (FE.N).

#### Their evidence is a snapshot of U.S. energy markets – prefer predictive evidence accounting for inflation

ACCCE 12 (American Coalition for Clean Coal Electricity, "Energy Cost Impacts on American Families,

2001-2012," Feb., http://www.americaspower.org/sites/default/files/Energy\_Cost\_Impacts\_2012\_FINAL.pdf)

Electricity is the bargain among all consumer energy products. Among consumer ¶ energy goods and services, electricity has maintained relatively lower annual ¶ average price increases compared to residential natural gas and gasoline. ¶ Electricity prices have increased by 51% in nominal dollars since 1990, well ¶ below the 72% rate of inflation in the Consumer Price Index. The nominal prices ¶ of residential natural gas and gasoline have nearly doubled and tripled, ¶ respectively, over this period.

### Links

#### Don’t buy their “wind is cheap” evidence – best studies prove that hidden costs and infrastructure problems more than triple electricity prices

Michael Bastasch, “Report: Wind generation costs twice as much as government estimates,” December 31, 2012, <http://dailycaller.com/2012/12/31/report-wind-generation-cost-twice-as-much-as-government-estimates/>, accessed 1-2-2013.

As lawmakers rush to hash out a deal to extend tax credits for wind energy generation, a new report shows that, once hidden costs are accounted for, the true cost of wind power generation is twice that of what previous government estimates have shown.¶ “Once these hidden costs are included and subsidies are excluded, wind generation is not close to being competitive with conventional generation sources such as natural gas, coal or nuclear,” said George Taylor, lead author of the report and senior fellow in energy policy at American Tradition Institute, in a statement.¶ For example, wind generation costs three times as much as natural gas-fired electricity and up to 50 percent more than government estimates for new nuclear and coal power generation. The Energy Information Administration reported in its most recent “levelized cost of electricity” that wind generation costs eight cents per kilowatt hour. However, this understates the true cost of wind generation because it leaves out indirect and infrastructure costs which are hard to measure and raise the true cost of generating wind power.

#### Transmission of wind power is incredibly expensive and energy gaps require fossil fuel backups to run inefficiently

Michael Bastasch, “Report: Wind generation costs twice as much as government estimates,” December 31, 2012, <http://dailycaller.com/2012/12/31/report-wind-generation-cost-twice-as-much-as-government-estimates/>, accessed 1-2-2013.

Most electricity cost estimates fail to take into account, the cost of keeping fossil fuel power plants online to balance out the variations in wind power generation, and the increased fuel consumption — per unit of output — which wind requires of power plants. Estimates also typically don’t include the additional long-distance transmission costs required by wind, as well as the electricity losses associated with it.¶

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“The costs that have been left out of previous reports are the costs of paying for the fossil-fired plants that must balance wind’s variations, the inefficiencies that wind imposes on those plants, and the cost of longer-distance transmission,” Taylor said.¶ Taking these hidden costs into account, as well as two subsidies, the cost of wind generation doubles — from eight cents per kilowatt hour to 15 cents per kilowatt hour when added to natural gas generation. the cost is even higher — 19 cents per kilowatt hour — when added to coal generation.¶ “Because wind is an intermittent source of electricity, it needs appropriate amounts of fossil-fueled capacity ready at all times to balance its large and rapid variations,” added Tom Tanton, co-author of the report and Director of Science & Technology Assessment at ATI, in a statement. “Those primary fossil plants then operate less efficiently than if they were running full-time without wind, meaning that any savings of gas and coal or any reductions in emissions are much less than simple calculations would indicate.”

### Impact

#### Food prices stable now

Catherine Hornby, “World food prices stable, low stocks pose risk of spikes: U.N.,” Feb 7, 2013, <http://www.reuters.com/article/2013/02/07/us-food-fao-idUSBRE9160A220130207>, accessed

World food prices stabilized in January after falling in the previous three months, the United Nations food agency said on Thursday, but it warned that adverse crop weather could cause violent price spikes due to tight grains stocks.¶ Global food prices surged in mid-2012 following the worst U.S. drought in more than half a century and dry weather in other key grains exporters, raising fears of a food crisis similar to the one in 2008.¶ ¶ But prices eased in the last three months of 2012 due to expectations that large South American production will replenish tight global cereals supplies.¶ On Thursday Brazil said it would produce a record 83.4 million metric tons (91.93 million tons) of soybeans this season due to unprecedented expansion in area planted after a disappointing harvest last year, and also forecast a record corn crop.¶ The Food and Agriculture Organisation (FAO) said its food price index, which measures monthly price changes for a basket of cereals, oilseeds, dairy, meat and sugar, averaged 210 points in January, unchanged from December.

# EU Cards

#### Alliance doesn’t solve foreign policy challenges

Techau10/6/11Jan**,** director of Carnegie Europe, the European centre of the Carnegie Endowment for International Peace, “The Dirty Secret of US European relations” http://carnegieendowment.org/2011/10/06/dirty-secret-of-u-s-european-relations/8l1h

For the internal psychology of the transatlantic relationship, this is undoubtedly good news. The more interesting question, however, seems to be whether all this new love translates into a more meaningful partnership on shared foreign-policy challenges. Here the answer is less clear. While cooperation on issues such as the Middle East, Iran and terrorism was and is constructive, one of the most crucial items on the Euro-American agenda remains untouched by the improved atmosphere: transatlantic burden sharing in the field of security and defense. Here, Europeans have for the last sixty years been in a position of utter dependence on the Washington’s willingness and ability to guarantee their security. And even though the global strategic framework has drastically changed since the beginning of this transatlantic bargain in the 1950s, Europeans still conduct their defense planning as if American generosity were the most naturally abundant and easily accessible political commodity. By doing so, they increase their reliance on U.S. guarantees, and they become less and less interesting as an ally for their American counterparts. All attempts to wake Europeans up and make them rethink their priorities have died away without much impact.¶ It would be easy to blame President Obama for not using his popularity with allies intelligently enough to induce them to get their act together. But the European passivity on security and defense issues goes far beyond the reach of even the most popular American president. By and large, Europeans are unaware of their utter dependency; they don’t feel particularly threatened, they hold a deep mistrust in all things military, and they have learned to look at the world without regard to strategic considerations. Despite Libya, their willingness for an active approach to the world around them and for intervention on behalf of values and interests is small. Their political leaders—to the extent that they are aware of today’s realities—shy away from the enormous budgetary and political costs that a realistic security and defense posture would create.The dirty little secret of transatlantic relations is that, under these circumstances, they will undoubtedly become a whole lot less boring very soon. Both America and Europe are broke. Their ability to shape the world around them is getting weaker. The global center of gravity is shifting towards the Pacific. Americans are ultimately better suited to master this process of relative decline. But it is in Washington’s fundamental interest to keep Europe safe and stable, to keep its best allies strong and to defend the enormous economic investments it has placed in the old world. Obsessing about perceptions and sympathy ratings will soon look like frivolous luxury. The ball is in the European court. For Americans, a Europe with a grown-up strategic culture will be more important than one that produces high approval ratings for the United States. For Europeans, investing in a relevant and workable transatlantic future will be more important than an American president they find easy to like.

#### Relations are high – shared interests make future cooperation inevitable

Hormats10/1/10 Robert, Under Secretary for Economic, Energy, and Agricultural Affairs “The US European Relationship: Past Perspectives and Future Prospects” http://www.state.gov/e/rls/rmk/2010/150032.htm

The United States seek to build a network of alliances and partnerships, regional organizations and global institutions that is durable and dynamic enough to help us meet today’s challenges. We worked after the Second World War to construct the pillars of US-European cooperation that rebuilt destroyed lands and lifted millions of people out of poverty, and worked with Europe to build the GATT, IMF, World Bank. Now we must work together to build a global architecture that reflects and harnesses the realities of the 21st century, including helping to integrate emerging powers into an international community with clear obligations and expectations. Both Europe and the United States recognize this priority. We have consistently turned to our closest allies in Europe, the nations that share our fundamental values and interests: democracy, pluralism, respect for different opinions, religious tolerance, a free press, a concern for those less fortunate than ourselves, and our commitment to solving common problems. We need to renew and deepen these alliances that are the cornerstone of global security and prosperity. As Secretary Clinton recently affirmed, “The bonds between Europe and America were forged through war and watchful peace, but they are rooted in our shared commitment to freedom, democracy and human dignity. Today, we are working with our allies to deal with all these issues and global challenges.”

# Oceans Debate

## 1NC

#### Biodiversity not key to ecosystem stability – prefer our evidence, scientific consensus on our side

Leslie Mertz et al (Biologist and veteran science writer) 2003 “Does greater species diversity lead to greater stability in ecosystems” http://findarticles.com/p/articles/mi\_gx5204/is\_2003/ai\_n19124307/pg\_7?tag=artBody;col1

Viewpoint: No, ecosystem stability may provide a foundation upon which diversity can thrive, but increased species diversity does not confer ecosystem stability. The hypothesis that greater species diversity begets heightened ecosystem stability may seem correct at first glance. Most people intuitively assume that the pond ecosystem has a better chance of thriving from year to year&#x2014;even in adverse conditions&#x2014;if it has a wider variety of species living there. That assumption, however, is supported by little scientific proof. On the other hand, many studies provide compelling evidence that diversity does not promote stability and may even be to its detriment. Several studies also suggest that if species diversity does exist, it is based on ecosystem stability rather than vice versa. One of the early experiments to critically damage the greater-diversity-equals-greater-stability argument came from the N. G. Hairston research group at the University of Michigan in 1968. In this study, the group created artificial communities of bacteria, Paramecia, and/or predatory protozoa grown on nutrient agar cultures. Each community contained more than one trophic level. In other words, the communities contained both predators and prey, as do the macroscopic food webs readily visible in a pond: A fish eats a frog that ingests an insect that attacks a tadpole that scrapes a dinner of bacterial scum from a plant stem. In Hairston&#x0027;s case, the researchers watched the combinations of organisms in a laboratory instead of a natural setting. Several patterns emerged. In one series of experiments, the researchers combined prey bacteria, which represented the lowest link in the food chain&#x2014;the first trophic level&#x2014;with Paramecium. The bacteria included Aerobacter aerogenes, and &#x0022;two unidentified bacilliform species isolated from a natural habitat.&#x0022; The Paramecium &#x2014;two varieties of P. aurelia and one variety of P. caudatum &#x2014;fed on the bacteria and so represented the second trophic level. As researchers increased the diversity of the bacteria, the Paramecia thrived and their numbers increased, at first suggesting that diversity caused stability. However, when the researchers looked more closely at the effects of increasing diversity on a specific trophic level, the story changed. They added a third Paramecium species to communities that already contained two species, and then watched what happened. The data showed that stability was based on which Paramecium species was introduced to which two pre-existing Paramecium species, and indicated that diversity in and of itself was not a requirement for stability. This set of experiments demonstrated that a higher number of species of one trophic level is unrelated to increased stability at that level. Finally, Hairston reported the repercussions that followed the introduction of predatory protozoa&#x2014;the third trophic level&#x2014;to the experimental communities. The predatory species were Woodruffia metabolica and Didinium nasutum . Regardless of whether the community held two or three Paramecium species, or whether the predators numbered one species or two, all Paramecia quickly fell to the protozoa, whole systems failed, and stability plummeted. In this case, at least, diversity did not generate stability. Although the Hairston research is based on an artificial system rather than a natural one, it represents credible, empirical evidence against the assertion that greater diversity yields stability. Over the years, numerous research groups have conducted similar laboratory experiments with the same results.

#### Biodiversity causes ecosystem instability and crushes resiliency – low biodiversity key to stability

Shahid Naeem (Professor and Chair of Columbia University Department of Ecology, Evolution and Environmental Biology) 2002 “Biodiversity: Biodiversity equals instability?” Nature Magazine

Pfisterer and Schmid3 studied biomass production in a combinatorial plant-diversity experiment, which consisted of an array of replicate grassland plots that varied both in their number of plant species (from 1 to 32) and in their combination of species. The authors used their results to test the venerable 'insurance' hypothesis of ecosystem stability. This hypothesis is one of several that have featured in the long-standing ecological debate over the relationship between complexity (diversity) and stability4. Over the course of this debate, the prevailing view has see-sawed between the thesis that diversity begets stability, and the antithesis that diversity either leads to instability or is irrelevant. Chief among the 'begets-stability' theories is the insurance hypothesis — the impeccably logical notion that having a variety of species insures an ecosystem against a range of environmental upsets. For example, suppose an ecosystem faces a drought, then a flood, which in turn is followed by a fire. According to the insurance hypothesis, if that ecosystem is diverse — if it has some species that can tolerate drought, some that are flood-resistant and some that are fire-tolerant — then two scenarios are likely. The ecosystem may show resistance, remaining broadly unchanged, because its many species buffer it against damage. Or it may show resilience: if it does get hammered, it may bounce back to its original state quickly because the tolerant species ultimately drive the recovery process and compensate for the temporary loss of their less hardy compatriots. But Pfisterer and Schmid3 found that, when challenged with an experimentally induced drought, species-poor communities were both more resistant and more resilient (as reflected by their ability to sustain and recover pre-drought biomass production) than plots of higher diversity. The higher-diversity plots were originally more productive, but their resistance and resilience — that is, their stability — was low (Fig. 1). This is the opposite of what the insurance hypothesis predicts. It also contrasts with what combinatorial 'microcosm' experiments have found5, 6 and what theoretical models of biodiversity have claimed4.

#### Biodiversity is key to biopiracy – corporations exploit diverse ecosystems

Global Exchange (a membership-based international human rights organization dedicated to promoting social, economic and environmental justice around the world) 2007 “Biopiracy: A New Threat to Indigenous Rights and Culture in Mexico” http://www.globalexchange.org/campaigns/mexico/biopiracyReport.html

Bioprospecting is the search for biological resources and accompanying indigenous knowledge -- primarily for the purpose of commercial exploitation. As such, while bioprospecting is not inherently contrary to the interests of indigenous peoples or a threat to biodiversity, it facilitates biopiracy. In other words, bioprospecting identifies biological resources and traditional knowledge with commercial potential, while biopiracy appropriates these resources and knowledge (or privatizes them for commercial gain) without obtaining Prior Informed Consent (PIC) or awarding just compensation. 3. Why is biodiversity a strategic resource and how is it being threatened? Biological diversity, or biodiversity, refers to the broad range of life forms found within a given ecosystem and is the backbone of food security and basic health needs. As the source of primary material and active ingredients for many commercial products -- foods, pharmaceuticals, cosmetics, biotechnology, veterinary science, seeds and agrochemicals -- it is now recognized as a highly strategic resource with commercial potential comparable to that of petroleum or uranium. This strategic importance of biodiversity is compounded by the largely untapped potential of the emerging genetic engineering sector. In conjunction with advances in modern technology and the exploitation of traditional knowledge, biodiversity has the market potential to be extraordinarily lucrative. In fact, commerce involving biological products and processes now accounts for almost half of the world economy, with profits concentrated in the emerging "life science" industry (food, pharmaceutical and agricultural production.) The following market figures (annual net sales) illustrate the importance of biodiversity as a strategic resource of the 21st century (RAFI, Wall Street Journal, Agriculture News-2000): Approximately 90% of the world's remaining biodiversity is concentrated in tropical and sub-tropical regions within developing countries, mostly located in the southern hemisphere. The Worldwatch Institute has identified the following countries as regions of "mega-diversity" due to their exceptionally high levels of cultural and biological diversity and high concentration of endemic plant species: Mexico, Brazil, India, Indonesia, Australia and The Democratic Republic of Congo. Not surprisingly, these mega-diverse countries are the focal points for biopiracy ventures.

#### Ocean biodiversity key

William Fenical (Ph.D. Director, Center for Marine Biotechnology and Biomedicine Scripps Institution of Oceanography) 2002 “Marine Biotechnology in the Twenty-First Century: Problems, Promise, and Products”

Although the diversity of life on land is great, the world’s oceans are the center of global biodiversity, with 34 of the 36 phyla of life represented. The land, by comparison, is represented by only 17 phyla. Given this reality, drug discovery should have begun in the rich ecosystem of the oceans. Much of this diversity is found in the macroscopic plants and animals that are adapted to all the regions of the world’s oceans (polar, temperate, and tropical). Species diversity reaches very high densities on coral reefs, occasionally reaching densities of approximately 1,000 species per square meter, particularly in the Indo-Pacific Ocean where tropical marine biodiversity reaches its peak.

#### Trawling chills bioprospecting.

EU Observer July 2008 “http://euobserver.com/9/27035

However, some of the different industries opening up as Arctic waters open up pose a threat to others. Pooh-poohing the idea that oil and gas exploration threatens the environment, North Energy's Mr Barlindhaug reckons it's a massive expansion of unsustainable fishing practices and illegal fishing that pose the greatest threat, particularly to bio-prospecting. "Bottom trawling is much more damaging than oil and gas exploration, as the you find oil all over the rocks and sand on the sea bed. These creatures are used to it - there's nothing to worry about from oil and gas exploration. "Bioprospectors should be more scared about increased fishing activity. That'll damage these organisms much more," he insists.

#### Bio-prospecting collapses the Antarctic Treaty System

Stephen Leahy (freelance environmental journalist) 2004 “Bio-Pirates of the Antarctic” http://www.zmag.org/znet/viewArticle/9128

Antarctic bio-prospectors are acting like bio-pirates, plundering the continent's biological treasures before global measures to control its biodiversity can be put in place, experts warn in a United Nations University report released Monday. "Bio-piracy is happening. But the piracy isn't illegal because they're not stealing it from anyone, since no one owns it," says Sam Johnston of the U.N. University's Institute of Advanced Studies. Gaps in the existing Antarctic Treaty System now allow organisms to be taken, patented and commercialised, report co-author Johnston told IPS. The Antarctic Treaty was established in 1961 to protect the continent from uncontrolled commercial exploitation from activities such as mining, militarisation or direct ownership by countries. Thirty-nine nations, representing over 80 per cent of the world's population, are signatories, including the United Kingdom, United States and Russia. A number of other treaties now comprise the Antarctic Treaty System (ATS). While commercial activities like mining and tourism are banned or carefully regulated, there is nothing to stop "bio-prospecting" for potentially lucrative organisms. Scientific expeditions to collect organisms are strictly regulated under the ATS, which includes strong measures to protect the delicate Antarctic ecosystem. And there is a long tradition of cooperation between scientists, which includes making all research public. The Antarctic is unique in the world in that it is not owned by any country, Johnston observes. "It's like the moon and Mars." ''Patents and commercialisation could change all that," he warns. "Profit-making is completely alien to the ATS," says Josh Stevens, of the Antarctic and Southern Ocean Coalition (ASOC), a group made up of nearly 230 NGOs from 49 countries that have flagged a trend towards increased commercialisation of science and other activities in the region. "Bio-prospecting could bring down the whole house of cards," Stevens told IPS. The region contains many unique species of "extremophiles", creatures adapted to the extreme conditions there, says the U.N. University's report, 'The International Regime For Bio-prospecting: Existing Policies And Emerging Issues For Antarctica'. Biotechnology companies in particular are scouring the area in hopes of finding organisms that will be the basis for new drugs, industrial compounds and other commercial applications, it says. Already, some 92 patents referring to Antarctic organisms or to molecules extracted from them have been filed in the United States, and a further 62 in Europe. Enzymes extracted from extremophiles in other regions have become multi-million-dollar products in laundry detergents. Another enzyme is the basis of the 300-million-dollar medical diagnosis and forensics industry. The market for biotechnology enzymes derived from extremophiles is forecast to grow 15¡20 percent a year, growth that is part of a larger trend, says the report. Annual sales derived from traditional knowledge using genetic resources are three billion dollars for the cosmetic and personal care industry, 20 billion dollars for the botanical medicine sector and 75 billion dollars for the pharmaceutical industry. Sixty¡two per cent of cancer drugs approved by the U.S. Food and Drug Administration (FDA) are of natural origin or modelled on natural products, adds the report. For those reasons, companies are buying or purchasing licences to complete collections of biological materials from various past Antarctic expeditions.. And because research in the coldest, harshest region on the planet is extremely expensive, pharmaceutical companies find many scientists and institutions willing to sign over commercial licensing rights in exchange for funding. A contract signed in 1995 between the University of Tasmania and Amrad Natural Products, an Australian company, gives Amrad the right to analyse Antarctic microbes to see if they could be used to develop new antibiotics or other pharmaceutical products. European food giant Unilever has patented a protein taken from bacteria found in Antarctic lake sediments that could stop ice crystals building up in ice cream. Should that protein become a billion-dollar product, it would create a nightmare scenario for the treaty system, says Stevens. "There's no way the ATS could withstand a commercial onslaught."

#### Collapse of ATS leads global nuclear war

Prakash Shah (secretary at the Indian ministry of external affairs) 1991 “The Antarctic Treaty System in World Politics” p. 429

While the context in which Antarctica is now considered by the international community has changed drastically since 1959, and despite metamorphosis in world polity, the Antarctic Treaty System remains both valid and relevant and there are no viable alternatives to it. Any upheaval in the Treaty System will open up the continent to military and nuclear rivalries, scramble for territorial occupation based on overlapping claims, ruthless exploitation and possible colonization. As Dr. Falk so ably argues in his paper, there are no viable alternatives to ATS. And yet, the ATS could come under strain as the major challenge with respect to Antarctica today is that, while incorporating the distant prospect of resource utilization and immediate need for preservation on its environment, it should be able to ensure the continuance of the system of cooperation envisaged in the Treaty without disturbing its pristine environment.

## 1NR

#### Our 1nc Mertz ev says their arg may seem right at first glance but has ZERO scientific proof – a review of the scholarly literature proves

Leslie Mertz et al (Biologist and veteran science writer) 2003 “Does greater species diversity lead to greater stability in ecosystems” http://findarticles.com/p/articles/mi\_gx5204/is\_2003/ai\_n19124307/pg\_7?tag=artBody;col1

As Daniel Goodman, of Montana State University, wrote in a 1975 examination of the stability-diversity controversy, there have been no experiments, field studies, or model systems that have proved a connection between greater diversity and stability. He added, &#x0022;We conclude that there is no simple relationship between diversity and stability in ecological systems.&#x0022; Those words still hold today. In 1998 another group of scientists (Chapin, Sala, and Burke) reviewed much of the literature surrounding the connection between diversity and stability in their paper &#x0022;Ecosystem Consequences of Changing Biodiversity,&#x0022; which appeared in the journal BioScience. They concluded that research that had inferred relationships between diversity and stability had relied on simple systems and may not translate well to the more complex systems common in nature. Although they noted that several studies imply a relationship between diversity and ecosystem stability, they added, &#x0022;At present, too few experiments have been conducted to draw convincing generalizations.&#x0022;

#### And bioprospecting is unique – now is key – any small discovery causes a new gold rush that magnifies our impacts

The Guardian February 2004 “Cold rush threatens pristine Antarctic” http://www.guardian.co.uk/world/2004/feb/02/science.research

The problem, according to a report by Hamid Zakri and Sam Johnston at the university's Institute of Advanced Studies, is that although commercial activities such as mining and tourism are banned or regulated, there is nothing to stop biotech companies going into Antarctica and hunting or "bioprospecting" for potentially lucrative organisms. "If bioprospecting is done properly, it can be useful and beneficial for all and can have a minimum impact on the environment, but you want it to be controlled to prevent companies from causing significant environmental damage or disrupting the scientific operations down there," Dr Johnston said. "It's a pristine, global park and it needs to be preserved." Agreeing rules for companies keen to work in Antarctica is fraught with difficulties. Antarctica has long been used by scientists and international agreements such as the Antarctic treaty ensure that scientific knowledge is made freely available to all. Commercial exploitation, and the inevitable close guarding of secrets, is against the spirit, if not the letter, of the treaty. While few scientists believe the threat to Antarctica is imminent, things could change drastically in the next 10 years. "It's similar to the old American gold rush in California. If someone finds a hint of something down there, everyone else will rush in," said Kevin Bowers, an expert in Antarctic microbes at the University of Maryland Biotechnology Institute. "If there are no controls in place, there's nothing to stop them." Blurred lines But the line between scientific research and commercial activity is already blurred. A contract signed in 1995 between the University of Tasmania and Amrad Natural Products, an Australian pharmaceutical company, gives Amrad the right to analyse Antarctic microbes to see if they could be used to develop new antibiotics or other pharmaceutical products.The food giant Unilever, meanwhile, has patented a protein taken from bacteria found in Antarctic lake sediments that could stop ice crystals building up in ice cream. The Antarctic treaty group's advisory body, the Scientific Committee on Antarctic Research, raised concerns about bioprospecting in a recent report. It stated: "While no current instance of harvesting for biotechnology is known, there are obvious environmental ramifications of the taking of animals and plants as a commercial venture." The report concludes that bioprospecting should be watched closely as it "may develop into important pressures on Antarctic resources". Another concern is that companies with patents on Antarctic organisms, or extracts from them, may prevent scientists from working on them freely. Dr Johnston says now is the time to deal with the issue. Regulations to control bioprospecting will have to be agreed upon by the many countries that control different parts of Antarctica. But if biotech companies start making agreements with individual governments, it will be much more difficult to reach a global agreement. "It's going to be much easier to put regulations in place that are effective and meaningful before there are vested interests," Dr Johnston said. "It is imminent that biotechnology companies will take up bioprospecting and will be significant in the next 10 years. After that, the horse may have bolted."

#### Impact turns and outweighs the aff – ATS is modeled globally as a conflict management mechanism – empirically prevented hostile conflicts from escalating globally – only collapse makes your impacts possible.

Sir Guy Green AC KBE CVO (The Governor of Tasmania) Spring 2002 “Antarctic treaty, science under scrutiny in inaugral Phillip Law lecture” http://www.aad.gov.au/default.asp?casid=4379

I think that those who are engaged in difficult international negotiations should take heart from the example of the negotiation of the Antarctic Treaty which showed that sometimes it is possible to overcome apparently intractable differences through honest open discussion informed by principle and good sense. [Treaty's success inspiring and instructive; provides new perspective on and better understanding of nature of international relations and United Nations role. In UN in 1983 Treaty System said to be exclusive, not accountable, 'neo-colonial; push for its replacement by universal UN-controlled regime. Australia and other Treaty nations saw strong arguments for status quo. Richard Woolcott, former Australian UN Ambassador, said (2) that Treaty is open to any UN member, is consistent with UN Charter, encourages open scientific research and has reduced international tension by dealing effectively with sovereignty claims. Richard Rowe, leader of Australian delegation to Treaty Consultative Meeting, observed (3) that Treaty system is 'robust framework for action in Antarctica'. Inclusive spirit of Treaty continues today with Australia's help to Indonesia and Malaysia to participate in Antarctic science. Treaty system is model for effective, principled international arrangement in accord with UN philosophy. Treaty has extraordinary record as vehicle for civilised discussion in difficult times, such as meeting recalled by Woolcott (4) between Russian and US ambassadors in which agreement was reached on vital tactics and procedures despite personal insults. Woolcott observed that at Cold War's height, Antarctica was main area of effective Soviet–US cooperation.] And I have my own memory of receiving at Government House on 2 June 1982 delegations from Argentina and the United Kingdom who had been working together at a meeting of an Antarctic Treaty organisation just two months after … [the start of] a war between the two countries. The … Antarctic Treaty System has also been … [adopted] as a model in other fields… The principles upon which the 1967 Outer Space Treaty was based were in essence identical with the philosophy of the Antarctic Treaty System. …The other major area of human endeavour in Antarctica … is the doing of science. Originally this was seen as being primarily concerned with discovering, describing and understanding the properties of the continent and the region below, above and around it. And that still remains a major function of Antarctic science. But what has changed is that much of the science which is being done is now understood to have far wider ramifications so that Antarctic science has now become truly global science.

#### Bioweapon terror in the future because of bio-break through.

The Hindu October 23, 2001

The biotechnology holds the promise of a great future but like any other technological breakthrough, it is a double-edged sword. Biotechnology could be panacea for eliminating hunger and disease from the globe but the same biotechnology tools can be used in a deadly manner against the [hu]mankind. Modern technologies that add efficiency, power and wonder to our lives inevitably deliver the same benefits to evildoers. According to Bill Joy, the chief scientist of Sun Microsystems, "the tragedy of September 11 was nothing like what might be possible with biological weaponry." In his forthcoming book titled Why the Future Doesn't Need Us, Joy has predicted that the coming age of biotech will undoubtedly make programmable bacteria and viruses more accessible — to doctors, business and bio-terrorists. "The things which we are worrisome about haven't happened yet." And having in mind all these, Harvard biologists, Matthew Meselson and Leading, have suggested a convention making any individual involved in the production of biological weapons liable as an international criminal, prosecutable anywhere, as is already the case for pirates and airplane hijackers. This proposal would permit countries to research and plan defensive work against biological warfare agents.

#### No offense – patenting prevents global collaboration to promote effective and sustainable bioprospecting – only increases the likelihood of our impacts

Sabrina Safrin (Assistant Professor of Law, Rutgers University Law School, Newark) 2004 “HYPEROWNERSHIP IN A TIME OF BIOTECHNOLOGICAL PROMISE: THE INTERNATIONAL CONFLICT TO CONTROL THE BUILDING BLOCKS OF LIFE” Lexis

Both the patent system and the sovereign-based system have overreached in permitting or asserting ownership rights to genetic material. This article has shown that the sovereign-based system (1) is or risks creating an anticommons in raw genetic material, (2) threatens the liberty and autonomy of individuals and indigenous communities whose property contains such material, and (3) is premised on a flawed approach in international law leading to broad and unenforceable regimes that will increase tensions between developed and developing nations and may set off a major TRIPS dispute. Meanwhile, the overprivatization of genetic material through the patent system is or, at a minimum, risks creating an anticommons in genetic material that inhibits innovation. These twin systems of hyperownership interact in a corrosive fashion. Sovereigns, in response to the patenting of genetic material, have been enclosing genetic material. Corporations and research institutions, in turn, are avoiding potentially valuable bioprospecting opportunities or pursuing such opportunities at suboptimal levels. In response, developing countries are tightening their control over genetic material by using the patent system to enforce their accessrestricting regimes. This article predicts that corporations and research institutions will further avoid interactions with genetically rich countries. This reciprocal spiral of increased enclosure of genetic material hinders the eventual enjoyment, by citizens of both economically developing and developed nations, of the as-yet largely unrealized potential of these resources. It generates tensions between nations and threatens individuals and indigenous communities. It diminishes opportunities to conserve, expand, and improve the global genetic pool.

#### Biodiversity collapses ecosystem resiliency – species-poor ecosystems key

Andrea B. Pfisterer & Bernhard Schmid (Institut für Umweltwissenschaften, Universität Zurich, Switzerland) 2002 Diversity-dependent production can decrease the stability of ecosystem functioning” Nature magazine

There is concern that species loss may adversely affect ecosystem functioning and stability. But although there is evidence that biodiversity loss can lead to reductions in biomass production1, 2, 3, 4, there is no direct evidence that biodiversity loss affects ecosystem resistance (ability to withstand perturbation) or resilience (recovery from perturbation). Yet theory5, 6, laboratory experiments7, 8, 9, 10, 11 and indirect experimental evidence12, 13, 14 strongly suggest that diversity and stability are related. Here we report results from a field experiment with factorially crossed perturbation and diversity manipulations. We simulated drought perturbation on constructed grassland ecosystems containing 1, 2, 4, 8 or 32 plant species. Under unperturbed conditions, the species-poor systems achieved lower biomass production than the species-rich systems. However, the species-poor systems were more resistant to perturbation than the species-rich systems. The species-poor systems also showed a larger initial resilience following perturbation, although the original relationship between diversity and productivity was fully restored after 1 year. Our results confirm that biodiversity increases biomass production, but they also point to the fact that such diversity–production associations may lead to an inverse relationship between biodiversity and the stability of ecosystem functioning.

#### Random losses in diversity won’t cause collapse

Angela Caines. (Plant Biologist at the University of Maryland.) "Biodiversity and Species exteinction." 2002. http://www.life.umd.edu/classroom/bsci124/lec37.html

Redundancy": Most species are superfluous as only a few are critical to the survival of the ecosystem. Species are like passengers on the plane, even with only a few, the plane can still fly Evidence Crop production increases with diversity, e.g., greater production of corn if other plants are intercropped than increasing the number of corn plants per acre Increased ecosystem resilience to stress with increase species diversity Full productivity can be reached by a few select species in terms of biomass but most ecosystems have far more species than necessary, thus random loss will not cause system collapse Levels of diversity Rates of speciation [See also examples of recent speciation] Rapid speciation occurs in tropical and arid (especially desert) regions; less so in temperate regions Rate of speciation low in aquatic habitat yet individual species tend to survive for much longer periods of time; rates much higher in areas of environmental stress (desert) Individual species survive for long periods of geological time in tropical regions where more species per unit area can exist and where even marginally successful species can survive a library filled with numerous books, even those with numerous error

#### Their evidence is all non-falsifiable speculation

John Charles Kunich Judge Advocate specializing in environmental law, United States Air Force, Colorado Springs, Co) Spring, 1994 SPECIES & HABITAT CONSERVATION: THE FALLACY OF DEATHBED CONSERVATION UNDER THE ENDANGERED SPECIES ACT 24 Envtl. L. 501

It is undisputed that, as one expert puts it, "Our ignorance of the natural world is enormous," and that, as we struggle with our response to the plight of our fellow organisms on this planet, "if we do not even know who the players are, our understanding of how well they are playing is far more deficient." 43 It has been estimated that the ratio of unknown to known species may be as high as 21 to 1, with 30 million undescribed species versus 1.4 [\*517] million that have been identified and taxonomically categorized by man. 44 The skeptics argue that the apocalyptic vision of a gigantic extinction spasm is based more on ideology than on science. In this view, although estimates of total species range as high as 100 million, anything in excess of the 1.4 million actually identified is mere guesswork. If no one knows how many species exist, how can anyone know how many are going extinct? 45 If traces of the alleged extinction victims are never discovered, no one will be able to determine whether they became extinct or never existed at all. According to Patrick Kangas of the University of Maryland, the "whole business is unfalsifiable, and everyone in science knows what a mess unfalsifiable theories are." 46

#### Biodiversity is the key to marine based drugs

Guy T. Carter, (Ph.D.Director, Natural Products Chemistry and Discovery Analytical Chemistry Wyeth-Ayerst Research) 2002 ““Marine Biotechnology in the Twenty-First Century: Problems, Promise, and Products”

 Many of the real or perceived bottlenecks to marine natural products-based drug discovery are founded on the issue of whether sufficient material will be available for complete biological and chemical evaluation and eventual production. Obviously, the development of synthetic and biosynthetic methods for production are real challenges, which must be addressed.

#### Biodiversity key to bioprospecting

George Frisvold (Professor of Agricultural and Resource Economics at the University of Arizona) and Kelly Day-Rubenstein (an Economist with the Economic Research Service, U.S. Department of Agriculture) 2008 Bioprospecting and Biodiversity Conservation: What Happens When Discoveries are Made? Lexis

Biodiversity as a source of medical breakthroughs has drawn considerable attention from the medical and environmental communities. 5 The Earth's [\*547] biodiversity may be thought of as a vast, unexplored library with information leading to many possible medical breakthroughs. The total number of species on the planet is unknown, and only a small number have been screened for medical activity. Further, the medical screening process has improved over time, so compounds thought to be of little value at one time may turn out to be quite important later.

#### ATS solves Spratly conflict

Adnaan Wasey (writer for Online NewsHour at PBS.org) February 2007 “International Agreements Hallmark of Antarctica” http://www.pbs.org/newshour/indepth\_coverage/science/poles/antarctica.html.

And Rothwell said the treaty could be applied elsewhere, such as the Spratly Islands, a collection of small islands and reefs in the South China Sea, where, like Antarctica, there is no indigenous population, and where multiple nations have laid claim over potential natural resources. "Letting countries [laying claim in the South China Sea] engage in scientific research, without the tension of sovereignty ... there's some chance of possibly acquiring the type of diplomatic and legal resolution of the issues that have been achieved in Antarctica," he said.

#### Spratly conflict escalates to global nuclear war - it’s the biggest flashpoint

Roy C. Howle, Jr. (the acting executive officer and military assistant for operations to the Undersecretary of the Army) 2001 “An Evitable War: Engaged Containment and the US-China Balance” Parameters http://www.carlisle.army.mil/usawc/parameters/01autumn/Howle.htm

American policymakers should be well aware of where all this is going: a quantum leap in China's ability to project force at the regional level. This capability will be achieved within the next decade and will be coupled with an unknown standoff capability in nuclear strike forces. The question is what, if anything, our allies and the United States should do about all this. As far as the United States (or Japan) is concerned, there is only cause for caution, since there is no foreseeable Chinese technological advance that we currently cannot counter. However, there is a growing recognition that China's military advances, if left unchecked, may gradually tip the balance of power across the Taiwan Strait. The "dominant scenario guiding PLA force planning, military training, and war preparation" continues to be conflict with Taiwan, which is expected to involve the United States.[19] Even if Taiwan currently is capable of fending for itself, the situation is different for China's other historical and potential antagonists such as Vietnam, Indonesia, the Philippines, or India. The place where China is most likely to seek conflict--indeed the only place where real conflict has recently occurred with significant loss of life--is in the South China Sea.[20] If there is one thing that the member countries of the Association of Southeast Asian Nations (ASEAN) agree upon, it is that the Spratly Islands are the most dangerous flashpoint in East Asia.[21] It is remarkable that about one-third of the annual report of the Secretary of Defense to Congress on our relationship with China is devoted to a rambling discussion of Taiwan, while there are barely four passing references to the situation in the Spratly Islands. The Spratlys are a sprawling collection of about 200 barren islands that straddle the blue water of the otherwise shallow and treacherous South China Sea. It is a rich fishing ground. There are also conflicting claims of vast reservoirs of oil somewhere in the Spratlys, though this remains speculation. What is certain, however, is that control of the Spratlys significantly contributes to the control of trade in East Asia. It is a key part of the conduit that channels one third of the world's trade, including oil from the Persian Gulf to Taiwan and Japan.[22] If a surprise major Chinese military action ever forcefully secured this contested island chain, it certainly would go down as yet another of the great intelligence failures of history. Apart from the South China Sea, other possible Chinese strategic defining moments are: the endgame in North Korea; China's rapprochement with Myanmar, perhaps the most unsavory regime in Asia after Pyongyang; and support to Islamic militants in the western reaches of China.[23] The forces of globalization, trade, communications, and decentralization that drive today's global strategic environment mean that all these situations--Taiwan, the Spratlys, North Korea, Indonesia, and Central Asia--are in flux, and the potential consequences to US national interests are more profound than we may realize.

#### Biopiracy causes genetic pollution, this - independent of biodiversity - collapses ecosystems and accesses the 1ac impact

Kristin Dawkins (Institute for Agriculture and Trade Policy and writer for FPIF) 1999 “Intellectual Property Rights

and the Privatization of Life” http://www.fpif.net/briefs/vol4/v4n04tra.html

This biopiracy, as it is often called, yields new profits for U.S. companies, which take the raw material, alter it in the laboratory to claim an invention, and win the patent. For source countries, this represents double trouble for their economies. First, their natural resource has been appropriated by a foreign corporation, and they are prohibited from further developing the resource domestically. Second, there will be a net outflow of foreign exchange, as licensing fees and royalties are paid on any commercial products eventually exported back to their domestic markets. Indeed, the expressed goals of IPR—to encourage innovation and promote the transfer of technology—are turned on their heads. A third major problem resulting from the patenting of plants is genetic pollution and the loss of biodiversity. Once a commercially viable product has been patented, companies invest in massive marketing campaigns and do not hesitate to enlist governments in promoting the product through the international financial institutions, rural extension services, and special loans and grants tied to designated seed-and-chemical packages. As a result, vast monocultures are planted with genetically identical seed, which in turn leads to thriving blights and the disappearance of local plant varieties. Furthermore, bees and other pollinators transfer the genes of transgenic crops to wild relatives, affecting local ecosystems in significant, potentially catastrophic ways. This genetic pollution, as it is being called, becomes part of the gene pool and can never be remediated. Extinction is forever.

#### Invisible threshold makes quantifying their impact impossible – ecosystem collapses are rare and don’t spillover

New York Times 2000 “Lost Rivets and Threads, and Ecosystems Pulled Apart” http://query.nytimes.com/gst/fullpage.html?res=9A06E4D61239F937A35754C0A9669C8B63&sec=&spon=&pagewanted=all.

In this way of looking at the situation, there is no clear threshold of catastrophe, but rather a ''continuum of degradation,'' from ''a world rich in biodiversity to a threadbare remnant with fewer species, fewer natural places, less beauty, and reduced ecosystem services.'' And while there may be multiple rips and tears in the tapestry, any catastrophic collapses that might take place (like the crash of fishery) are relatively rare and local.